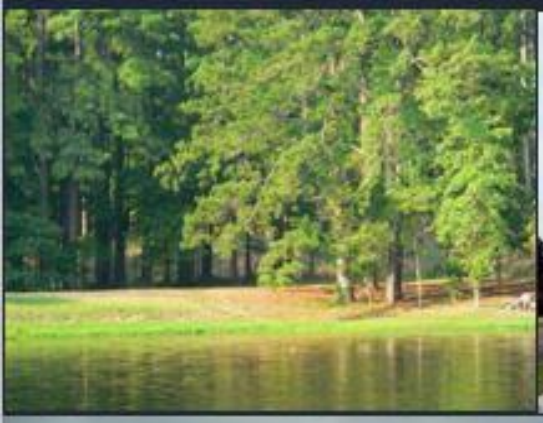

VERNON

PARISH HAZARD MITIGATION UPDATE – 2016

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VERNON PARISH

HAZARD MITIGATION PLAN UPDATE

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Vernon Parish

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August 24, 2016

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ACKNOWLEDGMENTS

This 2016 Vernon Parish Hazard Mitigation Plan Update was coordinated by the Vernon 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 Vernon Parish
Village of Anacoco
Town of Hornbeck
City of Leesville
Town of New Llano
Town of Rosepine
Village of Simpson

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

Title	First Name	Last Name	Agency
Mayor	Rick	Allen	City of Leesville
Immediate Past President	Rand	Alphord	Chamber of Commerce
Representative	James	Armes	State Representative
Chairman	Arno	Arpke	Lakes Commission
Mayor	Clarence	Beebe	Town of Hornbeck
Real Estate Agent	Ranelle	Birmingham	ERA Sarver Real Estate
Real Estate Agent	Lee	Birmingham	Ft. Polk DeRidder Association of Realtors
Office Manage/Permits	Kim	Bonner	Vernon Parish Police Jury
Mayor	Freddy	Boswell	Town of New Llano
Mayor	Donis	Brinkley	Village of Simpson
Executive Director	Ann	Causey	Vernon Parish Chamber of Commerce
Sheriff	Sam	Craft	Vernon Parish Sheriff's Office
Executive Director	John	Crook	Tourism Commission
Mayor	Donna	Duvall	Town of Rosepine
Project Manager	Greg	Faust	Cleco
Reverend	Harrison	Fields	New Willow Baptist Church
Project Manager	Tony	Gillespie	Cleco
Radio Operator	Lee	Grevenberg	Radio Maintenance
Community Planner	Lorna	Hanes	Fort Polk
Contractor	Robert	Hanna	Diamond B & R Construction
Director of Business Development	Mike	Harris	Beauregard Electric Co-Op
Chairman	Don	Haymon	Vernon Parish Fire District
Chief	Kyle	Bush	City of Leesville
Sanitarian	Randle	Holaway	Vernon Parish Health Unit
Representative	Frank	Howard	State Representative

Title	First Name	Last Name	Agency
Director	Kenneth	Moore	Office of Emergency Preparedness/E-911 Director
Member	Ken	Hughes	Fort Polk Progress
Airport Manager	Paul	Jackson	Leesville Airport
Dean	Geralyn	Janice	Louisiana Technical College-Lamar Salter Campus
Contractor	Ronald	Jeane	RJ Construction
Reverend	Maurice	Johnson	LAMA/Johnson Temple
Plant Operator	Philip	Jordan	West Vernon Parish Water District
City Administrator	Richard	Karamatic	City of Leesville
Executive Director	Barbara	Kaveski	Leesville Housing Authority
Sanitarian	Randy	Kay	Vernon Parish Health Unit
Attorney	Terry	Lambright	Parish Legal Counsel
Mayor	Keith	Lewing	Village of Anacoco
Building Inspector	Billy	McShan	Vernon Parish Building Inspection
Engineer	Vernon	Meyer	Meyer & Associates
Supervisor/ Operator	Milton	Midkiff	Ward 4 Water/Vernon Parish Water & Sewer
Council Member	LaVerne	Miers	Anacoco Town Hall
Manager/Broker	Malcom	Morris	Morris Team Realty
Manager	Alex	Nicholes	Department Of Transportation & Development
Biologist	Bobbie	Reed	Wildlife and Fisheries
Chairman	Michael	Reese	Fort Polk Progress
Senator	John	Smith	State Senator
Representative	Rob	Smith	Cleco
Parish Road Manager	Carl	Thompson	Vernon Parish Police Jury
President	James B.	Tuck	Vernon Parish Police Jury President
Chief Deputy	Calvin	Turner	Vernon Parish Sheriff's Office
Director	Lee	Turner	Congressman John Fleming
Parish Secretary	Belinda	Diehl	Vernon Parish Police Jury
Manager/Operator	Marion	VanTassel	South Vernon Water Works
Manager/Operator	Chris	Simmons	South Vernon Water Works
Executive Assistant	Rhonda	Martinez	Vernon Parish Chamber of Commerce
Director	Barney K.	Magee	City of Leesville Public Works
Safety Officer	Nathaniel	Perkins	City of Leesville Public Works
Public Information Director	Tammy	Sharp	City of Leesville
Biomedical Technician	James	Brooks	Byrd Regional Hospital
Secretary	Tammy	Slaughter	Vernon Parish Fire District

The 2016 Vernon Parish Hazard Mitigation Plan Update was written by the Stephenson Disaster Management Institute, Louisiana State University. Further comments should be directed to the Vernon Parish Office of Homeland Security and Emergency Preparedness: 300 South 3rd Street, Leesville, LA 71496.

Contents

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

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

- Unincorporated Vernon Parish
- Village of Anacoco
- Town of Hornbeck
- City of Leesville
- Town of New Llano
- Town of Rosepine
- Village of Simpson

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 Vernon Parish. The parish is subject to natural hazards that threaten life and health and have caused extensive property damage. To better understand these hazards and their impacts on people and property, and to identify ways to reduce those impacts, the parish's Office of Homeland Security and Emergency Preparedness undertook this Natural Hazards Mitigation Plan.

"Hazard mitigation" does not mean that all hazards are stopped or prevented. It does not suggest complete elimination of the damage or disruption caused by such incidents. Natural forces are powerful and most natural hazards are well beyond our ability to control. Mitigation does not mean quick fixes. It is a long term approach to reduce hazard vulnerability. As defined by FEMA, "hazard mitigation" means any sustained action taken to reduce or eliminate the long-term risk to life and property from a hazard event.

Why this plan? Every community faces different hazards and every community has different resources and interests to bring to bear on its problems. Because there are many ways to deal with natural hazards and many agencies that can help, there is no one solution or cookbook for managing or mitigating their effects.

Planning is one of the best ways to correct these shortcomings and produce a program of activities that will best mitigate the impact of local hazards and meet other local needs. A well-prepared plan will ensure that all possible activities are reviewed and implemented so that the problem is addressed by the most appropriate and efficient solutions. It can also ensure that activities are coordinated with each other and with other goals and programs, preventing conflicts and reducing the costs of implementing each individual activity.

Mitigation activities need funding. Under the Disaster Mitigation Act of 2000 (42 USC 5165), a mitigation plan is a requirement for federal mitigation funds. Therefore, a mitigation plan will both guide the best use of mitigation funding and meet the prerequisite for obtaining such funds from FEMA. FEMA also recognizes plans through its Community Rating System, a program that reduces flood insurance premiums in participating communities. This program is described at the end of this chapter.

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

Location, Demography, and Economy

Location

Vernon Parish, located at the heart of west-central Louisiana, is the largest parish in the state in terms of land area, possessing a total area of 1,341.5 square miles (858,560 acres). Leesville, the parish seat, is located 122 miles south of Shreveport, 70 miles north of Lake Charles, and 54 miles west of Alexandria. It is adjacent to Sabine and Natchitoches Parishes to the north, Rapides Parish to the east, and Allen and Beauregard Parishes to the south. The Sabine River forms its western border with the State of Texas

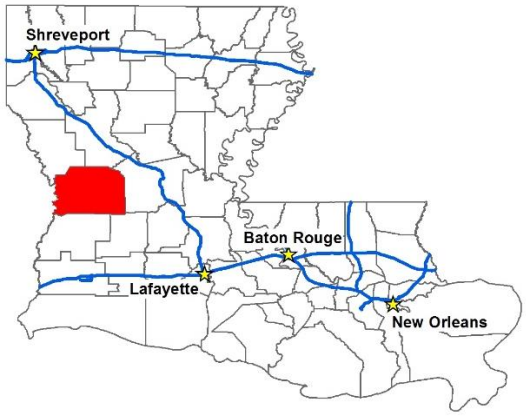

Figure 1-1: Location of Vernon Parish within the State of Louisiana

Vernon Parish includes the incorporated communities of Anacoco, Hornbeck, Leesville, New Llano, Rosepine, and Simpson. Since the 1940s, it has also been the home of Fort Polk, the fifth largest military installation in the nation. Approximately half of the parish population lives in rural areas or in unincorporated communities.

U.S. Highway 171 is the primary north-south traffic route for Vernon Parish. Most of the incorporated communities in the parish are situated along this highway. North of Leesville, State Highway 117 branches off U.S. 171 and the two highways continue north in a somewhat parallel direction. From the eastern border, State Highways 8 and 28 head marginally west-southwest until Highway 28 merges into Highway 8 east of Leesville, which then continues west across the parish. At the unincorporated community of Pickering, State Highway 10 branches off U.S. Highway 171 and heads east-southeast in the southern third of the parish.

Dominant landscape features consist of wooded areas, rolling hills, and open farmland. Kisatchie National Forest is located in the eastern half of the parish. Sabine River, Anacoco Lake, and Vernon Lake are the parish's major bodies of water; all are located in the western half of the parish. Average elevation in Vernon Parish is about 330 feet above sea level.

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

As noted above, Vernon Parish is located in the west-central region of Louisiana.

Figure 1-2: Louisiana Homeland Security Regions

Table 1-1: Vernon 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	52,334	52,828	52,132	0.94%	-0.39%
Population Density (Pop/Sq Mi)	39.4	____	____	____	____
Total Households	18,148	18,148	____	____	____

Economy

The local economy is primarily based on service related industries that support Fort Polk. There is a strong desire to attract more diverse businesses that will provide quality labor opportunities for the local market as well as for military spouses. Fort Polk and the Vernon Parish School Board are the largest employers in Vernon Parish, but much of the land is given to timber production and cattle farming. Industry data for business patterns in Vernon Parish can be found in the table below:

Table 1-2: Business Patterns in Vernon 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	1,588	130	35,992
Manufacturing	163	13	5,245
Health Care and Social Assistance	1,993	76	89,320
Mining, Quarrying, Oil and Gas Extraction	20-99	5	1,157
Transportation and Warehousing	354	39	10,746
Construction	714	54	22,239
Administration and Support and Waste Management and Remediation Services	250-499	32	12,108
Real Estate and Rental and Leasing	100-249	35	___
Wholesale Trade	98	18	4,212
Other Services (except Public Administration)	356	71	6,877
Accommodation and Food Services	1,005	70	12,756
Financial and Insurance	314	53	10,749
Professional, Scientific, and Technical Services	1,247	80	55,381
Information	100-249	9	2,953
Educational Services	100-249	8	___
Arts, Entertainment, and Recreation	0-19	3	___
Management of Companies and Enterprises	20-99	3	___
Agriculture, Forestry, Fishing and Hunting	135	19	6,678
Utilities	20-99	9	4,526

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 Vernon Parish. Hazard Profiles (see Section Two) contain detailed information on the likelihood of occurrence, possible magnitude or intensity, areas of the parish that could be affected, and conditions that could influence the manifestation of the hazard.

Hazard Mitigation

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

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

- Implement measures and actions to minimize hazard impacts immediately prior to, during, or in response to hazard events
- Implement measures to protect of reduce damage to structures and assets from future hazards
- Encourage sound development practice or implement other actions to reduce or eliminate impacts of future hazards
- Reduce hazard impacts through modifications to built or natural environments
- Enhance public awareness and understanding of disaster preparedness
- Improve communications throughout the parish during hazard events

This plan update makes a number of textual changes throughout, but the most obvious changes are data related and structural edits. First, the Spatial Hazard Events and Losses Database for the United States (SHELDUS) was used as a data source for hazard identification because it incorporates all storm event data from the National Climatic Data Center (NCDC) Storm Events Database used in previous plans, as well as storm event data from other sources including the NOAA Storm Prediction Center, National Hurricane Center, and U.S. Fire Administration. Furthermore, all of the sections were updated to reflect the most current information and the most current vision of the plan update. Second, instead of eleven, separate sections for numerous tables, maps, and appendices, the present plan update has four sections and five appendices. The most significant changes are the newly developed hazard profiles and risk assessments, as well as the removal of repetition between sections from the previous plan updates. The 2016 plan update is organized generally as follows:

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

Table 1-4: Plan Crosswalk

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

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

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

2. Hazard Identification and Parish-Wide Risk Assessment

This section assesses the various hazard risks that Vernon 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 Vernon 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
Subsidence/Coastal Land Loss			
Drought	X		X
Earthquakes	X		*
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
Dam Failure	X		+
Levee Failure	X		+

* Hazard was profiled but discounted

+ Hazard was profiled, but a data deficiency was declared

Prevalent Hazards to the Community

While many of the hazards identified in *Table 2-1* occur in the parish, the determination was made to focus attention and resources on the most prevalent hazards, which include the hazards previously profiled. Earthquake hazards were discounted due to having no impact on the parish in the past 25 years. The hazards of dam failure and levee failure currently have a data deficiency and will be updated by the parish as information is received from the USACE.

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

a) Drought
b) Earthquakes
c) Extreme Heat
d) Flooding (backwater, riverine, localized stormwater event)
e) Thunderstorms (Hail, Lightning, Wind)
f) Tornadoes
g) Tropical Cyclones
h) Wildfires
i) Winter Storms
j) Dam Failure
k) Levee Failure

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

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

The potential destructive power of tropical cyclones and flooding were determined to be the most prevalent hazards to the parish. Nine of the thirteen Presidential Declarations that Vernon Parish has received resulted from either tropical cyclones (6 declarations) or flooding (3 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 potential destructive potential, the risk assessment will also asses non-storm surge flooding as well. Flooding can also occur from non-hurricane events, as flash floods are a common occurrence due to heavy rainfall.

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

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

Table 2-2: Vernon Parish Major Disaster Declarations

Disaster Declaration Number	Date	Type of Disaster
3031	2/22/1977	Freezing
675	1/11/1983	Severe Storm, Flooding
829	5/20/1989	Severe Storm, Flooding
833	6/16/1989	Severe Storm, Tornado
835	7/17/1989	Tropical Cyclone – Tropical Cyclone Allison
2337	9/11/2000	Fire
1437	10/3/2002	Tropical Cyclone – Hurricane Lili
3172	2/1/2003	Loss of Space Shuttle Columbia
1603	8/29/2005	Tropical Cyclone – Hurricane Katrina
1607	9/24/2005	Tropical Cyclone – Hurricane Rita
1668	11/2/2006	Severe Storm, Flooding
1786	9/2/2008	Tropical Cyclone – Hurricane Gustav
1792	9/13/2008	Tropical Cyclone – Hurricane Ike

Probability of Future Hazard Events

The probability of a hazard event occurring in Vernon Parish is estimated on the following page. The percent chance of an event happening during any given year was calculated by posting past events and dividing by the time period. Unless otherwise indicated, the time period used to access probability followed the method used in the State of Louisiana's most current Hazard Mitigation Plan. The primary source for historical data used throughout the plan is the Spatial Hazards Events and Losses Database (SHELDUS), which provides historical hazard data from 1960 to 2014. In staying consistent with the state plan, the SHELDUS database was evaluated for the last twenty-five years (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-MH wasn't available to determine losses. This full record was used to provide a more extensive record to determine losses. All assessed damages were adjusted for inflation in order to reflect the equivalent amount of damages with the value of the U.S. dollar today. In addition, the National Climatic Data Center (NCDC) was also used to help identify hazard data specific to the municipalities. This was used due to it containing specific data for cities, whereas the data within SHELDUS is limited to parishes.

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

Table 2-3: Probability of Future Hazard Reoccurrence

Hazard	Probability						
	Vernon Parish (Unincorporated)	Anacoco	Hornbeck	Leesville	New Llano	Rosepine	Simpson
Drought	8%	8%	8%	8%	8%	8%	8%
Earthquakes	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Extreme Heat	4%	4%	4%	4%	4%	4%	4%
Flooding	52%	20%	12%	36%	12%	20%	12%
Thunderstorms (Hail)	4%	4%	4%	4%	4%	4%	4%
Thunderstorms (Lightning)	16%	16%	16%	16%	16%	16%	16%
Thunderstorms (Wind)	100%	100%	100%	100%	100%	100%	100%
Tornadoes	96%	96%	96%	96%	96%	96%	96%
Tropical Cyclones	16%	16%	16%	16%	16%	16%	16%
Wildfires	4%	4%	4%	4%	4%	4%	4%
Winter Storms	40%	40%	40%	40%	40%	40%	40%
Dam Failure	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
Levee Failure	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%

As shown in *Table 2-3*, high winds from thunderstorms have the highest annual chance of occurrence at 100%, followed closely by tornadoes at 96%. Flooding in the unincorporated areas of the parish has an annual chance of occurrence of 52%, with the incorporated areas of parish having slightly lower annual chances of occurrence. Winter storms have an annual chance of occurrence calculated at 40%, followed by lightning and tropical cyclones at 16%. Drought has an annual chance of occurrence of 8%, followed by extreme heat, hail, and wildfires at 4%. Earthquakes were discounted since the annual chance of occurrence was calculated at less than 1% and they are no threat to property or life in Vernon Parish. Dam and levee failures have a data deficiency and information will be updated as it is received from the USACE.

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 on critical infrastructure from a previous hazard mitigation project.

Within the entire planning area, there is an estimated value of $18,611,725,000 in structures throughout the parish. The tables on the following page provide the total estimated value for each type of structure by occupancy.

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

Occupancy	Vernon Parish	Unincorporated Vernon Parish	Anacoco	Hornbeck	Leesville	New Llano
Agricultural	$7,453,000	$5,012,000	$341,000	$0	$1,197,000	$477,000
Commercial	$410,365,000	$221,450,000	$4,070,000	$381,000	$164,262,000	$8,880,000
Government	$28,387,000	$10,755,000	$2,132,000	$0	$11,813,000	$2,137,000
Industrial	$44,604,000	$33,298,000	$488,000	$58,000	$8,518,000	$876,000
Religion	$82,029,000	$50,402,000	$415,000	$303,000	$23,807,000	$1,720,000
Residential	$3,501,752,000	$2,567,764,000	$60,626,000	$43,535,000	$477,179,000	$187,660,000
Education	$37,064,000	$10,916,000	$1,846,000	$1,904,000	$16,304,000	$141,000
Total	$4,111,654,000	$2,899,597,000	$69,918,000	$46,181,000	$703,080,000	$201,891,000

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

Occupancy	Rosepine	Simpson
Agricultural	$426,000	$0
Commercial	$4,594,000	$6,728,000
Government	$1,148,000	$402,000
Industrial	$940,000	$426,000
Religion	$4,388,000	$994,000
Residential	$108,171,000	$56,817,000
Education	$3,810,000	$2,143,000
Total	$123,477,000	$67,510,000

Essential Facilities of the Parish

Below are the locations and names of the essential facilities within the parish:

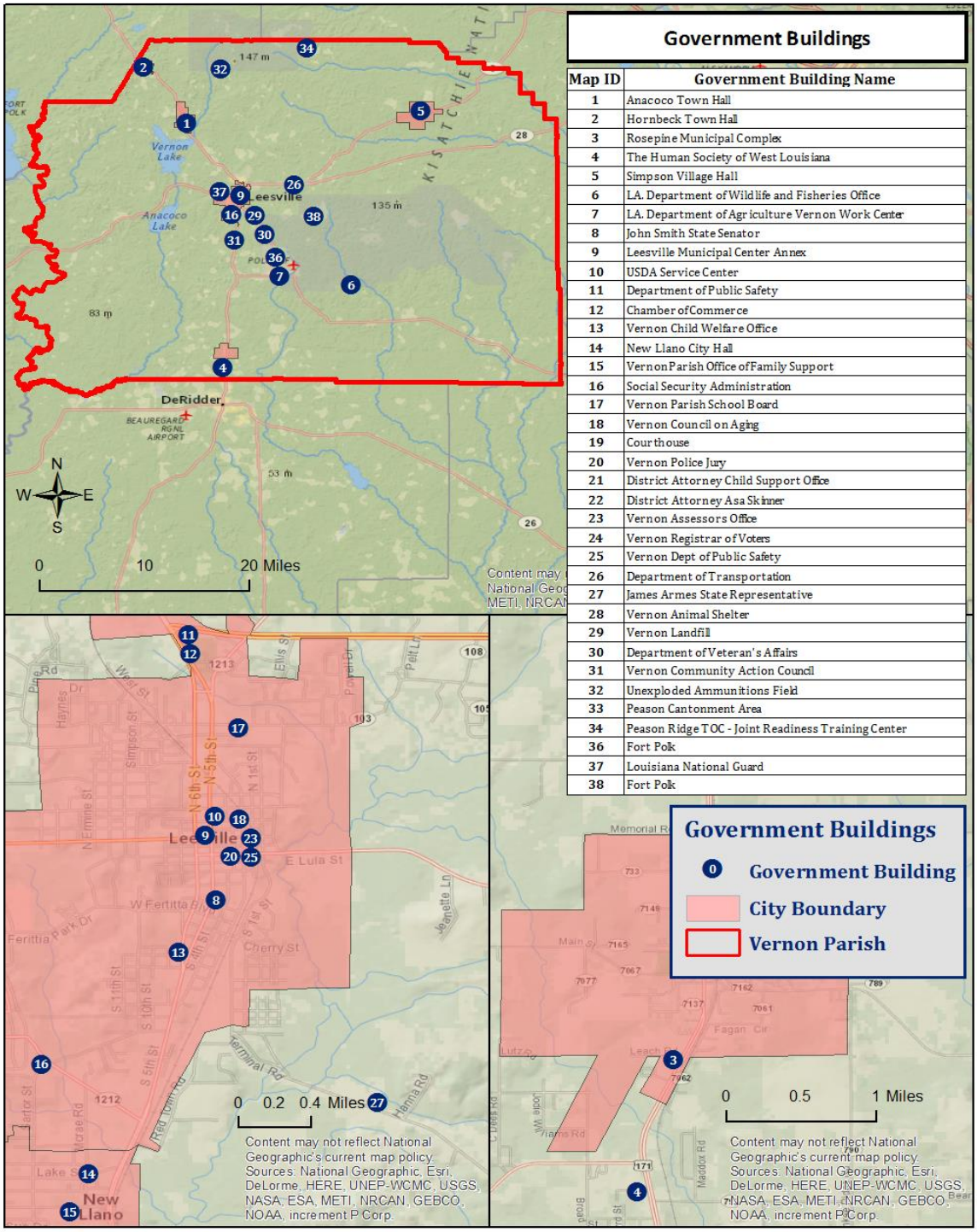

Figure 2-1: Government Buildings in Vernon Parish

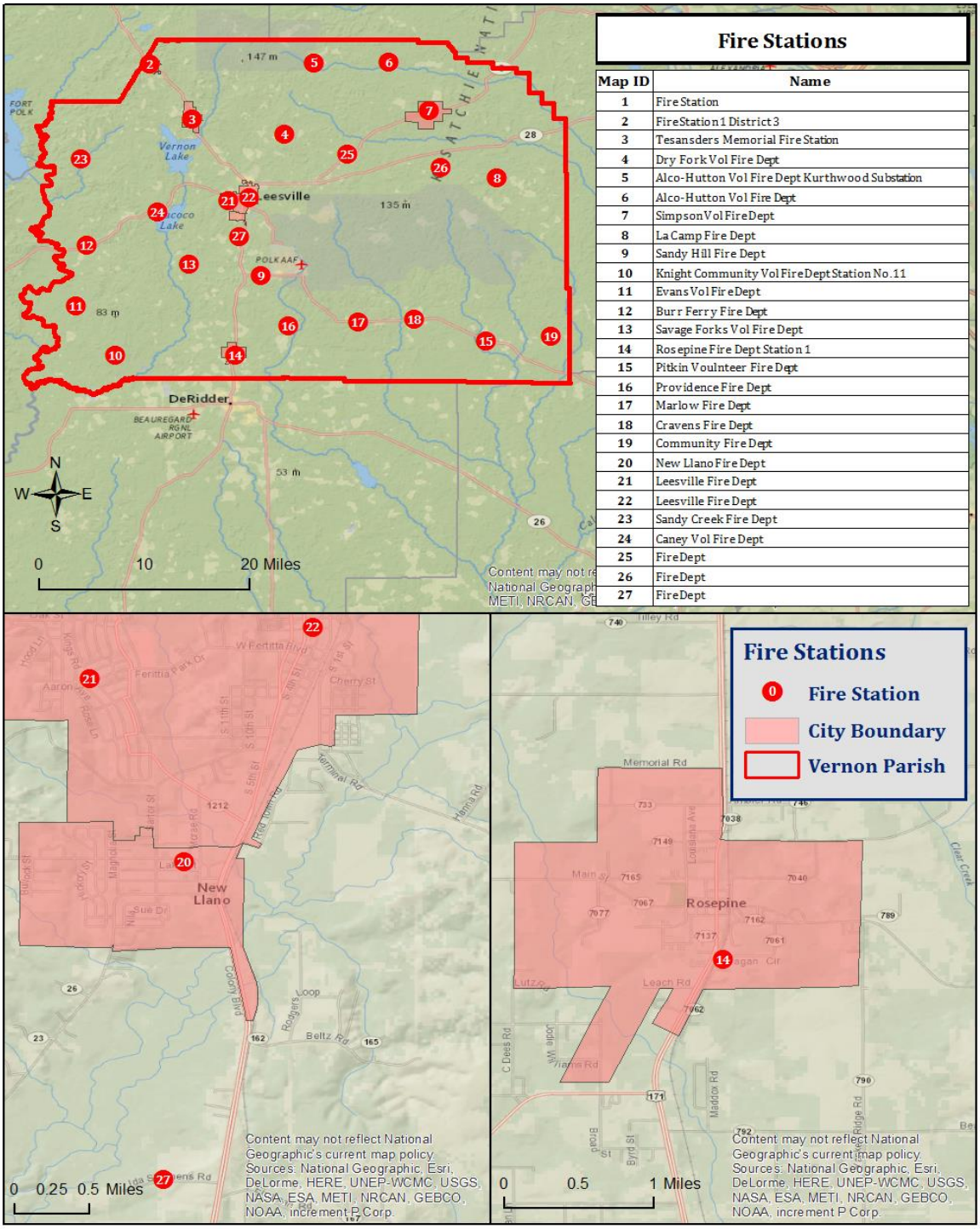

Figure 2-2: Fire Stations throughout Vernon Parish

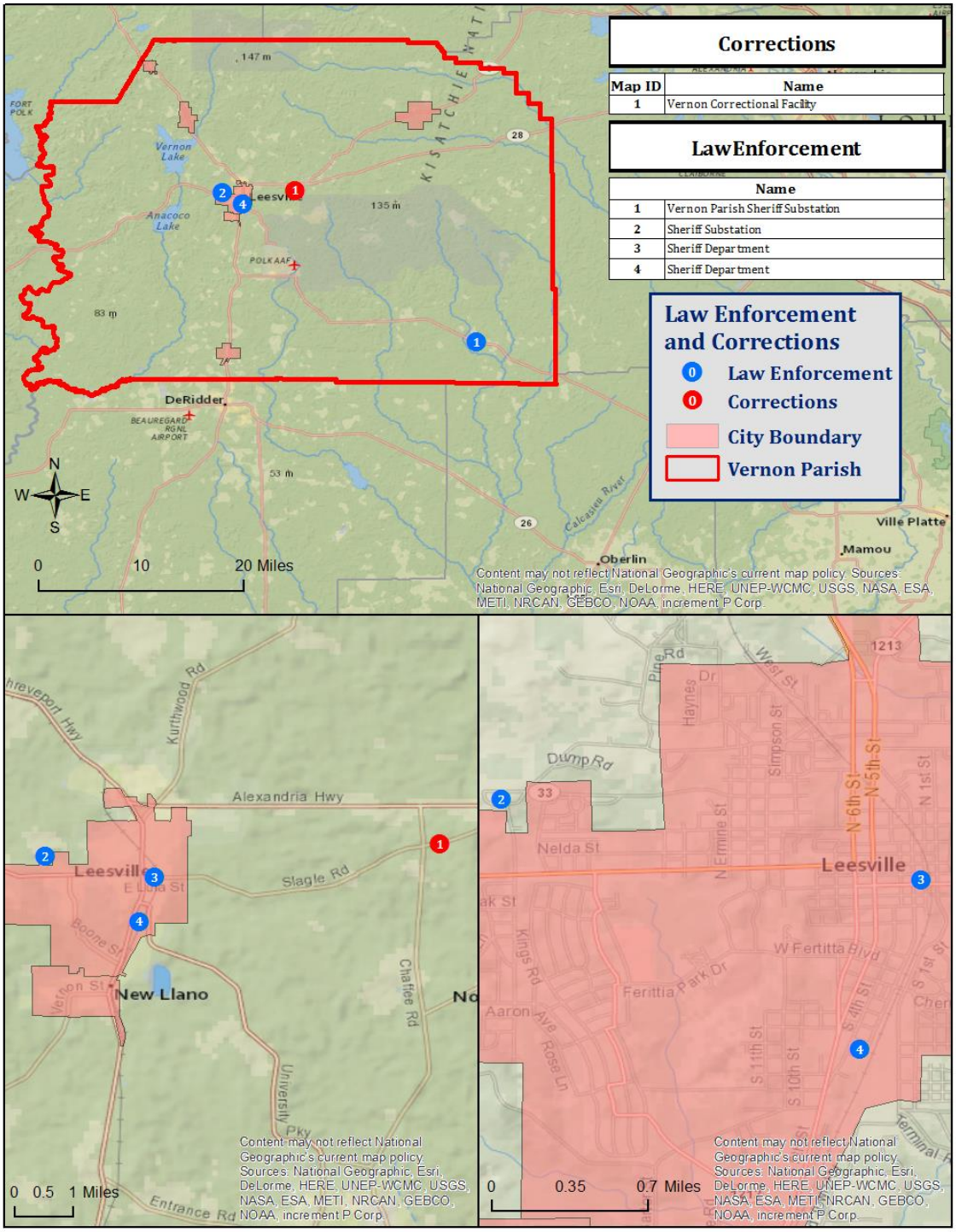

Figure 2-3: Law Enforcement Facilities in Vernon Parish

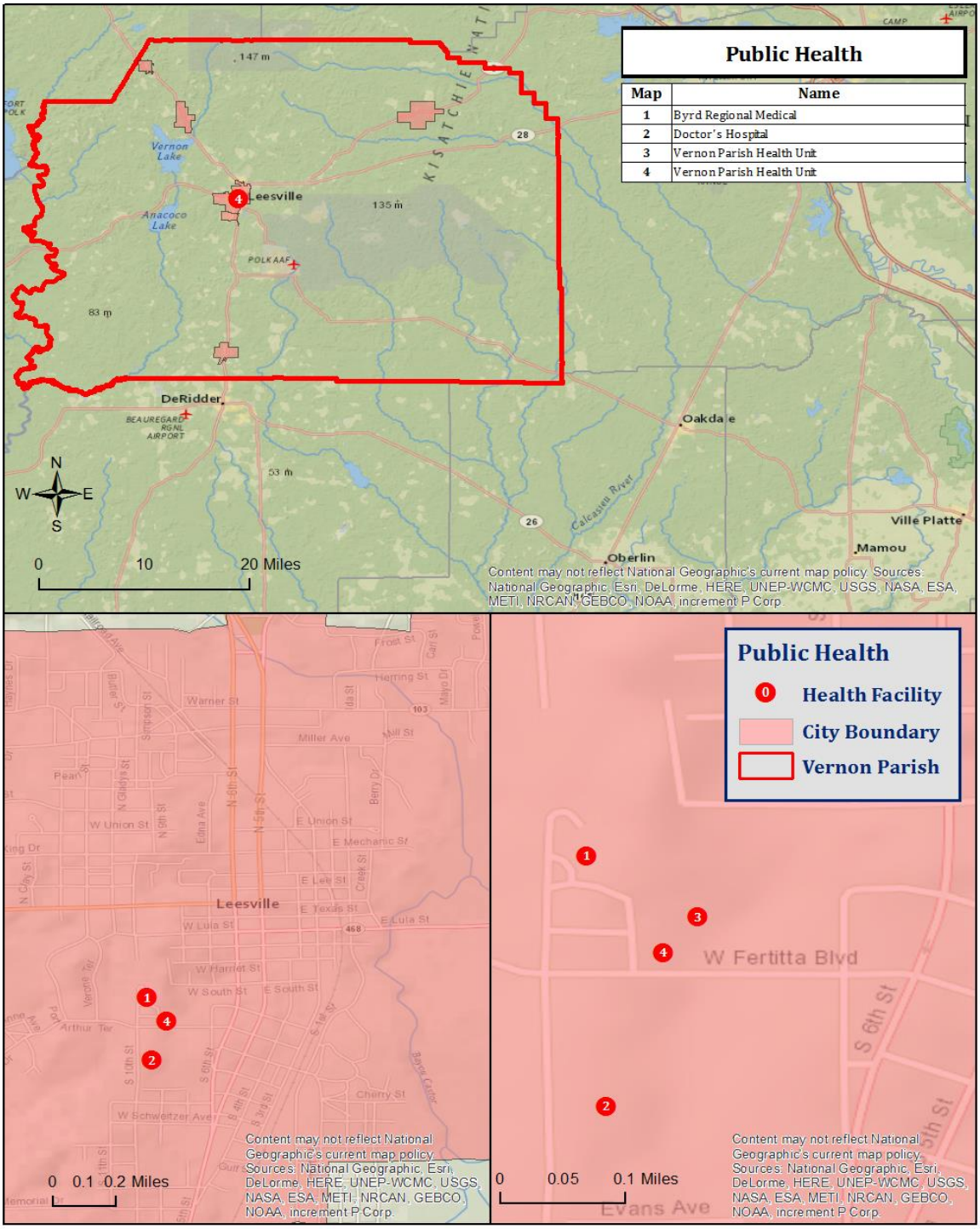

Figure 2-4: Public Health Facilities in Vernon Parish

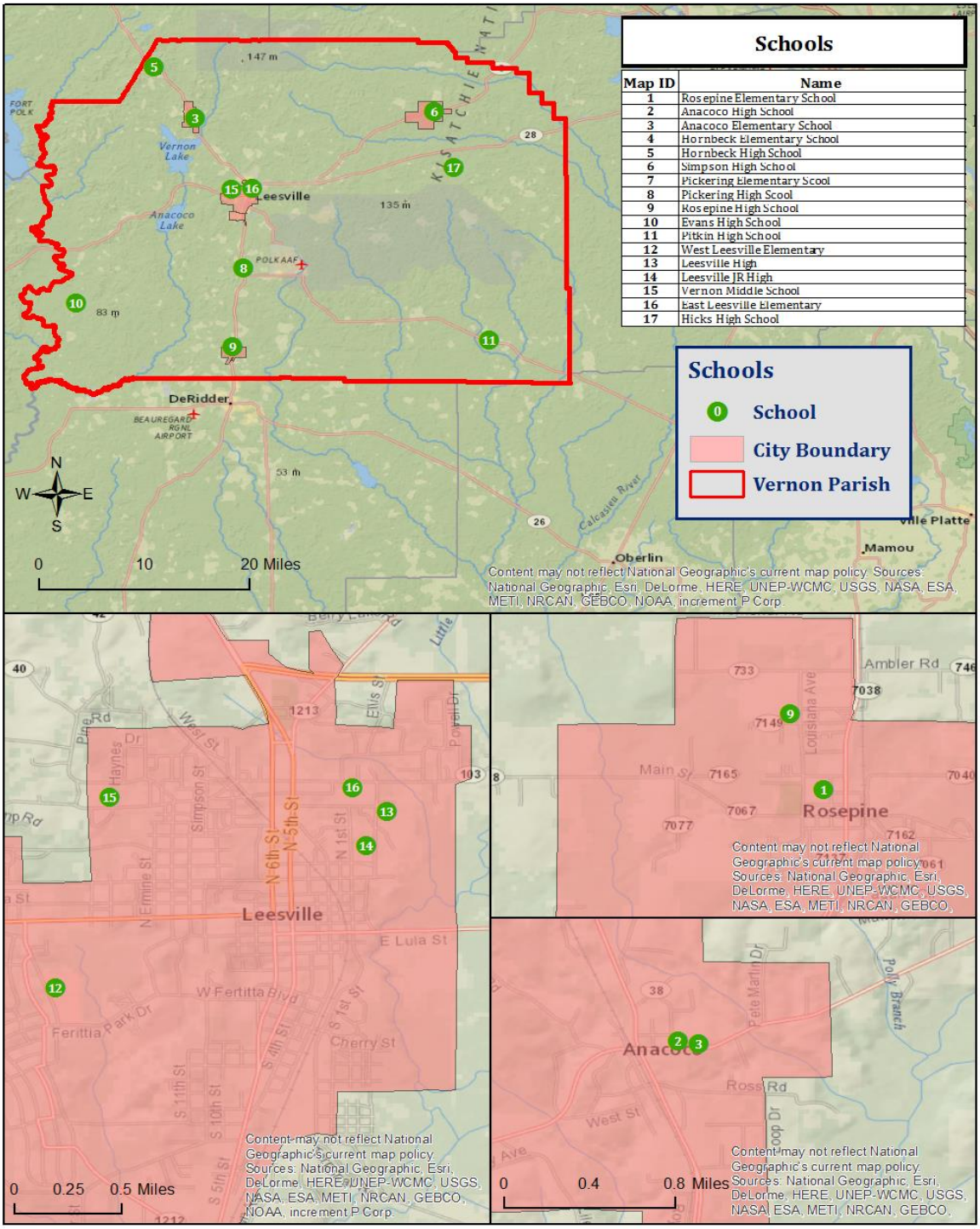

Figure 2-5: Educational Facilities in Vernon Parish

Future Development Trends

Vernon Parish has experienced a slight change in population and housing from the years 2000 to 2013. From 2000 to 2010, the population in Vernon Parish fell slightly from 52,531 to 52,334 and housing grew from 21,030 units to 21,433 units. Vernon Parish experienced a small growth in population and housing between the years of 2010 and 2013, growing from a population of 52,334 with 21,433 housing units in 2010 to a population of 52,334 with 21,449 housing units in 2013. Growth in population has largely taken place in Rosepine from the years 2000 to 2010 and in Anacoco in the years 2010 to 2013. 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 2-5: Population Growth Rate for Vernon Parish

Total Population	Vernon Parish	Vernon Parish (Unincorporated)	Anacoco	Hornbeck	Leesville	New Llano	Rosepine	Simpson
1-Apr-00	52,531	40,089	866	435	6,753	2,415	1,390	583
1-Apr-10	52,334	39,539	869	480	6,612	2,504	1,692	638
1-Jul-13	52,510	39,382	1,042	457	6,646	2,516	1,731	736
Population Growth between 2000 – 2010	-0.4%	-1.4%	0.3%	10.3%	-2.1%	3.7%	21.7%	9.4%
Average Annual Growth Rate between 2000 – 2010	-0.0%	-0.1%	0.0%	1.0%	-0.2%	0.4%	2.2%	0.9%
Population Growth between 2010 – 2013	0.3%	-0.4%	19.9%	-4.8%	0.5%	0.5%	2.3%	15.4%
Average Annual Growth Rate between 2010 – 2013	0.11%	-0.13%	6.64%	-1.60%	0.17%	0.16%	0.77%	5.12%

Table 2-6: Housing Growth Rate for Vernon Parish

Total Housing Units	Vernon Parish	Vernon Parish (Unincorporated)	Anacoco	Hornbeck	Leesville	New Llano	Rosepine	Simpson
1-Apr-00	21,030	15,171	376	227	3,389	1,037	563	267
1-Apr-10	21,433	15,687	370	237	3,068	1,052	731	288
1-Jul-13	21,449	15,634	432	207	2,977	1,200	721	278
Housing Growth between 2000 – 2010	1.9%	3.4%	-1.6%	4.4%	-9.5%	1.4%	29.8%	7.9%
Average Annual Growth Rate between 2000 – 2010	0.2%	0.3%	-0.2%	0.4%	-0.9%	0.1%	3.0%	0.8%
Housing Growth between 2010 – 2013	0.1%	-0.3%	16.8%	-12.7%	-3.0%	14.1%	-1.4%	-3.5%
Average Annual Growth Rate between 2010 – 2013	0.0%	-0.1%	5.6%	-4.2%	-1.0%	4.7%	-0.5%	-1.2%

As shown in the previous tables, the growth in population and housing units in Vernon Parish has been stagnant. Housing growth rates grew at 0.2% annually from 2000 to 2010, and at less than 0.1% annually from 2010 to 2013. Population growth rates for the parish were in a decline annually from 2000 to 2010 at an annual rate of less than -0.1%. From 2010 to 2013, population grew slightly at an annual rate of 0.11%. From 2000 to 2010, the incorporated area of Rosepine had the largest increase in population with an annual rate of 2.2%, followed by the incorporated area of Hornbeck at 1%. The incorporated area of Leesville and the unincorporated area of Vernon Parish experienced a decline in population from 2000 to 2010. From 2010 to 2013, Anacoco experienced the largest growth in population with an annual rate of growth of 6.64% followed by Simpson at 5.12%.

The incorporated area of Rosepine experienced the largest increase in housing units from 2000 to 2010 with a total growth of 29.8%, followed by the incorporated area of Simpson at 7.9%. The incorporated areas of Leesville and Anacoco were the only areas in Vernon Parish to experience a decline in housing units during

this time period. The incorporated area of Anacoco experienced the largest growth in housing units from 2010 to 2013 with a total growth of 16.8% followed by New Llano at 14.1%. The incorporated areas of Hornbeck, Leesville, Rosepine, and Simpson as well as the unincorporated area of the parish all experienced a decline in housing units from the years 2010 to 2013. No changes in development have impacted the community's vulnerability since the plans last update.

Future Hazard Impacts

Hazard impacts were estimated for five years and ten years in the future (2019 and 2024). Yearly population and housing growth rates were applied to parish inventory assets for composite flood and tropical cyclones. Based on a review of available information, it is assumed that population and housing units will grow slightly within Vernon Parish from the present until 2024. A summary of estimated future impacts is shown in the table below. Dollar values are expressed in future costs and assume an annual rate of inflation of 1.02%. No changes in development have impacted the community's vulnerability since the plans last update.

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

Hazard / Impact	Total in Parish (2014)	Hazard Area (2014)	Hazard Area (2019)	Hazard Area (2024)
Flood Damage				
Structures	21,454	7,467	7,476	7,487
Value of Structures	$4,154,626,440	$1,445,950,357	$1,523,107,232	$1,621,149,240
# of People	52,569	18,296	18,399	18,523
Tropical Cyclone				
Structures	21,454	21,454	21,481	21,513
Value of Structures	$4,154,626,440	$4,154,626,440	$4,376,320,076	$4,658,022,637
# of People	52,569	52,569	52,864	53,221

Land Use

The Vernon Parish Land Use table is provided on the following page. Residential, commercial, and industrial areas account for only 8% of the parish's land use. Forest land is the largest category at 614,548 acres, accounting for 72% of parish land. At 140,463 acres, wetlands account for 16% of parish lands, while 27,186 acres of agricultural areas account for 3% of parish lands. The parish also consists of 7,757 acres of water areas, accounting for 1% of all parish lands.

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

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	27,186	3%
Wetlands	140,463	16%
Forest Land (not including forested wetlands)	614,548	72%
Urban/Development	68,552	8%
Water	7,757	1%

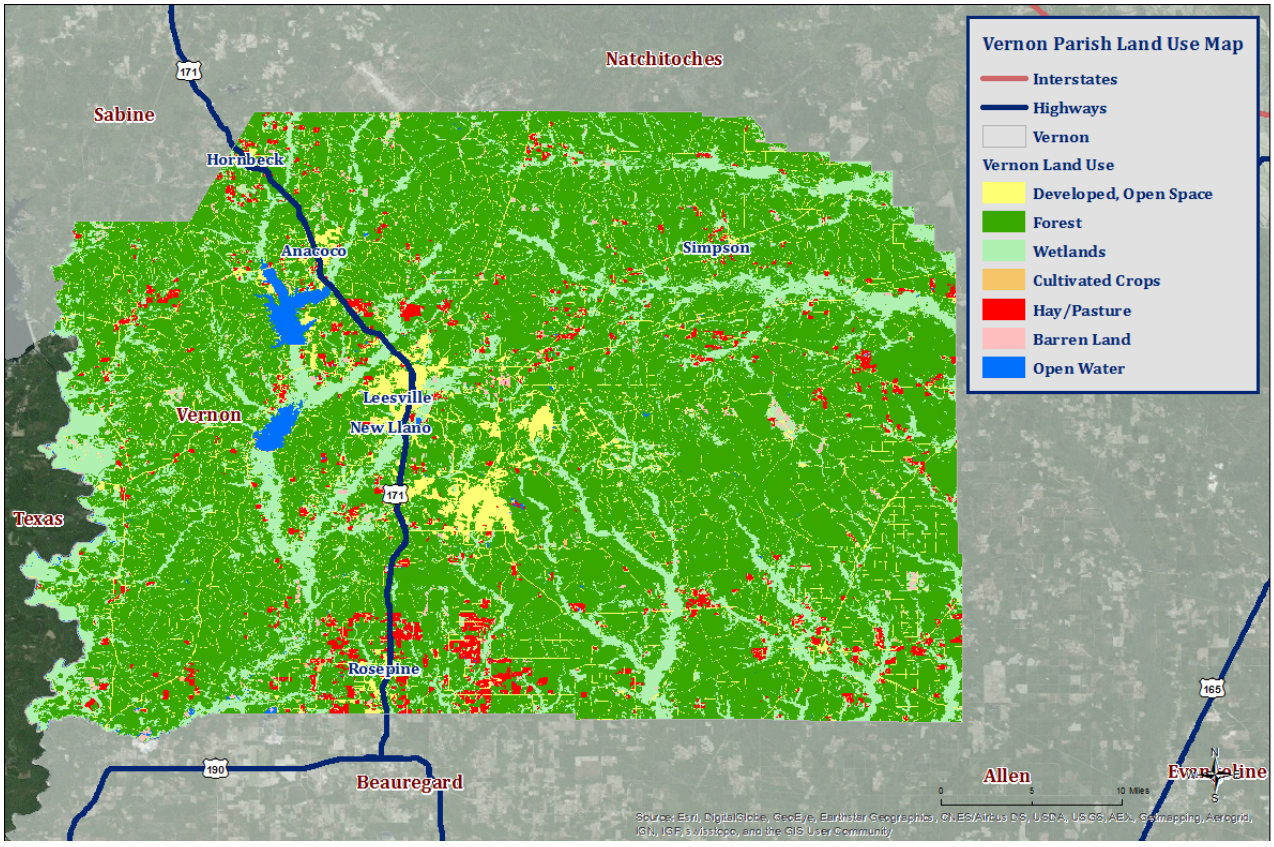

Figure 2-6: Vernon Parish Land Use Map
(Source: USGS Land Use Map)

Hazard Identification

Drought

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

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

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

Table 2-9 displays the range and Palmer classifications of the PDSI index. On the next page, *Figure 2-7* displays the current drought monitor for the State of Louisiana and its parishes.

Table 2-9: Palmer Drought Severity Index Classification and Range

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

The PDSI best measures the duration and intensity of drought-inducing circulation patterns at a somewhat long-term time scale, although not as long-term as the PHDI. Long-term drought is cumulative, so the intensity of drought during the current month is dependent on the current weather patterns in addition to the effects of cumulative patterns of previous months. Although weather patterns can change almost overnight from a long-term drought pattern to a long-term wet pattern, as a medium-response indicator, the PDSI responds relatively rapidly. Data compiled by the National Drought Mitigation Center indicates normal conditions exist in Vernon Parish at the time this plan went to publication (*Figure 2-7*).

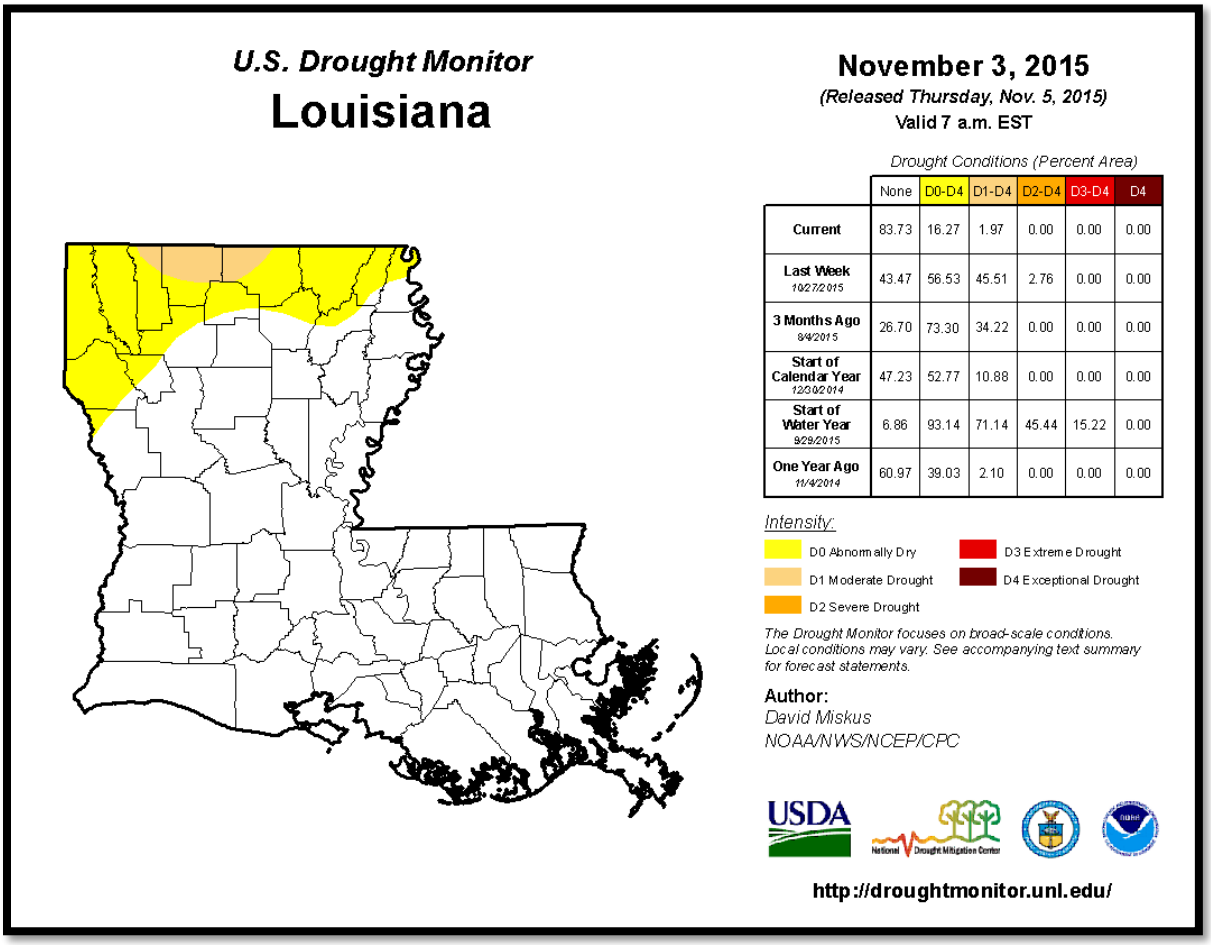

Figure 2-7: United States Drought Monitor for the State of Louisiana and its Parishes (Source: The National Drought Mitigation Center)

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 Vernon Parish is on the agricultural community.

Previous Occurrences / Extents

The SHELDUS database reports a total of two drought events occurring within the boundaries of Vernon Parish between the years of 1989 to 2014. On the following page, *Table 2-10* identifies the date of occurrence, estimated crop damage, and severity of the events that have occurred in Vernon Parish. Based on previous occurrences, and in accordance with the Palmer Drought Index, the worst case scenario for drought in Vernon Parish would be a severe drought event.

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

Date	Crop Damage	Palmer Classification
May 1996	$92,797	Moderate Drought
December 2000	$14,339,978	Severe Drought

Frequency / Probability

Based on previous occurrences of two drought events in 25 years, the probability of drought occurrence in the planning area in any given year is 8%.

Estimated Potential Losses

According to the SHELDUS database, there have been two drought events that have caused some level of crop damage. The total agricultural damage from these events is $80,252,176, with an average cost of $7,216,387 per drought event. When annualizing the total cost over the 25-year record, total annual losses based on drought is estimated to be $577,311. *Table 2-11* presents an analysis of agricultural exposure that is susceptible to drought by major crop type for Vernon Parish.

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

Agricultural Exposure by Type for Drought			
Forestry	Peaches	Hay	Total
$78,590,176	$30,000	$1,632,000	$80,252,176

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

Earthquakes

An earthquake is a sudden motion or trembling of the Earth caused by an abrupt release of stored energy in the rocks beneath the Earth's surface. The energy released results in vibrations which are known as seismic waves. Ground motion from seismic waves is expressed as peak ground acceleration (PGA), the fastest measured change in speed for a particle at ground level that is moving because of an earthquake. PGA is commonly measured as a percentage of acceleration due to Earth's gravity (%g). This measurement is relied on to determine seismic load engineering design and construction requirements. Earthquakes are typically described in terms of magnitude and intensity. Magnitude is the measure of the amplitude of the seismic wave and is often expressed by the Richter scale, and intensity is a measure of how strong the shock was felt at a particular location, indexed by the Modified Mercalli Intensity (MMI) scale. The Richter scale is a logarithmic measurement whereby an increase in the scale by one whole number represents a tenfold increase in measured ground motion of the earthquake (and an increase in energy released of more than 30 times). An increase by two whole numbers represents a 102 (or 100-fold) increase in ground motion, and thus more than 302 (or 900) times the energy released. *Table 2-12* shows the rough correlation between the Richter scale, PGA, and the MMI. The relationship between these is approximate and depends upon such specifics as the depth of the focus (the location of the actual rock movement) and distance from the epicenter (the location on the Earth's surface above the earthquake focus) of the earthquake.

Table 2-12: Comparison of Earthquake Magnitudes for PGA, Richter, and MMI
(Source: USGS Earthquake Hazards Program)

Comparison of Earthquake Metrics			
PGA (%g)	Magnitude (Richter)	Intensity (MMI)	Description (MMI)
<0.17	1.0 - 3.0	I	**I**. Not felt except by a very few under especially favorable conditions.
0.17 - 1.4	3.0 - 3.9	II - III	**II**. Felt only by a few persons at rest, especially on upper floors of buildings. **III**. Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
1.4 - 9.2	4.0 - 4.9	IV - V	**IV**. Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motorcars rock noticeably. **V**. Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
9.2 - 34	5.0 - 5.9	VI - VII	**VI**. Felt by all. Some heavy furniture moved; a few instances of fallen plaster. Damage slight. **VII**. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.

Comparison of Earthquake Metrics			
PGA (%g)	Magnitude (Richter)	Intensity (MMI)	Description (MMI)
34 - 124	6.0 - 6.9	VII - IX	**VIII**. Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. **IX**. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
>124	7.0 and higher	**VIII** or higher	**X**. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent. **XI**. Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly. **XII**. Damage total. Lines of sight and level are distorted. Objects thrown into the air.

The system of subsidence faults in southern Louisiana developed due to accelerated land subsidence and rapid sediment deposition from the Mississippi River. The system stretches across the southern portion of the state, from Beauregard Parish in the west to West Baton Rouge Parish in the east, and it includes every parish south of this line. This system is thought to be responsible for many of the recorded earthquakes from 1843 to the present. All of the earthquakes that occurred over this period of time were of low magnitude, resulting mostly in limited property damage (such as broken windows, damaged chimneys, and cracked plaster). While faults throughout the northwestern parishes are thought to be inactive, the New Madrid seismic zone lies just to the north of Louisiana and originates in the region of New Madrid, Missouri. The magnitude of historic earthquakes originating in the New Madrid seismic zone is far greater than that generated by the subsidence fault system in coastal Louisiana. A significant seismic event from the New Madrid seismic zone is more likely to have a greater impact on Louisiana than a seismic event from the subsidence fault system.

Location

An earthquake event is a geological hazard that occurs along fault lines. There are no fault lines that run through Vernon Parish (*Figure 2-8*). However, there are several fault lines that run through parishes south of Vernon Parish and the effects of an earthquake in those areas may be felt throughout the Vernon Parish planning area.

Previous Occurrences / Extents

Both the SHELDUS and National Climatic Data Center report no earthquake events occurring within the boundaries of Vernon Parish between the years of 1989 – 2014. The National Oceanic and Atmospheric Administration's National Geophysical Data Center reports no earthquake events occurring within the boundaries of Vernon Parish between the years 1811 – 2014. *Figure 2-8* displays the location and intensity of each earthquake event in the surrounding parishes. Based on the previous earthquake events in the surrounding parishes, an earthquake with an intensity level of MMI I could be felt within the planning area. This intensity of an earthquake would only be felt by a very few people.

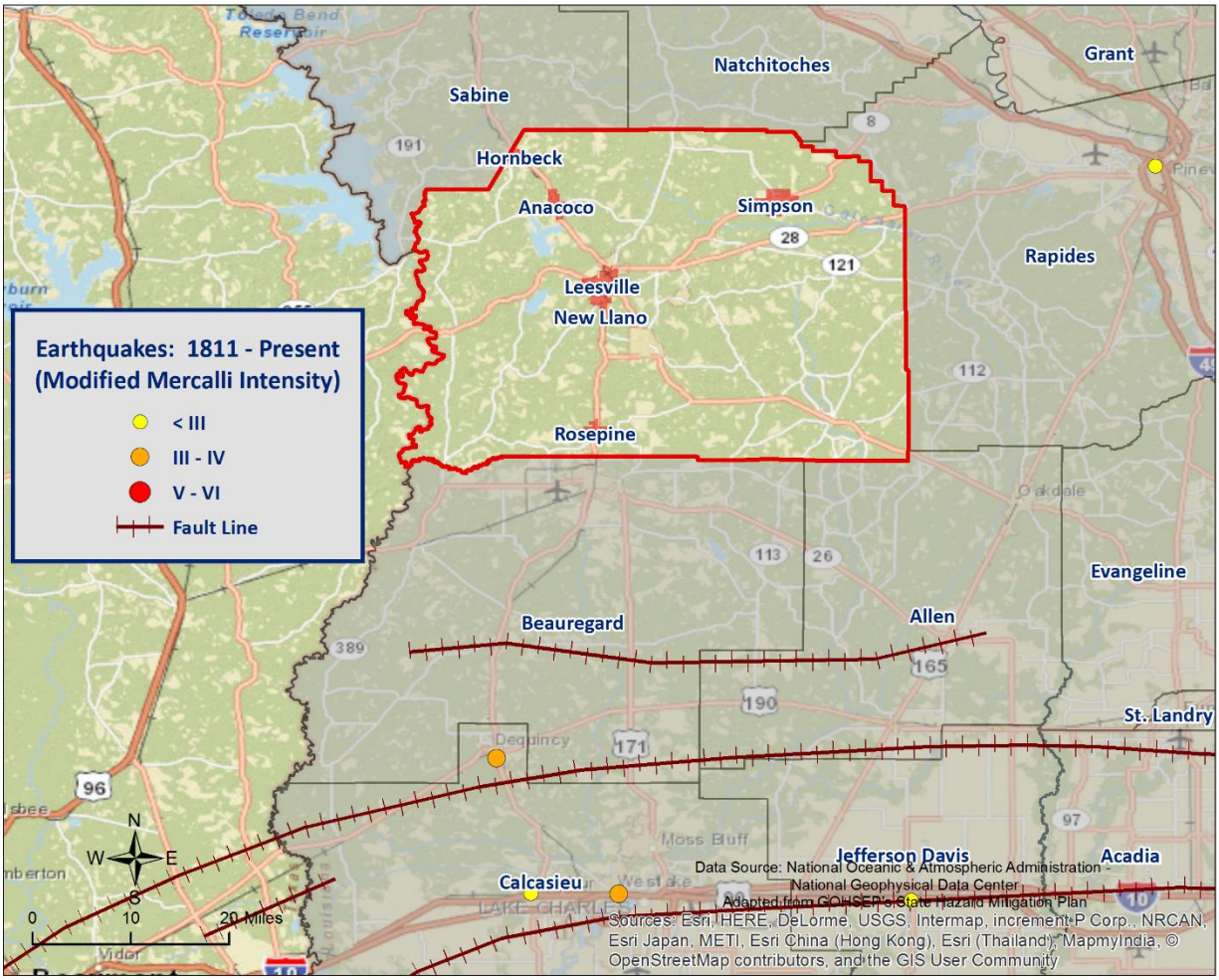

Figure 2-8: Location and Intensity (MMI) of Earthquakes in Vernon Parish

Frequency / Probability

Earthquakes are an extremely rare occurrence in the State of Louisiana and Vernon Parish, and there has been no occurrence of an earthquake event within the boundaries of the parish from the years 1811 – 2014. Based on this historical record and Louisiana's State Hazard Mitigation Plan, it is determined that an earthquake event has less than a 1% annual chance of occurrence in the Vernon Parish planning area, and is therefore discounted. As a result, earthquakes are not carried forward into risk assessment.

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 2-9*, and *Table 2-13* 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 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.

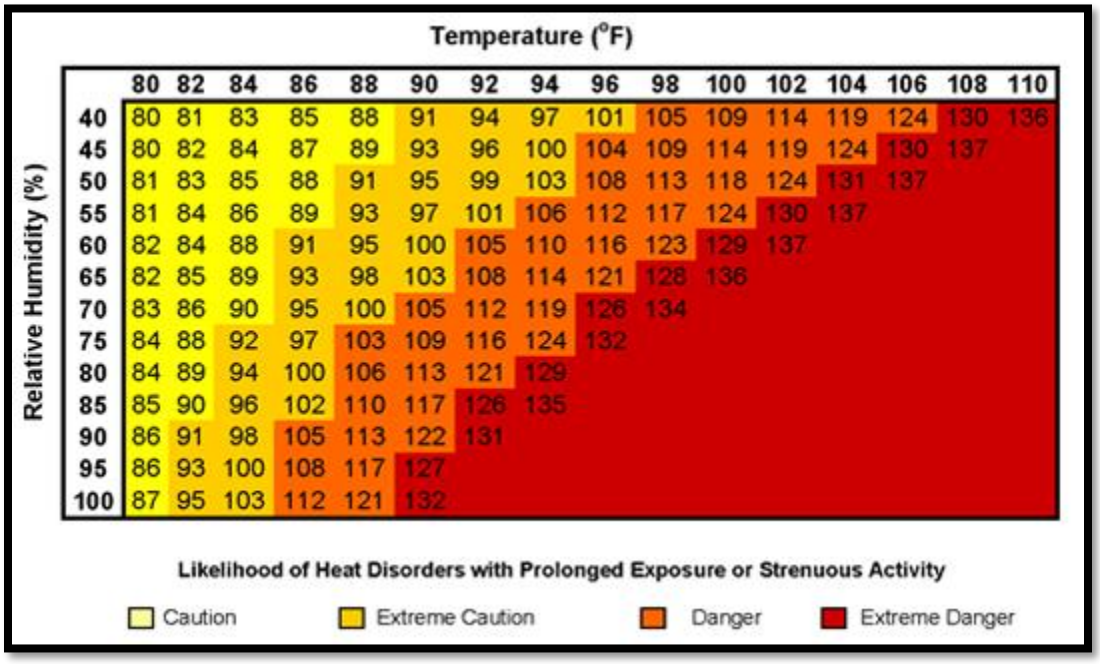

Figure 2-9: Heat Index Advisor based on Air Temperature (°F) and Relative Humidity (Source: National Weather Service)

Table 2-13: 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 Vernon Parish as all of the adjacent parishes, the entire planning area for Vernon Parish is equally at risk for extreme heat.

Previous Occurrences / Extents

The SHELDUS database reports a total of two significant extreme heat events occurring within the boundaries of Vernon Parish between the years of 1960 to 2014. *Table 2-14* provides an overview of extreme heat events that have impacted the Vernon Parish planning area since 1960. Based on historical data, the worst case scenario for Vernon 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 2-14: Previous Occurrences of Extreme Heat in Vernon Parish (Source: SHELDUS)

Date	Crop Damage	Risk Level
May 1963	$78,125	Moderate
July 1980	$7,813	High

Frequency / Probability

Based on the geographical location of the State of Louisiana, and Vernon Parish in particular, extreme heat events occur frequently. However, extreme heat events that meet the definition used by SHELDUS (those that actually result in damages to property or crops and injury or death to people) are less likely to occur. Based on a review of significant extreme heat data that has caused damages in the last 54 years, in which Vernon Parish has had two recorded events, the probability of occurrence is estimated at approximately 4%.

Estimated Potential Losses

According to the SHELDUS database, crop damage due to extreme heat in Vernon Parish has totaled approximately $85,938 since 1960. 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 (1960 – 2014). This provides an annual estimated potential loss of $3,438. The following table, based on the 2010 Census data, provides an estimate of potential crop losses for Vernon Parish:

Table 2-15: Estimated Annual Crop Losses in Vernon Parish for Extreme Heat

Estimated Annual Potential Losses from Extreme Heat for Vernon Parish						
Unincorporated Vernon Parish (75.6% of Population)	Anacoco (1.7% of Population)	Hornbeck (0.9% of Population)	Leesville (12.6% of Population)	New Llano (4.8% of Population)	Rosepine (3.2% of Population)	Simpson (1.2% of Population)
$2,597	$57	$32	$434	$164	$111	$42

There have been no reported injuries or deaths as a direct result of extreme heat in Vernon Parish.

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 defines a flood as:

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

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

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

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

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

- **Riverine flooding** occurs along a river or smaller stream. It is the result of runoff from heavy rainfall or intensive snow or ice melt. The speed with which riverine flood levels rise and fall depends not only on the amount of rainfall, but even more on the capacity of the river itself, as well as the shape and land cover of its drainage basin. The smaller the river, the faster that water levels rise and fall. Thus, the Mississippi River levels rise and fall slowly due to its large capacity. Generally, elongated and intensely-developed drainage basins will reach faster peak discharges and faster falls than circular-shaped and forested basins of the same area.
- **Flash flooding** occurs when locally intense precipitation inundates an area in a short amount of time, resulting in local stream flow and drainage capacity being overwhelmed.
- **Ponding** occurs when concave areas (e.g., parking lots, roads, and clay-lined natural low areas) collect water and are unable to drain.
- **Backwater flooding** occurs when water slowly rises from a normally unexpected direction where protection has not been provided. A model example is the flooding that occurred in LaPlace during Hurricane Isaac in 2012. Although the town was protected by a levee on the side facing the

Mississippi River, floodwaters from Lake Maurepas and Lake Pontchartrain crept into the community on the side of town opposite the Mississippi River.

- **Urban flooding** is similar to flash flooding but is specific to urbanized areas. It takes place when storm water drainage systems cannot keep pace with heavy precipitation, and water accumulates on the surface. Most urban flooding is caused by slow-moving thunderstorms or torrential rainfall.
- **Coastal flooding** can appear similar to any of the other flood types, depending on its cause. It occurs when normally dry coastal land is flooded by seawater, but may be caused by direct inundation (when the sea level exceeds the elevation of the land), overtopping of a natural or artificial barrier, or the breaching of a natural or artificial barrier (i.e., when the barrier is broken down by the sea water). Coastal flooding is typically caused by storm surge, tsunamis, or gradual sea level rise.

Historically, Vernon Parish has experienced several types of flooding. For purposes of this assessment, ponding, flash flooding, and urban flooding are considered to be flooding as a result of storm water from heavy precipitation thunderstorms

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

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

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

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

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

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

The 100-year flood event is of particular significance since it is the regulatory standard that determines the obligation (or lack thereof) to purchase flood insurance. Flood insurance premiums are set depending on the flood zone, as modeled by National Flood Insurance Program (NFIP) Rate Maps. The NFIP and FEMA suggest insurance rates based on Special Flood Hazard Areas (SFHAs), as diagrammed in *Figure 2-10*.

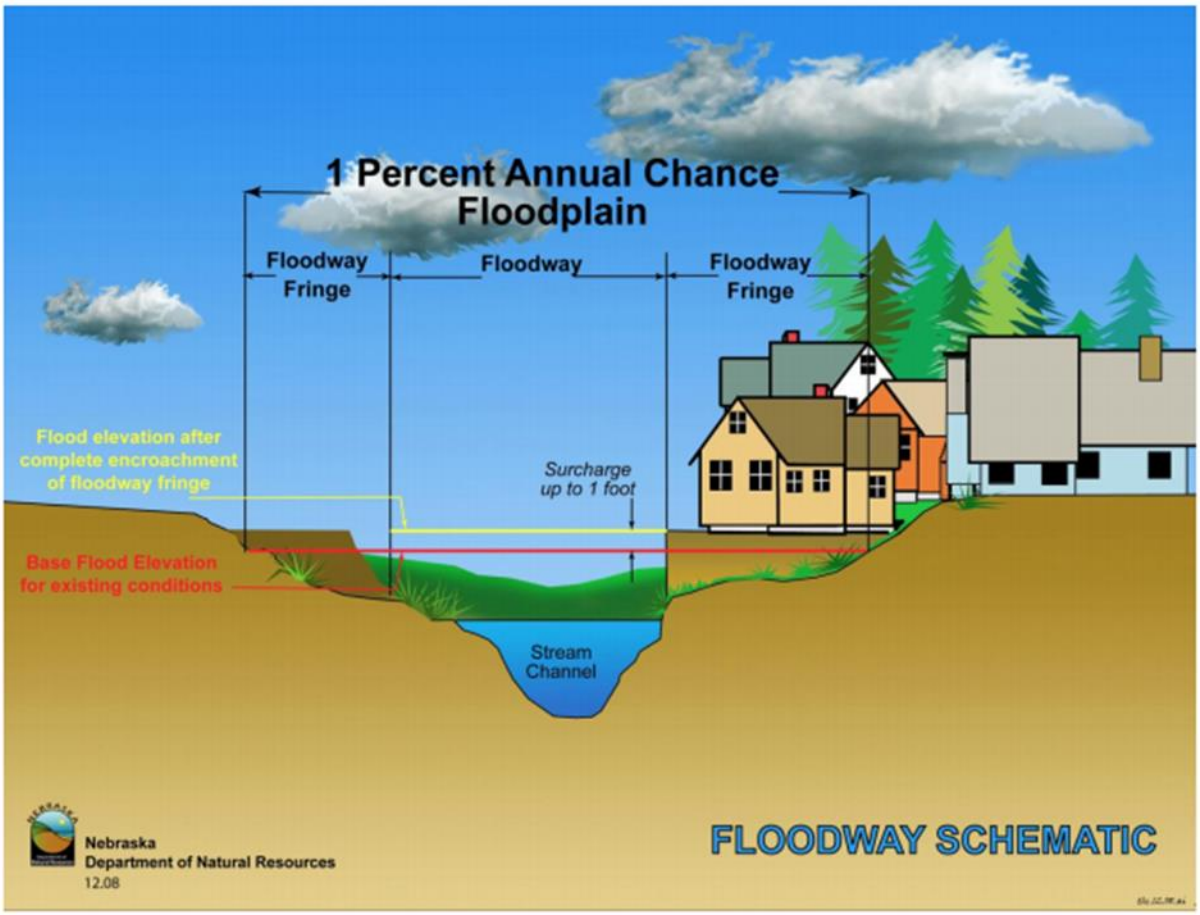

Figure 2-10: Schematic of 100-Year Floodplain. The Special Flood Hazard Area (SFHA) extends to the end of the floodway fringe.
(Source: Nebraska Department of Natural Resources)

A SFHA is the land area covered by the floodwaters of the base flood (red line in *Figure 2-10*), where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Property Damage

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

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

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

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

Repetitive Loss Properties

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

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

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

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

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

Table 2-16: Repetitive Loss Structures for Vernon Parish

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
Unincorporated Vernon Parish	11	11	0	0	32	918,941	$28,717
Anacoco	0	0	0	0	0	$0	$0
Hornbeck	0	0	0	0	0	$0	$0
Leesville	9	7	2	0	20	$248,547	$12,427
New Llano	0	0	0	0	0	$0	$0
Rosepine	0	0	0	0	0	$0	$0
Simpson	0	0	0	0	0	$0	$0
Total	20	18	2	0	52	$1,167,488	$22,452

Of the 20 repetitive loss structures, 14 were able to be geocoded in order to provide an overview of where the repetitive loss structures were located throughout the parish. *Figure 2-11* shows the approximate location of the 14 structures, while *Figure 2-12* 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 the incorporated areas of Leesville.

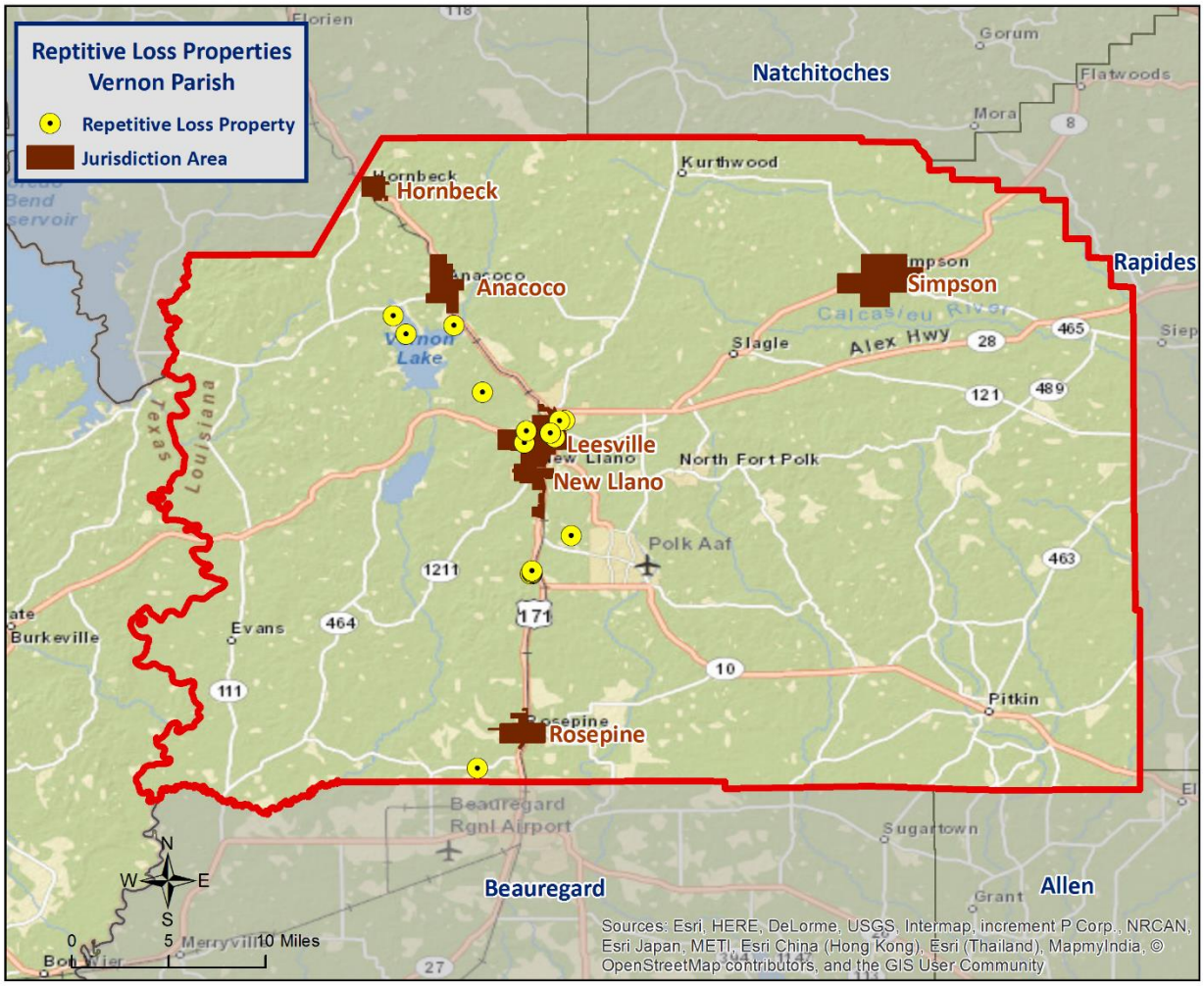

Figure 2-11: Repetitive Loss Properties in Vernon Parish

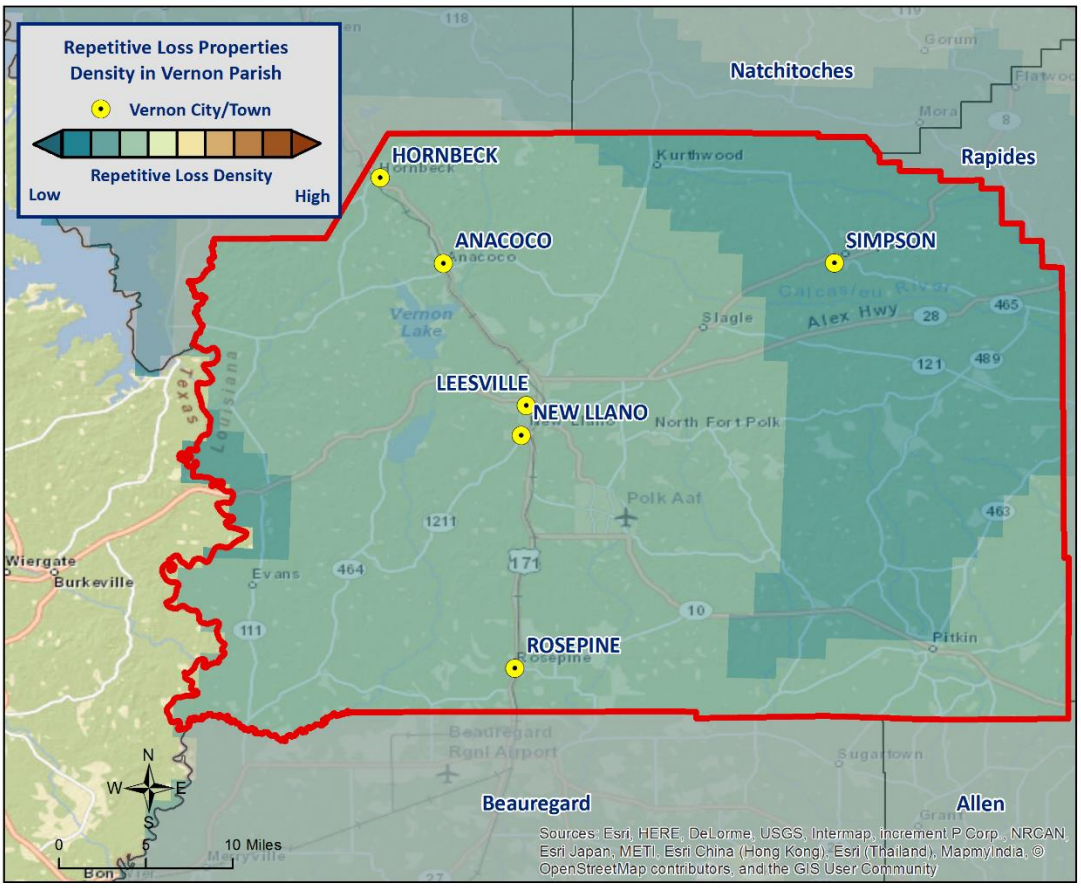

Figure 2-12: Repetitive Loss Property Densities in Vernon Parish

National Flood Insurance Program

Flood insurance statistics indicate that Vernon Parish has 320 flood insurance policies with the NFIP, with total annual premiums of $196,946. Vernon Parish, the city of Leesville, the towns of Rosepine, New Llano, and Hornbeck, and the villages of Anacoco and Simpson are all participants in the NFIP. Vernon Parish and each of the incorporated jurisdictions that participate in the NFIP 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 Vernon Parish are provided in the tables on the following page.

Table 2-17: Summary of NFIP Policies for Vernon Parish

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid	No. of Insurance Claims Filed Since 1978	Total Loss Payments
Vernon Parish (Unincorporated)	219	$47,748,400	$141,826	97	$1,991,811
Anacoco	3	$460,000	$2,212	0	$0
Hornbeck	2	$370,000	$1,540	0	$0
Leesville	67	$13,217,900	$37,622	40	$359,527
New Llano	22	$4,291,500	$11,730	1	$0
Rosepine	7	$1,526,000	$2,016	1	$4,419
Simpson	0	$0	$0	0	$0
Total	320	$67,613,800	$196,946	139	$2,355,757

*While the Village of Simpson does not have any active NFIP policies, the jurisdiction will continue to promote NFIP participation through education and outreach.

Table 2-18: Summary of Community Flood Maps for Vernon Parish

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220228#	Vernon Parish (Unincorporated)	7/26/1977	3/1/1987	3/3/2011	3/1/1987	No
220046#	Anacoco, Village of	3/1/1987	3/3/2011	3/3/11 (M)	9/2/2009	No
220332#	Hornbeck, Town of	8/15/1975	6/1/2005	3/3/11 (M)	6/1/2005	No
220229#	Leesville, City of	11/23/1973	1/17/1986	3/3/2011	1/17/1986	No
220340#	New Llano, Town of	4/9/1976	7/18/1985	3/3/11 (M)	7/18/1985	No
220346#	Rosepine, Town of	8/15/1975	10/19/1982	3/3/11 (M)	10/19/1982	No
220311#	Simpson, Village of	8/8/1975	3/3/2011	3/3/11 (M)	9/16/2010	No

According to the Community Rating System (CRS) list of eligible communities dated June 1, 2014, Vernon Parish and the incorporated areas of Anacoco, Hornbeck, Leesville, New Llano, Rosepine, and Simpson 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 floods have often put themselves in perilous situations by entering flood waters that they believe to be safe, or by ignoring travel advisories.

Major health concerns are also associated with floods. Flood waters can transport materials such as dirt, oil, animal waste, and chemicals (e.g., farm, lawn, and industrial) that may cause illnesses of various degrees when coming in contact with humans. Flood waters can also infiltrate sewer lines and inundate wastewater

treatment plants, causing sewage to backup and creating a breeding ground for dangerous bacteria. This infiltration may also cause water supplies to become contaminated and undrinkable.

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

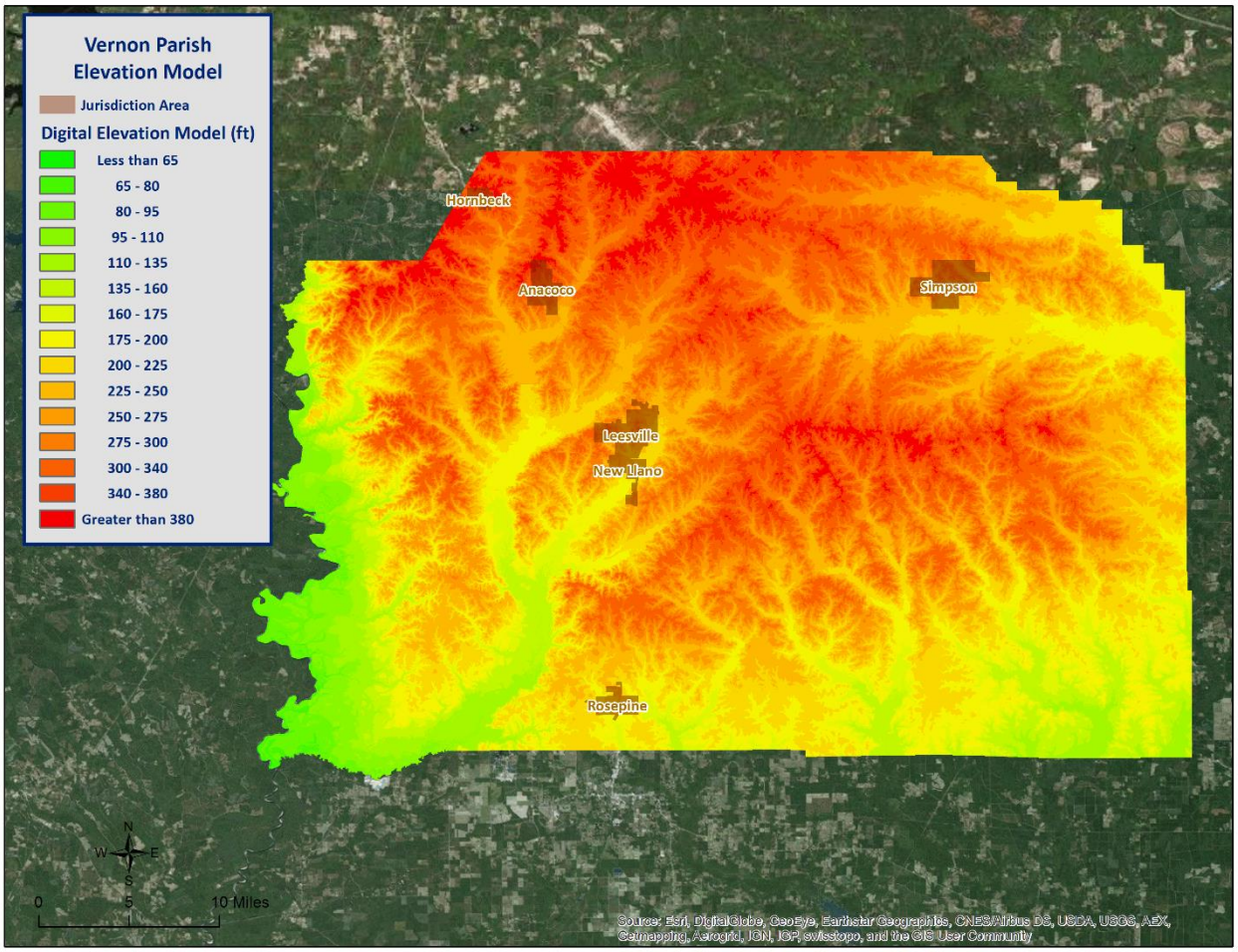

Figure 2-13: Elevation throughout Vernon Parish

Looking at the digital elevation model (DEM) for Vernon 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 less than 65 feet to over 380 feet. The highest elevation in the parish is approximately 484 feet, located in the Hornbeck area. The lowest elevations in Vernon Parish are located along the banks of the Sabine River in the western unincorporated areas of the parish. The incorporated areas range in elevation from approximately 217 feet to 335 feet, with Anacoco averaging 335 feet, Hornbeck averaging 325 feet, Leesville averaging 254 feet, New Llano averaging 217 feet, Rosepine averaging 230 feet, and Simpson averaging 259 feet.

Location

Vernon Parish has experienced significant flooding in its history and can expect more in the future. Many parts of the western portion of the parish that border the Sabine River are located in the 100-year floodplain. Another area of concern is Brushy Creek which causes significant flooding when heavy rains impact the area.

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

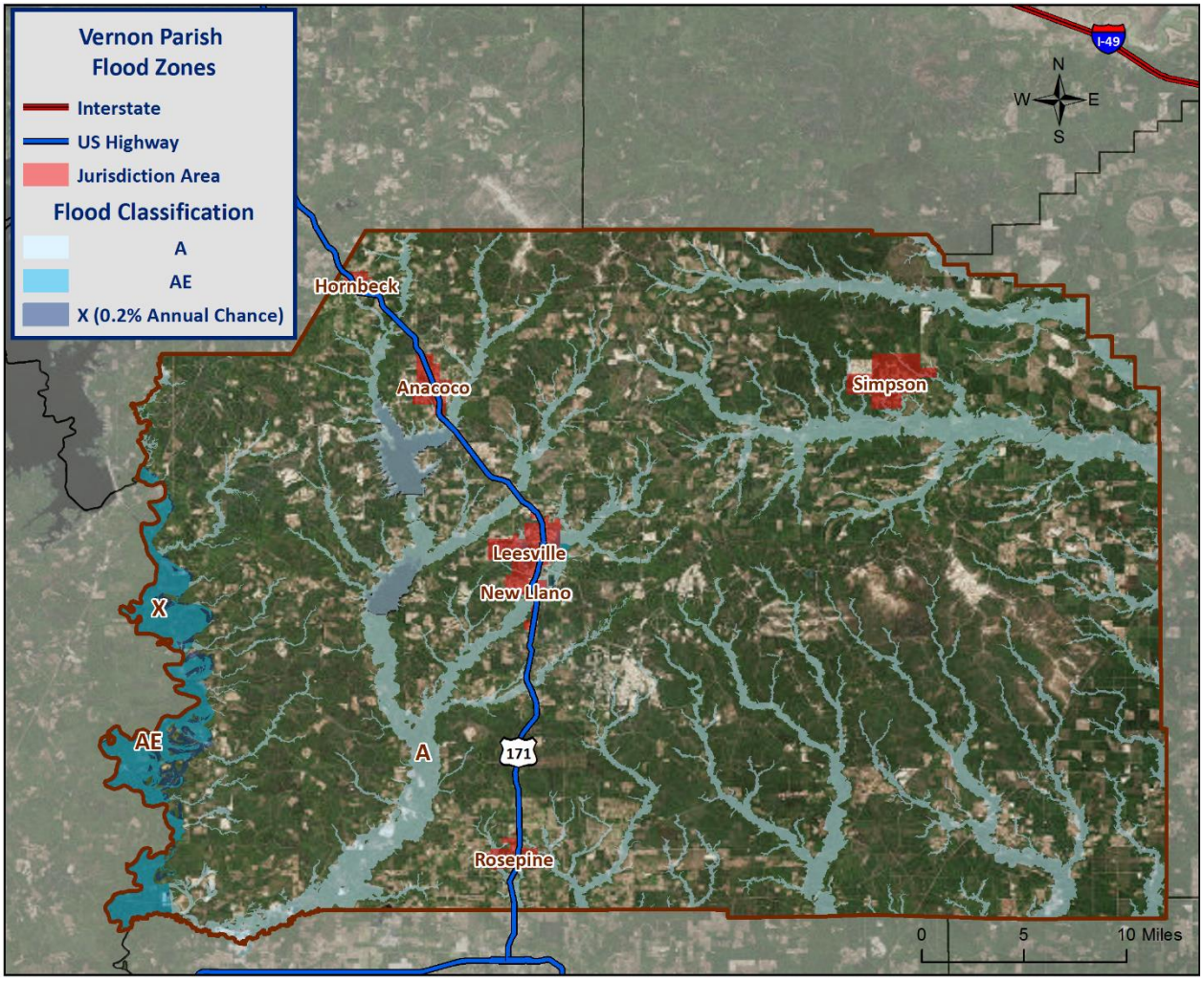

Figure 2-14: Vernon Parish Areas within the Flood Zones

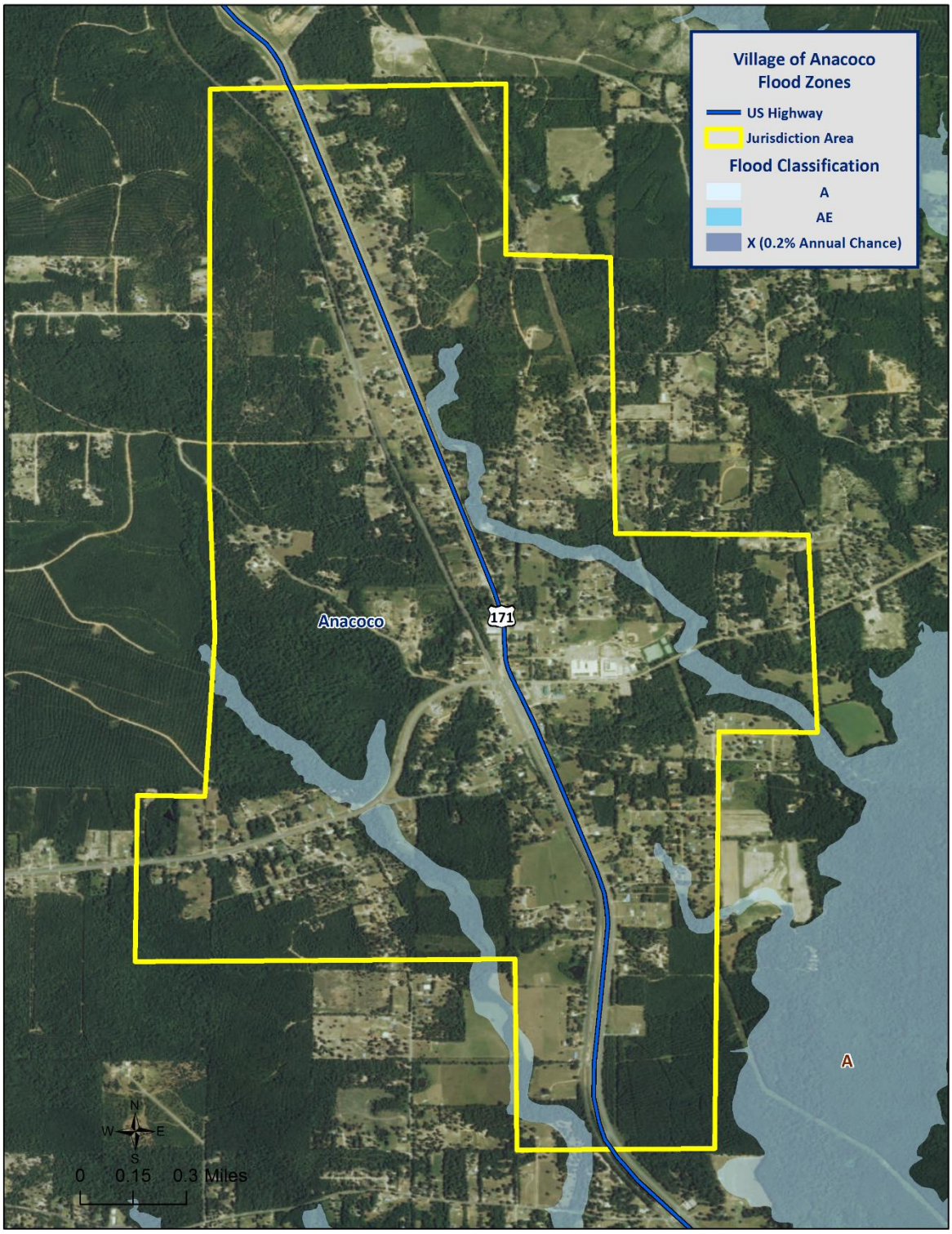

Figure 2-15: Village of Anacoco Areas within the Flood Zones

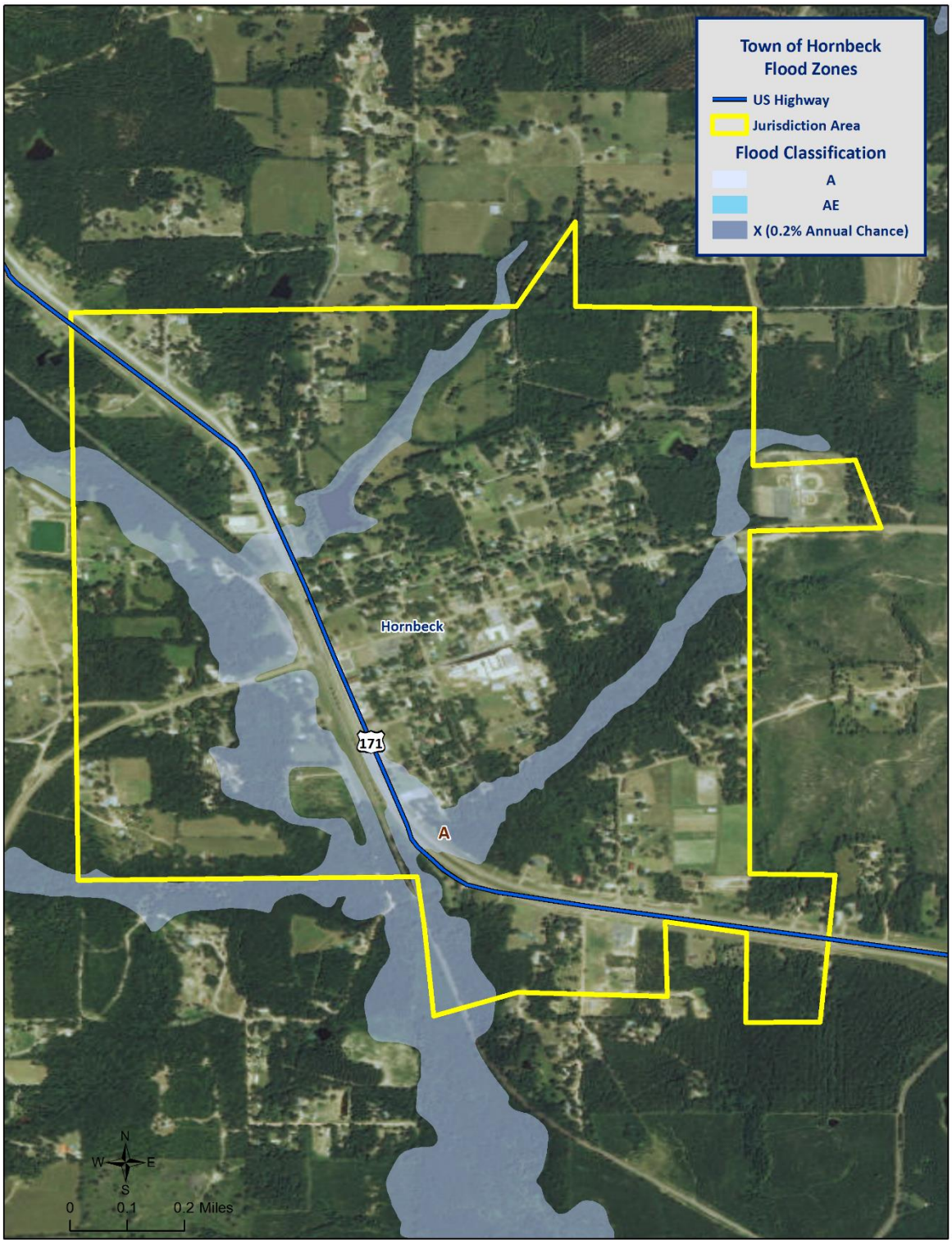

Figure 2-16: Town of Hornbeck Areas within the Flood Zones

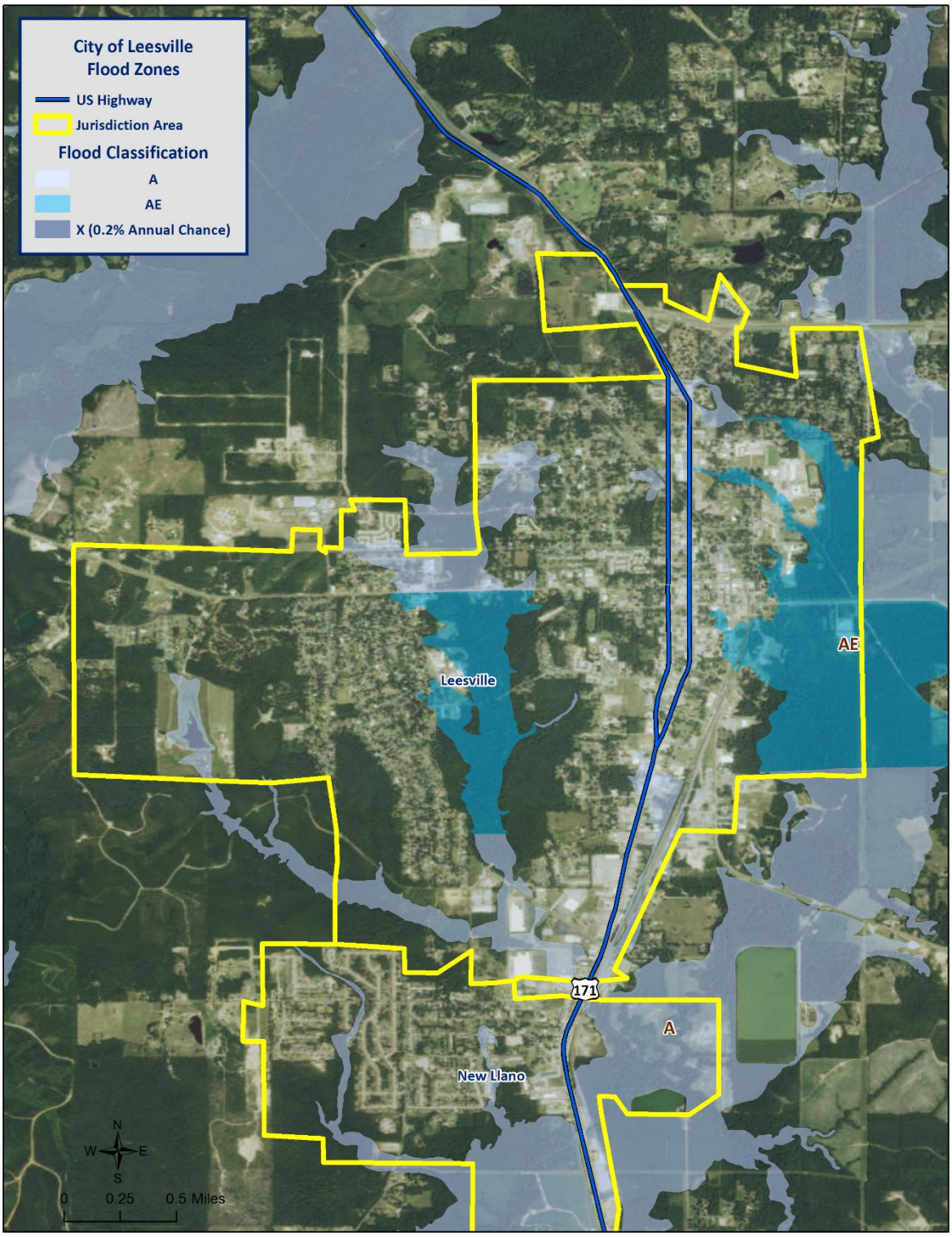

Figure 2-17: City of Leesville Areas within the Flood Zones

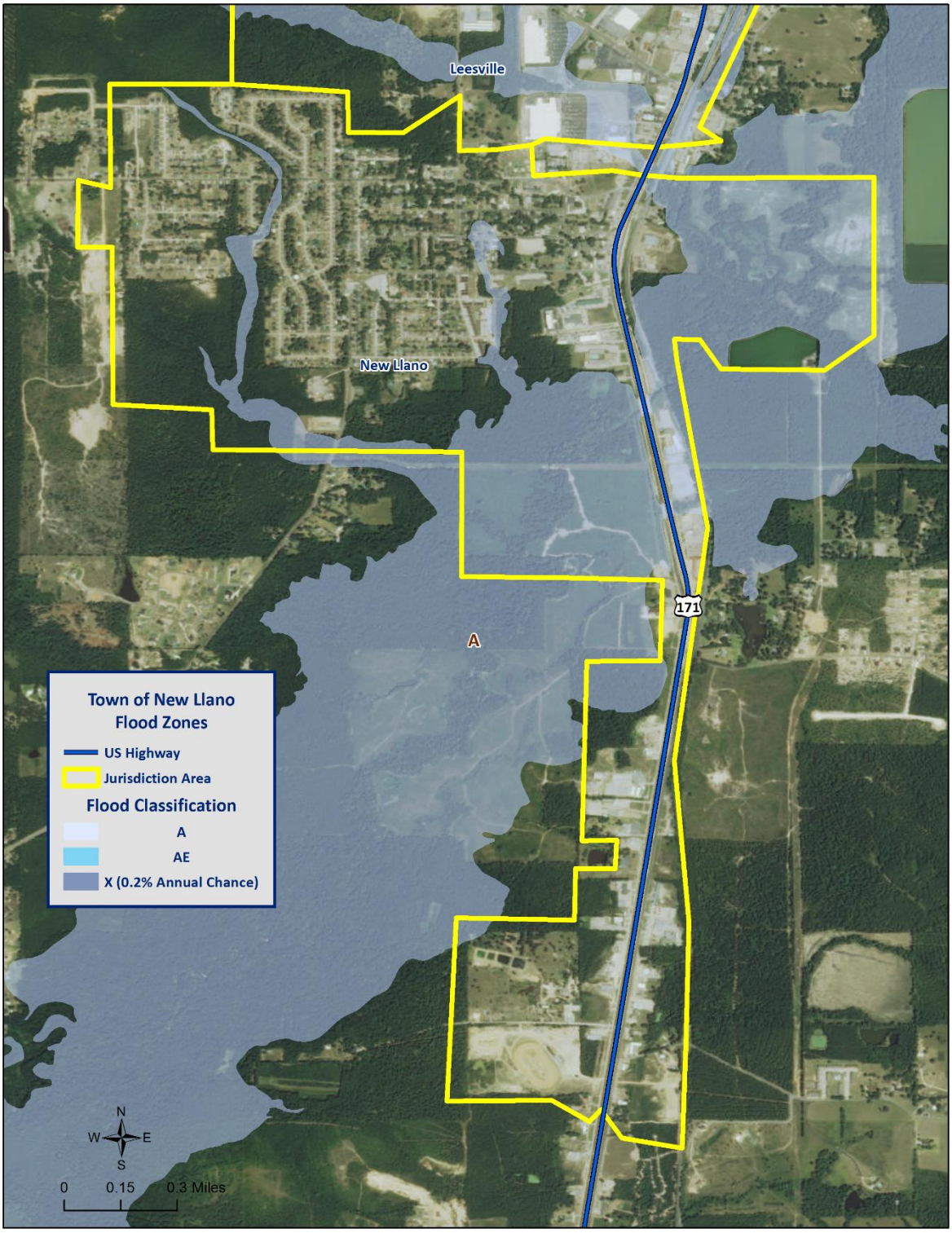

Figure 2-18: Town of New Llano Areas within the Flood Zones

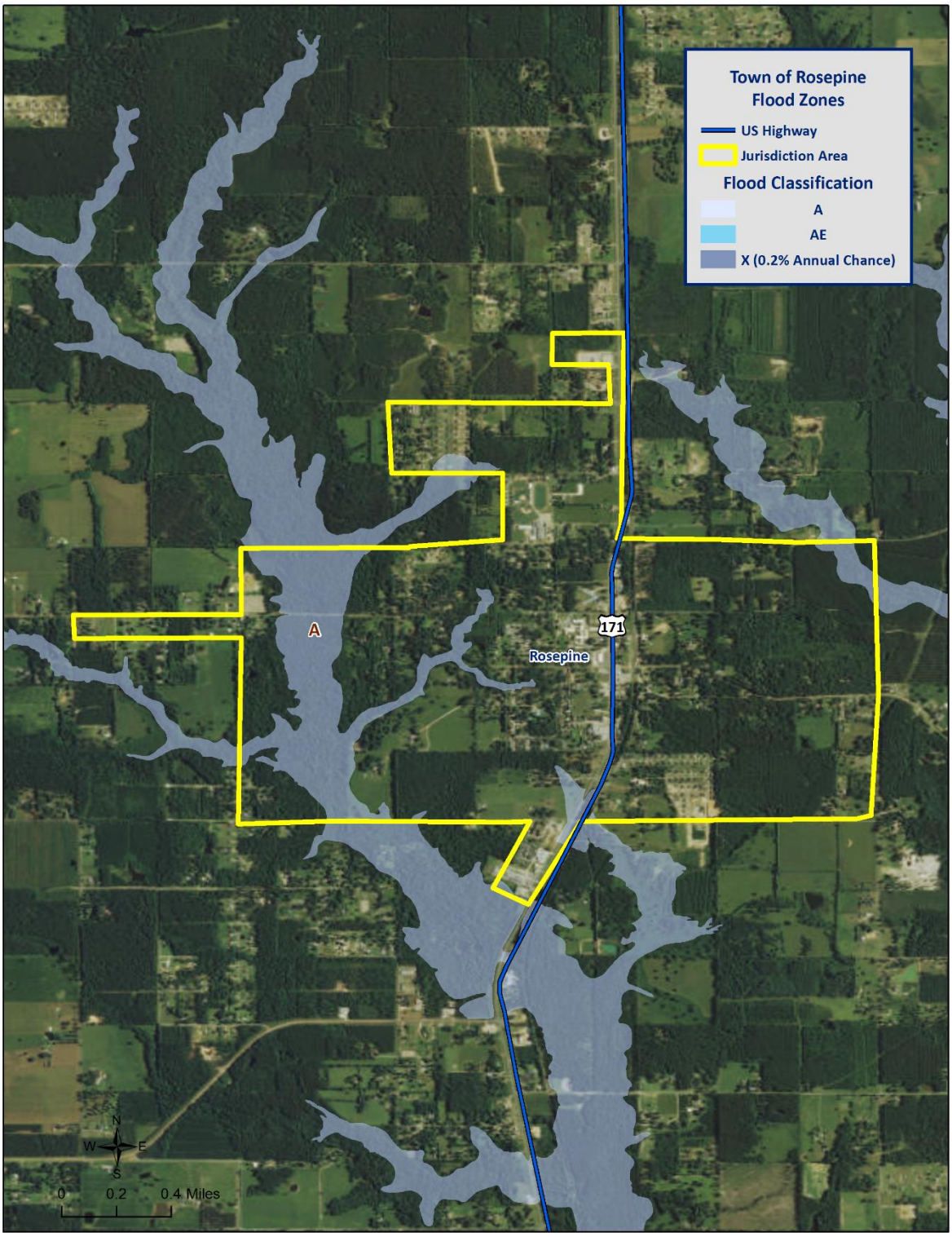

Figure 2-19: Town of Rosepine Areas within the Flood Zones

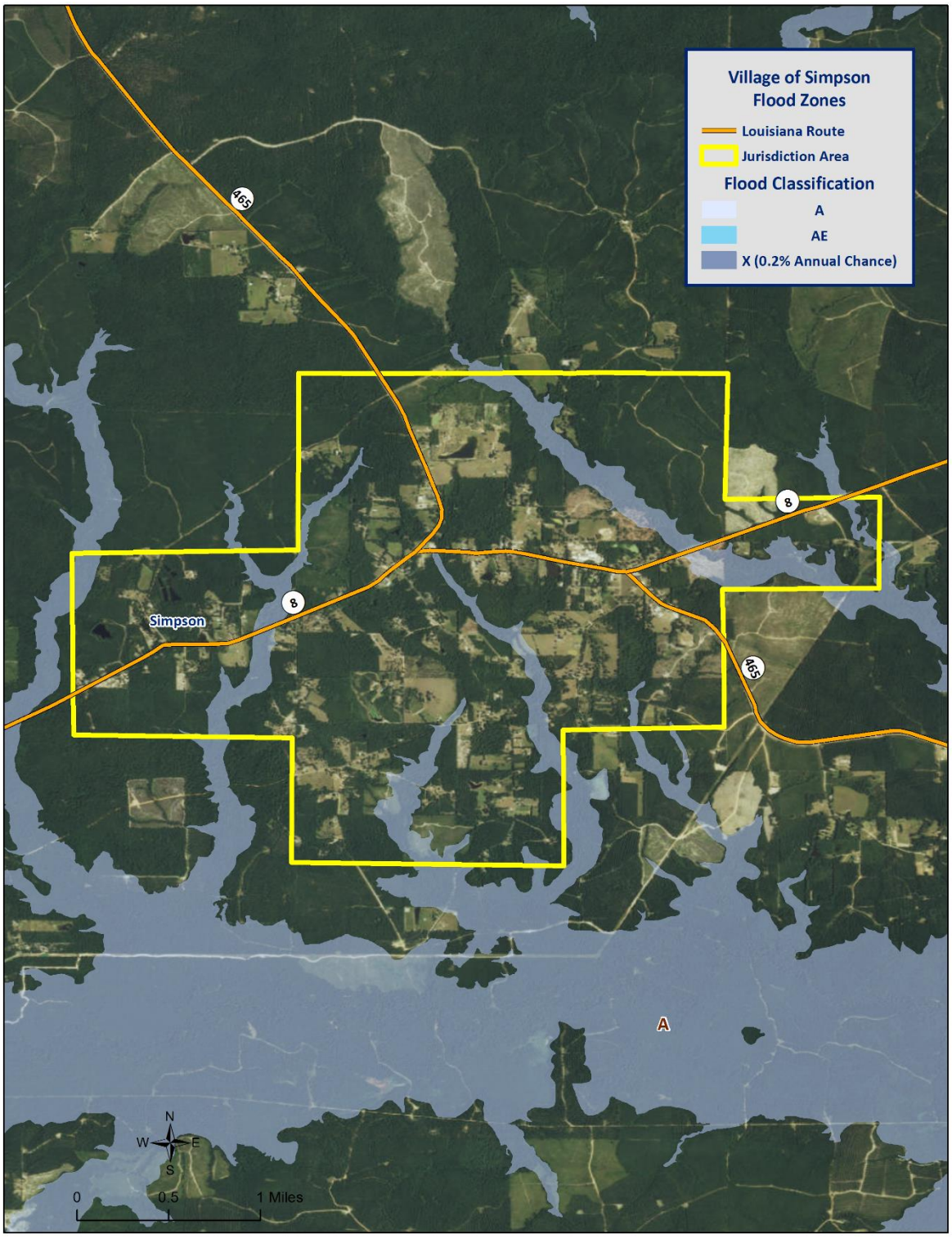

Figure 2-20: Village of Simpson Areas within the Flood Zones

Previous Occurrences / Extents

Historically, between 1989 and 2014, there have been 19 flooding events that have created significant flooding in Vernon Parish. Below is a brief synopsis of the 10 flooding events that have occurred since 2009, including those that have occurred since the parish's last planning update.

Table 2-19: Historical Floods in Vernon Parish with Locations from 2009 - 2014

Date	Extents	Type of Flooding	Estimated Damages	Location
October 29, 2009	Heavy rainfall in central Vernon Parish caused widespread flooding of roadways. Many streets across Leesville had flood depths of up to a half a foot. Several cars stalled in the high water of Highway 171 and on Jean Chapel Road.	Flash Flood	$50,000	LEESVILLE AND UNINCORPROATED AREA
October 30, 2009	Rising waters on the Sabine River from a combination of heavy rainfall and water releases from Toledo Bend Dam trapped several hunters in the area.	Flood	$0	BURR FERRY
November 1, 2009	River flooding from heavy rainfall lead to major damage to roadways in the western portion of the parish. Several homes and subdivisions were cut off from surrounding areas due to floodwaters.	Flood	$750,000	BURR FERRY
March 8, 2011	Heavy rainfall caused the flooding of Six Mile Creek. Approximately 2 feet of water covered the	Flash Flood	$0	(POE)FT POLK AAF LEE

Date	Extents	Type of Flooding	Estimated Damages	Location
	roadway near the creek.			
February 3, 2012	The west fork of Six Mile Creek overflowed its banks in Fort Polk. Two to 3.5 feet of water covered the roadway bordering the creek.	Flash Flood	$20,000	FULLERTON
March 20, 2012	Ten to 14 inches of rain caused flooding that closed or washed out several roadways in the area. Cars were trapped on Highway 171 from Hornbeck to Rosepine. 22 homes were flooded.	Flash Flood	$1,520,000	HORNBECK, LEESVILLE, ROSEPINE, NEW LLANO AND UNINCORPORATED AREA
January 10, 2013	Big Brushy Creek near Pitkin rose above flood stage, causing the closure of roads in the area.	Flash Flood	$0	PITKIN
October 31, 2013	Heavy rain from a slow moving storm produced flash flooding in the area. Birds Creek rose quickly, causing roadways to flood.	Flash Flood	$0	CRAVENS
May 12, 2014	Several inches of rain fell during a slow moving storm, producing flooding in portions of the parish. Multiple streets were flooded and closed in Leesville and Anacoco.	Flash Flood	$0	ANACOCO AND LEESVILLE

Date	Extents	Type of Flooding	Estimated Damages	Location
May 12, 2014	Heavy rain fall caused moderate flooding along the bayous, which resulted in the closure of several roads in Rosepine.	Flood	$0	ROSEPINE

Since 2009, there have been no significant flooding events in the incorporated area of Simpson.

The worst-case scenarios are based on several different types of flooding events. Storm water excesses and riverine flooding primarily affect the low lying areas of the parish, and flood depths of up to five feet can be expected in the unincorporated areas of the parish. The incorporated areas of Leesville, New Llano, Rosepine, and Anacoco can expect flood depths from three to five feet, while the incorporated area of Hornbeck can expect flooding levels of approximately one to three feet. The incorporated area of Simpson can expect flood levels of approximately two feet.

Frequency / Probability

While other parts of this plan, along with the State's Hazard Mitigation Plan, have relied on the SHELDUS database to provide the annual probability, due to Vernon Parish having multiple jurisdictions, it was necessary to assess the historical data found in the National Climatic Data Center's for Vernon 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 2-20: Annual Flood Probabilities for Vernon Parish

Jurisdiction	Annual Probability	Return Frequency
Vernon Parish (Unincorporated)	52%	1 - 2 years
Anacoco	20%	5 years
Hornbeck	12%	8 - 9 years
Leesville	36%	2 - 3 years
New Llano	12%	8 - 9 years
Rosepine	20%	5 years
Simpson	12%	8 - 9 years

Based on historical record, the overall flooding probability for the entire Vernon Parish planning area is 76%, with 19 events having occurred over a 25-year period.

Estimated Potential Losses

Using the Hazus 2.2 Flood Model, along with the parish DFIRM, the 100-year flood scenario was analyzed to determine losses from this worst-case scenario. Table 2-21 shows the total economic losses that would result from this occurrence.

Table 2-21: Estimated Losses in Vernon Parish from a 100-Year Flood Event (Source: Hazus 2.2)

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
Vernon Parish (Unincorporated)	$1,269,000
Anacoco	$47,000
Hornbeck	$206,000
Leesville	$525,000
New Llano	$510,000
Rosepine	$49,000
Simpson	$37,000
Total	$2,643,000

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 2-22: Estimated 100-Year Flood Losses for Unincorporated Vernon Parish by Sector (Source: Hazus 2.2)

Vernon Parish (Unincorporated)	Estimated Total Losses from 100-Year Flood Event
Agricultural	$11,000
Commercial	$50,000
Government	$0
Industrial	$132,000
Religious / Non-Profit	$158,000
Residential	$918,000
Schools	$0
Total	$1,269,000

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

Anacoco	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$4,000
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$43,000
Schools	$0
Total	$47,000

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

Hornbeck	Estimated Total Losses from 100-Year Flood Event
Agricultural	$2,000
Commercial	$5,000
Government	$0
Industrial	$0
Religious / Non-Profit	$74,000
Residential	$125,000
Schools	$0
Total	$206,000

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

Leesville	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$14,000
Government	$0
Industrial	$43,000
Religious / Non-Profit	$47,000
Residential	$421,000
Schools	$0
Total	$525,000

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

New Llano	Estimated Total Losses from 100-Year Flood Event
Agricultural	$1,000
Commercial	$12,000
Government	$0
Industrial	$32,000
Religious / Non-Profit	$95,000
Residential	$370,000
Schools	$0
Total	$510,000

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

Rosepine	Estimated Total Losses from 100-Year Flood Event
Agricultural	$0
Commercial	$0
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$49,000
Schools	$0
Total	$49,000

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

Simpson	Estimated Total Losses from 100-Year Flood Event
Agricultural	$1,000
Commercial	$4,000
Government	$0
Industrial	$0
Religious / Non-Profit	$0
Residential	$32,000
Schools	$0
Total	$37,000

Threat to People

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

Table 2-29: 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**
Vernon Parish (Unincorporated)	**39,539**	**16,198**	**41.0%**
Anacoco	**869**	**101**	**11.6%**
Hornbeck	**480**	**39**	**8.1%**
Leesville	**6,612**	**1,255**	**19.0%**
New Llano	**2,504**	**506**	**20.2%**
Rosepine	**1,692**	**79**	**4.7%**
Simpson	**638**	**36**	**5.6%**
Total	**52,334**	**18,214**	**34.8%**

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

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

Vernon Parish (Unincorporated)		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	16,198	41.0%
Persons Under 5 Years	1,474	9.1%
Persons Under 18 Years	4,325	26.7%
Persons 65 Years and Over	1,652	10.2%
White	12,602	77.8%
Minority	3,596	22.2%

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

Anacoco		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	101	11.6%
Persons Under 5 Years	7	7.4%
Persons Under 18 Years	20	19.9%
Persons 65 Years and Over	14	14.2%
White	94	93.2%
Minority	7	6.8%

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

Hornbeck		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	39	8.1%
Persons Under 5 Years	2	5.0%
Persons Under 18 Years	9	21.9%
Persons 65 Years and Over	5	12.9%
White	37	96.0%
Minority	2	4.0%

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

Leesville		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,255	19.0%
Persons Under 5 Years	94	7.5%
Persons Under 18 Years	217	17.3%
Persons 65 Years and Over	164	13.0%
White	679	54.1%
Minority	576	45.9%

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

New Llano		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	506	20.2%
Persons Under 5 Years	44	8.6%
Persons Under 18 Years	94	18.5%
Persons 65 Years and Over	38	7.5%
White	219	43.3%
Minority	287	56.7%

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

Rosepine		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	79	4.7%
Persons Under 5 Years	7	8.3%
Persons Under 18 Years	15	18.6%
Persons 65 Years and Over	10	13.2%
White	66	83.8%
Minority	13	16.3%

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

Simpson		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	36	5.6%
Persons Under 5 Years	2	6.0%
Persons Under 18 Years	7	19.6%
Persons 65 Years and Over	5	12.5%
White	34	95.5%
Minority	2	4.6%

Vulnerability

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

Thunderstorms

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

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

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

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

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

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

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

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

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

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

Hazard Description

Hailstorms

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

Table 2-37: 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 2-38: 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, with and without thunderstorms. The Federal Emergency Management Agency (FEMA) distinguishes these as shown in the following table.

Table 2-39: High Winds Categorized by Source, Frequency, and Duration
(Source: Making Critical Facilities Safe from High Wind, FEMA)

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

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

The following table presents the Beaufort Wind Scale, first developed in 1805 by Sir Francis Beaufort, which aids in determining relative force and wind speed based on the appearance of wind effects.

Table 2-40: 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 also pose a health risk for those requiring electric medical equipment and/or air conditioning.

Lightning

Lightning is a natural electrical discharge in the atmosphere that is a by-product of thunderstorms. Every thunderstorm produces lightning. There are three primary types of lightning: intra-cloud, cloud-to-ground, and cloud-to-cloud. Cloud-to-ground lightning has the potential to cause the most damage to property and crops, while also posing as a health risk to the populace in the area of the strike. Damage caused by lightning is usually to homes or businesses. These strikes have the ability to damage electrical equipment inside the home or business, and can also ignite a fire that could destroy homes or crops.

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

Table 2-41: 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 Vernon Parish is equally at risk for hailstorms.

Previous Occurrences / Extents

The SHELDUS database reports one significant hailstorm event occurring within the boundaries of Vernon Parish between the years of 1989-2014. According to the National Climatic Data Center, hailstorm diameters experienced in Vernon 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 2-21* displays the density of hailstorms in Vernon Parish and adjacent parishes. Based on the National Climatic Data Center dataset, *Table 2-42* provides an overview of hailstorms that have impacted the Vernon Parish planning area since 2009. Vernon Parish can expect to experience hail up to 2.75 inches in diameter for future events. Since 2009, there have been no hailstorm events that have caused property damage or loss of life in the incorporated areas of New Llano and Rosepine.

Table 2-42: Previous Occurrences of Hailstorms in Vernon Parish (Source: NCDC)

Date	Recorded Hail Size (inches)	Location
February 2, 2009	1	FULLERTON
August 26, 2009	0.75	HORNBECK
April 24, 2010	0.75	ANACOCO
April 24, 2010	1	ANACOCO
May 17, 2010	1	SLAGLE
May 26, 2010	0.88	HORNBECK
May 25, 2011	1.25	HORNBECK
March 28, 2014	1.75	SIMPSON
April 19, 2015	1.75	LEESVILLE

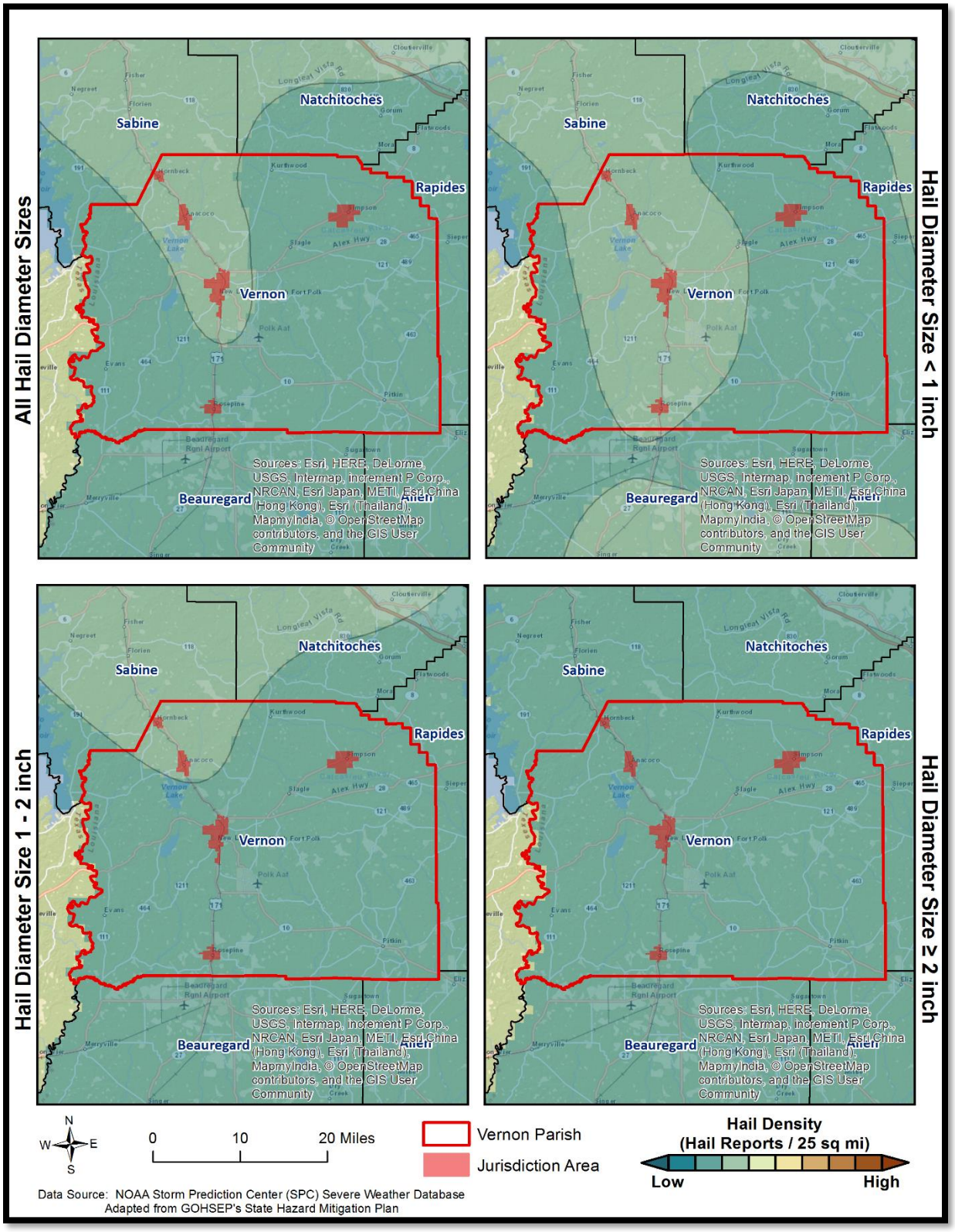

Figure 2-21: Density of Hailstorms by Diameter from 1950-2012
(Source: State of Louisiana Hazard Mitigation Plan 2014)

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, during which Vernon Parish has had one recorded event.

Estimated Potential Losses

According to the SHELDUS database, property damages due to hailstorms in Vernon Parish have totaled approximately $35,730 since 1989. A list of total damages by event can be found in *Table 2-43*. To estimate the potential losses of a hail event on an annual basis, the total damages recorded for hail events was divided by the total number of years of available wind data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of $1,429. *Table 2-44* provides an estimate of potential property losses for Vernon Parish.

Table 2-43: Property Damage Caused by Hailstorms in Vernon Parish (Source: SHELDUS)

Date	Property Damage
January 1998	$35,730

Table 2-44: Estimated Annual Property Losses in Vernon Parish from Hailstorms

Estimated Annual Potential Losses from Hailstorms for Vernon Parish						
Unincorporated Vernon Parish (75.6% of Population)	Anacoco (1.7% of Population)	Hornbeck (0.9% of Population)	Leesville (12.6% of Population)	New Llano (4.8% of Population)	Rosepine (3.2% of Population)	Simpson (1.2% of Population)
$1,080	$24	$13	$181	$68	$46	$17

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

Previous Occurrences / Extents

The SHELDUS database reports a total of 92 thunderstorm wind events occurring within the boundaries of Vernon Parish between the years of 1989 to 2014. The significant thunderstorm wind events experienced in Vernon Parish have ranged in wind speed from 49 mph to 81 mph. Vernon Parish can expect to receive thunderstorm winds up to 81 mph for future high wind events.

Table 2-45: Previous Occurrences for Thunderstorm High Wind Events in Vernon Parish

Location	Date	Recorded Wind Speeds (mph)	Property Damage	Crop Damage
SLAGLE	May 17, 2010	49	$534	$0
HORNBECK	July 26, 2010	81	$165,592	$0
HICKS	April 15, 2011	60	$1,767	$0
ANACOCO	April 26, 2011	60	$3,431	$0
PITKIN	April 26, 2011	60	$2,114	$0
NEW LLANO	June 13, 2012	58	$1,015	$0
PITKIN	July 20, 2012	58	$1,015	$0
LACAMP	October 17, 2012	58	$1,015	$0
KURTHWOOD	March 31, 2013	58	$1,000	$0
ROSEPINE	July 18, 2013	58	$9,500	$0
ANACOCO	July 24, 2013	58	$9,500	$0
ROSEPINE	October 13, 2014	58	$3,936	$0
PITKIN	October 13, 2014	58	$1,968	$0
LEESVILLE	April 27, 2015	58	$2,928	$0
EVANS	April 27, 2015	58	$1,952	$0
PITKIN	April 27, 2015	58	$1,952	$0

Since 2009, there have been no wind events that have caused property damage or loss of life in the incorporated area of Simpson.

Frequency

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

Estimated Potential Losses

Since 1989, there have been 92 significant wind events that have resulted in property damages according to the SHELDUS database. The total property damages associated with those storms have totaled $7,099,132. To estimate the potential losses of a wind event on an annual basis, the total damages recorded for wind events was divided by the total number of years of available wind data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of $283,965. The following table provides an estimate of potential property losses for Vernon Parish:

Table 2-46: Estimated Annual Property Losses in Vernon Parish Resulting from Wind Damage

Estimated Annual Potential Losses from Thunderstorm Winds for Vernon Parish						
Unincorporated Vernon Parish (75.6% of Population)	Anacoco (1.7% of Population)	Hornbeck (0.9% of Population)	Leesville (12.6% of Population)	New Llano (4.8% of Population)	Rosepine (3.2% of Population)	Simpson (1.2% of Population)
$214,539	$4,715	$2,604	$35,877	$13,587	$9,181	$3,462

There has been one injury as a result of a thunderstorm wind event over the 25-year record.

Vulnerability

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

Lightning

Location

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

Previous Occurrences / Extents

The SHELDUS database reports a total of four lightning events occurring within the boundaries of Vernon 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 Vernon Parish, which occur on a nearly monthly basis. The planning area can expect to have a lightning density of 11-12 flashes per square mile per year. The table below provides an overview of significant lightning strikes over the last five years:

Table 2-47: Previous Occurrences of Significant Lightning Strikes in Vernon parish from 2009 – 2014 (Source: NCDC and SHELDUS)

Location	Date	Summary	Property Damage
LEESVILLE	August 27, 2009	Scattered thunderstorms developed during the evening hours, and one produced a lightning strike that damaged the Leesville 911 Center.	$2,172

Since 2009, there have been no lightning events that have caused property damage or loss of life in the unincorporated area of Vernon Parish or the incorporated areas of Anacoco, Hornbeck, New Llano, Rosepine, and Simpson.

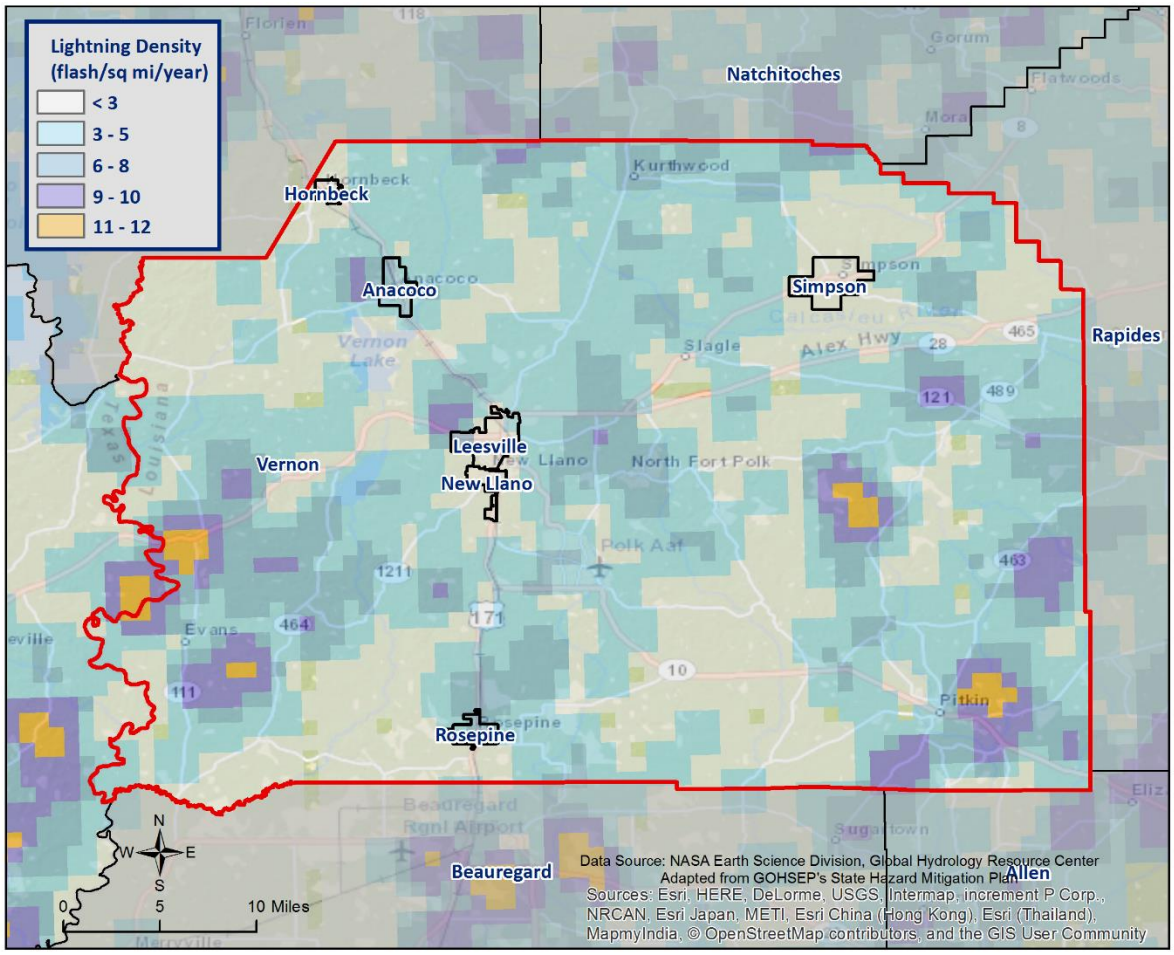

Figure 2-22: Lightning Density Reports for Vernon Parish

Frequency

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

Estimated Potential Losses

Since 1989, there have been four significant lightning events that have resulted in property damages according to the SHELDUS database. The total property damages associated with lightning events totaled $174,102. To estimate the potential losses of a lightning event on an annual basis, the total damages recorded for lightning events was divided by the total number of years of available major lightning strike data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of $43,526. The table on the following page provides an estimate of potential property losses for Vernon Parish.

Table 2-48: Estimated Annual Property Losses in Vernon Parish from Lightning

Estimated Annual Potential Losses from Thunderstorm Winds for Vernon Parish						
Unincorporated Vernon Parish (75.6% of Population)	Anacoco (1.7% of Population)	Hornbeck (0.9% of Population)	Leesville (12.6% of Population)	New Llano (4.8% of Population)	Rosepine (3.2% of Population)	Simpson (1.2% of Population)
$5,261	$116	$64	$880	$333	$225	$85

There have been two reported injuries Vernon 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 2-49* 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 2-49: Comparison of the Enhanced Fujita (EF) Scale to the Fujita (F) Scale

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

Table 2-50: Fujita and Enhanced Fujita Tornado Damage Scale

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

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

- *Tornado Watch*: Issued to alert people to the possibility of a tornado developing in the area. A tornado has not been spotted but the conditions are favorable for tornadoes to occur.
- *Tornado Warning*: Issued when a tornado has been spotted or when radar identifies a distinctive "hook-shaped" area within a thunderstorm line.

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

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

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

Location

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

Previous Occurrences / Extents

SHELDUS reports a total of 24 tornadoes or waterspouts occurring within the boundaries of Vernon Parish between the years of 1989-2014. The tornadoes experienced in Vernon Parish have from ranged EF0 to EF1 on the EF scale, and ranged from F0 to F2 on the F scale. The worst case scenario Vernon Parish can expect in the future is an EF2 tornado.

The tornadoes that caused the most damage to property occurred on November 15, 2004. Five tornadoes spawned across the parish, with four registering as a F1 and one registering as a F2. The tornadoes caused over $1 million in damage and injured three people. There have been no fatalities in Vernon Parish as a result of tornadoes.

Table 2-51: Historical Tornadoes in Vernon Parish with Locations from 2009-2014

Date	Impacts	Property Damage	Location	Magnitude
January 25, 2012	3.09 mile path with a width of 25 yards. A tornado touched down on Lynn Nash Road, blowing over or snapping trees along a 3 mile path that crossed LA Highway 111	$20,292	BURR FERRY	EF0
January 25, 2012	1.58 mile path with a width of 40 yards. Many pine trees were snapped or blown down.	$20,292	(POE) FT POLK AAF LEE	EF0
December 25, 2012	0.25 mile path with a width of 50 yards. The tornado mostly twisted and broke limbs, however one shed was destroyed along the Slagle Loop.	$1,015	SLAGLE	EF0
December 25, 2012	2.19 mile path with a width of 200 yards. A mobile home had a tree fall on it, causing minor damage. A barn had a few sheets of roofing tin removed.	$25,366	PITKIN	EF0
February 21, 2013	2.43 mile path with a width of 50 yards. The tornado snapped numerous trees along the path along with uprooting a few large pines.	$5,000	ALCO	EF1

The incorporated areas of Anacoco, Hornbeck, Leesville, New Llano, Rosepine, and Simpson 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, Vernon Parish has had five tornadoes touch down in the unincorporated areas of the parish. The following is a brief synopsis of these events:

January 25, 2012 – EF0 Tornado in Burr Ferry

An EF0 tornado touched down on Lynn Nash Road. The tornado caused extensive tree damage along the three mile path, which crossed Louisiana Highway 111.

January 25, 2012 – EF0 Tornado near Ft. Polk AAF

A tornado touched down in the middle of a forested area near Fort Polk. The tornado traveled across Louisiana Highway 10, damaging several pine trees in its path.

December 25, 2012 – EF0 near Slagle

A very weak tornado occurred near the town of Slagle on Christmas morning. The tornado broke limbs from trees and destroyed a shed along Slagle Loop.

December 25, 2012 – EF0 near Pitkin

An EF0 tornado touched down three miles east of the town of Pitkin. The tornado produced a damage path two miles long and 200 yards wide. The tornado damaged 20 to 40 pine trees along the path. A tree fell upon a mobile home, causing minor damage, and wind damage was sustained by a barn.

February 21, 2013 – EF1 near Alco

The EF1 tornado touched down in a forested area in the northern section of Vernon Parish. It began south of Louisiana Highway 465, where it damaged numerous trees and uprooted several large pines before moving into Natchitoches Parish.

Frequency / Probability

Tornadoes are a sporadic occurrence within Vernon Parish, with an annual chance of occurrence calculated at 96% based on the records for the past 25 years (1989-2014). The following figure displays the density of tornado touch downs in Vernon Parish and neighboring parishes.

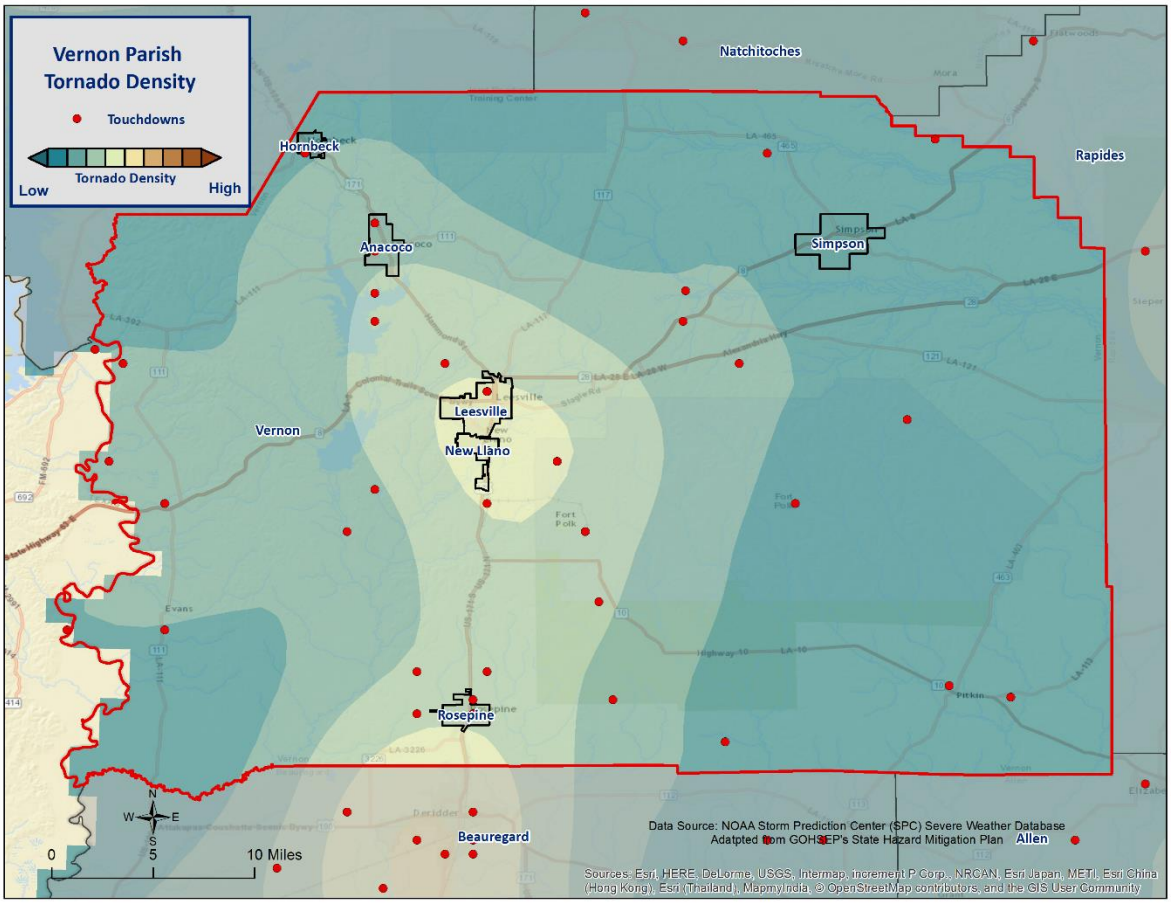

Figure 2-23: Location and Density of Tornadoes to Touch Down in Vernon Parish (Source: NOAA/SPC Severe Weather Database)

Estimated Potential Losses

According to the SHELDUS database, there have been 24 tornadoes that have caused some level of property damage. The total damage from the actual claims for property is $1,799,785, with an average cost of $987,020 per tornado strike. When annualizing the total cost over the 25-year record, total annual loses based on tornadoes are estimated to be $71,991. To provide an estimated potential annual 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 Vernon Parish.

Table 2-52: Estimated Annual Losses for Tornadoes in Vernon Parish

Estimated Annual Potential Losses from Tornadoes for Vernon Parish						
Unincorporated Vernon Parish (75.6% of Population)	Anacoco (1.7% of Population)	Hornbeck (0.9% of Population)	Leesville (12.6% of Population)	New Llano (4.8% of Population)	Rosepine (3.2% of Population)	Simpson (1.2% of Population)
$54,390	$1,195	$660	$9,096	$3,445	$2,328	$878

Table 2-53 presents an analysis of building exposure that is susceptible to tornadoes by general occupancy type for Vernon Parish, along with the percentage of building stock that are mobile homes.

Table 2-53: Building Exposure by General Occupancy Type for Tornadoes in Vernon 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 (%)
3,501,752	410,365	44,604	7,453	82,029	28,387	37,064	24.2%

The parish has suffered through a total of two days in which tornadoes or waterspouts have accounted for four injuries and no fatalities during this 25-year period (*Table 2-54*). The average number of injuries per event for Vernon Parish is 1.19 per tornado, with an average of 0.16 per year for the 25-year period.

Table 2-54: Tornadoes in Vernon Parish by Magnitude that Caused Injuries or Deaths

Date	Magnitude	Deaths	Injuries
November 19, 1991	F1	0	1
November 23, 2004	F2	0	3

In assessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 24.2% of all housing in Vernon Parish consists of manufactured housing. Based on location data collected in a previous hazard mitigation project, there are 31 known locations where manufactured housing is concentrated. Each of those 31 locations have an overall number of manufactured houses ranging from one to 68. The location and density of manufactured houses can be seen in *Figure 2-24* on the next page.

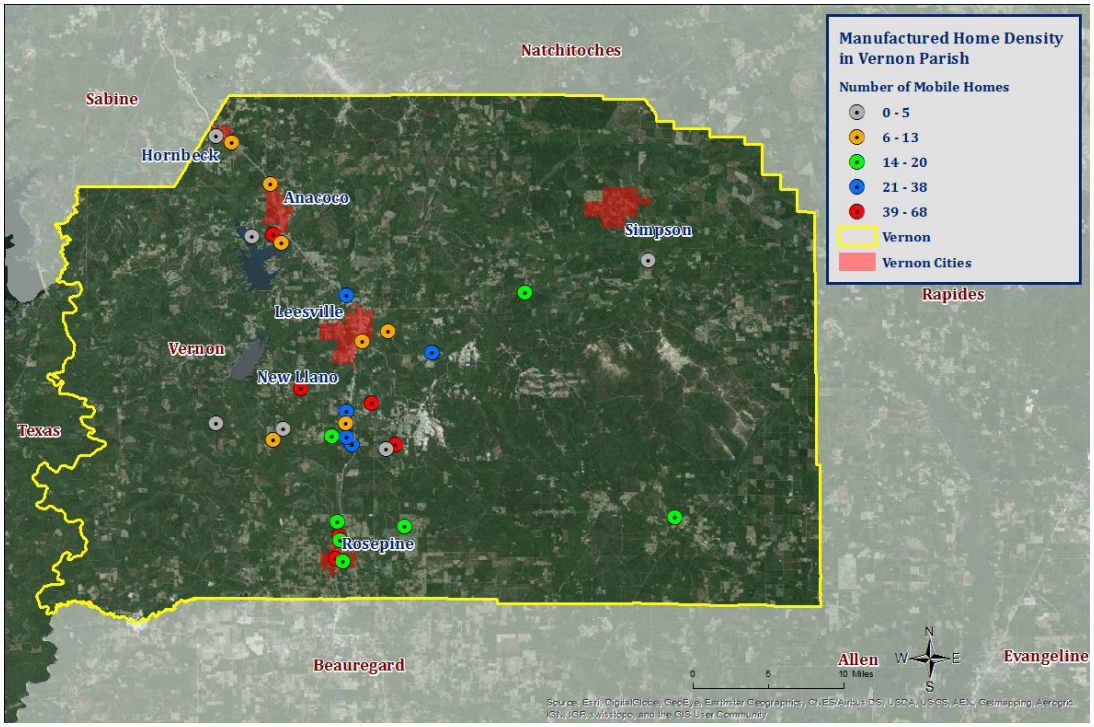

Figure 2-24: Location and Approximate Number of Units in Manufactured Housing Locations throughout Vernon Parish

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 Vernon Parish (*Table 2-55*). However, this does not influence the risk associated with a tornado event since they strike at random, making all structures and population within the planning area equally vulnerable.

Table 2-55: Manufactured Home Distribution throughout Vernon Parish

Location	Number of Manufactured Home Parks	% of Manufactured Home Parks
Unincorporated Area	22	71.0%
Anacoco	1	3.2%
Hornbeck	2	6.5%
Leesville	1	3.2%
New Llano	1	3.2%
Rosepine	4	12.9%
Simpson	0	0%

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 2-56 presents the Saffir-Simpson Hurricane Wind Scale, which categorizes tropical cyclones based on sustained winds.

Table 2-56: Saffir-Simpson Hurricane Wind Scale

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

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

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

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

Location

Hurricanes are the single biggest threat to all of south Louisiana. With any single hurricane having the potential to devastate multiple parishes at once, the risk of a tropical cyclone has the probability of impacting anywhere within the planning area for Vernon 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 four tropical cyclone events occurring within the boundaries of Vernon Parish between the years 2002 and 2014 (*Table 2-57*). The

tropical cyclone events experienced in Vernon Parish include depressions, storms, and hurricanes. As a worst case scenario, Vernon Parish can expect to experience hurricanes at the Category 1 level in the future.

Table 2-57: Historical Tropical Cyclone Events in Vernon Parish from 2002- 2014 (Source: SHELDUS)

Date	Name	Storm Type At Time of Impact
September 23, 2005	Rita	Hurricane – Category 1
September 13, 2007	Humberto	Tropical Storm
September 1, 2008	Gustav	Tropical Storm
September 3, 2011	Lee	Tropical Storm

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.

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 Vernon Parish, Hurricane Rita produced winds upwards of 85 mph for more than 24 hours in the incorporated and unincorporated areas of the parish. Approximately half of all homes and businesses in Vernon Parish received some element of damage, and four to five percent of reported damage was a total loss damage. Vernon Parish also accommodated over 2,000 evacuees from the southern parishes.

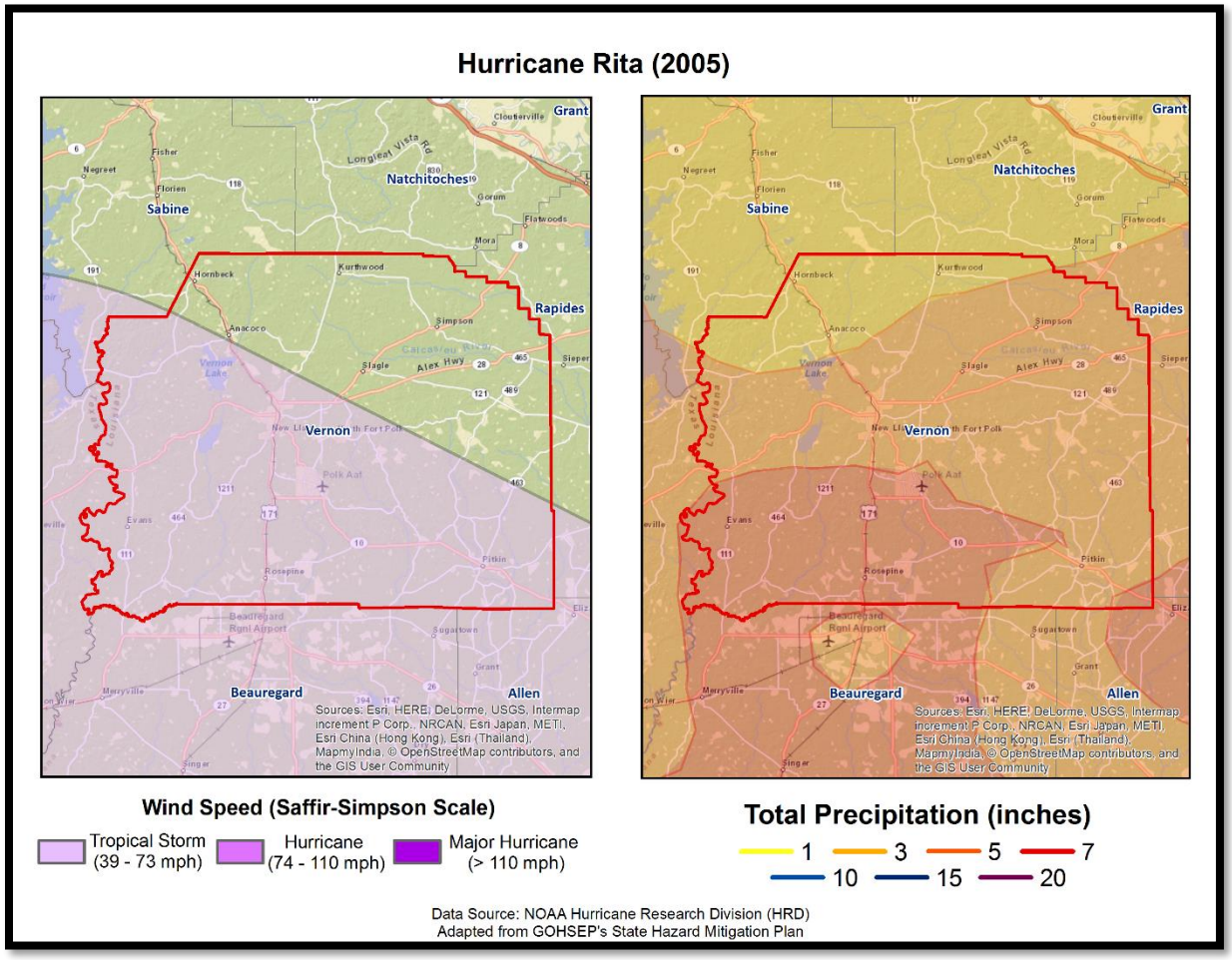

Figure 2-25: Wind Speed and Precipitation Totals in Vernon Parish for Hurricane Rita

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 in a northeasterly direction along the Texas coastline between Sea Rim State Park and High Island, Texas, then onward into the State of Louisiana. The most significant damages occurred in Jefferson, Orange, and Newton Counties in Texas.

Rain totals of five to seven inches were recorded in the unincorporated and incorporated areas of Vernon Parish. Tropical storm force winds impacted the southern portions of Vernon Parish. Minor wind damage such as downed trees and power lines were experienced in the 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.

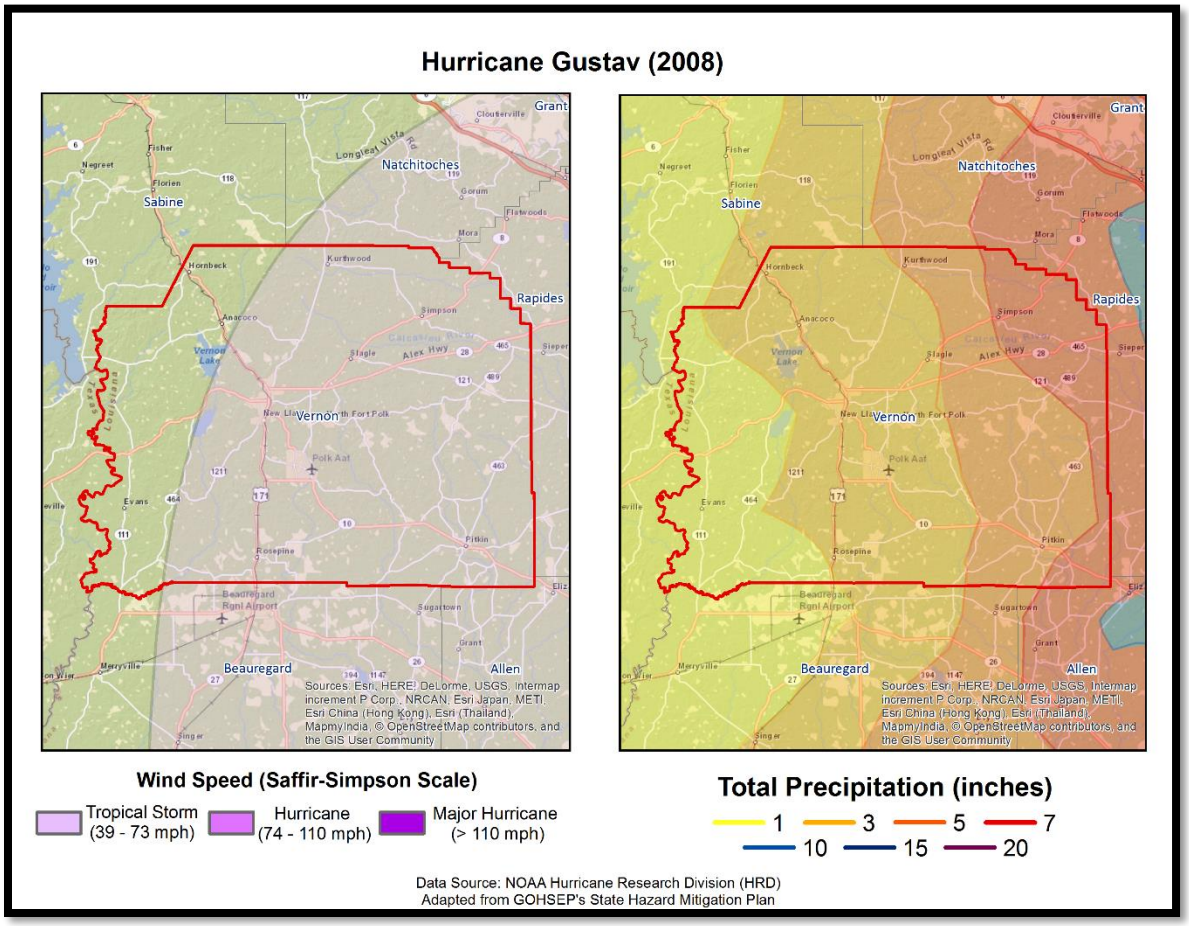

Figure 2-26: Wind Speed and Precipitation Totals in Vernon Parish for Hurricane Gustav

Gustav produced widespread wind damage across southeast Louisiana, especially in the area from Houma and Thibodaux through the greater Baton Rouge area. Hurricane force wind gusts occurred also across the inland areas, including the Baton Rouge area and surrounding parishes. A peak wind gust of 91 mph was recorded at the Baton Rouge (Ryan Field) Airport at 1:12 PM CST. This was only one mph less than the highest wind gust recorded during Hurricane Betsy in 1965. After the storm, the electric utility serving most of southeast Louisiana reported 75 to 100 percent of utility customers were without power, in areas ranging from Lafourche and Terrebonne Parishes northwest through the Baton Rouge area to 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 Vernon Parish, Hurricane Gustav produced tropical storm force winds. This resulted in the downing of several trees and power lines, mainly in the unincorporated areas of Pitkin and Cravens. The incorporated areas of the parish experienced minor damage due to wind.

Tropical Storm Lee (2011)

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

The main impacts associated with Tropical Storm Lee were storm surge and rainfall. Both of these impacts were related to its slow speed as it crossed the region, which allowed the circulation to linger over the area for several days. Storm surge associated with Lee caused storm tides three to five feet above normal, resulting in lowland flooding. Additional detailed information about Tropical Storm Lee's storm surge is contained in the separate storm surge report. Four day rainfall totals ranged from seven to 15 inches across the area. A maximum of 15.48 inches was recorded near Holden in Livingston Parish. Due to dry antecedent conditions, river flooding was minimal for the amount of rainfall that occurred. Wind impacts were generally minimal due to only tropical cyclone strength winds being recorded, resulting in tree limbs being blown down and weak trees toppling, causing power outages.

Overall, there were minimal reports of damage to residences or infrastructure in Vernon Parish. Localized flooding was experienced in low-lying areas of the parish, but flood damage was minimal. Isolated tree damage was reported in the unincorporated areas of the parish. Minimal to no damage was reported in the incorporated areas of the parish.

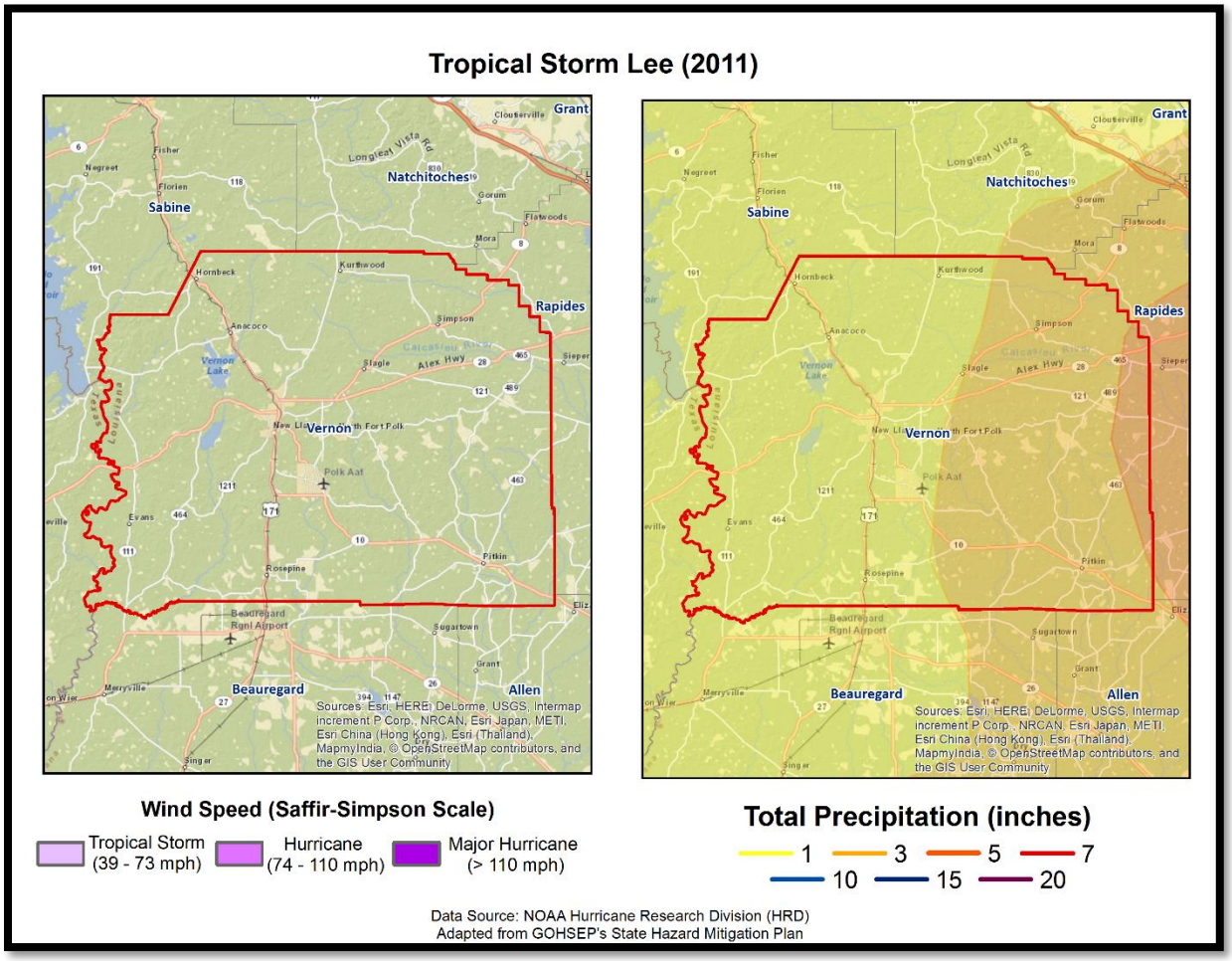

Figure 2-27: Wind Speed and Precipitation Totals in Vernon Parish for Tropical Storm Lee

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

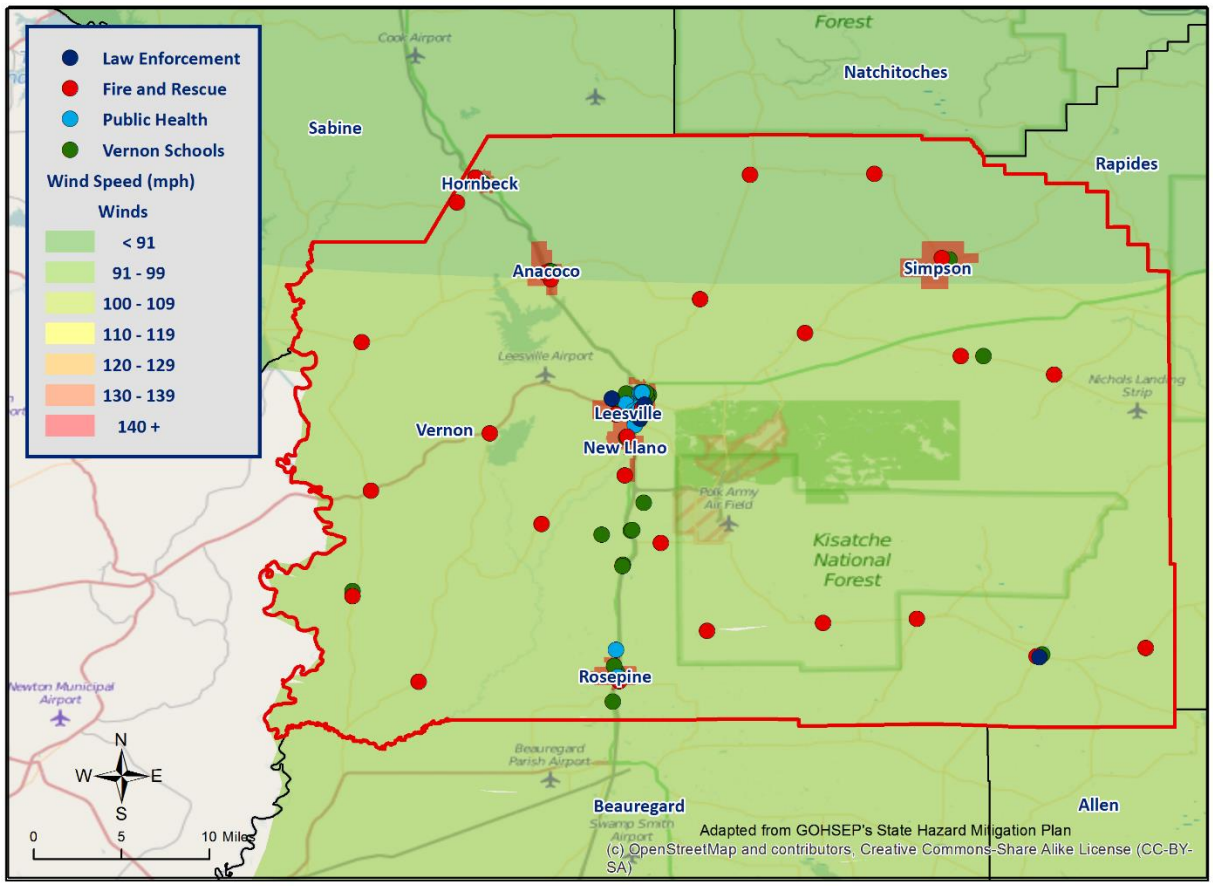

Figure 2-28: Winds Zones for Vernon Parish in Relation to Critical Facilities

Frequency / Probability

Tropical cyclones are large natural hazard events that regularly impact Vernon Parish. The annual chance of occurrence for a tropical cyclone is estimated at 16% for Vernon Parish and its municipalities, with four events occurring within 25 years. The tropical cyclone season for the Atlantic Basin is from June 1st through November 30th, with most of the major hurricanes (Saffir-Simpson Categories 3, 4, & 5) occurring between the months of August and October. Based on geographical location alone, Vernon Parish is highly vulnerable to tropical cyclones. This area has experienced several tropical cyclone events in the past and can expect more in the future.

Estimated Potential Losses

Using the 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 2-58: Total Estimated Losses for a 100-Year Hurricane Event (Source: Hazus 2.2)

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
Vernon Parish (Unincorporated)	$12,008,909
Anacoco	$263,935
Hornbeck	$145,787
Leesville	$2,008,217
New Llano	$760,523
Rosepine	$513,900
Simpson	$193,775
Total	$15,895,047

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 2-59: Ratio of Total Losses to Total Estimated Value of Assets for Each Jurisdiction in Vernon 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	$12,008,909	$2,899,597,000	0.4%
Anacoco	$263,935	$69,918,000	0.4%
Hornbeck	$145,787	$46,181,000	0.3%
Leesville	$2,008,217	$703,080,000	0.3%
New Llano	$760,523	$201,891,000	0.4%
Rosepine	$513,900	$123,477,000	0.4%
Simpson	$193,775	$67.510,000	0.3%

Based on the Hazus 2.2 Hurricane Model, estimated total losses range from 0.3% to 0.4% of the total estimated value of all assets for the unincorporated area of Vernon Parish and the incorporated areas of Anacoco, Hornbeck, Leesville, New Llano, Rosepine, and Simpson.

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 2-60: Estimated Losses in Unincorporated Vernon Parish for a 100-Year Hurricane Event (Source: Hazus 2.2)

Vernon Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$4,181
Commercial	$128,478
Government	$4,555
Industrial	$9,674
Religious / Non-Profit	$17,976
Residential	$13,306,220
Schools	$6,022
Total	$13,477,107

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

Anacoco	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$82
Commercial	$2,516
Government	$89
Industrial	$189
Religious / Non-Profit	$352
Residential	$260,589
Schools	$118
Total	$263,935

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

Hornbeck	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$45
Commercial	$1,390
Government	$49
Industrial	$105
Religious / Non-Profit	$194
Residential	$143,939
Schools	$65
Total	$145,787

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

Leesville	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$623
Commercial	$19,144
Government	$679
Industrial	$1,442
Religious / Non-Profit	$2,679
Residential	$1,982,754
Schools	$897
Total	$2,008,217

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

New Llano	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$236
Commercial	$7,250
Government	$257
Industrial	$546
Religious / Non-Profit	$1,014
Residential	$750,879
Schools	$340
Total	$760,523

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

Rosepine	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$159
Commercial	$4,899
Government	$174
Industrial	$369
Religious / Non-Profit	$685
Residential	$507,383
Schools	$230
Total	$513,900

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

Simpson	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	$60
Commercial	$1,847
Government	$65
Industrial	$139
Religious / Non-Profit	$258
Residential	$191,318
Schools	$87
Total	$193,775

Threat to People

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

Table 2-67: Number of People Susceptible to a 100-Year Hurricane Event in Vernon Parish (Source: Hazus 2.2)

Number of People Exposed to Hurricane Hazards			
Location	**# in Community**	**# in Hazard Area**	**% in Hazard Area**
Parish (Unincorporated)	**39,539**	**39,539**	**100.0%**
Anacoco	**869**	**869**	**100.0%**
Hornbeck	**480**	**480**	**100.0%**
Leesville	**6,612**	**6,612**	**100.0%**
New Llano	**2,504**	**2,504**	**100.0%**
Rosepine	**1,692**	**1,692**	**100.0%**
Simpson	**638**	**638**	**100.0%**
Total	**52,334**	**52,334**	**100.0%**

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

Table 2-68: Vulnerable Populations in Unincorporated Vernon Parish for a 100-Year Hurricane Event (Source: Hazus 2.2)

Vernon Parish (Unincorporated)		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	39,539	100.0%
Persons Under 5 Years	3,598	9.1%
Persons Under 18 Years	10,557	26.7%
Persons 65 Years and Over	4,033	10.2%
White	30,761	77.8%
Minority	8,778	22.2%

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

Anacoco		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	869	100.0%
Persons Under 5 Years	64	7.4%
Persons Under 18 Years	173	19.9%
Persons 65 Years and Over	123	14.2%
White	810	93.2%
Minority	59	6.8%

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

Hornbeck		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	480	100.0%
Persons Under 5 Years	24	5.0%
Persons Under 18 Years	105	21.9%
Persons 65 Years and Over	62	12.9%
White	461	96.0%
Minority	19	4.0%

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

Leesville		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	6,612	100.0%
Persons Under 5 Years	497	7.5%
Persons Under 18 Years	1,144	17.3%
Persons 65 Years and Over	862	13.0%
White	3.576	54.1%
Minority	3,036	45.9%

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

New Llano		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	2,504	100.0%
Persons Under 5 Years	216	8.6%
Persons Under 18 Years	464	18.5%
Persons 65 Years and Over	188	7.5%
White	1,084	43.3%
Minority	1,420	56.7%

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

Rosepine		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	1,692	100.0%
Persons Under 5 Years	140	8.3%
Persons Under 18 Years	315	18.6%
Persons 65 Years and Over	224	13.2%
White	1,417	83.8%
Minority	275	16.3%

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

Simpson		
Category	**Total Numbers**	**Percentage of People in Hazard Area**
Number in Hazard Area	638	100.0%
Persons Under 5 Years	38	6.0%
Persons Under 18 Years	125	19.6%
Persons 65 Years and Over	80	12.5%
White	609	95.5%
Minority	29	4.6%

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 2-29* displays the areas of wildland-urban interaction in Vernon 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 2-75: 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 Vernon Parish and its jurisdictions.

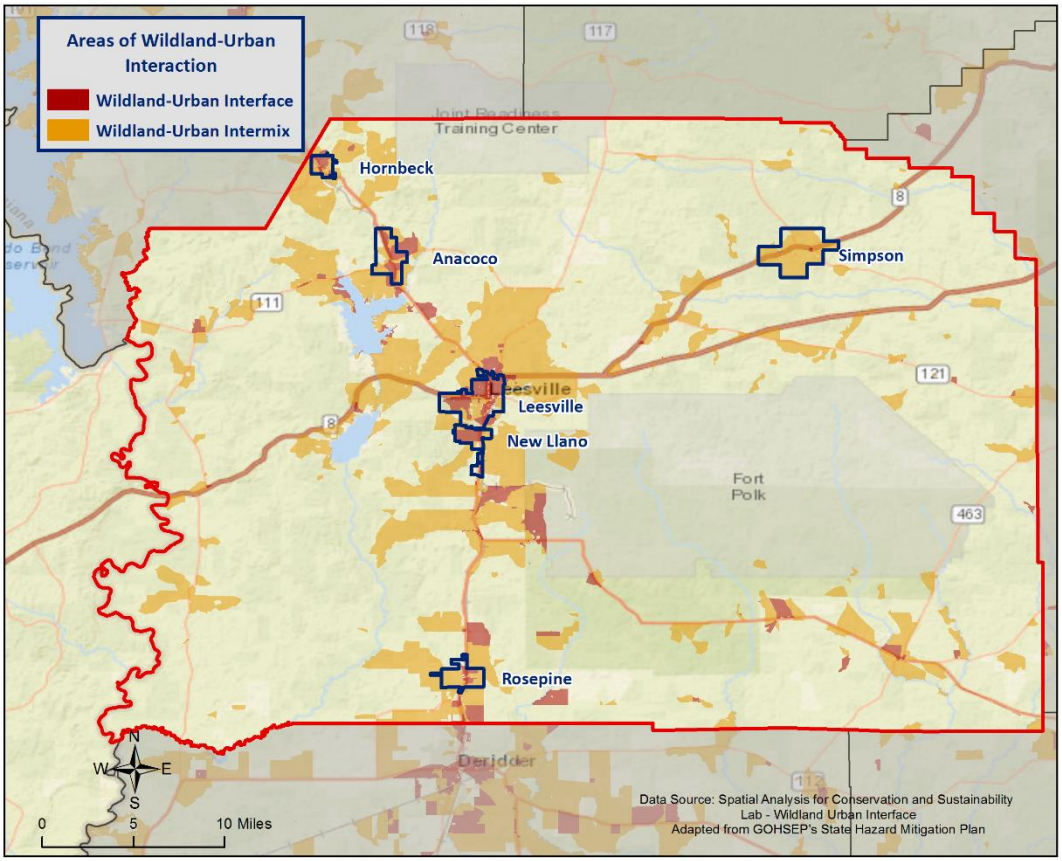

Figure 2-29: Wildland-Urban Interaction in Vernon Parish

Previous Occurrences / Extents

According to SHELDUS, there has been one reported wildfire event that has occurred within the boundaries of Vernon Parish between the years of 1989 and 2014. The following table provides a brief synopsis of the event.

Table 2-76: Previous Occurrences for Wildfire Events in Vernon Parish

Date	Synopsis	Property Damage	Crop Damage
April 16, 2011	Severe drought conditions contributed to a wildfire north of Pitkin in Vernon Parish. Approximately 130 acres burned during the wildfire.	$0	$15,535

Since 2009, there have been no reported wildfire events in the incorporated areas of Anacoco, Hornbeck, New Llano, Leesville, Rosepine, and Simpson.

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

Table 2-77: Potential Wildfire Intensity Levels for Vernon Parish
(Source: Southern Wildfire Assessment Portal)

Potential Wildfire Intensity	
Vernon Parish (Unincorporated)	Highest Intensity Level 5
Anacoco	Lowest Intensity Level 1
Hornbeck	Low to Moderate Intensity Level 2.5
Leesville	Low Intensity Level 2
New Llano	Low Intensity Level 2
Rosepine	Moderate Intensity Level 3
Simpson	Moderate Intensity Level 3

Frequency / Probability

With one recorded event in 25 years, wildfire events within the boundaries of Vernon Parish have an annual chance of occurrence calculated at 4% based on the SHELDUS dataset.

Estimated Potential Losses

According to the SHELDUS database, there has been one wildfire event that has caused property damage, crop damage, injuries, or fatalities in Vernon Parish. 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 2-29* displays the areas of wildland-urban interaction in Vernon 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 2-78: Total Building Exposure by Wildland-Urban Interaction Areas
(Source: Hazus 2.2)

Jurisdiction	Estimated Total Building Exposure
Vernon Parish (Unincorporated)	$2,434,495,000
Anacoco	$69,918,000
Hornbeck	$46,181,000
Leesville	$688,369,000
New Llano	$199,813,000
Rosepine	$116,358,000
Simpson	$67,976,000
Total	$3,623,110,000

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 2-79: Estimated Exposure for Unincorporated Vernon Parish by Sector
(Source: Hazus 2.2)

Vernon Parish (Unincorporated)	Estimated Total Building Exposure by Sector
Agricultural	$4,530,000
Commercial	$192,421,000
Government	$6,774,000
Industrial	$27,781,000
Religious / Non-Profit	$45,893,000
Residential	$2,149,782,000
Schools	$7,314,000
Total	$2,434,495,000

Table 2-80: Estimated Exposure for Anacoco by Sector
(Source: Hazus 2.2)

Anacoco	Estimated Total Building Exposure by Sector
Agricultural	$341,000
Commercial	$4,070,000
Government	$2,132,000
Industrial	$488,000
Religious / Non-Profit	$415,000
Residential	$60,626,000
Schools	$1,846,000
Total	$69,918,000

Table 2-81: Estimated Exposure for Hornbeck by Sector
(Source: Hazus 2.2)

Hornbeck	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$381,000
Government	$0
Industrial	$58,000
Religious / Non-Profit	$303,000
Residential	$43,535,000
Schools	$1,904,000
Total	$46,181,000

Table 2-82: Estimated Exposure for Leesville by Sector
(Source: Hazus 2.2)

Leesville	Estimated Total Building Exposure by Sector
Agricultural	$1,197,000
Commercial	$157,596,000
Government	$11,378,000
Industrial	$8,322,000
Religious / Non-Profit	$22,897,000
Residential	$470,675,000
Schools	$16,304,000
Total	$688,369,000

Table 2-83: Estimated Exposure for New Llano by Sector
(Source: Hazus 2.2)

New Llano	Estimated Total Building Exposure by Sector
Agricultural	$477,000
Commercial	$6,663,000
Government	$2,137,000
Industrial	$782,000
Religious / Non-Profit	$1,720,000
Residential	$187,893,000
Schools	$141,000
Total	$199,813,000

Table 2-84: Estimated Exposure for Rosepine by Sector
(Source: Hazus 2.2)

Rosepine	Estimated Total Building Exposure by Sector
Agricultural	$426,000
Commercial	$4,594,000
Government	$1,148,000
Industrial	$940,000
Religious / Non-Profit	$4,388,000
Residential	$101,052,000
Schools	$3,810,000
Total	$116,358,000

Table 2-85: Estimated Exposure for Simpson by Sector
(Source: Hazus 2.2)

Simpson	Estimated Total Building Exposure by Sector
Agricultural	$0
Commercial	$6,728,000
Government	$402,000
Industrial	$426,000
Religious / Non-Profit	$994,000
Residential	$57,283,000
Schools	$2,143,000
Total	$67,976,000

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 2-86: 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**
Vernon Parish (Unincorporated)	**39,539**	**36,039**	**91.1%**
Anacoco	**869**	**865**	**99.5%**
Hornbeck	**480**	**480**	**100.0%**
Leesville	**6,612**	**6,419**	**97.1%**
New Llano	**2,504**	**2,504**	**100.0%**
Rosepine	**1,692**	**1,538**	**90.9%**
Simpson	**638**	**638**	**100.0%**
Total	**52,334**	**48,483**	**92.6%**

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 2-87: Population in Unincorporated Vernon Parish Located within a Wildland-Urban Interaction Area (Source: 2010 U.S. Census Data)

Vernon Parish (Unincorporated)		
Category	**Total Numbers**	**Percentage of People in Wildland-Urban Interaction Area**
Number in Hazard Area	36,039	91.1%
Persons Under 5 Years	3,280	9.1%
Persons Under 18 Years	9,622	26.7%
Persons 65 Years and Over	3,676	10.2%
White	28,038	77.8%
Minority	8,001	22.2%

Table 2-88: Population in Anacoco Located within a Wildland-Urban Interaction Area (Source: 2010 U.S. Census Data)

Anacoco		
Category	**Total Numbers**	**Percentage of People in Wildland-Urban Interaction Area**
Number in Hazard Area	865	99.5%
Persons Under 5 Years	64	7.4%
Persons Under 18 Years	0	19.9%
Persons 65 Years and Over	0	14.2%
White	0	93.2%
Minority	0	6.8%

Table 2-89: Population in Hornbeck Located within a Wildland-Urban Interaction Area (Source: 2010 U.S. Census Data)

Hornbeck		
Category	**Total Numbers**	**Percentage of People in Wildland-Urban Interaction Area**
Number in Hazard Area	480	100.0%
Persons Under 5 Years	24	5.0%
Persons Under 18 Years	105	21.9%
Persons 65 Years and Over	62	12.9%
White	461	96.0%
Minority	19	4.0%

Table 2-90: Population in Leesville Located within a Wildland-Urban Interaction Area (Source: 2010 U.S. Census Data)

Leesville		
Category	**Total Numbers**	**Percentage of People in Wildland-Urban Interaction Area**
Number in Hazard Area	6,419	97.1%
Persons Under 5 Years	483	7.5%
Persons Under 18 Years	1,110	17.3%
Persons 65 Years and Over	837	13.0%
White	3,471	54.1%
Minority	2,948	45.9%

Table 2-91: Population in New Llano Located within a Wildland-Urban Interaction Area (Source: 2010 U.S. Census Data)

New Llano		
Category	**Total Numbers**	**Percentage of People in Wildland-Urban Interaction Area**
Number in Hazard Area	2,504	100.0%
Persons Under 5 Years	216	8.6%
Persons Under 18 Years	464	18.5%
Persons 65 Years and Over	188	7.5%
White	1,084	43.3%
Minority	1,420	56.7%

Table 2-92: Population in Rosepine Located within a Wildland-Urban Interaction Area (Source: 2010 U.S. Census Data)

Rosepine		
Category	**Total Numbers**	**Percentage of People in Wildland-Urban Interaction Area**
Number in Hazard Area	1,538	90.9%
Persons Under 5 Years	127	8.3%
Persons Under 18 Years	286	18.6%
Persons 65 Years and Over	204	13.2%
White	1,288	83.8%
Minority	250	16.3%

Table 2-93: Population in Simpson Located within a Wildland-Urban Interaction Area (Source: 2010 U.S. Census Data)

Simpson		
Category	**Total Numbers**	**Percentage of People in Wildland-Urban Interaction Area**
Number in Hazard Area	638	100.0%
Persons Under 5 Years	38	6.0%
Persons Under 18 Years	125	19.6%
Persons 65 Years and Over	80	12.5%
White	609	95.5%
Minority	29	4.6%

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 south Louisiana, include extreme temperatures which can cause waterlines to freeze and sewer lines to rupture. This is especially true with 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.

Location

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

Previous Occurrences / Extents

According to SHELDUS, there have been ten reported winter storm events that have occurred within the boundaries of Vernon Parish between the years of 1989 and 2014. The following table provides a brief synopsis of each event.

Table 2-94: Previous Occurrences for Winter Storm Events

Date	Synopsis	Property Damage	Crop Damage
March 12, 1993	The "Storm of the Century" made landfall along the Gulf Coast. Snow accumulations were recorded throughout much of the southern portion of the state, and records indicate snowfall spanning from Lafayette to Slidell.	$0	$224,191
February 1, 1996	Ice storm produced between 1/4 and 1/2 inch of ice, mainly across northern Vernon Parish. The hardest hit areas included Leesville and Fort Polk.	$296,950	$0
January 1, 2001	The first snow seen in five years resulted in one inch of snow across central Louisiana, from Leesville to Alexandria. Four people were injured in Alexandria when the vehicle they were driving flipped over after hitting a patch of ice. Several other traffic accidents also occurred in the area.	$36,173	$0
December 11, 2008	A cold upper level low pressure system moved across southwest Louisiana during the early morning hours of December 11, 2008. As cold air aloft associated with this system interacted with widespread rainfall ongoing over the area, precipitation began mixing with sleet and snow, and eventually changed over to all snow in many locations. This rare snow event lasted from 5 to 7 hours, with numerous reports of large snowflakes to the size of half dollars, along with a few reports of thundersnow.	$3,864	$0
February 3, 2011	A strengthening upper level low over western Texas began to push east-northeast across southwest Louisiana from the morning of February 3 into February 4. At the surface, temperatures were generally above freezing, but dew points were well below freezing. This allowed for a mix of freezing rain and sleet to develop across south central Louisiana during the early morning hours on February 3. A mix of freezing rain, sleet, and snow then spread across the remainder during the late morning hours of February 3rd, with a changeover to all freezing rain by the afternoon. Freezing rain then continued into the morning of February 4th before ending.	$10,356	$0
January 23, 2014	Vernon Parish experienced sleet that quickly turned to snow. Snow fell through the night and into the morning. Snow accumulation ranged from approximately 2.5 inches to 3.5 inches throughout the parish.	$0	$0

Date	Synopsis	Property Damage	Crop Damage
January 28, 2014	Light freezing rain and sleet fell throughout the parish before turning into snow. Under 1/10th of an inch of ice accumulated across the area, with snow accumulations ranging from 1 to 2 inches.	$0	$0
February 11, 2014	A pair of upper level disturbances caused two tenths of an inch of ice to accumulate in the northwest unincorporated areas of the parish. The remainder of the parishes received approximately one tenth of an inch of ice.	$0	$0
March 4, 2014	Freezing rain fell throughout the parish, with ice accumulations of one tenth to two tenths of an inch. Most of the ice melted by the afternoon when temperatures rose above freezing.	$0	$0
March 5, 2015	A cold air mass caused a wintery mix to fall throughout the parish. In Leesville, approximately a half inch of snow and sleet fell.	$0	$0

Based on previous winter storm events, the worst-case scenario for the unincorporated area of Vernon Parish and the incorporated areas of Anacoco, Hornbeck, Leesville, and New Llano is approximately three to three and a half inches of snow accumulation and approximately one tenth to one quarter inch of ice accumulation. The incorporated areas of Rosepine and Simpson can expect snow accumulation up to approximately two inches and ice accumulation from approximately one tenth to two tenths an inch.

Frequency / Probability

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

Estimated Potential Losses

Since 1989, there have been ten reported winter weather events that have resulted in property and/or crop damages according to the SHELDUS database. The total property damages associated with these storms have totaled $362,000. To estimate the potential losses of a winter weather event on an annual basis, the total damage recorded for winter weather events was divided by the total number of years of available winter weather data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of $14,481. To assess potential losses to the participating jurisdictions, the 2010 Census population was used to assign the estimated potential losses proportionally across the jurisdictions. The table on the following page provides an estimate of potential property losses for Vernon Parish based on the 2010 Census data.

Table 2-95: Estimated Annual Losses for Winter Weather Events in Vernon Parish

Estimated Annual Potential Losses from Winter Weather for Vernon Parish						
Unincorporated Vernon Parish (75.6% of Population)	Anacoco (1.7% of Population)	Hornbeck (0.9% of Population)	Leesville (12.6% of Population)	New Llano (4.8% of Population)	Rosepine (3.2% of Population)	Simpson (1.2% of Population)
$10,940	$240	$133	$1,830	$693	$468	$177

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

Vulnerability

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

Dam Failure

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

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

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

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

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

Location

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

Previous Occurrences / Extents

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

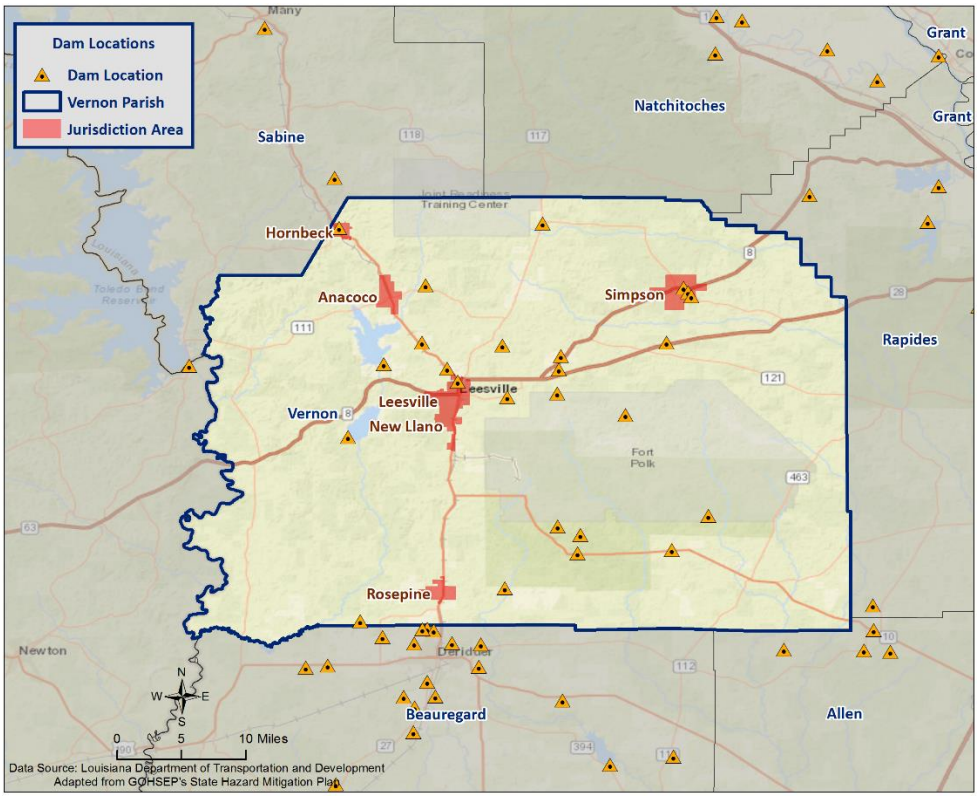

Figure 2-30: Dam Locations in Vernon Parish

Frequency / Probability

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

Levee Failure

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

The northern half of Louisiana is protected by levees on the Ouachita River, under the authority of the Vicksburg District of the United States Army Corp of Engineers (USACE). The Vicksburg District encompasses 68,000 mi^2 in the states of Arkansas, Mississippi and Louisiana. They manage seven drainage basins, including the Yazoo, Pearl, Big Black, Red, Ouachita, and Mississippi Rivers; 12 locks and dams on the Pearl, Red, and Ouachita Rivers; 1,808 miles of levees, including 468 miles along the Mississippi River; and multiple lakes with 1,709 miles of shoreline.

Coastal and southern Louisiana are protected by an extensive levee system under the authority of the New Orleans District of the USACE. This system includes 30,000 mi^2 of Louisiana south of Alexandria, including 961 miles of river levees in the Mississippi River and Tributaries Project, 449 miles of river levees in the Atchafalaya Basin, and 340 miles of hurricane-protection levees. Other levees have been built along stretches of rivers throughout Louisiana by local levee districts and private citizens. The data regarding these non-federal levees are managed by the individual entity responsible for construction and subsequent maintenance and are not kept in a consistent format for comprehensive hazard analysis.

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

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

Location

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

Previous Occurrences / Extents

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

Frequency / Probability

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

3. Capability Assessment

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

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

Policies, Plans, and Programs

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

Table 3-1: Vernon Parish Planning and Regulatory Capabilities

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

Building Codes, Permitting, Land Use Planning and Ordinances

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

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

The Vernon Parish Police Jury is also responsible for enforcing the Parish Ordinances relating to health and safety, property maintenance standards, condemnation of unsafe structures, and zoning compliance.

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

While local capabilities for mitigation can vary from community to community, Vernon Parish as a whole has a system in place to coordinate and share these capabilities through Vernon Parish Government and through this Parish Hazard Mitigation Plan.

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

Administration, Technical, and Financial

As a community, Vernon Parish has administrative and technical capabilities in place that may be utilized in reducing hazard impacts or implementing hazard mitigation activities. Such capabilities include staff, skillset, and tools available in the community that may be accessed to implement mitigation activities and to effectively coordinate resources. The ability to access and coordinate these resources is also important. The table below shows examples of resources in place in Vernon Parish and its jurisdictions.

Table 3-2: Vernon Parish Administrative and Technical Capabilities

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

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

Table 3-3: Vernon Parish Financial Capabilities

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

Education and Outreach

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

Vernon Parish and its jurisdictions have existing education and outreach programs to implement mitigation activities, as well as to communicate risk and hazard related information to its communities. The existing programs are outlined in the table below.

Table 3-4: Vernon Parish Education and Outreach Capabilities

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

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

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

- Unincorporated Vernon Parish
- Village of Anacoco
- Town of Hornbeck
- City of Leesville
- Town of New Llano
- Town of Rosepine
- Village of Simpson

Flood Insurance and Community Rating System

Vernon Parish is not a participant in the Community Rating System (CRS), nor are any of its jurisdictions. Obtaining the CRS rating for the parish and participating jurisdictions is recognized as an eventual goal by the Hazard Mitigation Steering Committee. Participation in the CRS strengthens local capabilities by lowering flood insurance premiums for jurisdictions that exceed NFIP minimum requirements.

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

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

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

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

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

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

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

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

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

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

As of May 2012, 310 communities in the State of Louisiana participate in the Federal Emergency Management Agency's NFIP. Of these communities, 41 (or 13%) participate in the Community Rating System (CRS). Of the top fifty Louisiana communities, in terms of total flood insurance policies held by residents, 27 participate in the CRS. The remaining 23 communities present an outreach opportunity for encouraging participation in the CRS.

The CRS provides an incentive not just to start new mitigation programs, but to keep them going. There are two requirements that "encourage" a community to implement flood mitigation activities.

First, the parish will receive CRS credit for this plan when it is adopted. To retain that credit, though, the parish must submit an evaluation report on progress toward implementing this plan to FEMA by October 1st of each year. That report must be made available to the media and the public.

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

In 2011[1], the National Flood Insurance Program (NFIP) completed a comprehensive review of the Community Rating System that will result in the release of a new CRS Coordinator's Manual.

The changes to the 2013 CRS Coordinator's Manual are the result of a multi-year program evaluation that included input from a broad group of contributors in order to evaluate the CRS and refine the program to meet its stated goals.

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

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

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

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

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

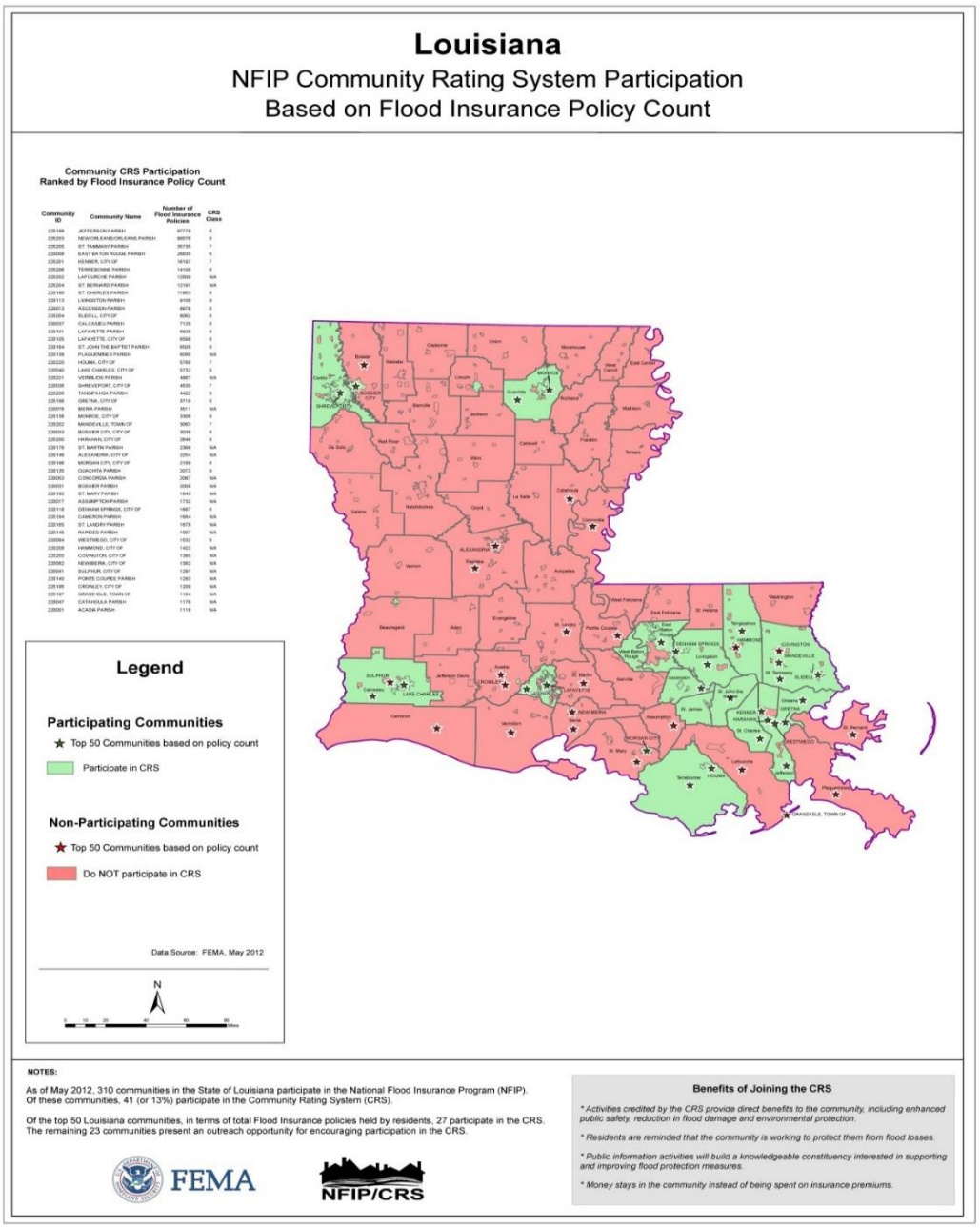

Figure 3-2: Louisiana CRS NFIP Participation
(Source: FEMA[2])

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

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

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

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

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

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

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

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

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

More information on the Community Rating System can be found at www.fema.gov/nfip/crs.shtm

NFIP Worksheets

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

4. Mitigation Strategy

Introduction

Vernon 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.

Vernon 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 Vernon Parish Hazard Mitigation Plan Steering Committee, under the coordination of the Vernon 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 May 2015 – March 2016.

An online public opinion survey was conducted of Vernon Parish residents between September 2015 and March 2016. The survey was designed to capture public perceptions and opinions regarding natural hazards in Vernon Parish. In addition, the survey sought to collect information regarding the methods and techniques preferred by the respondents for reducing the risks and losses associated with local hazards.

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

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

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

Goals

The goals represent the guidelines that the parish and its communities want to achieve with this plan update. To help implement the strategy and adhere to the mission of the Hazard Mitigation Plan, the preceding section of the plan update was focused on identifying and quantifying the risks faced by the residents and property owners in Vernon 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, Vernon 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 Vernon 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 six goals remain valid.

The goals are as follows:

- Implement Measures and Actions to Minimize Hazard Impacts Immediately Prior to, During, or in Response to Hazard Events
- Implement Measures to Protect or Reduce Damage to Structures and Assets from Future Hazards
- Encourage Sound Development Practices or Implement Other Actions to Reduce or Eliminate Impacts of Future Hazards
- Reduce Hazard Impacts through Modifications to Built or Natural Environments
- Enhance Public Awareness and Understanding of Disaster Preparedness
- Improve Communications Throughout Parish During Hazard Events

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

Vernon 2011 Hazard Mitigation Action Update

Vernon Parish – Previous Action Update					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
V1: Crisis Rehearsal Scenarios	Schedule and conduct Crisis Rehearsal scenarios involving various responder agencies.	Parish / municipal budgets; grant funding	VPOHSEP Director / GOHS EP	Hurricanes / Tornadoes / Severe Winter Storms / Thunderstorms / Hail / Earthquakes / Dam and Levee Failure	Carried Over
V2: Portable Power Generators	Acquire portable power generators for various locations including water systems.	Grant Funding	VPSO	Hurricanes / Tornadoes / Severe Winter Storms / Flooding / Thunderstorms / Hail	Carried Over
V3: Sewer Back-Up Power	Acquire back-up power for sewer lift stations.	Grant Funding	VPPJ	Hurricanes / Tornadoes / Severe Winter Storms / Flooding / Thunderstorms	Carried Over
V4: SCBA Equipment	Acquire SCBA equipment.	Grant Funding	LFD, GOHSEP	Wildland Fires	Carried Over
V5: Emergency Roadblock Equipment	Acquire emergency roadblock equipment.	Grant Funding	GOSHEP, VPSO, PWD, Various	Hurricanes / Tornadoes / Severe Winter Storms / Thunderstorms / Hail / Earthquakes / Floods	Carried Over

Vernon Parish – Previous Action Update					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
V6: Red Cross Structures	Maintain Red Cross structures.	Staff Time	ARC	Hurricanes / Tornadoes / Severe Winter Storms / Floods / Earthquakes /	Carried Over
V7: Shelter Operations	Train locals in Shelter operations.	Staff Time	ARC	Hurricanes / Tornadoes / Severe Winter Storms / Floods / Earthquakes /	Carried Over
V8: Back Up Fuel Supply	Acquire/install 15,000 gallon diesel and unleaded gasoline storage tanks and necessary pumping equipment to provide a backup fuel supply for generators so that critical facilities to continue essential operations.	Parish Budgets / Grant Funding	School District	Floods / Hurricanes / Tornadoes / Thunderstorm / Hail / Severe Winter Storms	Carried Over
V9: Roadside Warning Signs	Acquire/install roadside warning signs to warn motorists of potential flooding hazards.	State / Local Funding	DOTD / VPPJ	Floods / Hurricanes / Tornadoes / Thunderstorm / Hail / Severe Winter Storms	Carried Over
V10: SRL Sites	Acquire SRL sites within parish and clear sites	Grant Funding	VPPJ	Floods	Carried Over
V11: Risk Property Elevation	Elevate at risk properties within the parish and/or utilize a pilot reconstruction program for flood-proofing.	Grant Funding	VPPJ	Floods	Carried Over
V12: Government Building Hardening	Harden/retrofit governmental buildings and other critical facilities in the parish.	Parish Budgets / Grant Funding	VPPJ	Floods / Tornadoes / Hurricanes / Thunderstorms / Hail	Carried Over

Vernon Parish – Previous Action Update					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
V13: Emergency Operations and Communications Center	Construct a new Emergency Operations and Communications Center fitted with features to protect structure from high wind and flood events. This may include, among others, structure hardening, hurricane clips, building elevation, and the elevation of utility connectors and emergency generators.	Mitigation Grant	VPOHSEP	Floods / Tornadoes / Hurricanes / Thunderstorms / Hail / Severe Winter Storms / Earthquakes	Carried Over
V14: Sheriff's Office Hardening	Incorporate Safe Room and building hardening components into new Sheriff's office building now being designed.	Mitigation Grant	VPOHSEP	Tornadoes / Hurricanes / Thunderstorms / Severe Winter Storms	Carried Over
V15: Planning and Zoning Ordinances/Building Codes	Improve and/or develop planning and zoning ordinances as well as building codes to include more effective flood, hurricane, and tornado protection regulations.	Parish / Municipal budgets; staff time	VPPJ / other municipalities	Hurricanes / Tornadoes / Flooding	Carried Over
V16: GIS Database	Develop/maintain a comprehensive GIS database that will include the following: 1. All properties/parcels in the parish 2. Hazard areas 3. Service districts 4. Public works facilities 5. Transportation infrastructure 6. Special needs residence	Parish Budget	VPPJ Planning Dept. / PWD	Floods / Hurricanes / Thunderstorms / Drought / Severe Winter Storms	In progress
V17: Property Damage Database	Maintain a database of all properties that sustain damage as a result of a flood. Include information about the nature and extent of the damage. Incorporate this database into Parish Geographic Information System.	Parish Budget	VPPJ Planning Dept. / PWD	Floods	Carried Over

Vernon Parish – Previous Action Update					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
V18: Subdivision Regulations Ordinance Update	Review and update pertinent section(s) of the Vernon Parish Subdivision Regulations Ordinance in order to develop more stringent regulations requiring new and replacement sanitary sewage systems to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.	Parish Budget	VPPJ Planning Dept. / PWD	Floods	Carried Over
V19: Wastewater Treatment Retrofitting	Study the feasibility of implementing an impact fee program or similar mechanism to retrofit existing sewage lift stations, sewer lines, and treatment plants to improve the effectiveness and the capacity of the existing wastewater treatment infrastructure.	Parish Budget	VPPJ Engineering / P W Dept.	Floods	Carried Over
V20: Forested Area Undergrowth	Participate with appropriate authority to implement controlled burns to remove undergrowth in forested areas of the parish.	State Funding	LDAF	Wildland Fires	Carried Over
V21: Fire Lanes	Maintain fire lanes to reduce spread of wildland fires	State Funding	LDAF	Wildland Fires	Carried Over
V22: Critical Bridge Elevation	Elevate critical bridges in flood prone areas of the parish.	State Funding	DOTD / VPPJ	Floods	In progress
V23: Critical Road Elevation	Elevate critical roads in parish flood plains.	State Funding	DOTD / VPPJ	Floods	In progress

Vernon Parish – Previous Action Update					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
V24: Drainage Pattern Evaluation	Evaluate drainage patterns throughout the parish in light of anticipated land use changes. Evaluate the need for additional drainage and flood control measures for both newly developing areas of the Parish and more established areas. Coordinate with the appropriate agency (Corps of Engineers, DOTD, etc.) to design, fund, and implement the desired projects that result from this analysis.	Parish Budgets; Staff Time; Grants	VPPJ	Floods	Carried Over
V25: Public Water and Sewer Line Extension	Evaluate methods and financing mechanisms to extend public water and sewer lines into the parish currently served only by private water wells and other sewage disposal methods.	Grant Funding	VPPJ	Floods	In progress
V26: Beaver Dam Removal	Remove Beaver Dams which contribute to flooding in the parish.	Parish Budgets / Grant Funding	VPPJ	Floods	Carried Over
V27: Shallow-Rooted Tree Removal	Remove shallow-rooted trees at all public school sites and administrative facilities (BMP) in parish.	School Board Budgets / Grant Funding	School District	Hurricanes / Tornadoes / Severe Winter Storms / Thunderstorms	Carried Over
V28: Crop Protection For Droughts	In association with Louisiana State University Cooperative Extension Services, provide technical assistance to Vernon Parish farmers in the form of forums, brochures, or web pages regarding possible funding sources for and the installation of irrigation systems to protect crops from drought conditions.	Parish Budget	VPOHSEP	Drought	Carried Over

Vernon Parish – Previous Action Update					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
V29: Educational Materials	Develop, print, and distribute educational materials addressing separately all hazards, including information/measures to take to protect life and property during such hazard events.	$12,000; Parish Budget	VPOHSEP	Hurricanes / Tornadoes / Severe Winter Storms / Hail / Floods / Drought / Extreme Heat / Earthquakes / Thunderstorms / Wildland Fires	Carried Over
V30: Public Speaking Series	Develop a public-speaking series to include topics such as types of natural disasters, how to develop a family disaster plan, how to develop a business continuity plan, and simple types of mitigation projects for homeowners. Offer these engagements to civic groups, church groups, business groups, and others throughout Vernon Parish.	Parish Budget	VPOHSEP	Hurricanes / Tornadoes / Severe Winter Storms / Hail / Floods / Drought / Extreme Heat / Earthquakes / Thunderstorms / Wildland Fires	Carried Over
V31: Additional Communications Towers	Construct additional communications towers at strategic locations to complete parish coverage.	Grant Funding	VPPJ	Hurricanes / Tornadoes / Severe Winter Storms / Hail / Floods / Earthquakes / Thunderstorms / Wildland Fires	Carried Over
V32: Communications Towers Tie-Downs	Acquire/install tie-downs for all existing communication towers in parish.	Grant Funding	VPPJ	Hurricanes / Tornadoes / Severe Winter Storms / Thunderstorms	Carried Over
V33: Upgrade Communication Capabilities	Upgrade both technological and administrative communication capabilities among fire, police, 911, and other state and local emergency operations through improved planning and the upgrading of	Parish Budget; Grants	VPOHSEP	Hurricanes / Tornadoes / Severe Winter Storms / Thunderstorms	Carried Over

Vernon Parish – Previous Action Update					
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Responsible Party, Agency, or Department**	**Hazard**	**Status**
	communication infrastructure and equipment.				
V34: Emergency Notification Methods	Implement emergency notification methods, such as emergency radios or siren warning system, for those in flood prone areas below Toledo Bend Dam and other dam hazard areas in the parish.	Parish Budget; Grants	VPOHSEP, VPSO	flooding	Carried Over
V35: Hazardous Material Certification	Seek to secure/earn hazardous material certification for emergency response personnel in the Parish.	Parish/Municipal Budgets; Grant Funding	LFD, GOHSEP, VPSO	Hazardous Materials	Deleted

Unincorporated Vernon New Mitigation Actions

Vernon Unincorporated - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
V1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	High Winds, Tropical Cyclones, Tornadoes	1,2,4	New
V2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
V3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4,5	New
V4: Safe Room Projects	Construction of a safe room for first responders located in Vernon Parish. Other locations will be	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones, Wildfires	1,2,	New

Vernon Unincorporated - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
	identified based on funding availability.						
V5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, tornados, wildfire, extreme heat, thunderstorms (lightning, high wind, hail), drought, winter storm hazards, dam failure, and levee failure as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	1,2,3,4,5,6	New
V6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail) , Extreme Heat	1,2,3,6	New
V7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Lightning	1,2,4,	New

Vernon Unincorporated - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
V8: Warning Systems	Update/upgrade public warning system components throughout Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Winter Storm, Wildfires, Tornadoes, Tropical Cyclones, Flooding	1,5,6	New
V9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Drought, Extreme Heat	1,2	New
V10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Vernon Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,5	New
V11: Dam/Levee Failure Grant Funding	Seek out and apply for grant funding for the gathering and analysis of data related to a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New
V12: Dam/Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New

Village of Anacoco – New Mitigation Actions

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

Village of Anacoco - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
	identified based on funding availability.						
A5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, tornados, wildfire, extreme heat, thunderstorms (lightning, high wind, hail), drought, winter storm hazards, dam failure, and levee failure as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Anacoco/Vernon Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	1,2,3,4,5,6	New
A6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Anacoco/Vernon Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail) , Extreme Heat	1,2,3,6	New
A7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Anacoco/Vernon Parish OHSEP	Lightning	1,2,4,	New

Village of Anacoco - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
A8: Warning Systems	Update/upgrade public warning system components throughout Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Anacoco/Vernon Parish OHSEP	Winter Storms, Wildfires, Tornadoes, Tropical Cyclones, Flooding	1,5,6	New
A9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Anacoco/Vernon Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Drought, Extreme Heat	1,2	New
A10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Anacoco/Vernon Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,5	New
A11: Dam/Levee Failure Grant Funding	Seek out and apply for grant funding for the gathering and analysis of data related to a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Village of Anacoco/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New
A12: Dam/Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Village of Anacoco/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New

Town of Hornbeck – New Mitigation Actions

Town of Hornbeck - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
H1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	High Winds, Tropical Cyclones, Tornadoes	1,2,4	New
H2: Drainage Improvements	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
H3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4,5	New
H4: Safe Room Projects	Construction of a safe room for first responders located in Town of Hornbeck. Other locations will be	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones, Wildfires	1,2,	New

Town of Hornbeck - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
	identified based on funding availability.						
H5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, tornados, wildfire, extreme heat, thunderstorms (lightning, high wind, hail), drought, winter storm hazards, dam failure, and levee failure as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	1,2,3,4,5,6	New
H6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail) , Extreme Heat	1,2,3,6	New
H7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Lightning	1,2,4,	New

Town of Hornbeck - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
H8: Warning Systems	Update/upgrade public warning system components throughout Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Winter Storms, Wildfires, Tornadoes, Tropical Cyclones, Flooding	1,5,6	New
H9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Drought, Extreme Heat	1,2	New
H10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Hornbeck/Vernon Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,5	New
H11: Dam/Levee Failure Grant Funding	Seek out and apply for grant funding for the gathering and analysis of data related to a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Town of Hornbeck/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New
H12: Dam/Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Town of Hornbeck/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New

City of Leesville – New Mitigation Actions

City of Leesville - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
L1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	High Winds, Tropical Cyclones, Tornadoes	1,2,4	New
L2:Drainage Improvements	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
L3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4,5	New
L4: Safe Room Projects	Construction of a safe room for first responders located in City of Leesville. Other locations will be	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones, Wildfires	1,2,	New

City of Leesville - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
	identified based on funding availability.						
L5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, tornados, wildfire, extreme heat, thunderstorms (lightning, high wind, hail), drought, winter storm hazards, dam failure, and levee failure as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	1,2,3,4,5,6	New
L6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail) , Extreme Heat	1,2,3,6	New
L7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Lightning	1,2,4,	New

City of Leesville - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
L8: Warning Systems	Update/upgrade public warning system components throughout Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Winter Storms, Wildfires, Tornadoes, Tropical Cyclones, Flooding	1,5,6	New
L9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Drought, Extreme Heat	1,2	New
L10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	City of Leesville/Vernon Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,5	New
L11: Dam/Levee Failure Grant Funding	Seek out and apply for grant funding for the gathering and analysis of data related to a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	City of Leesville/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New
L12: Dam/Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	City of Leesville/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New

Town of New Llano – New Mitigation Actions

Town of New Llano - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
NL1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	High Winds, Tropical Cyclones, Tornadoes	1,2,4	New
NL2: Drainage Improvements	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
NL3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties. .	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4,5	New
NL4: Safe Room Projects	Construction of a safe room for first responders located in Town of New Llano. Other locations will be	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Tornado, High Winds, Tropical Cyclones, Wildfires	1,2,	New

Town of New Llano - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
	identified based on funding availability.						
NL5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, tornados, wildfire, extreme heat, thunderstorms (lightning, high wind, hail), drought, winter storm hazards, dam failure, and levee failure as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	1,2,3,4,5,6	New
NL6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail) , Extreme Heat	1,2,3,6	New
NL7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Lightning	1,2,4,	New

Town of New Llano - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
NL8: Warning Systems	Update/upgrade public warning system components throughout Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Winter storms, Wildfires, Tornadoes, Tropical Cyclones, Flooding	1,5,6	New
NL9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Drought, Extreme Heat	1,2	New
NL10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of New Llano/Vernon Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,5	New
NL11: Dam/Levee Failure Grant Funding	Seek out and apply for grant funding for the gathering and analysis of data related to a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Town of New Llano/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New
NL12: Dam/Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Town of New Llano/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New

Town of Rosepine – New Mitigation Actions

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

Town of Rosepine - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
	identified based on funding availability.						
R5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, tornados, wildfire, extreme heat, thunderstorms (lightning, high wind, hail), drought, winter storm hazards, dam failure, and levee failure as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Rosepine/Vernon Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	1,2,3,4,5,6	New
R6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Rosepine/Vernon Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail) , Extreme Heat	1,2,3,6	New
R7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Rosepine/Vernon Parish OHSEP	Lightning	1,2,4,	New

Town of Rosepine - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
R8: Warning Systems	Update/upgrade public warning system components throughout Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Rosepine/Vernon Parish OHSEP	Winter Storms, Wildfires, Tornadoes, Tropical Cyclones, Flooding	1,5,6	New
R9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Rosepine/Vernon Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Drought, Extreme Heat	1,2	New
R10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Rosepine/Vernon Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,5	New
R11: Dam/Levee Failure Grant Funding	Seek out and apply for grant funding for the gathering and analysis of data related to a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Town of Rosepine/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New
R12: Dam/Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Town of Rosepine/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New

Village of Simpson – New Mitigation Actions

Village of Simpson - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
S1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	High Winds, Tropical Cyclones, Tornadoes	1,2,4	New
S2: Drainage Improvements	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Flooding, High Winds, Tropical Cyclones	1,2,3,4	New
S3: Mitigation of repetitive loss and severe repetitive loss properties and other hazard prone structures	Elevation, acquisition-demolition, acquisition-relocations, and reconstruction of repetitive loss or flooding or other hazard prone properties.	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Flooding, Tropical Cyclones	1,2,3,4,5	New
S4 Safe Room Projects	Construction of a safe room for first responders located in Village of Simpson. Other locations will be	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Tornadoes, High Winds, Tropical Cyclones, Wildfires	1,2	New

Village of Simpson - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
	identified based on funding availability.						
S5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclone, tornados, wildfire, extreme heat, thunderstorms (lightning, high wind, hail), drought, winter storm hazards, dam failure, and levee failure as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Wildfires, Extreme Heat, Thunderstorms (lightning, high wind, hail), Winter Storms, Drought, Dam Failure, Levee Failure	1,2,3,4,5,6	New
S6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Tornadoes, Winter Storms, Tropical Cyclones, Thunderstorms (lightning, high wind, hail) , Extreme Heat	1,2,3,6	New
S7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Lightning	1,2,4,	New

Village of Simpson - New Mitigation Actions							
Jurisdiction-Specific Action	**Action Description**	**Funding Source**	**Target Completion Date**	**Responsible Party, Agency, or Department**	**Hazard**	**Goal**	**Status**
S8: Warning Systems	Update/upgrade public warning system components throughout Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Winter Storms, Wildfires, Tornadoes, Tropical Cyclones, Flooding	1,5,6	New
S9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes, Drought, Extreme Heat	1,2	New
S10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Village of Simpson/Vernon Parish OHSEP	Tropical Cyclones, Flooding	1,2,3,5	New
S11: Dam/Levee Failure Grant Funding	Seek out and apply for grant funding for the gathering and analysis of data related to a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Village of Simpson/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	New
S12: Dam/Levee Failure Working Group	Create a working group in order to assess the extent and determine the possible effects of a dam and/or levee failure.	FEMA HMGP, Local	1-5 Years	Village of Simpson/Vernon Parish OHSEP	Dam Failure, Levee Failure	1,2,3,4,5,6	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 Vernon 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.

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

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Appendix A: Planning Process

Purpose

The Hazard Mitigation Plan Update process prompts local jurisdictions to keep their Hazard Mitigation Plan current and moving toward a more resilient community. The plan update builds on the research and planning efforts of previous plans while reviewing recent trends. The steering committee followed FEMA's hazard mitigation planning process per the FEMA Local Mitigation Planning Handbook. This planning process assured public involvement and the participation of interested agencies and private organizations. Documentation of the planning process for the updated plan is addressed in this section.

The Vernon Parish Hazard Mitigation Plan Update

The Vernon 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.

Vernon Parish includes six incorporated municipalities that participated in the plan update process – the Village of Anacoco, Town of Hornbeck, City of Leesville, Town of New Llano, Town of Rosepine, and Village of Simpson. Vernon Parish Office of Homeland Security and Emergency Preparedness (OHSEP) invited communities' representatives to meetings through email and calendar invitations, where they supplied critical infrastructure data and reviewed work-in-progress for the plan update.

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

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

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

Date	Meeting or Outreach	Location	Public Invited	Purpose
5/26/2015	Initial Coordination	Telephone/ Email	No	Discuss with Parish HM coordinator and any Steering Committee members expectations and requirements of the project.
7/1/2015	Kick-Off Meeting	Vernon Parish Courthouse, Leesville, LA	No	Discuss with the plan steering committee expectations and requirements of the project. Assign plan worksheets to jurisdictions.
9/16/2015	Risk Assessment Overview	Vernon Parish Courthouse, Leesville, LA	No	Discuss and review the risk assessment with the steering committee discuss and review expectations for public meeting.
9/16/2015	Public Meeting	Vernon Parish Courthouse, Leesville, 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 Vernon 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 Vernon Parish. In addition, we asked about the methods and techniques preferred for reducing the risks and losses associated with these hazards. https://www.surveymonkey.com/r/VernonHMGP
2 Week Period	Public Plan Review (Digital)		Yes	Parish Website and Vernon Parish OHSEP

Planning

The plan update process consisted of several phases

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

Coordination

The Vernon Parish OHSEP oversaw the coordination of the 2016 Hazard Mitigation Plan Update Steering Committee during the update process. The Vernon 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 stakeholders to planned meetings and activities by email invitations and calendar invites. SDMI assisted the Parish Director with meeting notices, website and social media statements for notification to the media and general public for public meetings and public outreach activities.

SDMI was responsible for facilitating meetings and outreach efforts during the update process.

Neighboring Community, Local and Regional Planning Process Involvement

From the outset of the planning process, the Hazard Mitigation Team encouraged participation from a broad range of jurisdictional entities. The involvement of representatives from the city, state, and regional agencies provided diverse perspectives and mitigation ideas.

Formal participation in this plan includes but is not limited to the following activities:

- Participation in Hazard Mitigation Team meetings at the local and parish level
- Sharing local data and information

- Local action item development
- Plan document draft review
- Formal adoption of the Hazard Mitigation Plan document by each jurisdiction following provisional approval by The State of Louisiana and FEMA

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

- Vernon Parish Police Jury
- Vernon Parish OHSEP
- Vernon Parish Government
- City, Town and Village Officials
- Municipal Agencies and Departments
- Tourism Commission
- Office of Public Health

The Parish of Beauregard was invited by the Vernon Parish OHSEP through email and regional meetings 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:

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Mayor	Rick	Allen	City of Leesville	337.239.2444	N/A
Immediate Past President	Rand	Alphord	Chamber of Commerce	337.238.2800	N/A
Representative	James	Armes	State Representative	N/A	N/A
Chairman	Arno	Arpke	Lakes Commission	337.424.1072	N/A
Mayor	Clarence	Beebe	Town of Hornbeck	318.565.4659	N/A
Real Estate Agent	Ranelle	Birmingham	ERA Sarver Real Estate	337.239.2041	ranelle.birmingham@era.com
Real Estate Agent	Lee	Birmingham	Ft. Polk DeRidder Association of Realtors	337.208.4125	lee@coolproperties.com
Office Manage/Permits	Kim	Bonner	Vernon Parish Police Jury	337.239.9933	kim@vppjla.com

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Mayor	Freddy	Boswell	Town of New Llano	337.239.3670	N/A
Mayor	Donis	Brinkley	Village of Simpson	337.3837731	N/A
Executive Director	Ann	Causey	Vernon Parish Chamber of Commerce	337.238.0349	chambervernonparish@hotmail.com
Sheriff	Sam	Craft	Vernon Parish Sheriff's Office	337.238.7232	angiewestvpso@bellsouth.net
Executive Director	John	Crook	Tourism Commission	337.238.0783	vernontourism@bellsouth.net
Mayor	Donna	Duvall	Town of Rosepine	337.463.8908	N/A
Project Manager	Greg	Faust	Cleco	318.308.8050	gregory.faust@cleco.com
Reverend	Harrison	Fields	New Willow Baptist Church	337.239.9964	harrisonfields@wnline.net
Project Manager	Tony	Gillespie	Cleco	318.308.9155	tony.gillespie@cleco.com
Radio Operator	Lee	Grevenberg	Radio Maintenance	337.884.2735	lee.mobile@grevemberg.net
Community Planner	Lorna	Hanes	Fort Polk	337.531.6890	lorna.haynes@us.army.mil
Contractor	Robert	Hanna	Diamond B & R Construction	337.353.9006	roberthanna39@yahoo.com
Director of Business Development	Mike	Harris	Beauregard Electric Co-Op	337.396.1833	mharris@beci.org
Chairman	Don	Haymon	Vernon Parish Fire District	337.239.0022	N/A
Chief	Kyle	Bush	City of Leesville	337.239.7950	N/A
Sanitarian	Randle	Holaway	Vernon Parish Health Unit	337.238.6410 x 2	randle.holaway@la.gov
Representative	Frank	Howard	State Representative	N/A	N/A
Director	Kenneth	Moore	Office of Emergency Preparedness/ E-911 Director	337.238.0218	kmoore@vernonso.org
Member	Ken	Hughes	Fort Polk Progress	337.238.6282	kah.hughes@usa.net
Airport Manager	Paul	Jackson	Leesville Airport	N/A	N/A
Dean	Geralyn	Janice	Louisiana Technical College-Lamar Salter Campus	337.537.3135	mkay@ltc.edu
Contractor	Ronald	Jeane	RJ Construction	337.392.5035	N/A

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Reverend	Maurice	Johnson	LAMA/Johnson Temple	337.238.4063	johnson1933@suddenlink.net
Plant Operator	Philip	Jordan	West Vernon Parish Water District	337.238.2656	wvwater@cebridge.net
City Administrator	Richard	Karamatic	City of Leesville	337.239.2444	N/A
Executive Director	Barbara	Kaveski	Leesville Housing Authority	337.239.0940	bkaveski@aol.com
Sanitarian	Randy	Kay	Vernon Parish Health Unit	337.238.6410 x 2	randy.kay@la.gov
Attorney	Terry	Lambright	Parish Legal Counsel	337.239.6557	lambrightlaw@yahoo.com
Mayor	Keith	Lewing	Village of Anacoco	337.239.0215	N/A
Building Inspector	Billy	McShan	Vernon Parish Building Inspection	337.208.0195	billy@buildtocode.com
Engineer	Vernon	Meyer	Meyer & Associates	337.625.8353	vmeyer@meyerassociates.com
Supervisor/ Operator	Milton	Midkiff	Ward 4 Water/Vernon Parish Water & Sewer	337.208.2021	N/A
Council Member	LaVerne	Miers	Anacoco Town Hall	337.239.7128	anacocoth@cebridge.net
Manager/Broker	Malcom	Morris	Morris Team Realty	337.238.0361	morris@morrisla.com
Manager	Alex	Nicholes	Department Of Transportation & Development	N/A	N/A
Biologist	Bobbie	Reed	Wildlife and Fisheries	337.491.2575	N/A
Chairman	Michael	Reese	Fort Polk Progress	337.239.9555	mike.reese@americanmovinginc.com
Senator	John	Smith	State Senator	N/A	N/A
Representative	Rob	Smith	Cleco	318.308.8016	ronald.smith@cleco.com
Parish Road Manager	Carl	Thompson	Vernon Parish Police Jury	337.239.9933	carl@vppjla.com
President	James B.	Tuck	Vernon Parish Police Jury President	337.208.2272	jbtuck05@hotmail.com
Chief Deputy	Calvin	Turner	Vernon Parish Sheriff's Office	337.238.1311	chiefturner@bellsouth.net
Director	Lee	Turner	Congressman John Fleming	337.238.0778	lee.turner@mail.house.gov

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Parish Secretary	Belinda	Diehl	Vernon Parish Police Jury	337.238.0324	belinda@vppjla.com
Manager/ Operator	Marion	VanTassel	South Vernon Water Works	337.462.8888	svpwater@suddenlinkmail.com
Manager/ Operator	Chris	Simmons	South Vernon Water Works	337.462.8888	svpwater@suddenlinkmail.com
Executive Assistant	Rhonda	Martinez	Vernon Parish Chamber of Commerce	337.238.0349	N/A
Director	Barney K.	Magee	City of Leesville Public Works	337.239.2995	N/A
Safety Officer	Nathaniel	Perkins	City of Leesville Public Works	337.239.2995	N/A
Public Information Director	Tammy	Sharp	City of Leesville	337.378.9329	tammy.sharp@leesvillela.net
Biomedical Technician	James	Brooks	Byrd Regional Hospital	337.239-5260	james_brooks@chs.net
Secretary	Tammy	Slaughter	Vernon Parish Fire District	337.239.0022	tammy@vernonparishpolicejury.com

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 Vernon 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 Vernon 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)
- State of Louisiana Hazard Mitigation Plan
- Vernon Parish 2011 Hazard Mitigation Plan
- Flood Insurance Rate Maps

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

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 Vernon Parish.

Meeting #1: Coordination Discussion

Date: May 26, 2015
Location: Email
Purpose: Discuss with the Hazard Mitigation Lead for the parish (OHSEP Director) the expectations and requirements of the Hazard Mitigation Plan Update process and to establish and initial project timeline.
Public Initiation: No
Invitees Included: Vernon Parish OHSEP, Vernon Parish Police Jury, GOHSEP Region 6 Coordinator, SDMI Staff

Meeting #2: Hazard Mitigation Plan Update Kick-Off

Date: July 1, 2015
Location: Leesville, Louisiana
Purpose: Discuss the expectations and requirements of the Hazard Mitigation Plan Update process and to establish and initial project timeline with the parish's Hazard Mitigation Plan Steering Committee. Assign each individual jurisdiction and the parish data collection for the plan update.
Public Initiation: No
Invitees Included:

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Mayor	Rick	Allen	City of Leesville	337.239.2444	N/A
Immediate Past President	Rand	Alphord	Chamber of Commerce	337.238.2800	N/A
Representative	James	Armes	State Representative	N/A	N/A
Chairman	Arno	Arpke	Lakes Commission	337.424.1072	N/A
Mayor	Clarence	Beebe	Town of Hornbeck	318.565.4659	N/A
Real Estate Agent	Ranelle	Birmingham	ERA Sarver Real Estate	337.239.2041	ranelle.birmingham@era.com
Real Estate Agent	Lee	Birmingham	Ft. Polk DeRidder Association of Realtors	337.208.4125	lee@coolproperties.com
Office Manage/Permits	Kim	Bonner	Vernon Parish Police Jury	337.239.9933	kim@vppjla.com
Mayor	Freddy	Boswell	Town of New Llano	337.239.3670	N/A
Mayor	Donis	Brinkley	Village of Simpson	337.3837731	N/A
Executive Director	Ann	Causey	Vernon Parish Chamber of Commerce	337.238.0349	chambervernonparish@hotmail.com
Sheriff	Sam	Craft	Vernon Parish Sheriff's Office	337.238.7232	angiewestvpso@bellsouth.net
Executive Director	John	Crook	Tourism Commission	337.238.0783	vernontourism@bellsouth.net
Mayor	Donna	Duvall	Town of Rosepine	337.463.8908	N/A
Project Manager	Greg	Faust	Cleco	318.308.8050	gregory.faust@cleco.com
Reverend	Harrison	Fields	New Willow Baptist Church	337.239.9964	harrisonfields@wnline.net
Project Manager	Tony	Gillespie	Cleco	318.308.9155	tony.gillespie@cleco.com
Radio Operator	Lee	Grevenberg	Radio Maintenance	337.884.2735	lee.mobile@grevemberg.net
Community Planner	Lorna	Hanes	Fort Polk	337.531.6890	lorna.haynes@us.army.mil

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Contractor	Robert	Hanna	Diamond B & R Construction	337.353.9006	roberthanna39@yahoo.com
Director of Business Development	Mike	Harris	Beauregard Electric Co-Op	337.396.1833	mharris@beci.org
Chairman	Don	Haymon	Vernon Parish Fire District	337.239.0022	N/A
Chief	Kyle	Bush	City of Leesville	337.239.7950	N/A
Sanitarian	Randle	Holaway	Vernon Parish Health Unit	337.238.6410 x 2	randle.holaway@la.gov
Representative	Frank	Howard	State Representative	N/A	N/A
Director	Kenneth	Moore	Office of Emergency Preparedness/ E-911 Director	337.238.0218	kmoore@vernonso.org
Member	Ken	Hughes	Fort Polk Progress	337.238.6282	kah.hughes@usa.net
Airport Manager	Paul	Jackson	Leesville Airport	N/A	N/A
Dean	Geralyn	Janice	Louisiana Technical College-Lamar Salter Campus	337.537.3135	mkay@ltc.edu
Contractor	Ronald	Jeane	RJ Construction	337.392.5035	N/A
Reverend	Maurice	Johnson	LAMA/Johnson Temple	337.238.4063	johnson1933@suddenlink.net
Plant Operator	Philip	Jordan	West Vernon Parish Water District	337.238.2656	wvwater@cebridge.net
City Administrator	Richard	Karamatic	City of Leesville	337.239.2444	N/A
Executive Director	Barbara	Kaveski	Leesville Housing Authority	337.239.0940	bkaveski@aol.com
Sanitarian	Randy	Kay	Vernon Parish Health Unit	337.238.6410 x 2	randy.kay@la.gov
Attorney	Terry	Lambright	Parish Legal Counsel	337.239.6557	lambrightlaw@yahoo.com
Mayor	Keith	Lewing	Village of Anacoco	337.239.0215	N/A
Building Inspector	Billy	McShan	Vernon Parish Building Inspection	337.208.0195	billy@buildtocode.com
Engineer	Vernon	Meyer	Meyer & Associates	337.625.8353	vmeyer@meyerassociates.com

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Supervisor/ Operator	Milton	Midkiff	Ward 4 Water/Vernon Parish Water & Sewer	337.208.2021	N/A
Council Member	LaVerne	Miers	Anacoco Town Hall	337.239.7128	anacocoth@cebridge.net
Manager/Broker	Malcom	Morris	Morris Team Realty	337.238.0361	morris@morrisla.com
Manager	Alex	Nicholes	Department Of Transportation & Development	N/A	N/A
Biologist	Bobbie	Reed	Wildlife and Fisheries	337.491.2575	N/A
Chairman	Michael	Reese	Fort Polk Progress	337.239.9555	mike.reese@americanmovinginc.com
Senator	John	Smith	State Senator	N/A	N/A
Representative	Rob	Smith	Cleco	318.308.8016	ronald.smith@cleco.com
Parish Road Manager	Carl	Thompson	Vernon Parish Police Jury	337.239.9933	carl@vppjla.com
President	James B.	Tuck	Vernon Parish Police Jury President	337.208.2272	jbtuck05@hotmail.com
Chief Deputy	Calvin	Turner	Vernon Parish Sheriff's Office	337.238.1311	chiefturner@bellsouth.net
Director	Lee	Turner	Congressman John Fleming	337.238.0778	lee.turner@mail.house.gov
Parish Secretary	Belinda	Diehl	Vernon Parish Police Jury	337.238.0324	belinda@vppjla.com
Manager/ Operator	Marion	VanTassel	South Vernon Water Works	337.462.8888	svpwater@suddenlinkmail.com
Manager/ Operator	Chris	Simmons	South Vernon Water Works	337.462.8888	svpwater@suddenlinkmail.com
Executive Assistant	Rhonda	Martinez	Vernon Parish Chamber of Commerce	337.238.0349	N/A
Director	Barney K.	Magee	City of Leesville Public Works	337.239.2995	N/A
Safety Officer	Nathaniel	Perkins	City of Leesville Public Works	337.239.2995	N/A
Public Information Director	Tammy	Sharp	City of Leesville	337.378.9329	tammy.sharp@leesvillela.net
Biomedical Technician	James	Brooks	Byrd Regional Hospital	337.239-5260	james_brooks@chs.net
Secretary	Tammy	Slaughter	Vernon Parish Fire District	337.239.0022	tammy@vernonparishpolicejury.com

Meeting #3: Risk Assessment Overview

Date: September 16, 2015

Location: Leesville, LA

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

Public Initiation: No

Invitees Included:

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Mayor	Rick	Allen	City of Leesville	337.239.2444	N/A
Immediate Past President	Rand	Alphord	Chamber of Commerce	337.238.2800	N/A
Representative	James	Armes	State Representative	N/A	N/A
Chairman	Arno	Arpke	Lakes Commission	337.424.1072	N/A
Mayor	Clarence	Beebe	Town of Hornbeck	318.565.4659	N/A
Real Estate Agent	Ranelle	Birmingham	ERA Sarver Real Estate	337.239.2041	ranelle.birmingham@era.com
Real Estate Agent	Lee	Birmingham	Ft. Polk DeRidder Association of Realtors	337.208.4125	lee@coolproperties.com
Office Manage/Permits	Kim	Bonner	Vernon Parish Police Jury	337.239.9933	kim@vppjla.com
Mayor	Freddy	Boswell	Town of New Llano	337.239.3670	N/A
Mayor	Donis	Brinkley	Village of Simpson	337.3837731	N/A
Executive Director	Ann	Causey	Vernon Parish Chamber of Commerce	337.238.0349	chambervernonparish@hotmail.com
Sheriff	Sam	Craft	Vernon Parish Sheriff's Office	337.238.7232	angiewestvpso@bellsouth.net
Executive Director	John	Crook	Tourism Commission	337.238.0783	vernontourism@bellsouth.net
Mayor	Donna	Duvall	Town of Rosepine	337.463.8908	N/A
Project Manager	Greg	Faust	Cleco	318.308.8050	gregory.faust@cleco.com
Reverend	Harrison	Fields	New Willow Baptist Church	337.239.9964	harrisonfields@wnline.net
Project Manager	Tony	Gillespie	Cleco	318.308.9155	tony.gillespie@cleco.com
Radio Operator	Lee	Grevenberg	Radio Maintenance	337.884.2735	lee.mobile@grevemberg.net
Community Planner	Lorna	Hanes	Fort Polk	337.531.6890	lorna.haynes@us.army.mil

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Contractor	Robert	Hanna	Diamond B & R Construction	337.353.9006	roberthanna39@yahoo.com
Director of Business Development	Mike	Harris	Beauregard Electric Co-Op	337.396.1833	mharris@beci.org
Chairman	Don	Haymon	Vernon Parish Fire District	337.239.0022	N/A
Chief	Kyle	Bush	City of Leesville	337.239.7950	N/A
Sanitarian	Randle	Holaway	Vernon Parish Health Unit	337.238.6410 x 2	randle.holaway@la.gov
Representative	Frank	Howard	State Representative	N/A	N/A
Director	Kenneth	Moore	Office of Emergency Preparedness/ E-911 Director	337.238.0218	kmoore@vernonso.org
Member	Ken	Hughes	Fort Polk Progress	337.238.6282	kah.hughes@usa.net
Airport Manager	Paul	Jackson	Leesville Airport	N/A	N/A
Dean	Geralyn	Janice	Louisiana Technical College-Lamar Salter Campus	337.537.3135	mkay@ltc.edu
Contractor	Ronald	Jeane	RJ Construction	337.392.5035	N/A
Reverend	Maurice	Johnson	LAMA/Johnson Temple	337.238.4063	johnson1933@suddenlink.net
Plant Operator	Philip	Jordan	West Vernon Parish Water District	337.238.2656	wvwater@cebridge.net
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Executive Director	Barbara	Kaveski	Leesville Housing Authority	337.239.0940	bkaveski@aol.com
Sanitarian	Randy	Kay	Vernon Parish Health Unit	337.238.6410 x 2	randy.kay@la.gov
Attorney	Terry	Lambright	Parish Legal Counsel	337.239.6557	lambrightlaw@yahoo.com
Mayor	Keith	Lewing	Village of Anacoco	337.239.0215	N/A
Building Inspector	Billy	McShan	Vernon Parish Building Inspection	337.208.0195	billy@buildtocode.com
Engineer	Vernon	Meyer	Meyer & Associates	337.625.8353	vmeyer@meyerassociates.com

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Supervisor/ Operator	Milton	Midkiff	Ward 4 Water/Vernon Parish Water & Sewer	337.208.2021	N/A
Council Member	LaVerne	Miers	Anacoco Town Hall	337.239.7128	anacocoth@cebridge.net
Manager/Broker	Malcom	Morris	Morris Team Realty	337.238.0361	morris@morrisla.com
Manager	Alex	Nicholes	Department Of Transportation & Development	N/A	N/A
Biologist	Bobbie	Reed	Wildlife and Fisheries	337.491.2575	N/A
Chairman	Michael	Reese	Fort Polk Progress	337.239.9555	mike.reese@americanmovinginc.com
Senator	John	Smith	State Senator	N/A	N/A
Representative	Rob	Smith	Cleco	318.308.8016	ronald.smith@cleco.com
Parish Road Manager	Carl	Thompson	Vernon Parish Police Jury	337.239.9933	carl@vppjla.com
President	James B.	Tuck	Vernon Parish Police Jury President	337.208.2272	jbtuck05@hotmail.com
Chief Deputy	Calvin	Turner	Vernon Parish Sheriff's Office	337.238.1311	chiefturner@bellsouth.net
Director	Lee	Turner	Congressman John Fleming	337.238.0778	lee.turner@mail.house.gov
Parish Secretary	Belinda	Diehl	Vernon Parish Police Jury	337.238.0324	belinda@vppjla.com
Manager/ Operator	Marion	VanTassel	South Vernon Water Works	337.462.8888	svpwater@suddenlinkmail.com
Manager/ Operator	Chris	Simmons	South Vernon Water Works	337.462.8888	svpwater@suddenlinkmail.com
Executive Assistant	Rhonda	Martinez	Vernon Parish Chamber of Commerce	337.238.0349	N/A
Director	Barney K.	Magee	City of Leesville Public Works	337.239.2995	N/A
Safety Officer	Nathaniel	Perkins	City of Leesville Public Works	337.239.2995	N/A
Public Information Director	Tammy	Sharp	City of Leesville	337.378.9329	tammy.sharp@leesvillela.net
Biomedical Technician	James	Brooks	Byrd Regional Hospital	337.239-5260	james_brooks@chs.net
Secretary	Tammy	Slaughter	Vernon Parish Fire District	337.239.0022	tammy@vernonparishpolicejury.com

Meeting #4: Public Meeting

Date: September 16, 2015

Location: Leesville, LA

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

Public Initiation: Yes

Invitees Included:

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Mayor	Rick	Allen	City of Leesville	337.239.2444	N/A
Immediate Past President	Rand	Alphord	Chamber of Commerce	337.238.2800	N/A
Representative	James	Armes	State Representative	N/A	N/A
Chairman	Arno	Arpke	Lakes Commission	337.424.1072	N/A
Mayor	Clarence	Beebe	Town of Hornbeck	318.565.4659	N/A
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Real Estate Agent	Lee	Birmingham	Ft. Polk DeRidder Association of Realtors	337.208.4125	lee@coolproperties.com
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Mayor	Freddy	Boswell	Town of New Llano	337.239.3670	N/A
Mayor	Donis	Brinkley	Village of Simpson	337.3837731	N/A
Executive Director	Ann	Causey	Vernon Parish Chamber of Commerce	337.238.0349	chambervernonparish@hotmail.com
Sheriff	Sam	Craft	Vernon Parish Sheriff's Office	337.238.7232	angiewestvpso@bellsouth.net
Executive Director	John	Crook	Tourism Commission	337.238.0783	vernontourism@bellsouth.net
Mayor	Donna	Duvall	Town of Rosepine	337.463.8908	N/A
Project Manager	Greg	Faust	Cleco	318.308.8050	gregory.faust@cleco.com
Reverend	Harrison	Fields	New Willow Baptist Church	337.239.9964	harrisonfields@wnline.net
Project Manager	Tony	Gillespie	Cleco	318.308.9155	tony.gillespie@cleco.com
Radio Operator	Lee	Grevenberg	Radio Maintenance	337.884.2735	lee.mobile@grevemberg.net
Community Planner	Lorna	Hanes	Fort Polk	337.531.6890	lorna.haynes@us.army.mil

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
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Director of Business Development	Mike	Harris	Beauregard Electric Co-Op	337.396.1833	mharris@beci.org
Chairman	Don	Haymon	Vernon Parish Fire District	337.239.0022	N/A
Chief	Kyle	Bush	City of Leesville	337.239.7950	N/A
Sanitarian	Randle	Holaway	Vernon Parish Health Unit	337.238.6410 x 2	randle.holaway@la.gov
Representative	Frank	Howard	State Representative	N/A	N/A
Director	Kenneth	Moore	Office of Emergency Preparedness/ E-911 Director	337.238.0218	kmoore@vernonso.org
Member	Ken	Hughes	Fort Polk Progress	337.238.6282	kah.hughes@usa.net
Airport Manager	Paul	Jackson	Leesville Airport	N/A	N/A
Dean	Geralyn	Janice	Louisiana Technical College-Lamar Salter Campus	337.537.3135	mkay@ltc.edu
Contractor	Ronald	Jeane	RJ Construction	337.392.5035	N/A
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Attorney	Terry	Lambright	Parish Legal Counsel	337.239.6557	lambrightlaw@yahoo.com
Mayor	Keith	Lewing	Village of Anacoco	337.239.0215	N/A
Building Inspector	Billy	McShan	Vernon Parish Building Inspection	337.208.0195	billy@buildtocode.com
Engineer	Vernon	Meyer	Meyer & Associates	337.625.8353	vmeyer@meyerassociates.com
Supervisor/ Operator	Milton	Midkiff	Ward 4 Water/Vernon	337.208.2021	N/A

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
			Parish Water & Sewer		
Council Member	LaVerne	Miers	Anacoco Town Hall	337.239.7128	anacocoth@cebridge.net
Manager/Broker	Malcom	Morris	Morris Team Realty	337.238.0361	morris@morrisla.com
Manager	Alex	Nicholes	Department Of Transportation & Development	N/A	N/A
Biologist	Bobbie	Reed	Wildlife and Fisheries	337.491.2575	N/A
Chairman	Michael	Reese	Fort Polk Progress	337.239.9555	mike.reese@americanmovinginc.com
Senator	John	Smith	State Senator	N/A	N/A
Representative	Rob	Smith	Cleco	318.308.8016	ronald.smith@cleco.com
Parish Road Manager	Carl	Thompson	Vernon Parish Police Jury	337.239.9933	carl@vppjla.com
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Chief Deputy	Calvin	Turner	Vernon Parish Sheriff's Office	337.238.1311	chiefturner@bellsouth.net
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Biomedical Technician	James	Brooks	Byrd Regional Hospital	337.239-5260	james_brooks@chs.net
Secretary	Tammy	Slaughter	Vernon Parish Fire District	337.239.0022	tammy@vernonparishpolicejury.com

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

Meeting Public Notice

VERNON PARISH OFFICE OF HOMELAND SECURITY & EMERGENCY PREPAREDNESS

Public Meeting Notice

Leesville, LA – Vernon Parish Office of Homeland Security & Emergency Preparedness is in the process of updating the Vernon Parish Hazard Mitigation Plan and are required to hold public meetings on the plan update. The Public meeting will be held on September 16th, 2015 in the Vernon Parish Policy Jury Meeting Room from 1:00pm – 2:00pm.

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

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

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

Vernon Parish is in the beginning stages of updating its hazard mitigation plan. Public meeting will be held on September 16, 2015 for all citizens interested in learning about and participating in discussions concerning the Vernon Parish Hazard Mitigation Plan.

Residents of Vernon Parish are asked to participate in a survey about public perceptions and opinions regarding natural hazards in the parish. The survey results will be used in the development of the plan. This short web-based survey can be found at https://www.surveymonkey.com/r/VernonHMGP

For more information, please contact: Vernon Parish OHSEP Director, Kenneth Moore.

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

Outreach Activity #1: Public Opinion Survey

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

Outreach Activity #2: Incident Questionnaire

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

Outreach Activity #3: Mapping Activities

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

Public Plan Review Documentation

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

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Appendix B: Plan Maintenance

Purpose

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

Monitoring, Evaluating, and Updating the Plan

The Vernon Parish Planning Committee will be responsible for monitoring, evaluating, and documenting the plan's progress throughout the year. Part of the plan maintenance process should include a system by which local governing bodies incorporate the HMP into the parish's comprehensive or capital improvement plans. This process provides for continued public participation through the diverse resources of the parish to help in achieving the goals and objectives of the plan. Public participation will be achieved through availability of copies of HMP in parish public library and parish website. This section describes the whole update process which includes the following:

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

Responsible Parties

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

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

Methods for Monitoring and Evaluating the Plan and Plan Evaluation Criteria

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

- Ordinances, Resolutions, Regulations
- Floodplain Ordinances (Parish and Jurisdictions)
- Emergency Operations Plan (Parish and Jurisdictions)
- Comprehensive Master Plan (Entire Parish)
- Economic Development Plan (Parish and Jurisdictions)
- Capital Improvement Plan (Parish and Jurisdictions)
- Transportation 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 Vernon Parish Hazard Mitigation Steering Committee and through the five-year review process described herein. The primary means for integrating mitigation strategies into other local planning mechanisms will be through the revision, update and implementation of each jurisdiction's individual plans that require specific planning and administrative tasks (e.g. risk assessment, plan amendments, ordinance revisions, capital improvement projects, etc.). The members of the steering committee will meet with Department Heads to discuss what should be included in the changes that are necessary before the changes are introduced to the city council or police jury meetings. Steering

committee members will remain charged with ensuring that the goals and strategies of new and updated local planning documents for their jurisdictions or agencies are consistent with the goals and actions of the Vernon Parish Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability within the parish.

During the planning process for new and updated local planning documents at the parish and jurisdiction level, such as a risk assessment, comprehensive plan, capital improvements plan, or emergency operations plan, the jurisdictions will provide a copy of the Parish Hazard Mitigation Plan to the appropriate parties and recommend that all goals and strategies of new and updated local planning documents are consistent with and support the goals of the Parish Hazard Mitigation Plan and will not contribute to increased hazards.

Although it is recognized that there are many possible benefits to integrating components of this plan into other parish and jurisdiction planning mechanisms, the development and maintenance of this stand-alone Hazard Mitigation Plan is deemed by the steering committee to be the most effective and appropriate method to ensure implementation of parish and local hazard mitigation actions.

On behalf of Unincorporated Vernon, Vernon 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:

Vernon Unincorporated
Comprehensive Plan Master Plan/Updated as needed/University Pkwy Development District Planning Commission
Capital Improvement Plan/Updated as needed/Vernon Parish Police Jury
Economic Development Plan/Updated as needed/ Central Louisiana Economic Development Alliance
Emergency Operations Plan/Updated as needed/Vernon Parish OHSEP
Continuity of Operations Plan/Updated as needed/Vernon Parish OHSEP
Transportation Plan/Updated as needed/Vernon Parish Police Jury

Village of Anacoco
Capital Improvement Plan/Updated as needed/Village of Anacoco
Economic Development Plan/Updated as needed/ Central Louisiana Economic Development Alliance

Town of Hornbeck
Capital Improvement Plan/Updated as needed/Town of Hornbeck
Economic Development Plan/Updated as needed/ Central Louisiana Economic Development Alliance

City of Leesville
Comprehensive Plan Master Plan/Updated as needed/University Pkwy Development District Planning Commission and City of Leesville
Economic Development Plan/Updated as needed/ Central Louisiana Economic Development Alliance
Emergency Operations Plan/Updated as needed/City of Leesville
Continuity of Operations Plan/Updated as needed/City of Leesville

Town of New Llano

Comprehensive Plan Master Plan/Updated as needed/University Pkwy Development District Planning Commission and Town of New Llano
Economic Development Plan/Updated as needed/ Central Louisiana Economic Development Alliance
Emergency Operations Plan/Updated as needed/Town of New Llano
Continuity of Operations Plan/Updated as needed/Town of New Llano

Town of Rosepine

Capital Improvement Plan/Updated as needed/Town of Rosepine
Economic Development Plan/Updated as needed/ Central Louisiana Economic Development Alliance

Village of Simpson

Capital Improvement Plan/Updated as needed/Village of Simpson
Economic Development Plan/Updated as needed/ Central Louisiana Economic Development Alliance

Continued Public Participation

Public participation is an integral component of the mitigation planning process and will continue to be essential as this plan evolves over time. Significant changes or amendments to the plan require a public hearing prior to any adoption procedures. Other efforts to involve the public in the maintenance, evaluation, and revision process will be made as necessary. These efforts will include at least one of the following:

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

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Appendix C: Essential Facilities

Vernon Parish Essential Facilities – All Jurisdictions

Vernon Unincorporated Essential Facilities											
Type	**Name**	**Drought***	**Extreme Heat***	**Flooding**	**Hail**	**Lightning**	**Wind**	**Tornado**	**Tropical Cyclone**	**Wildfire**	**Winter Storms***
Fire and Rescue	Alco-Hutton Vol Fire Dept			X	X	X	X	X	X	X	
	Alco-Hutton Vol Fire Dept Kurthwood Substation				X	X	X	X	X	X	
	Burr Ferry Fire Dept			X	X	X	X	X	X	X	
	Caney Vol Fire Dept			X	X	X	X	X	X	X	
	Community Fire Dept				X	X	X	X	X	X	
	Cravens Fire Dept			X	X	X	X	X	X	X	
	Dry Fork Vol Fire Dept				X	X	X	X	X	X	
	Evans Vol Fire Dept			X	X	X	X	X	X	X	
	Fire Dept			X	X	X	X	X	X		
	Fire Dept			X	X	X	X	X	X		
	Fire Dept				X	X	X	X	X		
	Knight Community Vol Fire Dept Station No. 11				X	X	X	X	X	X	
	La Camp Fire Dept				X	X	X	X	X	X	

Vernon Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Marlow Fire Dept			X	X	X	X	X	X	X	
	Pitkin Volunteer Fire Dept			X	X	X	X	X	X	X	
	Providence Fire Dept			X	X	X	X	X	X	X	
	Sandy Creek Fire Dept			X	X	X	X	X	X	X	
	Sandy Hill Fire Dept				X	X	X	X	X	X	
	Savage Forks Vol Fire Dept				X	X	X	X	X	X	
Government	Department of Transportation			X	X	X	X	X	X	X	
	Department of Veteran's Affairs			X	X	X	X	X	X	X	
	Fort Polk				X	X	X	X	X	X	
	Fort Polk				X	X	X	X	X	X	
	James Armes State Representative				X	X	X	X	X	X	
	LA. Department of Agriculture Vernon Work Center			X	X	X	X	X	X	X	
	LA. Department of Wildlife and Fisheries Office			X	X	X	X	X	X	X	

Vernon Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Louisiana National Guard			X	X	X	X	X	X	X	
	Peason Cantonment Area				X	X	X	X	X	X	
	Peason Ridge TOC - Joint Readiness Training Center				X	X	X	X	X	X	
	The Human Society of West Louisiana			X	X	X	X	X	X	X	
	Unexploded Ammunitions Field			X	X	X	X	X	X	X	
	Vernon Animal Shelter			X	X	X	X	X	X	X	
	Vernon Community Action Council				X	X	X	X	X	X	
	Vernon Landfill			X	X	X	X	X	X	X	
Law Enforcement	Sheriff Substation				X	X	X	X	X	X	
	Vernon Parish Sheriff Substation			X	X	X	X	X	X	X	
Corrections	Vernon Correctional Facility			X	X	X	X	X	X	X	
Schools	Evans High School			X	X	X	X	X	X	X	
	Hicks High School			X	X	X	X	X	X	X	

Vernon Unincorporated Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Pickering Elementary School			X	X	X	X	X	X	X	
	Pickering High School				X	X	X	X	X	X	
	Pitkin High School				X	X	X	X	X	X	

Anacoco Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Fire Station				X	X	X	X	X	X	
	Tesansders Memorial Fire Station				X	X	X	X	X	X	
Government	Anacoco Town Hall				X	X	X	X	X	X	
Schools	Anacoco Elementary School				X	X	X	X	X	X	
	Anacoco High School				X	X	X	X	X	X	

Hornbeck Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Fire Station 1 District 3				X	X	X	X	X	X	
Government	Hornbeck Town Hall				X	X	X	X	X	X	
Schools	Hornbeck Elementary School				X	X	X	X	X	X	
	Hornbeck High School				X	X	X	X	X	X	

Leesville Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Leesville Fire Dept			X	X	X	X	X	X	X	
	Leesville Fire Dept				X	X	X	X	X	X	
Government	Chamber of Commerce				X	X	X	X	X	X	
	Courthouse				X	X	X	X	X	X	
	Department of Public Safety				X	X	X	X	X	X	
	District Attorney Asa Skinner				X	X	X	X	X	X	

Leesville Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	District Attorney Child Support Office				X	X	X	X	X	X	
	John Smith State Senator				X	X	X	X	X	X	
	Leesville Municipal Center Annex				X	X	X	X	X	X	
	Social Security Administration				X	X	X	X	X	X	
	USDA Service Center				X	X	X	X	X	X	
	Vernon Assessors Office				X	X	X	X	X	X	
	Vernon Child Welfare Office				X	X	X	X	X	X	
	Vernon Council on Aging				X	X	X	X	X	X	
	Vernon Dept of Public Safety				X	X	X	X	X	X	
	Vernon Parish School Board				X	X	X	X	X	X	
	Vernon Police Jury				X	X	X	X	X	X	
	Vernon Registrar of Voters				X	X	X	X	X	X	
Law Enforcement	Sheriff Department				X	X	X	X	X	X	

Leesville Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
	Sheriff Department				X	X	X	X	X	X	
Schools	East Leesville Elementary				X	X	X	X	X	X	
	Leesville High				X	X	X	X	X	X	
	Leesville JR High				X	X	X	X	X	X	
	Vernon Middle School				X	X	X	X	X	X	
	West Leesville Elementary				X	X	X	X	X	X	
Public Health	Byrd Regional Medical				X	X	X	X	X	X	
	Doctor's Hospital				X	X	X	X	X	X	
	Vernon Parish Health Unit				X	X	X	X	X	X	
	Vernon Parish Health Unit				X	X	X	X	X	X	

New Llano Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	New Llano Fire Dept				X	X	X	X	X	X	
Government	New Llano City Hall				X	X	X	X	X	X	
	Vernon Parish Office of Family Support				X	X	X	X	X	X	

Rosepine Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Rosepine Fire Dept Station 1				X	X	X	X	X	X	
Government	Rosepine Municipal Complex				X	X	X	X	X	X	
Schools	Rosepine Elementary School				X	X	X	X	X	X	
	Rosepine High School				X	X	X	X	X	X	
Nursing Homes	Rosepine Rehabilitation & Retirement				X	X	X	X	X	X	

Simpson Essential Facilities											
Type	Name	Drought*	Extreme Heat*	Flooding	Hail	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storms*
Fire and Rescue	Simpson Vol Fire Dept				X	X	X	X	X	X	
Government	Simpson Village Hall				X	X	X	X	X	X	
Schools	Simpson High School				X	X	X	X	X	X	

* There are no critical facilities vulnerable to the hazard.

Appendix D: Plan Adoption

08/05/2016 10:39 FAX ▲ 002

Village of Anacoco
P.O. Box 280 • Anacoco, LA 71403
(337) 239-0215 • Fax (337) 238-5550

KEITH LEWING
Mayor

SHANE FREEMAN
LA VERNE MIERS
MARK PHILLIPS
Council Members

RESOLUTION #3-2016

Vernon Parish Hazard Mitigation Plan August 2016

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

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

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

WHEREAS adoption by the Village of Anacoco Town Council demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Vernon Parish Hazard Mitigation Plan August 2016.

NOW, THEREFORE BE IT RESOLVED by the Village of Anacoco, Louisiana, that:

Section 1. In accordance with the governing authority by the Town Council of the Village of Anacoco in regular session adopts the Vernon Parish Hazard Mitigation Plan August 2016.

ON MOTION BY Mark Phillips and duly seconded by LaVerne Mier this resolution is formal adopted on this 1st day of August 2016.

ADOPTED by a vote of:

YEAS - 2

NAYS - 0

ABSENT - 1

ATTEST: CLERK
Lisa Manning

SIGNED: MAYOR
Keith Lewing

Received Time Aug. 5. 2016 10:34AM No. 0461

City of Leesville

LOUISIANA

RESOLUTION NO. 40 of 2016

A RESOLUTION OF THE City of Leesville

Vernon Parish Hazard Mitigation Plan, August 8, 2016

WHEREAS the Mayor and City Council recognizes the threat that natural hazards pose to people and property within the City of Leesville; and

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

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

WHEREAS adoption by the Mayor and City Council demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Vernon Parish Hazard Mitigation Plan.

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

Section 1. In accordance with MAYOR ALLEN AND THE CITY COUNCIL, THE CITY OF LEESVILLE adopts the Vernon Parish Hazard Mitigation Plan.

ADOPTED by a vote of 7 in favor and 0 against, and 0 abstaining, this 8th day of August, 2016.

By: _____

(print name)

ATTEST:

By: none

(print name)

APPROVED AS TO FORM:

By: Rick Allen, Mayor

(print name)

Town of Hornbeck

Louisiana

Resolution No. 17-2016

A RESOLUTION OF THE Town of Hornbeck

Hornbeck Mitigation Plan August 15, 2016

WHEREAS the Town of Hornbeck Mayor and Alderman recognizes the threat that natural hazards pose to people and property within the Town of Hornbeck; and

WHEREAS the Town of Hornbeck has prepared a multi-hazard mitigation plan, hereby known as Hornbeck Mitigation Plan August 15, 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Hornbeck Mitigation Plan August 15, 2016 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Hornbeck from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town of Hornbeck Mayor and Alderman demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Hornbeck Mitigation Plan August 15, 2016.

NOW THEREFORE, BE IT RESOLVED BY THE Town of Hornbeck, LOUISIANA, THAT:

On a motion by Hyatt seconded by Lantier Resolution No. 17-2016 was adopted on the 15th day of August, 2016

YEAS: Trotti, Whiddon, Ellis, Lantier, & Hyatt

NAYS: None

ABSENT: None

ABSTAIN: None

Cara McDaniel-Clerk

Clarence Beebe- Mayor

RESOLUTION #22 of 2016

BY

TOWN OF ROSEPINE

Town of Rosepine Hazard Mitigation Plan of August 11, 2016

WHEREAS the Mayor and Board of Aldermen of the Town of Rosepine recognizes the threat that natural hazards pose to people and property within the Town Of Rosepine; and

WHEREAS the Town of Rosepine has prepared a multi-hazard mitigation plan, hereby known as Town of Rosepine Hazard Mitigation Plan of August 11, 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS the Town of Rosepine Hazard Mitigation Plan of August 11, 2016 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Town of Rosepine from the impacts of future hazards and disasters; and

WHEREAS adoption by the Board of Aldermen demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Town of Rosepine Hazard Mitigation Plan of August 11, 2016.

NOW THEREFORE, BE IT RESOLVED BY THE Town of Rosepine, LOUISIANA, THAT:

Section 1. The Board of Aldermen of the Town of Rosepine adopts the Town of Rosepine Hazard Mitigation Plan of August 11, 2016.

This Resolution was adopted by the Board of Aldermen in regular session on this 11th day of August, 2016 by yea and nay votes as follows:

YEAS: Ray Blanchard, Jeff Solinsky, Leonard Johnson, BJ Bjornberg, Billy Owens
NAYS: None
ABSTAINED: None
ABSENT: None

BY: Donna W. Duvall,
Donna W. Duvall, Mayor

CERTIFICATE

I, Melissa Davis, Town Clerk of the Town of Rosepine, certify that the above and foregoing constitutes a true and correct copy of a resolution passed and adopted by the Town of Rosepine on the 11th day of August, 2016.

Melissa A. Davis
Melissa A. Davis, Town Clerk

MAYOR
Donnis Brinkley

CHIEF OF POLICE
David Delrie

CITY CLERK/ADMINISTRATOR
Janet Bennett

VILLAGE OF SIMPSON
P. O. Box 278
Simpson, LA 71474
(337) 383-7731
(337) 383-7794 (Fax)

COUNCILPERS:
Vickie Standifer
Carol Adams
Roger Bennett

RESOLUTION NO. 1 OF 2016

VILLAGE OF SIMPSON
SIMPSON, LOUISIANA

A RESOLUTION ADOPTING THE PARISH-WIDE HAZARD MITIGATION PLAN

DATE: August 8, 2016

WHEREAS, the Village of Simpson Board of Alderpersons recognizes the threat that natural hazards pose to people and property within Simpson, Louisiana; and

WHEREAS, the Village of Simpson has prepared a multi-hazard mitigation plan, hereby known as Vernon Parish Hazard Mitigation Plan on August 8, 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHREAS Vernon Parish Hazard Mitigation Plan, August 8, 2016 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Simpson, Louisiana from impacts of future hazards and disasters; and

WHEREAS adoption by the Village of Simpson Board of Alderpersons demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Vernon Parish Hazard Mitigation Plan, on August 8, 2016.

NOW THEREFORE, BE IT RESOLVED BY THE Village of Simpson, LOUISIANA, THAT:

Section 1. In accordance with its governing authority, the Village of Simpson Board of Alderpersons, hereby adopts the Vernon Parish Hazard Mitigation plan on the 8th day of August 2016.

ADOPTED by a vote of 3 in favor and 0 against, and 0 abstaining, this 8th day of August, 2016.

By: _____

Donnis Brinkley
(print name)

REC'D AUG 12 2016

RESOLUTION 16 OF 2016

BY

TOWN OF NEW LLANO

Town of New Llano Mitigation Plan of July 26th, 2016

WHEREAS the Town Of New Llano Mayor and Council Members recognizes the threat that natural hazards pose to people and property within Town Of New Llano; and

WHEREAS the Town Of New Llano has prepared a multi-hazard mitigation plan, hereby known as Town of New Llano Mitigation Plan of July 26th, 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Town Of New Llano Mitigation Plan of July 26th, 2016 identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Town of New Llano from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town of New Llano Mayor and Council Members demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Town Of New Llano Mitigation Plan of July 26th, 2016.

NOW THEREFORE, BE IT RESOLVED BY THE Town Of New Llano, LOUISIANA, THAT:

Section 1. The Town of New Llano Mayor and Council Members adopts the Town of New Llano Mitigation Plan of July 26th, 2016.

Passed, approved, and adopted by the Mayor and Council Members of the Town of New Llano, Parish of Vernon, State of Louisiana on the 26th day of July 2016.

Freddie Boswell, Mayor

Donna Condon

Donna Condon, Town Clerk

CERTIFICATE

I, Donna Condon, Clerk of the Town of New Llano, Louisiana do hereby certify that the above and foregoing constitutes a true and correct copy of a Resolution passed, approved, and adopted by the Town of New Llano on the 26th day of July 2016.

Donna Condon

Donna Condon, Town Clerk

VERNON PARISH POLICE JURY
RESOLUTION No. 45 of 2016

A RESOLUTION OF THE VERNON PARISH POLICE JURY
VERNON PARISH HAZARD MITIGATION PLAN

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

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

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

WHEREAS adoption by the Vernon Parish Police Jury demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Vernon Parish Hazard Mitigation Plan of August 2016.

NOW THEREFORE, BE IT RESOLVED by the Vernon Parish Police Jury, Vernon Parish, Louisiana, that:

Section 1. In accordance with the authority of the Vernon Parish Police Jury, we hereby adopt the Vernon Parish Hazard Mitigation Plan of August 2016 by a vote of: YEAS: 11 NAYS: 0 ABSTAIN: 0 ABSENT: 1

On motion by Mr. Curtis Clay, seconded by Mr. David Brister and carried, the foregoing resolution was unanimously adopted on this 8th day of August, 2016 at which meeting a quorum was present.

Rhonda M. Plummer
Parish Administrator/Treasurer
Vernon Parish Police Jury

James B. "Jim" Tuck
President
Vernon 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.

Mitigation Planning Team

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Hon.	Rick	Allen	Mayor	337.239.2444	n/a
Mr.	Rand	Alphord	Chamber of Commerce	337.238.2800	dowdenlaw@gmail.com
Hon.	James	Armes	State Representative	n/a	n/a
Mr.	Arno	Arpke	Lakes Commission	337.424.1072	n/a
Hon.	Clarence	Beebe	Mayor	318.565.4659	n/a
Ms.	Ranelle	Birmingham	ERA Sarver Real Estate	337.239.2041	ranelle.birmingham@era.com
Mr.	Lee	Birmingham	Ft. Polk DeRidder Assoc of Realtors	337.208.4125	lee@coolproperties.com
Ms.	Kim	Bonner	Vernon Parish Police Jury	337.239.9933	kim@vppjla.com
Hon.	Freddy	Boswell	Mayor	337.239.3670	n/a
Hon.	Donis	Brinkley	Mayor	337.3837731	n/a
Mrs.	Ann	Causey	Vernon Parish Chamber of Commerce	337.238.0349	chambervernonparish@hotmail.com
Hon.	Sam	Craft	Vernon Parish Sheriff's Office	337.238.7232	angiewestvpso@bellsouth.net
Mr.	John	Crook	Tourism Commission	337.238.0783	vernontourism@bellsouth.net
Hon.	Donna	Duvall	Mayor	337.463.8908	n/a
Mr.	Greg	Faust	Cleco	318.308.8050	gregory.faust@cleco.com
Rev.	Harrison	Fields	New Willow Baptist Church	337.239.9964	harrisonfields@wnline.net
Mr.	Tony	Gillespie	Cleco	318.308.9155	tony.gillespie@cleco.com
Mr.	Lee	Grevenberg	Rodio Maintenance	337.884.2735	lee.mobile@grevemberg.net

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Ms.	Sonya	Hamm	Visions for Vernon	337.424.6125	srhamm64@aol.com
Ms.	Lorna	Hanes	Fort Polk	337.531.6890	lorna.haynes@us.army.mil
Mr.	Robert	Hanna	Diamond B & R Construction	337.353.9006	roberthanna39@yahoo.com
Mr.	Mike	Harris	BECI	337.396.1833	mharris@beci.org
Mr.	Don	Haymon	Fire District President	337.239.0022	n/a
Mr.	Greg	Hill	Chief of Police, Leesville	337.238.0331	bobby.hickman@leesvillepd.org
Mr.	Randle	Holaway	Vernon Parish Health Unit	337.238.6410 x 2	randle.holaway@la.gov
Hon.	Frank	Howard	State Representative	n/a	n/a
Mr.	Howard	Hudgens	OEP Director	337.238.0218	vpsoeop@bellsouth.net
Mr.	Ken	Hughes	Fort Polk Progress	337.238.6282	kah.hughes@usa.net
Mr.	Paul	Jackson	Leesville City Airport	n/a	n/a
	Geralyn	Janice	LTC-Lamar Salter	337.537.3135	mkay@ltc.edu
Mr.	Ronald	Jeane	RJ Construction	337.392.5035	
Rev.	Maurice	Johnson	LAMA/Johnson Temple	337.238.4063	johnson1933@suddenlink.net
Mr.	Philip	Jordan	West Vernon Parish Water District	337.238.2656	wvwater@cebridge.net
Mr.	Richard	Karamatic	City of Leesville	337.239.2444	
Ms.	Barbara	Kaveski	Leesville Housing Authority	337.239.0940	bkaveski@aol.com
Mr.	Randy	Kay	Vernon Parish Health Unit	337.238.6410 x 2	randy.kay@la.gov
Mr.	Harvey	Kincaid	FEMA	n/a	harvey.kincaid@dhs.gov
Mr.	Clayton	King	FEMA	n/a	clayton.king@dhs.gov
Mr.	Jeffrey	Lacour	FEMA	n/a	jeffrey.lacour@dhs.gov
Mr.	Terry	Lambright	Parish Attorney	337.239.6557	lambrightlaw@yahoo.com
Hon.	Keith	Lewing	Mayor	337.239.0215	
Mr.	Billy	McShan	Vernon Parish Building Inspection	337.208.0195	billy@buildtocode.com
Mr.	Vernon	Meyer	Meyer & Associates, Consulting Engineer	337.625.8353	vmeyer@meyerassociates.com

Title	First Name	Last Name	Agency	Phone Number	E-mail Address
Mr.	Milton	Midkiff	Ward 4 Water/VP Water & Sewer	337.208.2021	n/a
Ms.	LaVerne	Miers	Anacoco Water System & Anacoco Village Council	337.239.7128	phmiers@cebridge.net
Hon.	Kenneth	Moore	OEP Director		
Mr.	Malcom	Morris	Morris Team Realty	337.238.0361	morris@morrisla.com
Mr.	Alex	Nicholes	DOTD	n/a	n/a
Mr.	Bobbie	Reed	Wildlife and Fisheries	337.491.2575	n/a
Mr.	Michael	Reese	Fort Polk Progress	337.239.9555	mike.reese@americanmovinginc.com
Ms.	Sidra	Sebastian	FEMA	n/a	sidra.a.sebestian@dhs.gov
Hon.	John	Smith	State Senator	n/a	n/a
Mr.	Rob	Smith	Cleco	318.308.8016	ronald.smith@cleco.com
Mr.	Carl	Thompson	Vernon Parish Police Jury	337.239.9933	carl@vppjla.com
Hon.	James B.	Tuck	Vernon Parish Police Jury President	337.208.2272	jbtuck05@hotmail.com
Mr.	Calvin	Turner	Chief Deputy Sheriff	337.238.1311	chiefturner@bellsouth.net
Mrs.	Lee	Turner	Cong. John Fleming	337.238.0778	lee.turner@mail.house.gov
Ms.	Marion	VanTassel	South Vernon Water Works	337.462.8888	svpwater@suddenlinkmail.com
Ms.	Beth	Westlake	Leesville Police Dept	337.238.0331	jhudgens@vpso.org

Capability Assessments – Vernon Parish

Worksheet 4.1: Capability Assessment Works	
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.	
	Vernon Parish
Plans	**Yes / No**
Comprehensive / Master Plan	Yes
Capital Improvements Plan	Yes
Economic Development Plan	Yes
Local Emergency Operations Plan	Yes
Continuity of Operations Plan	Yes
Transportation Plan	Yes
Stormwater Management Plan	No
Community Wildfire Protection Plan	No
Other plans (redevelopment, recovery, coastal zone management)	
Building Code, Permitting and Inspections	**Yes / No**
Building Code	Yes
Building Code Effectiveness Grading Schedule (BCEGS) Score	No
Fire Department ISO/PIAL rating	Yes
Site plan review requirements	Yes
Land Use Planning and Ordinances	**Yes / No**
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.		
	Vernon Parish	
Administration	Yes / No	
Planning Commission	Yes	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff	Yes / No;	
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	Yes	
Community Planner	Yes	
Civil Engineer	Yes	
GIS Coordinator	Yes	
Grant Writer	Yes	
Other	No	
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
Hazard Data & Information	Yes	
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	Vernon Parish Yes / No
Capital Improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	No
Stormwater Utility Fee	No
Community Development Block Grant (CDBG)	Yes
Other Funding Programs	Yes
	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	Vernon Parish Yes / No
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental	Yes
Natural Disaster or safety related school	Yes
Storm Ready certification	No
Firewise Communities certification	
Public/Private partnership initiatives addressing disaster-related issues	Yes
Other	No

Village of Anacoco

Worksheet 4.1: Capability Assessment Worksheet - Village of Anacoco		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	Rely on Parish
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Local Emergency Operations Plan	No	Rely on Parish
Continuity of Operations Plan	No	Rely on Parish
Transportation Plan	No	Rely on Parish
Stormwater Management Plan	No	Rely on Parish
Community Wildfire Protection Plan	No	Rely on Parish
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections	**Yes / No**	
Building Code	Yes	Rely on Parish
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	Rely on Parish
Fire Department ISO/PIAL rating	Yes	Rely on Parish
Site plan review requirements	No	Rely on Parish
Land Use Planning and Ordinances	**Yes / No**	
Zoning Ordinance	Yes	Rely on Parish
Subdivision Ordinance	Yes	Rely on Parish
Floodplain Ordinance	Yes	Rely on Parish
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	Rely on Parish
Flood Insurance Rate Maps	Yes	Rely on Parish
Acquisition of land for open space and public recreation uses	Yes	Rely on Parish
Other		Rely on Parish

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes / No	
Planning Commission	Yes	Rely on Parish
Mitigation Planning Committee	Yes	Rely on Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	Rely on Parish
Staff	Yes / No; FT/PT; % Hazard Mitigation	
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
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	
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	
Other Funding Programs	Yes	

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

Town of Hornbeck

Worksheet 4.1: Capability Assessment Worksheet - Town of Hornbeck		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	Rely on Parish
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Local Emergency Operations Plan	No	Rely on Parish
Continuity of Operations Plan	No	Rely on Parish
Transportation Plan	No	Rely on Parish
Stormwater Management Plan	No	Rely on Parish
Community Wildfire Protection Plan	No	Rely on Parish
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections	**Yes / No**	
Building Code	Yes	Rely on Parish
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	Rely on Parish
Fire Department ISO/PIAL rating	Yes	Rely on Parish
Site plan review requirements	No	Rely on Parish
Land Use Planning and Ordinances	**Yes / No**	
Zoning Ordinance	Yes	Rely on Parish
Subdivision Ordinance	Yes	Rely on Parish
Floodplain Ordinance	Yes	Rely on Parish
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	Rely on Parish
Flood Insurance Rate Maps	Yes	Rely on Parish
Acquisition of land for open space and public recreation uses	Yes	Rely on Parish
Other		Rely on Parish

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes / No	
Planning Commission	Yes	Rely on Parish
Mitigation Planning Committee	Yes	Rely on Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	Rely on Parish
Staff	Yes / No; FT/PT; % Hazard Mitigation	
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
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	
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	
Other Funding Programs	Yes	

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

City of Leesville

Worksheet 4.1: Capability Assessment Worksheet - City of Leesville

Local mitigation capabilities are existing authorities, polices and resources tha implement hazard mitigation activities. Please complete the tables and quest

Planning and Regulatory

Please indicate which of the following plans and regulatory capabilities your

Plans	Yes / No
Comprehensive / Master Plan	Yes
Capital Improvements Plan	No
Economic Development Plan	Yes
Local Emergency Operations Plan	YES
Continuity of Operations Plan	YES
Transportation Plan	NO
Stormwater Management Plan	NO
Community Wildfire Protection Plan	NO
Other plans (redevelopment, recovery, coastal zone management)	
Building Code, Permitting and Inspections	**Yes / No**
Building Code	YES
Building Code Effectiveness Grading Schedule (BCEGS) Score	NO
Fire Department ISO/PIAL rating	
Site plan review requirements	YES
Land Use Planning and Ordinances	**Yes / No**
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 techni local staff resources, if there are public resources at the next higher level gov

Administration	Yes / No
Planning Commission	YES
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	Yes/FT/20%
Floodplain Administrator	~~No~~ YES
Emergency Manager	Yes/PT/10%
Community Planner	NO
Civil Engineer	YES
GIS Coordinator	No
Grant Writer	YES
Other	
Technical	**Yes / No**
Warning Systems / Service (Reverse 911, outdoor warning signals)	YES
Hazard Data & Information	NO
Grant Writing	YES
Hazus Analysis	NO
Other	
Financial	

Identify whether your jurisdiction has access to or is eligible to use the follow

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

Identify education and outreach programs and methods, already in place that activities and communicate hazard-related information.

Program / Organization	Yes / No

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

Town of New Llano

Worksheet 4.1: Capability Assessment Worksheet - Town of New Llano		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	Yes	
Capital Improvements Plan	No	Rely on Parish
Economic Development Plan	Yes	
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	Yes	
Transportation Plan	No	
Stormwater Management Plan	No	Rely on Parish
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections	**Yes / No**	
Building Code	Yes	Rely on Parish
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	Rely on Parish
Fire Department ISO/PIAL rating	Yes	Rely on Parish
Site plan review requirements	No	Rely on Parish
Land Use Planning and Ordinances	**Yes / No**	
Zoning Ordinance	Yes	Rely on Parish
Subdivision Ordinance	Yes	Rely on Parish
Floodplain Ordinance	Yes	Rely on Parish
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	Rely on Parish
Flood Insurance Rate Maps	Yes	Rely on Parish
Acquisition of land for open space and public recreation uses	Yes	Rely on Parish

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes / No	
Planning Commission	Yes	Rely on Parish
Mitigation Planning Committee	Yes	Rely on Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	Rely on Parish
Staff	Yes / No; FT/PT; % Hazard Mitigation	
Chief Building Official	Yes	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
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	
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	
Other Funding Programs	Yes	

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

Village of Simpson

Worksheet 4.1: Capability Assessment Worksheet - Simpson		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	No	
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	
Local Emergency Operations Plan	No	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections	**Yes / No**	
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	

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	
Planning Commission	Yes	
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	Yes	
Floodplain Administrator	Yes	
Emergency Manager	No	
Community Planner	No	
Civil Engineer	Yes	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
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	
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	No	
Other Funding Programs	Yes	

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

Town of Rosepine

Worksheet 4.1: Capability Assessment Worksheet - Rosepine		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	**Yes / No**	**Comments**
Comprehensive / Master Plan	**No**	
Capital Improvements Plan	**Yes**	
Economic Development Plan	**Yes**	
Local Emergency Operations Plan	**No**	**Rely on Parish**
Continuity of Operations Plan	No	Rely on VPPJ
Transportation Plan	No	
Stormwater Management Plan	No	
Community Wildfire Protection Plan	No	Rely on Parish
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections		
Building Code	Yes	Rely on Parish
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	Fire Marshall
Site plan review requirements	No	
Land Use Planning and Ordinances	**Yes / No**	
Zoning Ordinance	No	VPPJ
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	No	
Other	No	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	**Yes / No**	
Planning Commission	No	
Mitigation Planning Committee	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	No	
Staff	**Yes / No; FT/PT; % Hazard Mitigation**	
Chief Building Official	**No**	
Floodplain Administrator	**Yes**	Carl Thompson VPPJ
Emergency Manager	**No**	
Community Planner	**No**	
Civil Engineer	No	
GIS Coordinator	No	
Grant Writer	No	
Other	No	
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**	
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	If elected by public
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)	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**	
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	No	
Natural Disaster or safety related school	No	
Storm Ready certification	No	
Firewise Communities certification	No	
Public/Private partnership initiatives addressing disaster-related issues	No	
Other	No	Rely on Parish

Building Inventory

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Unincorp. Vernon									
	Evans High School	Education	18829 Louisiana 111	Evans	30.98895959	-93.5014647	N/A	N/A	N/A
	Adult Education Center	Education	7460 Colorado Ave. Bldg. 660	Fort Polk	31.00958481	-93.27922956	N/A	N/A	N/A
	Pitkin High School	Education	None	Pitkin	30.93686792	-92.93353398	N/A	N/A	N/A
	Simpson High School	Education	4262 Louisiana 8	Simpson	31.26183463	-93.00970406	N/A	N/A	N/A
X	Community Fire Department	Fire Search and Rescue	172 Louisiana 112	Elizabeth	30.94202012	-92.84803707	N/A	N/A	N/A
X	Evans Volunteer Fire Department	Fire Search and Rescue	125 Fal Road	Evans	30.98482194	-93.50156172	N/A	N/A	N/A
X	Pitkin Volunteer Fire Department	Fire Search and Rescue	12778 Louisiana 10	Pitkin	30.93528683	-92.93788375	N/A	N/A	N/A
X	Marlow Fire Department	Fire Search and Rescue	118 Marlow Road	Pitkin	30.96262237	-93.11370353	N/A	N/A	N/A
X	Cravens Fire Department	Fire Search and Rescue	Nearby: 11714-11816 Pitkin Highway	Pitkin	30.96619136	-93.03657091	N/A	N/A	N/A
X	Vernon Parish Sheriff's Office Substation	Law Enforcement	Nearby: Middle Street	Pitkin	30.9346742	-92.93546542	N/A	N/A	N/A
X	Simpson Police Department	Law Enforcement	4464 LA HWY 8	Simpson	31.26297648	-93.01613508	N/A	N/A	N/A
	Louisiana Department of Agriculture -	Civil Government	Nearby: Kisatchie National Forest	Fort Polk	31.02787845	-93.21106461	N/A	N/A	N/A

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
	Vernon Work Center								
	Vernon Parish Office of Family Support	Civil Government	1591 Bell Richard Avenue # 920	Fort Polk	31.11247055	-93.27502889	N/A	N/A	N/A
X	Rosepine Municipal Complex	Civil Government	Nearby: 6693-6869 Par Road 7063	Pitkin	30.9116333	-93.28522271	N/A	N/A	N/A
	The Humane Society of West Louisiana	Civil Government	Nearby: 113-137 Cheatham Street	Pitkin	30.8984818	-93.2887719	N/A	N/A	N/A
	Simpson Village Hall	Civil Government	4464 Louisiana 8	Simpson	31.26292644	-93.01611792	N/A	N/A	N/A
X	Fort Polk	Military	Nearby: Kisatchie National Forest	Fort Polk	31.05060766	-93.21627858	N/A	N/A	N/A
Anacoco									
	Anacoco High School	Education	4740 Port Arthur Avenue	Anacoco	31.25242569	-93.33882907	N/A	N/A	N/A
	Anacoco Elementary School	Education	4726 Port Arthur Avenue	Anacoco	31.25221237	-93.33773651	N/A	N/A	N/A
X	Sandy Creek Fire Department	Fire Search and Rescue	Nearby: 10544-10852 Louisiana 111	Anacoco	31.19384945	-93.49371333	N/A	N/A	N/A
X	Memorial Fire Station	Fire Search and Rescue	Nearby: 1652-1756 Front Street	Anacoco	31.25109347	-93.3421247	N/A	N/A	N/A
X	Anacoco Police Department	Law Enforcement	4973 Main Street	Anacoco	31.24582403	-93.33849804	N/A	N/A	N/A

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Anacoco Town Hall	Civil Government	4973 Main Street	Anacoco	31.24577738	-93.33849371	N/A	N/A	N/A
Hornbeck									
	Hornbeck Elementary School	Education	4726 Port Arthur Avenue	Hornbeck	31.32545958	-93.39516409	N/A	N/A	N/A
	Hornbeck High School	Education	2363 Stillwell Avenue	Hornbeck	31.32530783	-93.39438281	N/A	N/A	N/A
X	Fire Station 1 District 3	Fire Search and Rescue	Nearby: Shreveport Highway	Hornbeck	31.32931661	-93.39999252	N/A	N/A	N/A
X	Fire Tower	Fire Search and Rescue	Nearby: 240-452 Louisiana 473	Hornbeck	31.30870372	-93.4152278	N/A	N/A	N/A
X	Hornbeck Police Department	Law Enforcement	1083 Hammond Street	Hornbeck	31.32550149	-93.39838779	N/A	N/A	N/A
X	Hornbeck Town Hall	Civil Government	1083 Hammond Street	Hornbeck	31.32541957	-93.39837271	N/A	N/A	N/A
Leesville									
	Northwestern State University	Education	Nearby: Kisatchie National Forest	Leesville	31.09979696	-93.2319634	N/A	N/A	N/A
	Vernon Parish Special Education Center	Education	201 Belview Road	Leesville	31.15284595	-93.26140709	N/A	N/A	N/A
	Pickering Elementary School	Education	116 Lebleu Road	Leesville	31.03891294	-93.27213601	N/A	N/A	N/A
	Pickering High School	Education	180 Lebleu Road	Leesville	31.03917759	-93.27115884	N/A	N/A	N/A
	West Leesville Elementary	Education	1200 Abe Allen Memorial Drive	Leesville	31.13808018	-93.27979832	N/A	N/A	N/A

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
	Leesville High	Education	502 Berry Drive	Leesville	31.1504898	-93.25729481	N/A	N/A	N/A
	Leesville JR High	Education	480 Berry Drive	Leesville	31.14810069	-93.25872551	N/A	N/A	N/A
	Vernon Middle School	Education	1410 Nona Street	Leesville	31.15148339	-93.27609455	N/A	N/A	N/A
	East Leesville Elementary	Education	203 Belview Road	Leesville	31.15218118	-93.2596521	N/A	N/A	N/A
	Hicks High School	Education	1296 Par Road 831	Leesville	31.18236075	-92.98179791	N/A	N/A	N/A
	Central Louisiana Technical Community College	Education	Nearby: 14676-14700 Lake Charles Highway	Leesville	31.01073124	-93.2787659	N/A	N/A	N/A
X	Leesville Substation District 36	Emergency Medical Services	Nearby: 104B East Texas Street	Leesville	31.14367791	-93.26267853	N/A	N/A	N/A
X	Fire Station	Fire Search and Rescue	109 East South Street	Leesville	31.24561433	-93.33821857	N/A	N/A	N/A
X	Alco-Hutton Volunteer Fire Dept. - Kurthwood Substation	Fire Search and Rescue	Nearby: 1120 Louisiana 117	Leesville	31.33150682	-93.17379384	N/A	N/A	N/A
X	Alco-Hutton Volunteer Fire Department	Fire Search and Rescue	118 Par Road 64	Leesville	31.33235793	-93.0714307	N/A	N/A	N/A
X	Simpson Volunteer Fire Department	Fire Search and Rescue	LA-8	Leesville	31.26306249	-93.01615794	N/A	N/A	N/A
X	La Camp Fire Department	Fire Search and Rescue	6413 Louisiana 121	Leesville	31.16736356	-92.92327489	N/A	N/A	N/A
X	Sandy Hill Fire Department	Fire Search and Rescue	826 Pitkin Road	Leesville	31.02864268	-93.24741909	N/A	N/A	N/A

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Burr Ferry Fire Department	Fire Search and Rescue	23466 Louisiana 8	Leesville	31.07155672	-93.48613057	N/A	N/A	N/A
X	Savage Forks Volunteer Fire Department	Fire Search and Rescue	4078 Savage Forks Road	Leesville	31.04421723	-93.34584359	N/A	N/A	N/A
X	Providence	Fire Search and Rescue	Nearby: Kisatchie National Forest	Leesville	30.95639674	-93.20925683	N/A	N/A	N/A
X	Caney Volunteer Fire Dept	Fire Search and Rescue	144 Louisiana 464	Leesville	31.11899604	-93.3882056	N/A	N/A	N/A
X	Fire Dept	Fire Search and Rescue	109 East South Street	Leesville	31.20157569	-93.12847918	N/A	N/A	N/A
X	Fire Dept	Fire Search and Rescue	6413 Louisiana 121	Leesville	31.18231392	-93.00050711	N/A	N/A	N/A
X	Fire Dept	Fire Search and Rescue	109 East South Street	Leesville	31.08420866	-93.2772121	N/A	N/A	N/A
X	Dry Fork Volunteer Fire Department	Fire Search and Rescue	185 Louisiana 111	Leesville	31.22909081	-93.21518284	N/A	N/A	N/A
X	Leesville Fire Department	Fire Search and Rescue	109 East South Street	Leesville	31.13442513	-93.2843933	N/A	N/A	N/A
	Leesville Fire Department	Fire Search and Rescue	109 East South Street	Leesville	31.13963694	-93.26271506	N/A	N/A	N/A
X	Vernon Parish Sheriff's Office Substation	Law Enforcement	Nearby: 301-329 H M Stevens Boulevard	Leesville	31.14753338	-93.28792142	N/A	N/A	N/A
X	Vernon Parish Sheriff's Office	Law Enforcement	Nearby: 301 East Courthouse Street	Leesville	31.14228938	-93.26066579	N/A	N/A	N/A
X	Vernon Parish Sheriff's Office	Law Enforcement	Nearby: 1301-1399 South 3rd Street	Leesville	31.13118391	-93.26462999	N/A	N/A	N/A

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
	Vernon Parish Correctional Facility	Prisons and Correctional Facilities	Nearby: 2294 Slagle Road	Leesville	31.15058078	-93.18973996	N/A	N/A	N/A
	Vernon Parish Sales Tax Department	Civil Government	Nearby: 207 Belview Road	Leesville	31.1523638	-93.26184593	N/A	N/A	N/A
	Louisiana Department of Wildlife and Fisheries Office	Civil Government	201 South 3rd Street	Leesville	31.01577753	-93.11233824	N/A	N/A	N/A
	Office of State Senator John Smith	Civil Government	611 South 5th Street	Leesville	31.1381693	-93.26334239	N/A	N/A	N/A
	Leesville Municipal Center Annex	Civil Government	Nearby: 100-198 Nolan Trace Parkway	Leesville	31.14348776	-93.26422761	N/A	N/A	N/A
	USDA Service Center	Civil Government	1100 South 3rd Street	Leesville	31.14438298	-93.26342989	N/A	N/A	N/A
	Department of Public Safety	Civil Government	9219 Shreveport Highway	Leesville	31.15981535	-93.26560049	N/A	N/A	N/A
	Vernon Parish Chamber of Commerce	Civil Government	1309 North 5th Street	Leesville	31.15846277	-93.26541231	N/A	N/A	N/A
	Vernon Parish Child Welfare Office	Civil Government	113 South 3rd Street	Leesville	31.13387035	-93.2663348	N/A	N/A	N/A
	Social Security Administration	Civil Government	2100 Sartor Street	Leesville	31.12464147	-93.27728208	N/A	N/A	N/A
	Vernon Council on Aging	Civil Government	200 North 3rd Street	Leesville	31.14422478	-93.26150368	N/A	N/A	N/A
X	Vernon Parish Courthouse	Civil Government	101 West Lee Street	Leesville	31.14228938	-93.2607866	N/A	N/A	N/A

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Vernon Police Jury	Civil Government	300 South 3rd Street	Leesville	31.14175485	-93.26148989	N/A	N/A	N/A
	Office of District Attorney Asa Skinner	Civil Government	Nearby: 201-299 South 3rd Street	Leesville	31.14235039	-93.26138609	N/A	N/A	N/A
	Vernon Parish Assessor's Office	Civil Government	301 East Courthouse Street	Leesville	31.14249883	-93.26053139	N/A	N/A	N/A
X	Vernon Parish Department of Public Safety	Civil Government	203 South 3rd Street	Leesville	31.14170744	-93.26058592	N/A	N/A	N/A
X	Louisiana Department of Transportation - Leesville Maintenance Unit	Civil Government	590 Alexandria Highway	Leesville	31.15862465	-93.19115503	N/A	N/A	N/A
	Office of State Representative James Armes	Civil Government	2255 University Parkway	Leesville	31.12147656	-93.25041611	N/A	N/A	N/A
	Vernon Parish Animal Shelter	Civil Government	Nearby: Olbanion Road	Leesville	31.10386315	-93.24313235	N/A	N/A	N/A
	Vernon Parish Landfill	Civil Government	344 J L Obanion Rd	Leesville	31.10161155	-93.24523869	N/A	N/A	N/A
	Department of Veterans Affairs	Civil Government	Nearby: 3353 University Parkway	Leesville	31.08730366	-93.2305975	N/A	N/A	N/A
	Vernon Community Action Council	Civil Government	12286 Lake Charles Highway	Leesville	31.07989208	-93.27308889	N/A	N/A	N/A
	District Attorney - Child Support Office	Civil Government	Nearby: 215 South 4th Street	Leesville	31.14220393	-93.26140671	N/A	N/A	N/A

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
	Vernon Parish Office of the Registrar of Voters	Civil Government	Nearby: 301 East Courthouse Street	Leesville	31.14245861	-93.26064436	N/A	N/A	N/A
	Peason Cantonment Area	Military	Nearby: 473 Louisiana 117	Leesville	31.35037992	-93.17232167	N/A	N/A	N/A
	Peason Ridge TOC - Joint Readiness Training Center	Military	Nearby: 563-599 Louisiana 117	Leesville	31.35211083	-93.17231133	N/A	N/A	N/A
	Louisiana National Guard	Military	Nearby: H M Stevens Boulevard	Leesville	31.14796667	-93.28695612	N/A	N/A	N/A
X	Byrd Regional Medical	Hospital or Medical Center	1020 Fertitta Boulevard	Leesville	31.13871144	-93.26906606	N/A	N/A	N/A
X	Doctor's Hospital	Hospital or Medical Center	1020 Fertitta Boulevard	Leesville	31.13569115	-93.26883146	N/A	N/A	N/A
New Llano									
X	New Llano Fire Department	Fire Search and Rescue	213 Stanton Street	New Llano	31.11604285	-93.27523842	N/A	N/A	N/A
X	New Llano City Hall	Civil Government	109 Stanton Street	New Llano	31.115585	-93.27359102	N/A	N/A	N/A
X	Vernon Parish School Board	Civil Government	Vernon Parish School Board	New Llano	31.15236154	-93.26154433	N/A	N/A	N/A
Rosepine									
X	Town Hall	City administrative office/Police Department	18846 Johnny B. Hall Memorial Hwy.	Rosepine	30d 54'41.99"N	93d 17'06.96"W	$ 1,264,600.00	2008	Reinforced Masonry

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Rosepine Volunteer Fire Department	House Fire Equipment and Trucks	6567 Fagan Circle	Rosepine	30d 54'53.41"N	93d 16'54.07"W	N/A	1967	Metal
X	Wastewater Treatment Plant	Treat raw sewerage	1377 Yocum	Rosepine	30d 54'58.86"N	93d 17'43.65"W	$ 147,553.00	1975 - 2013	Wood
X	Leach Road Lift Station	Pump sewerage to the Wastewater Treatment Plant	18808 Johnny B. Hall Mem. Hwy	Rosepine	30d 54'46.02"N	93d 17'03.55"W	$ 94,000.00	2012	Metal
X	Barbara Drive Lift Station	Pump sewerage to the Wastewater Treatment Plant	240 Barbara Drive	Rosepine	30d 54'38.76"N	93d 16'39.72"W	$ 94,000.00	2013	Metal
X	Hwy. 1146 Lift Station	Pump sewerage to the Wastewater Treatment Plant	4415 Hwy. 1146	Rosepine	30d 55'11.88"N	93d 16'47.10"W	$ 87,000.00	2009	Metal
X	Yankee Ridge Rd. Lift Station	Pump sewerage to the Wastewater Treatment Plant	141 Yankee Ridge Road	Rosepine	30d 55'03.03"N	93d 16'05.11"W	$ 87,000.00	2005	Metal
X	Bailey Road Lift Station	Pump sewerage to the Wastewater Treatment Plant	6324 Bailey Road	Rosepine	30d 55'22.56"N	93d 16'51.49"W	$ 40,000.00	2009	Metal
X	Weeks Road Lift Station	Pump sewerage to the Wastewater Treatment Plant		Rosepine	30d 55'49.67"N	93d 17'30.31"W	$ 87,000.00	2012	Metal

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
X	Main Street Lift Station	Pump sewerage to the Wastewater Treatment Plant	8485 Main Street	Rosepine	30d 55'21.88"N	93d 18'00.98"W	$ 87,000.00	2009	Metal
X	Water Plant	Maintain system pressure	6462 First Street	Rosepine	30d 55'09.94"N	93d 16'50.27"W	$ 35,393.00	? - 2010	Metal
X	Well #3	Produce water	2299 Ruth Street	Rosepine	30d 54'47.77"N	93d 16'57.28"W	$ 60,000.00	1976	Metal
X	Well #4	Produce water	2429 Ruth Street	Rosepine	30d 54'43.51"N	93d 16'59.41"W	$ 63,000.00	1986	Metal
X	Well #5	Produce water	10095 Lewis Road	Rosepine	30d 55'34.26"N	93d 19'44.08"W	$ 243,000.00	2003	Metal
X	Water Tower	Store water	224 Louisiana Avenue	Rosepine	30d 55'48.28"N	93d 17'08.22"W	$ 410,000.00	1990	Steel
	Generator - Wastewater Treatment Plant	Generate electricity during outage	1201 Yocum Street	Rosepine	30d 54'58.86"N	93d 17'43.65"W	$ 30,000.00	2012	Metal
	Generator - Well #5	Generate electricity during outage	10095 Lewis Road	Rosepine	30d 55'34.26"N	93d 19'44.08"W	$ 50,000.00	2012	Metal

Vulnerable Populations

Vulnerable Populations Worksheet

Vernon Parish

Name	Street	City	Zip Code	Latitude	Longitude
All Hospitals (Private or Public)					
Byrd Regional Medical	1020 Fertitta Boulevard	Leesville	71446	31.13871144	-93.26906606
Doctor's Hospital	1020 Fertitta Boulevard	Leesville	71446	31.13569115	-93.26883146
Nursing Homes (Private or Public)					
Rosepine Retirement and Rehabilitation	18364 Johnny B Hall Memorial HWY	Rosepine	70659	30d 55'25.68"N	93d 16'59.20"W
New Llano Seniors	301 Harper Street	New Llano	71461	31.11404393	-93.2784586
Mobile Home Parks					
Craft's Mobile Home Park	7196 Main Street	Rosepine	70659	30d 55'18.41"N	93d 17'14.13"W
Hattie's Hill Mobile Home Park	6411 First Street	Rosepine	70659	30d 55'06.18"N	93d 16'50.37"W
Stephens Mobile Home Park	6137 First Street	Rosepine	70659	30d 55'04.71"N	93d 16'39.31"W
Vernon Lake RV Park	168 Sapphire Lane	Anacoco	71446	31.22933524	-93.36738294
Sarver Trailer Park	3090 U.S. 171	Anacoco	71446	31.23143221	-93.34692106
Thaxton's Landing	Nearby: Thaxton Landing Road	Anacoco	71403	31.22290773	-93.33917618
Unknown Apartments	Nearby: 1840-1882 Front Street	Anacoco	71403	31.24888385	-93.34149483
Unknown RV Park	1000 Hodges Loop	Anacoco	71429	31.27969273	-93.349804
Wildlife Management Area Campground	Nearby: Louisiana 464	Evans	71446	31.05082082	-93.40138845
Hornbeck RV Park	Nearby: Shreveport Highway	Hornbeck	71439	31.31936843	-93.38655971
Arlington RV Park	12932 Lake Charles Highway	Leesville	71446	31.06238772	-93.27644037

Quality RV Park	1910 South 5th Street	Leesville	71446	31.03014457	-93.23037736
Unknown Trailer Park	Nearby: 288 Lonnie Jenae Loop	Leesville	71446	31.0261515	-93.2392041
Pecan Acres RV	8119 Hawks Road	Leesville	71446	30.94288459	-93.28355001
Unknown	Nearby: 174-198 Pecan Grove Road	Leesville	71446	30.95671294	-93.28592461
Unknown	Nearby: 180 Cooper Church Road	Leesville	71446	31.03743992	-93.27546945
Unknown	Nearby: 40 Par Road 5	Leesville	71446	31.03749429	-93.27699173
Unknown	Nearby: 2472 Par Road 5	Leesville	71446	31.03477544	-93.3472798
Unknown	Nearby: 261 Par Road 13	Leesville	71446	31.04557248	-93.33777521
Unknown	Nearby: 179-223 Kvvp Drive	Leesville	71446	31.05074022	-93.27730346
Green Acres Mobile Home Park	728 Browns Lane	Leesville	71446	31.03823709	-93.2908259
Trailer Park	Boswell Trailer Park	Leesville	71461	31.12873849	-93.26165316
Shady Lake RV Park	168 Sapphire Lane	Leesville	71446	31.17324091	-93.27717743
RV Park	1840 Alexandria Highway	Leesville	71446	31.17609313	-93.10635526
Trailer Park	Nearby: 1902 Alexandria Highway	Leesville	71446	31.20647112	-92.98826341
Liberty Creek RV	Nearby: 201-267 Ridgewood Boulevard	Leesville	71446	31.11870922	-93.19468946
Trailer Park	Boswell Trailer Park	Leesville	71461	31.13849724	-93.2372515
Elimelech Mobile Homes	3986 Vfw Road	Leesville	71446	31.08455748	-93.32042178
Trailer Park	Boswell Trailer Park	Leesville	71461	31.07032349	-93.25340457
Boswell's Mobile Home Park	Nearby: 301-599 Stanton Road	New Llano	71461	31.11591982	-93.27909661
Ray's Mobile Home Park	427 Pitkin Road	Pickering	71446	31.03335963	-93.27452352
JD's RV Park	Nearby: Lake Charles Highway	Pickering	71446	31.03036914	-93.27118195
Pecan Acres RV Park	8119 Hawks Road	Pickering	71446	30.94283206	-93.28350484
Unknown	Nearby: 17884 Lake Charles Highway	Pickering	71446	30.9391654	-93.282817
Unknown	Nearby: 742-2332 Louisiana 458	Pitkin	70656	30.96103929	-92.96283143
Unknown	Nearby: 17728 Calhoun Street	Rosepine	70634	30.9215784	-93.28714111
Hattie's Hill Trailer Park	Nearby: 208-316 1st Street	Rosepine	70634	30.9189058	-93.28071555
Unknown Trailer Park	Nearby: Bebe Loop	Rosepine	71439	31.32527689	-93.40178899
Clear Creek Estates	Nearby: Kisatchie National Forest	Rosepine	71446	30.95186999	-93.22146171

National Flood Insurance Program (NFIP)

Vernon Parish

ELEMENT F: STATE REQUIREMENT National Flood Insurance Program (NFIP) Parish: Vernon Parish						
	Vernon Parish	**Anacoco**	**Hornbeck**	**Leesville**	**New Llano**	**Rosepine**
Insurance Summary						
How many NFIP polices are in the community? What is the total premium and coverage?	Vernon Parish Unicorporated: 223 PIF; Premium - $142,937; Coverage - $47,158,500	Village of Anacoco: 2 PIF; Premium- $769; Coverage- $310,000	Town of Hornbeck: 2 PIF; Premium- $1,566; Coverage- $370,000	City of Leesville: 69 PIF; Premium- $39,404; Coverage- $13,375,200	Town of New Llano: 26 PIF; Premium- $13,510; Coverage- $5,579,500	City of Rosepine: 7 PIF; Premium - $2,025; Coverage - $1,288,000
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	Total Losses - 96 since 1978; Total Payments - $1,950,121 since 1978	Total Losses - 0; Total Payments - $0	Total Losses - 0 since 1978; Total Payments - $0 since 1978	Total Losses - 40; Total Payments - $359,529	Total Losses - 1 since 1978; Total Payments - $0 since 1978	Total Losses - 0 since 1978; Total Payments - $0 since 1978
How many structures are exposed to flood risk with in the community?	SFHA areas are abundant in the City. There are many bayous, rivers, and drainage laterals that contribute to flooding.	SFHA area are abundant in the Village. There are many bayous, rivers, and drainage lateral that contribute to flooding	SFHA area are abundant in the Town. There are many bayous, rivers, and drainage lateral that contribute to flooding	SFHA area are abundant in the City. There are many bayous, rivers, and drainage lateral that contribute to flooding	SFHA area are abundant in the Town. There are many bayous, rivers, and drainage lateral that contribute to flooding	SFHA areas are abundant in the City. There are many bayous, rivers, and drainage laterals that contribute to flooding.
Describe any areas of flood risk with limited NFIP policy coverage.	There are no areas in which NFIP is not available or limited.	There are no areas in which NFIP is not available or limited	There are no areas in which NFIP is not available or limited	There are no areas in which NFIP is not available or limited	There are no areas in which NFIP is not available or limited	There are no areas in which NFIP is not available or limited.
Staff Resources						
Is the Community FPA or NFIP Coordinator certified?	FPA	FPA	FPA	FPA	FPA	FPA
Is flood plain management an auxiliary function?	Yes	Yes	Yes	Yes	Yes	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	The NFIP is aimed at reducing the impact of flooding on private and public structures.	The NFIP is aimed at reducing the impact of flooding on private and public structures.	The NFIP is aimed at reducing the impact of flooding on private and public structures.	The NFIP is aimed at reducing the impact of flooding on private and public structures.	The NFIP is aimed at reducing the impact of flooding on private and public structures.	The NFIP is aimed at reducing the impact of flooding on private and public structures.
What are the barriers to running an effective NFIP program in the community, if any?	Vernon Parish is currently in the process of getting GIS.	Vernon Parish is currently in the process of getting GIS.	Vernon Parish is currently in the process of getting GIS.	Vernon Parish is currently in the process of getting GIS.	Vernon Parish is currently in the process of getting GIS.	Vernon Parish is currently in the process of getting GIS.
Compliance History						
Is the community in good standing with the NFIP?	Yes	Yes	Yes	Yes	Yes	Yes
Are there any outstanding compliance issues(i.e., current violations)?	No	No	No	No	No	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact(CAC)?	December 2013	December 2013	December 2013	December 2013	December 2013	December 2013
Is a CAV or CAC scheduled or needed? If so when?	A CAV is not needed at this time.	A CAV is not needed at this time.	A CAV is not needed at this time.	A CAV is not needed at this time.	A CAV is not needed at this time.	A CAV is not needed at this time.
Regulation						
When did the community enter the NFIP?	November 23, 1973	November 23, 1973	November 23, 1973	November 23, 1973	November 23, 1973	November 23, 1973
Are the FIRMs digital or paper?	Paper	Paper	Paper	Paper	Paper	Paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	The floodplain development regulations meet FEMA requirements.	The floodplain development regulations meet FEMA requirements.	The floodplain development regulations meet FEMA requirements.	The floodplain development regulations meet FEMA requirements.	The floodplain development regulations meet FEMA requirements.	The floodplain development regulations meet FEMA requirements.
Community Rating System (CRS)						
Does the community participate in CRS?	No	No	No	No	No	No
What is the community's CRS Class Ranking?	10	10	10	10	10	10
Does the plan include CRS planning requirements?	No	No	No	No	No	No