



JACKSON

PARISH HAZARD MITIGATION UPDATE – 2017



JACKSON PARISH

HAZARD MITIGATION PLAN UPDATE

Prepared for:

Jackson Parish



Prepared by:

Stephenson Disaster Management Institute

Mr. Brant Mitchell

Mr. Chris Rippetoe

Ms. Lauren Stevens

Mr. Joseph Harris

Mr. Stuart Nolan

Dr. Carol J. Friedland, P.E., Ph.D., C.F.M.

Louisiana State University – Louisiana Emerging Technology Center
Baton Rouge, LA 70803



This Page Left Intentionally Blank

ACKNOWLEDGMENTS

This 2017 Jackson Parish Hazard Mitigation Plan Update was coordinated by the Jackson 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:

Jackson Parish
Town of Chatham
Village of East Hodge
Town of Eros
Village of Hodge
Town of Jonesboro
Village of North Hodge
Village of Quitman

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

Mark Treadway	Director	Jackson Parish OEP
Tammy Collinsworth	Clerk	Jackson Parish OEP
Eddie Langston	President	Jackson Parish Police Jury
Dwight Cooper	Mayor	Town of Chatham
Hal M. Mims	Mayor	Village of East Hodge
Vicky Knox	Mayor	Town of Eros
Gerald Palmer	Mayor	Village of Hodge
James Bradford	Mayor	Town of Jonesboro
Kathy Robertson	Mayor	Village of North Hodge
Joe Vail	Mayor	Village of Quitman

The 2017 Jackson Parish Hazard Mitigation Plan Update was written by the Stephenson Disaster Management Institute, Louisiana State University. Further comments should be directed to the Jackson Parish Office of Homeland Security and Emergency Preparedness: 500 East Court Street, Jonesboro, LA 71251.

Contents

1. Introduction.....	1-1
Location, Demography, and Economy.....	1-2
Location	1-2
Economy	1-3
Hazard Mitigation.....	1-4
General Strategy.....	1-6
2017 Plan Update	1-7
2. Hazard Identification and Parish-Wide Risk Assessment	2-1
Prevalent Hazards to the Community	2-1
Previous Occurrences	2-2
Probability of Future Hazard Events.....	2-3
Inventory of Assets for the Entire Parish.....	2-4
Essential Facilities of the Parish.....	2-5
Future Development Trends	2-10
Future Hazard Impacts	2-12
Land Use	2-12
Hazard Identification	2-14
Flooding	2-14
Thunderstorms	2-37
Tornadoes.....	2-50
Tropical Cyclones.....	2-56
Dam Failure.....	2-71
Levee Failure.....	2-73
3. Capability Assessment.....	3-1
Policies, Plans, and Programs	3-1
Building Codes, Permitting, Land Use Planning and Ordinances	3-2
Administration, Technical, and Financial.....	3-3
Education and Outreach.....	3-4
Flood Insurance and Community Rating System.....	3-5
NFIP Worksheets	3-8
4. Mitigation Strategy.....	4-1
Introduction.....	4-1
Goals.....	4-1
2017 Mitigation Actions and Update on Previous Plan Actions.....	4-2
Jackson 2011 Hazard Mitigation Action Update	4-3

Unincorporated Jackson New Mitigation Actions	4-10
Town of Chatham - New Mitigation Actions	4-12
Village of East Hodge - New Mitigation Actions	4-14
Town of Eros - New Mitigation Actions	4-16
Village of Hodge - New Mitigation Actions.....	4-18
Town of Jonesboro - New Mitigation Actions	4-20
Village of North Hodge - New Mitigation Actions	4-22
Village of Quitman - New Mitigation Actions	4-24
Action Prioritization.....	4-26
Appendix A: Planning Process	A-1
Purpose.....	A-1
The Jackson Parish Hazard Mitigation Plan Update	A-1
Planning	A-3
Coordination.....	A-3
Neighboring Community, Local and Regional Planning Process Involvement	A-3
Program Integration	A-5
Meeting Documentation and Public Outreach Activities	A-5
Meeting #1: Coordination Discussion.....	A-5
Meeting #2: Hazard Mitigation Plan Update Kick-Off	A-6
Meeting #3: Risk Assessment Overview	A-6
Meeting #4: Public Meeting	A-7
Outreach Activity #1: Public Opinion Survey	A-9
Outreach Activity #2: Incident Questionnaire	A-9
Outreach Activity #3: Mapping Activities	A-9
Public Plan Review Documentation.....	A-9
Appendix B: Plan Maintenance	B-1
Purpose.....	B-1
Monitoring, Evaluating, and Updating the Plan	B-1
Responsible Parties	B-1
Methods for Monitoring and Evaluating the Plan and Plan Evaluation Criteria	B-1
2017 Plan Version Plan Method and Schedule Evaluation	B-3
Incorporation into Existing Planning Programs	B-3
Continued Public Participation	B-5
Appendix C: Essential Facilities.....	C-1
Jackson Parish Essential Facilities – All Jurisdictions	C-1
Appendix D: Plan Adoption	D-1

Appendix E: State Required Worksheets.....	E-1
Mitigation Planning Team	E-1
Capability Assessment.....	E-1
See Section 3: Capability Assessment	E-1
Building Inventory	E-2
Vulnerable Populations	E-6
National Flood Insurance Program (NFIP)	E-7
Jackson Parish.....	E-7

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

- Unincorporated Jackson Parish
- Town of Chatham
- Village of East Hodge
- Town of Eros
- Village of Hodge
- Town of Jonesboro
- Village of North Hodge
- Village of Quitman

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 Jackson 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

Located in north-central Louisiana, Jackson Parish is located 92 miles east of Shreveport, 55 miles west of Monroe, and 73 miles north of Alexandria (*Figure 1-1*). The parish is adjacent to Bienville Parish to the west, Lincoln Parish to the north, Ouachita and Caldwell Parishes to the east, and Winn Parish to the south. The total area of the parish is approximately 371,466 acres, of which 7,216 acres is water.



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

The majority of Jackson Parish is composed of woodlands and rural farmland, with rolling hills common to the area. Several bayous and lakes are in the parish, including Caney Creek, Caney Lake Reservoir, and the Dugdemona River, which forms a portion of the southwestern boundary of the parish. The average elevation in Jackson Parish is approximately 215 feet above sea level.

Traffic in Jackson Parish is primarily concentrated on U.S. Highway 167, which is a north-south axis for the western half of the parish. State Highway 34 comes in from Ouachita Parish at the northeast corner and heads in a southerly direction on the eastern side of the parish. State Highway 4 is the primary east-west axis across Jackson Parish, intersecting U.S. 167 at Jonesboro and intersecting LA-34 at Chatham.

Jackson Parish is located in Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) Region 8.

As noted above, Jackson Parish is located in the northern region of Louisiana.



Figure 1-2: Louisiana Homeland Security Regions

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

	2010 Census	2014 Census	Current Year (If Available)	Percent Change 2010 - 2014
Total Population	16,274	15,994	—	-1.70%
Population Density (Pop/Sq. Mi.)	28.6	—	—	—
Total Households	7,680	7,748	—	—

Economy

A hard-working labor force, abundant raw materials, location near a significant transportation corridor, and land for commercial and industrial development make Jackson Parish an ideal prospect for business investment. Although agriculture and timber dominate the local economic base, related industrial activity, including paper product manufacturing, also significantly impacts the local economy. Aside from the timber industry, the healthcare industry is quite large for such a rural parish. Jackson Parish is home to a hospital,

several nursing and long-term care facilities, pharmacies, medical clinics, and home health agencies. Industry data for business patterns in Jackson Parish can be found in the table below:

Table 1-2: Business Patterns in Jackson 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	555	46	11,439
Manufacturing	500-999	6	—
Health Care and Social Assistance	565	20	16,119
Mining, Quarrying, Oil and Gas Extraction	20-99	4	—
Transportation and Warehousing	20-99	13	2,462
Construction	189	22	13,503
Administration and Support and Waste Management and Remediation Services	27	9	866
Real Estate and Rental and Leasing	0-19	6	134
Wholesale Trade	23	4	871
Other Services (except Public Administration)	173	43	2,817
Accommodation and Food Services	213	17	2,270
Financial and Insurance	112	17	4,342
Professional, Scientific, and Technical Services	41	15	875
Information	0-19	1	—
Educational Services	20-99	3	—
Arts, Entertainment, and Recreation	11	4	101
Management of Companies and Enterprises	0-19	1	—
Agriculture, Forestry, Fishing and Hunting	89	10	3,187
Utilities	20-99	3	—

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 Jackson 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 Jackson 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 2017 Jackson 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 Jackson Hazard Mitigation Plan were as follows:

- Section One Table of Contents
- Section Two Executive Summary
- Section Three Context
- Section Four Adoption and Approval
- Section Five Planning Process
- Section Six Hazard Identification, Profiling, and Ranking
- Section Seven Risk Assessment
- Section Eight Capability Assessment
- Section Nine Mitigation Action Plan
- Section Ten Plan Monitoring and Maintenance
- 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 Jackson 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.

2017 Plan Update

This 2017 plan update proceeds with the previous goals of the Jackson Parish Hazard Mitigation Plan. The current goals are as follows:

- Improve education and outreach efforts, specifically to the public, parish/municipal employees, and local businesses, regarding potential impacts of hazards and the identification of specific measures that can be taken to reduce their impact.
- Improve data collection, use, and sharing, specifically with neighboring communities, among municipalities, and with the State, to reduce the impact of hazards.
- Improve capabilities, coordination, and opportunities at municipal and parish levels to plan and implement hazard mitigation projects, programs, and activities, especially through the use of GIS, coordination with universities, and public/private partnerships.
- Pursue opportunities to mitigate repetitive and severe repetitive loss properties and other appropriate hazard mitigation projects, programs, and activities, with a focus on existing structures, future structures, protection of existing infrastructure, and protection of future infrastructure.

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 2017 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 (2017)
Section 1: Table of Contents	Section 1: Introduction
Section 2: Executive Summary	Section 1: Introduction
Section 3: Context	Section 1: Introduction
Section 4: Adoption and Approval	Appendix D: Plan Adoption
Section 5: Planning Process	Appendix A: Planning Process
Section 6: Hazard Identification, Profiling, and Ranking	Section 2: Hazard Identification and Risk Assessment
Section 7: Risk Assessment	Section 2: Hazard Identification and Risk Assessment
Section 8: Capability Assessment	Section 3: Capability Assessment
Section 9: Mitigation Action Plan	Section 4: Mitigation Strategy
Section 10: Plan Monitoring and Maintenance	Appendix B: Plan Maintenance
Appendices	Appendices

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

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

2. Hazard Identification and Parish-Wide Risk Assessment

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

Table 2-1: Hazard Profile Summary

Hazard	Profiled in Last Plan	Considered Medium or High Risk in the State's HM Plan	Profiled in the 2017 Update
Subsidence/Coastal Land Loss			
Drought			
Earthquakes			
Expansive Soils			
Fog			
Flooding	X	X	X
Extreme Heat			
Sinkholes			
Thunderstorms (Hail, Lightning, & Wind)	X	X	X
Tornadoes	X	X	X
Tropical Cyclones	X	X	X
Tsunamis			
Wildfires			
Winter Storms			
Dam Failure	X		+
Levee Failure	X		+

+ Indicates a Data deficiency

Prevalent Hazards to the Community

While many of the hazards identified in *Table 2-1* occur in the parish, their occurrence was not merited for further study by the planning committee. The determination was made to focus attention and resources on the most prevalent hazards, which include the hazards previously profiled. Dam and levee failure both claim a data deficiency.

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

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

The potential destructive power of tropical cyclones and flooding were determined to be the most prevalent hazards to the parish. All six Presidential Declarations Jackson Parish has received resulted from either tropical cyclones (4 declarations) or flooding (2 declarations), which validates these as the most significant hazards. Therefore, the issues of hurricanes and floods will both serve as the main focus during the mitigation planning process. Hurricanes present risks from the potential for flooding, primarily resulting from storm surge, and high wind speeds. While storm surge is considered the hazard with the most destructive potential, the risk assessment will also assess non-storm surge flooding as well. Flooding can also occur from non-hurricane events, as flash floods are a common occurrence due to heavy rainfall.

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

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

Previous Occurrences

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

Table 2-2: Jackson Parish Major Disaster Declarations

Disaster Declaration Number	Date	Type of Disaster
829	5/20/1989	Severe Storms and Flooding
904	5/3/1991	Severe Storms, Tornadoes, and Flooding
1603	8/29/2005	Tropical Cyclone – Hurricane Katrina
1607	9/24/2005	Tropical Cyclone – Hurricane Rita
1786	9/2/2008	Tropical Cyclone – Hurricane Gustav
4080	8/29/2012	Tropical Cyclone – Hurricane Isaac

Probability of Future Hazard Events

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

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

Table 2-3: Probability of Future Hazard Reoccurrence

[illegible]

As shown in [Table 2-3](#), thunderstorm winds and hailstorms for the entire planning area, have the highest annual chance of occurrence in the parish (100%). Tornadoes have a 60% annual chance of occurrence, followed by flooding in the unincorporated areas at 24%. Flood events in the remaining incorporated areas have a slightly lower chance of occurring annually. Tropical cyclones have a 12% annual chance of occurrence, followed by lightning at 4%.

Inventory of Assets for the Entire Parish

As part of the Risk Assessment, the planning team identified essential facilities throughout the parish. Several methods were used to assist in identifying all essential facilities, including field data collected by the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) on critical infrastructure from a previous hazard mitigation project.

Within the entire planning area, there is an estimated value of \$2,386,744,000 in structures throughout the parish. The table below provide the total estimated value for each type of structure by occupancy.

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

Occupancy	Jackson Parish	Unincorporated Jackson Parish	Chatham	East Hodge	Eros
Agricultural	\$5,546,000	\$4,672,000	\$0	\$0	\$0
Commercial	\$251,611,000	\$88,706,000	\$6,388,000	\$1,632,000	\$1,552,000
Government	\$25,227,000	\$7,600,000	\$334,000	\$0	\$584,000
Industrial	\$35,504,000	\$23,931,000	\$2,208,000	\$0	\$0
Religion	\$109,592,000	\$57,676,000	\$2,294,000	\$0	\$598,000
Residential	\$1,937,714,000	\$1,211,827,000	\$51,171,000	\$30,331,000	\$15,320,000
Education	\$21,550,000	\$5,264,000	\$0	\$0	\$0
Total	\$2,386,744,000	\$1,399,676,000	\$62,395,000	\$31,963,000	\$18,054,000

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

Occupancy	Hodge	Jonesboro	North Hodge	Quitman
Agricultural	\$0	\$874,000	\$0	\$0
Commercial	\$12,654,000	\$137,171,000	\$3,508,000	\$0
Government	\$166,000	\$16,293,000	\$0	\$250,000
Industrial	\$2,250,000	\$6,577,000	\$0	\$538,000
Religion	\$3,274,000	\$37,440,000	\$1,304,000	\$7,006,000
Residential	\$71,442,000	\$495,786,000	\$40,896,000	\$20,941,000
Education	\$0	\$13,316,000	\$2,970,000	\$0
Total	\$89,786,000	\$707,457,000	\$48,678,000	\$28,735,000

Essential Facilities of the Parish

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

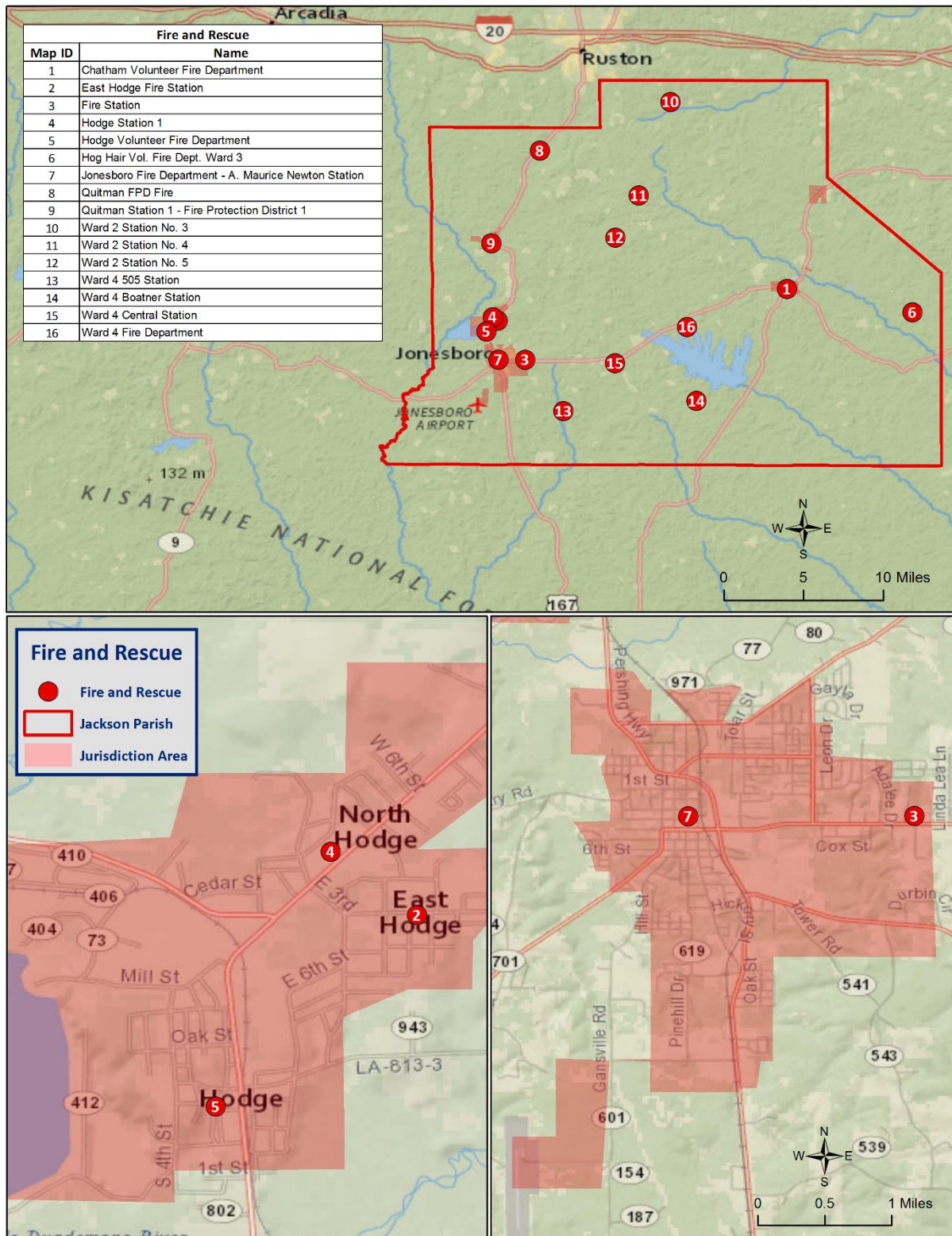
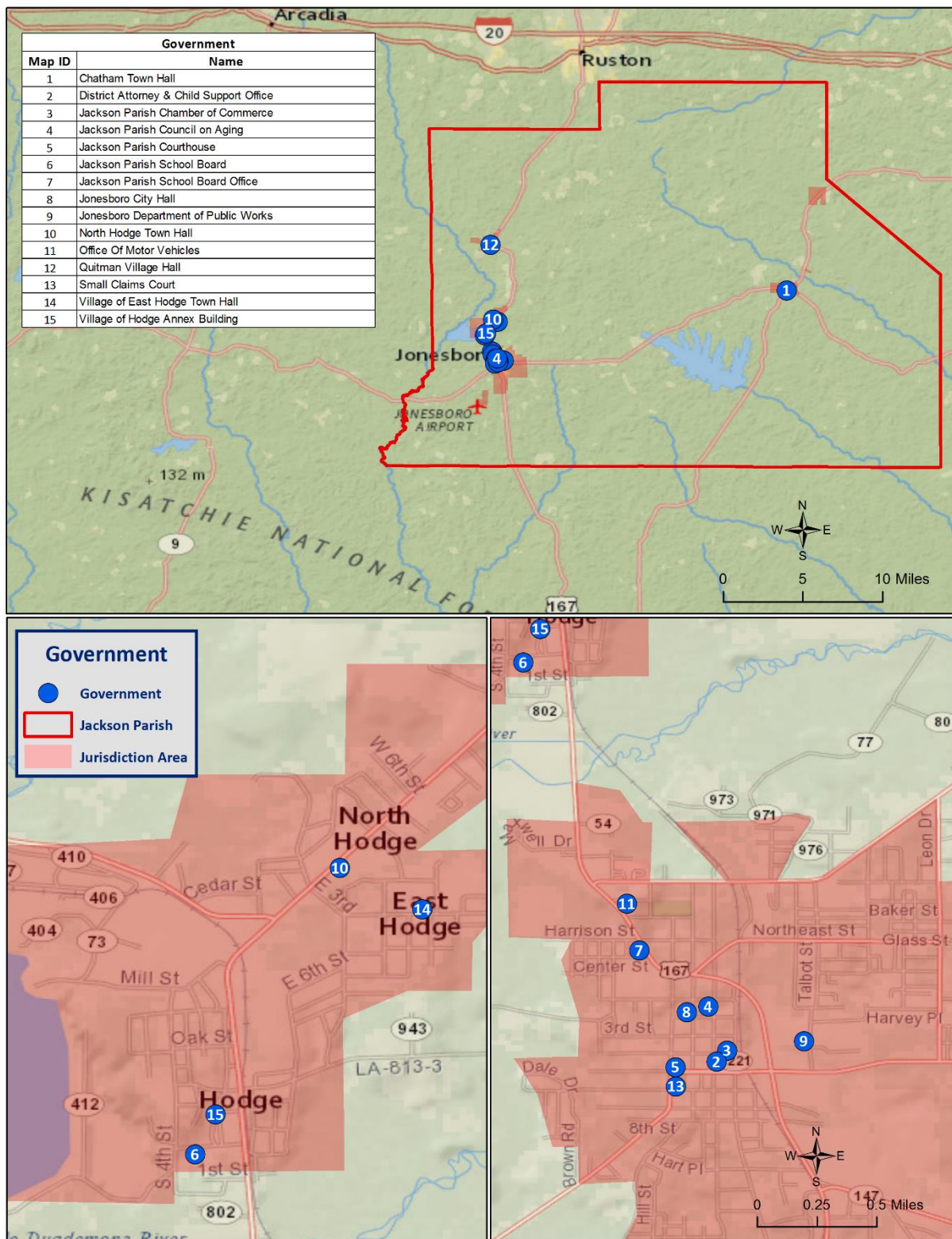
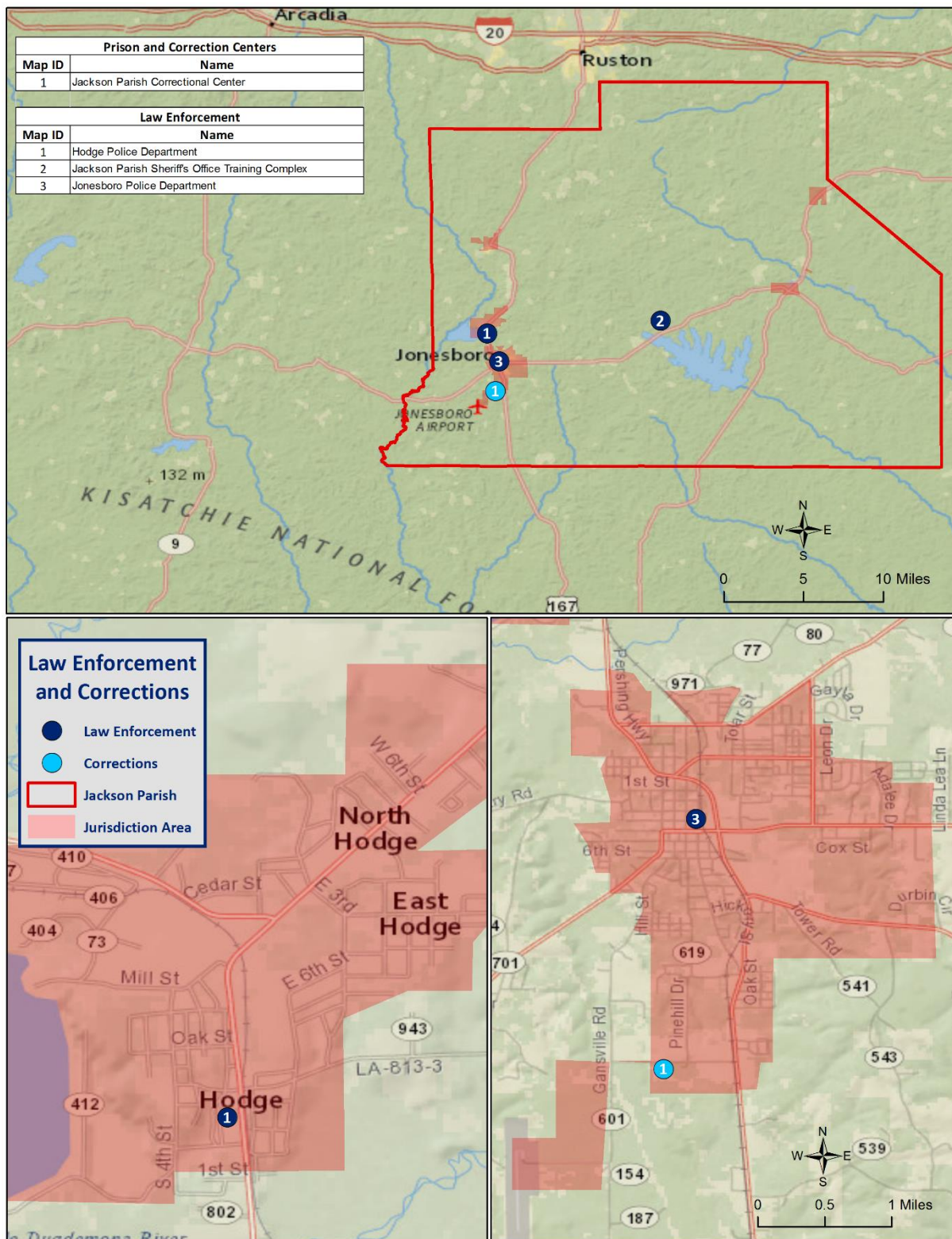
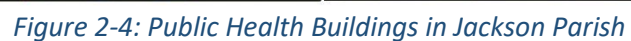
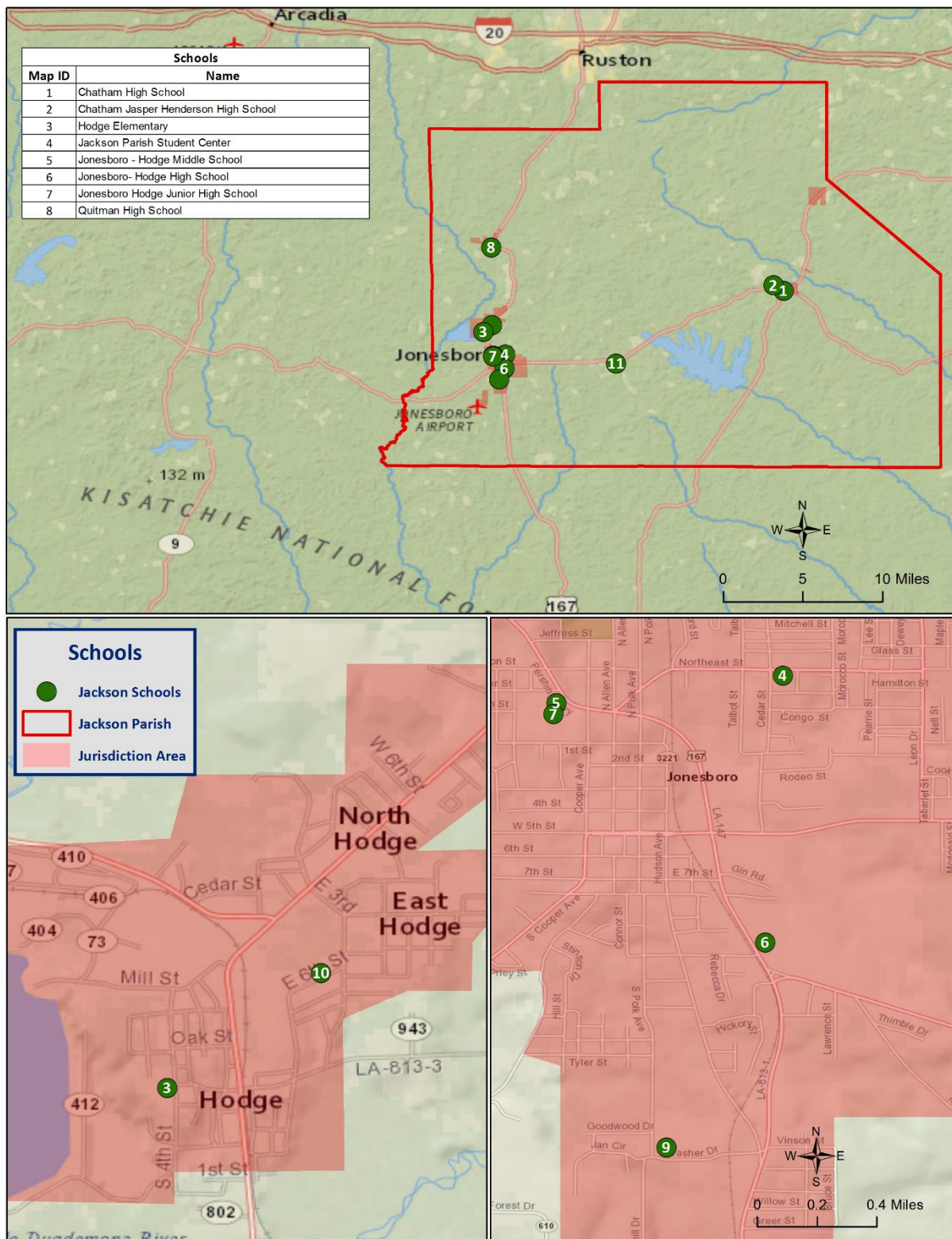


Figure 2-1: Fire and Rescue Buildings in Jackson Parish









Future Development Trends

Jackson Parish experienced a small growth in population and housing between the years of 2000 and 2014, growing from a population of 15,415 with 7,338 housing units in 2000 to a population of 16,199 with 7,725 housing units in 2014. This population growth was largely in the incorporated areas of Jonesboro and Quitman from the years 2000 to 2010, and in the incorporated areas of East Hodge and North Hodge from 2010 to 2014. The future population and number of buildings can be estimated using U.S. Census Bureau housing and population data. The following tables show population and housing unit estimates from 2000 to 2014:

Table 2-5: Population Growth Rate for Jackson Parish

Total Population	Jackson Parish	Jackson (Unincorporated)	Chatham	East Hodge	Eros
1-Apr-00	15,415	9,199	633	376	185
1-Apr-10	16,297	9,544	558	289	155
1-Jul-14	16,199	9,468	595	331	151
Population Growth between 2000 – 2010	5.7%	3.8%	-11.8%	-23.1%	-16.2%
Average Annual Growth Rate between 2000 – 2010	0.6%	0.4%	-1.2%	-2.3%	-1.6%
Population Growth between 2010 – 2014	-0.6%	-0.8%	6.6%	14.5%	-2.6%
Average Annual Growth Rate between 2010 – 2014	-0.15%	-0.20%	1.66%	3.63%	-0.65%

Table 2-5: Population Growth Rate for Jackson Parish (Continued)

Total Population	Hodge	Jonesboro	North Hodge	Quitman
1-Apr-00	490	3,948	417	167
1-Apr-10	471	4,710	389	181
1-Jul-14	376	4,680	442	156
Population Growth between 2000 – 2010	-3.9%	19.3%	-6.7%	8.4%
Average Annual Growth Rate between 2000 – 2010	-0.4%	1.9%	-0.7%	0.8%
Population Growth between 2010 – 2014	-20.2%	-0.6%	13.6%	-13.8%
Average Annual Growth Rate between 2010 – 2014	-5.04%	-0.16%	3.41%	-3.45%

Table 2-6: Housing Growth Rate for Jackson Parish

Total Housing Units	Jackson Parish	Jackson (Unincorporated)	Chatham	East Hodge	Eros
1-Apr-00	7,338	4,378	302	157	87
1-Apr-10	7,680	4,727	316	146	84
1-Jul-14	7,725	4,583	394	162	71
Housing Growth between 2000 – 2010	4.7%	8.0%	4.6%	-7.0%	-3.4%
Average Annual Growth Rate between 2000 – 2010	0.5%	0.8%	0.5%	-0.7%	-0.3%
Housing Growth between 2010 – 2014	0.6%	-3.0%	24.7%	11.0%	-15.5%
Average Annual Growth Rate between 2010 – 2014	0.1%	-0.8%	6.2%	2.7%	-3.9%

Table 2-6: Housing Growth Rate for Jackson Parish (Continued)

Total Housing Units	Hodge	Jonesboro	North Hodge	Quitman
1-Apr-00	273	1,852	213	7,338
1-Apr-10	266	1,852	203	7,680
1-Jul-14	235	1,971	228	7,725
Housing Growth between 2000 – 2010	-2.6%	0.0%	-4.7%	4.7%
Average Annual Growth Rate between 2000 – 2010	-0.3%	0.0%	-0.5%	0.5%
Housing Growth between 2010 – 2014	-11.7%	6.4%	12.3%	0.6%
Average Annual Growth Rate between 2010 – 2014	-2.9%	1.6%	3.1%	0.1%

As shown in previous tables, Jackson Parish has experienced slight growth in both population and housing units. Housing growth rates grew at 0.5% annually from 2000 to 2010, and at 0.1% annually from 2010 to 2014. Population growth rates for the parish were slightly higher from 2000 to 2010 at 0.6% annually, but population rates declined from 2010 to 2014 at -0.15% annually. From 2000 to 2010, the incorporated area of Jonesboro had the largest increase overall by 19.3%, followed by the incorporated area of Quitman at 8.4%. From 2010 to 2014, East Hodge experienced the largest growth in population at 14.5%, followed by North Hodge at 13.6%.

The incorporated area of Quitman experienced the largest increase in housing units from 2000 to 2010 at 13.2%, followed by the unincorporated area of Jackson Parish at 8%. From 2010 to 2014, the incorporated area of Chatham had the largest increase in housing units at 24.7%, followed by the incorporated area of North Hodge at 12.3%.

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 slightly within Jackson 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	7,754	91	93	94
Value of Structures	\$2,420,171,561	\$28,404,373	\$30,449,964	\$32,192,006
# of People	16,258	191	194	197
Tropical Cyclone				
Structures	7,754	7,754	7,901	8,021
Value of Structures	\$2,420,171,561	\$2,420,171,561	\$2,594,464,440	\$2,742,893,707
# of People	16,258	16,258	16,555	16,797

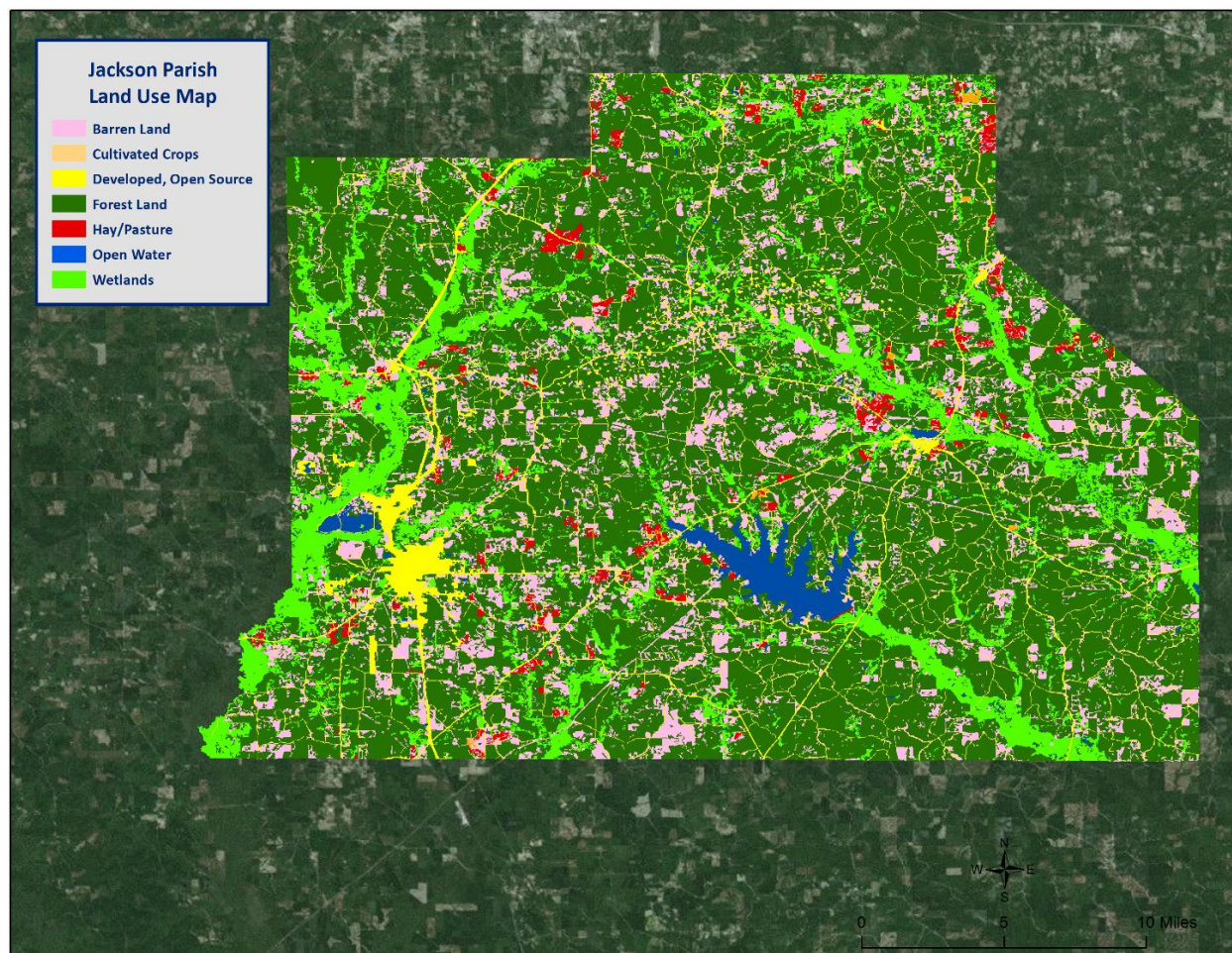
Land Use

The Jackson Parish Land Use table is provided below. Residential, commercial, and industrial areas account for only 6% of the parish's land use. Forest land is the largest category at 234,784 acres, accounting for 63% of parish land. At 59,534 acres, agricultural lands account for 16% of parish lands, while 48,143 acres of wetland areas account for 13% of parish lands. The parish also consists of 7,216 acres of water areas, accounting for 2% of all parish lands.

Table 2-8: Jackson Parish Land Use

(Source: USGS Land Use Map)

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	59,534	16%
Wetlands	48,143	13%
Forest Land (not including forested wetlands)	234,784	63%
Urban/Development	21,789	6%
Water	7,216	2%



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

Hazard Identification

Flooding

A flood is the overflow of water onto land that is usually not inundated. The National Flood Insurance Program defines a flood as:

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

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

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

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

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

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

Hurricane Isaac in 2012. Although the town was protected by a levee on the side facing the Mississippi River, floodwaters from Lake Maurepas and Lake Pontchartrain crept into the community on the side of town opposite the Mississippi River.

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

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

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

- **Flood Categories**
 - Minor Flooding: Minimal or no property damage, but possibly some public threat.
 - Moderate Flooding: Some inundation of structures and roads near streams. Some evacuations of people and/or transfer of property to higher elevations.
 - Major Flooding: Extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations.
 - Record Flooding: Flooding which equals or exceeds the highest stage or discharge at a given site during the period of record keeping.
- **Flood Warning**
 - Issued along larger streams when there is a serious threat to life or property.
- **Flood Watch**
 - Issued when current and developing hydrometeorological conditions are such that there is a threat of flooding, but the occurrence is neither certain nor imminent.

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

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

The 100-year flood event is of particular significance since it is the regulatory standard that determines the obligation (or lack thereof) to purchase flood insurance. Flood insurance premiums are set depending on the flood zone, as modeled by National Flood Insurance Program (NFIP) Rate Maps. The NFIP and FEMA suggest insurance rates based on Special Flood Hazard Areas (SFHAs), as diagrammed in *Figure 2-7*.

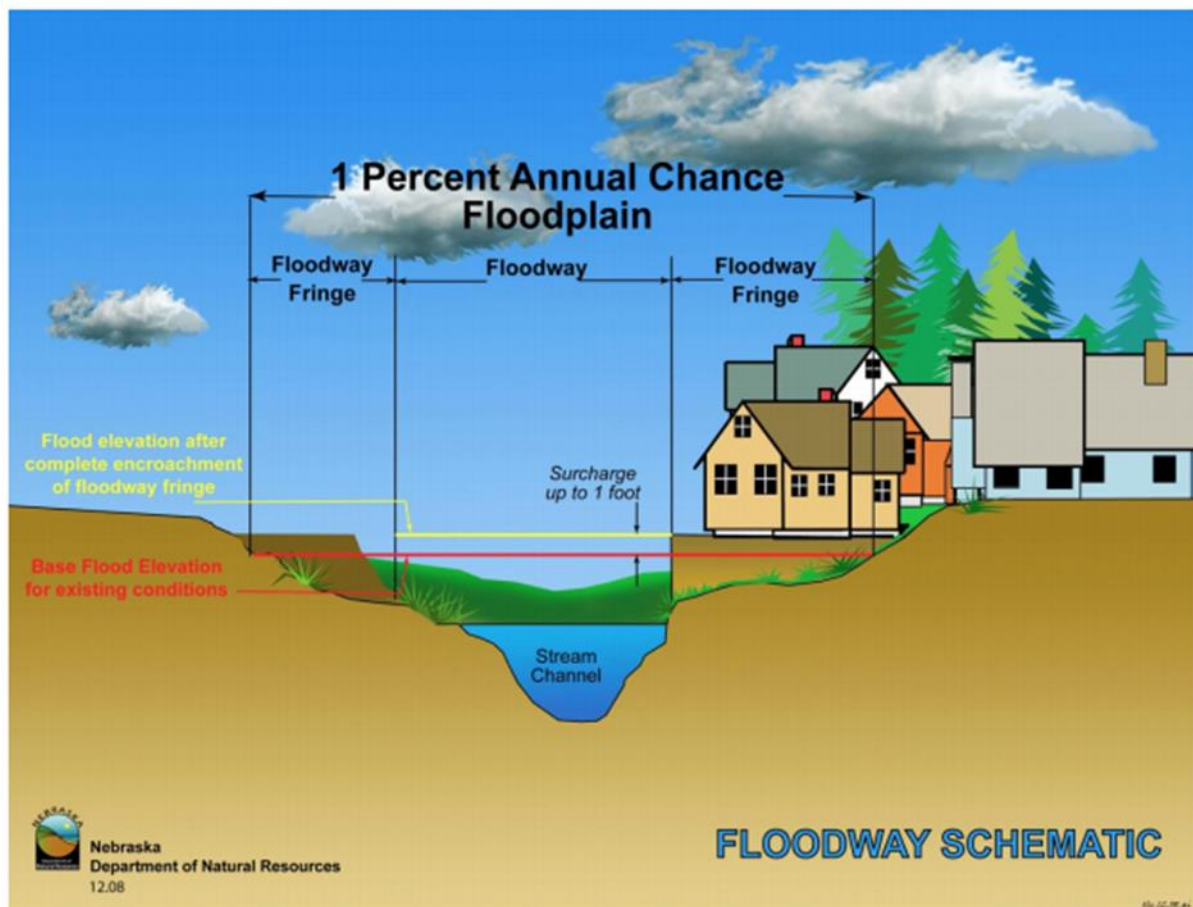


Figure 2-7: Schematic of 100-Year Floodplain. The Special Flood Hazard Area (SFHA) extends to the end of the floodway fringe.

(Source: Nebraska Department of Natural Resources)

A SFHA is the land area covered by the floodwaters of the base flood (red line in [Figure 2-7](#)), where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Property Damage

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

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

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

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

Repetitive Loss Properties

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

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

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

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

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

Table 2-9: Repetitive Loss Structures for Jackson Parish

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
Jackson Parish (Unincorporated)	1	1	0	0	2	\$16,134	\$8,067
Chatham	0	0	0	0	0	\$0	\$0
East Hodge	0	0	0	0	0	\$0	\$0
Eros	0	0	0	0	0	\$0	\$0
Hodge	0	0	0	0	0	\$0	\$0
Jonesboro	1	1	0	0	3	\$38,034	\$12,678
North Hodge	0	0	0	0	0	\$0	\$0
Quitman	0	0	0	0	0	\$0	\$0
Total	2	2	0	0	5	\$54,168	\$10,834

Both repetitive loss structures were able to be geocoded in order to provide an overview of where the repetitive loss structures were located throughout the parish. [Figure 2-8](#) shows the approximate location of the two structures, while [Figure 2-9](#) 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 the incorporated area of Jonesboro and the unincorporated areas of Jackson Parish.

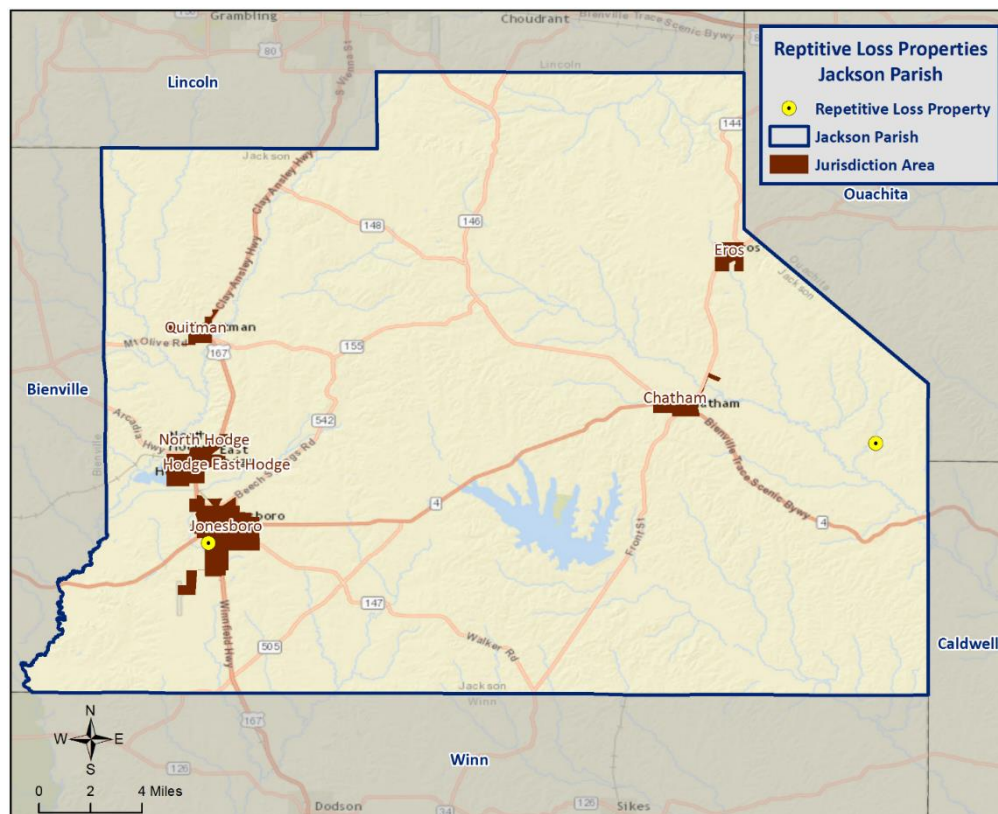


Figure 2-8: Repetitive Loss Properties in Jackson Parish

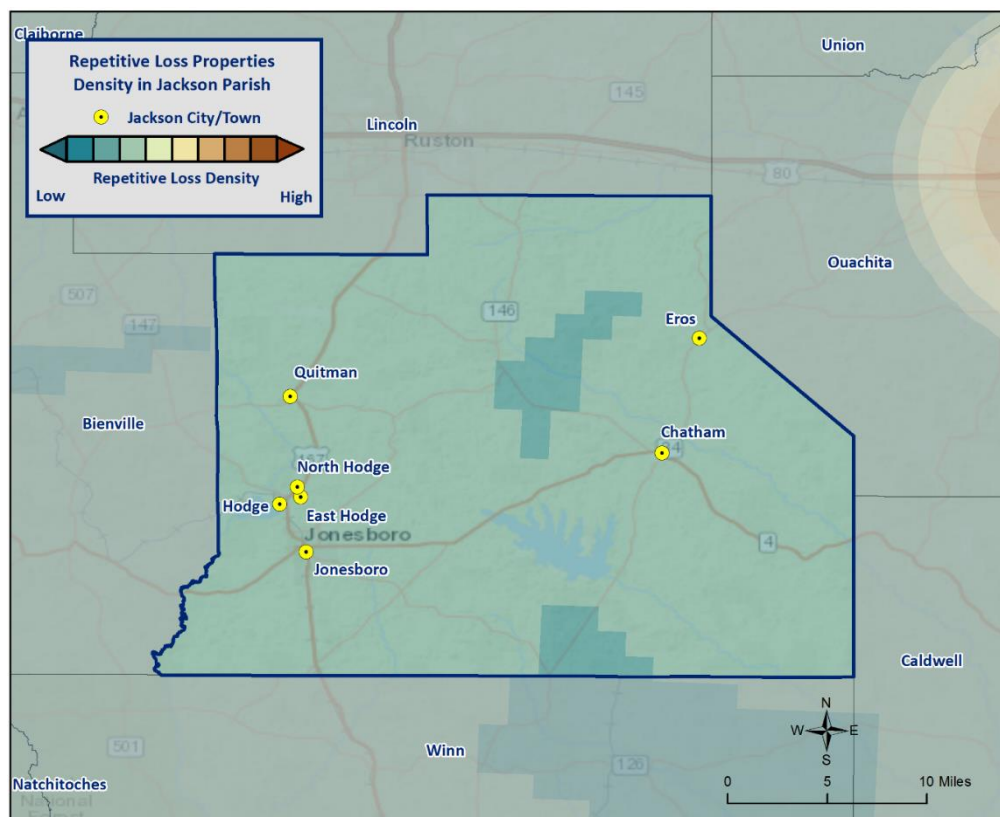


Figure 2-9: Repetitive Loss Property Densities in Jackson Parish

National Flood Insurance Program

Flood insurance statistics indicate that Jackson Parish has 11 flood insurance policies with the NFIP, with total annual premiums of \$6,718. The incorporated area of Jonesboro is currently the only participant in the NFIP. They presently have effective flood maps and a floodplain administrator for their jurisdiction, as well as both zoning ordinances and floodplain ordinances. The unincorporated portion of Jackson Parish is currently seeking to become a participant in the NFIP and should be adopted in the program in August 2020. Unincorporated Jackson Parish has preliminary flood maps, but no effective flood maps. They also have hired a floodplain administrator in anticipation of their joining the NFIP. The incorporated areas of Chatham, Hodge, East Hodge, Eros, North Hodge, and Quitman do not participate in the NFIP. Each of these non-participating jurisdictions are very limited when it comes to personnel, funding, and resources needed to administer the NFIP program. While there have been very few previous occurrences of flooding in these jurisdictions within the last 15 years, each jurisdiction has determined that participation in the NFIP has little or no large benefit or impact for the residents or the town's economy.

Jackson Parish and each of the incorporated jurisdictions will continue to adopt and enforce floodplain management requirements, including regulating new construction Special Flood Hazard Areas, and will continue to monitor activities including local requests for new map updates. Along with these, Jonesboro will take any additional measures required by the NFIP to ensure their good standing within the program. Flood insurance statistics and additional NFIP participation details for Jackson Parish are provided in the tables to follow.

Jackson Parish and the communities listed above will continue their active participation in the NFIP through various education and outreach activities. These activities will include community outreach on the availability of flood insurance within the parish and incorporated municipalities, as well as flood safe building initiatives

throughout the parish. The Parish Floodplain Manager will continue to work in coordination with each community to ensure floodplain management regulations are adopted and enforced. The Parish Floodplain Manager will continue to seek and attend floodplain management and NFIP continuing education.

Table 2-10: Summary of NFIP Policies for Jackson Parish

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid	No. of Insurance Claims Filed Since 1978	Total Loss Payments
Jackson Parish (Unincorporated)	6	\$390,000	\$4,782	1	\$10,937
Chatham	0	\$0	\$0	0	\$0
East Hodge	0	\$0	\$0	0	\$0
Eros	0	\$0	\$0	0	\$0
Hodge	0	\$0	\$0	0	\$0
Jonesboro	5	\$481,300	\$1,936	1	\$13,334
North Hodge	0	\$0	\$0	0	\$0
Quitman	0	\$0	\$0	0	\$0
Total	11	\$871,300	\$6,718	2	\$24,271

Table 2-11: Summary of Community Flood Maps for Jackson Parish

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220365	Jackson Parish	-	-	-	1/16/07 (E)	No
220252#	Jonesboro	9/12/1975	10/15/1985	10/15/85(M)	10/15/1985	No
220318	Chatham	9/19/1975	-	9/19/1975	Not in NFIP	No
220331	Hodge	7/11/1975	-	7/11/1975	Not in NFIP	No
-	East Hodge	-	-	-	Not in NFIP	-
-	Eros	-	-	-	Not in NFIP	-
-	North Hodge	-	-	-	Not in NFIP	-
-	Quitman	-	-	-	Not in NFIP	-

According to the Community Rating System (CRS) list of eligible communities, Jackson Parish and the incorporated areas of Jonesboro, Chatham, Hodge, East Hodge, Eros, North Hodge, and Quitman do not participate.

Threat to People

Just as with property damage, depth and velocity are major factors in determining the threat posed to people by flooding. It takes very little depth or velocity for flood waters to become dangerous. A car will float in less than two feet of moving water, and can be swept downstream into deeper waters, trapping passengers within the vehicle. Victims of flooding have often put themselves in perilous situations by entering flood waters that they believe to be safe, or by ignoring travel advisories.

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

Flooding in Jackson 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 Jackson Parish experiences.

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

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

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

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

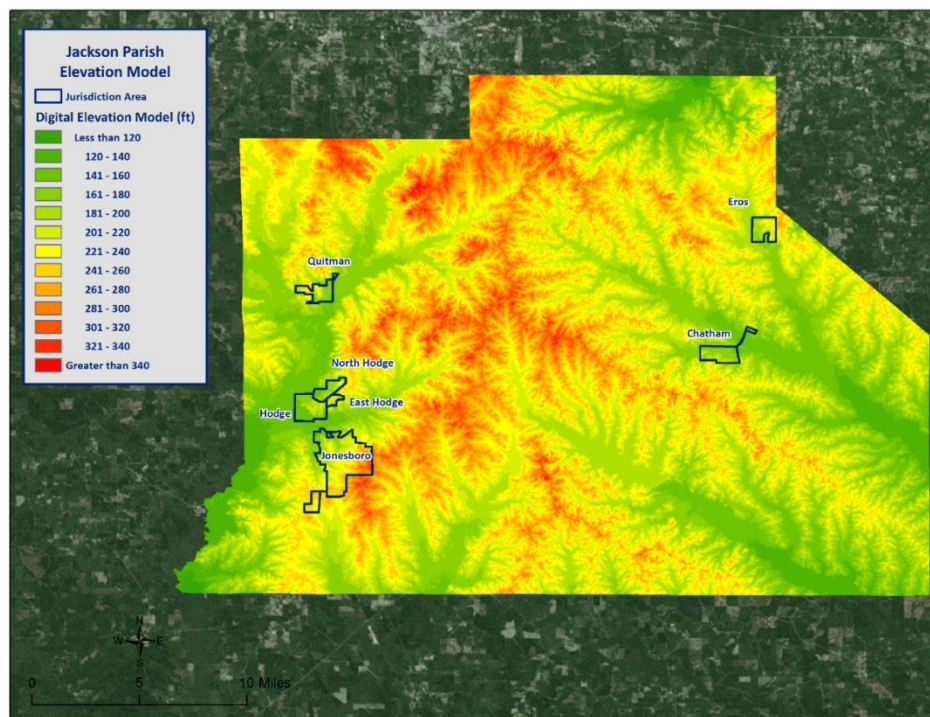


Figure 2-10: Elevation throughout Jackson Parish

Looking at the digital elevation model (DEM) for Jackson Parish in the previous figure is instructive in visualizing where the low lying and high risk areas are for the parish. Elevations in the parish range from less than 120 feet to approximately 340 feet. The incorporated areas range in elevation from 177 to 223 feet, with North Hodge averaging 177 feet, Chatham averaging 180 feet, Hodge averaging 190 feet, Quitman averaging 194 feet, East Hodge averaging 203 feet, Eros averaging 207 feet, and Jonesboro averaging 223 feet.

Location

Jackson Parish has experienced significant flooding in its history and can expect more in the future. The following are enlarged maps of the incorporated areas showing the areas within each jurisdiction that are at risk of flooding. While jurisdictions within Jackson Parish might not have flood hazard boundaries within their municipal boundaries, recent events throughout the state have demonstrated that even areas outside of flood hazard boundaries can be susceptible to flooding.

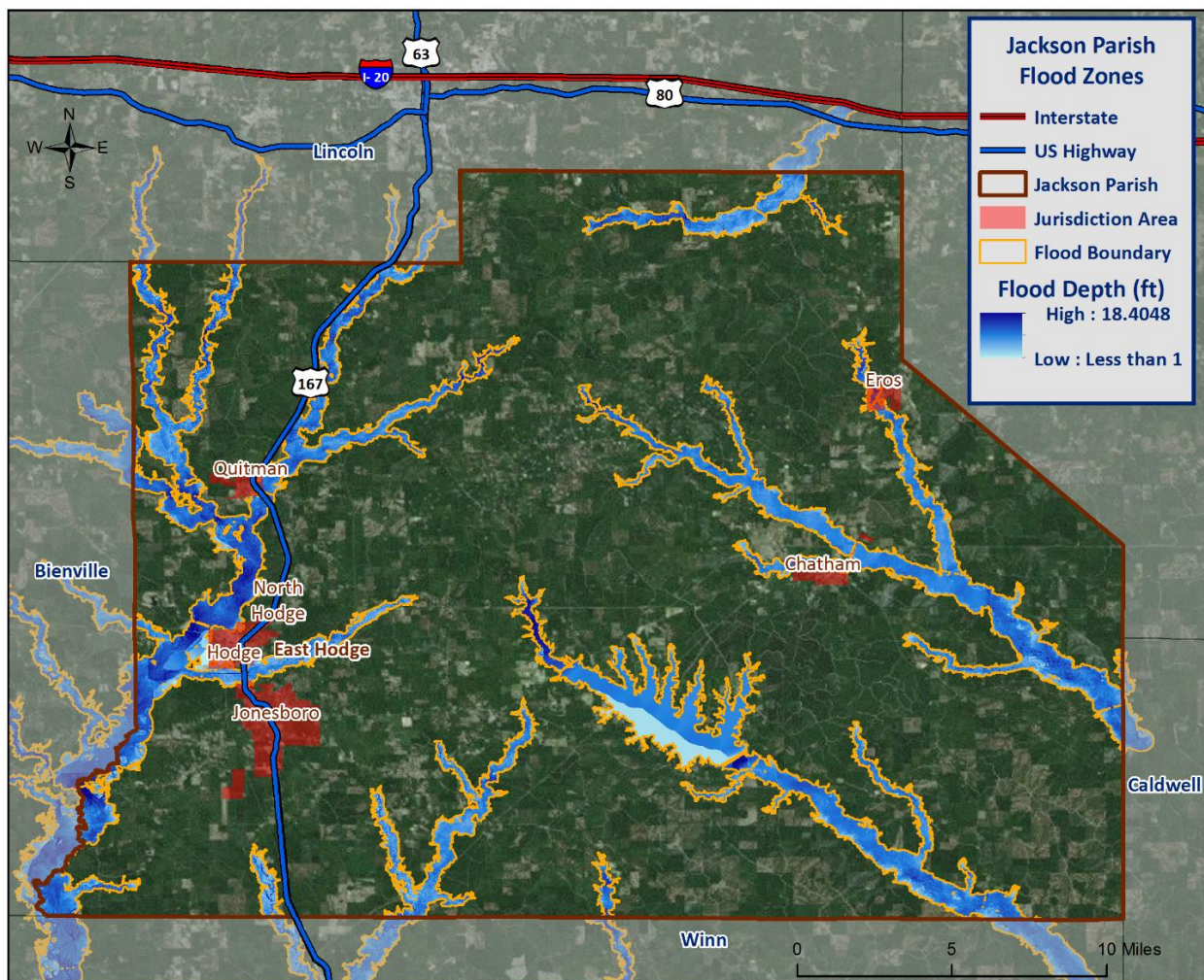


Figure 2-11: Jackson Parish Areas within the Flood Zones

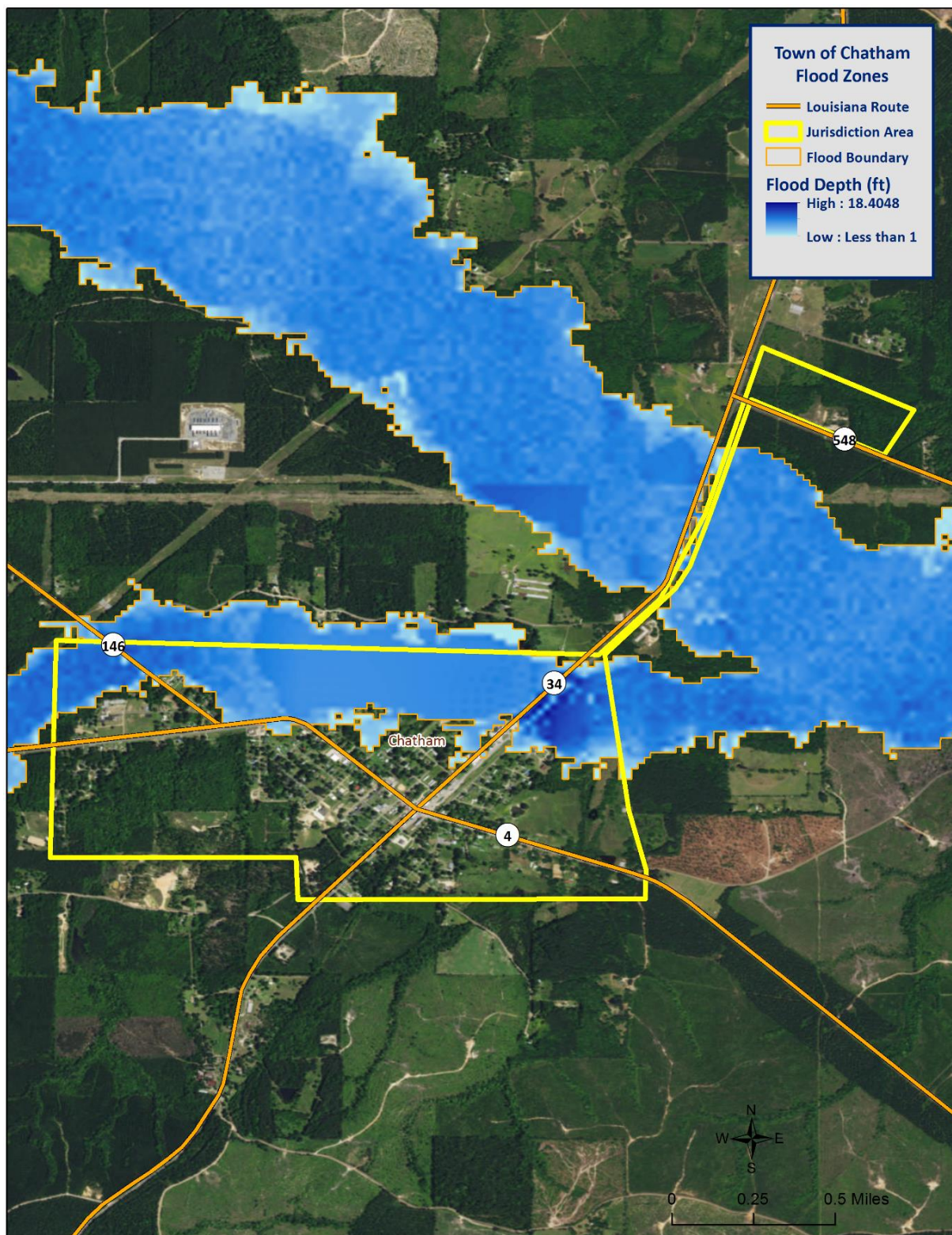


Figure 2-12: Town of Chatham Areas within the Flood Zones

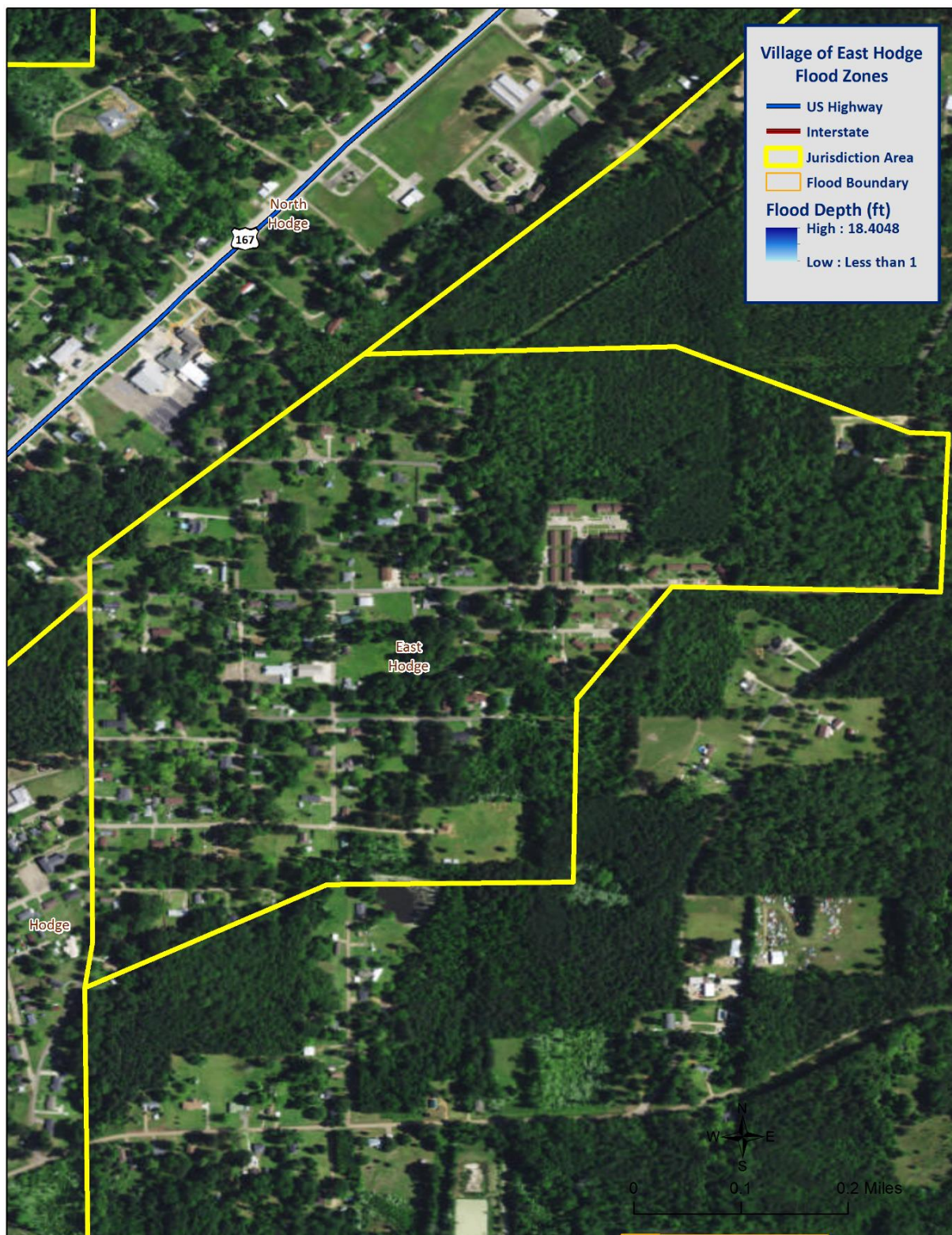


Figure 2-13: Village of East Hodge Areas within the Flood Zones

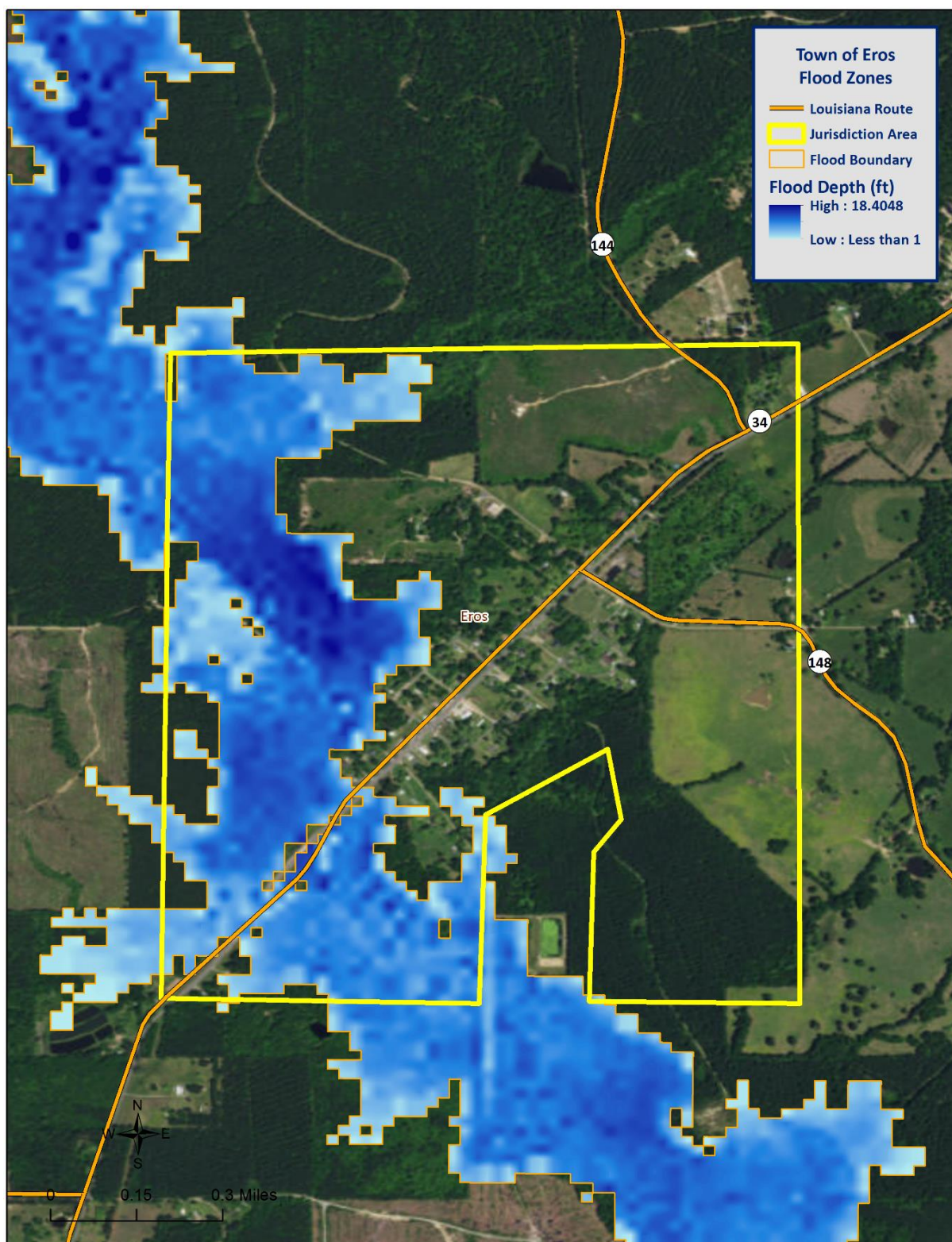


Figure 2-14: Town of Eros Areas within the Flood Zones

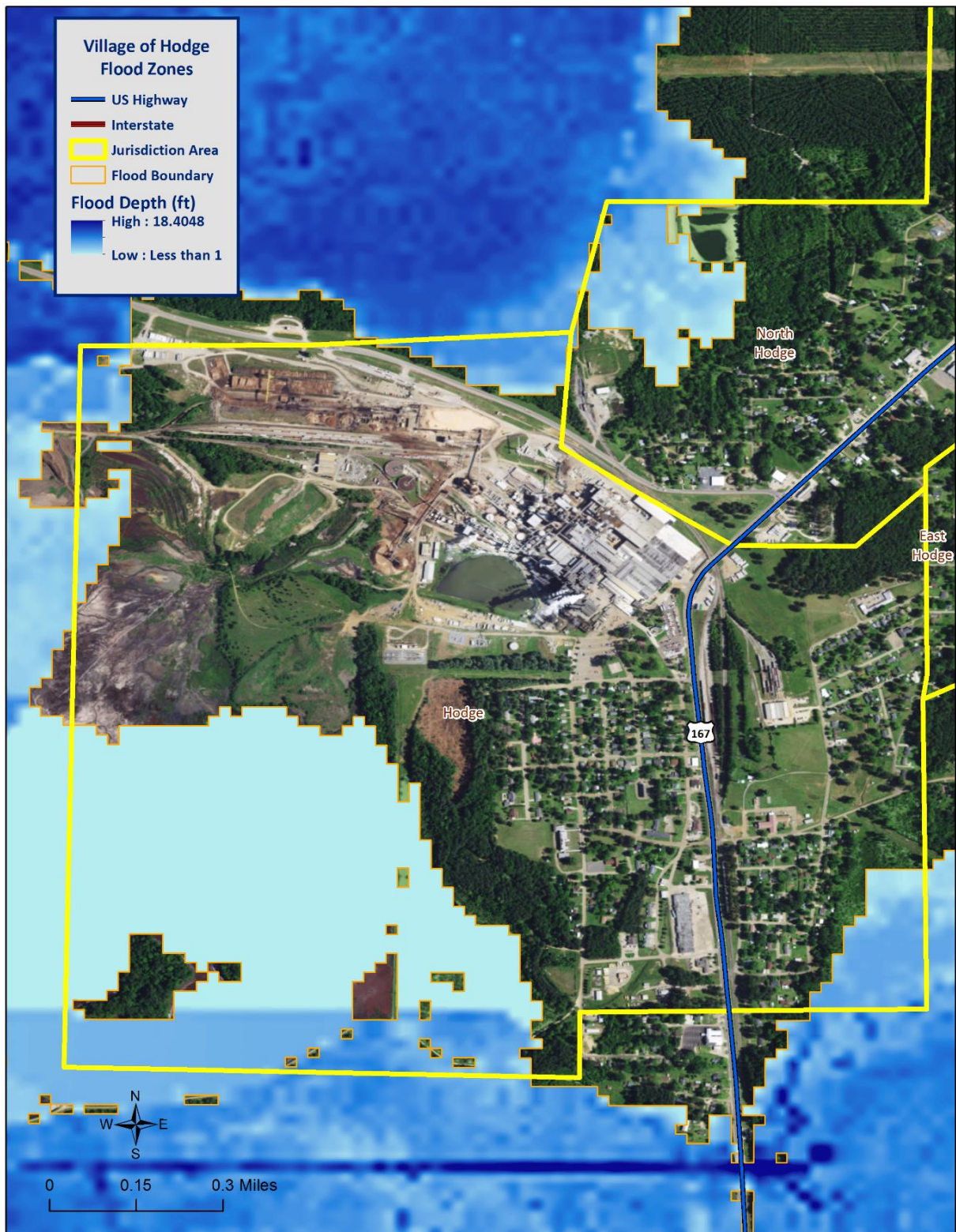


Figure 2-15: Village of Hodge Areas within the Flood Zones

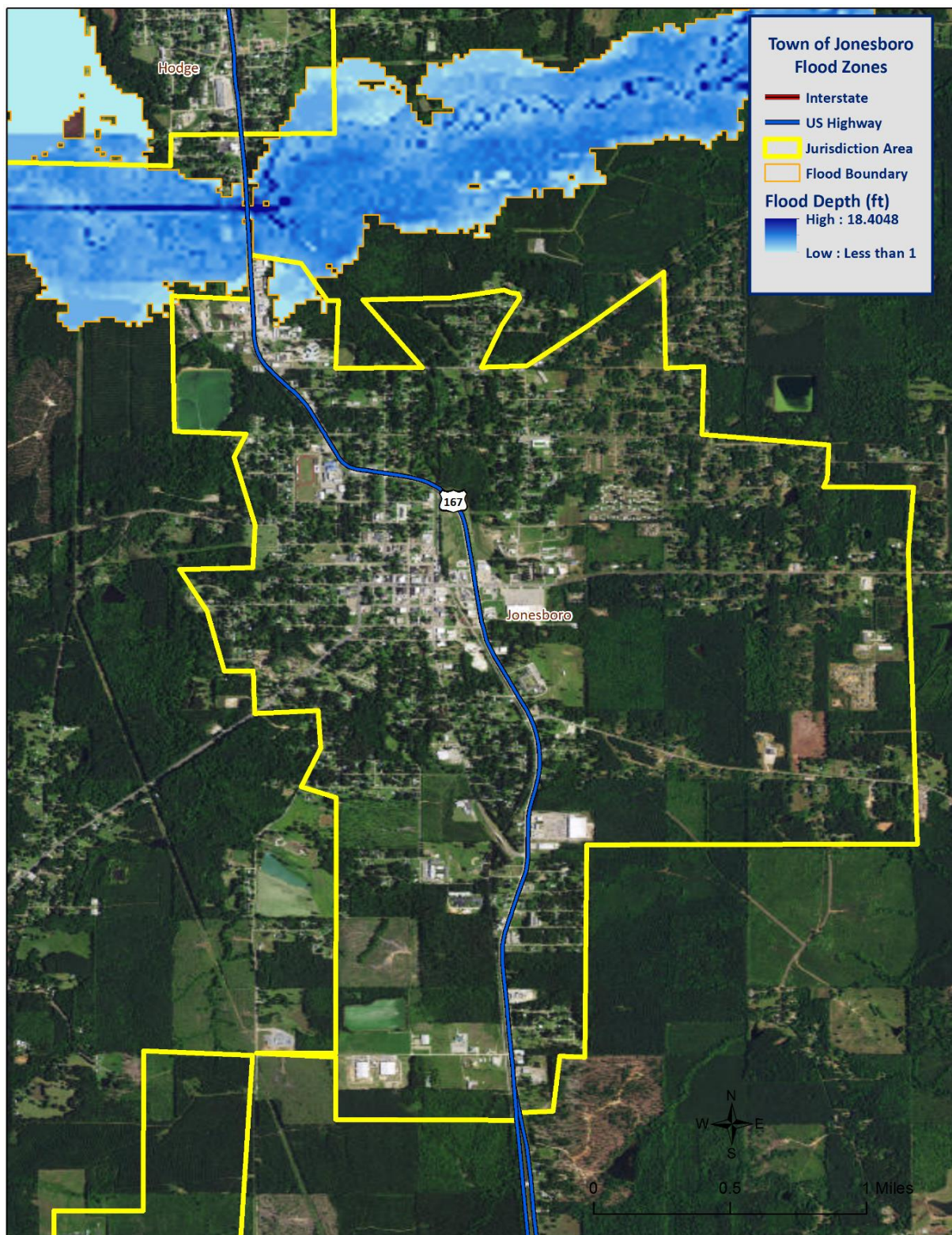


Figure 2-16: Town of Jonesboro Areas within the Flood Zones

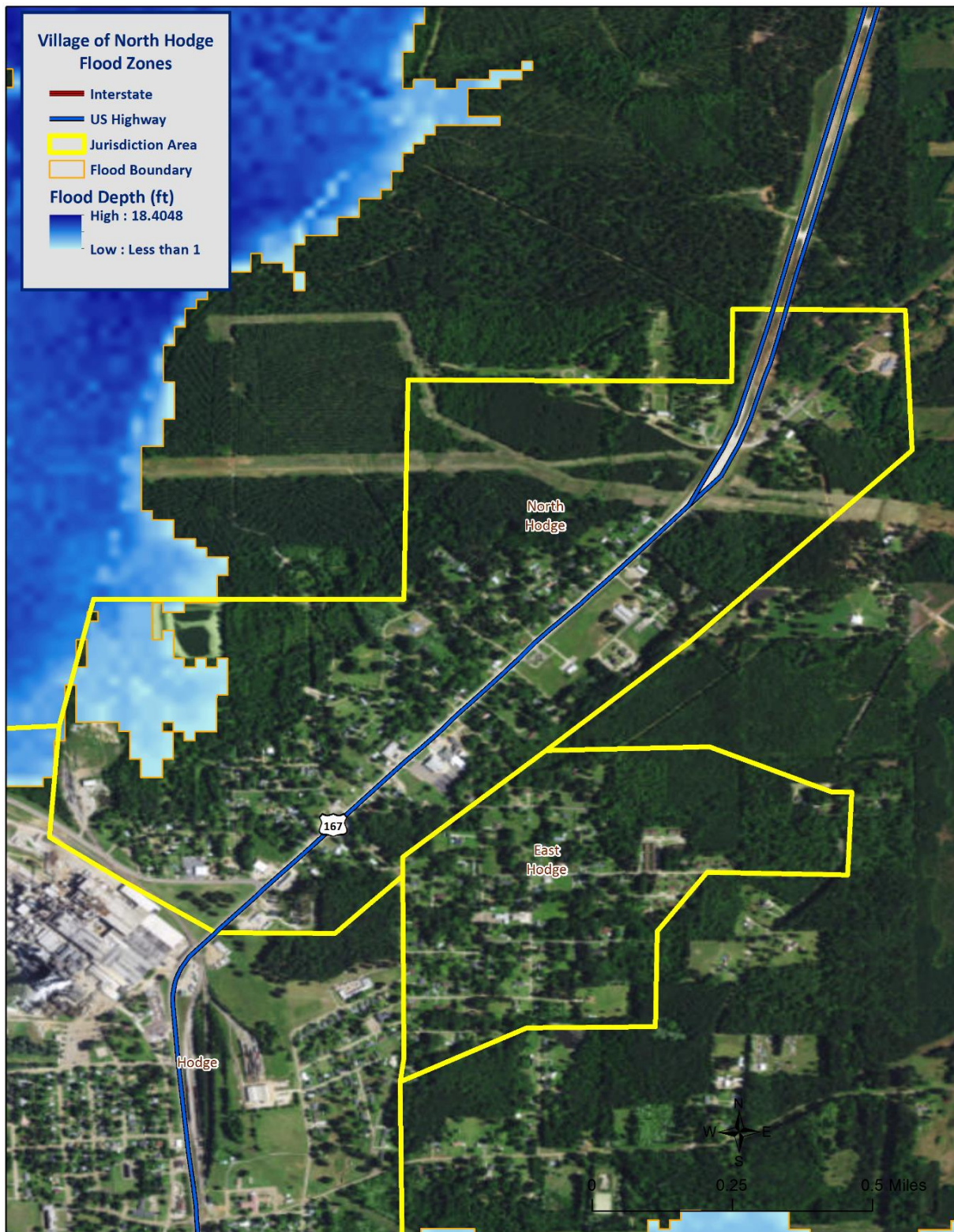


Figure 2-17: Village of North Hodge Areas within the Flood Zones

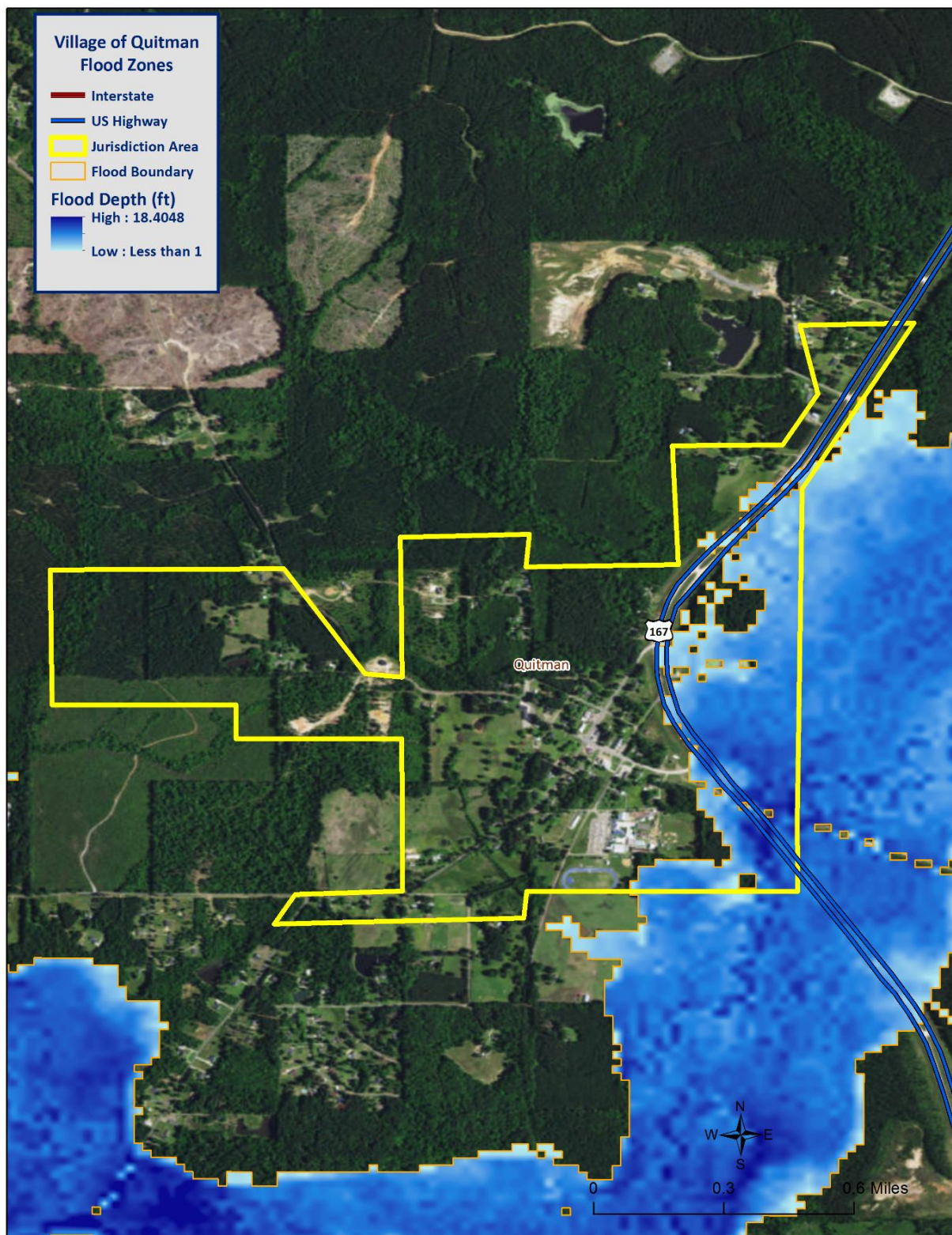


Figure 2-18: Village of Quitman Areas within the Flood Zones

Previous Occurrences / Extents

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

Table 2-12: Historical Floods in Jackson Parish with Locations from 2010 - 2015

Date	Extents	Type of Flooding	Estimated Damages	Location
April 26, 2011	Strong storms entered the area causing flash floods in the unincorporated area. Numerous parish roads were flooded and closed throughout the parish.	Flash Flood	\$0	UNINCORPORATED AREA
March 21, 2012	Flash floods occurred in the area when heavy rainfall fell in the parish. Highway 505 was barricaded and closed due to over a foot of water across the roadway between the communities of Wyatt and Gansville.	Flash Flood	\$0	WYATT
April 6, 2014	Heavy rainfall caused flash floods throughout the area. Water covered many roadways in the Jonesboro community.	Flash Flood	\$0	JONESBORO
April 6, 2014	A deep upper level system caused heavy rainfall throughout the parish. Numerous roads across the parish were under water. High water signs were posted at Highway 505 and Highway 810.	Flash Flood	\$0	UNINCORPORATED AREA

The worst-case scenarios are based on several different types of flooding events. Storm water excesses and riverine flooding primarily affect the low-lying areas of the parish, and flood depths of up to six feet can be expected in the unincorporated areas of the parish. The incorporated areas of Jonesboro, Quitman, North Hodge, and Eros can expect flood depths from three to five feet, while the incorporated areas of Chatham, East Hodge, and Hodge can expect flooding levels of approximately one to three feet.

Frequency / Probability

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

Table 2-13: Annual Flood Probabilities for Jackson Parish

Jurisdiction	Annual Probability	Return Frequency
Jackson Parish (Unincorporated)	24%	4 – 5 years
Chatham	< 1%	More than 25 years
East Hodge	< 1%	More than 25 years
Eros	4%	25 years
Hodge	< 1%	More than 25 years
Jonesboro	24%	4 – 5 years
North Hodge	4%	25 years
Quitman	8%	12 – 13 years

Based on historical record, the overall flooding probability for the entire Jackson Parish planning area is 52%, with 13 events occurring over a 25-year period.

Estimated Potential Losses

Using the Hazus 2.2 Flood Model, along with the Parish DFIRM, the 100-year flood scenario was analyzed to determine losses from this worst-case scenario. *Table 2-14* shows the total economic losses that would result from this occurrence.

Table 2-14: Estimated Losses in Jackson Parish from a 100-Year Flood Event
(Source: Hazus 2.2)

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
Jackson Parish (Unincorporated)	\$13,426,000
Chatham	\$1,010,000
East Hodge	\$0
Eros	\$174,000
Hodge	\$62,000
Jonesboro	\$76,000
North Hodge	\$0
Quitman	\$217,000
Total	\$14,965,000

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. These sectors are comprised of privately owned structures/facilities, as well as locally, state, and federally owned structures/facilities.

Table 2-15: Estimated 100-Year Flood Losses for Unincorporated Jackson Parish by Sector
(Source: Hazus 2.2)

Jackson Parish (Unincorporated)	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$87,000
Commercial	\$522,000
Government	\$132,000
Industrial	\$71,000
Religious / Non-Profit	\$2,250,000
Residential	\$10,209,000
Schools	\$155,000
Total	\$13,426,000

Table 2-16: Estimated 100-Year Flood Losses for Chatham by Sector
(Source: Hazus 2.2)

Chatham	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$372,000
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$89,000
Residential	\$549,000
Schools	\$0
Total	\$1,010,000

Table 2-17: Estimated 100-Year Flood Losses for Eros by Sector
(Source: Hazus 2.2)

Eros	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$0
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$174,000
Schools	\$0
Total	\$174,000

Table 2-18: Estimated 100-Year Flood Losses for Hodge by Sector

(Source: Hazus 2.2)

Hodge	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$0
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$28,000
Residential	\$34,000
Schools	\$0
Total	\$62,000

Table 2-19: Estimated 100-Year Flood Losses for Jonesboro by Sector

(Source: Hazus 2.2)

Jonesboro	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$62,000
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$14,000
Schools	\$0
Total	\$76,000

Table 2-20: Estimated 100-Year Flood Losses for Quitman by Sector

(Source: Hazus 2.2)

Quitman	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$0
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$217,000
Schools	\$0
Total	\$217,000

Threat to People

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

*Table 2-21: 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
Jackson Parish (Unincorporated)	9,530	121	1.3%
Chatham	557	34	6.1%
East Hodge	289	0	0.0%
Eros	155	4	2.6%
Hodge	470	11	2.3%
Jonesboro	4,704	14	0.3%
North Hodge	388	0	0.0%
Quitman	181	7	3.9%
Total	16,274	191	1.2%

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

*Table 2-22: Vulnerable Populations Susceptible to a 100-Year Flood Event in Unincorporated Jackson Parish
(Source: Hazus 2.2)*

Jackson Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	121	1.3%
Persons Under 5 Years	8	6.7%
Persons Under 18 Years	19	16.0%
Persons 65 Years and Over	20	16.7%
White	82	68.1%
Minority	39	31.9%

Table 2-23: Vulnerable Populations Susceptible to a 100-Year Flood Event in Chatham
(Source: Hazus 2.2)

Chatham		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	34	6.1%
Persons Under 5 Years	2	6.1%
Persons Under 18 Years	5	15.8%
Persons 65 Years and Over	7	19.9%
White	21	60.9%
Minority	13	39.1%

Table 2-24: Vulnerable Populations Susceptible to a 100-Year Flood Event in Eros
(Source: Hazus 2.2)

Eros		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	4	2.6%
Persons Under 5 Years	0	6.5%
Persons Under 18 Years	1	20.7%
Persons 65 Years and Over	1	14.2%
White	3	85.8%
Minority	1	14.2%

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

Hodge		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	11	2.3%
Persons Under 5 Years	1	6.2%
Persons Under 18 Years	2	13.8%
Persons 65 Years and Over	3	23.8%
White	7	64.9%
Minority	4	35.1%

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

Jonesboro		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	14	0.3%
Persons Under 5 Years	1	7.4%
Persons Under 18 Years	2	14.8%
Persons 65 Years and Over	2	15.0%
White	6	42.7%
Minority	8	57.3%

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

Quitman		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	7	3.9%
Persons Under 5 Years	1	7.2%
Persons Under 18 Years	1	18.8%
Persons 65 Years and Over	1	14.4%
White	6	90.1%
Minority	1	9.9%

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

Table 2-28: 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 2-29: Spectrum of Hailstone Diameters and Their Everyday Description
(Source: National Weather Service)

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

Hailstorms can cause widespread damage to structures, automobiles, and crops. While the damage to individual structures or vehicles is often minor, the cumulative cost to communities, especially across large metropolitan areas, can be quite significant. Hailstorms can also be devastating to crops. Thus, the severity of hailstorms depends on the size of the hailstones, the length of time the storm lasts, and where it occurs.

Hail rarely causes loss of life, although large hailstones can cause bodily injury.

High Winds

In general, high winds can occur in a number of different ways, within and without thunderstorms. The Federal Emergency Management Agency (FEMA) distinguishes these as shown in the following table.

*Table 2-30: 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 2-31: 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	64-73	Violent Storm	N/A
12	74+	Hurricane	N/A

Major damage directly caused by thunderstorm winds is relatively rare, while minor damage is common and pervasive, and most noticeable when it contributes to power outages. These power outages can have major negative impacts such as increased tendency for traffic accidents, loss of revenue for businesses, increased vulnerability to fire, food spoilage, and other losses that might be sustained by a loss of power. Power outages may pose a health risk for those requiring electric medical equipment and/or air conditioning.

Lightning

Lightning is a natural electrical discharge in the atmosphere that is a by-product of thunderstorms. Every thunderstorm produces lightning. There are three primary types of lightning: intra-cloud, cloud-to-ground, and cloud-to-cloud. Cloud-to-ground lightning has the potential to cause the most damage to property and crops, while also posing as a health risk to the populace in the area of the strike.

Damage caused by lightning is usually to homes or businesses. These strikes have the ability to damage electrical equipment inside the home or business, and can also ignite a fire that could destroy homes or crops.

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

Table 2-32: 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 Jackson Parish is equally at risk for hailstorms.

Previous Occurrences / Extents

The SHELDUS database reports 63 significant hailstorm events occurring within the boundaries of Jackson Parish between the years of 1990 - 2015. According to the National Climatic Data Center, hailstorm diameters experienced in Jackson Parish have ranged from 0.5 inches to 2.75 inches since 1990. The most frequently recorded hail size has been 0.75 inch diameters. [Figure 2-19](#) displays the density of hailstorms in Jackson Parish and adjacent parishes. Based on the National Climatic Data Center dataset, [Table 2-33](#) provides an overview of hailstorms that have impacted the Jackson Parish planning area since 2010. Jackson Parish can expect to experience hail up to 2.75 inches in diameter for future events.

Table 2-33: Previous Occurrences of Hailstorms in Jackson Parish
(Source: NCDC)

Date	Recorded Hail Size (inches)	Location
April 24, 2010	1	HODGE
March 26, 2011	0.75	QUITMAN
March 2, 2012	0.88	EROS
July 11, 2013	1	WOOD JCT
April 6, 2014	0.88	HODGE

Since 2010, there have been no significant hailstorm events in the incorporated areas of Chatham, East Hodge, Jonesboro, and North Hodge.

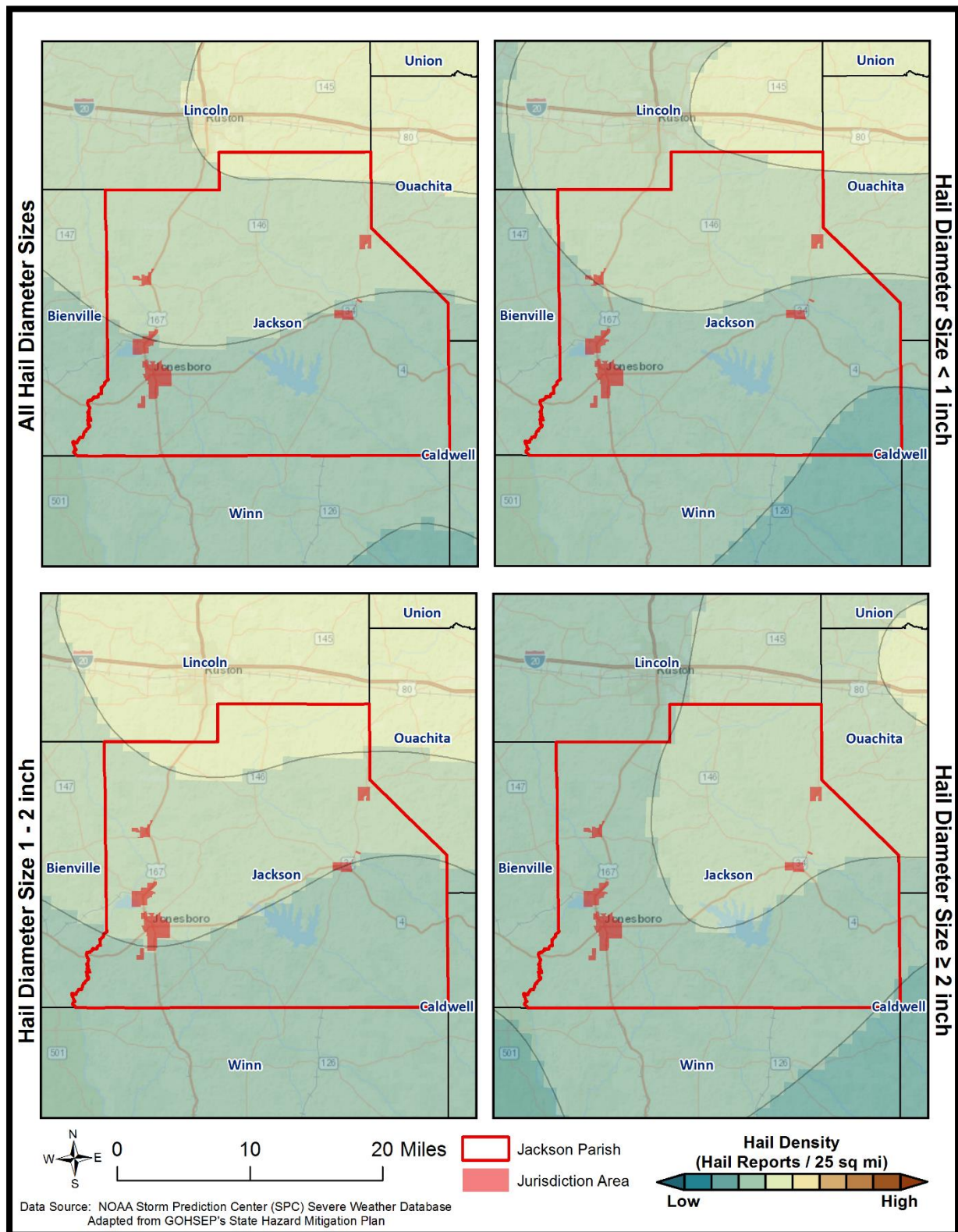


Figure 2-19: Density of Hailstorms by Diameter from 1950-2012
(Source: State of Louisiana Hazard Mitigation Plan 2014)

Frequency

Based on historical data from SHELUDS for the past 25 years, it is estimated the probability of occurrence for a significant hailstorm event is approximately 100%. The probability was determined based on a review of significant hail data that has caused damages in the last 25 years, in which Jackson Parish has had 63 recorded events.

Estimated Potential Losses

According to the SHELUDS database, property damage due to hailstorms in Jackson Parish have totaled approximately \$268 since 1990. To estimate the potential losses of a hail event on an annual basis, the total damages recorded for hail events was divided by the total number of years of available hail data in SHELUDS (1990 – 2015). This provides an annual estimated potential loss of \$11. *Table 2-34* provides an estimate of potential property losses for Jackson Parish.

Table 2-34: Estimated Annual Property Losses in Jackson Parish from Hailstorms

Estimated Annual Potential Losses from Hailstorms for Jackson Parish			
Unincorporated Jackson Parish (58.6% of Population)	Chatham (3.4% of Population)	East Hodge (1.8% of Population)	Eros (1.0% of Population)
\$6	< \$0	< \$0	< \$0

Table 2-34: Estimated Annual Property Losses in Jackson Parish from Hailstorms (Continued)

Estimated Annual Potential Losses from Hailstorms for Jackson Parish			
Hodge (2.9% of Population)	Jonesboro (28.9% of Population)	North Hodge (2.4% of Population)	Quitman (1.1% of Population)
< \$0	\$3	< \$0	< \$0

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

Previous Occurrences / Extents

The SHELUDS database reports a total of 110 thunderstorm wind events occurring within the boundaries of Jackson Parish between the years of 1990 to 2015. The significant thunderstorm wind events experienced in Jackson Parish have ranged in wind speed from 60 mph to 104 mph. Jackson Parish can expect to receive thunderstorm winds up to 104 mph for future high wind events. The table on the next page provides an overview of significant high wind events over the last five years.

Table 2-35: Previous Occurrences for Thunderstorm High Wind Events

Location	Date	Recorded Wind Speeds (mph)	Property Damage	Crop Damage
CHATHAM	June 1, 2010	60	\$0	\$0
MT MORIAH	June 20, 2010	62	\$0	\$0
WESTON	June 20, 2010	60	\$0	\$0
BOATNER	June 20, 2010	60	\$0	\$0
EROS	February 24, 2011	61	\$0	\$0
JONESBORO	April 26, 2011	69	\$0	\$0
QUITMAN	July 5, 2012	60	\$0	\$0
VERNON	December 4, 2012	60	\$0	\$0
JONESBORO	December 9, 2012	62	\$0	\$0
QUITMAN	December 9, 2012	62	\$20,000	\$0
BEECH SPGS	December 9, 2012	62	\$0	\$0
JONESBORO	December 20, 2012	62	\$0	\$0
EROS	January 29, 2013	69	\$0	\$0
JONESBORO	March 30, 2013	63	\$0	\$0
JONESBORO	March 31, 2013	65	\$0	\$0
JONESBORO	May 21, 2013	63	\$0	\$0
JONESBORO	June 18, 2013	61	\$0	\$0
JONESBORO	July 11, 2013	62	\$0	\$0
HODGE	July 11, 2013	62	\$0	\$0
VERNON	August 13, 2013	61	\$0	\$0
JONESBORO	December 21, 2013	65	\$0	\$0
JONESBORO	August 11, 2014	60	\$0	\$0
JONESBORO	April 1, 2015	61	\$0	\$0
SPRING HILL	April 1, 2015	61	\$0	\$0
QUITMAN	April 19, 2015	60	\$0	\$0
WESTON	June 9, 2015	61	\$0	\$0
JONESBORO	December 13, 2015	63	\$0	\$0

Frequency

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

Estimated Potential Losses

Since 1990, there have been 110 significant wind events that have resulted in property damages according to the SHELDUS database. The total property damages associated with those storms have totaled \$556,744. To estimate the potential losses of a wind event on an annual basis, the total damages recorded for wind events was divided by the total number of years of available wind data in SHELDUS (1990 – 2015). This

provides an annual estimated potential loss of \$22,270. The following tables provides an estimate of potential property losses for Jackson Parish:

Table 2-36: Estimated Annual Property Losses in Jackson Parish Resulting from High Winds

Estimated Annual Potential Losses from Thunderstorm Winds for Jackson Parish			
Unincorporated Jackson Parish (58.6% of Population)	Chatham (3.4% of Population)	East Hodge (1.8% of Population)	Eros (1.0% of Population)
\$13,041	\$762	\$395	\$212

Table 2-36: Estimated Annual Property Losses in Jackson Parish Resulting from High Winds (Continued)

Estimated Annual Potential Losses from Thunderstorm Winds for Jackson Parish			
Hodge (2.9% of Population)	Jonesboro (28.9% of Population)	North Hodge (2.4% of Population)	Quitman (1.1% of Population)
\$643	\$6,437	\$531	\$248

There has been one reported injury and no fatalities as a result of a thunderstorm wind event over the 25-year record.

Vulnerability

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

Lightning

Location

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

Previous Occurrences / Extents

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

Table 2-37: Previous Occurrences of Significant Lightning Strikes in Jackson Parish

(Source: NCDC and SHELDUS)

Location	Date	Summary	Property Damage
JONESBORO	July 5, 2001	Lightning hit an electric meter and energized every piece of wiring in a home. One piece of the wire in the attic sent fire from one of the home to the other. The home was totally destroyed.	\$207,194

Since 2010, there have been no lightning events that have caused property damage or loss of life in the incorporated areas of Chatham, East Hodge, Eros, Hodge, North Hodge, Quitman, and the unincorporated areas of the parish.

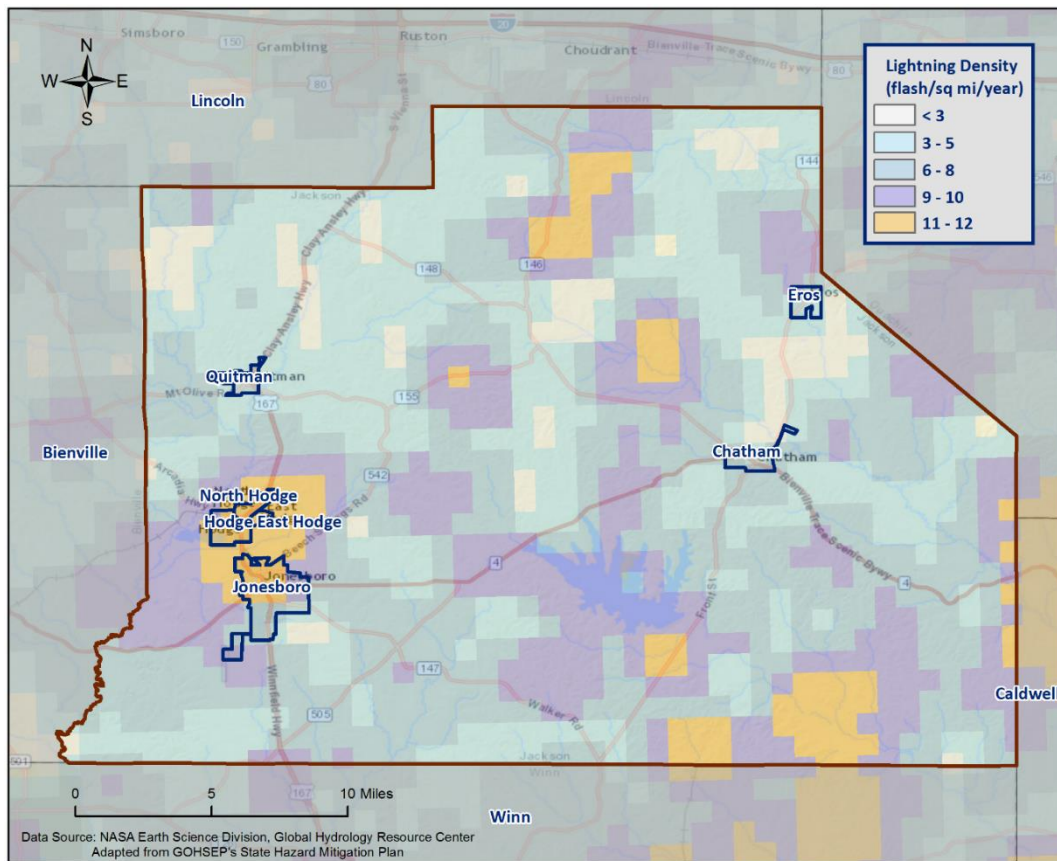


Figure 2-20: Lightning Density Reports for Jackson Parish

Frequency

Lightning can strike anywhere and is produced by every thunderstorm, so the chance of lightning occurring in Jackson 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 one lightning events that have caused property damages or injuries over the last 25 years, establishing an annual probability of 4%.

Estimated Potential Losses

Since 1990, there has been one significant lightning event that has resulted in property damages according to the SHELDUS database. The total property damages associated with lightning events totaled \$207,194. To estimate the potential losses of a lightning event on an annual basis, the total damages recorded for lightning events was divided by the total number of years of available major lightning strike data in SHELDUS (1990 – 2015). This provides an annual estimated potential loss of \$8,288. The tables on the next page provide an estimate of potential property losses for Jackson Parish.

Table 2-38: Estimated Annual Property Losses in Jackson Parish from Lightning

Estimated Annual Potential Losses from Thunderstorm Lightning for Jackson Parish			
Unincorporated Jackson Parish (58.6% of Population)	Chatham (3.4% of Population)	East Hodge (1.8% of Population)	Eros (1.0% of Population)
\$4,853	\$284	\$147	\$79

Table 2-38: Estimated Annual Property Losses in Jackson Parish from Lightning (Continued)

Estimated Annual Potential Losses from Thunderstorm Lightning for Jackson Parish			
Hodge (2.9% of Population)	Jonesboro (28.9% of Population)	North Hodge (2.4% of Population)	Quitman (1.1% of Population)
\$239	\$2,396	\$198	\$92

There have been no reported injuries or fatalities in Jackson 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 2-39* 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 2-39: Comparison of the Enhanced Fujita (EF) Scale to the Fujita (F) Scale

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

Table 2-40: Fujita and Enhanced Fujita Tornado Damage Scale

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

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

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

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

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

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

Location

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

Previous Occurrences / Extents

SHELDUS reports a total of 15 tornadoes or waterspouts occurring within the boundaries of Jackson Parish between the years of 1990 - 2015. The tornadoes experienced in Jackson Parish have from ranged EF0 to EF1 on the EF scale, and ranged from F0 to F3 on the F scale. The worst case scenario Jackson Parish can expect in the future is an EF3 tornado.

The tornado that caused the most damage to property occurred on April 9, 2009. The EF1 tornado was responsible for over \$500,000 in damage. The tornado touched down on east of Olive Grove Road destroying homes and trees in its path. The tornado responsible for the most injuries and fatalities occurred on September 12, 1961. The F3 tornado is responsible for 5 fatalities and 37 injuries.

Table 2-41: Historical Tornadoes in Jackson Parish with Locations from 2010 - 2015

Date	Impacts	Property Damage	Location	Magnitude
April 26, 2011	1.28 mile path with a width of 80 yards. A few trees were blown over.	\$0	CLAY	EFO
April 26, 2011	1.13 mile path with a width of 70 yards. An EFO tornado blew over power lines and trees in northeastern Jackson Parish.	\$0	EROS	EFO

The incorporated areas of Chatham, East Hodge, Hodge, Jonesboro, North Hodge, and Quitman have not experienced a tornado event from 2010 to the present. Since 2011, the year in which the last update to this hazard mitigation plan was written, Jackson Parish has had two tornadoes touchdown in the unincorporated area of the parish and the incorporated area of Eros. The following is a brief synopsis of these events:

April 26, 2011 – EFO Tornado in Clay

A tornado touched down in the far northern portion of Jackson parish. A few trees were blown over along Highway 818 between Clay, LA and Woodville, LA. The tornado continued into southern Lincoln Parish. Maximum sustained winds were estimated at 70 – 75 mph.

April 26, 2011 – EFO Tornado in Eros

Several trees and power lines were blown over just west of the intersection of Highways 556 and 144 in northeastern Jackson Parish by the initial touchdown of the tornado. The tornado continued northeastward along Highway 144 in western Ouachita Parish. Maximum winds were estimated at 80 – 85 mph.

Frequency / Probability

Tornadoes are a sporadic occurrence within Jackson Parish, with an annual chance of occurrence calculated at 60% based on the records for the past 25 years (1990 - 2015). The figure on the next page displays the density of tornado touch downs in Jackson Parish and neighboring parishes.

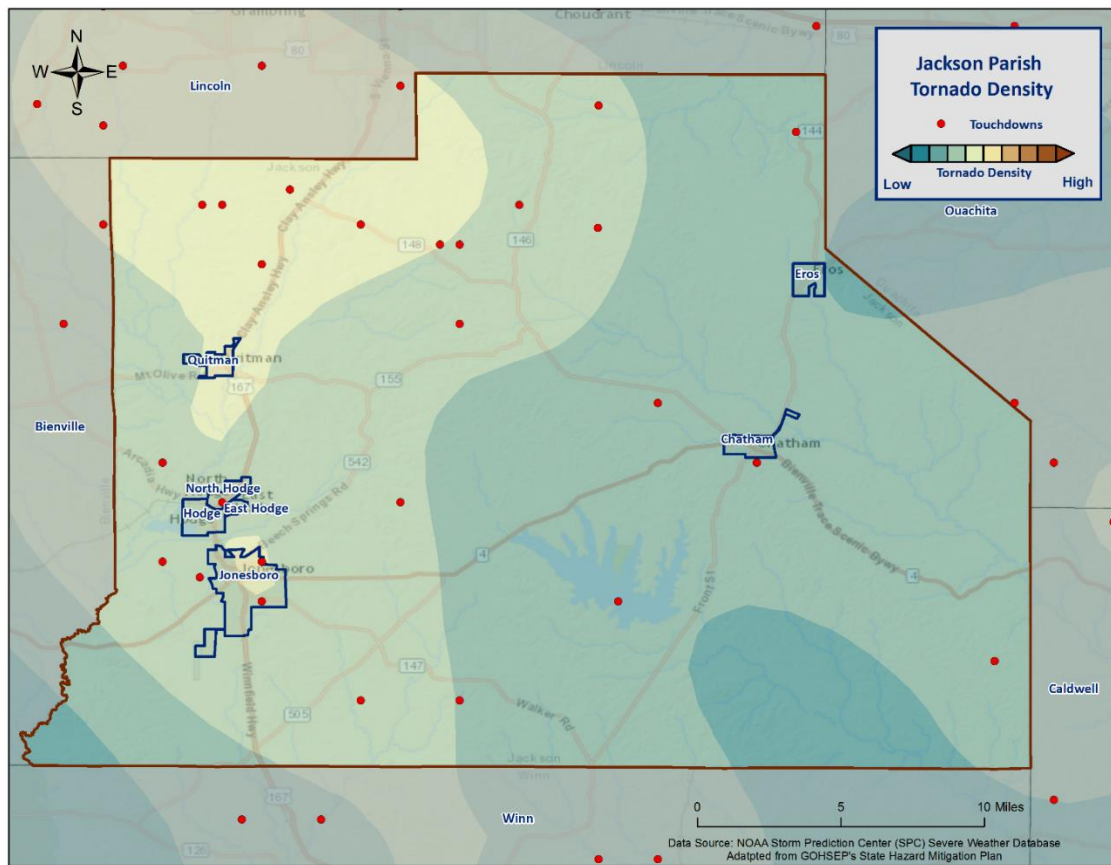


Figure 2-21: Location and Density of Tornadoes to Touch Down in Jackson Parish
(Source: NOAA/SPC Severe Weather Database)

Estimated Potential Losses

According to the SHELATUS database, there have been 15 tornadoes that have caused some level of property damage. The total damage from the actual claims for property is \$1,430,445, with an average cost of \$95,363 per tornado strike. When annualizing the total cost over the 25-year record, total annual losses based on tornadoes are estimated to be \$57,218. To provide an estimated annual estimated potential loss per jurisdiction, the 2010 Census population was used to assign the estimated potential losses proportionally across the jurisdictions. Based on the 2010 Census data, the following tables provides an annual estimate of potential losses for Jackson Parish.

Table 2-42: Estimated Annual Losses from Tornadoes in Jackson Parish

Estimated Annual Potential Losses from Tornadoes for Jackson Parish			
Unincorporated Jackson Parish (58.6% of Population)	Chatham (3.4% of Population)	East Hodge (1.8% of Population)	Eros (1.0% of Population)
\$33,507	\$1,958	\$1,016	\$545

Table 2-42: Estimated Annual Losses from Tornadoes in Jackson Parish (Continued)

Estimated Annual Potential Losses from Tornadoes for Jackson Parish			
Hodge (2.9% of Population)	Jonesboro (28.9% of Population)	North Hodge (2.4% of Population)	Quitman (1.1% of Population)
\$1,652	\$16,539	\$1,364	\$636

Table 2-43 presents an analysis of building exposure that is susceptible to tornadoes by general occupancy type for Jackson Parish, along with the percentage of building stock that are mobile homes.

Table 2-43: Building Exposure by General Occupancy Type for Tornadoes in Jackson 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 (%)
1,937,714	251,611	35,504	5,546	109,592	25,227	21,550	21.2%

The parish has suffered through a total of one day in which tornadoes or waterspouts have accounted for one injury and no fatalities during this 25-year period (*Table 2-44*). The average number of injuries per event for Jackson Parish is 0.07 per tornado, with an average of 0.04 per year for the 25-year period.

Table 2-44: Tornadoes in Jackson Parish by Magnitude that Caused Injuries or Deaths

Date	Magnitude	Deaths	Injuries
April 23, 2000	F1	0	1

In assessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 21.2% of all housing in Jackson Parish consists of manufactured housing. Based on location data collected in a previous hazard mitigation project, there is one known locations where manufactured housing is concentrated. The one location has five manufactured homes. The location and density of manufactured houses can be seen in *Figure 2-22*.

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 Jackson Parish (*Table 2-45*). 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 2-45: Manufactured Home Distribution throughout Jackson Parish

Location	Number of Manufactured Home Parks	% of Manufactured Home Parks
Unincorporated Area	1	100%
Chatham	0	0%
East Hodge	0	0%
Eros	0	0%
Hodge	0	0%
Jonesboro	0	0%
North Hodge	0	0%
Quitman	0	0%

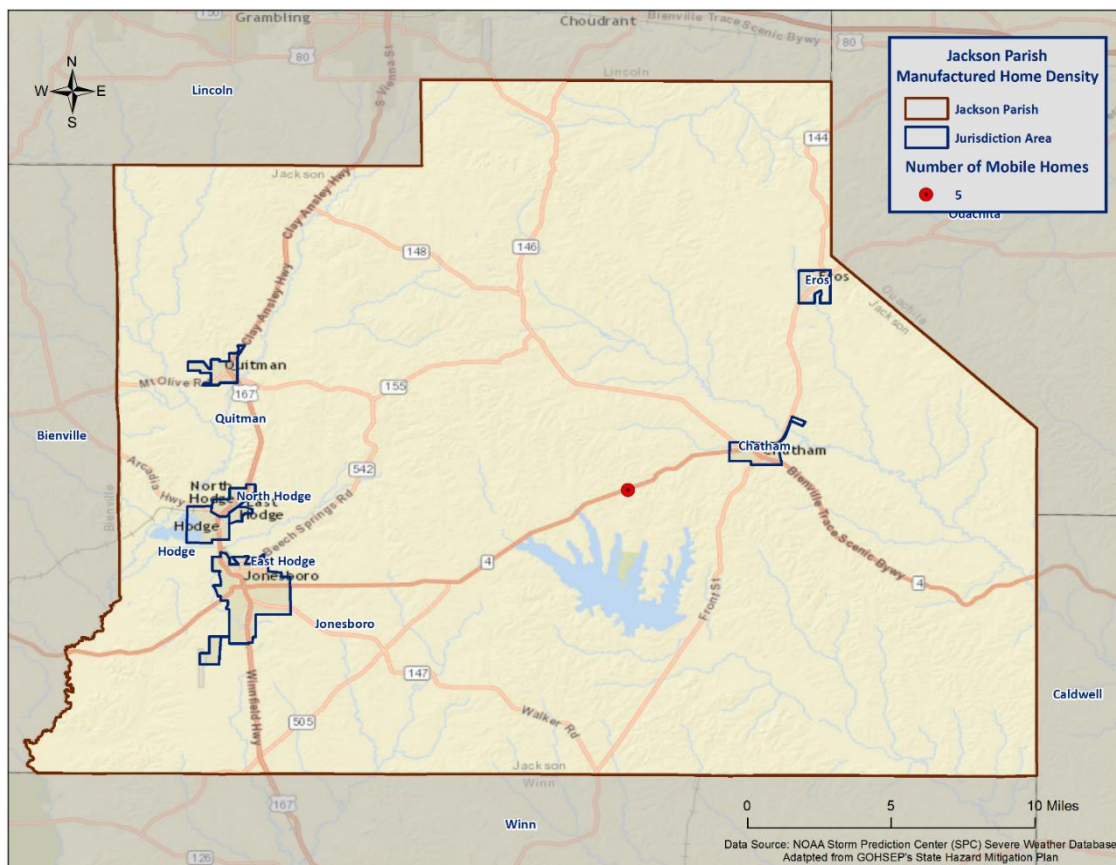


Figure 2-22: Location and Approximate Number of Units in Manufactured Housing Locations throughout Jackson Parish.

Vulnerability

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

Tropical Cyclones

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

Table 2-46: Saffir-Simpson Hurricane Wind Scale

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

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

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

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

Location

Hurricanes are the single biggest threat to 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 Jackson 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 SHELATUS database reports a total of three tropical cyclone events occurring within the boundaries of Jackson Parish between the years 2002 and 2014 (*Table 2-47*). The tropical cyclone events experienced in Jackson Parish include depressions, storms, and hurricanes. As a worst case scenario, Jackson Parish can expect to experience hurricanes at the Category 1 level in the future.

*Table 2-47: Historical Tropical Cyclone Events in Jackson Parish from 2002- 2015**(Source: SHEL DUS)*

Date	Name	Storm Type At Time of Impact
September 1, 2008	Gustav	Tropical Storm
September 13, 2008	Ike	Tropical Storm
August 30, 2012	Isaac	Tropical Storm

[Hurricane Gustav \(2008\)](#)

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

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

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

In Jackson Parish, tropical storm force wind gusts resulted in numerous trees and power lines downed across the entire parish. Power outages were widespread across the parish.

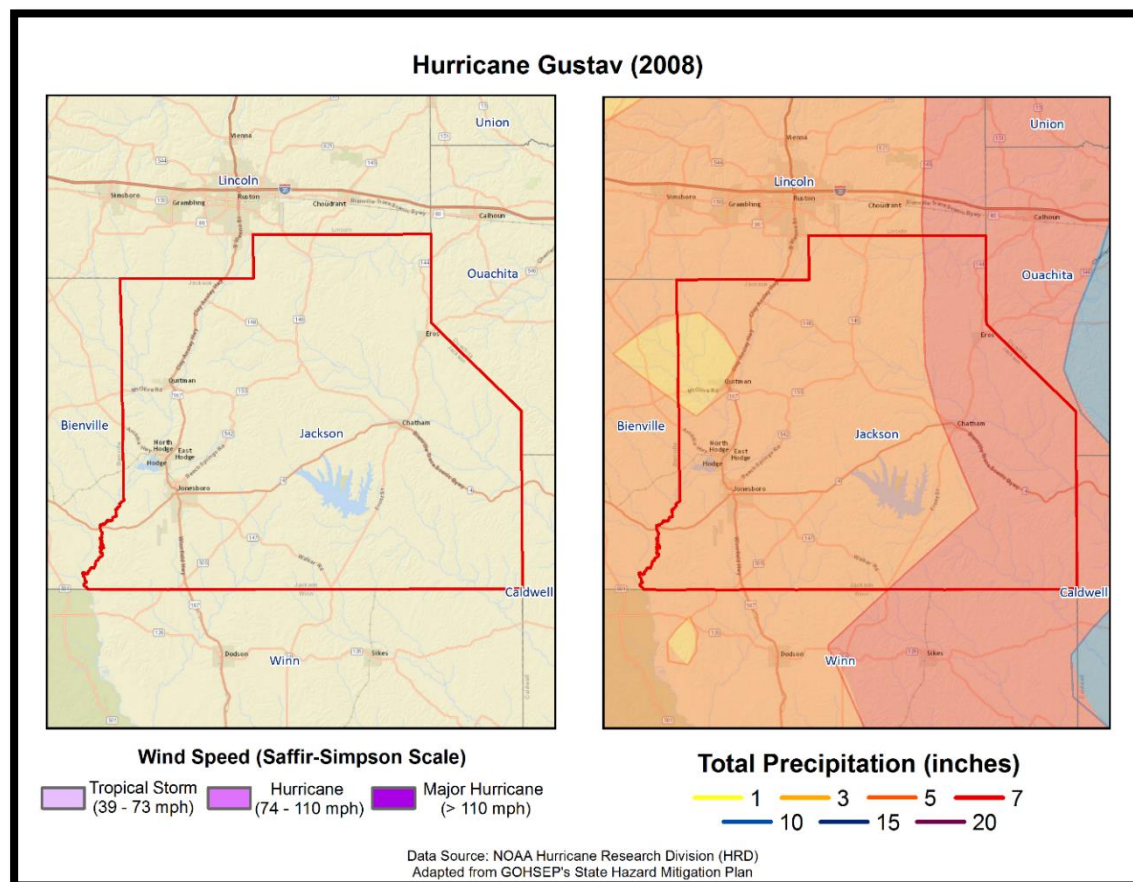


Figure 2-23: Wind Speed and Precipitation Totals in Jackson Parish for Hurricane Gustav

Hurricane Ike (2008)

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

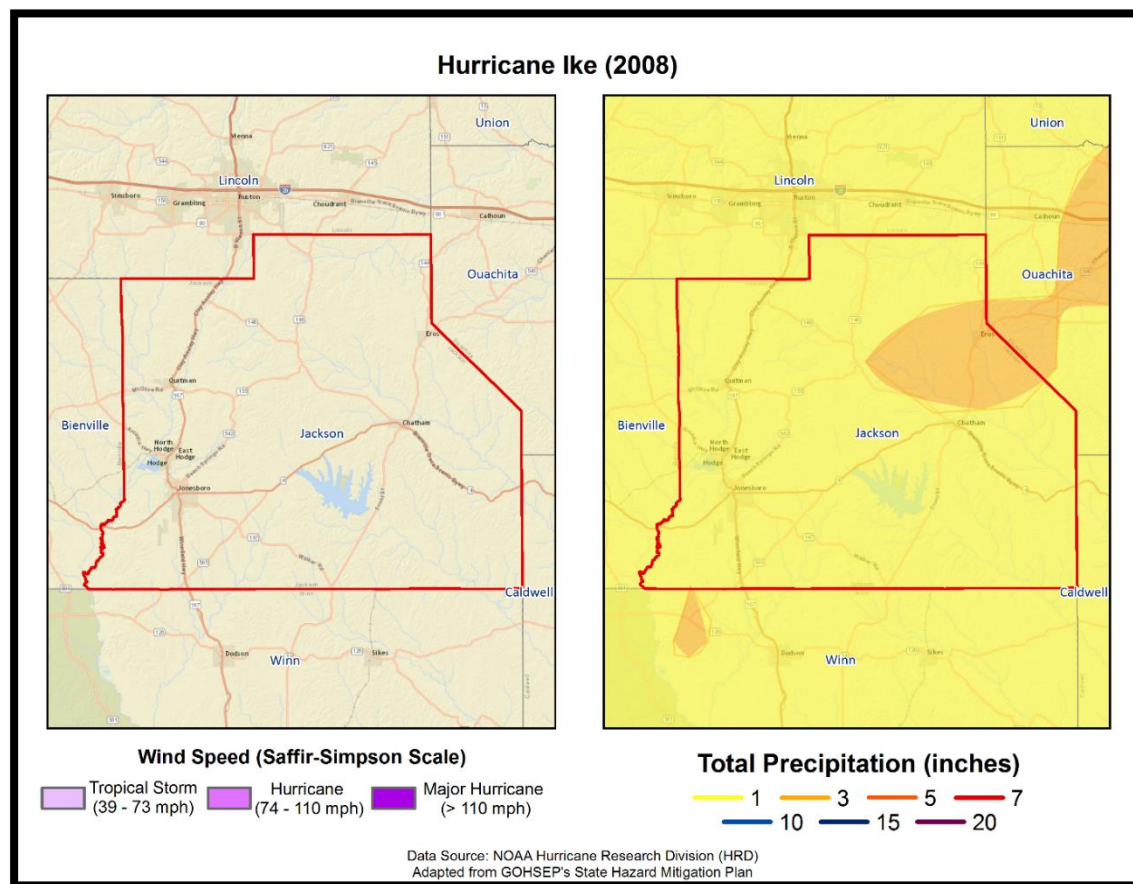


Figure 2-24: Wind Speed and Precipitation Totals in Jackson Parish for Hurricane Ike

In Jackson Parish, tropical storm force winds downed several trees and power lines. Trees littered several secondary roads across the parish. Power outages were scattered across the parish during the height of the storm and after the storm had passed.

Hurricane Isaac (2012)

Tropical Depression Nine formed in the Atlantic, east of the Lesser Antilles, on the morning of August 21, 2012. Twelve hours later, Tropical Depression Nine had strengthened into Tropical Storm Isaac. Isaac continued to track through the eastern Caribbean Sea and Florida Straits while maintaining high end tropical storm strength. Just before noon central time on the 28th, Isaac was located about 75 miles south-southeast of the mouth of the Mississippi River (or about 160 miles southeast of New Orleans) and was found to have reached hurricane strength with winds of 75 mph. An outer rain band from Isaac brought some showers to portions of the ArkLaMiss during the afternoon of the 28th, while the center of Isaac was still churning in the Gulf of Mexico. At 6:45pm on August 28th, Hurricane Isaac made a brief landfall along the coast of Southeast Louisiana in Plaquemines Parish. Maximum sustained winds were 80mph at this landfall. Isaac did not remain over land for long as he was back over water again by 9:00pm that same evening. Isaac made his second landfall along the coast of southeast Louisiana, just to the west of Port Fourchon, around 2:15am August 29th, again with maximum sustained winds of 80 mph.

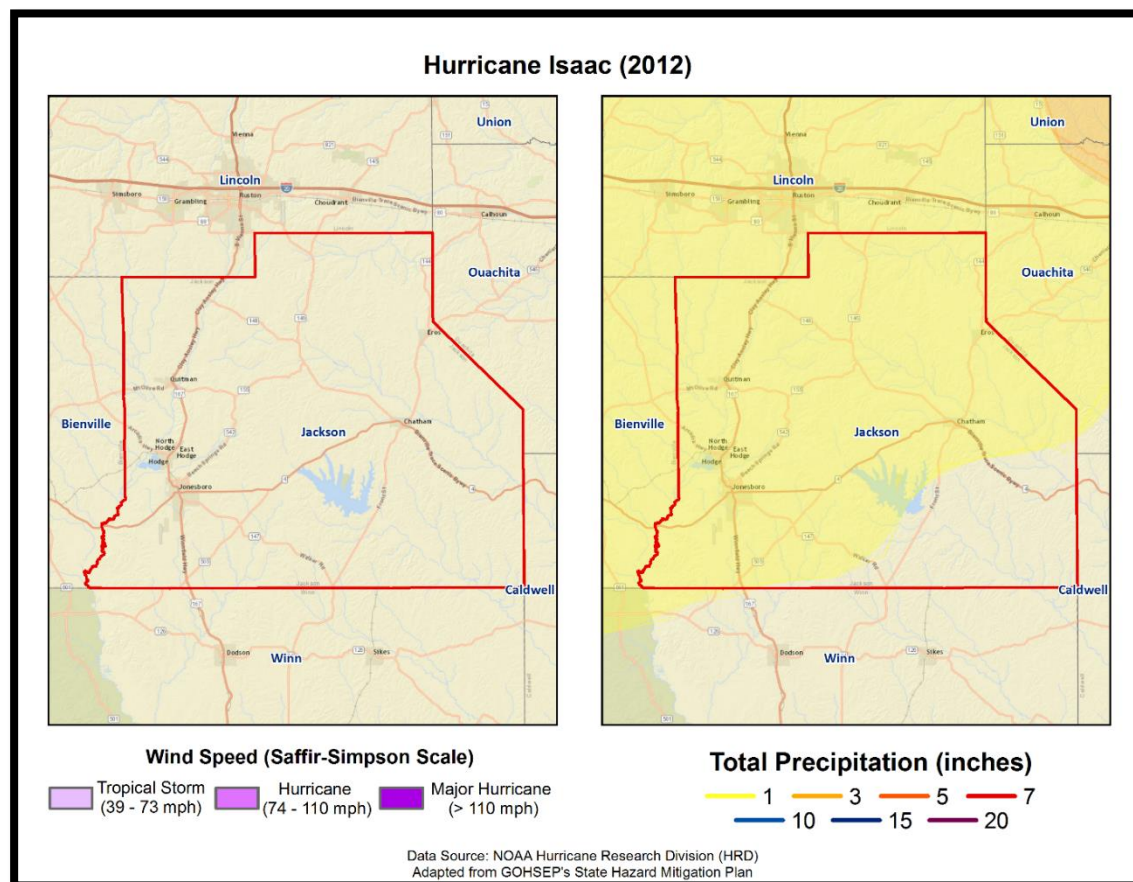


Figure 2-25: Wind Speed and Precipitation Totals in Jackson Parish for Hurricane Isaac

Isaac moved very slowly to the north and northwest over the course of August 29th, which made for prolonged impacts. Forward motion of about 5 mph lead to tremendous flooding issues for both Louisiana and portions of Mississippi south of I-20. Around noon on August 29th, Isaac was downgraded to a Tropical Storm, but this was not much relief to the many residents who were being inundated with rain and wind. Storm total rainfall across portions of Marion County indicated at least 10 to 15 inches fell. Numerous homes and buildings were flooded and some water rescues occurred in Lamar, Marion and Clarke counties. Further to the north, flooding issues were not quite as bad with about 5 to 7 inches of rain falling from the I-20 corridor and north. Tropical storm force wind gusts were noted as far north as Bolivar County, with the Golden Triangle region not seeing winds reach more than tropical depression strength. The worst of the wind was felt generally along and south of an axis from Marion County to Adams County. Numerous trees were down in Adams County, leaving many without power for several days. Eighty percent of the roads were blocked in Franklin County due to downed trees.

With all of the rain that fell, some of the area's rivers filled quickly. Minor flooding was recorded on the lower Pearl River at Rockport and Monticello, as well as on Bouie Creek at Hattiesburg and Tallahala Creek at Laurel. The biggest river impact in the Jackson Hydrologic Service Area was on Black Creek at Brooklyn. Black Creek entered moderate flooding and finally crested at 26.71 feet on August 31st at 5pm. This will go down as the second highest crest in history for this particular river and forecast point. This river flooding caused damage to 15 homes both upstream and downstream of the river gage.

The winds and flooding were not all Isaac brought as a couple of tornadoes touched down in eastern Mississippi. Two tornadoes, one in Clarke County and one in Lauderdale County, occurred during the morning of August 30th. Both were rated EF-1 with winds around 100 mph. The tornado in Clarke County, near Crandall, resulted in 3 injuries to residents of a mobile home. One death attributed to Isaac occurred in Holmes County when a 64 year old woman was killed by a tree falling on her car. Isaac finally moved out of the region by the afternoon of the 30th, and was downgraded to a tropical depression by late afternoon on the 30th as it continued to track to the northwest into Missouri and the Ohio Valley.

In Jackson Parish, several trees and power lines were downed across the entire parish.

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

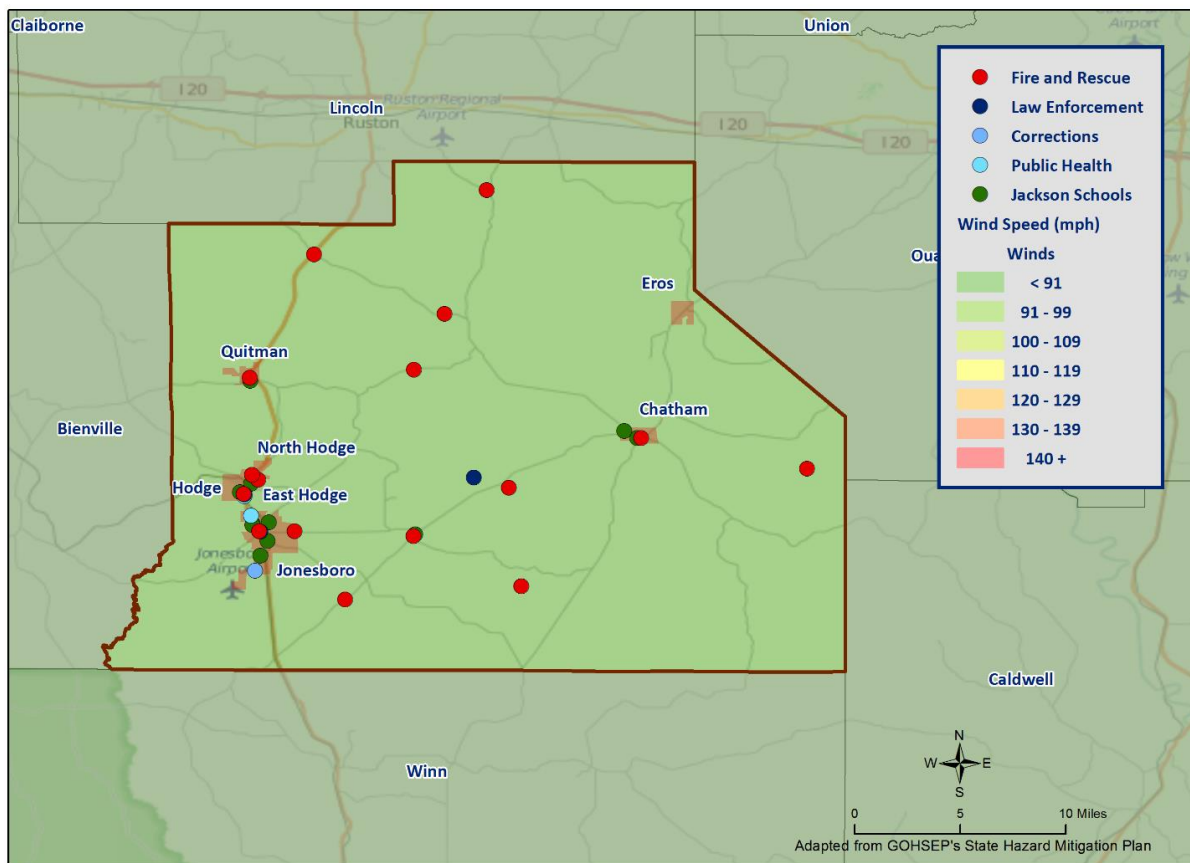


Figure 2-26: Winds Zones for Jackson Parish in Relation to Critical Facilities

Frequency / Probability

Tropical cyclones are large natural hazard events that regularly impact Jackson Parish. The annual chance of occurrence for a tropical cyclone is estimated at 12% for Jackson Parish and its municipalities, with three events occurring within 25 years. The tropical cyclone season for the Atlantic Basin is from June 1st through November 30th, with most of the major hurricanes (Saffir-Simpson Categories 3, 4, & 5) occurring between the months of August and October.

Estimated Potential Losses

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

*Table 2-48: Total Estimated Losses for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
Jackson Parish (Unincorporated)	\$805,041
Chatham	\$47,052
East Hodge	\$24,413
Eros	\$13,094
Hodge	\$39,703
Jonesboro	\$397,368
North Hodge	\$32,776
Quitman	\$15,290
Total	\$1,374,736

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 2-49: Ratio of Total Losses to Total Estimated Value of Assets for each Jurisdiction in Jackson 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	\$805,041	\$1,399,676,000	0.1%
Chatham	\$47,052	\$62,395,000	0.1%
East Hodge	\$24,413	\$31,963,000	0.1%
Eros	\$13,094	\$18,054,000	0.1%
Hodge	\$39,703	\$89,786,000	0.0%
Jonesboro	\$397,368	\$707,457,000	0.1%
North Hodge	\$32,776	\$48,678,000	0.1%
Quitman	\$15,290	\$28,735,000	0.1%

Based on the Hazus 2.2 Hurricane Model, estimated total losses were 0.1% of the total estimated value of all assets for the unincorporated area of Jackson Parish, and the incorporated areas of Chatham, East Hodge, Eros, Hodge, Jonesboro, North Hodge, and Quitman.

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. These sectors are comprised of privately owned structures/facilities, as well as locally, state, and federally owned structures/facilities.

Table 2-50: Estimated Losses in Unincorporated Jackson Parish for a 100-Year Hurricane Event
(Source: Hazus 2.2)

Jackson Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$118
Commercial	\$5,156
Government	\$610
Industrial	\$604
Religious / Non-Profit	\$2,009
Residential	\$796,007
Schools	\$536
Total	\$805,041

Table 2-51: Estimated Losses in Chatham for a 100-Year Hurricane Event
(Source: Hazus 2.2)

Chatham	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$7
Commercial	\$301
Government	\$36
Industrial	\$35
Religious / Non-Profit	\$117
Residential	\$46,524
Schools	\$31
Total	\$47,052

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

East Hodge	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$4
Commercial	\$156
Government	\$18
Industrial	\$18
Religious / Non-Profit	\$61
Residential	\$24,139
Schools	\$16
Total	\$24,413

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

Eros	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$2
Commercial	\$84
Government	\$10
Industrial	\$10
Religious / Non-Profit	\$33
Residential	\$12,947
Schools	\$9
Total	\$13,094

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

Hodge	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$6
Commercial	\$254
Government	\$30
Industrial	\$30
Religious / Non-Profit	\$99
Residential	\$39,257
Schools	\$26
Total	\$39,703

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

Jonesboro	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$58
Commercial	\$2,545
Government	\$301
Industrial	\$298
Religious / Non-Profit	\$992
Residential	\$392,909
Schools	\$265
Total	\$397,368

*Table 2-56: Estimated Losses in North Hodge for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

North Hodge	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$5
Commercial	\$210
Government	\$25
Industrial	\$25
Religious / Non-Profit	\$82
Residential	\$32,408
Schools	\$22
Total	\$32,776

*Table 2-57: Estimated Losses in Quitman for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Quitman	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$2
Commercial	\$98
Government	\$12
Industrial	\$11
Religious / Non-Profit	\$38
Residential	\$15,118
Schools	\$10
Total	\$15,290

Threat to People

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

*Table 2-58: Number of People Susceptible to a 100-Year Hurricane Event in Jackson Parish
(Source: Hazus 2.2)*

Number of People Exposed to Hurricane Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
Jackson Parish (Unincorporated)	9,530	9,530	100%
Chatham	557	557	100%
East Hodge	289	289	100%
Eros	155	155	100%
Hodge	470	470	100%
Jonesboro	4,704	4,704	100%
North Hodge	388	388	100%
Quitman	181	181	100%
Total	16,274	16,274	100%

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

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

Jackson Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	9,530	100.0%
Persons Under 5 Years	640	6.7%
Persons Under 18 Years	1,529	16.0%
Persons 65 Years and Over	1,592	16.7%
White	6,491	68.1%
Minority	3,039	31.9%

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

Chatham		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	557	100.0%
Persons Under 5 Years	34	6.1%
Persons Under 18 Years	88	15.8%
Persons 65 Years and Over	111	19.9%
White	339	60.9%
Minority	218	39.1%

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

East Hodge		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	289	100.0%
Persons Under 5 Years	36	12.5%
Persons Under 18 Years	49	17.0%
Persons 65 Years and Over	48	16.6%
White	22	7.6%
Minority	267	92.4%

Table 2-62: Vulnerable Populations in Eros for a 100-Year Hurricane Event

(Source: Hazus 2.2)

Eros		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	155	100.0%
Persons Under 5 Years	10	6.5%
Persons Under 18 Years	32	20.7%
Persons 65 Years and Over	22	14.2%
White	133	85.8%
Minority	22	14.2%

Table 2-63: Vulnerable Populations in Hodge for a 100-Year Hurricane Event

(Source: Hazus 2.2)

Hodge		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	470	100.0%
Persons Under 5 Years	29	6.2%
Persons Under 18 Years	65	13.8%
Persons 65 Years and Over	112	23.8%
White	305	64.9%
Minority	165	35.1%

Table 2-64: Vulnerable Populations in Jonesboro for a 100-Year Hurricane Event

(Source: Hazus 2.2)

Jonesboro		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	4,704	100.0%
Persons Under 5 Years	349	7.4%
Persons Under 18 Years	694	14.8%
Persons 65 Years and Over	707	15.0%
White	2,008	42.7%
Minority	2,696	57.3%

*Table 2-65: Vulnerable Populations in North Hodge for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

North Hodge		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	388	100.0%
Persons Under 5 Years	37	9.5%
Persons Under 18 Years	54	13.9%
Persons 65 Years and Over	53	13.7%
White	293	75.5%
Minority	95	24.5%

*Table 2-66: Vulnerable Populations in Quitman for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Quitman		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	181	100.0%
Persons Under 5 Years	13	7.2%
Persons Under 18 Years	34	18.8%
Persons 65 Years and Over	26	14.4%
White	163	90.1%
Minority	18	9.9%

Vulnerability

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

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

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

Previous Occurrences / Extents

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

Frequency / Probability

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

Levee Failure

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

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

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

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

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

Location

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

Previous Occurrences / Extents

There have been no reported levee failures in Jackson 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. Jackson 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 Jackson Parish planning area. Jackson Parish is awaiting a response from the USACE, and will continue to work to update this information as new data is received.

This Page Left Intentionally Blank

3. Capability Assessment

This section summarizes the results of the Jackson 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, Jackson 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

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

Table 3-1: Jackson Parish Planning and Regulatory Capabilities

Planning and Regulatory									
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.									
	Jackson Parish	Chatham	East Hodge	Eros	Hodge	Jonesboro	North Hodge	Quitman	
Plans	Yes / No								
Comprehensive / Master Plan	No	No	No	No	No	No	Yes	No	
Capital Improvements Plan	No	No	No	No	No	No	Yes	No	
Economic Development Plan	No	No	No	No	No	No	Yes	No	
Local Emergency Operations Plan	Yes	Yes	No	No	No	Yes	Yes	Yes	
Continuity of Operations Plan	Yes	No	No	No	No	No	Yes	No	
Transportation Plan	Yes	No	No	No	No	No	No	No	
Stormwater Management Plan	No	No	No	No	No	No	No	No	
Community Wildfire Protection Plan	Yes	No	No	No	No	No	No	No	
Other plans (redevelopment, recovery, coastal zone management)	No	No	No	No	No	No	No	No	
Building Code, Permitting and Inspections	Yes / No								
Building Code	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	
Building Code Effectiveness Grading Schedule (BCEGS) Score		No	No	Yes	Yes	No	No	No	
Fire Department ISO/PIAL rating	Yes	No	Yes	No	Yes	4	No	3	
Site plan review requirements	Yes	Yes	No	No	Yes		No	No	
Land Use Planning and Ordinances	Yes / No								
Zoning Ordinance	No	Yes	No	No	Yes	Yes	Yes	No	
Subdivision Ordinance	Yes	No	No	No	No	No	Yes	No	
Floodplain Ordinance	Yes	No	No	No	No	Yes	No	No	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	No	No	No	No	No	No	No	
Flood Insurance Rate Maps	Yes	No	No	No	No	Yes	No	No	
Acquisition of land for open space and public recreation uses	No	No	No	No	Yes	No	Yes	No	
Other	No					Yes		No	

Building Codes, Permitting, Land Use Planning and Ordinances

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

As of the 2017 update, Jackson 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 Jackson 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 (where applicable).

The Jackson 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, Jackson Parish as a whole has a system in place to coordinate and share these capabilities through Jackson 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, Jackson 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 Jackson Parish and its jurisdictions.

Table 3-2: Jackson 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 higher level government that can provide technical assistance, indicate so in your comments.									
	Jackson Parish	Chatham	East Hodge	Eros	Hodge	Jonesboro	North Hodge	Quitman	
Administration	Yes / No								
Planning Commission	No	No	No	No	Yes	Yes	Yes	No	
Mitigation Planning Committee	No	No	No	No	Yes	No	Yes	No	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	No	No	Yes	Yes	Yes	Yes	No	
Mutual Aid Agreements									
Staff	Yes / No; FT/PT; % Hazard Mitigation								
Chief Building Official	Yes	No	No	No	Yes	No	No	Yes	
Floodplain Administrator	Yes	No	No	No	No	Yes	No	No	
Emergency Manager	Yes	No	No	No	Yes	No	No	Yes	
Community Planner	No	No	No	No	No	No	No	No	
Civil Engineer	Yes	No	No	No	Yes	No	No	Yes	
GIS Coordinator	No	No	No	No	No	No	No	No	
Grant Writer	No	No	No	No	Yes	No	No	Yes	
Other	No	No	No	No	No	No	No	No	
Technical	Yes / No								
Warning Systems / Service (Reverse 911, outdoor warning signals)	No	No	No	No	Yes	No	Yes	No	
Hazard Data & Information	No	No	No	No	No	No	Yes	Yes	
Grant Writing	No	No	No	No	Yes	No	No	Yes	
Hazus Analysis	No	No	No	No	No	No	No	No	
Other	No	No	No	No	No	No	No	No	

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

Table 3-3: Jackson Parish Financial Capabilities

Financial									
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.									
	Jackson Parish	Chatham	East Hodge	Eros	Hodge	Jonesboro	North Hodge	Quitman	
Funding Resource	Yes / No								
Capital Improvements project funding	Yes	Yes	No	No	Yes	Yes	Yes	No	
Authority to levy taxes for specific purposes	Yes	No	No	No	Yes	No	No	No	
Fees for water, sewer, gas, or electric services	No	Yes	No	Yes	Yes	Yes	Yes	No	
Impact fees for new development	No	No	No	No	No	No	No	No	
Stormwater Utility Fee	No	No	No	No	No	No	No	No	
Community Development Block Grant (CDBG)	Yes	Yes	No	No	Yes	Yes	Yes	No	
Other Funding Programs	Yes					Yes		No	

Education and Outreach

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

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

Table 3-4: Jackson 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.									
	Jackson Parish	Chatham	East Hodge	Eros	Hodge	Jonesboro	North Hodge	Quitman	
Program / Organization	Yes / No								
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	No	No	No	No	No	Yes	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	No	No	No	No	Yes	Yes	No	
Natural Disaster or safety related school program	No	No	No	No	No	No	No	No	
Storm Ready certification	No	No	No	No	No	No	No	No	
Firewise Communities certification	No	No	No	No	No	No	No	No	
Public/Private partnership initiatives addressing disaster-related issues	No	No	No	No	No	No	No	No	
Other	No	No	No	No	No	No	No	No	

In some cases, the jurisdictions rely on Jackson Parish OHSEP and/or Jackson 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, Jackson 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 Jackson 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 Jackson Parish
- Town of Chatham
- Village of East Hodge
- Town of Eros
- Village of Hodge
- Town of Jonesboro
- Village of North Hodge
- Village of Quitman

Flood Insurance and Community Rating System

Jackson 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, including Lake Charles (class 8) and Calcasieu Parish (class 8). Mandeville, Shreveport, and Jefferson and East Baton Rouge Parishes had the best classifications in the state, class 7. As of the 2017 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.

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

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

communities, in terms of total flood insurance policies held by residents, 27 participate in the CRS. The remaining 23 communities present an outreach opportunity for encouraging participation in the CRS.

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

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

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

In 2011¹, the National Flood Insurance Program (NFIP) completed a comprehensive review of the Community Rating System that will result in the release of a new CRS Coordinator’s Manual.

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

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

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

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

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

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

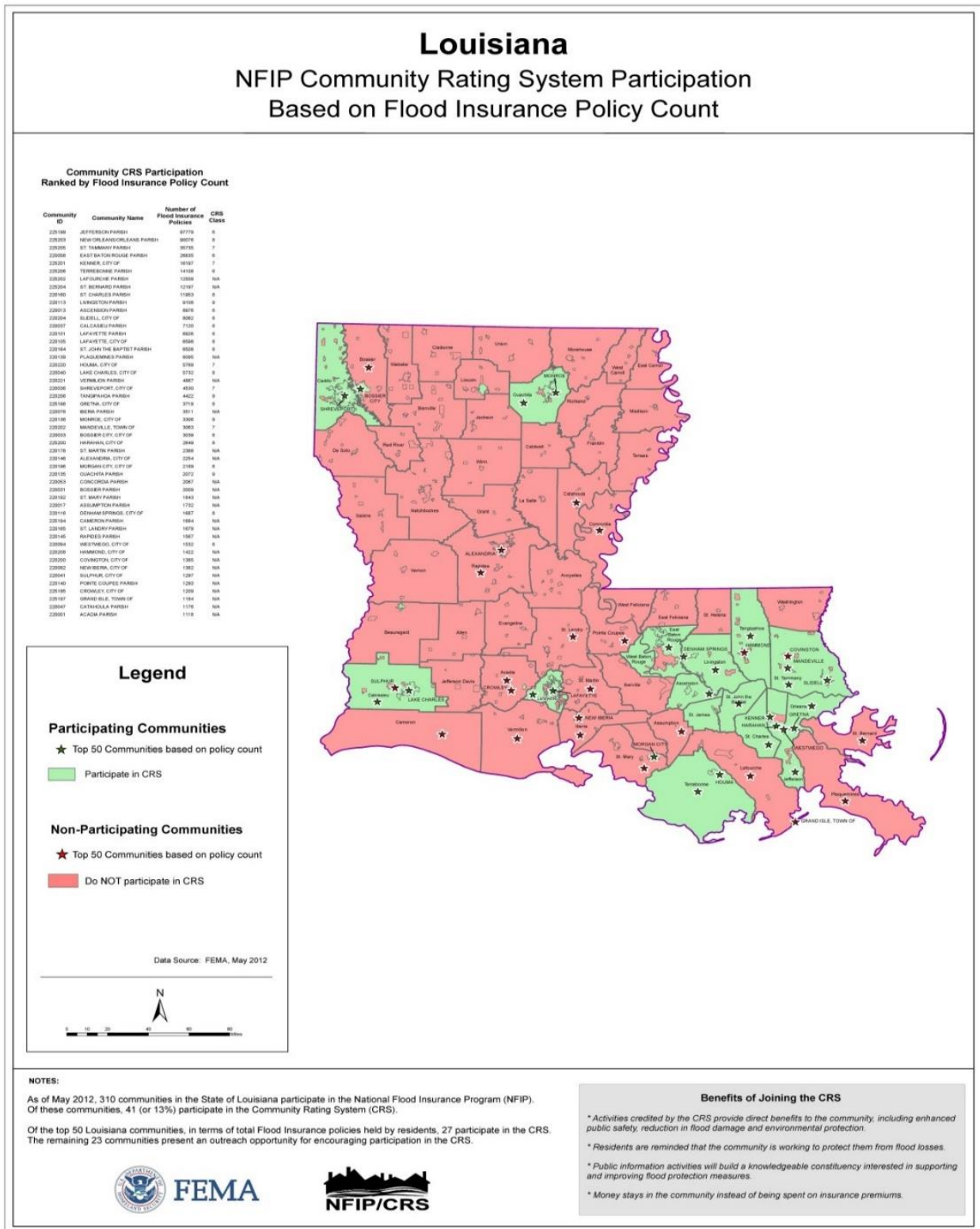


Figure 3-2: Louisiana CRS NFIP Participation
(Source: FEMA²)

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

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

1. The activities credited by the CRS provide direct benefits to residents, including:
 - Enhanced public safety
 - A reduction in damage to property and public infrastructure
 - Avoidance of economic disruption and losses
 - Reduction of human suffering
 - Protection of the environment
2. A community’s flood programs will be better organized and more formal. Ad hoc activities, such as responding to drainage complaints rather than an inspection program, will be conducted on a sounder, more equitable basis.
3. A community can evaluate the effectiveness of its flood programs against a nationally recognized benchmark.
4. Technical assistance in designing and implementing a number of activities is available at no charge from the Insurance Services Office.
5. The public information activities will build a knowledgeable constituency interested in supporting and improving flood protection measures.
6. A community would have an added incentive to maintain its flood programs over the years. The fact that its CRS status could be affected by the elimination of a flood related activity or a weakening of the regulatory requirements for new developments would be taken into account by the governing board when considering such actions.
7. Every time residents pay their insurance premiums, they are reminded that the community is working to protect them from flood losses, even during dry years.

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

NFIP Worksheets

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

4. Mitigation Strategy

Introduction

Jackson 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.

Jackson 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 2017 update are a product of analysis and review of the Jackson Parish Hazard Mitigation Plan Steering Committee, under the coordination of the Jackson 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 February 2016 – October 2016.

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

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

During the public meeting in October, the committee provided a status of the projects from 2011 and the proposed actions for the 2017 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 Jackson 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, Jackson 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 Jackson Parish Hazard Mitigation Plan Update Steering Committee represent long-term commitments by the parish and its jurisdictions. After assessing these goals, the committee decided that the current four goals remain valid.

The goals are as follows:

- Improve education and outreach efforts, specifically to the public, parish/municipal employees, and local businesses, regarding potential impacts of hazards and the identification of specific measures that can be taken to reduce their impact.
- Improve data collection, use, and sharing, specifically with neighboring communities, among municipalities, and with the State, to reduce the impact of hazards.
- Improve capabilities, coordination, and opportunities at municipal and parish levels to plan and implement hazard mitigation projects, programs, and activities, especially through the use of GIS, coordination with universities, and public/private partnerships.
- Pursue opportunities to mitigate repetitive and severe repetitive loss properties and other appropriate hazard mitigation projects, programs, and activities, with a focus on existing structures, future structures, protection of existing infrastructure, and protection of future infrastructure.

The Mitigation Action Plan focuses on actions to be taken by Jackson 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.

[2017 Mitigation Actions and Update on Previous Plan Actions](#)

The Jackson Parish Hazard Mitigation Plan Steering Committee and participating jurisdictions each identified actions that would reduce and/or prevent future damage within Jackson 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 tables below.

Jackson 2011 Hazard Mitigation Action Update

Jackson Parish- Unincorporated Areas				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
J1: Crisis Rehearsal	Parish-wide crisis rehearsal.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	In Progress
J2: Hazardous Material Certification	Hazardous material certification for emergency personnel.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Mayor's Office	All Hazards	In Progress
J3: Shelter Base List	Establish a base list of available shelters in Jackson Parish.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	In Progress
J4: Facility Hardening	Hardening of critical facilities.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	In Progress
J5: Resident Education	Educate residents on protection of existing homes and property by handing out brochures at local gatherings and public places.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	Carried Over
J6: Flood Insurance	Actively promote flood insurance purchases.	Jackson Parish Police Jury, Town of Chatham, Village of East Hodge, Town of Eros, Village of Hodge, Town of Jonesboro, Village of North Hodge, Village of Quitman	All Hazards	Carried Over
J7: Weather Radios	Encourage private care facilities to purchase weather radios.	Jackson Parish Police Jury, Town of Chatham, Village of East Hodge, Town of Eros, Village of Hodge, Town of Jonesboro, Village of North Hodge, Village of Quitman	All Hazards	Carried Over

J8: National Weather Service Skywatch Seminar	Establish guidelines for mandatory attendance of all Emergency Service Personnel and encourage local citizens to attend the annual National Weather Service Skywatch Seminar.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	In Progress
J9: NIMS and ICS	Work to provide training to emergency personnel Parish-wide in NIMS and ICS.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	Completed
J10: Monitoring and Communications	Work to enhance monitoring and communications systems to improve ability to predict and prepare for flood events.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	Flooding (Flash and Riverine)	In Progress
J11: International Building Codes	Implement and enforce International Building Codes.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	In Progress
J12: Insurance Promoting Building Codes	Develop partnerships with insurance companies to promote building codes.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	In Progress
J13: Water-Saving Measures	Adopt ordinance requiring water-saving measures in time of drought.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	Drought	In Progress
J14: WarnSpot Weather Warning	Distribution of WarnSpot Weather Warning software.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	In Progress
J15: Volunteer Fire Department Radios and Sirens	Installation of radio or phone-activated air sirens at volunteer fire departments.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	Completed
J16: Emergency Roadblock Equipment	Purchase of emergency roadblock equipment (signs, barricades, flashing lights).	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	Completed
J17: 911 Callback Software	Installation of 911 callback software.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	Completed
J18: Portable Power Generators	Purchase portable power generators.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	Completed
J19: Public Building Modification	Modify public buildings to withstand the effects of severe weather.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	All Hazards	In Progress

Town of Chatham				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
C1: Warning System Update	Update the warning system for approaching tornadoes and thunderstorms.	Town of Chatham	Flooding (flash and Riverine), Tornadoes & Thunderstorms	Carried Over
C2: Back Up Generators	Purchase back up generators to keep the water and sewer systems operable during power outages.	Town of Chatham	Severe Winter Storms, Tropical Systems / Hurricanes	Carried Over
C3: Castor and Edwards Branch Creek Dredging	Dredging of either Castor Creek and/or Edwards Branch Creek would alleviate the flooding problem.	Town of Chatham	Flooding (flash and Riverine)	Carried Over
C4: Fire Risk Alerts	Alert the public when the fire risk is great and will advise the public on a regular basis of the dangers of carelessness with debris burning, fireworks, and cigarettes.	Town of Chatham	Wildfire	Completed
C5: Controlled Burn Equipment	Acquire specialized equipment (brush trucks, off road vehicles, and heavy equipment) for conducting controlled burns.	Town of Chatham	Wildfire	Carried Over
C6: Local Fire Prevention Awareness	Support local fire prevention awareness through educational partnerships between schools, civic groups and fire awareness organizations.	Town of Chatham	Wildfire	Completed
C7: Hazardous Material Emergency Response	Coordinate emergency response efforts, particularly for hazardous material releases.	Town of Chatham	HazMat (Fixed Site & Transport)	Carried Over

Village of East Hodge				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
E1: Persons of Risk	Encourage churches and community groups to assist persons of risk during power loss and to develop an emergency plan.	Village of East Hodge	All Hazards	Completed
E2: Back Up Generators	Provide back-up generators in order to keep the sewage system from flooding into the street.	Village of East Hodge	Flooding (Flash and Riverine)	Carried Over
E3: Water System Power Generators	Install emergency power generator for water systems.	Village of East Hodge	Thunderstorms, Tornadoes	Completed
E4: Community Shelter	Construct community shelter to provide immediate life protection for events with little or no warning.	Village of East Hodge	Tornado	Carried Over

Town of Eros				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
E1: Awareness of NFIP	Partner with insurance agents to increase awareness and policyholders in the NFIP.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	Flooding (Flash and Riverine)	Carried Over
E2: Public Awareness	Through public service announcements by the local media, promote public awareness of the dangers of thunderstorms and the high winds generated by them and what can be done to prevent / reduce personal injury and property damage.	Town of Eros	Thunderstorms (High Winds)	Completed
E3: Persons of Risk	Personnel from LHOSEP and Jackson Parish will meet with local churches and community groups and encourage them to assist persons at risk during power loss and develop emergency plans to provide shelter when power fails from winter storms.	Town of Eros	Severe Winter Storms	Completed
E4: Local Fire Prevention Awareness	Support local fire prevention awareness through educational partnerships between schools, civic groups, and fire awareness organizations.	Town of Eros	Wildfire	Completed
E5: Water System Emergency Power Generator	Install emergency power generator for water system.	Town of Eros	Thunderstorms , Tornadoes	Completed
E6: Community Shelter	Construct community shelter to provide immediate life protection for events with little or no warning.	Town of Eros	Tornado	Carried Over

Village of Hodge				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
H1: Public Awareness	The Village will promote public awareness of the dangers of high winds and tornadoes and what can be done to prevent / reduce personal injury and property damage.	Village of Hodge	Thunderstorms	In Progress
H2: Persons of Risk	The Sheriff's Office and LHSOP personnel will meet with churches and community groups to identify the elderly and indigent citizens who are at risk on order that they may be assisted during power losses.	Village of Hodge	All Hazards	In Progress
H3: Storm Water Drainage System	Improve storm water drainage system by having a drainage survey performed relative to sewer infiltration. The drainage system will then be corrected in such a manner that it would have no impact on the sewer system.	Village of Hodge	Flooding (Flash and Riverine)	In Progress
H4: Little Dugdemona Creek Levee	A levee needs to be built to keep Little Dugdemona Creek from overflowing and causing flooding.	Village of Hodge	Flooding (Flash and Riverine)	In Progress
H5: Burn Bans Enforcement	Conduct a wider publication and a stricter enforcement of burn bans.	Village of Hodge	Wildfire	In Progress
H6: Water System Emergency Power Generator	Install emergency power generator for water system.	Village of Hodge	Thunderstorms Tornadoes	Completed
H7: Community Shelter	Construct community shelter to provide immediate life protection for events with little or no warning.	Village of Hodge	Tornado	In Progress

Town of Jonesboro				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
J1: Awareness of NFIP	Partner with insurance agents to increase awareness and policyholders in the NFIP.	Jackson Parish Office of Homeland Security and Emergency Preparedness, Town / Village Mayors' Offices	Flooding (Flash and Riverine)	In Progress
J2: Building High Wind Resistance	Adopt building codes that will institute measures that will improve resistance of new buildings to high winds.	Town of Jonesboro	Thunderstorm (High Winds)	In Progress
J3: Back Up Generator	Provide backup generator for sewer system.	Town of Jonesboro	Thunderstorm (High Winds)	Completed
J4: Persons of Risk	Identify the elderly and indigent citizens who are at risk; encourage churches and other community groups to assist them during power losses; develop emergency plans to provide shelter when power fails from winter storms.	Town of Jonesboro	All Hazards	Completed
J5: Road Elevation	Elevate roads in area of Cedar Street and Talbot Street	Town of Jonesboro	Flooding (Flash and Riverine)	In Progress
J6: 10th and 5th Street Culvert Resizing	Resize culverts in south Jonesboro around 10th Street and 5th Street areas.	Town of Jonesboro	Flooding (Flash and Riverine)	In Progress
J7: Water System Emergency Power Generator	Install emergency power generator for water system.	Town of Jonesboro	Thunderstorms, Tornadoes	In Progress
J8: Town Hall Emergency Power Generator	Install emergency power generator at Town Hall.	Town of Jonesboro	Thunderstorms, Tornadoes	In Progress
J9: Lift Stations Emergency Power Generators	Install portable emergency power generators at lift stations.	Town of Jonesboro	Thunderstorms, Tornadoes	In Progress
J10: Town Hall Roof Retrofitting	Retrofit roof for Jonesboro Town Hall.	Town of Jonesboro	Thunderstorms, Tornadoes	Completed
J11: Public Works Building Roof Retrofitting	Retrofit roof for Jonesboro Public Works Building.	Town of Jonesboro	Thunderstorms, Tornadoes	In Progress
J12: Safe Room	Construct a new structure or retrofit an existing structure for use as a safe room.	Town of Jonesboro	Thunderstorms, Tornadoes	In Progress
J13: Storm Water Drainage System	Improve storm water drainage system by having a drainage survey performed relative to sewer infiltration. The drainage system would then be corrected in such a manner that it would have no impact on the sewer system.	Town of Jonesboro	Flooding (Flash and Riverine)	In Progress
J14: Cedar and Talbot Street Culvert Resizing	Culvert resizing at Cedar Street and Talbot Street will reduce clogged channels and stabilize banks.	Town of Jonesboro	Flooding	Completed
J15: Local Fire Prevention Awareness	The Town of Jonesboro will support local fire prevention awareness through educational partnerships between schools, civic groups, and fire awareness organizations.	Town of Jonesboro	Wildfire	Completed

J16: Hazardous Materials Education	Educate the public about the hazardous materials to which they could be exposed and help homeowners identify the hazardous materials from which they are at risk.	Town of Jonesboro	HazMat (Fixed Site and Transport)	In Progress
J17: Potable Water Sources	Study alternate sources of potable water due to decline in Sparta Aquifer.	Town of Jonesboro	Droughts	In Progress
J18: Water Well Security Measures	Enhance security measures at water well sites.	Town of Jonesboro	Terrorism	In Progress
J19: Coding Transmission Lines	Investigate methods of coding transmission lines to protect contents.	Town of Jonesboro	Terrorism	In Progress

Village of North Hodge				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
N1: High Wind Protection	Identify homes and buildings that are vulnerable to loss from high winds; suggest ways that homeowners can prepare for storms.	Village of North Hodge	Thunderstorm; Tornado	Completed
N2: Back Up Generator	Provide back-up generator for water and sewer system.	Village of North Hodge	All Hazards	Carried Over
N3: Persons of Risk	Encourage churches and community groups to assist persons at risk during power loss and develop emergency plans to provide shelter when power fails from winter storms.	Village of North Hodge	Severe Winter Storms	Completed
N4: Tree Trimming	Thin tree and cut back limbs that are prone to falling on power lines.	Village of North Hodge	Thunderstorm; Tornado, Tropical System / Hurricane	Completed
N5: Storm Drainage System	Improve storm drainage system by having a drainage survey performed relative to sewer infiltration. The drainage system will then be corrected in such a manner that it would have no impact on the sewer system.	Village of North Hodge	Flooding (Flash and Riverine)	Carried Over
N6: Local Fire Prevention Awareness	The Village of North Hodge will support local fire prevention awareness through educational partnerships between schools, civic groups and fire awareness organizations.	Village of North Hodge	Wildfire	Completed
N7: Mosquito Abatement Programs	Investigate mosquito abatement programs to address hazard.	Village of North Hodge	Biohazards	Carried Over
N8: Beaver Dam Problems	Address issues with beaver dams causing flooding a sewer pond.	Village of North Hodge	Flooding (Flash and Riverine)	Completed
N9: Drainage Survey	Contract for drainage survey relative to sewer infiltration. Based on results of survey, the drainage system will then be corrected to eliminate impact on the sewer system.	Village of North Hodge	Flooding (Flash and Riverine)	Carried Over
N10: Drainage Canal	Add drainage canal and resize culverts in Pine Street / 5th Street / Line Avenue area	Village of North Hodge	Flooding (Flash and Riverine)	Carried Over

Town of Quitman				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
Q1: High Wind Protection	Educate the citizens as the dangers of high winds and tornadoes; suggest ways that these dangers can be mitigated.	Village of Quitman	Thunderstorm (High Winds) & Tornadoes	Completed
Q2: Persons of Risk	Encourage churches and community groups to assist persons of risk during power loss and to develop emergency plans to provide shelter when power fails from winter storms.	Village of Quitman	Thunderstorm; Tornado	Completed
Q3: Drainage Deficiency Correction	Identify and correct the deficiencies in the drainage system that makes it vulnerable to flash flooding. Possibly dredging Cypress Creek and/or Dugdemona Bayou.	Village of Quitman	Thunderstorm; Tornado	Completed
Q4: Town Hall Roof Retrofitting	Retrofit / harden roof of Quitman Town Hall.	Village of Quitman	Thunderstorm; Tornado	Completed
Q5: Town Hall Emergency Power Generator	Install emergency power generator at Quitman Town Hall.	Village of Quitman	Thunderstorm; Tornado	Carried Over
Q6: Fire Station Bay Doors	Harden bay doors of Quitman Fire Station.	Village of Quitman	Thunderstorm; Tornado; Tropical System	Carried Over

Unincorporated Jackson New Mitigation Actions

Jackson Unincorporated - New Mitigation Actions						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
J1: 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	Jackson Parish Police Jury/Jackson Parish OHSEP	High Wind, Tropical Cyclones, Tornadoes	New
J2: 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	Jackson Parish Police Jury/Jackson Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
J3: 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	Jackson Parish Police Jury/Jackson Parish OHSEP	Flooding, Tropical Cyclones	New
J4: Safe Room Projects	Construction of a safe room for first responders located in Jackson Parish. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Jackson Parish Police Jury/Jackson Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
J5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, and Levee Failure hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Jackson Parish Police Jury/Jackson Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, Levee Failure	New

J6: 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	Jackson Parish Police Jury/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
J7: 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	Jackson Parish Police Jury/Jackson Parish OHSEP	Lightning	New
J8: Warning Systems	Update/upgrade public warning system components throughout Jackson Parish as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Jackson Parish Police Jury/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
J9: 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	Jackson Parish Police Jury/Jackson Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes	New
J10: 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	Jackson Parish Police Jury/Jackson Parish OHSEP	Tropical Cyclones, Flooding	New
J11: 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	Jackson Parish Police Jury/Jackson Parish OHSEP	Dam Failure, Levee Failure	New

Town of Chatham - New Mitigation Actions

Town of Chatham						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
C1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	High Wind, Tropical Cyclones, Tornadoes	New
C2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
C3: 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 Chatham Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones	New
C4: Safe Room Projects	Construction of a safe room for first responders located in Chatham. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
C5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, and Levee Failure hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, Levee Failure	New

C6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
C7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	Lightning	New
C8: Warning Systems	Update/upgrade public warning system components throughout Chatham as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
C9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes	New
C10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Chatham Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Flooding	New
C11: 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 Chatham Mayor's Office/Jackson Parish OHSEP	Dam Failure, Levee Failure	New

Village of East Hodge - New Mitigation Actions

Village of East Hodge						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
EH1: 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 East Hodge Mayor's Office/Jackson Parish OHSEP	High Wind, Tropical Cyclones, Tornadoes	New
EH2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Village of East Hodge Mayor's Office/Jackson Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
EH3: 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 East Hodge Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones	New
EH4: Safe Room Projects	Construction of a safe room for first responders located in East Hodge. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of East Hodge Mayor's Office /Jackson Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
EH5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, and Levee Failure hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of East Hodge Mayor's Office /Jackson Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, Levee Failure	New

EH6: 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 East Hodge Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
EH7: 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 East Hodge Mayor's Office/Jackson Parish OHSEP	Lightning	New
EH8: Warning Systems	Update/upgrade public warning system components throughout East Hodge as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of East Hodge Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
EH9: 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 East Hodge Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes	New
EH10: 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 East Hodge Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Flooding	New
EH11: 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 East Hodge Mayor's Office/Jackson Parish OHSEP	Dam Failure, Levee Failure	New

Town of Eros - New Mitigation Actions

Town of Eros						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
E1: Building Retrofits	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage from high winds, and helps assure that the public buildings can be used, occupied and operable during or after storms.	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	High Wind, Tropical Cyclones, Tornadoes	New
E2: Drainage Improvement	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
E3: 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 Eros Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones	New
E4: Safe Room Projects	Construction of a safe room for first responders located in Eros. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
E5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, and Levee Failure hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, Levee Failure	New

E6: Generators for Continuity of Operations and Government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
E7: Lightning Mitigation	Procurement and Installation of Lightning rods and surge protectors for public buildings to preserve life and property	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	Lightning	New
E8: Warning Systems	Update/upgrade public warning system components throughout Eros as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
E9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes	New
E10: Promote Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	FEMA HMGP, Local	1-5 years	Town of Eros Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Flooding	New
E11: 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 Eros Mayor's Office/Jackson Parish OHSEP	Dam Failure, Levee Failure	New

Village of Hodge - New Mitigation Actions

Village of Hodge						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	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	Village of Hodge Mayor's Office/Jackson Parish OHSEP	High Wind, Tropical Cyclones, Tornadoes	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	Village of Hodge Mayor's Office/Jackson Parish OHSEP	Flooding, High Wind, Tropical Cyclones	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	Village of Hodge Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones	New
H4: Safe Room Projects	Construction of a safe room for first responders located in Hodge. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Hodge Mayor's Office/Jackson Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
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 Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, and Levee Failure hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Hodge Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, Levee Failure	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	Village of Hodge Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	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	Village of Hodge Mayor's Office/Jackson Parish OHSEP	Lightning	New
H8: Warning Systems	Update/upgrade public warning system components throughout Hornbeck as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Hodge Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
H9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Hodge, 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 Hodge Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes	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	Village of Hodge Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Flooding	New
H11: 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 Hodge Mayor's Office/Jackson Parish OHSEP	Dam Failure, Levee Failure	New

Town of Jonesboro - New Mitigation Actions

Town of Jonesboro						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
J1: 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 Jonesboro Public Works/Jackson Parish OHSEP	High Wind, Tropical Cyclones, Tornadoes	New
J2: 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 Jonesboro Public Works/Jackson Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
J3: 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 Jonesboro Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones	New
J4: Safe Room Projects	Construction of a safe room for first responders located in Jonesboro. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Town of Jonesboro Public Works/Jackson Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
J5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, and Levee Failure hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Town of Jonesboro Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, Levee Failure	New

J6: 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 Jonesboro Public Works/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
J7: 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 Jonesboro Public Works/Jackson Parish OHSEP	Lightning	New
J8: Warning Systems	Update/upgrade public warning system components throughout Jonesboro as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Town of Jonesboro Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
J9: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Hodge, 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 Jonesboro Public Works/Jackson Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes	New
J10: 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 Jonesboro Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Flooding	New
J11: 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 Jonesboro Mayor's Office/Jackson Parish OHSEP	Dam Failure, Levee Failure	New

Village of North Hodge - New Mitigation Actions

Village of North Hodge						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
NH1: 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 North Hodge Mayor's Office/Jackson Parish OHSEP	High Wind, Tropical Cyclones, Tornadoes	New
NH2: 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 North Hodge Mayor's Office/Jackson Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
NH3: 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 North Hodge Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones	New
NH4: Safe Room Projects	Construction of a safe room for first responders located in North Hodge. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of North Hodge Mayor's Office/Jackson Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
NH5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, and Levee Failure hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of North Hodge Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, Levee Failure	New

NH6: 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 North Hodge Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
NH7: 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 North Hodge Mayor's Office/Jackson Parish OHSEP	Lightning	New
NH8: Warning Systems	Update/upgrade public warning system components throughout North Hodge as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of North Hodge Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
NH9: 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 North Hodge Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes	New
NH10: 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 North Hodge Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Flooding	New
NH11: 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 North Hodge Mayor's Office/Jackson Parish OHSEP	Dam Failure, Levee Failure	New

Village of Quitman - New Mitigation Actions

Town of Quitman						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
Q1: 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 Quitman Mayor's Office/Jackson Parish OHSEP	High Wind, Tropical Cyclones, Tornadoes	New
Q2: 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 Quitman Mayor's Office/Jackson Parish OHSEP	Flooding, High Wind, Tropical Cyclones	New
Q3: 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 Quitman Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones	New
Q4: Safe Room Projects	Construction of a safe room for first responders located in Quitman. Other locations will be identified based on funding availability.	FEMA HMGP, Local	1-5 years	Village of Quitman Mayor's Office/Jackson Parish OHSEP	Tornadoes, High Wind, Tropical Cyclones	New
Q5: Education and Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety for Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, and Levee Failure hazards as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	FEMA HMGP, Local	1-5 years	Village of Quitman Mayor's Office/Jackson Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Thunderstorms (lightning, high wind, hail), Dam Failure, Levee Failure	New

Q6: 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 Quitman Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Thunderstorms (lightning, high wind, hail)	New
Q7: 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 Quitman Mayor's Office/Jackson Parish OHSEP	Lightning	New
Q8: Warning Systems	Update/upgrade public warning system components throughout Quitman as necessary. Install audible and/or reverse 911 warning system(s)	FEMA HMGP, Local	1-5 years	Village of Quitman Mayor's Office/Jackson Parish OHSEP	Tornadoes, Tropical Cyclones, Dam Failure, Levee Failure	New
Q9: 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 Quitman Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Thunderstorms (lightning, high wind, hail), Tornadoes	New
Q10: 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 Quitman Mayor's Office/Jackson Parish OHSEP	Tropical Cyclones, Flooding	New
Q11: 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 Quitman Mayor's Office/Jackson Parish OHSEP	Dam Failure, Levee Failure	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 Jackson 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.

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

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 Jackson Parish Hazard Mitigation Plan Update

The Jackson Parish Hazard Mitigation Plan Update process began in January 2016 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.

Jackson Parish includes the unincorporated areas of the parish, as well as seven incorporated municipalities that participated in the plan update process – the Town of Chatham, Village of East Hodge, Town of Eros, Village of Hodge, Town of Jonesboro, Village of North Hodge, and Village of Quitman. Jackson Parish Office of Homeland Security and Emergency Preparedness (OHSEP) invited communities' representatives to meetings, where they supplied critical infrastructure data and reviewed work-in-progress for the plan update.

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

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

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

Date	Meeting or Outreach	Location	Public Invited	Purpose
1/22/2016	Initial Coordination	Telephone/ Email	No	Discuss with Parish HM coordinator and any Steering Committee members' expectations and requirements of the project.
2/4/2016	Kick-Off Meeting	Jonesboro, LA	No	Discuss with the plan steering committee expectations and requirements of the project. Assign plan worksheets to jurisdictions.
10/6/2016	Risk Assessment Overview	Jonesboro, LA	No	Discuss and review the risk assessment with the steering committee discuss and review expectations for public meeting.
10/6/2016	Public Meeting	Jonesboro, 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 Jackson 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 Jackson Parish. In addition, we asked about the methods and techniques preferred for reducing the risks and losses associated with these hazards. Survey Results: https://www.surveymonkey.com/r/JacksonParish
2 Week Period	Public Plan Review (Digital)		Yes	Parish Website and Jackson 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	Month 9
Plan Revision								
Data Collection								
Risk Assessment								
Public Input								
Mitigation Strategy and Actions								
Plan Review by GOHSEP and FEMA								
Plan Adoption								
Plan Approval								

Coordination

The Jackson Parish OHSEP oversaw the coordination of the 2017 Hazard Mitigation Plan Update Steering Committee during the update process. The Jackson 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 Committee and key stakeholders to all 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 2017 Hazard Mitigation Plan Update Steering Committee consisted of representatives from the following parish, municipal, or community stakeholders:

- Jackson Parish Police Jury
- Jackson Office of Homeland Security and Emergency Preparedness
- Town of Chatham
- Village of East Hodge
- Town of Eros
- Village of Hodge
- Town of Jonesboro
- Village of North Hodge
- Village of Quitman

The Lincoln Parish OHSEP Director was invited by the Jackson Parish OHSEP via email invitation to participate in all meetings and activities as well in an effort to collaborate with neighboring communities. In addition, the participation of the GOHSEP Region 8 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 2017 update. The completed worksheets can be found in Appendix E – State Required Plan Update Worksheets.

Below is a detailed list of the 2017 Hazard Mitigation Plan Update Steering Committee:

Name	Title	Agency	Address	Phone
Mark Treadway	Director	Jackson Parish OEP	104 Fourth St. Jonesboro, LA 71251	318-259-5010
Tammy Collinsworth	Clerk	Jackson Parish OEP	500 E. Court St. Jonesboro, LA 71251	318-259-2361
Eddie Langston	President	Jackson Parish Police Jury	500 E. Court St. Jonesboro, LA 71251	318-259-2361
Dwight Cooper	Mayor	Town of Chatham	P.O. Box 422 Chatham, LA 71226	318-249-2050
Hal M. Mims	Mayor	Village of East Hodge	P.O. Box 306 Hodge, LA 71247	318-259-1051
Vicky Knox	Mayor	Town of Eros	10017 Hwy. 34 Eros, LA 71238	318-381-9125
Gerald Palmer	Mayor	Village of Hodge	P. O. Drawer 280 Hodge, LA 71247	318-259-4704
James Bradford	Mayor	Town of Jonesboro	128 Allen Ave. Jonesboro, LA 71251	318-259-2385
Kathy Robertson	Mayor	Village of North Hodge	5204 Quitman Hwy. North Hodge, LA 71247	318-259-4272
Joe Vail	Mayor	Village of Quitman	8255 Quitman Hwy. Quitman, LA 71268	318-259-8014

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 Jackson 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 Jackson Parish Hazard Mitigation Steering Committee will remain charged with ensuring that the goals and strategies of new and updated local planning documents for their jurisdictions or agencies are consistent with the goals and actions of the Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability in the parish. Existing plans, studies, and technical information were incorporated in the planning process. Examples include flood data from FEMA, the U.S. Army Corps of Engineers (USACE or Corps), and the U.S. Geological Survey. Much of this data was incorporated into the risk assessment component of the plan relative to plotting historical events and the magnitude of damages that occurred. The parish's 2005 Hazard Mitigation Plan was also used in the planning process. Other existing parish and jurisdiction data and plans reviewed and/or incorporated into the planning process include those listed below:

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

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

Meeting Documentation and Public Outreach Activities

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

Meeting #1: Coordination Discussion

Date: January 22, 2016

Location: Email

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

Public Initiation: No

Invitees Included: Jackson Parish OHSEP, SDMI Staff

Meeting #2: Hazard Mitigation Plan Update Kick-Off

Date: February 4, 2016**Location:** Jonesboro, Louisiana

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

Public Initiation: No**Invitees Included:**

Name	Title	Agency
Mark Treadway	Director	Jackson Parish OEP
Tammy Collinsworth	Clerk	Jackson Parish OEP
Eddie Langston	President	Jackson Parish Police Jury
Dwight Cooper	Mayor	Town of Chatham
Hal M. Mims	Mayor	Village of East Hodge
Vicky Knox	Mayor	Town of Eros
Gerald Palmer	Mayor	Village of Hodge
James Bradford	Mayor	Town of Jonesboro
Kathy Robertson	Mayor	Village of North Hodge
Joe Vail	Mayor	Village of Quitman

Meeting #3: Risk Assessment Overview

Date: October 6, 2016**Location:** Jonesboro, Louisiana

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

Public Initiation: No**Invitees Included:**

Name	Title	Agency
Mark Treadway	Director	Jackson Parish OEP
Tammy Collinsworth	Clerk	Jackson Parish OEP
Eddie Langston	President	Jackson Parish Police Jury
Dwight Cooper	Mayor	Town of Chatham
Hal M. Mims	Mayor	Village of East Hodge
Vicky Knox	Mayor	Town of Eros
Gerald Palmer	Mayor	Village of Hodge
James Bradford	Mayor	Town of Jonesboro
Kathy Robertson	Mayor	Village of North Hodge
Joe Vail	Mayor	Village of Quitman

Meeting #4: Public Meeting**Date:** October 6, 2016**Location:** Jonesboro, Louisiana

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

Public Initiation: Yes**Invitees Included:**

Name	Title	Agency
Mark Treadway	Director	Jackson Parish OEP
Tammy Collinsworth	Clerk	Jackson Parish OEP
Eddie Langston	President	Jackson Parish Police Jury
Dwight Cooper	Mayor	Town of Chatham
Hal M. Mims	Mayor	Village of East Hodge
Vicky Knox	Mayor	Town of Eros
Gerald Palmer	Mayor	Village of Hodge
James Bradford	Mayor	Town of Jonesboro
Kathy Robertson	Mayor	Village of North Hodge
Joe Vail	Mayor	Village of Quitman

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

Meeting Public Notice

JACKSON PARISH OFFICE OF HOMELAND SECURITY & EMERGENCY PREPAREDNESS

MEETING NOTICE – October 4, 2016

Jackson Parish to hold Public Meetings for Hazard Mitigation Plan Update

Jonesboro, LA – Jackson Parish Office of Homeland Security & Emergency Preparedness is in the process of updating the Jackson Parish Hazard Mitigation Plan and are required to hold public meetings on the plan update. The Public meeting will be held on October 6th, in the Jackson Parish Public Library, Jonesboro, LA - McBride Room, from 10:30am to 11:30am.

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

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

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

Jackson Parish is in the stages of updating its hazard mitigation plan. Public meeting will be held on October 6th for all citizens interested in learning about and participating in discussions concerning the Jackson Parish Hazard Mitigation Plan.

Residents of Jackson 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/JacksonParish>

For more information, please contact: Jackson OHSEP Office

Outreach Activity #1: Public Opinion Survey

Date: Ongoing throughout planning process

Location: Web Survey

Public Initiation: Yes

No comments were collected through this activity.

Outreach Activity #2: Incident Questionnaire

Date: Public Meeting Activity

Location: Public Meeting

Public Initiation: Yes

The public was asked to provide information regarding which types of hazards concerned them the most. No public elected to participate in this activity, therefore no feedback was collected at this time.

Outreach Activity #3: Mapping Activities

Public meeting attendees were asked to identify areas on jurisdictional maps provided that were “problem areas”. They were also asked to indicate any areas of new development. This activity gave the public an opportunity to interact with SDMI’s GIS Mapping section, as well as provide valuable input on areas that may flood repeatedly during rain events that may not get reported to local emergency managers as significant events. However, because no members of the public attended, no comments were collected.

Public Plan Review Documentation

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

This Page Left Intentionally Blank

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 Jackson 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

Jackson 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

Jackson 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 Jackson 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 Jackson 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.

2017 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 2017 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 Jackson Parish Hazard Mitigation Plan Steering Committee and participating jurisdictions to determine additional implementation procedures when appropriate. This may include integrating the requirements of the Jackson Parish Hazard Mitigation Plan into each jurisdiction's planning documents, processes, or mechanisms as follows:

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

Opportunities to integrate the requirements of this plan into other local planning mechanisms will continue to be identified through future meetings of the Jackson 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.). However, several of the jurisdictions represented do not have additional plans in place due to the lack of funding and administrative personnel. These jurisdictions will look for other opportunities through which they can

incorporate this mitigation plans into their communities and any future planning efforts. 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 Jackson Parish Hazard Mitigation Plan, and will not contribute to increased hazard vulnerability within the parish.

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

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

On behalf of the jurisdictions of Chatham, East Hodge, Eros, Hodge, Jonesboro, North Hodge, and Quitman, Jackson 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:

Jackson Unincorporated

Local Emergency Operations Plan/Updated as needed/Jackson Parish OHSEP

Continuity of Operations Plan/Updated as needed/Jackson Parish OHSEP and Jackson Parish Police Jury

Transportation Plan/Updated as needed/ Jackson Parish OHSEP and Jackson Parish Police Jury

Community Wildfire Protection Plan Plan/Updated as needed/ Jackson Parish OHSEP

Town of Chatham

Local Emergency Operations Plan/Updated as needed/Jackson Parish OHSEP and Mayor of Chatham

Village of East Hodge

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

Town of Eros

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

Village of Hodge

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

Town of Jonesboro

Local Emergency Operations Plan/Updated as needed/Jackson Parish OHSEP and Mayor of Jonesboro

Village of North Hodge

Comprehensive Master Plan/Updated as needed/ Jackson Parish Police Jury and Mayor of North Hodge
Capital Improvements Plan/Updated as needed/ Jackson Parish Police Jury and Mayor of North Hodge
Economic Development Plan/Updated as needed/ Jackson Parish Police Jury and Mayor of North Hodge
Local Emergency Operations Plan/Updated as needed/ Jackson Parish OHSEP and Mayor of North Hodge
Continuity of Operations Plan/Updated as needed/Jackson Parish OHSEP and Mayor of North Hodge

Village of Quitman

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

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

This Page Left Intentionally Blank

Appendix C: Essential Facilities

Jackson Parish Essential Facilities – All Jurisdictions

Jackson Unincorporated Essential Facilities							
Type	Name	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Hog Hair Volunteer Fire Department Ward 3		X	X	X	X	X
	Quitman FPD		X	X	X	X	X
	Ward 2 Station 3		X	X	X	X	X
	Ward 2 Station 4		X	X	X	X	X
	Ward 2 Station 5		X	X	X	X	X
	Ward 4 505 Station		X	X	X	X	X
	Ward 4 Boatner Station		X	X	X	X	X
	Ward 4 Central Station		X	X	X	X	X
	Ward 4 Fire Department		X	X	X	X	X
Government	Jackson Parish Solid Waste Department	X	X	X	X	X	X
Law Enforcement	Jackson Parish Sheriff's Office Training Complex		X	X	X	X	X
Schools	Westin High School	X	X	X	X	X	X

Chatham Essential Facilities							
Type	Name	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Chatham Volunteer Fire Department		X	X	X	X	X
Government	Chatham Town Hall		X	X	X	X	X
Schools	Chatham High School		X	X	X	X	X
	Chatham Jasper Henderson High School	X	X	X	X	X	X

East Hodge Essential Facilities							
Type	Name	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	East Hodge Fire Station		X	X	X	X	X
Government	Village of East Hodge Town Hall		X	X	X	X	X

Eros Essential Facilities							
Type	Name	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Government	Eros Town Hall		X	X	X	X	X

Hodge Essential Facilities							
Type	Name	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Hodge Volunteer Fire Department		X	X	X	X	X
Government	Jackson Parish School Board		X	X	X	X	X
	Village of Hodge Annex Building		X	X	X	X	X
Law Enforcement	Hodge Police Department		X	X	X	X	X
Public Health	Jonesboro Hodge Internal Medicine		X	X	X	X	X
Schools	Hodge Elementary		X	X	X	X	X
	Union Elementary		X	X	X	X	X

Jonesboro Essential Facilities							
Type	Name	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Fire Station		X	X	X	X	X
	Jonesboro Fire Department - A. Maurice Newton Station		X	X	X	X	X
Government	District Attorney and Child Support Office		X	X	X	X	X
	Jackson Parish Chamber of Commerce		X	X	X	X	X
	Jackson Parish Council on Aging		X	X	X	X	X
	Jack Parish Courthouse		X	X	X	X	X
	Jackson Parish School Board Office		X	X	X	X	X
	Jonesboro City Hall		X	X	X	X	X
	Jonesboro Department of Public Works		X	X	X	X	X
	Office of Motor Vehicles		X	X	X	X	X
	Small Claims Court		X	X	X	X	X
Law Enforcement	Jonesboro Police Department		X	X	X	X	X
Corrections	Jackson Parish Correctional Center		X	X	X	X	X
Public Health	Jackson Parish Hospital		X	X	X	X	X
Schools	Jackson Parish Student Center		X	X	X	X	X
	Jonesboro-Hodge High School		X	X	X	X	X
	Jonesboro-Hodge Middle School		X	X	X	X	X
	Jonesboro-Hodge Junior High School		X	X	X	X	X
	Southside Elementary School		X	X	X	X	X

North Hodge Essential Facilities							
Type	Name	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Hodge Station 1		X	X	X	X	X
Government	North Hodge Town Hall		X	X	X	X	X

Quitman Essential Facilities							
Type	Name	Flooding	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Quitman Station 1 - Fire Protection District 1		X	X	X	X	X
Government	Quitman Village Hall		X	X	X	X	X
Schools	Quitman High School		X	X	X	X	X

* There are no critical facilities vulnerable to the hazard.

Appendix D: Plan Adoption

**JACKSON PARISH POLICE JURY**

Courtthouse

500 East Court Street, Room 301
Jonesboro, Louisiana 71251-3446

Phone: (318) 259-2361

Fax: (318) 259-5660

www.jacksonparishpolicejury.org**MEMBERS**

District 1
TODD CULPEPPER
P. O. Box 323
Quitman, LA. 71268
(318) 259-4184 (Work)
(318) 243-1084

District 2
LEWIS CHATHAM
1575 Mariah Road
Chatham, LA. 71226
(318) 235-0254

District 3
AMY C. MAGEE
2332 Walker Road
Jonesboro, LA. 71251
(318) 235-0002

District 4
JOHN W MCCARTY
2766 Hwy 155
Quitman, LA. 71268
(318) 259-9694

District 5
TARNESHALA COWANS
598 Beech Springs Road
Jonesboro, LA. 71251
(318) 480-9095

District 6
REGINA H. ROWE
159 Hughes Rd.
Jonesboro, LA. 71251
(318) 259-7923

District 7
LYNN TREADWAY
505 Fifth Street
Jonesboro, LA. 71251
(318) 259-7673
(318) 680-8510

Certified Meeting Minutes

July 13, 2020

Jonesboro, Louisiana

www.jacksonparishpolicejury.org

The Jackson Parish Police Jury met in regular session on Monday, July 13, 2020 at 5:30 PM in the Dr. Charles H. Garrett Community Center, 182 Industrial Drive, Jonesboro, Louisiana. Members Present: Mr. Todd Culpepper, Ms. Amy Magee, Mr. John McCarty, Ms. Regina Rowe, and Mr. Lynn Treadway. Absent: Mr. Lewis Chatham and Ms. Tarneshala Cowans.

Motion Ms. Rowe, seconded Mr. Treadway to adopt the Jackson Parish Hazard Mitigation Plan. Motion carried.

I, Gina M. Thomas, Secretary-Treasurer of the Jackson Parish Police Jury do hereby swear that the above is a true and correct excerpt of the official minutes of the Regular Meeting of the Jackson Parish Police Jury, conducted in open session at which a quorum was present July 13, 2020.

Gina M. Thomas
Secretary-Treasurer

Parish Seal:

RESOLUTION 2020-10

BE IT RESOLVED by the MAYOR AND Board of Aldermen of the Town of Chatham Louisiana in legal session concerned that WHEREAS, the Town of Chatham adopting the Jackson Parish multi-jurisdictional Hazard Mitigation Plan Update.

WHEREAS, the people and leaders residing within Jackson Parish recognize the threat that natural and man-made hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, the Town of Chatham participated jointly in the planning process with the other units of local government within Jackson Parish to prepare a multi-jurisdictional Hazard Mitigation Plan; and

NOW, THEREFORE, BE IT RESOLVED, that the Town of Chatham hereby adopts the Jackson Parish Multi-Jurisdiction Hazard Mitigation Plan Update as an official plan.

A MOTION TO ADOPT the above resolution was offered by Marvin Davis, seconded by Toni Malone


THIS RESOLUTION was adopted on this the 8th day of September 2020 with the vote recorded as follows:

YEAS: 3 NAYS: 0 ABSENT: 2 ABSTAIN: 0

CERTIFICATE

We the undersigned do certify that the foregoing resolution is a true and correct copy of a resolution adopted at a meeting held on the 8th day of September 2020 at which a quorum was present and voting.


Dwight Cooper, Mayor


Lynette Roberts, Clerk

*Village of East Hodge
P.O. Drawer 10
East Hodge, LA 71247
Phone No: (318) 259-9127 Fax No: (318) 395-8813*

*Hal Mims, Mayor
Gloria Moore, Alderwoman
Preston Traxler, Alderman*

Robert Bradley, Alderman

RESOLUTION

Motion by: Gloria Moore

Seconded by: Robert Bradley

BE IT RESOLVED by the Mayor and Board of Aldermen of the Village of East Hodge, Louisiana in legal session convened that WHEREAS, the Village of East Hodge adopting the Jackson Parish multi-jurisdictional Hazard Mitigation Plan Update.

WHEREAS, the people and leaders residing within Jackson Parish recognize the threat that natural and man-made hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, and adopted all hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, the Village of East Hodge participated jointly in the planning process with the other units of local government within Jackson Parish to prepare a multi-jurisdictional Hazard Mitigation Plan and

NOW, THEREFORE BE IT RESOLVED, that the Village of East Hodge hereby adopts the Jackson Parish Multi-Jurisdictional Hazard Plan Update as an official plan.

The recorded vote thereon being as follows:

YEAS: Gloria Moore, Preston Traxler, Robert Bradley

ABSENT: NONE

ABSTAIN: NONE

The resolution was declared adopted September 8, 2020.

ATTEST:

Dimietrich S. Mason
Dimietrich Mason
Clerk

TOWN OF EROS

KELLY GRYDER, MAYOR

JOHN DAVID HOWARD, Alderman

JOSEPH SPILLERS, ALDERMAN

APRIL HAMMETT, ALDERWOMAN

RESOLUTION

BE IT RESOLVED by the Mayor and Board of Aldermen of the Town of Eros, Louisiana in legal session convened that WHEREAS, the Town of Eros adopting the Eros multi-jurisdictional Hazard Mitigation Plan Update.

WHEREAS, the people and leaders residing within Eros recognize the threat that natural and man-made hazards pose to people and property.

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, the Town of Eros participated jointly in the planning process with the other units of local government within Eros to prepare a multi-jurisdictional Hazard Mitigation Plan; and

NOW, THEREFORE, BE IT RESOLVED, that the Town of Eros hereby adopts the Eros Multi-Jurisdictional Hazard Mitigation Plan Update as an official plan.

The recorded vote thereon being as follows:

YEAS: April Hammett, Joe Spillers, David Howard

NAYS: none

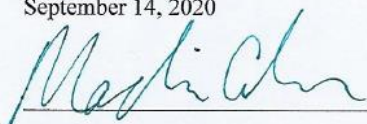
ABSENT: none

ABSTAIN: none

The resolution was declared adopted September 14, 2020.

ATTEST:

September 14, 2020



Madison Coleman,

Clerk

(318) 259-4704 - PH
(318) 259-6670 - FAX



406 W. CENTRAL ST.
P.O. BOX 280
HODGE, LA 71247

RESOLUTION

Motion by: Wayne Buchan

Seconded by: Steve Fox

BE IT RESOLVED by the Mayor and Board of Aldermen of the Village of Hodge, Louisiana in legal session convened that WHEREAS, the Village of Hodge adopting the Jackson Parish multi-jurisdictional Hazard Mitigation Plan Update.

WHEREAS, the people and leaders residing within Jackson Parish recognize the threat that natural and man-made hazards pose to people and property; and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and

WHEREAS, and adopted all hazard mitigation plan is required as a condition of future grant funding for mitigation projects; and

WHEREAS, the Village of Hodge participated jointly in the planning process with the other units of local government within Jackson Parish to prepare a multi-jurisdictional Hazard Mitigation Plan and

NOW, THEREFORE BE IT RESOLVED, that the Village of Hodge hereby adopts the Jackson Parish Multi-Jurisdictional Hazard Plan Update as an official plan.

The recorded vote thereon being as follows:

YEAS: Wayne Buchan, Steve Fox, Willard Willis

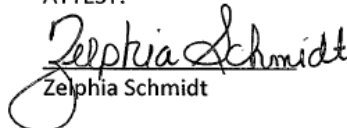
NAYS: NONE

ABSENT: NONE

ABSTAIN: NONE

The resolution was declared adopted September 8, 2020.

ATTEST:


Zephia Schmidt

GERALD T. PALMER
MAYOR

The regular of the Board of Alderman of the Village of Hodge was held at Hodge Town Hall on September 8, 2020 at 5:00pm

Present:	Gerald Palmer	Mayor
	Wayne Buchan	Alderman
	Steve Fox	Alderman
	Willard Willis	Mayor Pro-Tem
Absent:	Michael Heard	Fire Chief

Visitors: Carey Bryan, Glenn Turner MML&H

The meeting was called to order by Mayor Gerald Palmer and Mayor Pro Tem Willard Willis gave the invocation.

The Pledge of Allegiance was led by Denise Johnson.

Motion was made by Steve Fox seconded by Willard Willis to add item 8A to the agenda.

Motion was made by Steve Fox seconded by Wayne Buchan to approve the agenda.

Motion carried. All in favor.

Motion was made by Steve Fox seconded by Wayne Buchan to approve the monthly minutes for August 2020. Motion carried. All in favor.

Motion was made by Steve Fox seconded by Wayne Buchan to approve the public hearing minutes for August 2020. Motion carried. All in favor.

Motion was made by Wayne Buchan seconded by Willard Willis to approve the monthly bills for August 2020. Motion carried. All in favor.

The Board of Alderman was given a copy of the Budget vs Actual Report the month of August 2020.

Motion was made by Steve Fox seconded by Willard Willis to adopt the Covid 19 (Coronavirus) Policy. Motion carried. All in favor.

Motion was made by Wayne Buchan seconded by Steve Fox to adopt the Resolution for Jackson Parish Hazardous Mitigation Plan. Motion carried. All in favor.

Motion was made by Steve Fox seconded by Willard Willis for the authorizing advertisement for bids to improve the Sanitary Sewer System. Motion carried. All in favor.

Mayor Palmer talked about the upcoming water rates when the new water meters are put online.

Police Chief Travis Reed gave the monthly report for the August 2020.

Mayor Gerald Palmer gave update on the cleanup from the hurricane damages in the town.

Motion was made by Steve Fox seconded by Wayne Buchan to go into executive session.

Motion was made by Steve Fox seconded by Willard Willis to go back into regular session.

Motion was made by Wayne Buchan seconded by Willard Willis to adjourn. Motion carried, All in favor.

ATTEST:

Zelphia Schmidt
Clerk

Gerald T. Palmer
Mayor

TOWN OF JONESBORO

RESOLUTION NUMBER: 2020-032

Date: September 8, 2020

RESOLUTION

WHEREAS, the people and leaders residing within Jonesboro, (Jackson Parish) Louisiana recognize the threat that natural and man-made hazards pose to people and property; and,

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars; and,

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects; and,

WHEREAS, the Town of Jonesboro participated jointly in the planning process with the other units of local government within Jackson Parish to prepare a multi-jurisdictional Hazard Mitigation Plan; and,

BE IT RESOLVED by the Mayor and Board of Aldermen of the Town of Jonesboro, Louisiana in legal session convened that whereas, the Town of Jonesboro adopting the Jackson Parish multijurisdictional Hazard Mitigation Plan Update; and,

NOW, THEREFORE BE IT FURTHER RESOLVED that the Town of Jonesboro hereby adopts the Jackson Parish Multi-Jurisdictional Hazard Mitigation Plan Update as an official plan.

.....
The foregoing resolution having been submitted to a vote, the vote thereon was as follows:


YEAS: 3ABSENT: 2NAYS: 0ABSTAIN: 0

I, Clerk of the Town of Jonesboro, do hereby certify that the above and foregoing is a true and correct copy of a resolution adopted by the Town of Jonesboro in a teleconference session convened on the 17th day of September, 2020.

Given under my official signature and seal of office on this the 17th day of September, 2020.

(SEAL)


Clerk, Town of Jonesboro


Mayor, Town of Jonesboro



Phone: 318-259-4272

VILLAGE OF NORTH HODGE

P.O. Box 520 | Hodge, Louisiana 71247

Mayor Kathy Robertson



Fax: 318-259-1055

RESOLUTION #179

BE IT RESOLVED by the Mayor and Board of Aldermen of the Village of North Hodge, Louisiana in legal session convened that WHEREAS, the Village of North Hodge adopting the Jackson Parish multi-jurisdictional Hazard Mitigation Plan Update.

WHEREAS, the people and leaders residing within Jackson Parish recognize the threat that natural and man-made hazards pose to people and property: and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars: and

WHEREAS, an adopted all hazards mitigation plan is required as a condition of future grant funding for mitigation projects: and

WHEREAS, the Village of North Hodge participated jointly in the planning process with the other units of local government within Jackson Parish to prepare a multi-jurisdictional Hazard Mitigation Plan: and

NOW, THEREFORE, BE IT RESOLVED, that the Village of North Hodge hereby adopts the Jackson Parish Multi-Jurisdictional Hazard Mitigation Plan Update as an official plan.

This resolution was motioned by Charity Womack and Seconded by Ernie Boden.

The record vote thereon being as follows:

YEAS: 3
Charity Davis Womack
Ernie Boden
Ernest A. Boden

NAYS: 0

ABSENT: 0

ABSTAIN: 0

The resolution was declared adopted on October 13, 2020.

Kathy Robertson
KATHY ROBERTSON, MAYOR

ATTEST:

Deanna M. Carter
DEANNA M. CARTER, CLERK



Village of Quitman

RESOLUTION

Motion by Mr. Trull.

BE IT RESOLVED by the Mayor and Board of Aldermen of the Village of Quitman, Louisiana in legal session convened that WHEREAS, the Village of Quitman adopting the JACKSON Parish Multi-jurisdictional Hazard Mitigation Plan Update.

WHEREAS, the people and leaders residing within Jackson Parish recognize the threat that natural and man-made hazards pose to people and property and

WHEREAS, undertaking hazard mitigation actions before disasters occur will reduce the potential for harm to people and property and save taxpayer dollars and

WHEREAS, an adopted all hazards mitigation plan is requested as a condition of future grant funding for mitigation projects and

WHEREAS, the Village of Quitman participated jointly in the planning process with the other units of local governments within Jackson Parish to prepare a, Multi-jurisdictional Hazard Mitigation Plan; and

NOW, THEREFORE, be it resolved, that the Village of Quitman hereby adopts the Jackson Parish Multi-Jurisdictional Hazard Mitigation Plan Updates as an official plan.

The recorded vote thereon being as follows:

YEAS: Trull, Greer, Burns

NAYS: None


ABSENT: None

ABSTAIN: None

This resolution was declared adopted September 1, 2020.

ATTEST:

September 10, 2020.


Tay Williams

Village Clerk



This Page Left Intentionally Blank

Appendix E: State Required Worksheets

During the planning process (Appendix A) the Hazard Mitigation Plan Update Steering Committee was provided state-required plan update process worksheets to be filled out by each jurisdiction. The worksheets were presented at the Kickoff Meeting by the contractor as tools for assisting in the update of the Hazard Mitigation Plan. The plan update worksheets allowed for collection of information such as planning team members, community capabilities, critical infrastructure and vulnerable populations and NFIP information. The following pages contain documentation of the worksheets.

Mitigation Planning Team

Name	Title	Agency	Address	Phone
Mark Treadway	Director	Jackson Parish OEP	104 Fourth St. Jonesboro, LA 71251	318-259-5010
Tammy Collinsworth	Clerk	Jackson Parish OEP	500 E. Court St. Jonesboro, LA 71251	318-259-2361
Eddie Langston	President	Jackson Parish Police Jury	500 E. Court St. Jonesboro, LA 71251	318-259-2361
Dwight Cooper	Mayor	Town of Chatham	P.O. Box 422 Chatham, LA 71226	318-249-2050
Hal M. Mims	Mayor	Village of East Hodge	P.O. Box 306 Hodge, LA 71247	318-259-1051
Vicky Knox	Mayor	Town of Eros	10017 Hwy. 34 Eros, LA 71238	318-381-9125
Gerald Palmer	Mayor	Village of Hodge	P. O. Drawer 280 Hodge, LA 71247	318-259-4704
James Bradford	Mayor	Town of Jonesboro	128 Allen Ave. Jonesboro, LA 71251	318-259-2385
Kathy Robertson	Mayor	Village of North Hodge	5204 Quitman Hwy. North Hodge, LA 71247	318-259-4272
Joe Vail	Mayor	Village of Quitman	8255 Quitman Hwy. Quitman, LA 71268	318-259-8014

Capability Assessment

See Section 3: Capability Assessment

Building Inventory

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Jackson Uninc.									
	Dr. Charles H. Garrett Community Center	Community meeting/event center	182 Industrial Drive	Jonesboro			\$796,588		
	Jury Office Building	Administrative office space	160 Industrial Drive	Jonesboro			\$472,499	2000	
	Jackson Parish Courthouse	Administrative office space, courtroom	500 E. Court Street	Jonesboro			\$3,665,000	1938	
	OEP/Coroner/911 Director Offices	Administrative office space	319 Jimmie Davis Blvd	Jonesboro			\$241,514		
	Museum	Artifact display/ administrative office space	515 Cooper Street	Jonesboro			\$499,665		
	Road Department Barn	Equipment storage/ administrative office space	230 Fitzpatrick Road	Jonesboro			\$1,959,862		
	Solid Waste Office	Administrative office space	302 Landfill Road	Quitman			\$125,700		
	Health Unit	Health care facility	228 Bond Street	Jonesboro			\$960,651		
	Quitman Fire Protection District	Fire Station	8247 Quitman Hwy	Quitman					
	Ward Four Fire Protection District	Fire Station	261 Hwy 505	Jonesboro					
	Ward Two Fire Protection District	Fire Station	9890 LA-34	Eros					
	Weston High School	School	213 Hwy 505	Jonesboro					
	Jimmie Davis State Park	Lake Park	12109 State Park Road	Chatham					
Chatham									
	Chatham High School	Education	None	Chatham	32.30630036	-92.45481516	73,400		
	Chatham Jasper Henderson High School	Education	Nearby: 170-176 School Drive	Chatham	32.31125998	-92.46390517	438,800		

	Chatham Parish Ambulance Service Vernon Sub Station	Emergency Medical Services	Nearby: 2963- 2999 Vernon Highway	Chatham	32.34332701	-92.54471656	8,200.00		
	Chatham Volunteer Fire Department	Fire	Nearby: 1703 Oakmont Street	Chatham	32.30649407	-92.4522198	47,515.00		
	Chatham Town Hall	Civil Government	Nearby: 1709 Oakmont Street	Chatham	32.30663572	-92.45207477	28,300.00		
East Hodge									
	East Hodge Fire Station	Fire Search and Rescue	4693 Quitman Highway	East Hodge	32.27783962	-92.7149748	15,450		
X	Village of East Hodge Town Hall	Civil Government	Nearby: Main Street	East Hodge	32.27820559	-92.71468094	24,900		
Eros									
	Hog Hair Vol. Fire Dept. Ward 3	Fire Search and Rescue	Nearby: 922 Par Road 345	Eros	32.28535154	-92.33823955	11,850		
Hodge									
	Union Bee Head Start Center	Education	3039 East 6th Street	Hodge	32.27496159	-92.71985903	145,000		Reinforced Masonry
Jonesboro									
	LSU Ag Center	Education	Nearby: 320 West 8th Street	Jonesboro	32.23812125	-92.71755567	189,000		
	Southside Elementary School	Education	2105 South Polk Avenue	Jonesboro	32.22564854	-92.71343632	394,600		
	Jonesboro - Hodge Middle School	Education	440 Old Winnfield Road	Jonesboro	32.23559244	-92.70863887	542,300		
	Jonesboro Hodge Junior High School	Education	440 Old Winnfield Road	Jonesboro	32.24666272	-92.71876429	469,900		
	Jonesboro - Hodge High School	Education	440 Old Winnfield Road	Jonesboro	32.24720322	-92.71876429	469,900		
	Jackson Parish Student Center	Education	Nearby: 415 Northeast Street	Jonesboro	32.24854064	-92.70778789	257,600		
	Jackson Parish Ambulance Service	Emergency Medical Services	Nearby: Alexander Road	Jonesboro	32.25417161	-92.72056196	77,025		

	Jonesboro Fire Department - A. Maurice Newton Station	Fire Search and Rescue	Nearby: 301-399 Polk Avenue	Jonesboro	32.24230863	-92.71450092	39,900		
	Unknown Fire Department	Fire Search and Rescue	Nearby: 139 Southeastern Drive	Jonesboro	32.24234816	-92.69007214	51,525		
	Jonesboro Police Department	Law Enforcement	Nearby: 100-198 4th Street	Jonesboro	32.24218933	-92.71367049	32,000		
	Jackson Parish Sheriff's Office Training Complex	Law Enforcement	Nearby: 1247 - 1615 Pardue Loop	Jonesboro	32.27913265	-92.56704292	19,200		
	Jackson Parish Correctional Center	Prisons and Correctional Facilities	Nearby: 305-371 Industrial Drive	Jonesboro	32.21514214	-92.71715464	1,083,100		
	Jonesboro Department of Public Works	Civil Government	340 Cedar Street	Jonesboro	32.24273533	-92.7092656	37,575		
	Office Of Motor Vehicles	Civil Government	524 Pershing Highway	Jonesboro	32.25106487	-92.71999303	18,800		
	Jackson Parish School Board Office	Civil Government	315 Pershing Highway	Jonesboro	32.24823156	-92.71925016	109,800		
	Jonesboro City Hall	Civil Government	Nearby: 300-314 2nd Street	Jonesboro	32.24449641	-92.71636418	87,800		
	Jackson Parish Courthouse	Civil Government	500 East Court Street #103	Jonesboro	32.24115701	-92.71705518	137,200		
	Jackson Parish Chamber of Commerce	Civil Government	102 4th Street	Jonesboro	32.24216455	-92.7139073	29,200		
	District Attorney & Child Support Office	Civil Government	Nearby: 415 Polk Avenue	Jonesboro	32.24149621	-92.71455527	51,900		
	Jackson Parish School Board	Civil Government	Nearby: Par Road 402	Jonesboro	32.26569592	-92.72627672	22,600		
	Jackson Parish School Board - Adult Education Building	Civil Government	Nearby: 917 South 4th Street	Jonesboro	32.268084	-92.72749978	155,900		
	Jackson Parish Council on Aging	Civil Government	120 Polk Avenue	Jonesboro	32.24482821	-92.71505719	95,800		
	Vacant	Civil Government	Nearby: 302 Polk Avenue	Jonesboro	32.24285934	-92.71495136	62,500		
	Jackson Parish Hospital	Hospital or Medical Center	165 Beech Springs Road	Jonesboro	32.25295661	-92.71984048	388,000		
	Jonesboro Airport	Airports and Airfields	Nearby: Jonesboro Airport	Jonesboro	32.20562795	-92.73256735	70,050		

North Hodge									
	North Hodge Town Hall	Civil Government	8255 Quitman Highway	North Hodge	32.28032167	-92.71889851	14,900		
	Small Claims Court	Civil Government	5139 Quitman Highway	North Hodge	32.24000157	-92.71703249	32,100		
Quitman									
	Quitman High School	Education		Quitman	32.34568465	-92.72062936	848,100	1956	Metal
	Quitman Station 1 - Fire Protection District 1	Fire Search and Rescue	8247 Quitman Highway	Quitman	32.34791045	-92.72097086	36,675	1984	Metal
	Ward 2 Station No. 5	Fire Search and Rescue	Nearby: 101-143 Shenandoah Road	Quitman	32.35334797	-92.6083097	13,950		Metal
	Quitman FPD Fire	Fire Search and Rescue	Nearby: 101-119 Louisiana 148	Quitman	32.43234111	-92.67670353	13,875	1984	Metal
	Quitman Village Hall	Civil Government	8255 Quitman Highway	Quitman	32.3481175	-92.72126899	144,000	1970	Reinforced Masonry

Vulnerable Populations

Vulnerable Populations Worksheet					
Jackson Parish					
Name	Street	City	Zip Code	Latitude	Longitude
All Hospitals (Private or Public)					
Jackson Parish Hospital	165 Beech Springs Rd	Jonesboro	71251	32.25295661	-92.71984048
Nursing Homes (Private or Public)					
Professional Hospice Care	525 Alexander Road	Jonesboro	71251	32.2536726	-92.72228842
Jackson Manor Care and Rehabilitation Center	1691 South Hudson Avenue	Jonesboro	71251	32.22209768	-92.70914385
Wyatt Manor Nursing Home	4659 Hwy 505	Jonesboro	71251		
Mobile Home Parks					
T & D R/V Park					

National Flood Insurance Program (NFIP)

Jackson Parish

National Flood Insurance Program (NFIP)

Jackson Parish

	Jackson Parish	Chatham	East Hodge	Eros	Hodge	Jonesboro	North Hodge	Quitman
Insurance Summary								
How many NFIP policies are in the community? What is the total premium and coverage?	N/A	N/A	N/A	N/A	N/A	5; Unknown; \$481,300	N/A	N/A
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?	N/A	N/A	N/A	N/A	N/A	1; \$13,334	N/A	N/A
How many structures are exposed to flood risk with in the community?	90 per assessment from Tax Assessor's office	N/A	N/A	N/A	N/A		N/A	N/A
Describe any areas of flood risk with limited NFIP policy coverage.	N/A	N/A	N/A	N/A	N/A		N/A	N/A
Staff Resources								
Is the Community FPA or NFIP Coordinator certified?	No	N/A	N/A	N/A	N/A	No	N/A	N/A
Is flood plain management an auxiliary function?	Yes	N/A	N/A	N/A	N/A	Yes	N/A	N/A
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Permit review, map review, general knowledge	N/A	N/A	N/A	N/A		N/A	N/A
What are the barriers to running an effective NFIP program in the community, if any?	Lack of dedicated staff and time	N/A	N/A	N/A	N/A	Staff; Funding	N/A	N/A
Compliance History								
Is the community in good standing with the NFIP?	Yes	N/A	None	Yes	N/A	Yes	N/A	N/A
Are there any outstanding compliance issues(i.e., current violations)?	No	N/A	None	No	N/A	No	N/A	N/A
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact(CAC)?	N/A	N/A		NA	N/A		N/A	N/A
Is a CAV or CAC scheduled or needed? If so when?	N/A	N/A		No	N/A		N/A	N/A

Regulation								
When did the community enter the NFIP?	N/A	N/A	N/A	No	N/A	1975	N/A	N/A
Are the FIRMs digital or paper?	Paper	N/A	N/A	Paper	N/A	Digital	N/A	N/A
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Meets minimum requirements	N/A	N/A	Yes	N/A	Yes	N/A	N/A
Community Rating System (CRS)								
Does the community participate in CRS?	No	No	No	No	No	No	No	No
What is the community's CRS Class Ranking?	N/A	N/A	N/A	No	N/A	N/A	N/A	N/A
Does the plan include CRS planning requirements?	N/A	N/A	N/A	No	N/A	N/A	N/A	N/A