



LAFAYETTE

PARISH HAZARD MITIGATION UPDATE – 2016



This Page Left Intentionally Blank

LAFAYETTE PARISH

HAZARD MITIGATION PLAN UPDATE

Prepared for:

Lafayette Parish



Prepared by:

Stephenson Disaster Management Institute

Ms. Lauren Stevens

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

Mr. Joseph B. Harris

Mr. Brant Mitchell

Mr. Chris Rippetoe

Mr. Stuart Nolan

Louisiana State University - Business Education Complex
Baton Rouge, LA 70803



May 16, 2016

This Page Left Intentionally Blank

ACKNOWLEDGMENTS

This 2016 Lafayette Parish Hazard Mitigation Plan Update was coordinated by the Lafayette 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:

Lafayette Parish
 City of Broussard
 City of Carencro
 City of Lafayette
 City of Scott
 City of Youngsville
 Town of Duson

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

Dee Stanley	CAO
Craig Stansbury	Director - Lafayette OHSEP
Linda Lavergne	Assistant Director - Lafayette OHSEP
Melanie Jumonville	Codes
Bobby Cormier	Emergency Operations/Security Coordinator
Carlee Alm-Labar	Parish President's Office
Kerwin Woodard	Flood Plain Administrator
Eleanor Bouy	Planning Zoning & Codes
Melinda Felps	Accounting Manager
Nicolette English	Plans Manager (Hazard Mitigation) GOHSEP
Terry Huval	Utilities Director
Kevin Blanchard	Public Works Director
Mayor Charles Langlinais	City of Broussard
Mayor Glenn Brasseaux	City of Carencro
Mayor Johnny Paul Thibodeaux	Town of Duson
Mayor Purvis Morrison	City of Scott
Mayor Ken Ritter	City of Youngsville
Joey Pons	The University of Louisiana at Lafayette
Steven Picou	Lafayette Regional Airport
Mike Hollier	Planning Manager - Traffic & Transportation
Mona Bernard	Lafayette School Board
Chief Jim Craft	Lafayette Police Department
Sheriff Mike Neustrom	Lafayette Sheriff's Office
Chief Robert Benoit	Lafayette Fire Department

Anjanette Hebert	Director of Security & Safety
Jason El Koubi	One Acadiana (f/k/a Chamber of Commerce)
Troy Guidry	Acadian Ambulance Service, Inc.
Greg Davis	Cajundome
Tim Tolbert	LCG Building Official
Lee John	GOHSEP Region 4 Coordinator
Brenda Cooper	GOHSEP

The 2016 Lafayette Parish Hazard Mitigation Plan Update was written by the Stephenson Disaster Management Institute, Louisiana State University. Further comments should be directed to the Lafayette Parish Office of Homeland Security and Emergency Preparedness: Post Office Box 3286, Lafayette, LA, 70502.

Contents

1. Introduction.....	1-1
History	1-2
Location, Demography, and Economy.....	1-3
Location	1-3
Economy	1-5
Hazard Mitigation.....	1-5
General Strategy.....	1-7
2016 Plan Update	1-8
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.....	2-6
Future Development Trends	2-13
Future Hazard Impacts	2-15
Land Use	2-15
Hazard Identification	2-17
Drought.....	2-17
Earthquakes	2-21
Flooding	2-24
Land Subsidence	2-50
Sinkholes.....	2-54
Thunderstorms	2-59
Tornadoes.....	2-72
Tropical Cyclones.....	2-80
Wildfires	2-95
Winter Storms	2-103
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.....	3-5
Flood Insurance and Community Rating System.....	3-6
NFIP Worksheets	3-9

4. Mitigation Strategy.....	4-1
Introduction.....	4-1
Goals.....	4-1
2016 Mitigation Actions and Update on Previous Plan Actions.....	4-2
Lafayette 2011 Hazard Mitigation Action Update.....	4-3
Unincorporated Lafayette New Mitigation Actions	4-10
City of Broussard – New Mitigation Actions.....	4-13
City of Carencro - New Mitigation Actions	4-15
Town of Duson – New Mitigation Actions.....	4-19
City of Lafayette – New Mitigation Actions.....	4-22
City of Scott – New Mitigation Actions.....	4-25
City of Youngsville – New Mitigation Actions.....	4-28
Action Prioritization.....	4-30
Appendix A: Planning Process	A-1
Purpose.....	A-1
The Lafayette 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-6
Meeting Documentation and Public Outreach Activities.....	A-7
Meeting #1: Coordination Discussion.....	A-7
Meeting #2: Hazard Mitigation Plan Update Kick-Off	A-8
Meeting #3: Risk Assessment Overview	A-10
Meeting #4: Public Meeting	A-12
Outreach Activity #1: Public Opinion Survey.....	A-15
Outreach Activity #2: Incident Questionnaire	A-15
Outreach Activity #3: Mapping Activities	A-15
Public Plan Review Documentation.....	A-15
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
2016 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
Lafayette 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-4
Lafayette Unincorporated	E-4
City of Broussard	E-7
City of Carencro	E-10
Town of Duson.....	E-13
City of Lafayette.....	E-16
City of Scott	E-19
City of Youngsville.....	E-22
Building Inventory	E-25
Vulnerable Populations	E-26
National Flood Insurance Program (NFIP)	E-29
Lafayette Parish	E-29
Appendix F: Community Rating System (CRS).....	F-1

This Page Left Intentionally Blank

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

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

- City of Broussard
- City of Carencro
- City of Lafayette
- City of Scott
- City of Youngsville
- Town of Duson

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

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

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

Planning is one of the best ways to correct these shortcomings and produce a program of activities that will best mitigate the impact of local hazards and meet other local needs. A well-prepared plan will ensure that all possible activities are reviewed and implemented so that the problem is addressed by the most

appropriate and efficient solutions. It can also ensure that activities are coordinated with each other and with other goals and programs, preventing conflicts and reducing the costs of implementing each individual activity.

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

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

History

Research indicates that Paleo-Indian populations may have begun to inhabit portions of Louisiana as early as 12,000-10,000 B.C.¹ By the time of European contact in the late 15th century, there were many indigenous groups of people living throughout the region, including a tribe known by their adversaries as the Atakapas, or “man eaters”, due to their purported cannibalistic practices.² In 1682, French explorer René-Robert Cavelier, Sieur de La Salle, descended the Mississippi River from Canada in an attempt to found a French colony near the river's mouth. As a result of his explorations, all the lands drained by the Mississippi River were claimed for France. These lands were given the name *Louisiane* in honor of King Louis XIV. Prior to the arrival of the Acadians in 1765, present-day Lafayette Parish, located in the Attakapas region of southwest Louisiana, was fairly remote, saw minimal European contact, and was known for its prime grazing land.³

The first migration of Acadian settlers to the region began at the twilight of the French colonial regime (1699-1766). In an enterprising move to make the land profitable with as little supervision possible, the initial land benefactors of the region entered into a cattle/land agreement with several leaders from the newly arrived Acadians. The production of cattle was considered vitally important to the support of New Orleans during times of war with the British, since the remoteness of the region provided unexposed communication and supply lines to New Orleans.⁴ In addition to the cattle in the contract, the Acadians were given farming tools, seed rice, corn flour, hardtack, hulled rice, salt pork, and beef to support themselves for six months. This marked the beginning of a population “boom” in the Attakapas region.⁵

The major land route in the region at the time was the Old Spanish Trail. The Spanish Trail was the seventeenth century roadway that linked Spanish colonial St. Augustine, Florida with San Antonio, Texas, and San Diego, California. Its 2,817-mile route cuts through present day Broussard, Lafayette, Rayne, and Crowley, Louisiana. This trail eventually became the old stage road connecting Brashear City (present-day

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

² Kniffen, Gregory, & Stokes, *The Historic Indian Tribes of Louisiana: From 1542 to Present*, Louisiana State University Press, Baton Rouge, 1987

³ John R. Swanton, *The Indian Tribes of North America*, *Bureau of American Ethnology Bulletin 145*, Smithsonian Institution, Washington, D.C., 1952

⁴ Carl Brasseaux (ed.), *Allons A La Louisiane: Acadian Immigration, 1765-1769, A Refuge for All Ages: Immigration in Louisiana History*, vol. 1, Center for Louisiana Studies, Lafayette, 1996

⁵ Grover Rees, *Dauterive Compact: Foundation of the Acadian Cattle Industry*, *Attakapas Gazette* 11:91-126, 1976

Morgan City) with Vermilionville (present-day Lafayette), Opelousas, and other cities to the north. This road, also known as Route 2, was paved and reclassified as U.S. Route 90 in 1924 under the Huey P. Long administration.

Lafayette Parish was created officially when it was cleaved from St. Martin Parish in 1823. It was named for the Marquis de Lafayette who fought in the American Revolution. Jean Mouton, an Acadian, designed the parish seat, Lafayette in 1821. By 1824, individual parishes were formed in Louisiana. These areas matched the jurisdictions of the predominant Roman Catholic Church here also called Parishes. Lafayette (the city) incorporated in 1836 with the name of Vermilionville. The area prospered with agriculture and cattle until it was ravaged by both Yellow Fever and the Civil War in the mid 1800's.⁶

By 1881, the railroad came extending its route from New Orleans to Houston and the area once again began to grow and prosper. The name of Vermilionville was changed to Lafayette in 1884. Both the parish government and the government of the city of Lafayette have now consolidated into one entity.

Location, Demography, and Economy

Location

Lafayette Parish is located in south-central Louisiana and is 35 miles from the Gulf of Mexico, 50 miles from Baton Rouge and 129 miles west of New Orleans. (Figure 1-1). Irregular in shape, Lafayette Parish is one of the smallest parishes in Louisiana. Its current size and dimensions have been intact since 1823. Neighboring parishes are St. Martin Parish to the east, St. Landry Parish to the north, Vermilion Parish to the south and Acadia Parish to the west. The parish is situated in the west-central portion of the Atchafalaya-Teche-Vermilion Basin. The City of Lafayette is the major urban area and is located in the eastern part of the parish along the Vermilion River. The extreme western and southwestern portions of Lafayette Parish are included within the Calcasieu-Mermentau Basin. This area is primarily flat and prairie-like.



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

⁶ Carl Brasseaux, *Lafayette: Where Yesterday Meets Tomorrow*, Windsor Publications, Chatsworth, 1990

The closest waterway is the Vermilion River which passes through the planning area. The next closest major waterway is located 50 miles east of Lafayette, at the convergence of the Mississippi River and the Gulf Intra-coastal Waterway, with a channel depth of 45 ft. The Port of Lake Charles is located 70 miles west of Lafayette, with a channel depth of 40 feet.

Two physiographic areas make up Lafayette Parish: the terrace upland, and the Mississippi River alluvial plain. Over 90% of the parish is in the terrace upland, which is comprised mostly of alluvial deposits known geologically as the Prairie Formation. Much of the area has a good potential as cropland and pasture.⁷

Approximately 30% of the total land area of Lafayette Parish is located within FEMA’s 100-year floodplain. The majority of the floodplain is found along the Vermilion River and Bayou Queue de Tortue. Floodplain is also located along the Magenta Canal, Coulee Ile Des Cannes and Coulee Mine.

Lafayette Parish is located in Louisiana Governor’s Office of Homeland Security and Emergency Preparedness (GOHSEP) Region 4 (Figure 1-2).

As noted above, Lafayette Parish is located in the south-central region of Louisiana.



Figure 1-2: Louisiana Homeland Security Regions

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

	2010 Census	2013 Census	(Current Yr) Estimate	Percent Change 2010 - 2013	Percent Change 2010 - (Current Year)
Total Population	221,578	231,310	235,644	4.40%	6.30%
Population Density (Pop/Sq Mi)	824.6	—	—	—	—
Total Households	86,504	86,504	—	—	—

⁷ Murphy, Daigle, & Roetker, *Soil Survey of Lafayette Parish, Louisiana*, U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C., 1977

Economy

Lafayette Parish is the center of the gulf oil and gas industry. Lafayette Parish receives revenues from agriculture, oil and gas production, and wholesale and retail trade. Chief crops include rice, soybeans, sugarcane, beef cattle, and vegetable and cattle farming. The economic base of the planning area consists of companies in the oil and gas, medical, manufacturing, retail, information technology, transportation/distribution, and public administration fields. Its hard-working labor force, excellent transportation network, abundant raw materials, and land for commercial and industrial development make the area an ideal prospect for business investment. Industry data for business patterns in Lafayette Parish can be found in the table below:

Table 1-2: Business Patterns in Lafayette 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	16,735	1,058	424,885
Manufacturing	7,269	295	391,649
Health Care, Social Assistance	24,416	1,057	1,069,174
Mining, Oil and Gas Extraction	8,418	313	740,448
Transportation / Warehousing	4,260	224	213,692
Construction	6,585	511	340,416
Administration, Support, Waste Management, Remediation Services	7,095	360	264,703
Real Estate, Rental, Leasing	4,013	498	216,442
Wholesale Trade	8,755	533	527,230
Other Services, Except Public Administration	5,014	541	156,062
Accommodation, Food Services	15,410	688	266,053
Financial and Insurance	3,478	558	210,579
Professional, Scientific, Technical Services	8,773	1,317	579,839
Information	2,712	98	118,972
Educational Services	1,660	79	49,410
Arts, Entertainment, Recreation	1,280	96	22,884
Management of Companies and Enterprises	2,500-4,999	73	—

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 Lafayette 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 Lafayette 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 2015 Lafayette 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 Lafayette Hazard Mitigation Plan were as follows:

- Section One Executive Summary
- Section Two Parish Profile
- Section Three Adoption and Approval
- Section Four Planning Process
- Section Five Hazard Identification, Profiling, and Ranking
- Section Six Risk Assessment
- Section Seven Mitigation Action Plan
- Section Eight 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 Lafayette Parish Hazard Mitigation Steering Committee was not ignorant or dismissive of the successful analysis and mitigation planning executed in previous plan updates. This plan update remains coherent with those documents, retaining language and content when needed, deleting it when appropriate, and augmenting it when constructive.

2016 Plan Update

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

- Improve education and outreach efforts 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 to reduce the impact of hazards
- Improve capabilities, coordination, and opportunities at the municipal and parish level to plan and implement hazard mitigation projects, programs, and activities
- 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.
- Maintain continuity of operations during and after natural hazard events

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

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

Table 1-4: Plan Crosswalk

2011 Plan	Revised Plan (2016)
Section 1: Executive Summary	Section 1: Introduction
Section 2: Parish Profile	Section 1: Introduction
Section 3: Adoption and Approval	Appendix D: Plan Adoption
Section 4: Planning Process	Appendix A: Planning Process
Section 5: Hazard Identification, Profiling, and Ranking	Section 2: Hazard Identification and Risk Assessment
Section 6: Risk Assessment	Section 2: Hazard Identification and Risk Assessment
Section 7: Mitigation Action Plan	Section 4: Mitigation Strategy
Section 8: 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 Lafayette Parish and its municipalities. The extent of this risk is dictated primarily by its geographic location. Most significantly, Lafayette 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.

This Page Left Intentionally Blank

2. Hazard Identification and Parish-Wide Risk Assessment

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

Table 2-1: Hazard Profile Summary

Hazard	Profiled in Last Plan	Considered Medium or High Risk in the State's HM Plan	Profiled in the 2016 Update
Subsidence/Coastal Land Loss	X	X	*
Drought	X		X
Earthquakes	X		*
Expansive Soils			
Fog			
Flooding	X	X	X
Extreme Heat			
Sinkholes		X	X
Thunderstorms (Hail, Lightning, & Wind)	X	X	X
Tornadoes	X	X	X
Tropical Cyclones	X	X	X
Tsunamis			
Wildfires	X		X
Winter Storms	X		X

* Hazard was profiled but discounted

Prevalent Hazards to the Community

While many of the hazards identified in *Table 2-1* occur in the parish, the determination was made to focus attention and resources on the most prevalent hazards, which include the hazards previously profiled, along with sinkholes.

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

- a) Flooding (backwater, riverine, localized stormwater event)
- b) Tropical Cyclones (flooding and high winds)
- c) Drought
- d) Sinkhole
- e) Thunderstorms (Hail, Lightning, Wind)
- f) Winter Storm
- g) Tornado

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

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

The potential destructive power of tropical cyclones and flooding were determined to be the most prevalent hazards to the parish. Seventeen of the nineteen presidential declarations Lafayette Parish has received resulted from either tropical cyclones (12 declarations) or flooding (5 declarations), which validates these as the most significant hazards. Therefore, the issues of hurricanes and floods will both serve as the main focus during the mitigation planning process. Hurricanes present risks from the potential for flooding, primarily resulting from storm surge, and high wind speeds. While storm surge is considered the hazard with the most potential 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 Lafayette Parish is included in the hurricane risk assessment.

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

Table 2-2: Lafayette Parish Major Disaster Declarations

Disaster Declaration Number	Date	Type of Disaster
208	9/10/1965	Tropical Cyclone – Hurricane Betsy
315	10/13/1971	Tropical Cyclone – Hurricane Edith
448	9/23/1974	Tropical Cyclone – Hurricane Carmen
3031	2/22/1977	Drought and Freezing
534	5/2/1977	Severe Storm, Flooding
622	5/21/1980	Severe Storm, Flooding
728	10/31/1984	Severe Storm, Flooding
835	7/17/1989	Tropical Cyclone – Tropical Storm Allison
956	8/26/1992	Tropical Cyclone – Hurricane Andrew
978	2/2/1993	Severe Storm, Flooding
1380	6/11/2001	Tropical Cyclone – Tropical Storm Allison
1437	10/3/2002	Tropical Cyclone – Hurricane Lili
3172	2/1/2003	Loss of Space Shuttle Columbia
1521	6/8/2004	Severe Storm, Flooding
1548	9/15/2004	Tropical Cyclone – Hurricane Ivan
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 Lafayette Parish is estimated on the following page. The percent chance of an event happening during any given year was calculated by posting past events and dividing by the time period. Unless otherwise indicated, the time period used to assess probability followed the method used in the State of Louisiana’s most current Hazard Mitigation Plan. The primary source for historical data used throughout the plan is the Spatial Hazards Events and Losses Database (SHELDUS), which provides historical hazard data from 1960 to 2014. In staying consistent with the state plan, the SHELDUS database was evaluated for the last twenty five years (1989 – 2014) in order to determine future probability of a hazard occurring. While the 25-year record used by the State was adopted for the purpose of determining the overall probability, in order to assist with determining estimated losses, unless otherwise stated, the full 54-year record was used when Hazus-MH wasn’t available to determine losses. This full record was used to provide a more extensive record to determine losses. All assessed damages were adjusted for inflation in order to reflect the equivalent amount of damages with the value of the U.S. dollar today. In addition, the National Climatic Data Center (NCDC) was also used to help identify hazard data specific to the municipalities. This was used due to it containing specific data for cities, whereas the data within SHELDUS is limited to parishes.

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

Table 2-3: Probability of Future Hazard Reoccurrence

Hazard	Probability						
	Lafayette Parish (Unincorporated)	Broussard	Carencro	Duson	Lafayette	Scott	Youngville
Drought	12%	12%	12%	12%	12%	12%	12%
Flooding	40%	12%	44%	12%	52%	20%	24%
Sinkholes	<1%	< 1%	< 1%	<1%	<1%	<1%	<1%
Thunderstorms (Hail)	12%	12%	12%	12%	12%	12%	12%
Thunderstorms (Lightning)	36%	36%	36%	36%	36%	36%	36%
Thunderstorms (Wind)	100%	100%	100%	100%	100%	100%	100%
Tornadoes	72%	72%	72%	72%	72%	72%	72%
Tropical Cyclones	16%	16%	16%	16%	16%	16%	16%
Wildfires	<1%	<1%	<1%	<1%	<1%	<1%	<1%
Winter Storms	28%	28%	28%	28%	28%	28%	28%

As shown in *Table 2-3: Probability of Future Hazard Reoccurrence*, thunderstorm winds for the entire planning area have the highest annual chance of occurrence in the parish (100%). Tornadoes have a 72% annual chance of occurrence followed by flooding in the City of Lafayette with a 52% annual chance of occurrence. Flood events in the remaining incorporated and unincorporated areas of the parish have a slightly lower chance of occurring annually. Lightning has an annual chance of occurrence calculated at 36% followed by winter storms (28%) and tropical cyclones (16%). Both drought and hail have a 12% annual chance of occurrence. Sinkholes and Wildfires both have less than a 1% annual chance of occurrence. Subsidence/coastal land loss and earthquakes were discounted since the annual chance of occurrence was calculated at less than 1% and do not impact the parish.

Inventory of Assets for the Entire Parish

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

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

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

Occupancy	Lafayette Parish	Unincorporated Lafayette	Broussard	Carencro	Duson	Lafayette
Agricultural	\$45,561,000	\$15,466,000	\$2,158,000	\$3,468,000	\$346,000	\$21,448,000
Commercial	\$4,058,347,000	\$585,464,000	\$196,872,000	\$93,308,000	\$8,291,000	\$3,017,828,000
Government	\$120,079,000	\$1,735,000	\$1,799,000	\$11,307,000	\$2,977,000	\$97,892,000
Industrial	\$943,538,000	\$262,957,000	\$100,838,000	\$17,804,000	\$874,000	\$487,897,000
Religion	\$248,962,000	\$35,444,000	\$9,145,000	\$4,142,000	\$971,000	\$187,872,000
Residential	\$18,349,165,000	\$4,999,089,000	\$776,119,000	\$541,707,000	\$90,880,000	\$10,724,503,000
Education	\$161,223,000	\$16,627,000	\$9,118,000	\$7,982,000	\$232,000	\$118,732,000
Total	\$23,926,875,000	\$5,916,782,000	\$1,096,049,000	\$679,718,000	\$104,571,000	\$14,656,172,000

Table 2-5: Estimated Total of Potential Losses (Continued)

Occupancy	Scott	Youngsville
Agricultural	\$1,137,000	\$1,538,000
Commercial	\$103,495,000	\$53,089,000
Government	\$1,921,000	\$2,448,000
Industrial	\$47,217,000	\$25,951,000
Religion	\$6,521,000	\$4,867,000
Residential	\$573,852,000	\$643,015,000
Education	\$6,261,000	\$2,271,000
Total	\$740,404,000	\$733,179,000

Essential Facilities of the Parish

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

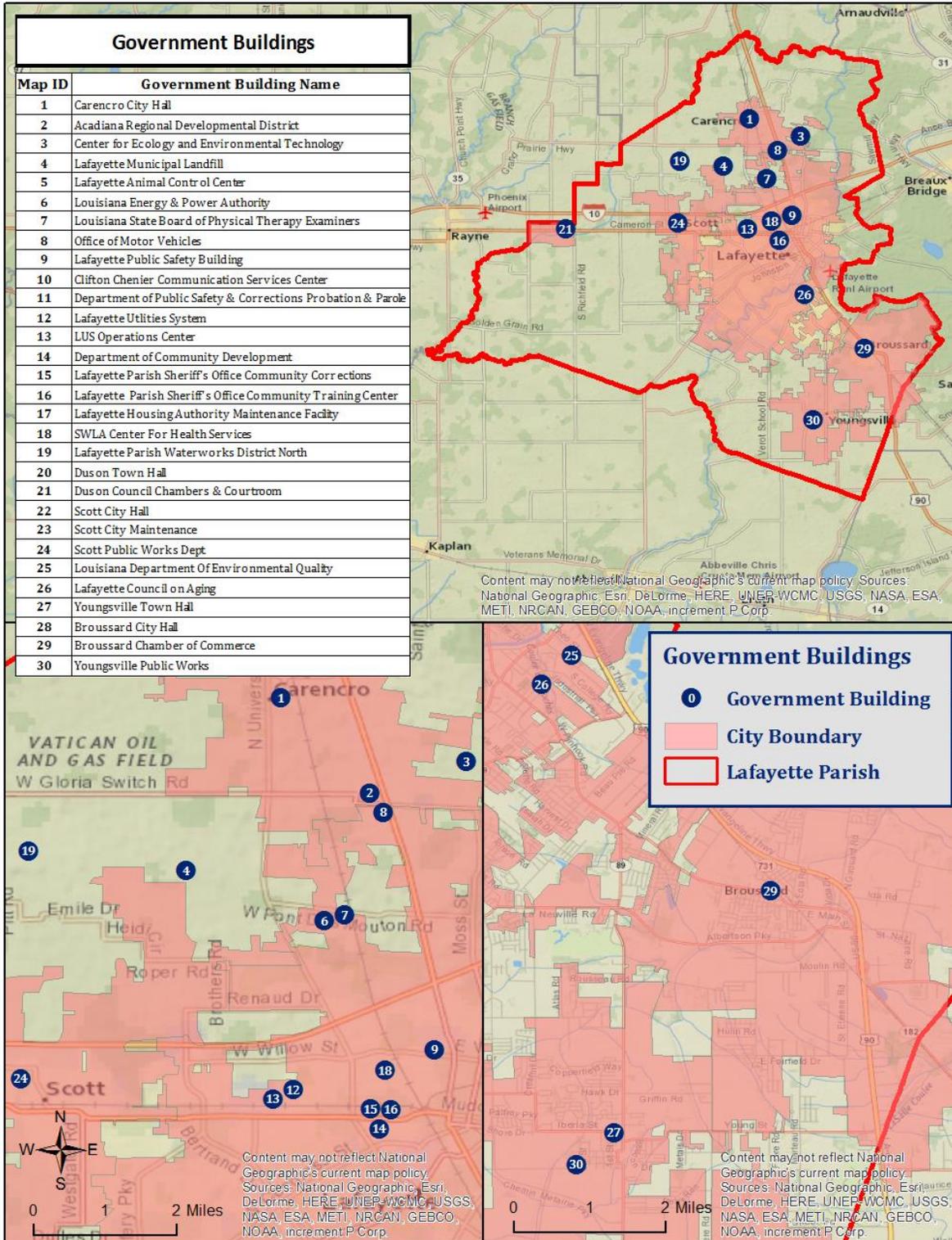


Figure 2-1: Government Buildings throughout Lafayette Parish

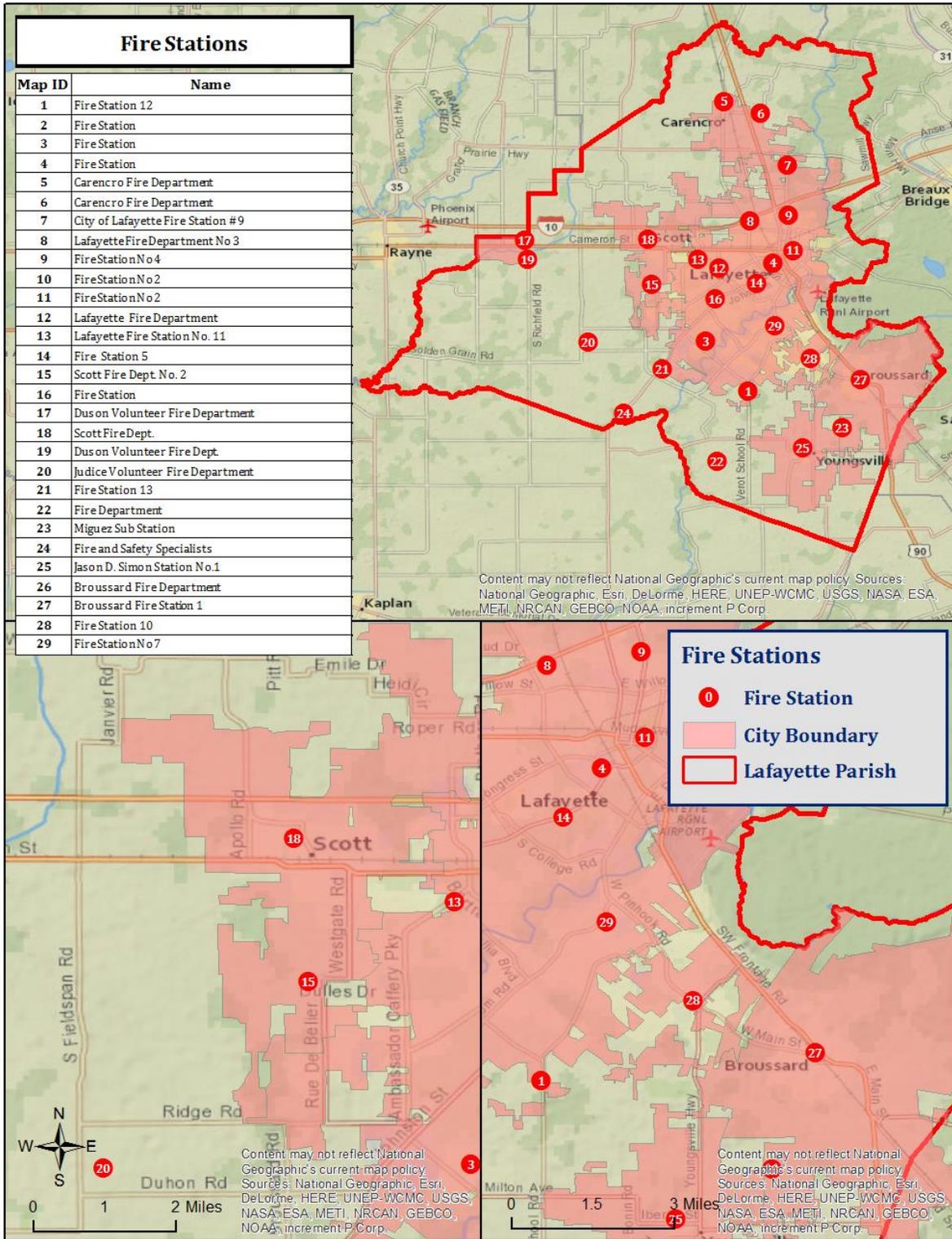


Figure 2-2: Fire Stations throughout Lafayette Parish

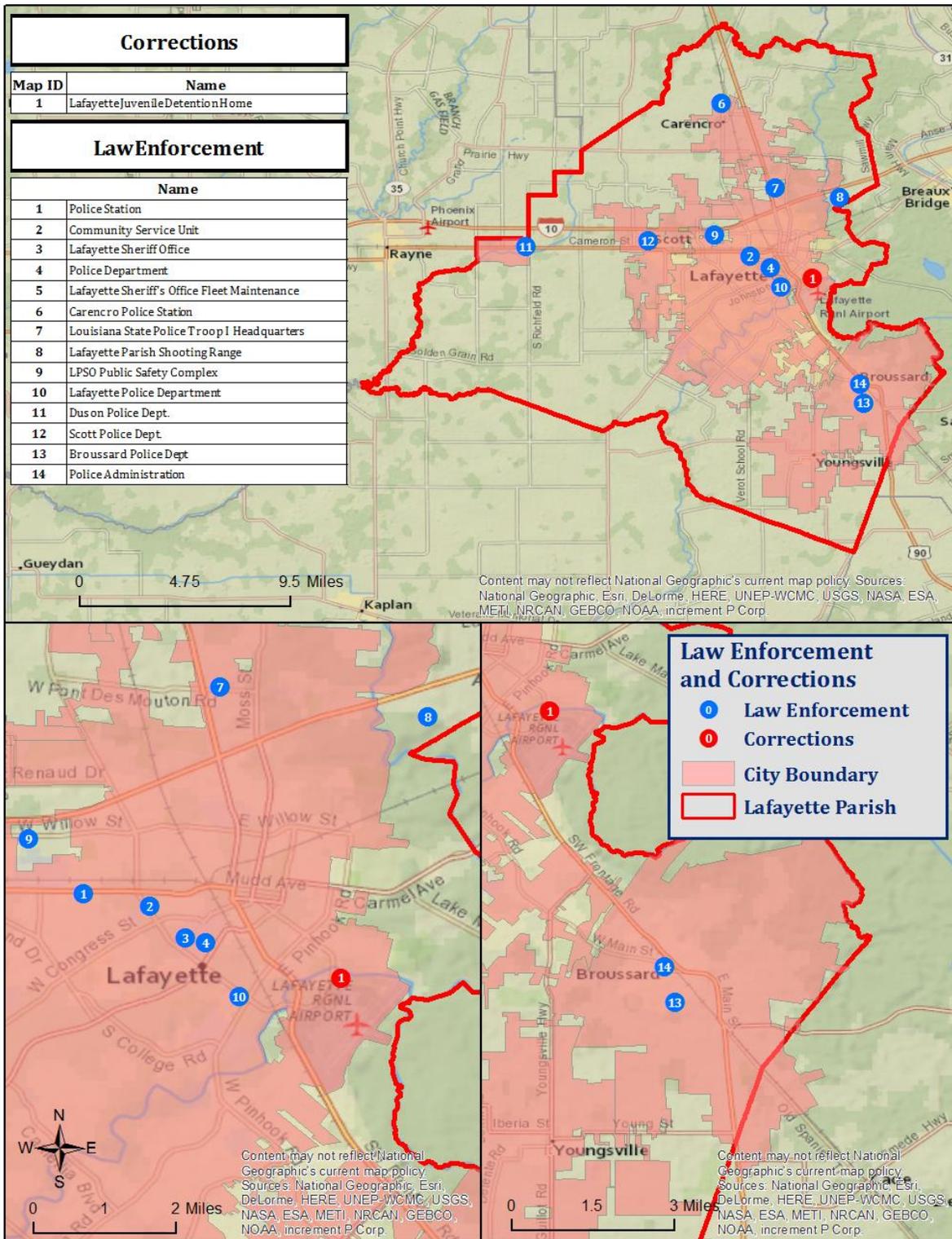


Figure 2-3: Law Enforcement Facilities in Lafayette Parish

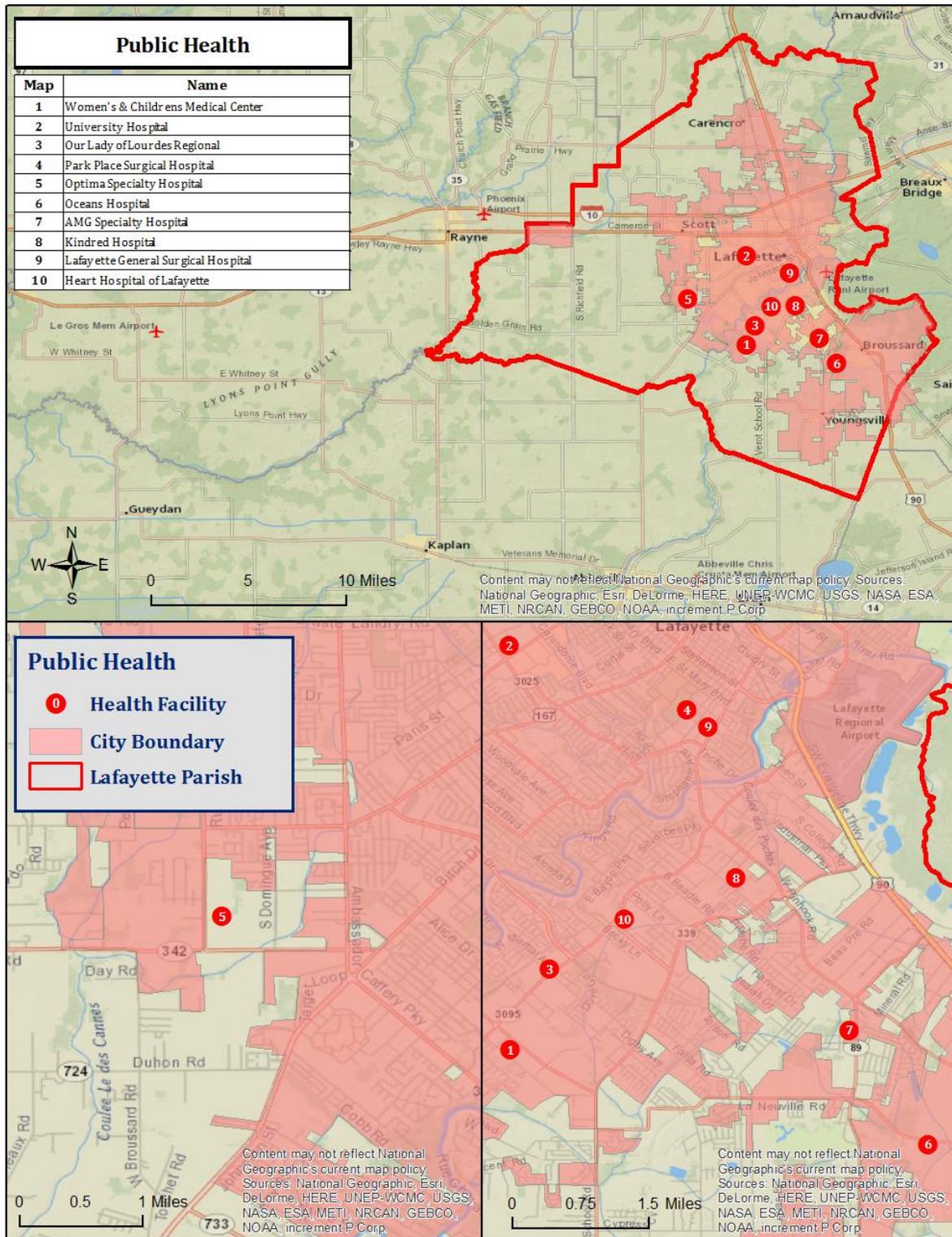


Figure 2-4: Public Health Facilities in Lafayette Parish

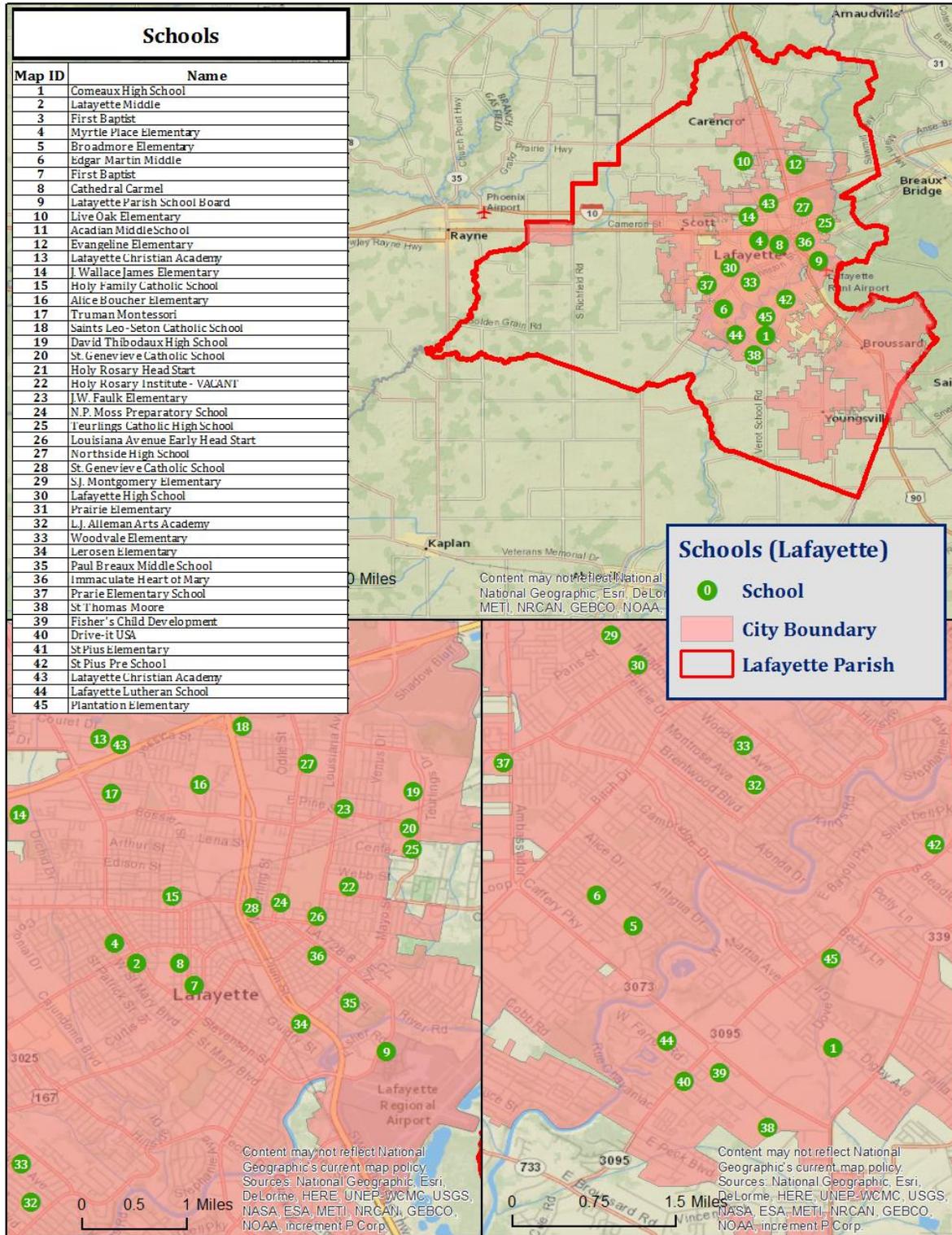


Figure 2-5: Educational Facilities in the City of Lafayette

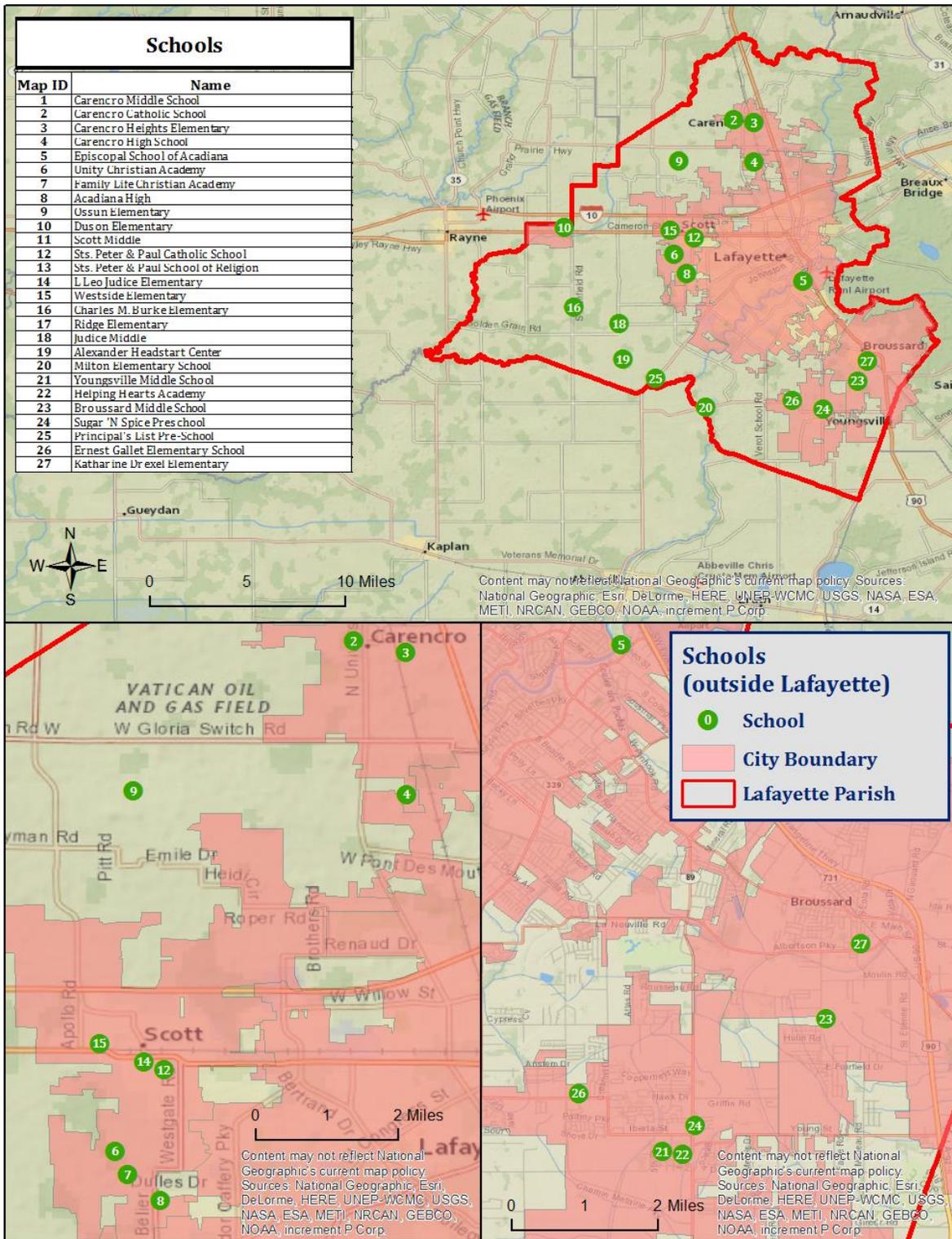


Figure 2-6: Educational Facilities Outside of the City of Lafayette

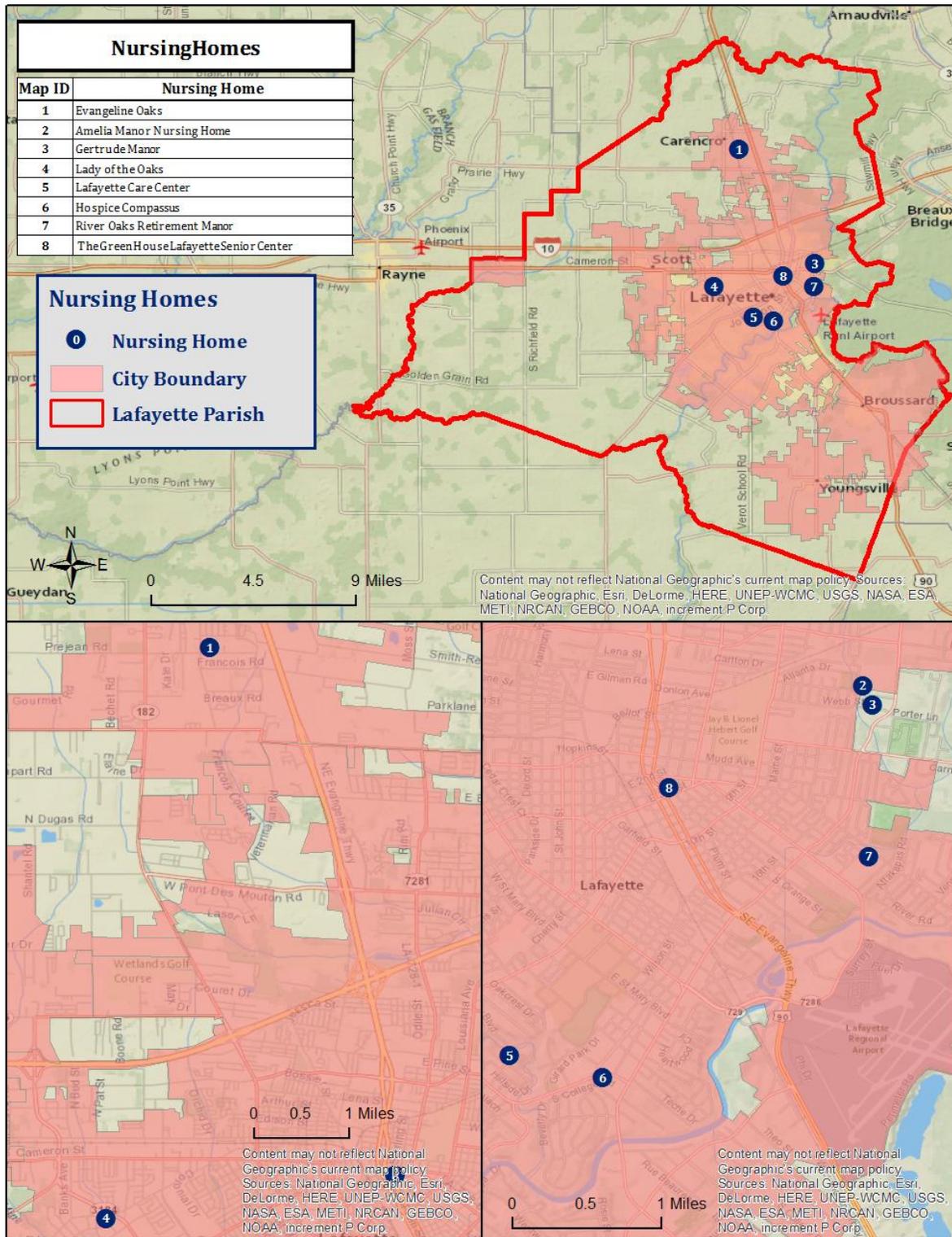


Figure 2-7: Nursing Home Facilities in Lafayette Parish

Future Development Trends

Lafayette Parish experienced growth in population and housing between the years of 2000 and 2013, growing from a population of 190,503 with 78,122 housing units in 2000 to a population of 224,719 with 94,372 housing units in 2013. This growth was largely in the incorporated area of Youngsville from the years 2000 to 2010, and in the incorporated area Duson from 2010 to 2013. The incorporated areas of Broussard, Carencro, Duson, Lafayette, Scott, and Youngsville, as well as the unincorporated area of Lafayette Parish, all experienced a growth in population from the years of 2000 to 2013. The future population and number of buildings can be estimated using U.S. Census Bureau housing and population data. The following tables show population and housing unit estimates from 2000 to 2013:

Table 2-6: Population Growth Rate for Lafayette Parish

Total Population	Lafayette Parish	Lafayette (Unincorporated)	Broussard	Carencro	Duson	Lafayette	Scott	Youngsville
1-Apr-00	190,503	54,718	5,874	6,120	1,672	110,257	7,870	3,992
1-Apr-10	221,578	66,797	8,197	7,526	1,716	120,623	8,614	8,105
1-Jul-13	224,719	66,998	8,559	7,885	1,914	122,009	8,659	8,695
Population Growth between 2000 – 2010	16.3%	22.1%	39.5%	23.0%	2.6%	9.4%	9.5%	103.0%
Average Annual Growth Rate between 2000 – 2010	1.6%	2.2%	4.0%	2.3%	0.3%	0.9%	0.9%	10.3%
Population Growth between 2010 – 2013	1.4%	0.3%	4.4%	4.8%	11.5%	1.1%	0.5%	7.3%
Average Annual Growth Rate between 2010 – 2013	0.47%	0.10%	1.47%	1.59%	3.85%	0.38%	0.17%	2.43%

Table 2-7: Housing Growth Rate for Lafayette Parish

Total Housing Units	Lafayette Parish	Lafayette (Unincorporated)	Broussard	Carencro	Duson	Lafayette	Scott	Youngsville
1-Apr-00	78,122	21,125	2,346	2,401	724	46,865	3,154	1,507
1-Apr-10	93,656	26,405	3,351	3,233	775	53,356	3,666	2,870
1-Jul-13	94,372	25,842	3,544	3,428	791	53,633	3,871	3,263
Housing Growth between 2000 – 2010	19.9%	25.0%	42.8%	34.7%	7.0%	13.9%	16.2%	90.4%
Average Annual Growth Rate between 2000 – 2010	2.0%	2.5%	4.3%	3.5%	0.7%	1.4%	1.6%	9.0%
Housing Growth between 2010 – 2013	0.8%	-2.1%	5.8%	6.0%	2.1%	0.5%	5.6%	13.7%
Average Annual Growth Rate between 2010 – 2013	0.3%	-0.7%	1.9%	2.0%	0.7%	0.2%	1.9%	4.6%

As shown in previous tables, Lafayette Parish has experienced growth in both population and housing units. Housing growth rates grew at 2% annually from 2000 to 2010, and at 0.3% annually from 2010 to 2013. Population growth rates for the parish were at 1.6% annually from 2000 to 2010, and 0.47% annually from 2010 to 2013. From 2000 to 2010, the incorporated area of Youngsville had the largest increase in population at an annual rate of 10.3%, followed by incorporated area of Broussard at 4% annually. From 2010 to 2013, Duson experienced the largest growth in population at 3.85% annually followed by Youngsville at 2.43% annually.

The incorporated area of Youngsville experienced the largest increase in housing units from 2000 to 2010 at 9% annually, followed by the incorporated area of Broussard at 4.3% annually. From 2010 to 2013, Youngsville continued to experience the largest increase in housing units with a 4.6% annual growth rate. The only area in Lafayette Parish to experience a decline in housing units during this time period was the unincorporated area of the parish (-0.7% annually).

Future Hazard Impacts

Hazard impacts were estimated for five years and ten years in the future (2019 and 2024). Yearly population and housing growth rates were applied to parish inventory assets for composite flood and tropical cyclones. Based on a review of available information, it is assumed that population and housing units will continue to grow within Lafayette 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 last update.

*Table 2-8: 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	94,612	34,540	34,982	35,521
Value of Structures	\$24,232,524,699	\$8,846,515,247	\$9,426,178,228	\$10,172,126,374
# of People	225,781	82,425	84,391	86,812
Tropical Cyclones				
Structures	94,612	94,612	95,824	97,299
Value of Structures	\$24,232,524,699	\$24,232,524,699	\$25,820,347,373	\$27,863,661,195
# of People	225,781	225,781	231,166	237,798

Land Use

The Lafayette Parish Land Use table is provided below. Residential, commercial, and industrial areas account for approximately 32% of the parish's land use. Agricultural land is the largest category at 97,823 acres, accounting for 57% of parish land. At 14,024 acres, wetlands account for 8% of parish lands, while 3,425 acres of forested areas account for 2% of parish lands. The parish also consists of 1,185 acres of water areas, accounting for 1% of all parish lands.

*Table 2-9: Lafayette Parish Land Use
(Source: USGS Land Use Map)*

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	97,823	57%
Wetlands	14,024	8%
Forest Land (not including forested wetlands)	3,425	2%
Urban/Development	55,837	32%
Water	1,185	1%

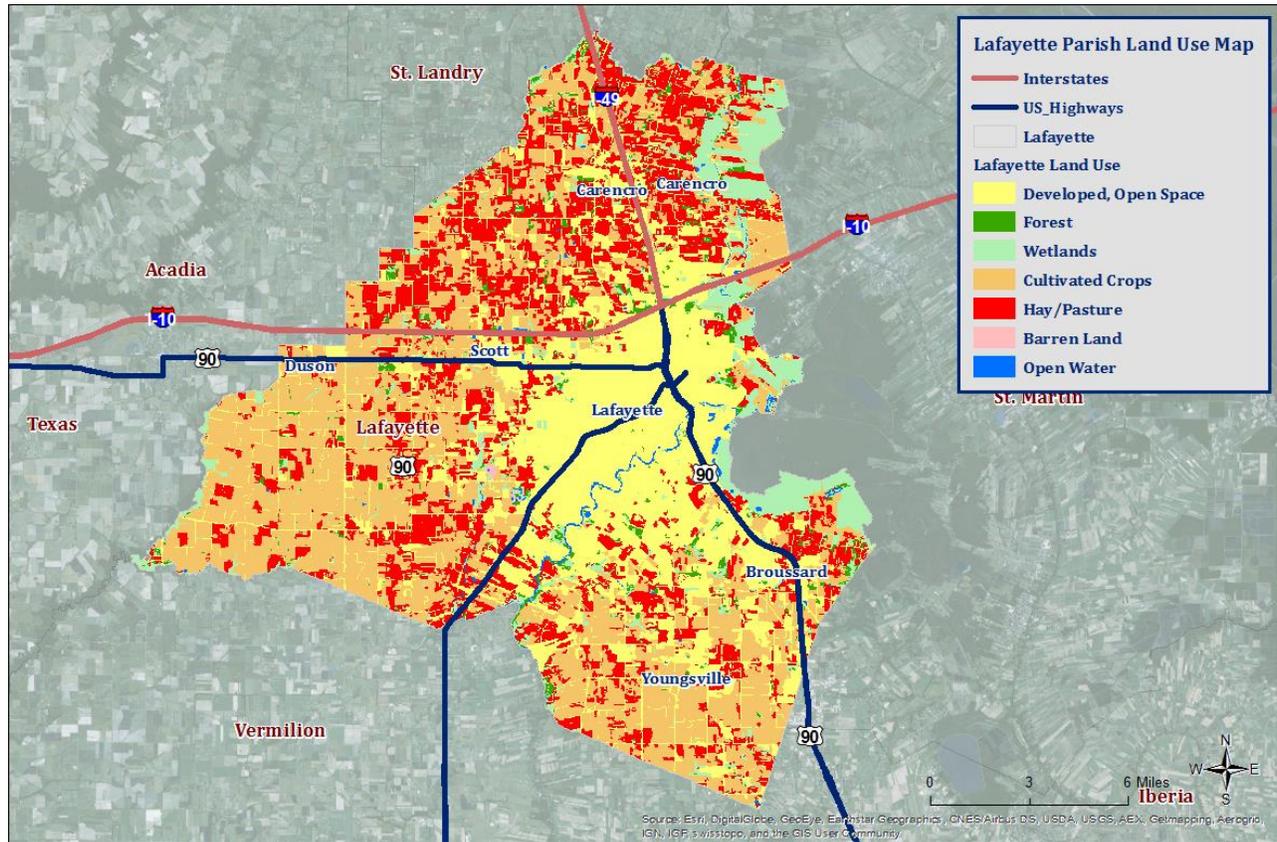


Figure 2-8: Lafayette Parish Land Use Map
(Source: USGS Land Use Map)

Hazard Identification

Drought

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

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

This hazard is often measured using the Palmer Drought Severity Index (PDSI, also known operationally as the Palmer Drought Index). The PDSI, first developed by Wayne Palmer in a 1965 paper for the U.S. Weather Bureau, measures drought through recent precipitation and temperature data with regard to a basic supply-and-demand model of soil moisture. It is most effective in long-term calculations. Three other indices used to measure drought are the Palmer Hydrologic Drought Index (PHDI), the Crop Moisture Index (CMI), which is derived from the PDSI, and the Keetch-Byram Drought Index (KBDI), created by John Keetch and George Byram in 1968 for the U.S. Forest Service. The KBDI is used mainly for predicting the likelihood of wildfire outbreaks. As a compromise, the PDSI is used most often for droughts since it is a medium-response drought indicator. The objective of the PDSI is to provide measurements of moisture conditions that are standardized so that comparisons using the index can be made between locations and between months. *Table 2-10* displays the range and Palmer classifications of the PDSI index. *Figure 2-9* displays the current drought monitor for the state of Louisiana and its parishes.

Table 2-10: Palmer Drought Severity Index Classification and Range

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

The PDSI best measures the duration and intensity of drought-inducing circulation patterns at a somewhat long-term time scale, although not as long-term as the PHDI. Long-term drought is cumulative, so the intensity of drought during the current month is dependent on the current weather patterns in addition to the effects of cumulative patterns of previous months. Although weather patterns can change almost overnight from a long-term drought pattern to a long-term wet pattern, as a medium-response indicator, the PDSI responds relatively rapidly. Data compiled by the National Drought Mitigation Center indicates severe drought conditions exist in the majority of Lafayette Parish and moderate drought conditions exist in portions of the western and southern sections of the parish at the time this plan went to publication (*Figure 2-9*).

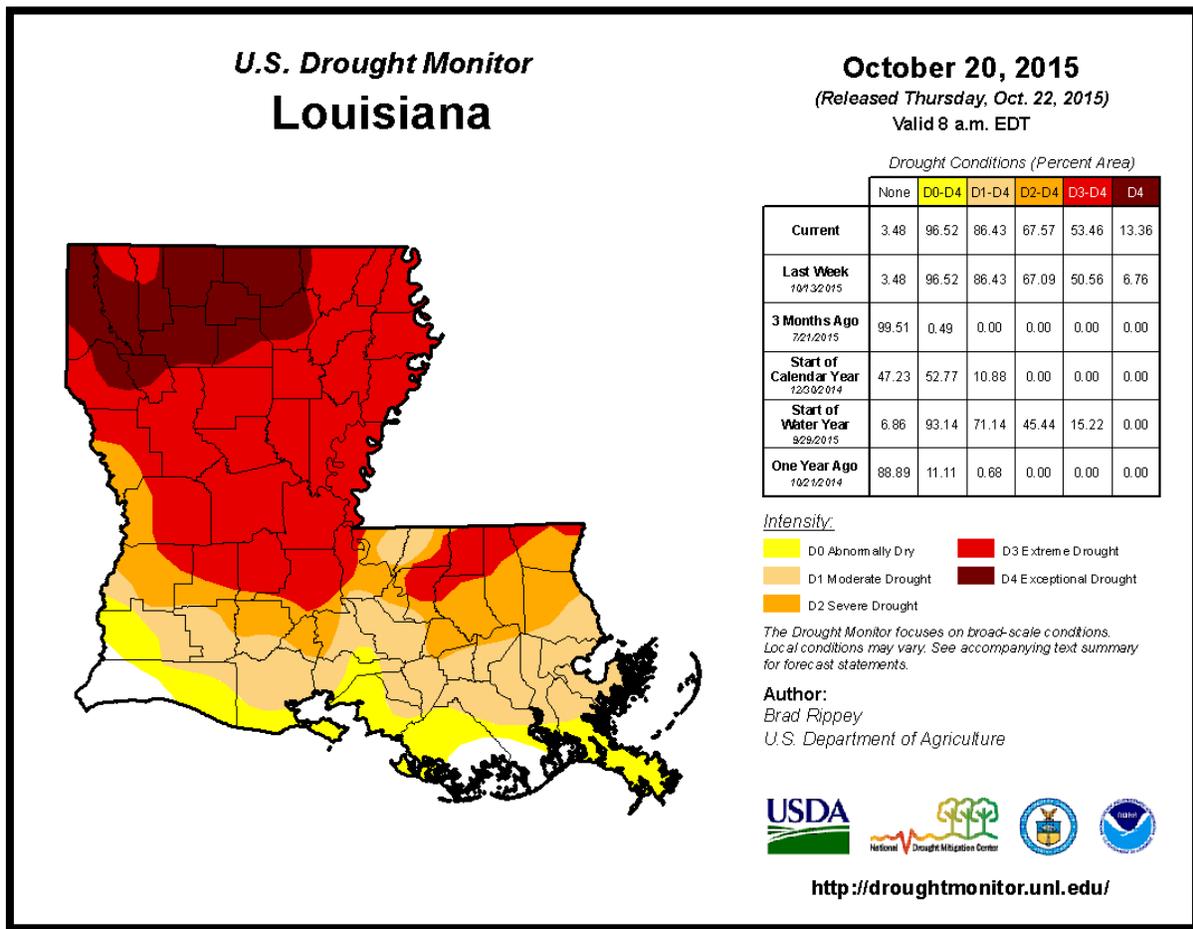


Figure 2-9: United States Drought Monitor for the State of Louisiana and its Parishes (Source: The National Drought Mitigation Center)

Location

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

Previous Occurrences / Extents

The SHELDUS database reports a total of three drought events occurring within the boundaries of Lafayette Parish between the years of 1989 to 2014. Table 2-11 identifies the date of occurrence, estimated crop damage, and severity of the events that have occurred in Lafayette Parish. Based on previous occurrences, and in accordance with the Palmer Drought Index, the worst case scenario for drought in Lafayette Parish would be a severe drought event.

Table 2-11: Drought Events with Crop Damage Totals for Lafayette Parish (Source: SHELDUS)

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

Frequency / Probability

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

Estimated Potential Losses

According to the SHELDUS database, there have been three drought events that have caused some level of crop damage. The total agricultural damage from these events is \$29,593,120, with an average cost of \$9,864,373 per drought event. When annualizing the total cost over the 25-year record, total annual losses based on drought is estimated to be \$1,183,725. [Table 2-12](#) presents an analysis of agricultural exposure that is susceptible to drought by major crop type for Lafayette Parish.

*Table 2-12: Agricultural Exposure by Crop Type for Droughts in Lafayette Parish
(Source: LSU Ag Center 2014 Parish Totals)*

Agricultural Exposure by Type for Drought						
Sugarcane	Tomatoes	Wheat	Sweet Corn	Soybeans	Hay	Total
\$10,603,951	\$205,800	\$561,340	\$487,500	\$3,716,064	\$1,346,400	\$16,921,055

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

Earthquakes

An earthquake is a sudden motion or trembling of the Earth caused by an abrupt release of stored energy in the rocks beneath the Earth's surface. The energy released results in vibrations which are known as seismic waves. Ground motion from seismic waves is expressed as peak ground acceleration (PGA), the fastest measured change in speed for a particle at ground level that is moving because of an earthquake. PGA is commonly measured as a percentage of acceleration due to Earth's gravity (%g). This measurement is relied on to determine seismic load engineering design and construction requirements. Earthquakes are typically described in terms of magnitude and intensity. Magnitude is the measure of the amplitude of the seismic wave and is often expressed by the Richter scale, and intensity is a measure of how strong the shock was felt at a particular location, indexed by the Modified Mercalli Intensity (MMI) scale. The Richter scale is a logarithmic measurement whereby an increase in the scale by one whole number represents a tenfold increase in measured ground motion of the earthquake (and an increase in energy released of more than 30 times). An increase by two whole numbers represents a 102 (or 100-fold) increase in ground motion, and thus more than 302 (or 900) times the energy released. *Table 2-13* shows the rough correlation between the Richter scale, PGA, and the MMI. The relationship between these is approximate and depends upon such specifics as the depth of the focus (the location of the actual rock movement) and distance from the epicenter (the location on the Earth's surface above the earthquake focus) of the earthquake.

*Table 2-13: Comparison of Earthquake Magnitudes for PGA, Richter, and MMI
(Source: USGS Earthquake Hazards Program)*

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

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

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

Location

An earthquake event is a geological hazard that occurs along fault lines. Lafayette Parish has two fault lines with one running almost parallel with US Interstate 10 in the northern portion of the parish and the second in the southern portion of the parish that extends the length of the parish (*Figure 2-10*). Effects of an earthquake may be felt throughout the parish.

Previous Occurrences / Extents

Both the SHELUDS and National Climatic Data Center report no earthquake events occurring within the boundaries of Lafayette Parish between the years of 1989 – 2014. The National Oceanic and Atmospheric Administration’s National Geophysical Data Center reports 1 earthquake event occurring within the boundaries of Parish Name between the years 1811 – 2014. *Table 2-14* summarizes the earthquake event that occurred within Lafayette Parish. *Figure 2-10* displays the location and intensity of each earthquake event in Lafayette Parish and surrounding parishes. Based on the previous earthquake event presented in the following table, an earthquake with an intensity level of MMI 5 could occur within the planning area. This intensity of an earthquake would only be felt by nearly everyone. Many people would be awakened from their sleep, pendulum clocks would stop, unstable objects would be overturned, and some windows would break.

Table 2-14: Summary of Earthquakes in Lafayette Parish

Date	Location	Intensity (MMI)
October 19, 1930	Youngville	5

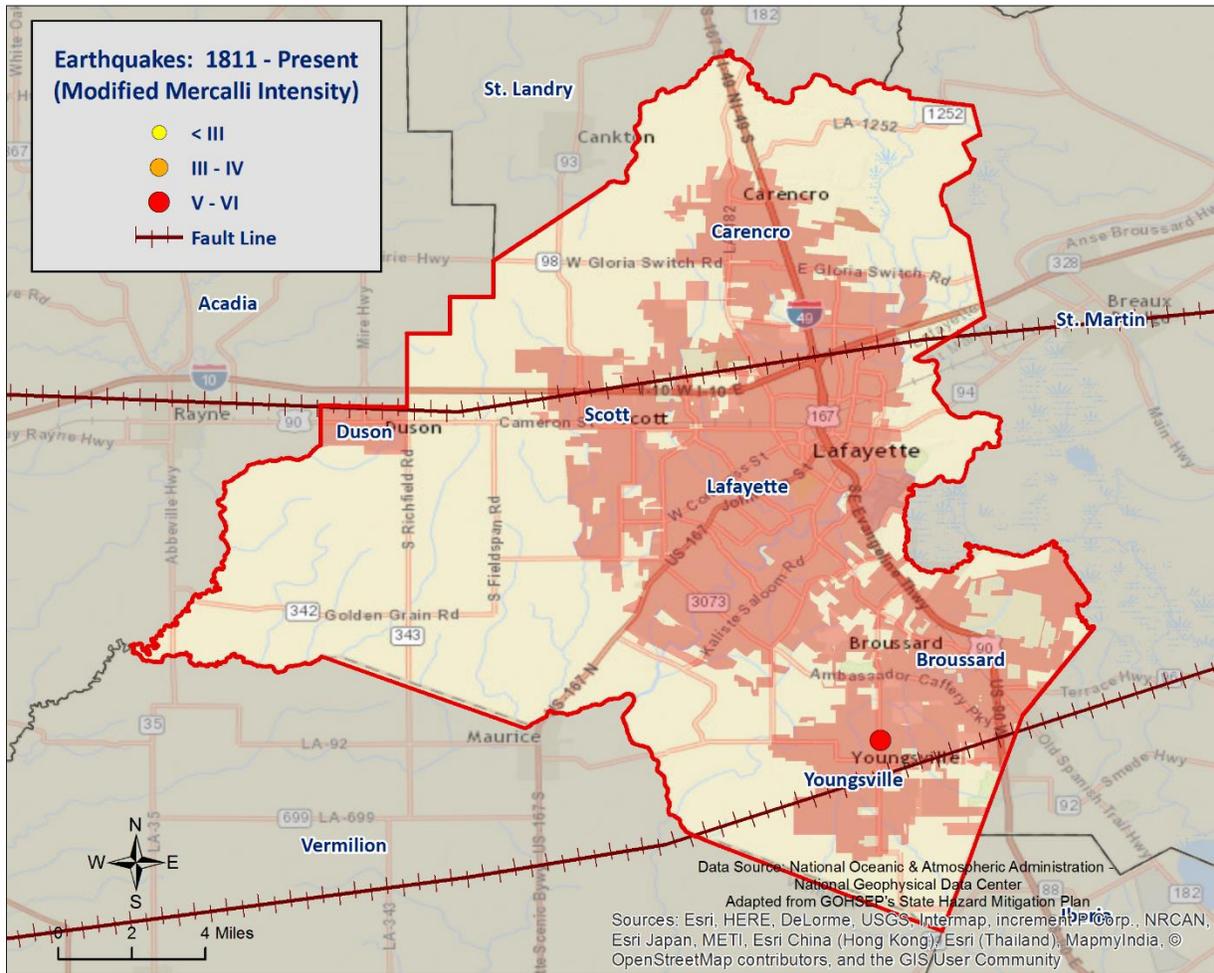


Figure 2-10: Location and Intensity (MMI) of Earthquakes in Lafayette Parish

Frequency / Probability

Earthquakes are an extremely rare occurrence in the State of Louisiana and Lafayette Parish, with one occurrence of an earthquake event within the boundaries of the parish from the years 1811 – 2014. Based on this historical record and Louisiana’s State Hazard Mitigation Plan, it is determined that an earthquake event has less than a 1% annual chance of occurrence in the Lafayette Parish planning area, and is therefore discounted. As a result, earthquakes are not carried forward into risk assessment.

Flooding

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

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

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

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

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

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

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

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

Historically, in Lafayette Parish, several types of flooding have been observed. 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 change of river characteristics (volume, discharge, and topography). As a result, the definition of what constitutes a 100-year flood event is specific to each location, river, and time, since floodplain and river characteristics change over time. Finally, it is important to note that each flood event is unique. Two hypothetical events at the same location, given the same magnitude of stream flow, may still produce substantially different impacts if there were different antecedent moisture characteristics, different times of day of occurrence (which indicates the population's probable activities at the flood's onset), or other characteristic differences.

The 100-year flood event is of particular significance since it is the regulatory standard that determines the obligation (or lack thereof) to purchase flood insurance. Flood insurance premiums are set depending on the flood zone, as modeled by National Flood Insurance Program (NFIP) Rate Maps. The NFIP and FEMA suggest insurance rates based on Special Flood Hazard Areas (SFHAs), as diagrammed in *Figure 2-11*.

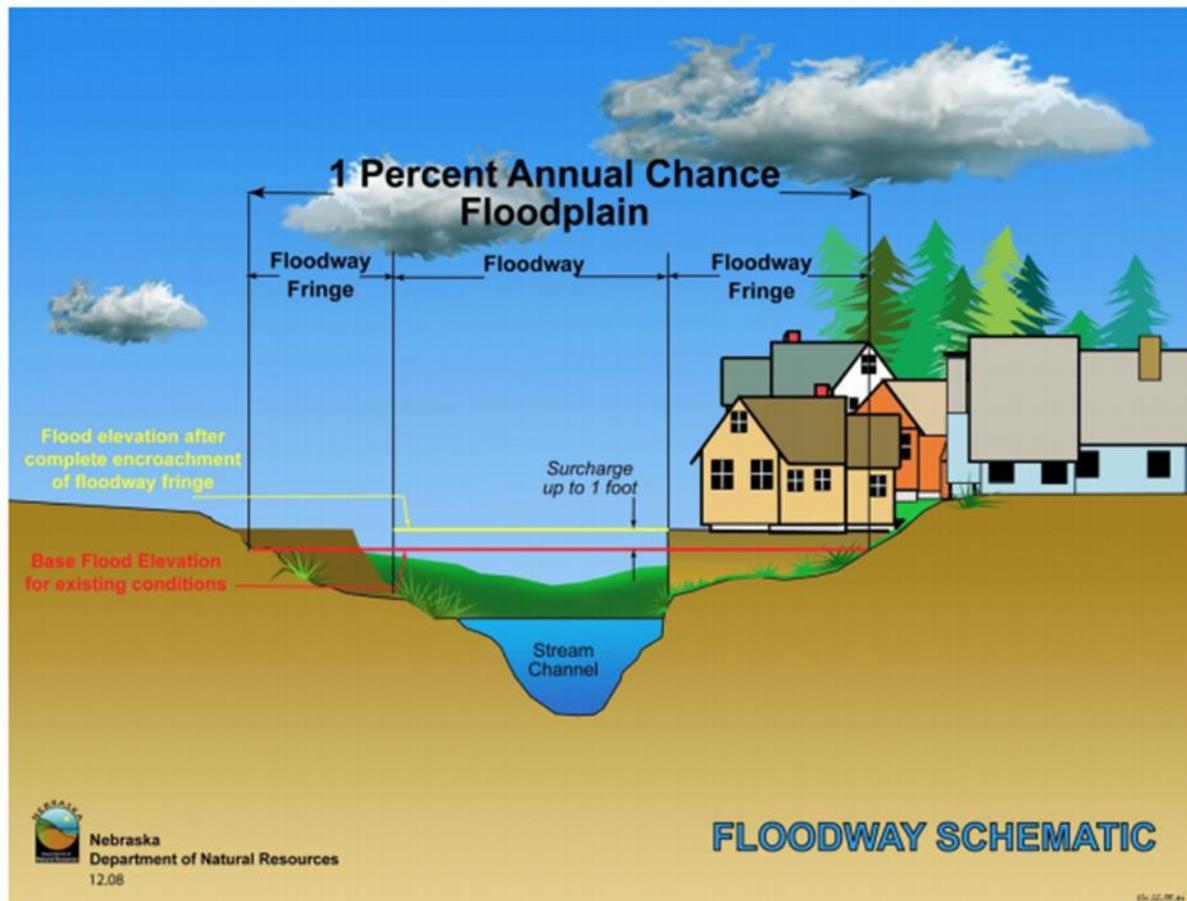


Figure 2-11: Schematic of 100-year Floodplain. The Special Flood Hazard Area (SFHA) extends to the end of the floodway fringe. (Source: Nebraska Department of Natural Resources)

A SFHA is the land area covered by the floodwaters of the base flood (red line in *Figure 2-11*), where the NFIP's floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

Property Damage

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

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

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

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

Repetitive Loss Properties

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

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

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

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

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

Table 2-15: Repetitive Loss Structures for Lafayette Parish

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
Unincorporated Lafayette Parish	85	75	10	0	288	\$3,968,727	\$13,780
Broussard	6	5	1	0	17	\$189,855	\$11,168
Carencro	36	35	1	0	122	\$1,678,108	\$13,755
Duson	0	0	0	0	0	\$0	\$0
Lafayette	116	108	8	0	392	\$5,352,839	\$13,655
Scott	14	12	2	0	53	\$435,316	\$8,214
Youngsville	6	6	0	0	19	\$332,571	\$17,504
Total	263	241	22	0	891	\$11,957,416	\$13,420

Of the 263 repetitive loss structures, 252 were able to be geocoded in order to provide an overview of where the repetitive loss structures were located throughout the parish. *Figure 2-12* shows the approximate location of the 252 structures, while *Figure 2-13* shows where the highest concentration of repetitive loss structures are located. Through the repetitive loss map, it is clear that the primary concentrated area of repetitive loss structures is focused in and around the incorporated areas of Lafayette, Broussard, Carencro, Scott and Youngsville.

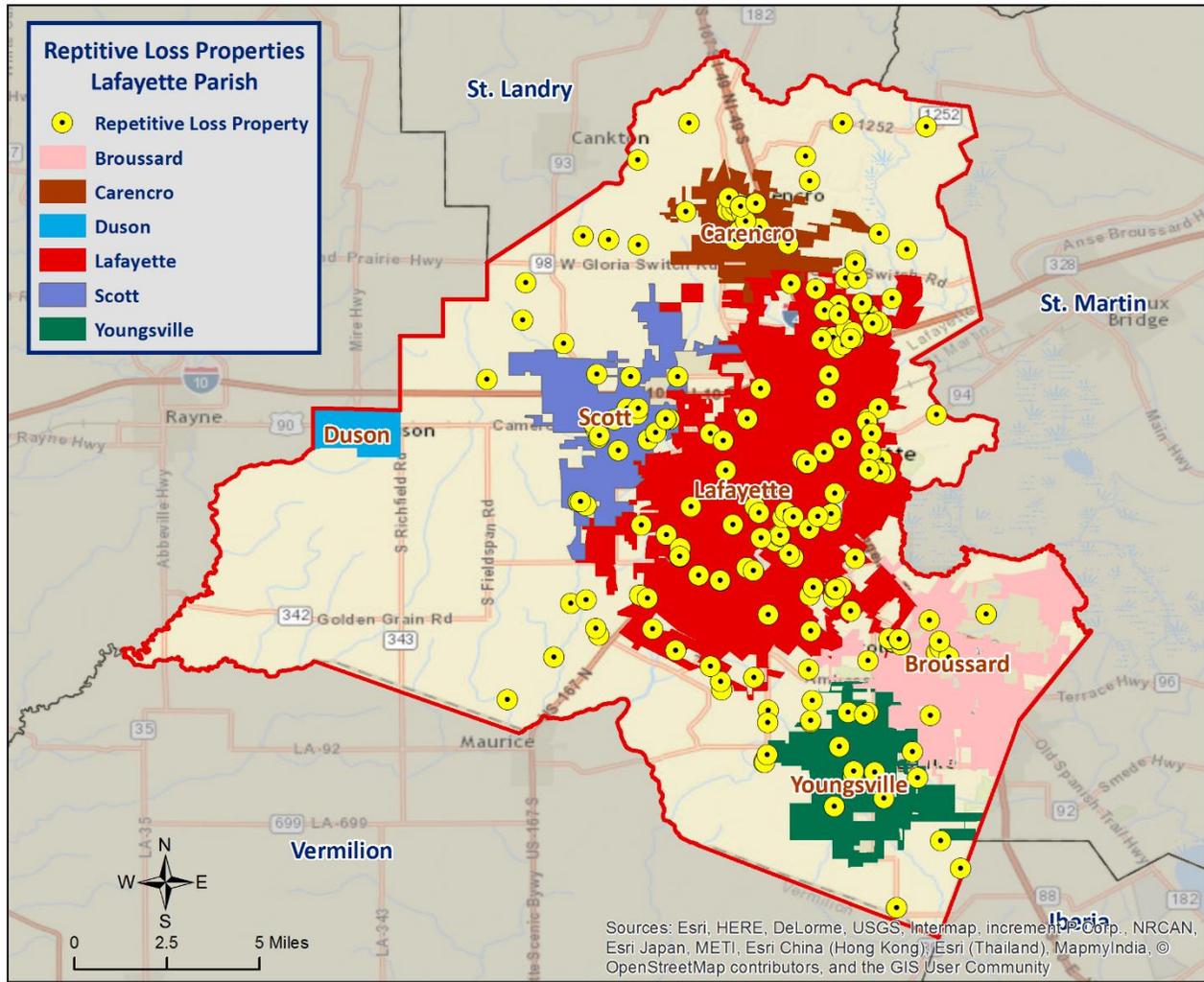


Figure 2-12: Repetitive Loss Properties in Lafayette Parish

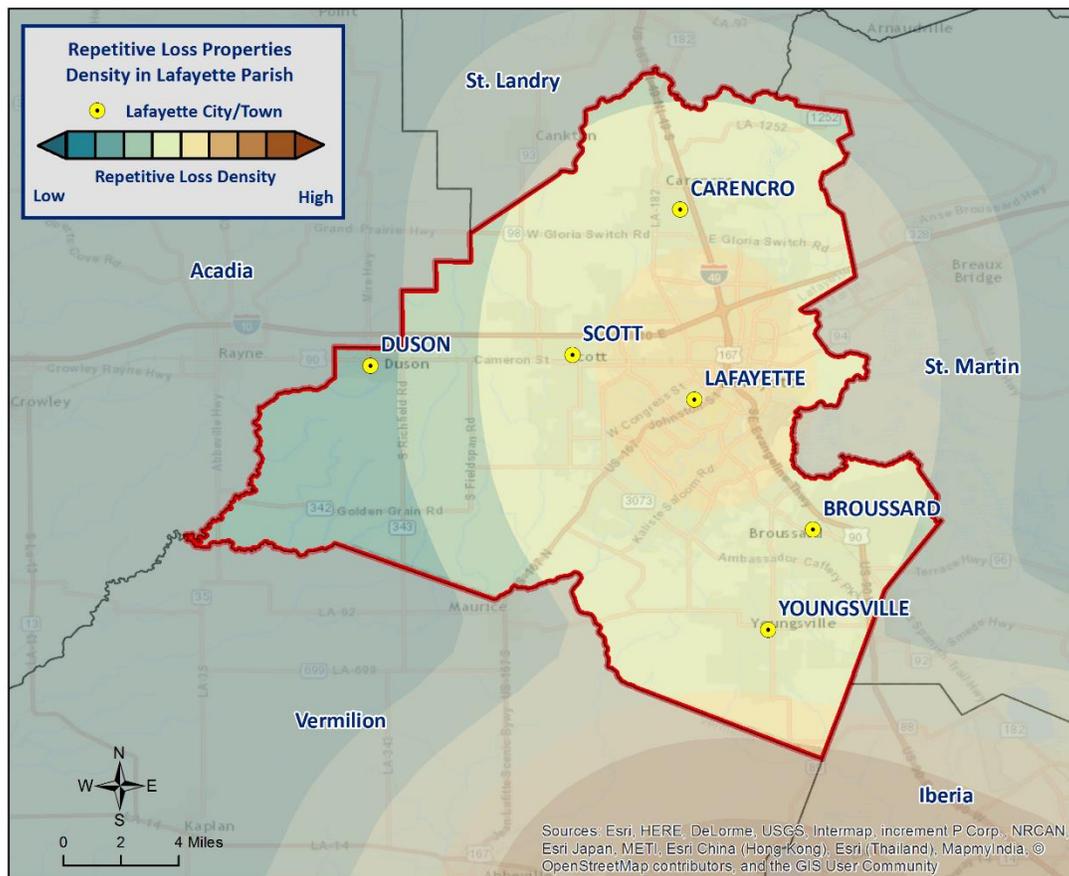


Figure 2-13: Repetitive Loss Property Densities in Lafayette Parish

National Flood Insurance Program

Flood insurance statistics indicate that Lafayette Parish has 15,636 flood insurance policies with the NFIP, with total annual premiums of \$9,081,049. Lafayette Parish, the cities of Broussard, Carencro, Lafayette, Scott, and Youngsville, and the town of Duson are all participants in the NFIP. Lafayette Parish and each of the incorporated jurisdictions will continue to adopt and enforce floodplain management requirements, including regulating new construction Special Flood Hazard Areas, and will continue to monitor activities including local requests for new map updates. Flood insurance statistics and additional NFIP participation details for Lafayette Parish are provided in the tables to follow.

Table 2-16: Summary of NFIP Policies for Lafayette Parish

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid	No. of Insurance Claims Filed Since 1978	Total Loss Payments
Lafayette Parish (Unincorporated)	7,642	\$1,911,069,700	\$4,086,394	1,501	\$18,735,715
Broussard	331	\$89,846,500	\$198,145	70	\$790,728
Carencro	341	\$72,055,400	\$161,709	225	\$4,198,222
Duson	0	\$0	\$0	0	\$0
Lafayette	6,063	\$1,537,422,200	\$3,720,149	1,050	\$9,365,550
Scott	890	\$168,861,200	\$724,852	149	\$1,016,888
Youngsville	369	\$106,176,700	\$189,800	45	\$899,259
Total	15,636	\$3,885,431,700	\$9,081,049	3,040	\$35,006,362

Table 2-17: Summary of Community Flood Maps for Lafayette Parish

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220101#	Unincorporated Lafayette Parish	11/15/1977	8/1/1980	1/20/1999	8/1/1980	No
220102#	Broussard, City of	4/12/1974	3/16/1988	11/4/2010	3/16/1988	No
220103#	Carencro, City of	3/26/1976	11/5/1980	1/19/1996	11/5/1980	No
220104#	Duson, Town of	4/5/1974	9/30/1981	11/26/2010	9/30/1981	No
220105#	Lafayette, City of	3/1/1974	9/30/1980	1/20/1999	9/30/1980	No
220106#	Scott, City of	6/14/1974	4/4/1983	1/20/1999	4/4/1983	No
220358#	Youngsville, City of	4/5/1974	3/30/1982	1/19/96 (M)	3/30/1982	No

According to the Community Rating System (CRS) list of eligible communities dated June 1, 2014, Lafayette Parish and the cities of Carencro, Lafayette, and Scott participate in the CRS, while the cities of Broussard and Youngsville, and the town of Duson do not participate.

Table 2-18: List of Areas within Lafayette Parish that Participate in the Community Rating System

Community Number	Name	CRS Entry Date	Current Effective Date	Current Class	% Discount for SFHA	% Discount for Non-SFHA	Status
220101	Lafayette Parish	10/1/2011	10/1/2011	8	10	5	C
220103	Carencro, City of	5/1/2009	5/1/2010	8	10	5	C
220105	Lafayette, City of	10/1/2011	10/1/2011	8	10	5	C
220106	Scott, City of	10/1/2012	10/1/2012	8	10	5	C

Threat to People

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

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

Flooding in Lafayette 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 Lafayette Parish experiences.

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

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

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

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

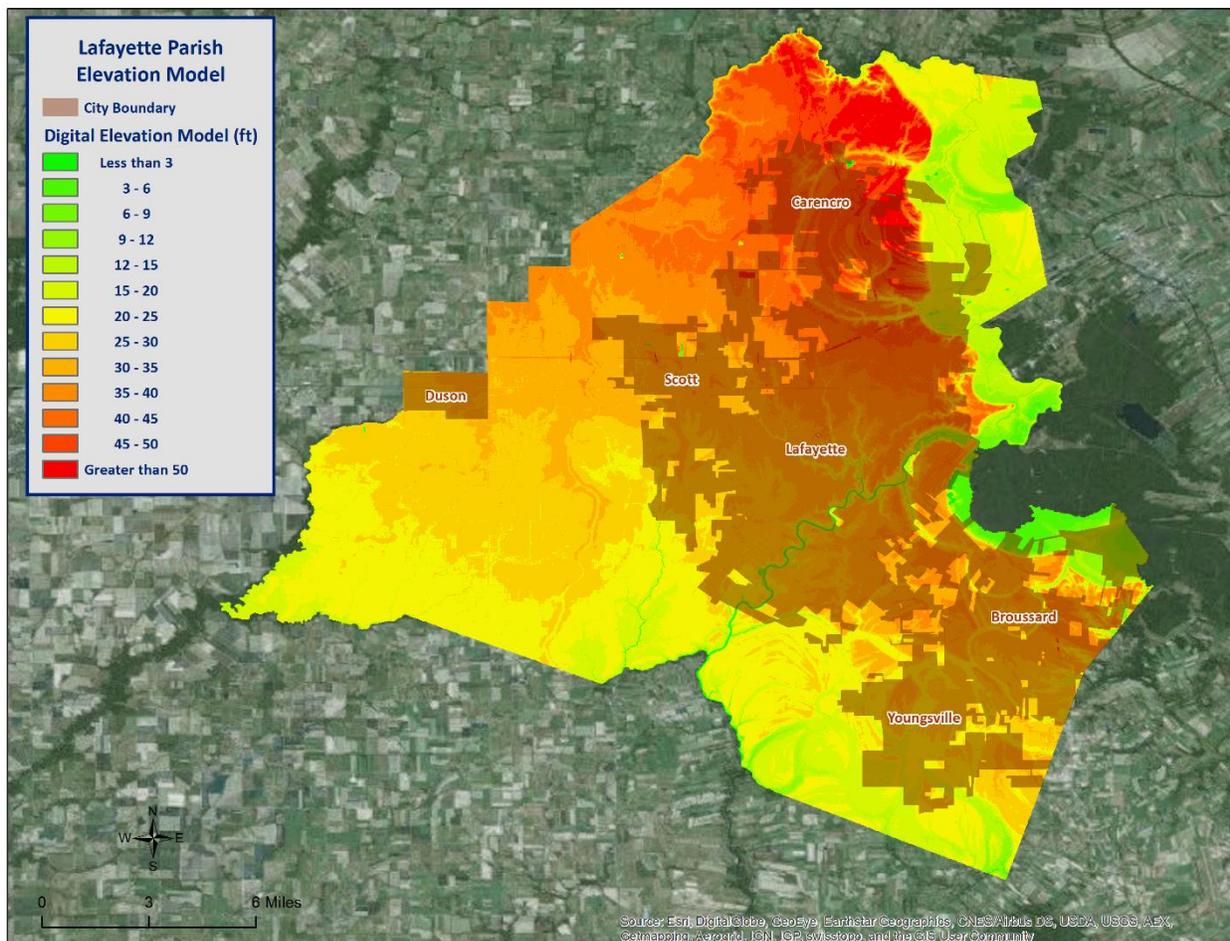


Figure 2-14: Elevation throughout Lafayette Parish

Looking at the digital elevation model (DEM) in the figure above for Lafayette Parish is instructive in visualizing where the low lying and high risk areas are for the parish. Elevations in the parish range from near sea level to 55 feet. The highest elevations in the parish are approximately 55 feet, located in the northern unincorporated areas of the parish and the incorporated area of Carencro. These higher elevations are sporadic throughout the parish and are not common for the majority of the area. The other incorporated areas range in elevation from 26 to 36 feet, with the incorporated areas of Scott, Duson, and Lafayette averaging 36 feet, the city of Broussard averaging 33 feet, and the city of Youngsville averaging 26 feet. The lowest elevations of the parish are located in the unincorporated areas in the southern and eastern portions of Lafayette Parish.

Location

Lafayette Parish has experienced significant flooding in its history and can expect more in the future. Many parts of the parish are located in the 100-year floodplain. The Vermilion River is the major waterway that winds its way through Lafayette Parish, and is the area's major stormwater drainage outfall being fed by Bayou Carencro, Bayou Queue de Tortue, Beau Basin, Coulee Bend, Grand Avenue Coulee, Coulee des Poches, Coulee Ile des Cannes, Coulee Mine, Francois Coulee, Gaston Coulee, and the Isaac Verot Coulee. The Vermilion River passes near several communities and across the Intracoastal Waterway before it empties into Vermilion Bay, which connects the Gulf of Mexico. Flooding along the Vermilion River leads to problems along Bayou Carencro and the Coulee Mine.

During high flood stages, an unusual phenomenon occurs on the Vermilion River. When the river below Pinhook Bridge is unable to carry high flows, the direction is reversed upstream toward the low marsh areas east of Lafayette Parish. This reversal is limited to the reach between Pinhook Bridge and Long Bridge where the left descending bank borders a low swamp area. When the stages downstream of Pinhook Bridge are relatively low, the direction of flow is in the normal downstream direction.

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

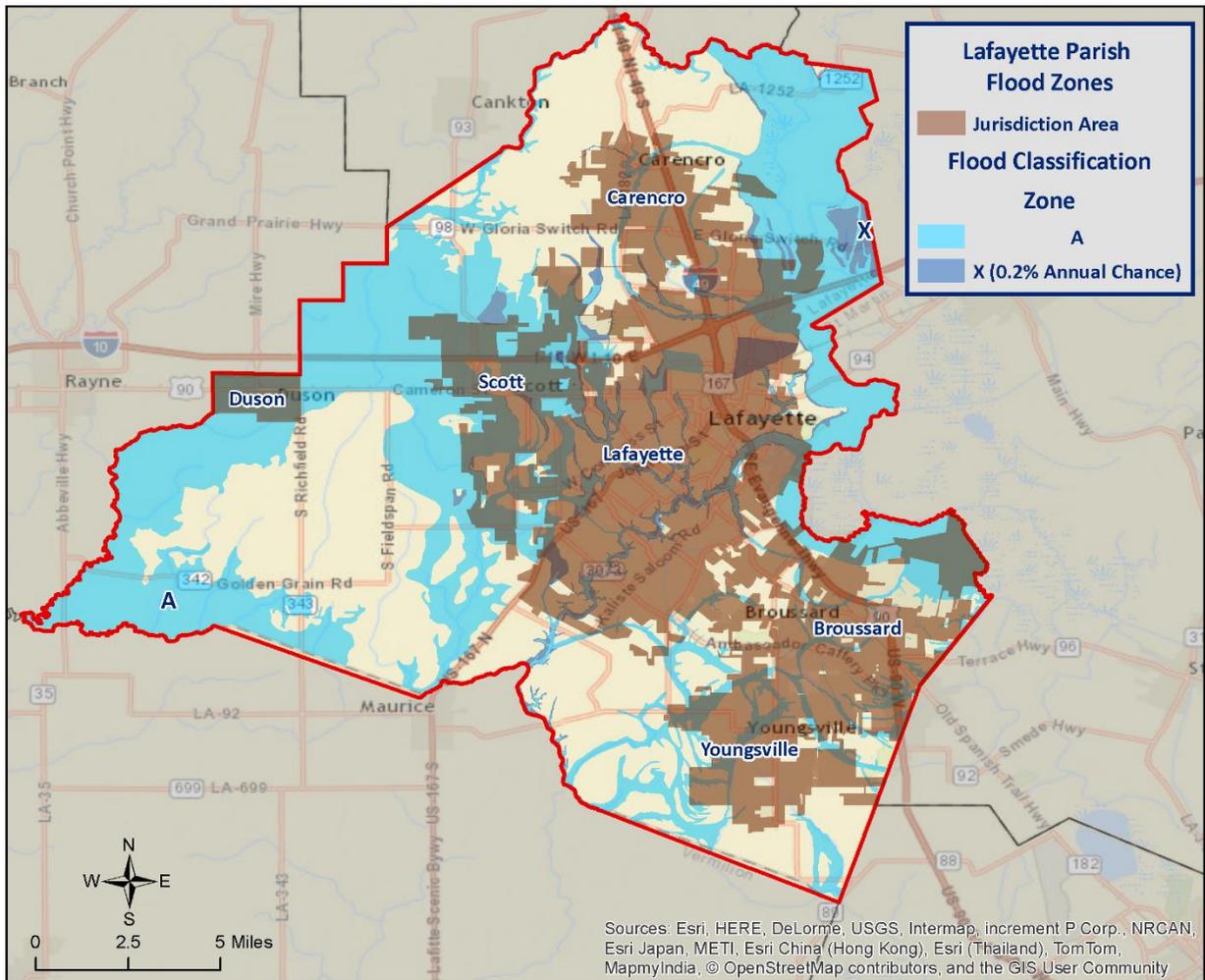


Figure 2-15: Lafayette Parish Areas within the Flood Zones

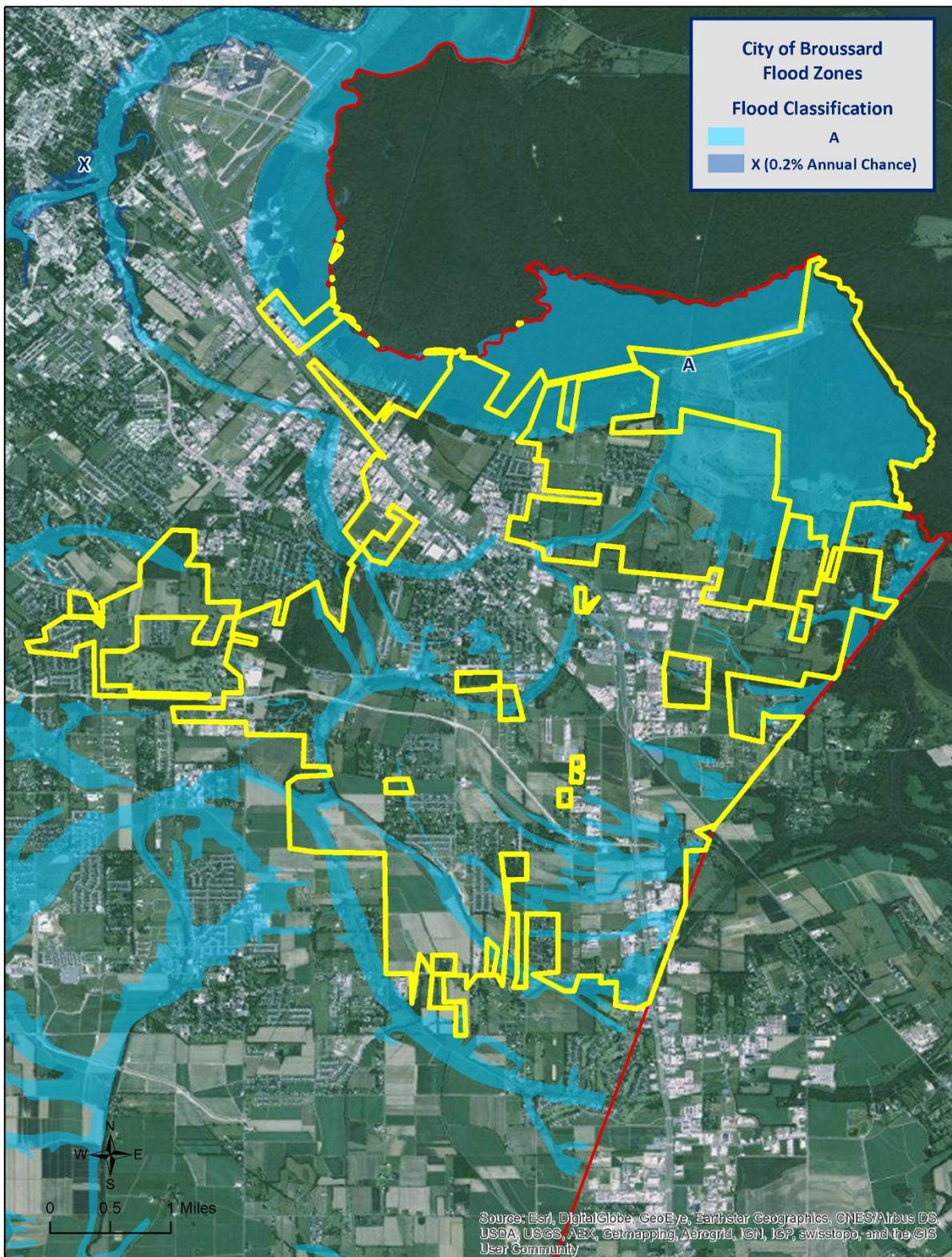


Figure 2-16: City of Broussard Areas within the Flood Zones

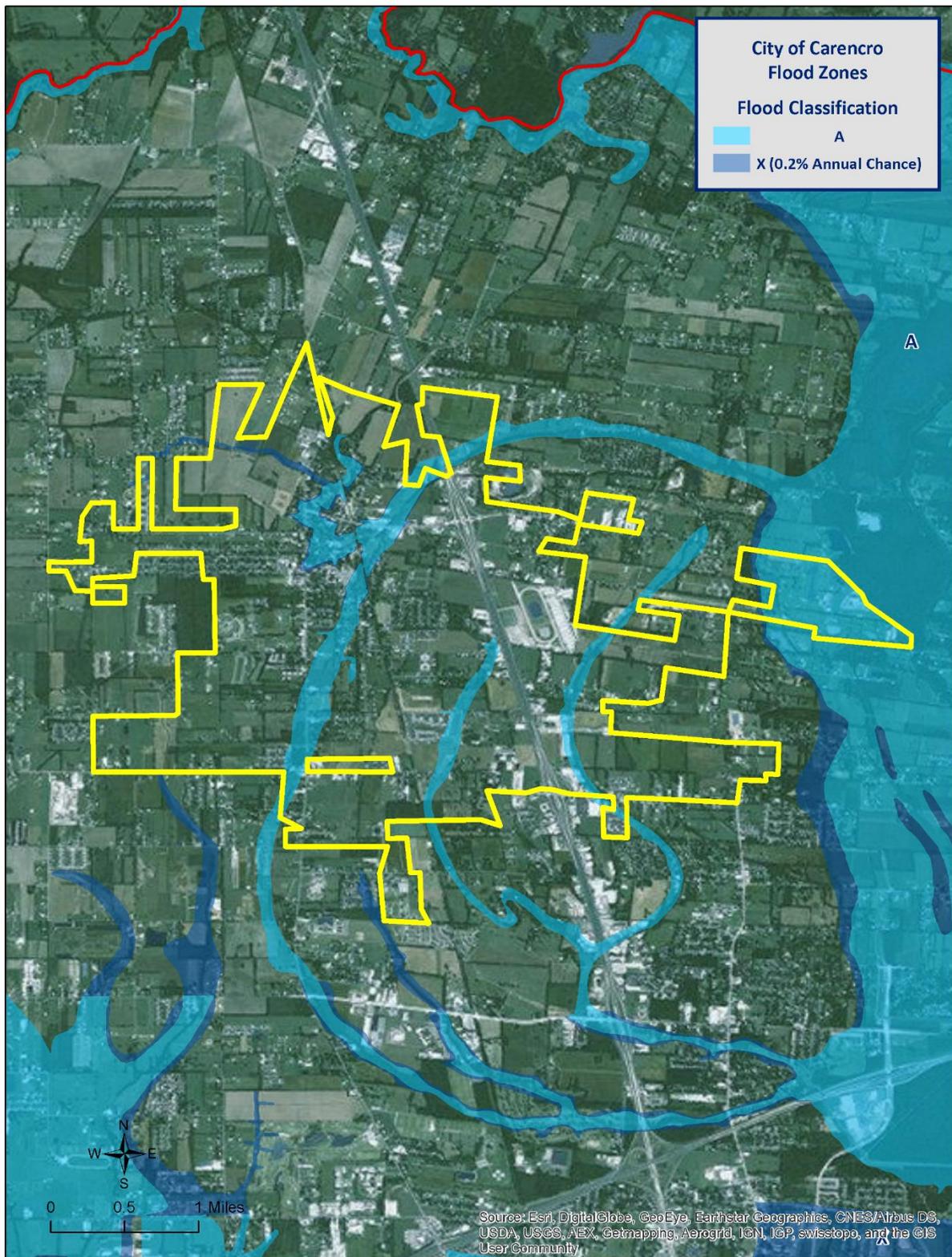


Figure 2-17: City of Carencro Areas within the Flood Zones

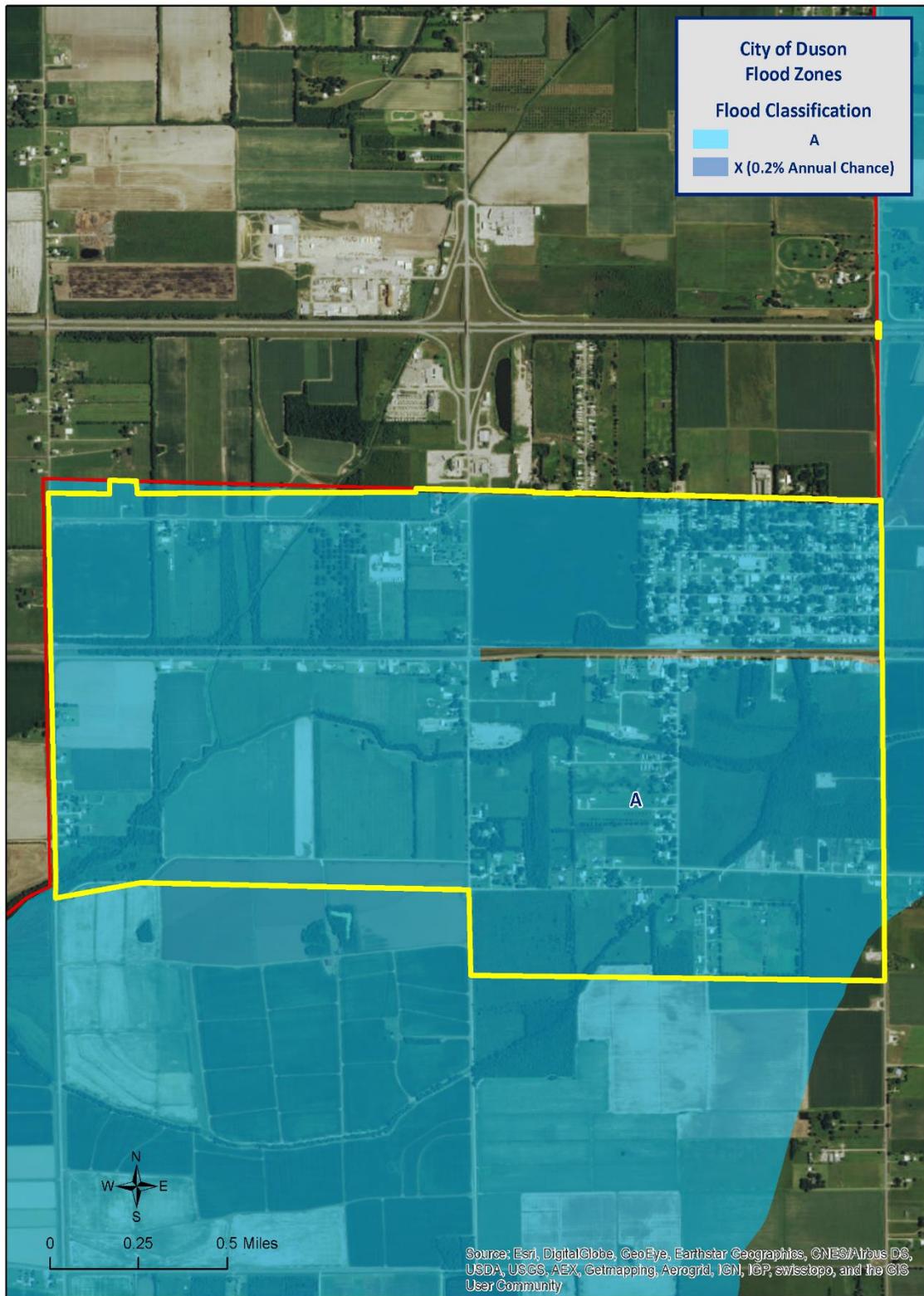


Figure 2-18: City of Duson Areas within the Flood Zones

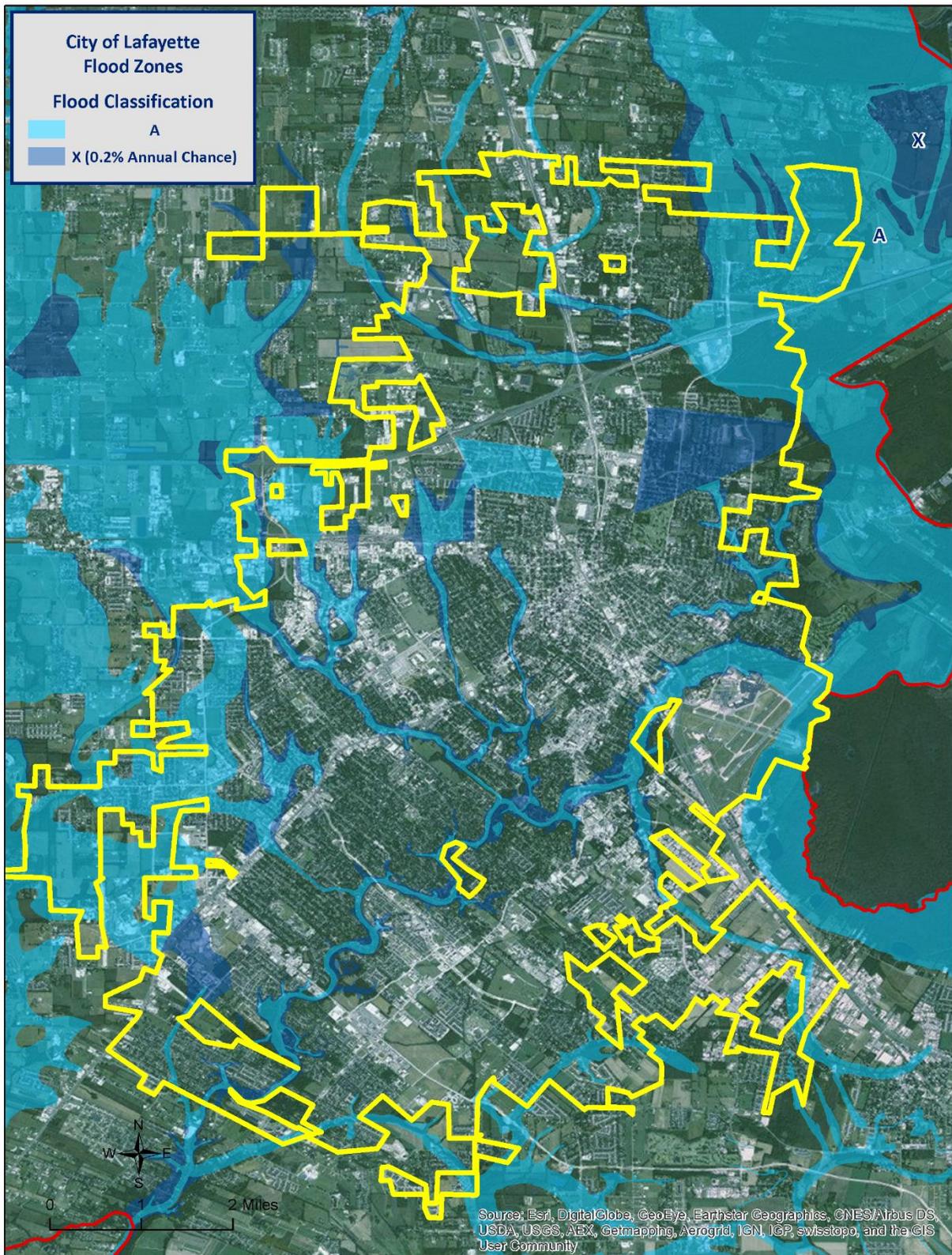


Figure 2-19: City of Lafayette Areas within the Flood Zones

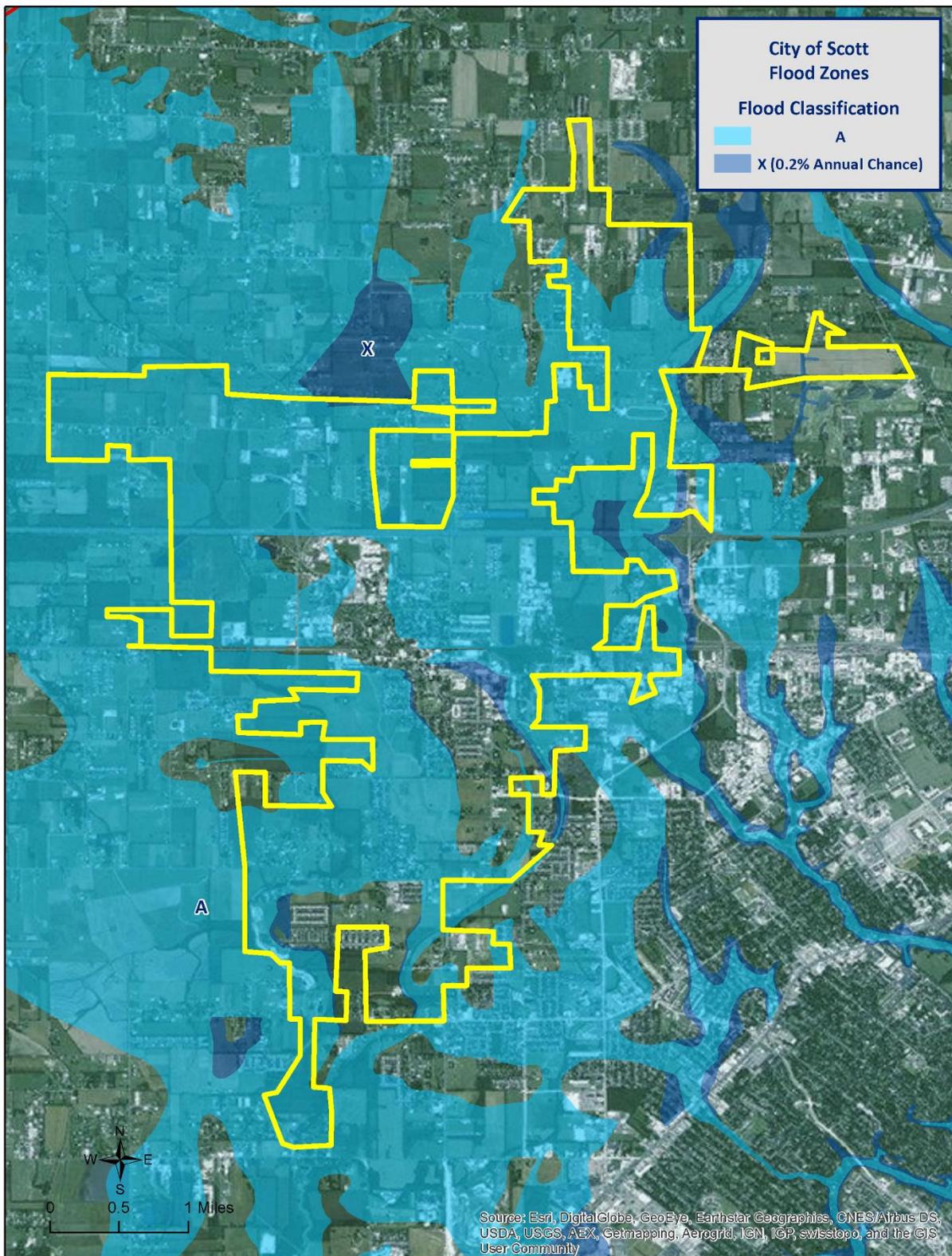


Figure 2-20: City of Scott Areas within the Flood Zones

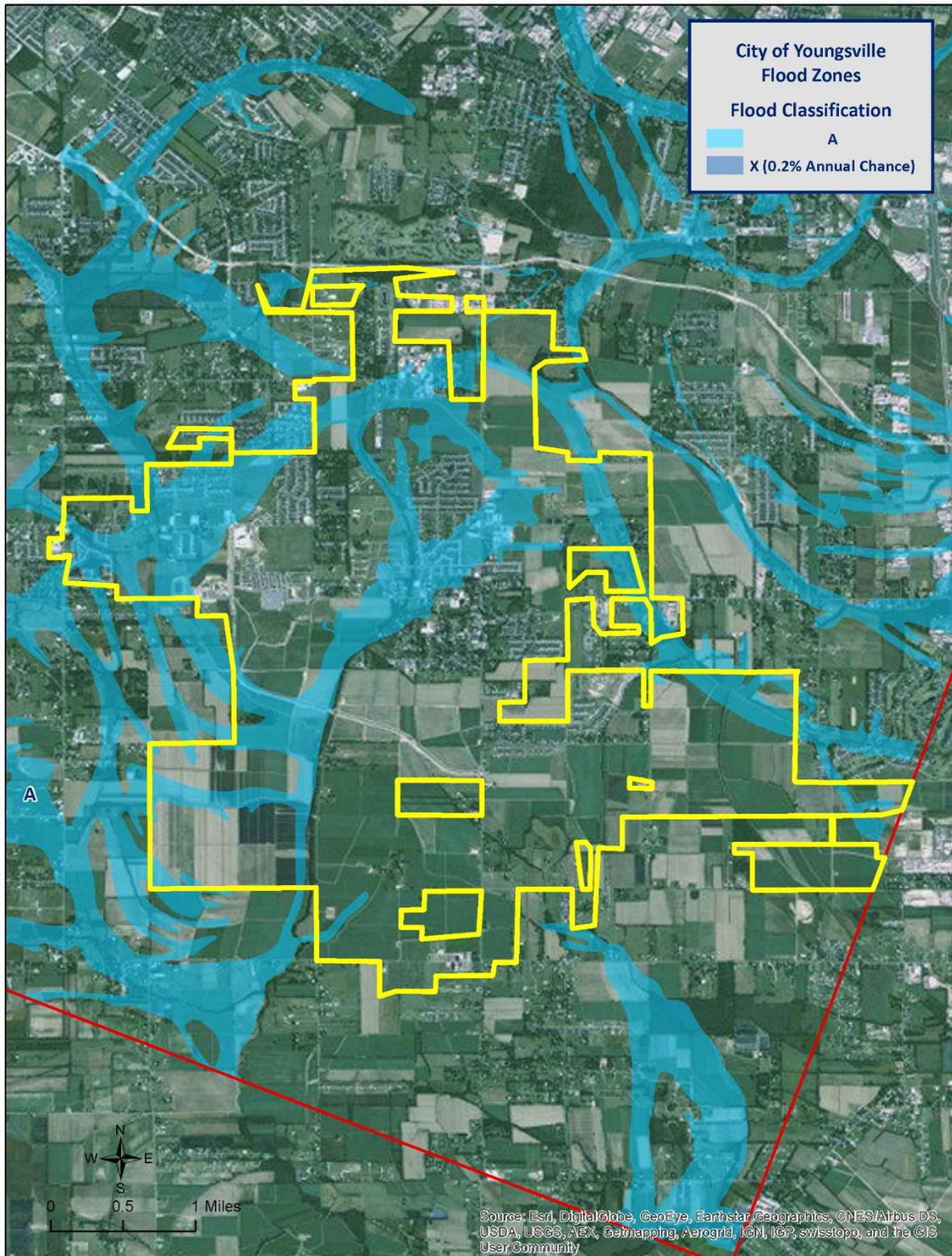


Figure 2-21: City of Youngsville Areas within the Flood Zones

Previous Occurrences / Extents

Historically, there have been 33 flooding events that have created significant flooding in Lafayette Parish between 1989 and 2014. The following page contains a brief synopsis of the 12 flooding events that have occurred since 2009, including flooding events that have occurred since the parish's last planning update.

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

Date	Extents	Type of Flooding	Estimated Damages	Location
July 17, 2009	Three inches of rainfall per hour was reported west of Youngsville that resulted in flash flooding. Several roads were completely underwater.	Flash Flood	\$0	UNINCORPORATED AREA
October 22, 2009	Severe thunderstorms caused flash floods in Scott and Lafayette. Widespread street flooding was reported. Verot School Road was completely underwater with water approaching the undercarriages of cars.	Flash Flood	\$10,000	SCOTT AND LAFAYETTE
October 11, 2010	Widespread street flooding was reported near Ossun Elementary School when 3 to 5 inches of rain fell in a 3 hour period. Widespread street flooding occurred along Interstate 10 near the Ambassador Caffery Road exit.	Flood	\$2,000	UNINCORPORATED AREA
March 12, 2012	A weak frontal boundary caused wide spread flooding in the Carencro area. 690 homes were flooded and 77 rescues were necessary to evacuate residents.	Flash Flood	\$164,000,000	CARENCRO
March 12, 2012	Localized street flooding occurred in unincorporated areas of the parish when a weak frontal boundary passed through the area.	Flood	\$0	UNINCORPORATED AREA

Date	Extents	Type of Flooding	Estimated Damages	Location
June 12, 2012	Three days of strong thunderstorms caused extensive flooding in the area. Ambassador Caffery Parkway, College Road, Bertand Drive, and Doucet Road were inundated with flood waters.	Flood	\$1,000	LAFAYETTE
August 11, 2012	Strong thunderstorms resulted in flooding. A bridge was washed out in the area due to heavy rain and flood waters.	Flash Flood	\$5,000	YOUNGSVILLE
December 25, 2012	Heavy rain flooded the Highway 90 west bound ramp from LA 182. A few cars were flooded due to deep water.	Flood	\$3,000	UNINCORPROATED AREA
January 9, 2013	Heavy rain fell on saturated ground during the 9 th and 10 th causing road closures in portions of the parish. Over 60 homes had flood waters enter them.	Flash Flood	\$22,500,000	UNINCORPORATED AREA
May 28, 2014	Heavy rain from a slow moving thunderstorm produced nearly a foot of rainfall. Several houses were flooded in the Carencro area.	Flash Flood	\$100,000	CARENCRO
June 10, 2014	Periods of heavy rain caused flooding in the area. Several streets and intersections were closed due to high water including Ambassador Caffery Parkway, Rue Fosse, Johnson Street, Taft Street, Vermillion Street, and Cornelius Drive.	Flood	\$0	UNINCORPORATED AREA
July 18, 2014	Two to four inches of rain caused flash floods in the area. Numerous roadways in Carencro were flooded.	Flash Flood	\$0	CARENCRO

Based on previous flood events, the worst-case scenarios are based on historical flooding events. Storm water excesses and riverine flooding primarily affect the low lying areas of the parish, and flood depths of up to five feet can be expected in the unincorporated areas of the parish. The incorporated areas of Lafayette, Carencro, and Scott can expect flood depths from three to five feet, while the incorporated areas of Broussard, Youngsville, and Duson 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 SHELUDS database to provide the annual probability, due to Lafayette Parish having multiple jurisdictions, it was necessary to assess the historical data found in the National Climatic Data Center's for Lafayette Parish and its jurisdictions to properly determine probability for future flood events. The table below shows the probability and return frequency for each jurisdiction.

Table 2-20: Annual Flood Probabilities for Lafayette Parish

Jurisdiction	Annual Probability	Return Frequency
Lafayette Parish (Unincorporated)	40%	2 – 5 years
Broussard	12%	8 – 9 years
Carencro	44%	2 – 3 years
Duson	12%	8 – 9 years
Lafayette	52%	1 – 2 years
Scott	20%	5 years
Youngsville	24%	4 – 5 years

Based on historical record, the overall flooding probability for the entire Lafayette Parish Planning area is 100% with 33 events occurring over a 25-year period.

Estimated Potential Losses

Using the Hazus 2.2 Flood Model, the 100-year flood scenario, along with the Parish DFIRM, 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 2-21: Estimated Losses in Lafayette Parish from a 100-year Flood Event
(Source: Hazus 2.2)*

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
Lafayette Parish (Unincorporated)	\$112,687,000
Broussard	\$25,786,000
Carencro	\$62,032,000
Duson	\$453,000
Lafayette	\$515,115,000
Scott	\$37,476,000
Youngsville	\$7,600,000
Total	\$761,149,000

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

*Table 2-22: Estimated 100-year Flood Losses for Unincorporated Lafayette Parish by Sector
(Source: Hazus 2.2)*

Lafayette Parish (Unincorporated)	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$283,000
Commercial	\$8,158,000
Government	\$57,000
Industrial	\$3,480,000
Religious / Non-Profit	\$501,000
Residential	\$100,008,000
Schools	\$200,000
Total	\$112,687,000

*Table 2-23: Estimated 100-year Flood Losses for Broussard by Sector
(Source: Hazus 2.2)*

Broussard	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$4,376,000
Government	\$0
Industrial	\$12,000
Religious / Non-Profit	\$0
Residential	\$21,398,000
Schools	\$0
Total	\$25,786,000

*Table 2-24: Estimated 100-year Flood Losses for Carencro by Sector
(Source: Hazus 2.2)*

Carencro	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$3,786,000
Government	\$0
Industrial	\$4,000
Religious / Non-Profit	\$81,000
Residential	\$58,141,000
Schools	\$20,000
Total	\$62,032,000

*Table 2-25: Estimated 100-year Flood Losses for Duson by Sector
(Source: Hazus 2.2)*

Duson	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$23,000
Government	\$0
Industrial	\$38,000
Religious / Non-Profit	\$0
Residential	\$392,000
Schools	\$0
Total	\$453,000

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

Lafayette	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$913,000
Commercial	\$156,661,000
Government	\$2,246,000
Industrial	\$23,540,000
Religious / Non-Profit	\$7,024,000
Residential	\$319,692,000
Schools	\$5,039,000
Total	\$515,115,000

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

Scott	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$11,000
Commercial	\$8,169,000
Government	\$0
Industrial	\$10,106,000
Religious / Non-Profit	\$332,000
Residential	\$18,051,000
Schools	\$807,000
Total	\$37,476,000

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

Youngsville	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$11,000
Commercial	\$16,000
Government	\$0
Industrial	\$15,000
Religious / Non-Profit	\$143,000
Residential	\$7,415,000
Schools	\$0
Total	\$7,600,000

Threat to People

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

Table 2-29: Vulnerable Populations Susceptible to a 100-year Flood Event
(Source: Hazus 2.2)

Number of People Exposed to Flood Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
Lafayette Parish (Unincorporated)	66,797	22,570	33.8%
Broussard	8,197	1,169	14.3%
Carencro	7,526	6,123	81.4%
Duson	1,716	101	5.9%
Lafayette	120,623	41,948	34.8%
Scott	8,614	6,847	79.5%
Youngsville	8,105	2,133	26.3%
Total	221,578	80,891	36.5%

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

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

Lafayette Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	22,570	33.8%
Persons Under 5 Years	1,535	6.8%
Persons Under 18 Years	5,394	23.9%
Persons 65 Years and Over	2,483	11.0%
White	15,889	70.4%
Minority	6,681	29.6%

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

Broussard		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,169	14.3%
Persons Under 5 Years	97	8.3%
Persons Under 18 Years	209	17.9%
Persons 65 Years and Over	108	9.2%
White	935	80.0%
Minority	234	20.0%

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

Carencro		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	6,123	81.4%
Persons Under 5 Years	503	8.2%
Persons Under 18 Years	1,067	17.4%
Persons 65 Years and Over	740	12.1%
White	3,274	53.5%
Minority	2,849	46.5%

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

Duson		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	101	5.9%
Persons Under 5 Years	9	8.6%
Persons Under 18 Years	20	19.4%
Persons 65 Years and Over	12	11.9%
White	70	68.8%
Minority	31	31.2%

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

Lafayette		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	41,948	34.8%
Persons Under 5 Years	2,546	6.1%
Persons Under 18 Years	6,594	15.7%
Persons 65 Years and Over	4,925	11.7%
White	26,754	63.8%
Minority	15,194	36.2%

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

Scott		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	6,847	79.5%
Persons Under 5 Years	525	7.7%
Persons Under 18 Years	1,191	17.4%
Persons 65 Years and Over	734	10.7%
White	5,388	78.7%
Minority	1,459	21.3%

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

Youngsville		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	2,133	26.3%
Persons Under 5 Years	196	9.2%
Persons Under 18 Years	460	21.6%
Persons 65 Years and Over	126	5.9%
White	1,915	89.8%
Minority	218	10.2%

Vulnerability

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

Land Subsidence

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

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

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

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

Subsidence results from a number of factors including:

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

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

Overall, subsidence creates three distinct problems in Louisiana:

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

Location

Historic areas of coastal land loss and gain (*Figure 2-22*) and subsidence rates (*Figure 2-23*) have been quantified for Lafayette Parish using data from the U.S. Geologic Survey and Louisiana Coastal Protection and Restoration Authority (CPRA). Since 1932, the average annual land loss in Louisiana is 35 mi², while the average annual land gain has been 3 mi² for a net loss of 32 mi² per year. However, the models reflect no measurable land loss or subsidence currently in Lafayette Parish (*Figure 2-22* and *Figure 2-23*).

Frequency / Probability

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

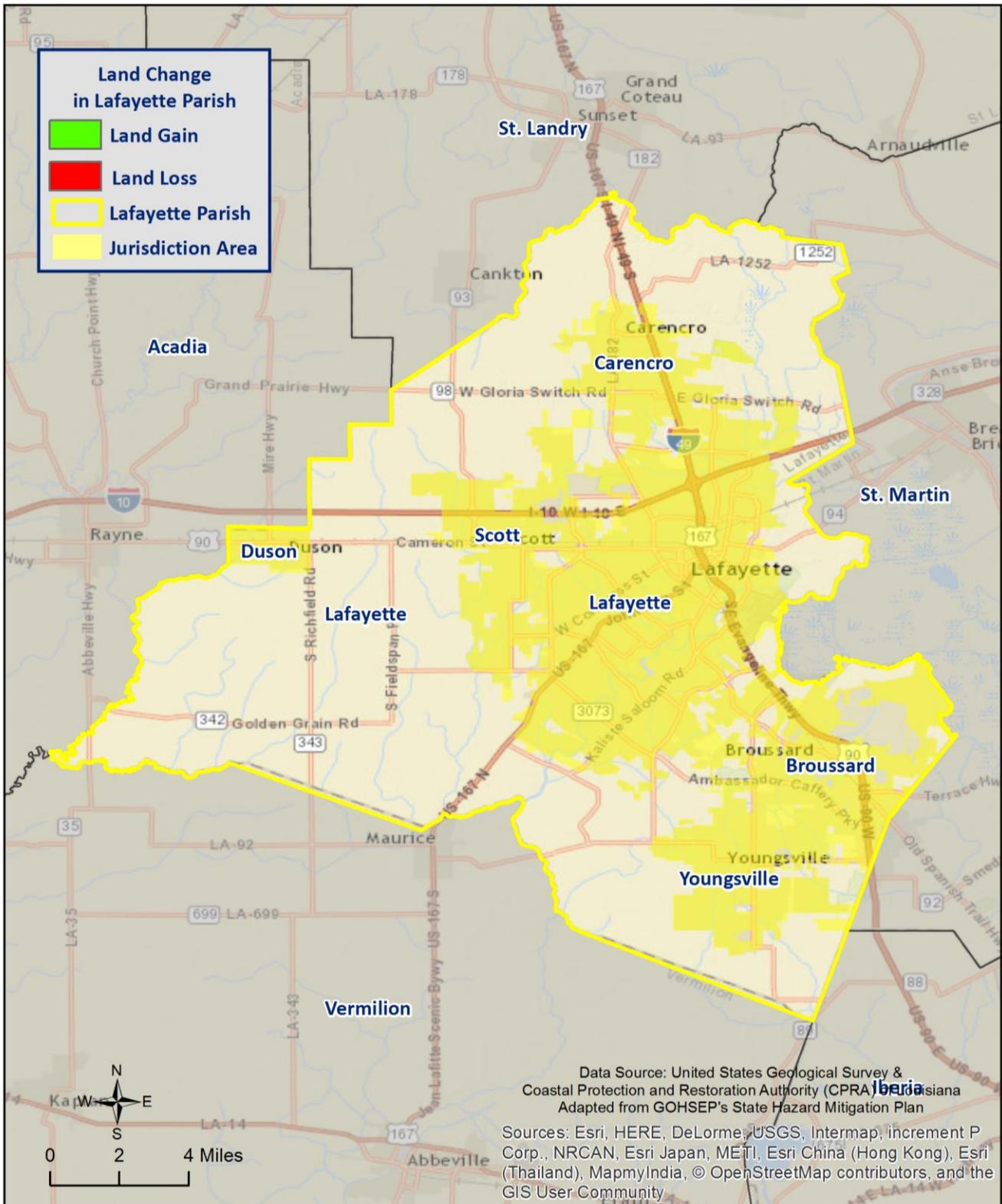


Figure 2-22: Historical Areas of Land Loss and Gain between 1932 and 2010
(Source: State of Louisiana Hazard Mitigation Plan)

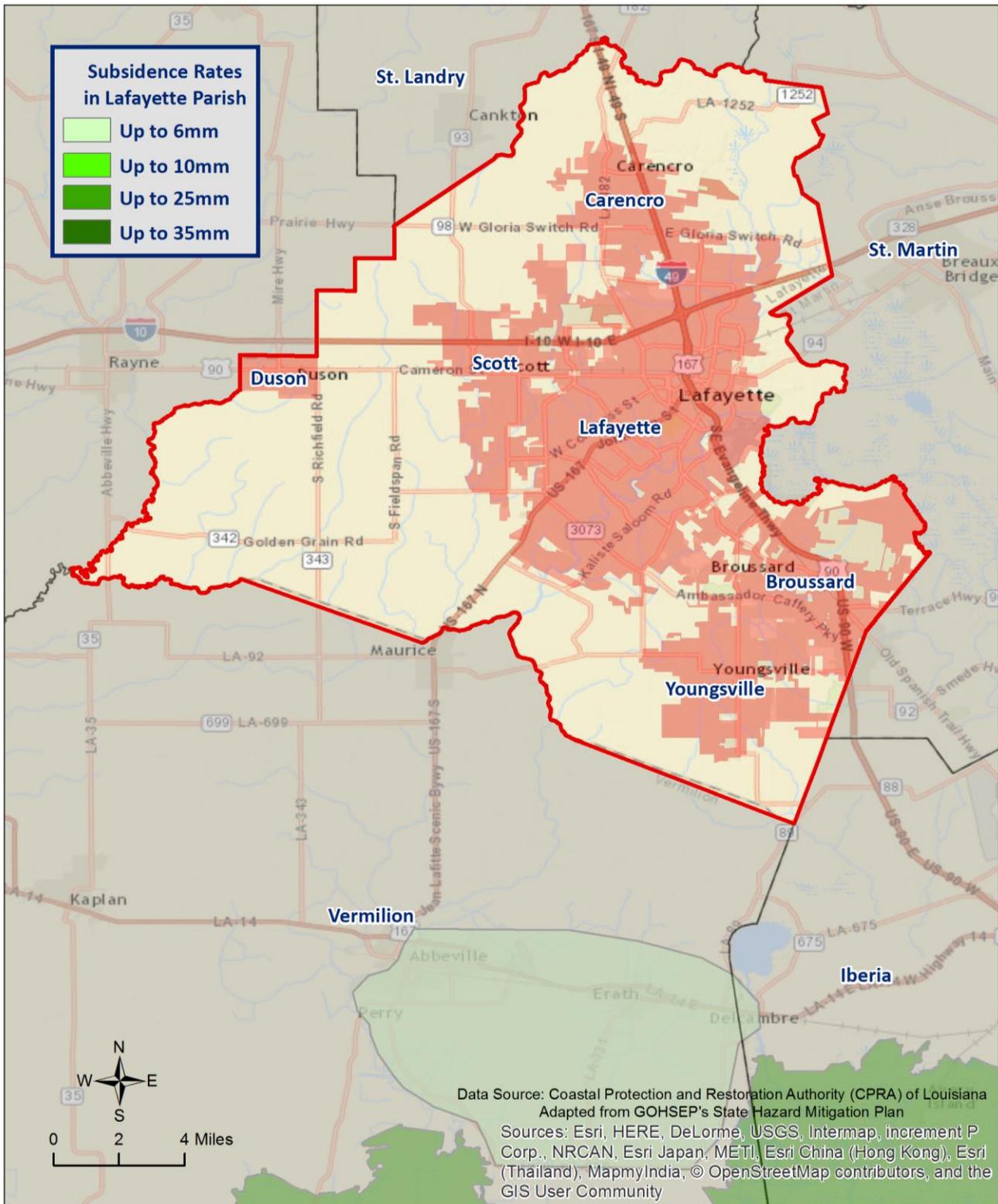


Figure 2-23: Maximum Annual Subsidence Rates Based on Subsidence Zones in Coastal Louisiana (Source: State of Louisiana Hazard Mitigation Plan)

Sinkholes

Sinkholes are areas of ground with no natural external surface drainage. They can vary in size from a few square feet to hundreds of acres, and can reach depths of more than 100 feet. Sinkholes are usually found in karst terrain—that is, areas where limestone, carbonate rock, salt beds, and other water-soluble rocks lie below the Earth’s surface. Karst terrain is marked by the presence of other uncommon geologic features, such as springs, caves, and dry streambeds that lose water into the ground. In general, sinkholes form gradually (in the case of cover-subsidence sinkholes), but they can also occur suddenly (in the case of cover-collapse sinkholes).

Sinkhole formation is a very simple process. Whenever water is absorbed through soil, it encounters water-soluble bedrock. The water then begins to dissolve the bedrock, forming sinkholes. The karst rock dissolves along cracks; as the fissures grow, soil and other particles fill the gaps, loosening the soil above the bedrock. *Figure 2-24* illustrates the development of a cover subsidence sinkhole. As the soil sinks from the surface, a depression forms, which draws in more water, funneling it down to the water-soluble rock. The increase of water and soil in the rock pushes open the cracks, again drawing more soil and water into it. This positive feedback loop continues, unless clay plugs into the cracks in the bedrock, at which time a pond may form. A sudden cover-collapse sinkhole occurs when the top soil above dissolving bedrock does not sink, but forms a bridge over the soil that is sinking beneath it. As *Figure 2-25* demonstrates, underground soil continues to fill the bedrock fissures, until finally the soil bridge collapses and fills the void beneath it.

Both kinds of sinkholes can occur naturally or through human influence. While sinkholes tend to form naturally in karst areas, sinkholes can form in other geological areas that have been altered by humans, by processes such as mining, sewers, hydraulic fracture drilling, groundwater pumping, irrigation, or storage ponds. In all of these cases, and others, the cause for the sinkhole is that support for surface soil has been weakened or substantially removed.

In the United States, 20% of the land is susceptible to sinkholes. Most of this area lies in Florida, Texas, Alabama, Missouri, Kentucky, Tennessee, and Pennsylvania. In Louisiana, most of the sinkholes are precipitated by the human-influenced collapse of salt dome caverns. The collapse of a salt dome is usually a slow process. However, it may occur suddenly and without any advance warning.

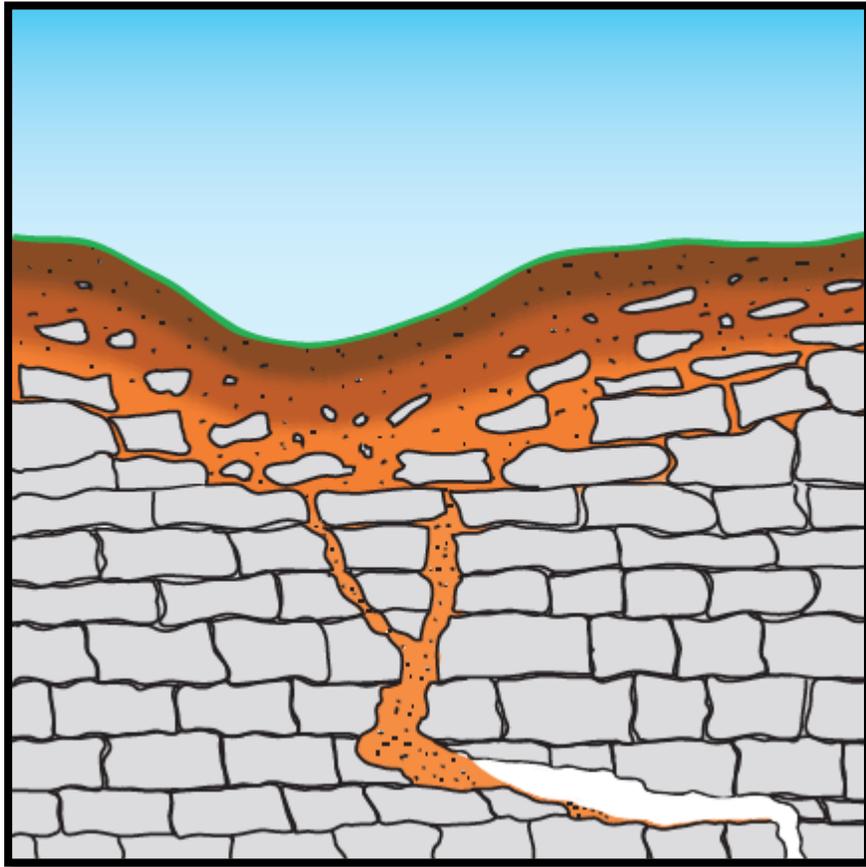


Figure 2-24: Cover-subsidence Sinkhole Formation from the Breaking Apart of Karst Bedrock by Soil Deposit (Courtesy of USGS Sinkholes Fact Sheet)

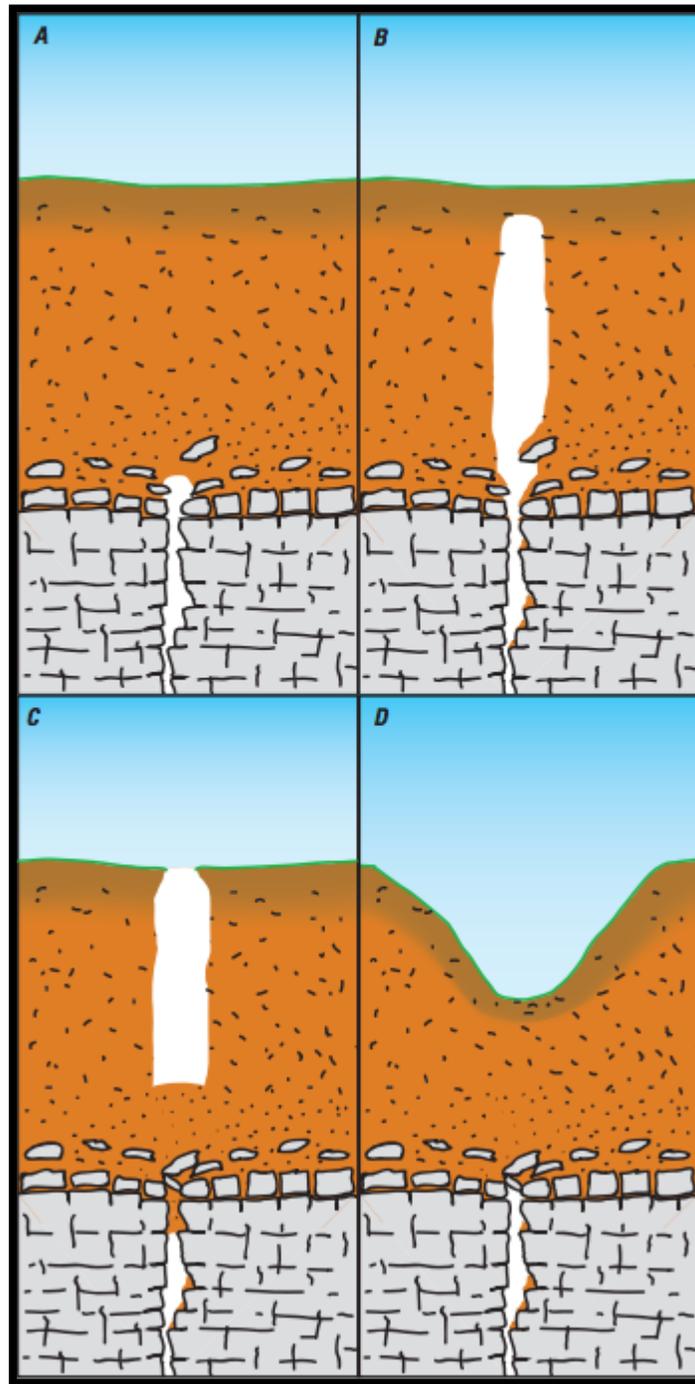


Figure 2-25: Formation of Cover-collapse Sinkhole after a Soil Bridge forms above Dissolving Bedrock (Courtesy of USGS Sinkhole Fact Sheet)

Location

Currently, there are no identifiable salt dome locations in Lafayette Parish; however, there are two salt domes in which their two mile buffer extends into Lafayette Parish. *Figure 2-26* displays the locations of these salt domes with their relative location to the nearest jurisdiction. As depicted in *Figure 2-26*, the salt domes are located outside of Lafayette Parish, but the mile buffer for Bosc Bosco and Anse la Butte Salt domes extend into the unincorporated area of Lafayette Parish.

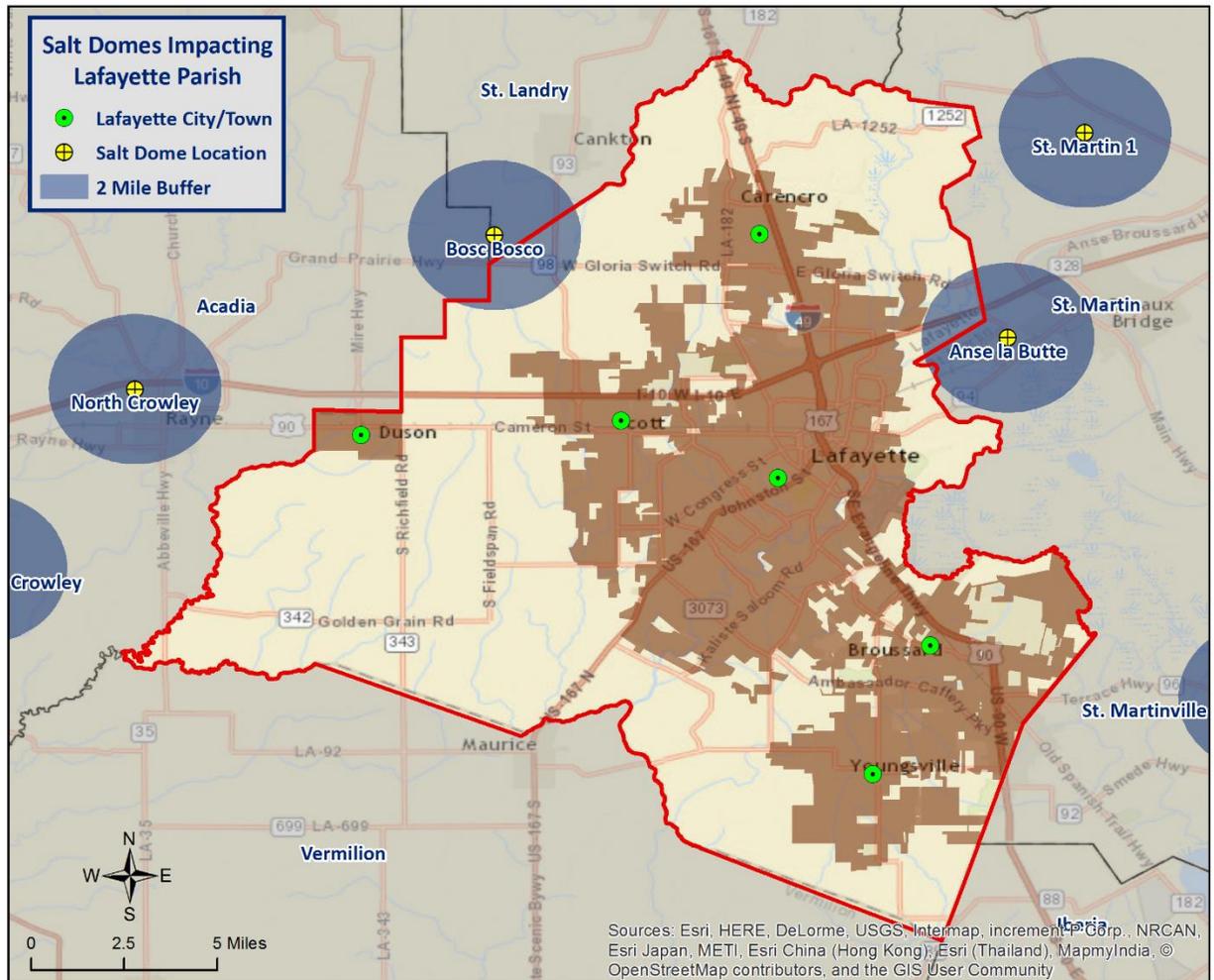


Figure 2-26: Salt Dome Locations in Lafayette Parish Relative to Jurisdictions

Previous Occurrences / Extents

There have been no recorded incidents of sinkholes or salt dome collapses in Lafayette Parish to date. Based on the State of Louisiana Hazard Mitigation Plan, sinkholes in the planning area would be anticipated to reach up to two square miles in size.

Frequency / Probability

Since there has been no recorded incidents of sinkhole or salt dome collapse in Lafayette Parish, the annual chance of occurrence is calculated at less than 1%.

Estimated Potential Losses

The Bosc Bosco Salt Dome and Anse la Butte Salt Dome were analyzed to determine the number of people and houses that are potentially susceptible to losses from a sinkhole materializing from one of the salt domes. The following tables are based on conducting a two mile buffer around the center of the salt dome. The values were determined by querying the 2010 U.S. Census block data to determine the number of houses and people located within two miles of each salt dome. Critical facilities were also analyzed to determine if they fell within the two mile buffer of a salt dome. Total value for all occupancy groups from Hazus 2.2 was used to estimate a total loss of all facilities that were within two miles of a salt dome.

The salt dome that poses the greatest risk to Lafayette Parish is the Bosc Bosco Salt Dome. The Bosc Bosco Salt Dome contains over \$36 million worth of buildings along with 907 homes and 341 residents within its two mile buffer.

*Table 2-37: Estimated Potential Losses from a Sinkhole Formation
(Source: U.S. 2010 Census Data and Hazus 2.2)*

Salt Dome Name	Total Building Exposure	Critical Infrastructure Exposure	Number of People Exposed	Number of Houses Exposed
Bosc Bosco	\$36,356,000	0	907	341
Anse la Butte	\$2,612,000	1	834	336

Due to the isolated locations of the sinkholes, there is little to no risk to people, with the exception being the residents within two miles of the Bosc Bosco Salt Dome and Anse la Butte Salt Dome.

Vulnerability

See Appendix C for parish and municipality building exposure to a sinkhole hazard.

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 means larger hailstone sizes. The tables on the following page displays a spectrum of hailstone diameters and their everyday equivalents along with the TORRO Hailstorm Intensity Scale.

Table 2-38: 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 2-39: 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 2-40: 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 2-41: Beaufort Wind Scale
(Source: NOAA's SPC)*

Beaufort Wind Scale			
Force	Wind (MPH)	WMO Classification	Appearance of Wind Effects on Land
			Calm, smoke rises vertically
1	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-7	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	8-12	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	13-17	Moderate Breeze	Dust, leaves, and loose paper lifted, small tree branches move
5	18-24	Fresh Breeze	Small trees in leaf begin to sway
6	25-30	Strong Breeze	Larger tree branches moving, whistling in wires
7	31-38	Near Gale	Whole trees moving, resistance felt walking against wind
8	39-46	Gale	Twigs breaking off trees, generally impedes progress
9	47-54	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	55-63	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	54-73	Violent Storm	N/A
12	74+	Hurricane	N/A

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

Lightning

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

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

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

Table 2-42: 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 Lafayette Parish is equally at risk for hailstorms.

Previous Occurrences / Extents

The SHELDUS database reports three significant hailstorm events occurring within the boundaries of Lafayette Parish between the years of 1989-2014. According to the National Climatic Data Center, hailstorm diameters experienced in Lafayette Parish have ranged from 0.75 inches to 2 inches since 1989. The most frequently recorded hail size has been 1.75 inch diameters. *Figure 2-27* displays the density of hailstorms in Lafayette Parish and adjacent parishes. Based on the National Climatic Data Center dataset,

Table 2-43 provides an overview of hailstorms that have impacted the Lafayette Parish Planning area since 1989. Lafayette Parish can expect to experience hail up to 2 inches in diameter for future events.

Since 2009, there have been no significant hailstorm events in the unincorporated area of Lafayette Parish or the incorporated areas of Broussard, Carencro, Duson, Lafayette, Scott, and Youngsville.

*Table 2-43: Previous Occurrences of Hailstorms in Lafayette Parish
(Source: NCDC)*

Date	Recorded Hail Size (inches)	Location
April 28, 1991	1.75	UNINCORPORATED AREA
May 5, 1991	1.75	UNINCORPORATED AREA
August 13, 1997	0.75	YOUNGSVILLE

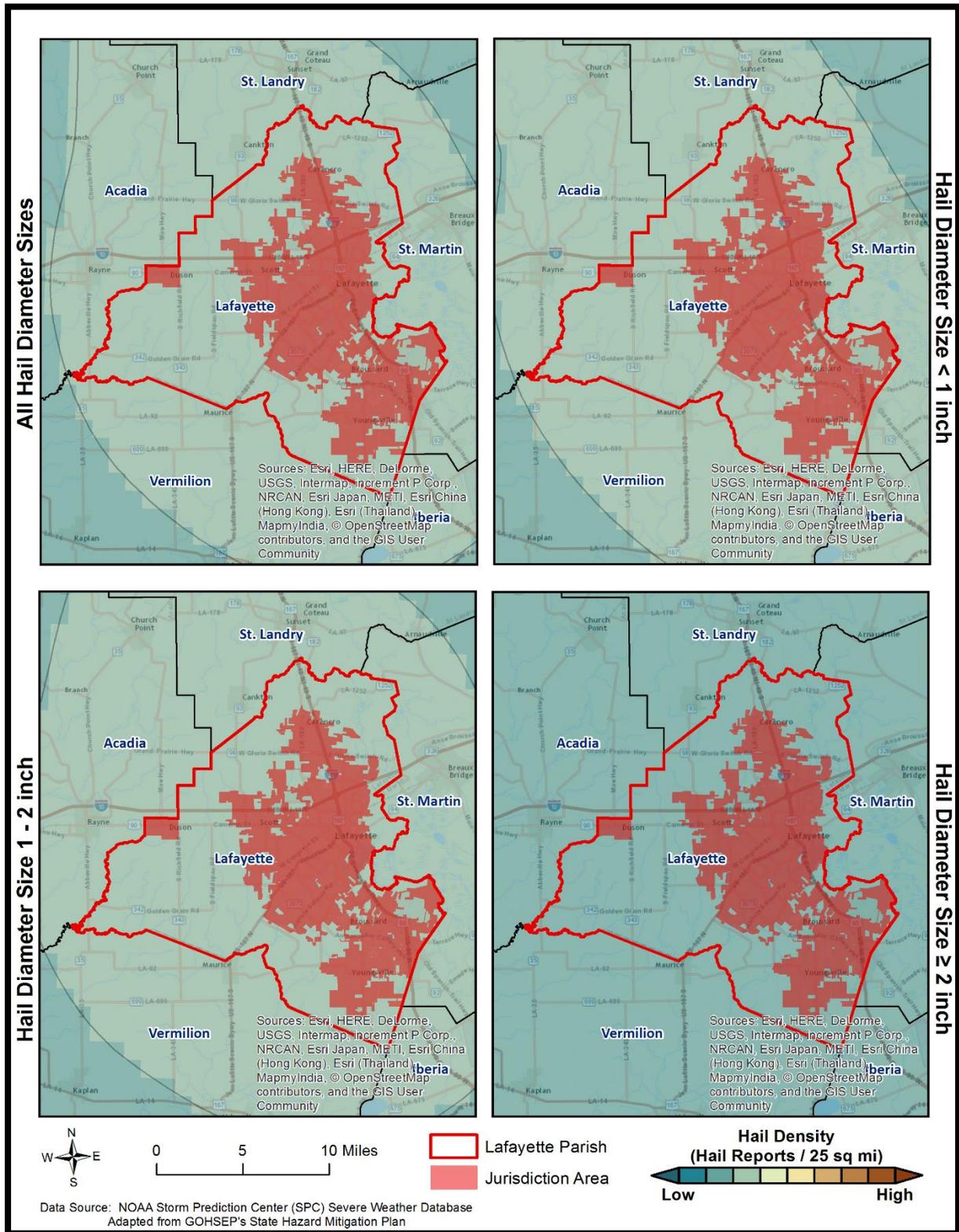


Figure 2-27: Density of Hailstorms by Diameter from 1950-2012
(Source: State of Louisiana Hazard Mitigation Plan 2014)

Frequency

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

Estimated Potential Losses

According to the SHELDUS database, property damage due to hailstorms in Lafayette Parish have totaled approximately \$5,779 since 1989. A list of total damages by event can be found in [Table 2-44](#). To estimate the potential losses of a hail event on an annual basis, the total damages recorded for wind events was divided by the total number of years of available wind data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of \$231. [Table 2-45](#) provides an estimate of potential property losses for Lafayette Parish.

*Table 2-44: Property Damage Caused by Hailstorms in Lafayette Parish
(Source: SHELDUS)*

Date	Property Damage
April 1991	\$86
May 1991	\$855
August 1997	\$4,838

Table 2-45: Estimated Annual Property Losses in Lafayette Parish from Hailstorms

Estimated Annual Potential Losses from Hailstorms for Lafayette Parish						
Unincorporated Lafayette Parish (30.1% of Population)	Broussard (3.7% of Population)	Carencro (3.4% of Population)	Duson (0.8% of Population)	Lafayette (54.4% of Population)	Scott (3.9% of Population)	Youngsville (3.7% of Population)
\$70	\$9	\$8	\$2	\$126	\$9	\$8

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

Previous Occurrences / Extents

The SHELDUS database reports a total of 57 thunderstorm wind events occurring within the boundaries of Lafayette Parish between the years of 1989 to 2014. The significant thunderstorm wind events experienced

in Lafayette Parish have ranged in wind speed from 46 mph to 75 mph. Lafayette Parish can expect to receive thunderstorm winds up to 75 mph for future high wind events.

Table 2-46: Previous Occurrences for Thunderstorm High Wind Events in Lafayette Parish

Location	Date	Recorded Wind Speeds (mph)	Property Damage	Crop Damage
DUSON	March 25, 2009	58	\$2,715	\$0
YOUNGSVILLE	March 25, 2009	58	\$13,573	\$0
SCOTT	December 24, 2009	49	\$5,342	\$0
CARENCRO	April 14, 2010	60	\$1,068	\$0
DUSON	May 26, 2010	60	\$1,068	\$0
LAFAYETTE	June 4, 2010	60	\$534	\$0
SCOTT	April 4, 2011	60	\$2,589	\$0
BROUSSARD	July 1, 2011	58	\$2,589	\$0
(LFT) LAFAYETTE RGNL	August 18, 2011	73	\$2,589	\$0
LAFAYETTE	July 3, 2012	70	\$1,015	\$0
BROUSSARD	November 5, 2012	58	\$1,015	\$0
SCOTT	December 25, 2012	58	\$1,015	\$0

Frequency

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

Estimated Potential Losses

Since 1989, there have been 57 significant wind events that have resulted in property damages according to the SHELDUS database. The total property damages associated with those storms have totaled \$35,112. To estimate the potential losses of a wind event on an annual basis, the total damages recorded for wind events was divided by the total number of years of available wind data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of \$1,404. The following table provides an estimate of potential property losses for Lafayette Parish:

Table 2-47: Estimated Annual Property Losses in Lafayette Parish Resulting from Wind Damage

Estimated Annual Potential Losses from Thunderstorm Winds for Lafayette Parish						
Unincorporated Lafayette Parish (30.1% of Population)	Broussard (3.7% of Population)	Carencro (3.4% of Population)	Duson (0.8% of Population)	Lafayette (54.4% of Population)	Scott (3.9% of Population)	Youngsville (3.7% of Population)
\$423	\$52	\$48	\$11	\$765	\$55	\$51

There has been one reported injury and one reported fatality as a result of thunderstorm wind over the 25 year record. The injury occurred on August 14, 2007 when winds overturned a trailer and injured the inhabitant of the trailer. The fatality occurred on December 24, 2009 when a large rotten tree fell due to high wind onto a mobile home.

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 Lafayette Parish.

Previous Occurrences / Extents

The SHELDUS database reports a total of nine lightning events occurring within the boundaries of Lafayette Parish between the years of 1989-2014. The SHELDUS database only records lightning events that cause death, injuries, crop damage, and/or property damage, so these numbers do not accurately reflect the number of lightning events in Lafayette Parish, which occur on a nearly monthly basis. The planning area can expect to have a lightning density of 9-10 flash/sq. mile/year. The table below provides an overview of significant lightning strikes over the last five years:

*Table 2-48: Previous Occurrences of Significant Lightning Strikes in Lafayette Parish from 2009 – 2014
(Source: NCDC and SHELDUS)*

Location	Date	Summary	Property Damage
LAFAYETTE	June 2, 2009	KLFY-TV reported lightning struck their TV tower and briefly knocked the station off the air.	\$1,086
LAFAYETTE	June 2, 2009	KATC-TV reported a lightning strike caused significant damage to electronic equipment in their studio.	\$10,859
LAFAYETTE	July 6, 2009	Two homes were struck by lightning in Lafayette and both were set on fire.	\$10,859
PITETTE	August 23, 2010	Scattered thunderstorms produced lightning which struck and destroyed a home.	\$160,250
(LFT) LAFAYETTE RGNL	December 29, 2010	A lightning strike started a fire that completely destroyed the home of	\$5,341,678

Location	Date	Summary	Property Damage
		professional tennis star Chanda Rubin.	
SCOTT	August 18, 2011	A ham radio operator reported a trailer was struck by lightning and was on fire.	\$10,356
DUSON	December 25, 2012	A lightning strike ignited a 90-barrel storage tank battery.	\$2,029

Since 2009, there have been no lightning events that have caused property damage or loss of life in the incorporated areas of Broussard, Carencro, and Youngsville.

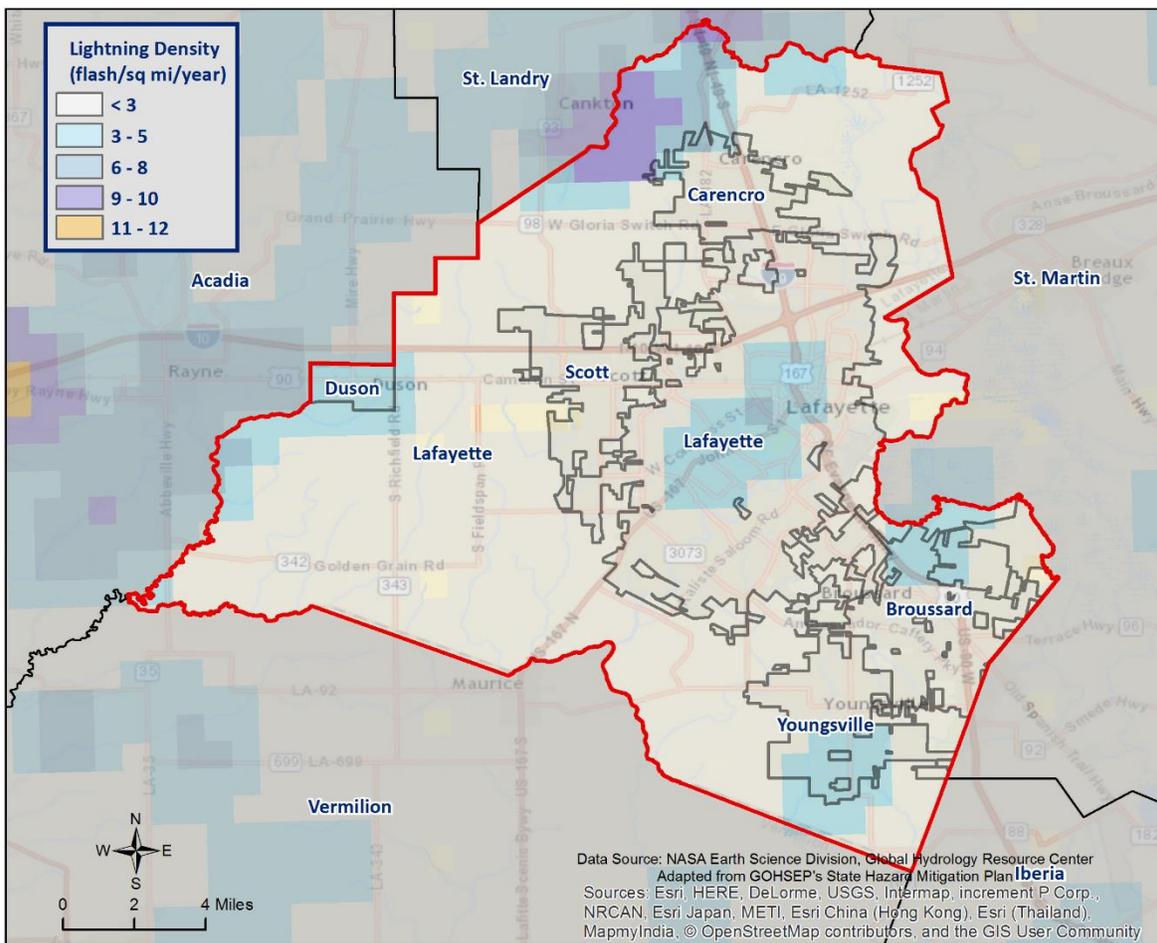


Figure 2-28: Lightning Density Reports for Lafayette Parish

Frequency

Lightning can strike anywhere and is produced by every thunderstorm, so the chance of lightning occurring in Lafayette 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 nine lightning events that have caused property damages or injuries over the last 25 years, establishing an annual probability of 36%.

Estimated Potential Losses

Since 1989, there have been nine significant lightning events that have resulted in property damages according to the SHELDUS database. The total property damages associated with lightning events totaled \$5,574,236. To estimate the potential losses of a lightning event on an annual basis, the total damages recorded for lightning events was divided by the total number of years of available major lightning strike data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of \$222,969. The following table provides an estimate of potential property losses for Lafayette Parish:

Table 2-49: Estimated Annual Property Losses in Lafayette Parish from Lightning

Estimated Annual Potential Losses in Lafayette Parish from Lightning						
Unincorporated Lafayette Parish (30.1% of Population)	Broussard (3.7% of Population)	Carencro (3.4% of Population)	Duson (0.8% of Population)	Lafayette (54.4% of Population)	Scott (3.9% of Population)	Youngsville (3.7% of Population)
\$8,905	\$334	\$309	\$7,424	\$2,105	\$331	\$471

There has been one reported injury in Lafayette Parish as a result of a lightning strike over the 25 year record. On August 23, 2002, a 60 year old man in Youngsville was struck by lightning.

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 2-50* 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 2-50: 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 2-51: 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 Lafayette Parish with actual locations, tornadoes in general are a climatological based hazard and have the same approximate probability of occurring in Lafayette Parish as all of its jurisdictions. Because a tornado has a similar probability of striking anywhere within the planning area for Lafayette Parish, all jurisdictions are equally at risk for tornadoes.

Previous Occurrences / Extents

SHELDUS reports a total of 18 tornadoes or waterspouts occurring within the boundaries of Lafayette Parish between the years of 1989-2014. The tornadoes experienced in Lafayette Parish have from ranged EF0 to EF2 on the EF scale, and ranged from F0 to F3 on the F scale. The worst case scenario Lafayette Parish can expect in the future is an EF3 tornado.

The tornado that caused the most damage to property occurred on March 2, 1988. A line of thunderstorms moving eastward across southern Louisiana produced a F1 tornado that touched down at the airport damaging or destroying 35 light aircraft and three hangars. Minor damage was sustained to an industrial

park just south of the airport. The F1 tornado was responsible for over \$25 million in damage. The tornado responsible for the most injuries and fatalities occurred on November 7, 1957. The F1 tornado injured 13 people and caused 2 fatalities.

Table 2-52: Historical Tornadoes in Lafayette Parish with Locations from 1989-2014

Date	Impacts	Property Damage	Location	Magnitude
May 15, 1991	0.2 mile path with a width of 20 yards. A small tornado damaged two mobile homes near Lafayette	\$85,520	UNINCORPORATED AREA	F0
January _12, 1992	2 mile path with a width of 23 yards. A tornado destroyed one mobile home and heavily damaged five others in the town of Broussard.	\$83,021	UNINCORPORATED AREA	F1
June 13, 1992	6 mile path with a width of 60 yards. A tornado destroyed a mobile home and blew a couple of homes off their foundations.	\$83,021	UNINCORPORATED AREA	F2
January 6, 1995	5 mile path with a width of 30 yards. Tornado touched down twice destroying a mobile home and injuring eight people, one with a broken collarbone.	\$107,001	DUSON to SCOTT	F1
November 21, 1997	3 mile path with a width of 200 yards. 37 homes and 14 mobile homes received damage. The Lafayette Utilities System power plant was heavily damaged.	\$5,080,059	LAFAYETTE	F1
September 11, 1998	1 mile path with a width of 10 yards. A tornado on the outer rainband of Tropical Storm Frances damaged 12 homes near Youngsville, six of which were considered major.	\$142,918	YOUNGSVILLE	F0
September 12, 1998	1 mile path with a width of 10 yards. A small tornado associated with the remnants of TS Frances damaged roofs	\$71,459	LAFAYETTE	F0

Date	Impacts	Property Damage	Location	Magnitude
	and trees in western Lafayette.			
October 3, 2002	1 mile path with a width of 20 yards. A tornado associated with Hurricane Lili blew down a few trees and power lines.	\$32,373	LAFAYETTE	F0
October 3, 2002	1 mile path with a width of 10 yards. A weak tornado damaged a TV station studio. Other homes and businesses had damage from trees.	\$1,294,925	LAFAYETTE	F0
October 3, 2002	1 mile path with a width of 10 yards. Damage was confined to trees blown down and barn roofs ripped off.	\$12,949	LAFAYETTE	F0
January 25, 2004	1 mile path with a width of 10 yards. Destroyed two brick homes and two mobile homes. Damaged at least 15 other homes and businesses.	\$1,233,229	LAFAYETTE	F2
December 9, 2004	7 mile path with a width of 50 yards. At least half a dozen homes were damaged from Ridge to Scott.	\$308,307	RIDGE	F1
April 29, 2006	0.2 mile path with a width of 10 yards. Several oak trees split in half and a mobile home flipped over. Several homes were damaged by flying debris	\$57,777	LAFAYETTE	F0
February 13, 2007	2.16 mile path with a width of 50 yards. Two homes received significant roof damage. One home had its garage destroyed which caused part of the roof to be ripped off. 33 homes were damaged.	\$280,885	YOUNGSVILLE	EF1
May 15, 2008	5.34 mile path with a width of 200 yards. One home had the roof completely blown off. Other homes received minor	\$324,599	RIDGE	EF2

Date	Impacts	Property Damage	Location	Magnitude
	roof or siding damage, and many trees were blown down.			
May 15, 2008	0.69 mile path with a width of 25 yards. Scattered trees were blown down and some shingles were blown off several homes.	\$108,200	PITETTE	EFO
May 15, 2008	0.85 mile path with a width of 100 yards. Several medical buildings received significant roof damage with debris from the roofs knocking out windows in neighboring buildings.	\$3,245,988	LAFAYETTE	EF1
January 25, 2012	0.15 mile path with a width of 10 yards. One mobile home lost its roof. Another had major damage to its porch and car port.	\$76,099	DUSON	EFO

The unincorporated area of Lafayette Parish and the incorporated areas of Broussard, Carencro, Lafayette, Scott, and Youngsville have not experienced a tornado event from 2009 to the present. Since 2011, the year in which the last update to this hazard mitigation plan was written, Lafayette Parish has had one tornado touchdown in the incorporated area of Duson. The following is a brief synopsis of that event:

January 25, 2012 – EFO Tornado in Duson

A small EFO tornado touched down on the 100 block of La Rue Rhiems where strong winds removed the roof of a mobile home. The tornado caused major damage to the car port and porch of another mobile home on the 200 block of La Rue Biarritz. Debris was scattered in the trees and fields nearby.

Frequency / Probability

Tornadoes are a sporadic occurrence within Lafayette Parish with an annual chance of occurrence calculated at 72% based on the records for the past 25 years (1989-2014). The figure on the next page displays the density of tornado touch downs in Lafayette Parish and neighboring parishes.

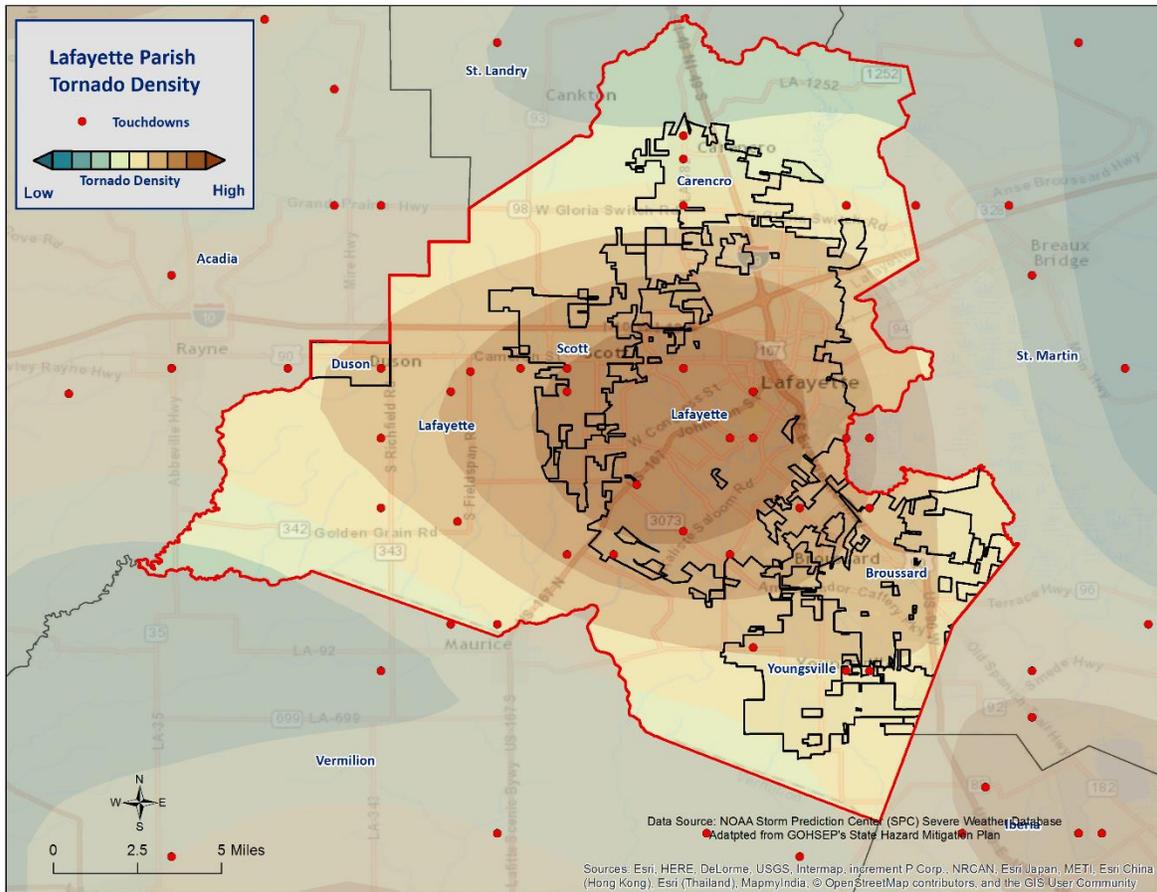


Figure 2-29: Location and Density of Tornadoes to Touch Down in Lafayette Parish (Source: NOAA/SPC Severe Weather Database)

Estimated Potential Losses

According to the SHELDUS database, there have been 18 tornadoes that have caused some level of property damage. The total damage from the actual claims for property is \$13,628,331, with an average cost of \$757,130 per tornado strike. When annualizing the total cost over the 25-year record, total annual losses based on tornadoes are estimated to be \$545,133. To provide an estimated annual estimated potential loss per jurisdiction, the 2010 Census population was used to assign the estimated potential losses proportionally across the jurisdictions. Based on the 2010 Census data, the following table provides an annual estimate of potential losses for Lafayette Parish.

Table 2-53: Estimated Annual Losses for Tornadoes in Lafayette Parish

Estimated Annual Potential Losses from Tornadoes for Lafayette Parish						
Unincorporated Lafayette Parish (30.1% of Population)	Broussard (3.7% of Population)	Carencro (3.4% of Population)	Duson (0.8% of Population)	Lafayette (54.4% of Population)	Scott (3.9% of Population)	Youngsville (3.7% of Population)
\$164,336	\$20,167	\$18,516	\$4,222	\$296,761	\$21,192	\$19,940

Table 2-54 presents an analysis of building exposure that is susceptible to tornadoes by general occupancy type for Lafayette Parish, along with the percentage of building stock that are mobile homes.

Table 2-54: Building Exposure by General Occupancy Type for Tornadoes in Lafayette 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 (%)
18,349,165	4,058,347	943,538	45,561	248,962	120,079	161,223	12.9%

The parish has suffered through a total of four days in which tornadoes or waterspouts have accounted for eight injuries and no fatalities during this 25-year period (Table 2-55). The average number of injuries per event for Lafayette Parish is 0.72 per tornado, with an average of 0.52 per year for the 25-year period. There have been no fatalities due to tornadoes in the 25 year record.

Table 2-55: Tornadoes by Magnitude that Caused Injuries or Deaths in Lafayette Parish

Date	Magnitude	Deaths	Injuries
January 6, 1995	F1	0	8
November 21, 1997	F1	0	1
January 25, 2004	F2	0	3
December 9, 2004	F1	0	1

In assessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 12.9% of all housing in Lafayette Parish consists of manufactured housing. Based on location data collected in a previous hazard mitigation project, there are 79 known locations where manufactured housing is concentrated. Each of those 79 locations have an overall number of manufactured houses ranging from one to 252. The location and density of manufactured houses can be seen in Figure 2-30.

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 incorporated area of Lafayette (Table 2-56). 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 2-56: Manufactured Home Distribution throughout Lafayette Parish

Location	Number of Manufactured Home Parks	% of Manufactured Home Parks
Unincorporated Area	22	27.8%
Broussard	2	2.5%
Carencro	8	10.1%
Duson	3	3.8%
Lafayette	26	32.9%
Scott	16	20.3%
Youngsville	2	2.5%

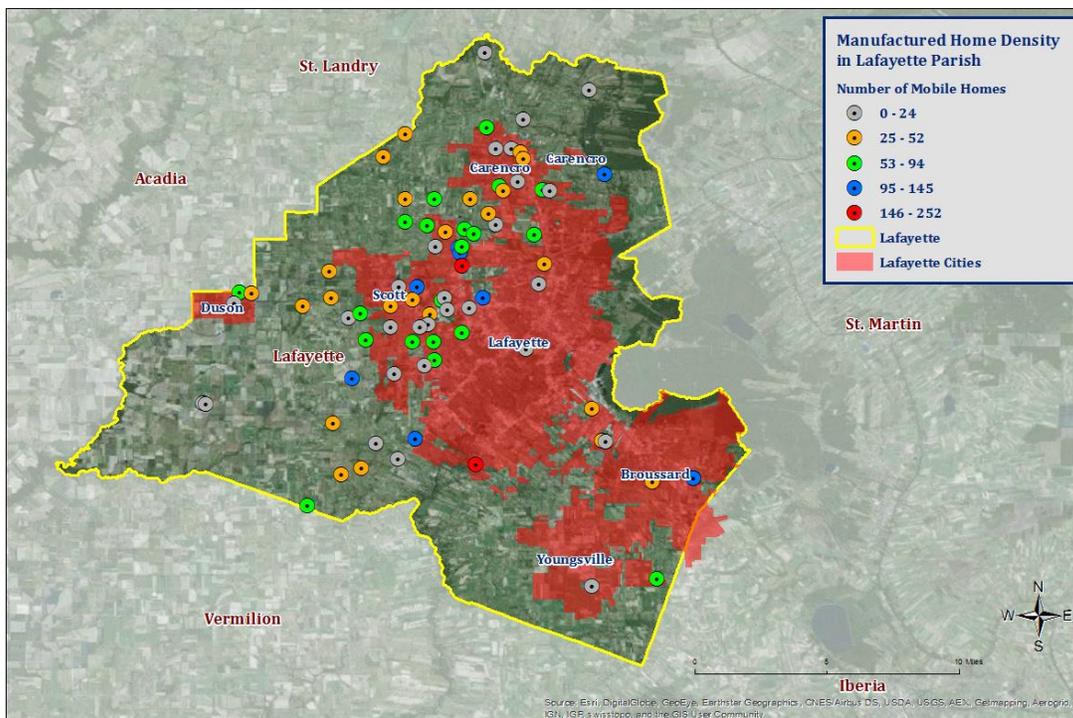


Figure 2-30: Location and Approximate Number of Units in Manufactured Housing Locations throughout Lafayette Parish

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, [Table 2-57](#) presents the Saffir-Simpson Hurricane Wind Scale, which categorizes tropical cyclones based on sustained winds.

Table 2-57: Saffir-Simpson Hurricane Wind Scale

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

Many associated hazards can occur during a hurricane, including heavy rains, flooding, high winds, and tornadoes. A general rule of thumb in coastal Louisiana is that the number of inches of rainfall to be expected from a tropical cyclone is approximately 100 divided by the forward velocity of the storm in mph; so a fast-moving storm (20 mph) might be expected to drop five inches of rain while a slow-moving (5 mph) storm could produce totals of around 20 inches. However, no two storms are alike, and such generalizations have limited utility for planning purposes. Hurricane Beulah, which struck Texas in 1967, spawned 115 confirmed

tornadoes. In recent years, extensive coastal development has increased the storm surge resulting from these storms so much that this has become the greatest natural hazard threat to property and loss of life in the state. Storm surge is a temporary rise in sea level generally caused by reduced air pressure and strong onshore winds associated with a storm system near the coast. Although storm surge can technically occur at any time of the year in Louisiana, surges caused by hurricanes can be particularly deadly and destructive. Such storm surge events are often accompanied by large, destructive waves (exceeding ten meters in some places) that can inflict a high number of fatalities and economic losses. In 2005, Hurricane Katrina clearly demonstrated the destructive potential of this hazard, as it produced the highest modern-day storm surge levels in the state of Louisiana, reaching up to 18.7 feet near Alluvial City in St. Bernard Parish.

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

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

Location

Hurricanes are the single biggest threat to all of south Louisiana. With any single hurricane having the potential to devastate multiple parishes at once, the risk of a tropical cyclone has the probability of impacting anywhere within the planning area for Lafayette Parish. As such, all jurisdictions are equally at risk for tropical cyclones.

Previous Occurrences / Extents

The central Gulf of Mexico coastline is among the most hurricane-prone locations in the United States, and hurricanes can affect every part of the state. The SHELDUS database reports a total of four tropical cyclone events occurring within the boundaries of Lafayette Parish between the years 2002 and 2014 (*Table 2-58*). The tropical cyclone events experienced in Lafayette Parish include depressions, storms, and hurricanes. As a worst case scenario, Lafayette Parish can expect to experience hurricanes at the Category 3 level in the future.

*Table 2-58: Historical Tropical Cyclone Events in Lafayette Parish from 2002- 2014
(Source: SHEL DUS)*

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

[Hurricane Lili \(2002\)](#)

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

The primary impact in Lafayette Parish was minor flooding in the low-lying areas located in all jurisdictions and the unincorporated areas of the parish. In Lafayette, high winds caused a cable television tower to fall onto a home, trapping a resident inside. Numerous trees and power lines were downed across the parish. Debris from high winds caused minor roof and window damage to homes throughout the parish.

[Hurricane Rita \(2005\)](#)

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

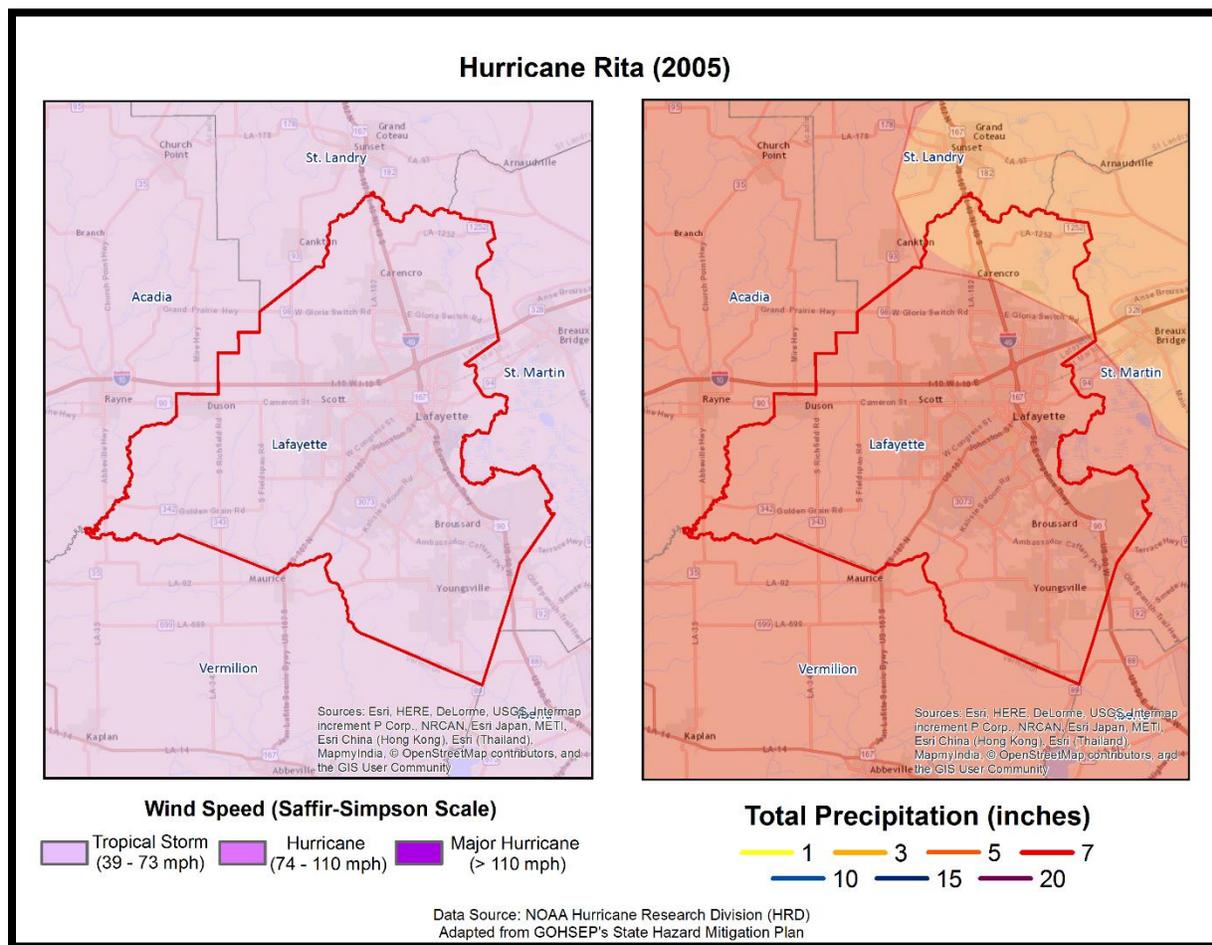


Figure 2-31: Wind Speed and Precipitation Totals in Lafayette Parish for Hurricane Rita

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

Lafayette Parish was declared to be in a State of Emergency as a result of Hurricane Rita. Although Lafayette Parish did not experience a direct hit of the eye or the eye wall of Hurricane Rita, Lafayette Parish did experience destructive wind and extensive rainfall associated with the hurricane. Minor flooding occurred in low-lying areas of the parish including areas inside all of the jurisdictions and the unincorporated area of the parish.

Hurricane Gustav (2008)

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

to a Category 1 storm over south central Louisiana later that day. The storm diminished to a tropical depression over northwestern Louisiana on September 2nd.

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

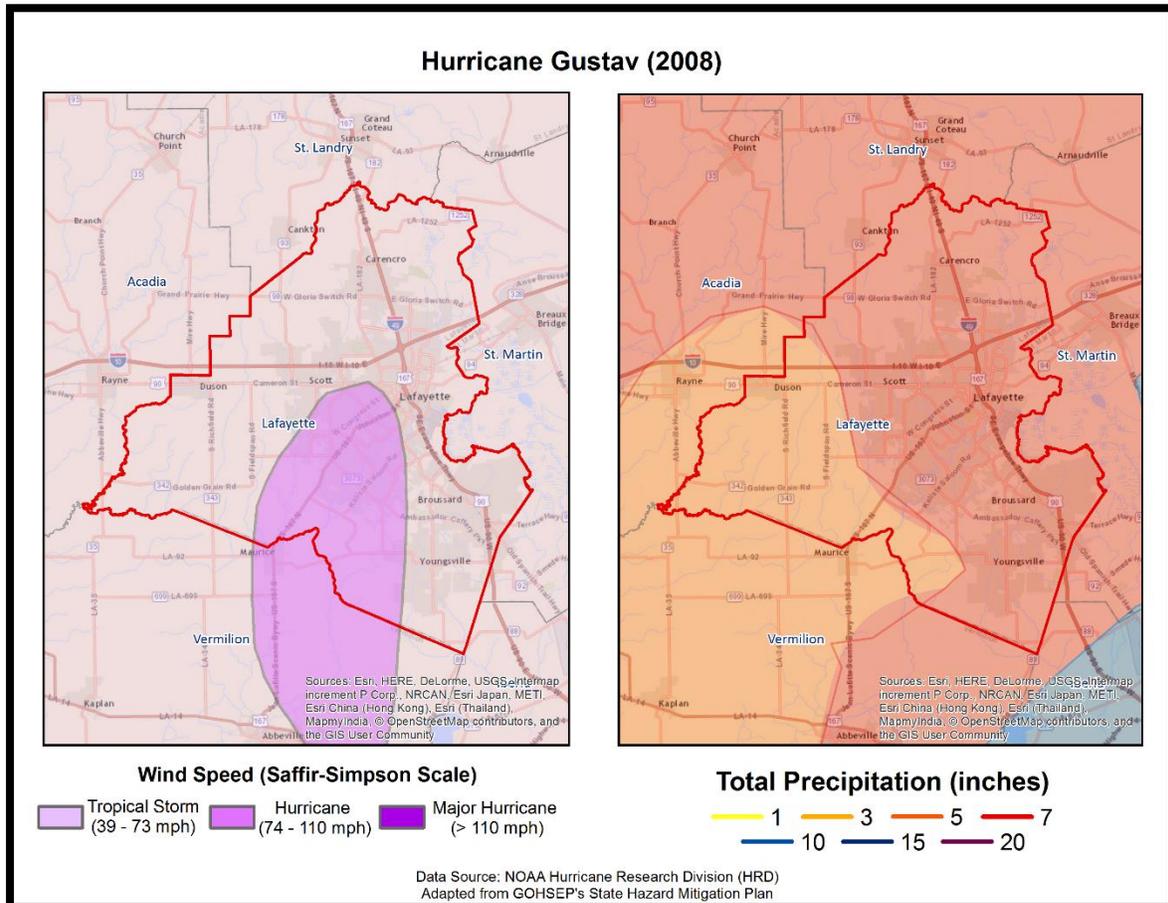


Figure 2-32: Wind Speed and Precipitation Totals in Lafayette Parish for Hurricane Gustav

Gustav produced widespread wind damage across southeast Louisiana, especially in the area from Houma and Thibodaux through the greater Baton Rouge area. Hurricane force wind gusts occurred also across the inland areas, including the Baton Rouge area and surrounding parishes. A peak wind gust of 91 mph was recorded at the Baton Rouge (Ryan Field) Airport at 1:12 PM CST. This was only one mph less than the highest wind gust recorded during Hurricane Betsy in 1965. After the storm, the electric utility serving most of southeast Louisiana reported 75 to 100 percent of utility customers were without power, in areas ranging from Lafourche and Terrebonne Parishes northwest through the Baton Rouge area to southwest Mississippi and central Louisiana. Considerable damage occurred to many houses and structures as large tree limbs and trees were toppled by the hurricane force winds. Preliminary estimates from the American Red Cross

indicated that around 13,000 single family dwellings were damaged by the hurricane in southeast Louisiana, and several thousand more apartments and mobile homes were also damaged. Early estimates from Louisiana Economic Development indicated that Gustav caused at least \$4.5 billion in property damage in Louisiana, including insured and uninsured losses.

In Lafayette Parish, Hurricane Gustav weakened to a category 1 hurricane as it approached the City of Lafayette with maximum sustained winds of 90 mph and hurricane force winds extending 50 miles from the center. Voluntary evacuations were ordered for the entire parish. Over 10,000 customers in Lafayette Parish experienced power outages due to Hurricane Gustav. Unincorporated areas of Lafayette Parish and the incorporated areas of Lafayette, Broussard, Carencro, Duson, Scott, and Youngsville recorded over 8 inches of rain.

[Hurricane Isaac \(2012\)](#)

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

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

Significant impact also occurred around Lakes Pontchartrain and Maurepas with a storm tide of 5 to 9 feet. 5 to 10 thousand homes were flooded in low lying areas of that border these lakes of the following parishes: St. Tammany, Tangipahoa, Livingston, Ascension, St James and St John the Baptist. Laplace in St. John the Baptist was especially hard hit with over 5,000 homes flooded by storm surge.

Storm surge flooding also affected areas south and southwest of New Orleans with a storm tide of 4 to 7 feet. Roadways and low lying property were flooded. Local levees around Lafitte and Myrtle Grove were overtopped and/or breached resulting flooding of numerous houses and property in this area.

Overall impacts of Isaac resulted in at least \$600 million in damages in southeast Louisiana, 3 direct fatalities, and 2 indirect fatalities. Storm surge flooding accounted for the bulk of damage, estimated around \$500 million and the three direct storm surge fatalities in Louisiana. Winds accounted for a much lesser amount of slightly more than a \$100 million.

In Lafayette Parish, scattered trees and power outages were reported across the parish. Approximately 5,000 customers in Lafayette Parish experienced power outages. Rainfall from Hurricane Isaac was minimal with approximately 1.2 inches of rain recorded in the incorporated area of Lafayette in a 24 hour period. The

incorporated areas of Broussard, Carencro, Duson, Scott, and Youngville experienced less than one inch of rainfall during the same time period.

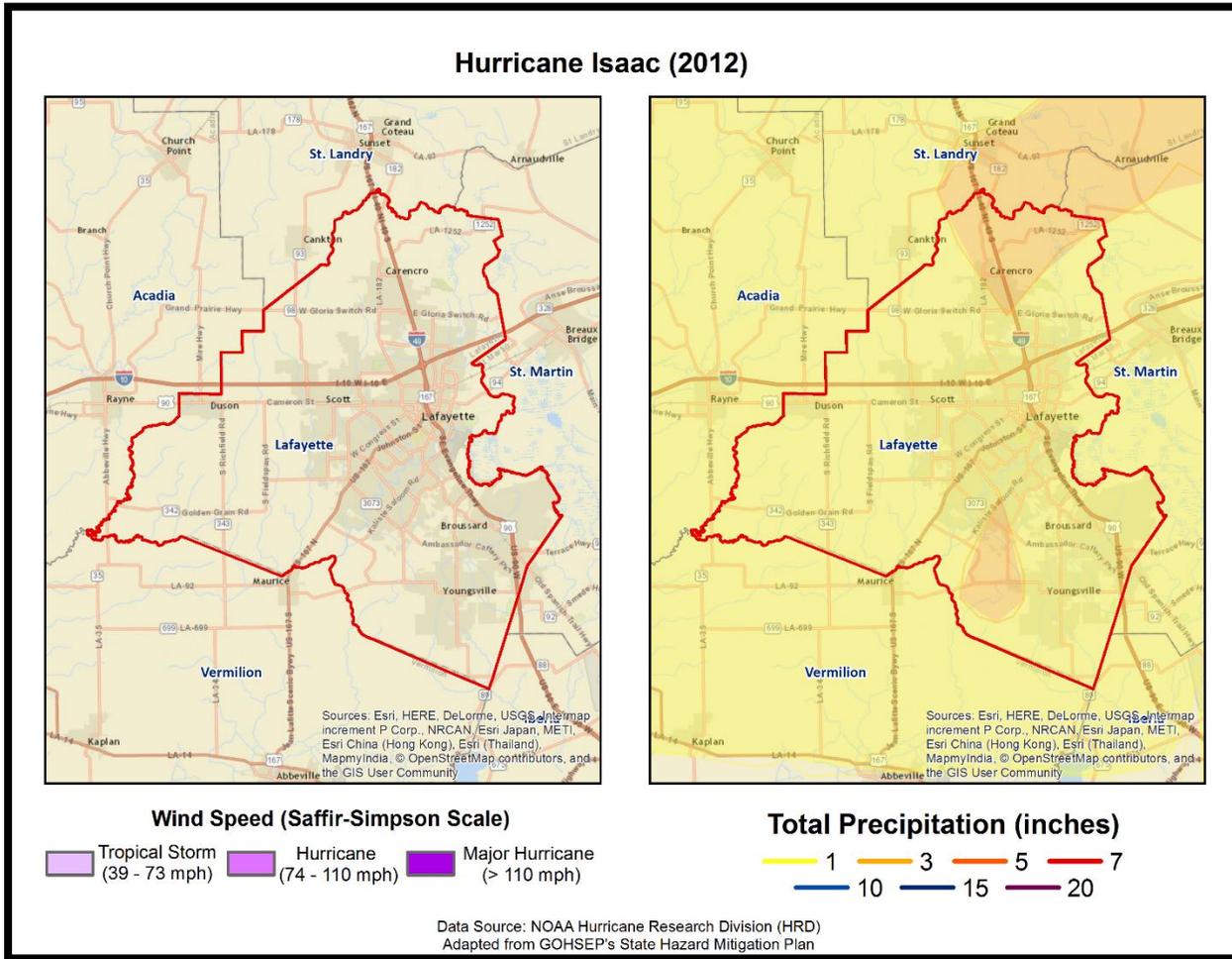


Figure 2-33: Wind Speed and Precipitation Totals for Hurricane Isaac in Lafayette Parish

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

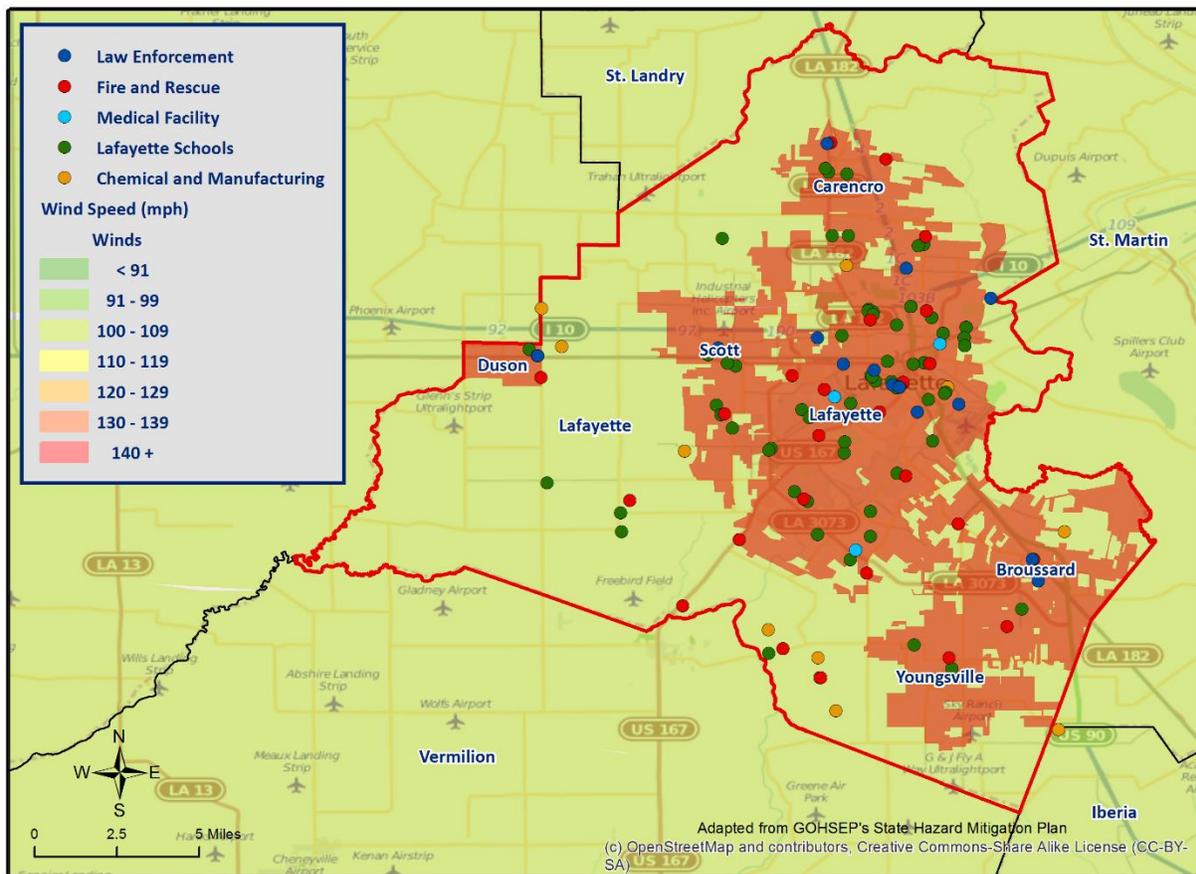


Figure 2-34: Winds Zones for Lafayette Parish in Relation to Critical Facilities

Frequency / Probability

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

Estimated Potential Losses

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

*Table 2-59: Total Estimated Losses for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
Lafayette Parish (Unincorporated)	\$145,386,078
Broussard	\$17,841,066
Carencro	\$16,380,610
Duson	\$3,734,936
Lafayette	\$262,540,307
Scott	\$18,748,681
Youngsville	\$17,640,825
Total	\$482,272,502

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 2-60: Ratio of Total Losses to Total Estimated Value of Assets for each Jurisdiction in Lafayette 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	\$145,386,078	\$5,916,782,000	2.5%
Broussard	\$17,841,066	\$1,096,049,000	1.6%
Carencro	\$16,380,610	\$679,718,000	2.4%
Duson	\$3,734,936	\$104,571,000	3.6%
Lafayette	\$262,540,307	\$14,656,172,000	1.8%
Scott	\$18,748,681	\$740,404,000	2.5%
Youngsville	\$17,640,825	\$733,179,000	2.4%

Based on the Hazus 2.2 Hurricane Model, estimated total losses range from 2.5% of the total estimated value of all assets for the unincorporated area of Lafayette Parish and the incorporated areas of Carencro, Scott, and Youngsville. The incorporated areas of Broussard and Lafayette have slightly lower ratios of 1.6% to 1.8% respectively with the incorporated area of Duson at a slightly higher rate of 3.6%.

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

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

Lafayette Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$1,286,914
Commercial	\$40,393,651
Government	\$1,380,125
Industrial	\$9,293,341
Religious / Non-Profit	\$1,817,961
Residential	\$389,111,457
Schools	\$1,032,441
Total	\$444,315,890

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

Broussard	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$51,675
Commercial	\$1,621,967
Government	\$55,418
Industrial	\$373,165
Religious / Non-Profit	\$72,998
Residential	\$15,624,386
Schools	\$41,457
Total	\$17,841,066

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

Carencro	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$47,445
Commercial	\$1,489,194
Government	\$50,881
Industrial	\$342,618
Religious / Non-Profit	\$67,023
Residential	\$14,345,386
Schools	\$38,063
Total	\$16,380,610

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

Duson	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$10,818
Commercial	\$339,551
Government	\$11,601
Industrial	\$78,120
Religious / Non-Profit	\$15,282
Residential	\$3,270,885
Schools	\$8,679
Total	\$3,734,936

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

Lafayette	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$760,420
Commercial	\$23,868,067
Government	\$815,497
Industrial	\$5,491,311
Religious / Non-Profit	\$1,074,209
Residential	\$229,920,746
Schools	\$610,056
Total	\$262,540,307

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

Scott	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$54,304
Commercial	\$1,704,480
Government	\$58,237
Industrial	\$392,149
Religious / Non-Profit	\$76,712
Residential	\$16,419,234
Schools	\$43,566
Total	\$18,748,681

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

Youngsville	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$51,095
Commercial	\$1,603,763
Government	\$54,796
Industrial	\$368,977
Religious / Non-Profit	\$72,179
Residential	\$15,449,024
Schools	\$40,991
Total	\$17,640,825

Threat to People

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

Table 2-68: Number of People Susceptible to a 100-Year Hurricane Event in Lafayette Parish
(Source: Hazus 2.2)

Number of People Exposed to Hurricane Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
Parish (Unincorporated)	66,797	66,797	100.0%
Broussard	8,197	8,197	100.0%
Carencro	7,526	7,526	100.0%
Duson	1,716	1,716	100.0%
Lafayette	120,623	120,623	100.0%
Scott	8,614	8,614	100.0%
Youngsville	8,105	8,105	100.0%
Total	221,578	221,578	100.0%

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

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

Lafayette Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	66,797	100.0%
Persons Under 5 Years	4,542	6.8%
Persons Under 18 Years	15,964	23.9%
Persons 65 Years and Over	7,348	11.0%
White	47,025	70.4%
Minority	19,772	29.6%

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

Broussard		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	8,197	100.0%
Persons Under 5 Years	678	8.3%
Persons Under 18 Years	1,465	17.9%
Persons 65 Years and Over	755	9.2%
White	6,556	80.0%
Minority	1,641	20.0%

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

Carencro		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	7,526	100.0%
Persons Under 5 Years	618	8.2%
Persons Under 18 Years	1,311	17.4%
Persons 65 Years and Over	910	12.1%
White	4,024	53.5%
Minority	3,502	46.5%

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

Duson		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,716	100.0%
Persons Under 5 Years	147	8.6%
Persons Under 18 Years	332	19.4%
Persons 65 Years and Over	204	11.9%
White	1,181	68.8%
Minority	535	31.2%

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

Lafayette		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	120,623	100.0%
Persons Under 5 Years	7,322	6.1%
Persons Under 18 Years	18,962	15.7%
Persons 65 Years and Over	14,161	11.7%
White	76,933	63.8%
Minority	43,690	36.2%

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

Scott		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	8,614	100.0%
Persons Under 5 Years	661	7.7%
Persons Under 18 Years	1,498	17.4%
Persons 65 Years and Over	923	10.7%
White	6,778	78.7%
Minority	1,836	21.3%

*Table 2-75: Vulnerable Populations in Youngsville for a 100-Year Hurricane Event
(Source: Hazus 2.2)*

Youngsville		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	8,105	100.0%
Persons Under 5 Years	744	9.2%
Persons Under 18 Years	1,747	21.6%
Persons 65 Years and Over	479	5.9%
White	7,276	89.8%
Minority	829	10.2%

Vulnerability

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

Wildfires

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

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

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

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

Table 2-76: Southern Group of State Foresters Wildfire Risk Assessment Fire Intensity Scale
(Source: Southern Wildfire Assessment Portal)

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

Location

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

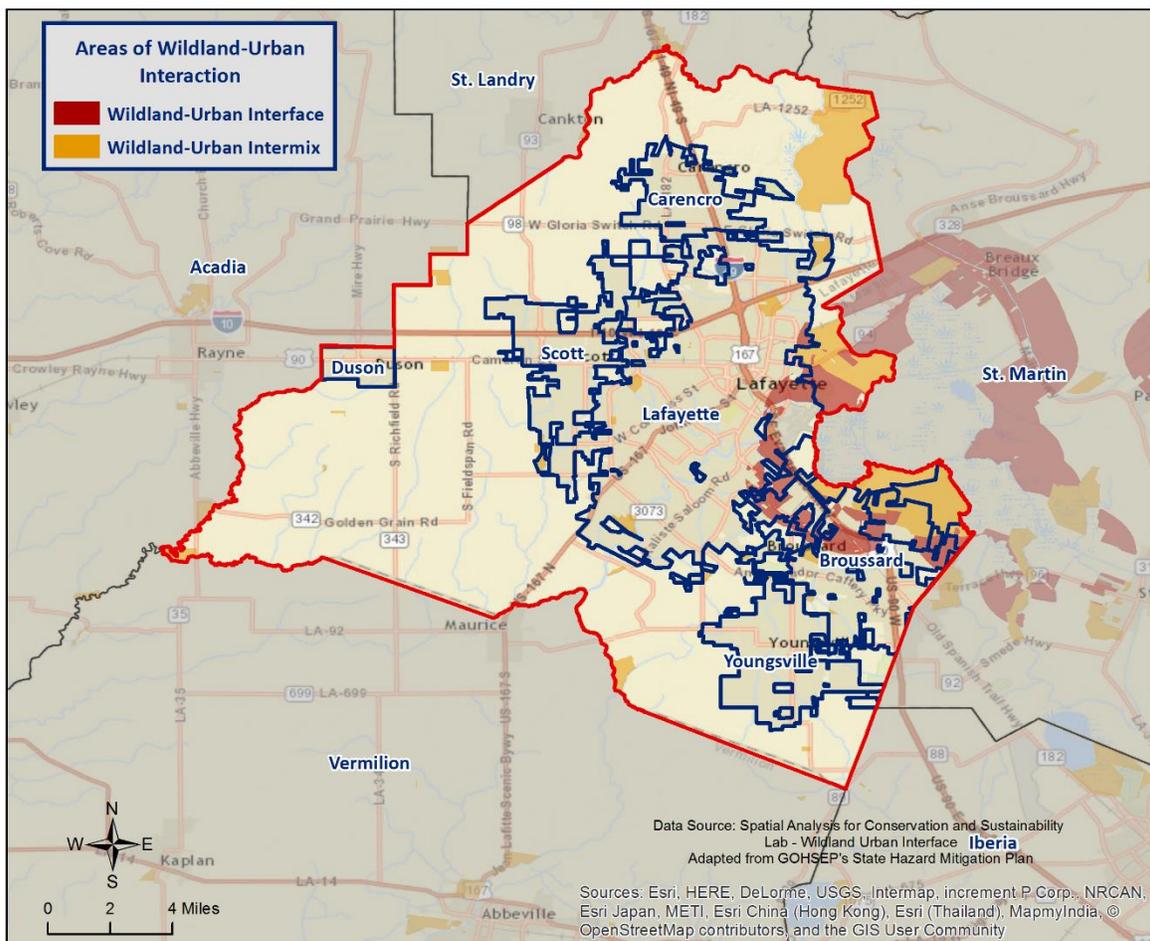


Figure 2-35: Wildland-Urban Interaction in Lafayette Parish

Previous Occurrences / Extents

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

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

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

Potential Wildfire Intensity	
Lafayette Parish (Unincorporated)	Moderate Intensity Level 3
Broussard	Low to Moderate Level Intensity 2.5
Carencro	Lowest Intensity Level 1
Duson	Moderate Intensity Level 3
Lafayette	Low Intensity Level 2
Scott	Low Intensity Level 2
Youngsville	Moderate Intensity Level 3

Frequency / Probability

With no recorded events in 25 years, wildfire events within the boundaries of Lafayette Parish have an annual chance of occurrence calculated at less than 1%.

Estimated Potential Losses

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

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

*Table 2-78: Total Building Exposure by Wildland-Urban Interaction Areas
(Source: Hazus 2.2)*

Jurisdiction	Estimated Total Building Exposure
Lafayette Parish (Unincorporated)	\$994,859,000
Broussard	\$631,397,000
Carencro	\$0
Duson	\$19,538,000
Lafayette	\$2,020,018,000
Scott	\$40,132,000
Youngsville	\$41,585,000
Total	\$3,747,529,000

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

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

Lafayette Parish (Unincorporated)	Estimated Total Building Exposure by Sector
Agricultural	\$2,432,000
Commercial	\$185,319,000
Government	\$0
Industrial	\$73,598,000
Religious / Non-Profit	\$6,356,000
Residential	\$724,420,000
Schools	\$2,734,000
Total	\$994,859,000

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

Broussard	Estimated Total Building Exposure by Sector
Agricultural	\$1,578,000
Commercial	\$101,858,000
Government	\$657,000
Industrial	\$53,973,000
Religious / Non-Profit	\$7,383,000
Residential	\$461,648,000
Schools	\$4,300,000
Total	\$631,397,000

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

Duson	Estimated Total Building Exposure by Sector
Agricultural	\$81,000
Commercial	\$3,527,000
Government	\$0
Industrial	\$168,000
Religious / Non-Profit	\$509,000
Residential	\$15,253,000
Schools	\$0
Total	\$19,538,000

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

Lafayette	Estimated Total Building Exposure by Sector
Agricultural	\$1,984,000
Commercial	\$417,538,000
Government	\$11,166,000
Industrial	\$109,333,000
Religious / Non-Profit	\$25,092,000
Residential	\$1,441,115,000
Schools	\$13,790,000
Total	\$2,020,018,000

*Table 2-83: Estimated Exposure for Scott by Sector
(Source: Hazus 2.2)*

Scott	Estimated Total Building Exposure by Sector
Agricultural	\$0
Commercial	\$4,371,000
Government	\$0
Industrial	\$1,029,000
Religious / Non-Profit	\$1,259,000
Residential	\$33,473,000
Schools	\$0
Total	\$40,132,000

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

Youngsville	Estimated Total Building Exposure by Sector
Agricultural	\$0
Commercial	\$4,833,000
Government	\$0
Industrial	\$2,666,000
Religious / Non-Profit	\$0
Residential	\$34,086,000
Schools	\$0
Total	\$41,585,000

Threat to People

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

*Table 2-85: Populations Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Number of People Located in Wildland-Urban Interaction Areas.			
Location	# in Community	# in Area	% in Area
Lafayette Parish (Unincorporated)	66,797	10,586	15.8%
Broussard	8,197	4,804	58.6%
Carencro	7,526	0	0.0%
Duson	1,716	247	14.4%
Lafayette	120,623	15,788	13.1%
Scott	8,614	520	6.0%
Youngsville	8,105	382	4.7%
Total	221,578	32,327	14.6%

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

*Table 2-86: Population in Unincorporated Lafayette Parish Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Lafayette Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	10,586	15.8%
Persons Under 5 Years	720	6.8%
Persons Under 18 Years	2,530	23.9%
Persons 65 Years and Over	1,164	11.0%
White	7,453	70.4%
Minority	3,133	29.6%

*Table 2-87: Population in Broussard Located within a Wildland-Urban Interaction Area
(Source: 2010 U.S. Census Data)*

Broussard		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	4,804	58.6%
Persons Under 5 Years	397	8.3%
Persons Under 18 Years	858	17.9%
Persons 65 Years and Over	442	9.2%
White	3,842	80.0%
Minority	962	20.0%

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

Duson		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	247	14.4%
Persons Under 5 Years	21	8.6%
Persons Under 18 Years	48	19.4%
Persons 65 Years and Over	29	11.9%
White	170	68.8%
Minority	77	31.2%

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

Lafayette		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	15,788	13.1%
Persons Under 5 Years	958	6.1%
Persons Under 18 Years	2,482	15.7%
Persons 65 Years and Over	1,854	11.7%
White	10,070	63.8%
Minority	5,718	36.2%

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

Scott		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	520	6.0%
Persons Under 5 Years	40	7.7%
Persons Under 18 Years	90	17.4%
Persons 65 Years and Over	56	10.7%
White	409	78.7%
Minority	111	21.3%

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

Youngsville		
Category	Total Numbers	Percentage of People in Wildland-Urban Interaction Area
Number in Hazard Area	382	4.7%
Persons Under 5 Years	35	9.2%
Persons Under 18 Years	82	21.6%
Persons 65 Years and Over	23	5.9%
White	343	89.8%
Minority	39	10.2%

Vulnerability

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

Winter Storms

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

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

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

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

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

Winter storm events occur throughout Louisiana usually during the colder calendar months of December, January, and February. Severe weather events do not occur with the same frequency across all parts of Louisiana. The northern quarter of Louisiana has historically experienced the most severe winter events between 1987 and 2012. The central, and to an even greater extent the southern parts of the state, such as Ascension Parish, have experienced the fewest severe winter events.

Location

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

Previous Occurrences / Extents

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

Table 2-92: Previous Occurrences for Winter Storm Events

Date	Synopsis	Property Damage	Crop Damage
December 23, 1989	The most significant cold spell of the century for the Deep South. Snow and sleet paralyzed transportation systems where as much as two to four inches of snow accumulated in Lafourche and Terrebonne Parishes. The greatest impact was on breakage of water pipes in homes and businesses. Ice formed over shallow lakes and waterways where commercial fishing took heavy losses	\$14,677	\$0
March 12, 1993	The "Storm of the Century" made landfall along the Gulf coast. Snow accumulations were recorded throughout much of the southern portion of the state, and records indicate snowfall spanning from Lafayette to Slidell.	\$0	\$224,191
January 12, 1997	A record ice storm hit southwest Louisiana and southeast Texas. Over 40,000 electric customers were without power for up to six days due to the number of downed trees and power lines. Millions of tons of debris were removed, taking over two months to pick up in some areas. Hundreds of homes received minor roof damage due to trees and tree limbs falling on them.	\$2,854,509	\$0
January 8, 2010	A deep upper level trough moving eastward across the United States forced a bitterly cold Arctic air mass southward from Canada into the Gulf Coast states. This air mass remained in place for several days across southwest Louisiana, leading to the coldest temperatures seen across this region since February 1996. The Lafayette Daily Advertiser reported scattered power outages across Lafayette Parish	\$5,342	\$0
February 3, 2011	A strengthening upper level low over western Texas began to push east-northeast across southwest Louisiana. At the surface, temperatures were generally above freezing, but dewpoints were well below freezing. Freezing rain continued into the morning of February 4 th before ending. Dozens of car accidents were reported around Lake Charles, Lafayette, and Franklin, with several major roadways such as Interstate 10 and U.S. Highway 90 being closed.	\$10,356	\$0
January 28, 2014	Light freezing rain and sleet fell across Lafayette Parish before changing over to mostly sleet. Sleet accumulation ranged from under a tenth of an inch to a half an inch. Icy conditions forced the closure of Interstate 10 from Lafayette to Baton Rouge. Lafayette Regional Airport was also closed due to severe weather.	\$0	\$0
March 4, 2014	Approximately two tenths of an inch of freezing rain fell throughout the day affecting several Mardi Gras events in	\$0	\$0

Date	Synopsis	Property Damage	Crop Damage
	the parish. Some overpasses along Interstate 10 were temporarily closed during the day due to icy conditions.		

Based on previous winter storm events, the worst-case scenario for the unincorporated area of Lafayette Parish and the incorporated area of Broussard, Carencro, Duson, Lafayette, Scott, and Youngsville is approximately one to two inches of snow accumulation and approximately one tenth to one half inch of ice accumulation.

Frequency / Probability

With seven recorded events in 25 years, winter storm events within the boundaries of Lafayette Parish have an annual chance of occurrence calculated at 28% based on the SHELDUS dataset.

Estimated Potential Losses

Since 1989, there have been seven reported winter weather events that have resulted in property and/or crop damages according to the SHELDUS database. The total property damages associated with these storms have totaled \$2,884,885. To estimate the potential losses of a winter weather event on an annual basis, the total damage recorded for winter weather events was divided by the total number of years of available winter weather data in SHELDUS (1989 – 2014). This provides an annual estimated potential loss of \$115,395. To assess potential losses to the participating jurisdictions, the 2010 Census population was used to assign the estimated potential losses proportionally across the jurisdictions. The following table provides an estimate of potential property losses for Lafayette Parish based on the 2010 Census data:

Table 2-93: Estimated Annual Losses for Winter Weather Events in Lafayette Parish

Estimated Annual Potential Losses from Tornadoes for LAFAYETTE PARISH						
Unincorporated Lafayette Parish (30.1% of Population)	Broussard (3.7% of Population)	Carencro (3.4% of Population)	Duson (0.8% of Population)	Lafayette (54.4% of Population)	Scott (3.9% of Population)	Youngsville (3.7% of Population)
\$34,787	\$4,269	\$3,919	\$894	\$62,819	\$4,486	\$4,221

There have been three injuries as a result of winter weather in Lafayette Parish over the 25 year record.

Vulnerability

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

This Page Left Intentionally Blank

3. Capability Assessment

This section summarizes the results of the Lafayette 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, Lafayette 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

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

Table 3-1: Lafayette Parish Planning and Regulatory Capabilities

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

Building Codes, Permitting, Land Use Planning and Ordinances

Lafayette Consolidated Government provides oversight for building permits and codes, land use planning, and all parish ordinances.

Planning, Zoning, and Development is a “one-stop-shop” for businesses and individuals in the parish and its jurisdictions involved in a variety of activities, including:

- Purchasing or developing property (platting, subdivisions, plan review);
- Undertaking construction projects (permitting, inspections); and
- Condemning Unsafe Structures
- Opening or relocating businesses (certificates of occupancy, land use regulations).

The Department is also responsible for assisting citizens with requests for:

- Zoning variances or reclassification;
- Abandonments of easements or rights-of-way;
- Annexation of land into the City of Lafayette; and
- Implementing PlanLafayette, a long range comprehensive plan;
- Regional transportation planning; and
- Including a property on the Lafayette Parish Register of Historic Properties.

The Department is divided into four Divisions each handling unique responsibilities (Development, Zoning, Codes and Planning).

As of the 2016 update, Lafayette 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. The Codes Division of the Planning, Zoning, & Development Department is charged with the responsibility of implementing the Louisiana State Uniform Construction Codes so that everyone can be assured of a safe place to live, shop, be entertained and even to worship.

The Codes Division also acts as the permitting agency for Lafayette Consolidated Government in addition to implementing the Federal Flood Management Program.

The Planning and Zoning Commission, the Board of Zoning Adjustment, and the Lafayette Preservation Commission meets regularly at the Clifton Chenier Center.

While local capabilities for mitigation can vary from community to community, Lafayette Parish as a whole has a system in place to coordinate and share these capabilities through Lafayette 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, Lafayette 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 on the following page shows examples of resources in place in Lafayette Parish and its jurisdictions.

Table 3-2: Lafayette Parish Administrative and Technical Capabilities

	Lafayette Parish	Broussard	Carencro	Duson	Scott	Youngsville
Administration	Yes / No					
Planning Commission	Yes	Yes	Yes	Yes	YES	Yes
Mitigation Planning Committee	Yes	Yes	Yes	Yes		Yes
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	Yes	Yes	Yes	YES	Yes
Staff	Yes / No; FT/PT; % Hazard Mitigation					
Chief Building Official	Yes/FT	Yes	Yes/FT/0%	Yes	Yes/FT/0%	Yes
Floodplain Administrator	Yes/FT	Yes	Yes/FT/0%	Yes	Yes/FT/0%	Yes
Emergency Manager	Yes/FT	Yes	Yes/FT/0%	Yes	Yes/FT/0%	Yes
Community Planner	Yes/FT	Yes	Yes/FT/0%	Yes	Yes/FT/0%	Yes
Civil Engineer	Yes/FT	Yes	Yes/FT/0%	Yes	YES	Yes
GIS Coordinator	Yes/FT	No	No	No	NO	No
Grant Writer	Yes/FT	No	Yes/PT/0%	No	YES/PT/0%	No
Other	Yes/FT	No	No	No	NO	No
Technical	Yes / No					
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	Yes	Yes	Yes	YES	Yes
Hazard Data & Information	No	No	No	No	NO	No
Grant Writing	Yes	Yes	Yes	Yes	YES	Yes
Hazus Analysis	No	No	No	No	NO	No
Other		No	No	No	NO	No

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

Table 3-3: Lafayette Parish Financial Capabilities

Financial	Lafayette Parish	Broussard	Carencro	Duson	Scott	Youngsville
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.						
Funding Resource	Yes / No					
Capital Improvements project funding	Yes	Yes	Yes	Yes	YES	Yes
Authority to levy taxes for specific purposes	Yes	Yes	Yes	Yes	YES	Yes
Fees for water, sewer, gas, or electric services	Yes	Yes	Yes	Yes	YES	Yes
Impact fees for new development	No	No	No	No	NO	No
Stormwater Utility Fee	No	No	No	No	NO	No
Community Development Block Grant (CDBG)	Yes	Yes	Yes	Yes	YES	Yes
Other Funding Programs	Yes	YES	Yes	Yes	Yes	Yes

Education and Outreach

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

Lafayette 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 outlined in the table on the following page.

Table 3-4: Lafayette 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.							
	Lafayette Parish	Broussard	Carencro	Duson	Scott	Youngsville	
Program / Organization	Yes / No						
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	No	No	No	NO	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	Yes	Yes	Yes	YES	Yes	
Natural Disaster or safety related school program	Yes	Yes	Yes	Yes	YES	Yes	
Storm Ready certification	Yes	No	No	No	NO	No	
Firewise Communities certification	No	No	No	No	NO	No	
Public/Private partnership initiatives addressing disaster-related issues	No	No	No	No	NO	No	
Other	No	No	No	No	NO	No	

In some cases, the jurisdictions rely on Lafayette Parish OHSEP and/or Lafayette 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, Lafayette Parish and its jurisdiction remains committed to expanding and improving on the existing capabilities within the parish. 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 Lafayette under the Hazard Mitigation Plan, allowing them to apply for available hazard mitigation funding for as long as these municipalities and entities notify the parish of their intentions and the parish concurs:

- City of Broussard
- City of Carencro
- City of Lafayette
- City of Scott
- City of Youngsville
- Town of Duson

Flood Insurance and Community Rating System

Lafayette Parish is a participant in the Community Rating System (CRS). Lafayette entered the CRS in October of 2011. Maintaining and improving the CRS rating for the parish and participating jurisdictions is recognized as a high priority 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 Lafayette Parish, City of Lafayette, and the City of Carencro (class 8). As of the 2016 update, Jefferson, East Baton Rouge, and Terrebonne Parishes all lead the state with best classifications, class 6.

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

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

SFHA (Zones A, AE, A1-A30, V, V1-V30, AO, and AH): Discount varies depending on class.
 SFHA (Zones A99, AR, AR/A, AR/AE, AR/A1-A30, AR/AH, and AR/AO): 10% discount for Classes 1-6; 5% discount for Classes 7-9.*
 Non-SFHA (Zones B, C, X, D): 10% discount for Classes 1-6; 5% discount for Classes 7-9.

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

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

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 2011⁸, 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.

⁸ <https://www.fema.gov/national-flood-insurance-program-community-rating-system>

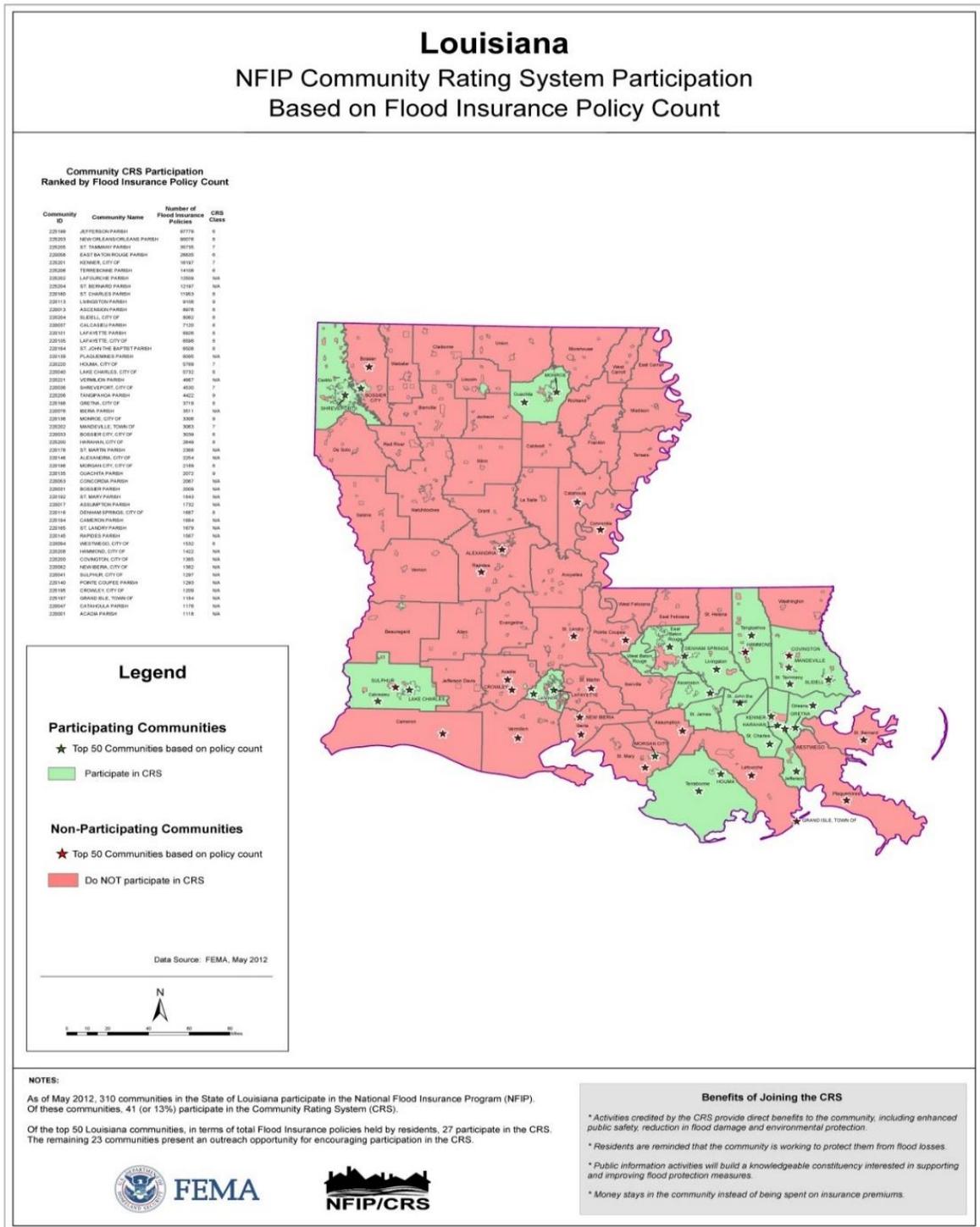


Figure 3-2: Louisiana CRS NFIP Participation
(Source: FEMA⁹)

⁹ 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

This Page Left Intentionally Blank

4. Mitigation Strategy

Introduction

Lafayette 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.

Lafayette Parish confirmed the goals, objectives, actions, and projects over the period of the Hazard Mitigation Plan Update process. The mitigation actions and projects in this 2016 update are a product of analysis and review of the Lafayette Parish Hazard Mitigation Plan Steering Committee, under the coordination of the Lafayette 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 August 2015 – December 2015.

An online public opinion survey was conducted of Lafayette Parish residents between October and December 2015. The survey was designed to capture public perceptions and opinions regarding natural hazards in Lafayette 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 Lafayette 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 Lafayette Parish survey can be found at the following link:

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

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

Goals

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

The goals are as follows:

- Improve education and outreach efforts 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 to reduce the impact of hazards
- Improve capabilities, coordination, and opportunities at the municipal and parish level to plan and implement hazard mitigation projects, programs, and activities
- 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.
- Maintain continuity of operations during and after natural hazard events

The Mitigation Action Plan focuses on actions to be taken by Lafayette Parish and its jurisdictions. All of the activities in the Mitigation Action Plan will be focused on helping the parish and its municipalities in developing and funding projects that are not only cost effective, but also meet the other DMA 2000 criteria of environmental compatibility and technical feasibility.

The Hazard Mitigation Plan Steering Committee and each jurisdiction reviewed and evaluated the potential action and project lists in which consideration was given to a variety of factors. Such factors include determining a project's eligibility for federal mitigation grants, as well as its ability to be funded. This process required evaluation of each project's engineering feasibility, cost effectiveness, and environmental and cultural factors.

[2016 Mitigation Actions and Update on Previous Plan Actions](#)

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

As outlined in the Local Mitigation Planning Handbook, the following are eligible types of mitigation actions:

- **Local Plans and Regulations** – These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.
- **Structure and Infrastructure Projects** – These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area, and also includes projects to construct manmade structures to reduce the impact of hazards.
- **Natural System Protection** – These actions minimize the damage and losses and also preserve or restore the functions of natural systems.
- **Education and Awareness Programs** – These actions inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them.

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

Lafayette 2011 Hazard Mitigation Action Update

Lafayette Parish - City-Parish Consolidated Government				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
L1: Public Education	Continue and expand efforts to educate the public regarding all hazards, including direct mail, technical assistance, and development / implementation of general advertising campaign. Distribute public awareness information regarding flood hazards, SFHA's and potential mitigation measures using the local newspaper, utility bill inserts, inserts in the phone book, a parish hazard awareness website, and an educational program for school age children or "how to" classes in retrofitting by local merchants. Integrate "Disaster Resistance Education" into the public school curriculum. Provide public education on the importance of maintaining the ditches. Benefits: An informed public is better able to respond and protect themselves in times of hazards.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, City/Town Mayor's Offices, Parish School Board	All Hazards	in progress and ongoing

Lafayette Parish - City-Parish Consolidated Government				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
L2: Business Hazards	Work with local businesses to identify hazards to their business and mitigation actions that can be taken to protect Parish's economy.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, City/Town Mayor's Offices	All Hazards	in progress and ongoing
L3: Employee Hazards	Work with parish and municipal employees to identify potential ways to mitigate the impact of hazards upon employees, assets and infrastructure.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, City/Town Mayor's Offices	All Hazards	in progress and ongoing
L4: Flood Insurance	Promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, City/Town Floodplain Managers or Designee	All Hazards	in progress and ongoing
L5: Community Rating System	Work to improve Community Rating System (CRS) rating.	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, City/Town Floodplain Managers or Designee	Floods	In progress and ongoing

Lafayette Parish - City-Parish Consolidated Government				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
L6: Multi-Hazard Awareness Week	Sponsor a "Multi-Hazard Awareness Week"; to educate the public on hurricane and tornadoes (sheltering in place, evacuation, emergency preparedness, and structural retrofitting), flooding (evacuation, emergency preparedness, retrofitting, and flood insurance), and thunderstorms with lightning and high winds (emergency preparedness). Benefits: to reduce the loss of life and property by having an educated citizenry.	Mayors and Lafayette City- Parish Consolidated Government Floodplain Managers / Planning Director / Building Inspector / Inspection and Code Director	All Hazards	Deleted/Removed
L7: Insurance Partnerships	Develop partnerships with insurance companies to promote building codes	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, City/Town Mayors' Offices	All Hazards	In progress and ongoing
L8: FIRMs/DFIRMs	Work with FEMA to update FIRMs / DFIRMs	Lafayette City-Parish Public Works, City/Town Mayors' Offices	Flooding (Flash and Riverine)	in progress and ongoing
L9: Update Mitigation Requirements	Continue to include and update mitigation requirements in floodplain development regulations.	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, City/Town Mayors' Offices	Flooding (Flash and Riverine)	In progress
L10: Vegetation Mitigation Programs	Implement vegetation mitigation programs and methods	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, City/Town Mayors'	Wildfire	Deleted
L11: Auxiliary Power Sources	Identify and prioritize auxiliary power sources for critical infrastructure.	Lafayette Utilities Service, Private Energy Providers	All Hazards	in progress and ongoing

Lafayette Parish - City-Parish Consolidated Government				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
L12: Floodplain Development Regulations	Update and implement floodplain development regulations, which limit the opportunity for new homes and businesses to be constructed in the floodplain.	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, City/Town Mayors' Offices	Flooding (Flash and Riverine)	Completed
L13: Hazardous Materials Training	Train First Responders (EMS Personnel) in hazardous materials incidents.	Lafayette Fire and Volunteer Departments, City/Town Mayor's Offices	Hazardous Materials Incidents	Completed and ongoing
L14: Terrorism Review	Conduct parish-wide terrorism critical infrastructure review.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, City/Town Mayors' Offices	Terrorism	in progress and ongoing
L15: Preparedness Coordination	Coordination of all preparedness and mitigation efforts; hosting disaster response drills; regular attendance at networking and coordination meetings.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, City/Town Mayors' Offices	All Hazards	in progress and ongoing
L16: NIMS and ICS Training	Work to provide training to emergency personnel Parish-wide in NIMS and ICS.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, City/Town Mayors' Offices	All Hazards	In progress
L17: Monitoring and Communications Enhancement	Work to enhance monitoring and communications systems to improve ability to predict and prepare for flood events, including connection with Lafayette Parish Flood Warning System.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, City/Town Mayors' Offices	Flooding (Flash and Riverine) / Flooding (Dam and Levee Failure)	In progress

Lafayette Parish - City-Parish Consolidated Government				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
L18: International Building Codes	Implement and enforce International Building Codes.	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, City/Town Mayors' Offices	All Hazards	Completed and ongoing
L19: Insurance Partnerships	Develop partnerships with insurance companies to promote building codes.	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, City/Town Mayors' Offices	All Hazards	In progress and ongoing
L20: Additional Subdivision Guidelines	Develop additional subdivision guidelines that would help reduce flooding, such as requiring proper drainage with adequate sloping; storm water retention ponds; dikes; levees and floodwalls if appropriate, and requiring freeboard above the Base Flood Elevation (BFE) in flood prone areas. Encourage new subdivision developments to install underground utilities, which would help reduce the chances of power outages.	Lafayette City-Parish Consolidated Government Planning, Zoning and Codes, Parish and City Floodplain Managers/ Inspection and Code Planning Department / Parish and Municipality Departments of Public Works	Floods / Hurricanes and Tropical Systems/ Thunderstorms, Lightning, High Winds / Hail/ Tornadoes	Completed
L21: Power Supply and Generators	Install an elevated and securely attached back up power supply/generators at Dustin Circle lift station.	City of Broussard	Floods / Hurricanes and Tropical Systems/ Thunderstorms, Lightning, High Winds / Hail/ Tornadoes	Completed

Lafayette Parish - City-Parish Consolidated Government				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
L22: Lafayette Emergency Operation Center Hardening	Wind harden and upgrade the Lafayette Emergency Operation Center at 800 South Buchanan Street, by expanding the site to accommodate increasing demand, adding new monitoring equipment and to become more disaster resistant.	Lafayette Parish President, Office of Homeland Security and Emergency Preparedness	Floods / Hurricanes and Tropical Systems/ Thunderstorms, Lightning, High Winds / Hail/ Tornadoes	In progress
L23: Stormwater Retention Capacity	Upgrade the capacity of storm water retention and detention reservoirs along the Vermillion River and at LA Highways 90 and 92, by removing any obstructions, dredging the reservoirs, and replacing any inferior culverts along the major drainage laterals.	Department of Public Works	Flooding (Flash and Riverine)/ Hurricanes and Tropical Systems	Completed
L24: Larger Volume Pumps and Pipes	Along Beau Basin Coulee, Coulee Acadiana Lat. 8A, Coulee Mine, LaFamme Road Coulee and Ille de Cannes Coulee increase the drainage capacity of the drainage laterals by installing larger volume pumps and larger pipes.	Department of Public Works	Flooding (Flash and Riverine)/ Hurricanes and Tropical Systems	In progress and on going
L25: Repetitive Loss Area Drainage	Determine the most feasible drainage projects for each repetitive loss area, as seen on Map 3, to reduce its flood potential (e.g. Beau Basin Coulee and Ille de Cannes Coulee, which are located in the unincorporated areas of the Parish) and implement the identified interior localized drainage project.	Parish Engineer / Parish Department of Public Works / Parish Floodplain Manager / Community Development and Capital Projects	Flooding (Flash and Riverine)/ Hurricanes and Tropical Systems	In progress and on going
L26: Repetitive Loss Structure Improvements	Pursue elevation, acquisition, and flood proofing projects and structural solutions to flooding for repetitive loss structures and severe repetitive loss structures.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, Mayor of City and City or Parish Floodplain Managers	Flooding (Flash and Riverine) / Flooding (Dam and Levee Failure) / Hurricanes and Tropical Systems	In progress and on going

Lafayette Parish - City-Parish Consolidated Government				
Jurisdiction-Specific Action	Action Description	Responsible Party, Agency, or Department	Hazard	Status
L27: Update Comprehensive Drainage Plan	Update the comprehensive drainage plan ensuring future protection for areas in the Parish that experience flooding and drainage problems.	Parish Engineer / Parish Department of Public Works / Parish Floodplain Manager	Flooding (Flash and Riverine)	in progress and on going
L28: Retention and Detention Ponds	Pursue the development of retention and detention ponds to reduce flooding impacts.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, Mayor of City and City or Parish Floodplain Managers	Flooding (Flash and Riverine) / Flooding (Dam and Levee Failure) / Hurricanes and Tropical Systems	In progress and on going
L29: Safe Rooms	Pursue opportunities to mitigate structures to use as safe rooms or construct safe rooms throughout the parish.	Lafayette Parish Office of Homeland Security and Emergency Preparedness, Mayor of City and City or Parish Floodplain Managers	Hurricanes and Tropical Systems / Tornados / High Wind	Carry Over
L30: Main Transmission Line Turbines	Install five (5) new turbines at the main transmission line in Boyce. The new turbines will take five seconds to crank, compared to the old ones, which could take 48 hours.	Lafayette Utilities	Flooding (Flash and Riverine) / Flooding (Dam and Levee Failure) / Hurricanes and Tropical Systems/ Tornados / High Wind	COMPLETED

Unincorporated Lafayette New Mitigation Actions

Unincorporated Lafayette - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
L1: Public Building Wind Hardening	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage and helps assure that the public buildings can be used, occupied and operable during or after storms.	HMGP and Parish	1-5 years	Lafayette Parish Government	High Wind, Hail, Tropical Cyclone, Tornado	3,4,5	New
L2: Drainage Projects	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	HMGP and Parish	1-5 years	Lafayette Parish Government	Flooding, High Wind, Tropical Cyclone	3,4	New
L3: Residential elevations and acquisitions for repetitive loss and severe repetitive loss properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP and Parish	1-5 years	Lafayette Parish Government	Flooding, Tropical Cyclone	1,3,4	New
L4: Safe Room Projects	Construction of a safe room for first responders located in Lafayette Parish. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Lafayette Parish Government	Tornado, high wind, hail, tropical cyclone, flooding	3,4,5	New

Unincorporated Lafayette - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
L5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety through technical assistance to communities, training events, direct mail outs and multi-hazard awareness weeks for Thunderstorms, Drought, flooding, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	HMPG and Parish	1-5 years	Lafayette Parish Government	Drought, Flooding, Thunderstorms, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole	1,2,4	New
L6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Lafayette Parish Government	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail), Sinkhole	3,4,5	New
L7: Installation of lightning rods and surge protectors at Critical Facilities	Install lightning rods and/or surge protectors; Benefits: will help to ensure minimal down time or equipment failures at Critical Facilities	HMPG and Parish	1-5 years	Lafayette Parish Government	Lightning, Thunderstorms	3,4,5	New

Unincorporated Lafayette - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
L8: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA, Local	1-5 years	Lafayette Parish Government	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	3,4,5	New
L9: Wildfire mitigation	Identify and implement wildfire vegetation management strategies	HMPG and Parish	1-5 years	Lafayette Parish Government	Wildfire	3,4	New

City of Broussard – New Mitigation Actions

City of Broussard - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
B1: Public Building Wind Hardening	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage and helps assure that the public buildings can be used, occupied and operable during or after storms.	HMGP and Parish	1-5 years	Mayor's Office, City of Broussard/ Lafayette Parish Government	High Wind, Hail, Tropical Cyclone, Tornado	3,4,5	New
B2: Drainage Projects	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	HMGP and Parish	1-5 years	Mayor's Office, City of Broussard/ Lafayette Parish Government	Flooding, High Wind, Tropical Cyclone	3,4	New
B3: Residential elevations and acquisitions for repetitive loss and severe repetitive loss properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP and Parish	1-5 years	Mayor's Office, City of Broussard/ Lafayette Parish Government	Flooding, Tropical Cyclone	1,3,4	New
B4: Safe Room Projects	Construction of a safe room for first responders located in Broussard. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Mayor's Office, City of Broussard /Lafayette Parish Government	Tornado, high wind, hail, tropical cyclone, flooding	3,4,5	New

City of Broussard - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
B5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety through technical assistance to communities, training events, direct mail outs and multi-hazard awareness weeks for Thunderstorms, Drought, flooding, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	HMPG and Parish	1-5 years	Mayor's Office, City of Broussard/ Lafayette Parish Government	Drought, Flooding, Thunderstorms, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole	1,2,4	New
B6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Mayor's Office, City of Broussard/ Lafayette Parish Government	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail), Sinkhole	3,4,5	New
B7: Installation of lightning rods and surge protectors at Critical Facilities	Install lightning rods and/or surge protectors; Benefits: will help to ensure minimal down time or equipment failures at Critical Facilities	HMPG and Parish	1-5 years	Mayor's Office, City of Broussard/ Lafayette Parish Government	Lightning, Thunderstorms	3,4,5	New

City of Broussard - New Mitigation Actions

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
B8: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA, Local	1-5 years	Mayor's Office, City of Broussard/ Lafayette Parish Government	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	3,4,5	New
B9: Wildfire mitigation	Identify and implement wildfire vegetation management strategies	HMPG and Parish	1-5 years	Lafayette Parish Government	Wildfire	3,4	New

City of Carencro - New Mitigation Actions

City of Carencro - New Mitigation Actions

Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
C1: Public Building Wind Hardening	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage and helps assure that the public buildings can be used, occupied and operable during or after storms.	HMGP and Parish	1-5 years	Mayor's Office, City of Carencro/ Lafayette Parish Government	High Wind, Hail, Tropical Cyclone, Tornado	3,4,5	New

City of Carencro - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
C2: Drainage Projects	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	HMGP and Parish	1-5 years	Mayor's Office, City of Carencro/ Lafayette Parish Government	Flooding, High Wind, Tropical Cyclone	3,4	New
C3: Residential elevations and acquisitions for repetitive loss and severe repetitive loss properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP and Parish	1-5 years	Mayor's Office, City of Carencro/ Lafayette Parish Government	Flooding, Tropical Cyclone	1,3,4	New
C4: Safe Room Projects	Construction of a safe room for first responders located in Carencro. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Mayor's Office, City of Carencro/ Lafayette Parish Government	Tornado, high wind, hail, tropical cyclone, flooding	3,4,5	New

City of Carencro - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
C5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety through technical assistance to communities, training events, direct mail outs and multi-hazard awareness weeks for Thunderstorms, Drought, flooding, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	HMPG and Parish	1-5 years	Mayor's Office, City of Carencro/ Lafayette Parish Government	Drought, Flooding, Thunderstorms, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole	1,2,4	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, Local	1-5 years	Mayor's Office, City of Carencro/ Lafayette Parish Government	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail), Sinkhole	3,4,5	New
C7: Installation of lightning rods and surge protectors at Critical Facilities	Install lightning rods and/or surge protectors; Benefits: will help to ensure minimal down time or equipment failures at Critical Facilities	HMPG and Parish	1-5 years	Mayor's Office, City of Carencro/ Lafayette Parish Government	Lightning, Thunderstorms	3,4,5	New

City of Carencro - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
C8: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA, Local	1-5 years	Mayor's Office, City of Carencro/ Lafayette Parish Government	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	3,4,5	New
C9: Wildfire mitigation	Identify and implement wildfire vegetation management strategies	HMPG and Parish	1-5 years	Lafayette Parish Government	Wildfire	3,4	New

Town of Duson – New Mitigation Actions

Town of Duson - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
D1: Public Building Wind Hardening	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage and helps assure that the public buildings can be used, occupied and operable during or after storms.	HMGP and Parish	1-5 years	Mayor's Office, Town of Duson/Lafayette Parish Government	High Wind, Hail, Tropical Cyclone, Tornado	3,4,5	New
D2: Drainage Projects	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	HMGP and Parish	1-5 years	Mayor's Office, Town of Duson/Lafayette Parish Government	Flooding, High Wind, Tropical Cyclone	3,4	New
D3: Residential elevations and acquisitions for repetitive loss and severe repetitive loss properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP and Parish	1-5 years	Mayor's Office, Town of Duson/Lafayette Parish Government	Flooding, Tropical Cyclone	1,3,4	New

Town of Duson - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
D4: Safe Room Projects	Construction of a safe room for first responders located in Duson. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Mayor's Office, Town of Duson/Lafayette Parish Government	Tornado, high wind, hail, tropical cyclone, flooding	3,4,5	New
D5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety through technical assistance to communities, training events, direct mail outs and multi-hazard awareness weeks for Thunderstorms, Drought, flooding, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	HMPG and Parish	1-5 years	Mayor's Office, Town of Duson/Lafayette Parish Government	Drought, Flooding, Thunderstorms, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole	1,2,4	New
D6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Mayor's Office, Town of Duson/Lafayette Parish Government	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail), Sinkhole	3,4,5	New

Town of Duson - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
D7: Installation of lightning rods and surge protectors at Critical Facilities	Install lightning rods and/or surge protectors; Benefits: will help to ensure minimal down time or equipment failures at Critical Facilities	HMPG and Parish	1-5 years	Mayor's Office, Town of Duson/Lafayette Parish Government	Lightning, Thunderstorms	3,4,5	New
D8: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA, Local	1-5 years	Mayor's Office, Town of Duson/Lafayette Parish Government	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	3,4,5	New
D9: Wildfire mitigation	Identify and implement wildfire vegetation management strategies	HMPG and Parish	1-5 years	Lafayette Parish Government	Wildfire	3,4	New

City of Lafayette – New Mitigation Actions

City of Lafayette - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
LA1: Public Building Wind Hardening	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage and helps assure that the public buildings can be used, occupied and operable during or after storms.	HMGP and Parish	1-5 years	Mayor's Office, City of Lafayette/ Lafayette Parish Government	High Wind, Hail, Tropical Cyclone, Tornado	3,4,5	New
LA2: Drainage Projects	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	HMGP and Parish	1-5 years	Mayor's Office, City of Lafayette/ Lafayette Parish Government	Flooding, High Wind, Tropical Cyclone	3,4	New
LA3: Residential elevations and acquisitions for repetitive loss and severe repetitive loss properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP and Parish	1-5 years	Mayor's Office, City of Lafayette/ Lafayette Parish Government	Flooding, Tropical Cyclone	1,3,4	New

City of Lafayette - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
LA4: Safe Room Projects	Construction of a safe room for first responders located in Lafayette. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Mayor's Office, City of Lafayette/ Lafayette Parish Government	Tornado, high wind, hail, tropical cyclone, flooding	3,4,5	New
LA5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety through technical assistance to communities, training events, direct mail outs and multi-hazard awareness weeks for Thunderstorms, Drought, flooding, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	HMPG and Parish	1-5 years	Mayor's Office, City of Lafayette/ Lafayette Parish Government	Drought, Flooding, Thunderstorms, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole	1,2,4	New
LA6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Mayor's Office, City of Lafayette/ Lafayette Parish Government	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail), Sinkhole	3,4,5	New

City of Lafayette - New Mitigation Actions							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
LA7: Installation of lightning rods and surge protectors at Critical Facilities	Install lightning rods and/or surge protectors; Benefits: will help to ensure minimal down time or equipment failures at Critical Facilities	HMPG and Parish	1-5 years	Mayor's Office, City of Lafayette/ Lafayette Parish Government	Lightning, Thunderstorms	3,4,5	New
LA8: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA, Local	1-5 years	Mayor's Office, City of Lafayette/ Lafayette Parish Government	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	3,4,5	New
LA9: Wildfire mitigation	Identify and implement wildfire vegetation management strategies	HMPG and Parish	1-5 years	Lafayette Parish Government	Wildfire	3,4	New

City of Scott – New Mitigation Actions

City of Scott							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
S1: Public Building Wind Hardening	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage and helps assure that the public buildings can be used, occupied and operable during or after storms.	HMGP and Parish	1-5 years	Mayor's Office, City of Scott/Lafayette Parish Government	High Wind, Hail, Tropical Cyclone, Tornado	3,4,5	New
S2: Drainage Projects	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	HMGP and Parish	1-5 years	Mayor's Office, City of Scott/Lafayette Parish Government	Flooding, High Wind, Tropical Cyclone	3,4	New
S3: Residential elevations and acquisitions for repetitive loss and severe repetitive loss properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP and Parish	1-5 years	Mayor's Office, City of Scott/Lafayette Parish Government	Flooding, Tropical Cyclone	1,3,4	New
S4: Safe Room Projects	Construction of a safe room for first responders located in Scott. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Mayor's Office, City of Scott/Lafayette Parish Government	Tornado, high wind, hail, tropical cyclone, flooding	3,4,5	New

City of Scott							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
S5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety through technical assistance to communities, training events, direct mail outs and multi-hazard awareness weeks for Thunderstorms, Drought, flooding, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	HMPG and Parish	1-5 years	Mayor's Office, City of Scott/Lafayette Parish Government	Drought, Flooding, Thunderstorms, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole	1,2,4	New
S6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Mayor's Office, City of Scott/Lafayette Parish Government	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail), Sinkhole	3,4,5	New
S7: Installation of lightning rods and surge protectors at Critical Facilities	Install lightning rods and/or surge protectors; Benefits: will help to ensure minimal down time or equipment failures at Critical Facilities	HMPG and Parish	1-5 years	Mayor's Office, City of Scott/Lafayette Parish Government	Lightning, Thunderstorms	3,4,5	New

City of Scott							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
S8: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA, Local	1-5 years	Mayor's Office, City of Scott/Lafayette Parish Government	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	3,4,5	New
S9: Wildfire mitigation	Identify and implement wildfire vegetation management strategies	HMPG and Parish	1-5 years	Lafayette Parish Government	Wildfire	3,4	New

City of Youngsville – New Mitigation Actions

City of Youngsville							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Y1: Public Building Wind Hardening	Retrofit public buildings exterior shell to maintain use during and after storm events. Benefits: Reduces damage and helps assure that the public buildings can be used, occupied and operable during or after storms.	HMGP and Parish	1-5 years	Mayor's Office, City of Youngsville/ Lafayette Parish Government	High Wind, Hail, Tropical Cyclone, Tornado	3,4,5	New
Y2: Drainage Projects	Will relieve flooding problems, reduce flood damage and costs of damage, overtopping of roads with drain water, while also keeping open roadways during periods of high precipitation. Benefits: Relieves Parish or local government and property owners of the continual flooding problems, with closed roadways (loss of function). Saves public funds for road repairs, drainage ditch repairs, sandbagging and blocking of roadways during storm periods.	HMGP and Parish	1-5 years	Mayor's Office, City of Youngsville/ Lafayette Parish Government	Flooding, High Wind, Tropical Cyclone	3,4	New
Y3: Residential elevations and acquisitions for repetitive loss and severe repetitive loss properties	Elevation or acquisition-demolition of properties. Benefits: Relieves property owners of the continual flooding problems. Saves flood relief and damage repayment for each property.	HMGP and Parish	1-5 years	Mayor's Office, City of Youngsville/ Lafayette Parish Government	Flooding, Tropical Cyclone	1,3,4	New

City of Youngsville							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
Y4: Safe Room Projects	Construction of a safe room for first responders located in Youngsville. Other locations will be identified based on funding availability.	HMGP and Parish	1-5 years	Mayor's Office, City of Youngsville/ Lafayette Parish Government	Tornado, high wind, hail, tropical cyclone, flooding	3,4,5	New
Y5: Mitigation Public Outreach	Enhance the public outreach programs for the parish and all communities by increasing awareness of risks and safety through technical assistance to communities, training events, direct mail outs and multi-hazard awareness weeks for Thunderstorms, Drought, flooding, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole hazards, as well as providing information on high risk areas. Informing communities, business and citizens on proper mitigation efforts and activities will create resiliency within the parish and its communities.	HMPG and Parish	1-5 years	Mayor's Office, City of Youngsville/ Lafayette Parish Government	Drought, Flooding, Thunderstorms, Lightning, Hail, High Wind, Tropical Cyclones, Tornado, Wildfire, Winter Weather, Sinkhole	1,2,4	New
Y6: Generators for continuity of operations and government	Procurement and Installation of generators at public facilities to ensure continued operations during and after events.	FEMA, Local	1-5 years	Mayor's Office, City of Youngsville/ Lafayette Parish Government	Tornados, Winter Weather, tropical cyclone, thunderstorms (lightning, high wind, hail), Sinkhole	3,4,5	New
Y7: Installation of lightning rods and surge protectors	Install lightning rods and/or surge protectors; Benefits: will help to ensure minimal down time or	HMPG and Parish	1-5 years	Mayor's Office, City of Youngsville/ Lafayette Parish Government	Lightning, Thunderstorms	3,4,5	New

City of Youngsville							
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Goal	Status
at Critical Facilities	equipment failures at Critical Facilities						
Y8: Potable Water	Create redundancy of potable water supply to critical facilities, especially hospitals in Parish, and provide protection of potable water supply by acquisition/installation of backflow preventers at appropriate critical locations.	FEMA, Local	1-5 years	Mayor's Office, City of Youngsville/ Lafayette Parish Government	Tropical Cyclone, thunderstorms (lightning, high wind, hail), tornados, Drought	3,4,5	New
Y9: Wildfire mitigation	Identify and implement wildfire vegetation management strategies	HMPG and Parish	1-5 years	Lafayette Parish Government	Wildfire	3,4	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 Lafayette 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.

Lafayette Parish and the participating jurisdictions will implement and administer the identified actions based off of the proposed timeframes and priorities for each reflected in the portions of this section where actions

are summarized. The inclusion of any specific action item in this document does not commit the parish to implementation. Each action item will be subject to availability of staff and funding. Certain items may require regulatory changes or other decisions that must be implemented through standard processes, such as changing regulations. This plan is intended to offer priorities based on an examination of hazards.

This Page Left Intentionally Blank

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 Lafayette Parish Hazard Mitigation Plan Update

The Lafayette Parish Hazard Mitigation Plan Update process began in May 2015 with a series of meetings and collaborations between the contractor (SDMI) and the participating jurisdictions. Update activities were intended to give each jurisdiction the opportunity to shape the plan to best fit their community's goals. Community stakeholders and the general public were invited to attend and contribute information to the planning process during specific time periods or meetings.

Lafayette Parish includes six incorporated municipalities that participated in the plan update process – City of Broussard, City of Carencro, Duson, City of Lafayette, City of Scott, and City of Youngsville. Lafayette Parish Office of Homeland Security and Emergency Preparedness (OHSEP) invited communities' representatives to meetings, where they supplied critical infrastructure data and reviewed work-in-progress for the plan update.

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

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

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

Date	Meeting or Outreach	Location	Public Invited	Purpose
5/19/2015	Initial Coordination	Telephone/ Email	No	Discuss with Parish HM coordinator and any Steering Committee members expectations and requirements of the project.
6/16/2015	Kick-Off Meeting	Lafayette Parish, Clifton Chenier, Lafayette, LA	No	Discuss with the plan steering committee expectations and requirements of the project. Assign plan worksheets to jurisdictions.
10/1/2015	Risk Assessment Overview	Lafayette Parish, Clifton Chenier, Lafayette, LA	No	Discuss and review the risk assessment with the steering committee discuss and review expectations for public meeting.
10/1/2015	Public Meeting	Lafayette Parish, Clifton Chenier, Lafayette, 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 Lafayette 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 Lafayette 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/LafayetteOHSEP
2 Week Period	Public Plan Review (Digital)		Yes	Parish Website and Lafayette Parish Government Building

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	Grey							
Data Collection	Grey							
Risk Assessment	Grey							
Public Input						Grey		
Mitigation Strategy and Actions				Grey				
Plan Review by GOHSEP and FEMA								Grey
Plan Adoption								Yellow
Plan Approval								Green

Coordination

The Lafayette Parish OHSEP oversaw the coordination of the 2016 Hazard Mitigation Plan Update Steering Committee during the update process. The Lafayette Parish OHSEP and participating jurisdictions were responsible for identifying members for the committee.

The Parish Director and SDMI were jointly responsible for inviting the Steering Committees and key stakeholders to planned meetings and activities by email invitations and calendar invites to each committee member and jurisdiction. 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 2015 Hazard Mitigation Plan Update Steering Committee consisted of representatives from the following parish, municipal or community stakeholders:

- Lafayette Parish Government Offices and Departments
- City of Broussard
- City of Carencro
- Town of Duson
- City of Lafayette
- City of Scott
- City of Youngsville
- GOHSEP
- The University of Louisiana at Lafayette
- Lafayette Regional Airport
- Lafayette School Board
- Lafayette Police Department
- Lafayette Sheriff's Office
- One Acadiana (Chamber of Commerce)
- Acadian Ambulance Service Inc
- Cajundome
- LCG Building Official

The GOHSEP Region 4 Coordinator during the process contributed to neighboring community representation. The Region 4 Coordinator represented the parishes of Acadia, Vermilion, Iberia, Saint Martin and St Landry, all of which border Lafayette Parish. This neighboring community collaboration ensures that mitigation strategies in Lafayette are in line with those of its neighbors. These parishes in GOHSEP Region 4 have all committed to regional cooperation in future mitigation strategies and projects.

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

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

STEERING COMMITTEE		
NAME	TITLE	EMAIL ADDRESS
Dee Stanley	CAO	deestanley@lafayettela.gov
Craig Stansbury	Director - Lafayette OHSEP	cstansbury@lafayettela.gov
Linda Lavergne	Assistant Director - Lafayette OHSEP	eoc@lafayettela.gov

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Melanie Jumonville	Codes	mjumonville@lafayettela.gov
Bobby Cormier	Emergency Operations/Security Coordinator	bcormier@lafayettela.gov
Carlee Alm-Labar	Parish President's Office	calmlabar@lafayettela.gov
Kerwin Woodard	Flood Plain Administrator	kwoodard@lafayettela.gov
Eleanor Bouy	Planning Zoning & Codes	ebouy@lafayettela.gov
Melinda Felps	Accounting Manager	mfelps@lafayettela.gov
Nicolette English	Plans Manager (Hazard Mitigation) GOHSEP	nicolette.english@la.gov
Terry Huval	Utilities Director	thuval@lus.org
Kevin Blanchard	Public Works Director	kblanchard@lafayettela.gov
Mayor Charles Langlinois	City of Broussard	mayor@broussardla.com
Mayor Glenn Brasseaux	City of Carencro	mayor@carencro.org
Mayor Johnny Paul Thibodeaux	Town of Duson	dusonla@cox-internet.com
Mayor Purvis Morrison	City of Scott	pmorrison@cityofscott.org
Mayor Ken Ritter	City of Youngsville	kenritter@youngsvillela.gov
Joey Pons	The University of Louisiana at Lafayette	safetyman@louisiana.edu
Steven Picou	Lafayette Regional Airport	stevenp@lftairport.com
Mike Hollier	Planning Manager - Traffic & Transportation	mhollier@lafayettela.gov
Mona Bernard	Lafayette School Board	mbernard@lpssonline.com
Chief Jim Craft	Lafayette Police Department	Jcraft@lafayettela.gov
Sheriff Mike Neustrom	Lafayette Sheriff's Office	mike.neustrom@lafayettesheriff.com
Chief Robert Benoit	Lafayette Fire Department	rpbenoit@lafayettela.gov
Anjanette Hebert	Director of Security & Safety	ahebert@lgmc.com
Jason El Koubi	One Acadiana (f/k/a Chamber of Commerce)	jason@oneacadiana.org
Troy Guidry	Acadian Ambulance Service, Inc.	tguidry@acadian.com

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Greg Davis	Cajundome	gdavis@cajundome.com
Tim Tolbert	LCG Building Official	ttolbert@lafayettela.gov
Lee John	GOHSEP Region 4 Coordinator	Lee.JohnIII@la.gov
Brenda Cooper	GOHSEP	Brenda.cooper@la.gov

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

- Emergency Operations Plan (Parish and Jurisdictions)
- PlanLafayette 2035
- 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 Lafayette Parish.

Meeting #1: Coordination Discussion

Date: May 19, 2015

Location: Email/phone

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

Public Initiation: No

Invitees Included: Lafayette Parish OHSEP, SDMI Staff

Meeting #2: Hazard Mitigation Plan Update Kick-Off

Date: June 16, 2015**Location:** Lafayette, 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:**

STEERING COMMITTEE		
NAME	TITLE	EMAIL ADDRESS
Dee Stanley	CAO	deestanley@lafayettela.gov
Craig Stansbury	Director - Lafayette OHSEP	cstansbury@lafayettela.gov
Linda Lavergne	Assistant Director - Lafayette OHSEP	eoc@lafayettela.gov
Melanie Jumonville	Codes	mjumonville@lafayettela.gov
Bobby Cormier	Emergency Operations/Security Coordinator	bcormier@lafayettela.gov
Carlee Alm-Labar	Parish President's Office	calmlabar@lafayettela.gov
Kerwin Woodard	Flood Plain Administrator	kwoodard@lafayettela.gov
Eleanor Bouy	Planning Zoning & Codes	ebouy@lafayettela.gov
Melinda Felps	Accounting Manager	mfelps@lafayettela.gov
Nicolette English	Plans Manager (Hazard Mitigation) GOHSEP	nicolette.english@la.gov
Terry Huval	Utilities Director	thuval@lus.org
Kevin Blanchard	Public Works Director	kblanchard@lafayettela.gov
Mayor Charles Langlinais	City of Broussard	mayor@broussardla.com
Mayor Glenn Brasseaux	City of Carencro	mayor@carencro.org
Mayor Johnny Paul Thibodeaux	Town of Duson	dusonla@cox-internet.com
Mayor Purvis Morrison	City of Scott	pmorrison@cityofscott.org
Mayor Ken Ritter	City of Youngsville	kenritter@youngsvillela.gov
Joey Pons	The University of Louisiana at Lafayette	safetyman@louisiana.edu
Steven Picou	Lafayette Regional Airport	stevenp@lftairport.com
Mike Hollier	Planning Manager - Traffic & Transportation	mhollier@lafayettela.gov

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Mona Bernard	Lafayette School Board	mbernard@lpsonline.com
Chief Jim Craft	Lafayette Police Department	Jcraft@lafayettela.gov
Sheriff Mike Neustrom	Lafayette Sheriff's Office	mike.neustrom@lafayettesheriff.com
Chief Robert Benoit	Lafayette Fire Department	rpbenoit@lafayettela.gov
Anjanette Hebert	Director of Security & Safety	ahebert@lgmc.com
Jason El Koubi	One Acadiana (f/k/a Chamber of Commerce)	jason@oneacadiana.org
Troy Guidry	Acadian Ambulance Service, Inc.	tguidry@acadian.com
Greg Davis	Cajundome	gdavis@cajundome.com
Tim Tolbert	LCG Building Official	ttolbert@lafayettela.gov
Lee John	GOHSEP Region 4 Coordinator	Lee.JohnIII@la.gov
Brenda Cooper	GOHSEP	Brenda.cooper@la.gov

Meeting #3: Risk Assessment Overview

Date: October 1, 2016**Location:** Lafayette, LA**Purpose:** Members of the Hazard Mitigation Plan Update Steering Committee were invited and were presented the results of the most recent risk assessment and an overview of the public meeting presentation during this overview. The assessment was conducted based on hazards identified during previous plans.**Public Initiation:** No**Invitees Included:**

STEERING COMMITTEE		
NAME	TITLE	EMAIL ADDRESS
Dee Stanley	CAO	deestanley@lafayettela.gov
Craig Stansbury	Director - Lafayette OHSEP	cstansbury@lafayettela.gov
Linda Lavergne	Assistant Director - Lafayette OHSEP	eoc@lafayettela.gov
Melanie Jumonville	Codes	mjumonville@lafayettela.gov
Bobby Cormier	Emergency Operations/Security Coordinator	bcormier@lafayettela.gov
Carlee Alm-Labar	Parish President's Office	calmlabar@lafayettela.gov
Kerwin Woodard	Flood Plain Administrator	kwoodard@lafayettela.gov
Eleanor Bouy	Planning Zoning & Codes	ebouy@lafayettela.gov
Melinda Felps	Accounting Manager	mfelps@lafayettela.gov
Nicolette English	Plans Manager (Hazard Mitigation) GOHSEP	nicolette.english@la.gov
Terry Huval	Utilities Director	thuval@lus.org
Kevin Blanchard	Public Works Director	kblanchard@lafayettela.gov
Mayor Charles Langlinais	City of Broussard	mayor@broussardla.com
Mayor Glenn Brasseaux	City of Carencro	mayor@carencro.org
Mayor Johnny Paul Thibodeaux	Town of Duson	dusonla@cox-internet.com
Mayor Purvis Morrison	City of Scott	pmorrison@cityofscott.org
Mayor Ken Ritter	City of Youngsville	kenritter@youngsvillela.gov
Joey Pons	The University of Louisiana at Lafayette	safetyman@louisiana.edu
Steven Picou	Lafayette Regional Airport	stevenp@lftairport.com

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Mike Hollier	Planning Manager - Traffic & Transportation	mhollier@lafayettela.gov
Mona Bernard	Lafayette School Board	mbernard@lpssonline.com
Chief Jim Craft	Lafayette Police Department	Jcraft@lafayettela.gov
Sheriff Mike Neustrom	Lafayette Sheriff's Office	mike.neustrom@lafayettesheriff.com
Chief Robert Benoit	Lafayette Fire Department	rpbenoit@lafayettela.gov
Anjanette Hebert	Director of Security & Safety	ahebert@lgmc.com
Jason El Koubi	One Acadiana (f/k/a Chamber of Commerce)	jason@oneacadiana.org
Troy Guidry	Acadian Ambulance Service, Inc.	tguidry@acadian.com
Greg Davis	Cajundome	gdavis@cajundome.com
Tim Tolbert	LCG Building Official	ttolbert@lafayettela.gov
Lee John	GOHSEP Region 4 Coordinator	Lee.JohnIII@la.gov
Brenda Cooper	GOHSEP	Brenda.cooper@la.gov

Meeting #4: Public Meeting

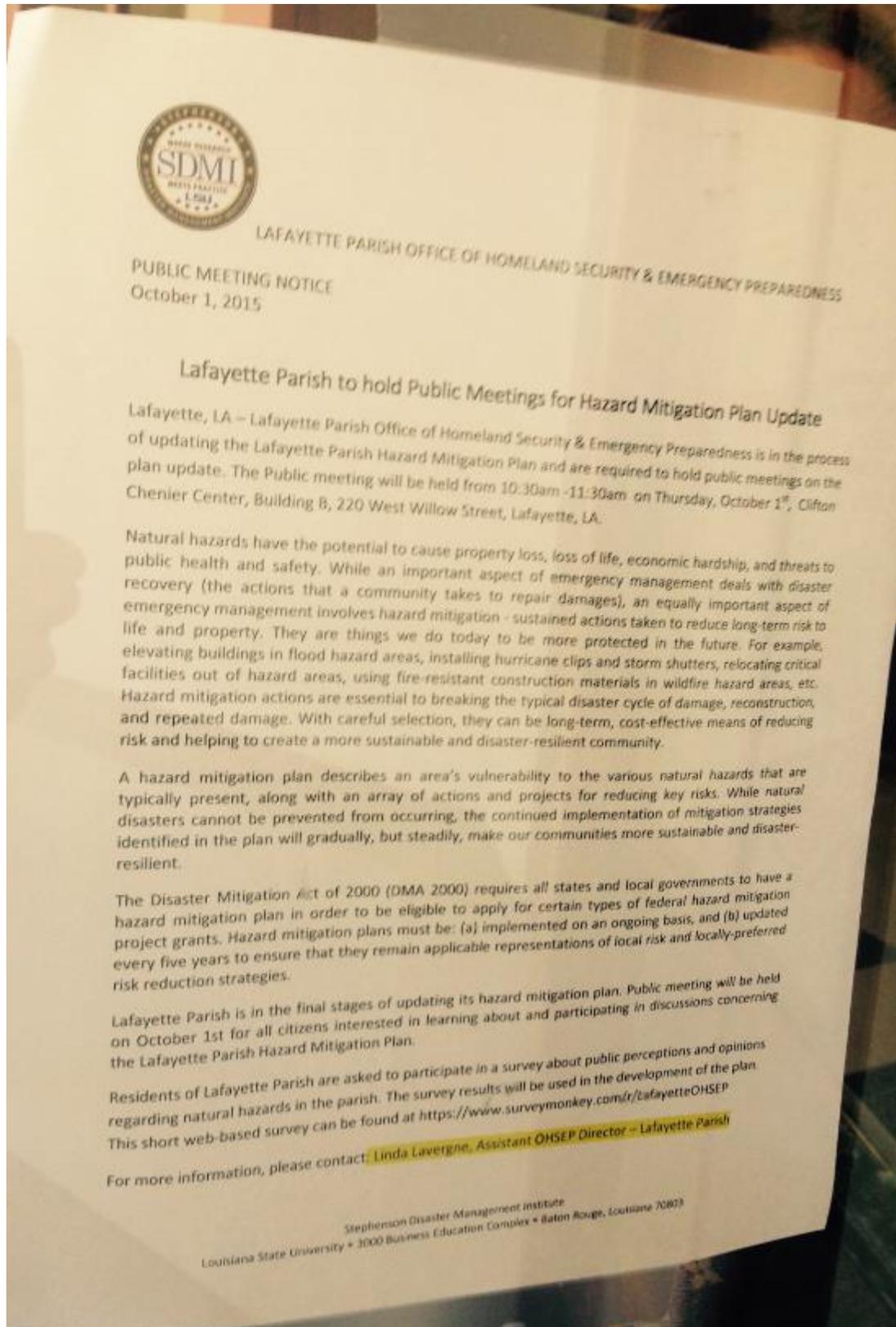
Date: October 1, 2015**Location:** Lafayette, LA**Purpose:** The public meeting allowed the public and community stakeholders to participate and provide input into the hazard mitigation planning process. Maps of the Lafayette Parish communities were provided for the meeting attendees to identify specific areas where localized hazards occur.**Public Initiation:** Yes**Invitees Included:**

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Dee Stanley	CAO	deestanley@lafayettela.gov
Craig Stansbury	Director - Lafayette OHSEP	cstansbury@lafayettela.gov
Linda Lavergne	Assistant Director - Lafayette OHSEP	eoc@lafayettela.gov
Melanie Jumonville	Codes	mjumonville@lafayettela.gov
Bobby Cormier	Emergency Operations/Security Coordinator	bcormier@lafayettela.gov
Carlee Alm-Labar	Parish President's Office	calmlabar@lafayettela.gov
Kerwin Woodard	Flood Plain Administrator	kwoodard@lafayettela.gov
Eleanor Bouy	Planning Zoning & Codes	ebouy@lafayettela.gov
Melinda Felps	Accounting Manager	mfelps@lafayettela.gov
Nicolette English	Plans Manager (Hazard Mitigation) GOHSEP	nicolette.english@la.gov
Terry Huval	Utilities Director	thuval@lus.org
Kevin Blanchard	Public Works Director	kblanchard@lafayettela.gov
Mayor Charles Langlinais	City of Broussard	mayor@broussardla.com
Mayor Glenn Brasseaux	City of Carencro	mayor@carencro.org
Mayor Johnny Paul Thibodeaux	Town of Duson	dusonla@cox-internet.com
Mayor Purvis Morrison	City of Scott	pmorrison@cityofscott.org
Mayor Ken Ritter	City of Youngsville	kenritter@youngsvillela.gov
Joey Pons	The University of Louisiana at Lafayette	safetyman@louisiana.edu
Steven Picou	Lafayette Regional Airport	stevenp@lftairport.com
Mike Hollier	Planning Manager - Traffic & Transportation	mhollier@lafayettela.gov

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Mona Bernard	Lafayette School Board	mbernard@lpsonline.com
Chief Jim Craft	Lafayette Police Department	jcraft@lafayettela.gov
Sheriff Mike Neustrom	Lafayette Sheriff's Office	mike.neustrom@lafayettesheriff.com
Chief Robert Benoit	Lafayette Fire Department	rpbenoit@lafayettela.gov
Anjanette Hebert	Director of Security & Safety	ahebert@lgmc.com
Jason El Koubi	One Acadiana (f/k/a Chamber of Commerce)	jason@oneacadiana.org
Troy Guidry	Acadian Ambulance Service, Inc.	tguidry@acadian.com
Greg Davis	Cajundome	gdavis@cajundome.com
Tim Tolbert	LCG Building Official	ttolbert@lafayettela.gov
Lee John	GOHSEP Region 4 Coordinator	Lee.JohnIII@la.gov
Brenda Cooper	GOHSEP	Brenda.cooper@la.gov

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

Meeting Public Notice



Outreach Activity #1: Public Opinion Survey

Date: Ongoing throughout planning process

Location: Web Survey

Public Initiation: Yes

Outreach Activity #2: Incident Questionnaire

Date: Public Meeting Activity

Location: Public Meeting

Public Initiation: Yes

Outreach Activity #3: Mapping Activities

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

Public Plan Review Documentation

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

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

Responsible Parties

Lafayette 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

Lafayette 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 Lafayette 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 Lafayette Parish's dedication to involving the public directly in review and updates of the Hazard Mitigation Plan. Meetings will be scheduled as needed by the plan administrator to provide a forum for which the public can express their concerns, opinions, and/or ideas about the plan. The plan administrator will be responsible for using parish resources to publicize the annual public meetings and maintain public involvement through the newspapers, radio, and public access television channels. Copies of the plan will be catalogued and kept at all appropriate agencies in the city government, as well as at the Public Library.

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

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

2016 Plan Version Plan Method and Schedule Evaluation

For the current plan update, the previously approved plan's method and schedule were evaluated to determine if the elements and processes involved in the required 2016 update. Based on this analysis, the method and schedule were deemed to be acceptable, and nothing was changed for this update.

Incorporation into Existing Planning Programs

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

- Ordinances, Resolutions, Regulations
- Floodplain Ordinances
- Emergency Operations Plans
- Continuity of Operations Plans
- Debris Removal Plan
- Transportation Plan

Opportunities to integrate the requirements of this plan into other local planning mechanisms will continue to be identified through future meetings of the Lafayette Parish Hazard Mitigation Steering Committee and through the five-year review process described herein. The primary means for integrating mitigation strategies into other local planning mechanisms will be through the revision, update and implementation of each jurisdiction's individual plans that require specific planning and administrative tasks (e.g. risk assessment, plan amendments, ordinance revisions, capital improvement projects, etc.). The members of the steering committee will 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 Lafayette 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 the City of Broussard, City of Carencro, Town of Duson, City of Lafayette, City of Scott, City of Youngsville, Lafayette 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:

Lafayette Unincorporated

Comprehensive Master Plan/Updated as needed/Lafayette Consolidated Government
Local Emergency Operations Plan/Updated as needed/Lafayette Parish OHSEP
Transportation Plan/Updated as needed/Lafayette Consolidated Government
Economic Development Plan/Updated as needed/Lafayette Economic Development Authority
Stormwater Management Plan/Updated as needed/Department of Public Works

City of Broussard

There are no additional plans within this jurisdiction for the hazard mitigation plan to be integrated.

City of Carencro

Local Emergency Operations Plan/Updated yearly/City of Carencro
Capital Improvement Plan/Updated as needed/City of Carencro
Stormwater Management Plan/Updated as needed/City of Carencro

Town of Duson

There are no additional plans within this jurisdiction for the hazard mitigation plan to be integrated.

City of Lafayette

Local Emergency Operations Plan/Updated as needed/City of Lafayette
Economic Development Plan/Updated as needed/Lafayette Economic Development Authority
Comprehensive Master Plan/Updated as needed/Lafayette Consolidated Government
Transportation Plan/Updated as needed/City of Lafayette
Stormwater management plan/Department of Public Works

City of Scott

Comprehensive Master Plan/Updated as needed/City of Scott
Capital Improvement Plan/Updated as needed/City of Scott
Economic Development Plan/Updated as needed/City of Scott

Local Emergency Operations Plan/Updated as needed/City of Scott
Stormwater Management Plan/Updated as needed/City of Carencro

City of Youngsville

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 may include:

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

This Page Left Intentionally Blank

Appendix C: Essential Facilities

Lafayette Parish Essential Facilities – All Jurisdictions

Lafayette Unincorporated Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Fire and Rescue	Carencro Fire Department					X	X	X	X		
	Fire and Safety Specialists		X			X	X	X	X		
	Fire Department					X	X	X	X		
	Judice Volunteer Fire Department		X			X	X	X	X		
Government	Center for Ecology and Environmental Technology					X	X	X	X		
	Lafayette Animal Control Center					X	X	X	X		
	Lafayette Municipal Landfill					X	X	X	X		
	Lafayette Parish Waterworks District North					X	X	X	X		
Law Enforcement	Lafayette Parish Shooting Range		X	X		X	X	X	X		
	LPSO Public Safety Complex		X			X	X	X	X		
Public Health	Optima Specialty Hospital		X			X	X	X	X		
Schools	Alexander Headstart Center					X	X	X	X		

Lafayette Unincorporated Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
	Charles M. Burke Elementary					X	X	X	X		
	Episcopal School of Acadiana					X	X	X	X		
	Judice Middle		X			X	X	X	X		
	Milton Elementary School		X			X	X	X	X		
	Ossun Elementary					X	X	X	X		
	Principal's List Pre-School		X			X	X	X	X		
	Ridge Elementary					X	X	X	X		
Nursing Homes	Amelia Manor Nursing Home					X	X	X	X		
	Gertrude Manor					X	X	X	X		

Broussard Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Fire and Rescue	Broussard Fire Department					X	X	X	X		
	Broussard Fire Station 1		X			X	X	X	X	X	
	Miguez Sub Station		X			X	X	X	X		
Government	Broussard Chamber of Commerce					X	X	X	X	X	
	Broussard City Hall					X	X	X	X		

Broussard Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Law Enforcement	Broussard Police Dept					X	X	X	X		
	Police Administration					X	X	X	X	X	
Public Health	Oceans Hospital					X	X	X	X		
Schools	Broussard Middle School		X			X	X	X	X		
	Katharine Drexel Elementary					X	X	X	X		

Lafayette Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Fire and Rescue	City of Lafayette Fire Station #9					X	X	X	X		
	Fire Station 5					X	X	X	X		
	Fire Station					X	X	X	X		
	Fire Station					X	X	X	X		
	Fire Station					X	X	X	X		
	Fire Station					X	X	X	X		
	Fire Station 10					X	X	X	X		
	Fire Station 12					X	X	X	X		
	Fire Station 13					X	X	X	X		
	Fire Station No 2			X			X	X	X	X	
	Fire Station No 2			X			X	X	X	X	
	Fire Station No 4			X			X	X	X	X	

Lafayette Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
	Fire Station No 7					X	X	X	X		
	Lafayette Fire Department					X	X	X	X		
	Lafayette Fire Department No 3					X	X	X	X		
	Lafayette Fire Station No. 11					X	X	X	X		
Government	Clifton Chenier Communication Services Center					X	X	X	X		
	Department of Community Development					X	X	X	X		
	Department of Public Safety & Corrections Probation & Parole					X	X	X	X		
	Lafayette Parish Sheriff's Office Community Training Center					X	X	X	X		
	Lafayette Council on Aging					X	X	X	X		
	Lafayette Housing Authority Maintenance Facility					X	X	X	X		
	Lafayette Parish Sheriff's Office					X	X	X	X		

Lafayette Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
	Community Corrections										
	Lafayette Public Safety Building					X	X	X	X		
	Lafayette Utilities System					X	X	X	X		
	Louisiana Department Of Environmental Quality					X	X	X	X		
	Louisiana Energy & Power Authority					X	X	X	X		
	Louisiana State Board of Physical Therapy Examiners					X	X	X	X		
	LUS Operations Center		X			X	X	X	X		
	Office of Motor Vehicles					X	X	X	X		
	SWLA Center For Health Services					X	X	X	X		
Law Enforcement	Community Service Unit		X			X	X	X	X		
	Lafayette Police Department					X	X	X	X		
	Lafayette Sheriff Office					X	X	X	X		

Lafayette Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
	Lafayette Sheriff's Office Fleet Maintenance					X	X	X	X		
	Louisiana State Police Troop I Headquarters					X	X	X	X		
	Police Department		X			X	X	X	X		
	Police Station					X	X	X	X		
Corrections	Lafayette Juvenile Detention Home					X	X	X	X		
Schools	Acadian Middle School					X	X	X	X		
	Alice Boucher Elementary					X	X	X	X		
	Broadmore Elementary					X	X	X	X		
	Cathedral Carmel					X	X	X	X		
	Comeaux High School					X	X	X	X		
	David Thibodaux High School					X	X	X	X	X	
	Drive-it USA					X	X	X	X		
	Edgar Martin Middle					X	X	X	X		
	Evangeline Elementary		X			X	X	X	X		
	First Baptist					X	X	X	X		
	First Baptist					X	X	X	X		
Fisher's Child Development					X	X	X	X			

Lafayette Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
	Holy Family Catholic School					X	X	X	X		
	Holy Rosary Head Start					X	X	X	X		
	Holy Rosary Institute - VACANT					X	X	X	X		
	Immaculate Heart of Mary		X			X	X	X	X		
	J. Wallace James Elementary					X	X	X	X		
	J.W. Faulk Elementary					X	X	X	X		
	L.J. Alleman Arts Academy					X	X	X	X		
	Lafayette Christian Academy					X	X	X	X		
	Lafayette Christian Academy					X	X	X	X		
	Lafayette High School		X			X	X	X	X		
	Lafayette Lutheran School		X			X	X	X	X		
	Lafayette Middle					X	X	X	X		
	Lafayette Parish School Board		X			X	X	X	X	X	
	Lerosen Elementary					X	X	X	X		
	Live Oak Elementary					X	X	X	X		
	Louisiana Avenue Early Head Start					X	X	X	X		

Lafayette Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
	Myrtle Place Elementary					X	X	X	X		
	N.P. Moss Preparatory School					X	X	X	X		
	Northside High School					X	X	X	X		
	Paul Breaux Middle School					X	X	X	X	X	
	Plantation Elementary					X	X	X	X		
	Prairie Elementary					X	X	X	X		
	Prarie Elementary School		X			X	X	X	X		
	S.J. Montgomery Elementary					X	X	X	X		
	Saints Leo-Seton Catholic School					X	X	X	X		
	St Pius Elementary					X	X	X	X		
	St Pius Pre School					X	X	X	X		
	St Thomas Moore					X	X	X	X		
	St. Genevieve Catholic School					X	X	X	X	X	
	St. Genevieve Catholic School					X	X	X	X	X	
	Teurlings Catholic High School		X			X	X	X	X	X	
	Truman Montessori					X	X	X	X		
	Woodvale Elementary					X	X	X	X		

Lafayette Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Public Health	AMG Specialty Hospital					X	X	X	X		
	Heart Hospital of Lafayette					X	X	X	X		
	Kindred Hospital					X	X	X	X		
	Lafayette General Surgical Hospital					X	X	X	X		
	Our Lady of Lourdes Regional					X	X	X	X		
	Park Place Surgical Hospital					X	X	X	X		
	University Hospital					X	X	X	X		
	Women's & Childrens Medical Center					X	X	X	X		
Nursing Homes	The Green House Lafayette Senior Center					X	X	X	X		
	Hospice Compassus					X	X	X	X		
	Lady of the Oaks					X	X	X	X		
	Lafayette Care Center					X	X	X	X		
	River Oaks Retirement Manor		X			X	X	X	X		

Scott Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Fire and Rescue	Scott Fire Dept.		X			X	X	X	X		
	Scott Fire Dept. No. 2		X			X	X	X	X		
Government	Scott City Hall		X			X	X	X	X		
	Scott City Maintenance		X			X	X	X	X		
	Scott Public Works Dept.		X			X	X	X	X		
Law Enforcement	Scott Police Dept.		X			X	X	X	X		
Schools	Acadiana High		X			X	X	X	X		
	Family Life Christian Academy		X			X	X	X	X		
	L Leo Judice Elementary		X			X	X	X	X		
	Scott Middle		X			X	X	X	X		
	Sts. Peter & Paul Catholic School		X			X	X	X	X		
	Sts. Peter & Paul School of Religion		X			X	X	X	X		
	Unity Christian Academy		X			X	X	X	X		
	Westside Elementary		X			X	X	X	X		

Duson Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Fire and Rescue	Duson Volunteer Fire Department		X			X	X	X	X		
	Duson Volunteer Fire Dept.		X			X	X	X	X		
Government	Duson Council Chambers & Courtroom		X			X	X	X	X		
	Duson Town Hall		X			X	X	X	X		
Law Enforcement	Duson Police Dept.		X			X	X	X	X		
Schools	Duson Elementary		X			X	X	X	X		

Youngsville Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Fire and Rescue	Jason D. Simon Station No.1		X			X	X	X	X		
						X	X	X	X		
Government	Youngsville Public Works		X			X	X	X	X		
	Youngsville Town Hall		X			X	X	X	X		
Schools	Ernest Gallet Elementary School					X	X	X	X		
	Helping Hearts Academy					X	X	X	X		

	Sugar 'N Spice Preschool		X			X	X	X	X		
	Youngsville Middle School					X	X	X	X		

Carencro Essential Facilities											
Type	Name	Drought*	Flood	Sinkholes	Hail*	Lightning	Wind	Tornado	Tropical Cyclone	Wildfire	Winter Storm*
Fire and Rescue	Carencro Fire Department					X	X	X	X		
Government	Acadiana Regional Developmental District					X	X	X	X		
	Carencro City Hall		X			X	X	X	X		
Law Enforcement	Carencro Police Station					X	X	X	X		
Schools	Carencro Catholic School					X	X	X	X		
	Carencro Heights Elementary		X			X	X	X	X		
	Carencro High School					X	X	X	X		
	Carencro Middle School					X	X	X	X		
Nursing Homes	Evangeline Oaks		X			X	X	X	X		

*There are no critical facilities vulnerable to the hazard.

Appendix D: Plan Adoption

CITY OF BROUSSARD RESOLUTION # 468--16
A RESOLUTION ADOPTING THE PARISH-WIDE MITIGATION PLAN

WHEREAS, the Lafayette Consolidated Government working with the Lafayette Parish Office of Homeland Security and Emergency Preparedness has prepared a multi-hazard mitigation plan hereby known as the LAFAYETTE PARISH HAZARD MITIGATION PLAN 2016 in accordance with the Disaster Mitigation Act of 2000; and

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

WHEREAS, our community is participating in the Hazard Mitigation Plan prepared by the Lafayette Office of Homeland Security and Emergency Preparedness under the oversight of a Steering Committee comprised of Parish-Wide representatives;

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

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

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

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

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

NOW, THEREFORE, BE IT FURTHER RESOLVED, that the City of Broussard does hereby adopt the Lafayette Parish Hazard Mitigation Plan.

MOVED FOR ADOPTION BY Councilman Ray Gary and seconded by Councilman David Bonin.

WHEREUPON, this Resolution was submitted to a vote that resulted in the following:

YEAS: Councilwoman Racca, Councilman Bourque, Councilman Bonin, Councilman Foco,
 Councilman Higginbotham and Councilman Gary

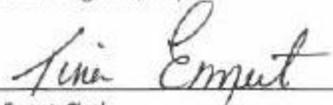
NAYS: none

ABSENT: Councilwoman Batiste

This resolution was declared adopted on the 12th day of April, 2016



 Charles E. Langlinal, Mayor



 Tina Emert, Clerk

CITY OF CARENCRO RESOLUTION # 2016-008

A RESOLUTION ADOPTING THE PARISH-WIDE MITIGATION PLAN

WHEREAS, the Lafayette Consolidated Government working with the Lafayette Parish Office of Homeland Security and Emergency Preparedness has prepared a multi-hazard mitigation plan hereby known as the LAFAYETTE PARISH HAZARD MITIGATION PLAN 2016 in accordance with the Disaster Mitigation Act of 2000; and

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

WHEREAS, our community is participating in the Hazard Mitigation Plan prepared by the Lafayette Office of Homeland Security and Emergency Preparedness under the oversight of a Steering Committee comprised of Parish-Wide representatives;

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

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

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

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

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

NOW THEREFORE BE IT RESOLVED BY THE CARENCRO CITY COUNCIL:

SECTION 1: That the Carencro City Council hereby adopts the Lafayette Parish Hazard Mitigation Plan this 18th day of April, 2016 and authorizing Mayor Glenn L. Brasseaux to sign all documents.

The veto thereon was as follows:

YEAS: Councilmembers Antoine Babineaux, L. J. Boudreaux, Kim Guidry and J. L. Richard

NAYS: None

ABSENT: Councilmember Alfred Sinegal


Glenn L. Brasseaux, Mayor
City of Carencro

Publish: 4/24/16

ITEM NO. 07 – EMERGENCY OPERATIONS
FDD: 04-19-2016**RESOLUTION NO. R-018-2016****A RESOLUTION OF THE LAFAYETTE CITY-PARISH COUNCIL ADOPTING THE LAFAYETTE PARISH HAZARD MITIGATION PLAN 2016**

BE IT RESOLVED by the Lafayette City-Parish Council, that:

WHEREAS, the Lafayette City-Parish Consolidated Government working with the Lafayette Parish Office of Homeland Security and Emergency Preparedness has had a multi-hazard mitigation plan prepared that is hereby known as the Lafayette Parish Hazard Mitigation Plan 2016 in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, our community has participated in the process to prepare a Disaster Mitigation Act (DMA) compliant Hazard Mitigation Plan based on the FEMA guidance available in the "How-To" guides; and

WHEREAS, our community wishes to participate in the Hazard Mitigation Plan ("The Plan") prepared by the Lafayette City-Parish Consolidated Government under the oversight of a steering committee comprised of Parish-wide representatives; and

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

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

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

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

NOW, THEREFORE, BE IT FURTHER RESOLVED by the Lafayette City-Parish Council, that:

SECTION 1: All of the aforescribed "Whereas" clauses are adopted as part of this resolution.

SECTION 2: The Lafayette City-Parish Council wishes to adopt the Lafayette Parish Hazard Mitigation Plan 2016.

SECTION 3: All resolutions, or parts thereof, in conflict herewith are hereby repealed.

This resolution having been submitted to a vote, the results were as follows:

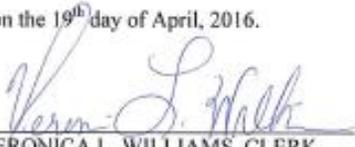
YEAS: Naquin, Castille, Lewis, Boudreaux, Bellard, Conque, Cook, Hebert, Theriot

NAYS: None

ABSENT: None

ABSTAIN: None

AND the resolution was declared adopted on the 19th day of April, 2016.


 VERONICA L. WILLIAMS, CLERK
 LAFAYETTE CITY-PARISH COUNCIL

OFFICE OF HOMELAND SECURITY AND
 EMERGENCY PREPAREDNESS
 CITY-PARISH OF LAFAYETTE
 P.O. BOX 3286 • LAFAYETTE, LA 70502

DATE: March 30, 2016

TO: Lowell Duhon

FROM: Linda Lavergne 

SUBJ: Resolution of the Lafayette City-Parish Council Adopting the Lafayette Parish Hazard Mitigation Plan 2016

RECEIVED

APR 04 2016

MAYOR-PRESIDENT'S
 OFFICE

Lafayette Consolidated Government has received millions of dollars of Hazard Mitigation Grant funds for several drainage projects, a pilot reconstruction, and acquisitions and elevations of homes in Lafayette Parish which have experienced numerous losses due to flooding.

In order to qualify for these Hazard Mitigation Grants, the parish must have a Hazard Mitigation Plan. This plan must be updated and approved by FEMA every five years.

We have worked with a Steering Committee and have submitted an updated plan to FEMA. FEMA has issued an "APA" – Approval Pending Adoption. The City-Parish of Lafayette and each municipality must formally adopt the plan through resolutions. There is a short time frame to do this.

I have corresponded with each municipality within the parish and they are working to get resolutions adopting the plan. Once I receive all the resolutions, I will have these resolutions forwarded FEMA.

A copy of The Hazard Mitigation Plan is not included in the packet due to its overwhelming size, so in lieu of the physical document, you can visit the website <https://filestogeaux.lsu.edu/public/download.php?FILE=tcoffman/48174XSPALr> or call me at 291-5060 for any questions or concerns you may have.

Please forward your approval and required paperwork to have this item placed on the agenda for the April 19, 2016 City-Parish Council meeting.

Thanks for your help in this matter.

c: Carolina McRae

RECEIVED

APR 04 2016

Lafayette Consolidated Government
 Chief Administrative Officer

LAFAYETTE CITY-PARISH COUNCIL MEETING

AGENDA ITEM SUBMITTAL FORM

If this involves a budget revision, please complete a budgetary revision form.

1) JUSTIFICATION FOR REQUEST: In order for the Parish of Lafayette to receive Hazard Mitigation Grant Funds, the Parish of Lafayette must update their Hazard Mitigation Plan every 5 years.

2) ACTION REQUESTED: Adoption of Resolution

3) REQUESTED ACTION OF COUNCIL:
A) INTRODUCTION: April 19, 2016
B) FINAL ADOPTION: April 19, 2016

4) DOCUMENTATION INCLUDED WITH THIS REQUEST:
A) Resolution
B) Cover Memo
C) Submittal Form

5) FISCAL IMPACT:
Fiscal Impact (will be detailed in Cost-Revenue Analysis)
x No Fiscal Impact

RECOMMENDED BY:
Linda Lavigne
ASSISTANT DIRECTOR

APPROVED FOR AGENDA:
[Signature]
CHIEF ADMINISTRATIVE OFFICER

**CITY OF SCOTT RESOLUTION # 2016-7
A RESOLUTION ADOPTING THE PARISH-WIDE MITIGATION PLAN**

WHEREAS, the Lafayette Consolidated Government working with the Lafayette Parish Office of Homeland Security and Emergency Preparedness has prepared a multi-hazard mitigation plan hereby known as the LAFAYETTE PARISH HAZARD MITIGATION PLAN 2016 in accordance with the Disaster Mitigation Act of 2000; and

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

WHEREAS, our community is participating in the Hazard Mitigation Plan prepared by the Lafayette Office of Homeland Security and Emergency Preparedness under the oversight of a Steering Committee comprised of Parish-Wide representatives;

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

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

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

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

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

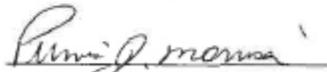
NOW THEREFORE, BE IT FURTHER RESOLVED BY THE SCOTT CITY COUNCIL THAT THE COUNCIL HEREBY ADOPTS THE LAFAYETTE PARISH HAZARD MITIGATION PLAN THIS 5th DAY OF May, 2016

WHEREUPON, this Resolution was submitted to a vote that resulted in the following:

YEAS: Jan Scott Richard, Terry Montouct, Danny Hollien

NAYS:

ABSENT: Tonya Carola and Troy Bergeron



Purvis Morrison, Mayor
City of Scott, Louisiana

CITY OF YOUNGSVILLE RESOLUTION NO. 2016-04**A RESOLUTION ADOPTING THE PARISH-WIDE MITIGATION PLAN**

WHEREAS, the Lafayette Consolidated Government working with the Lafayette Parish Office of Homeland Security and Emergency Preparedness has prepared a multi-hazard mitigation plan hereby known as the LAFAYETTE PARISH HAZARD MITIGATION PLAN 2016 in accordance with the Disaster Mitigation Act of 2000; and

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

WHEREAS, our community is participating in the Hazard Mitigation Plan prepared by the Lafayette Office of Homeland Security and Emergency Preparedness under the oversight of a Steering Committee comprised of Parish-Wide representatives; and

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

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

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

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

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

The foregoing resolution was read in full, the roll was called on the adoption thereof, and the resolution was adopted by the following votes:

YEAS: Jamison Abshire, Lauren Michel, Matt Romero, Ken Stansbury, Dianne McClelland
 NAYS: None
 ABSTAIN: None
 ABSENT: None

/s/ Ken Ritter

Ken Ritter, Mayor

/s/ Sally M. Angers

Sally M. Angers, City Clerk

CERTIFICATE

I do hereby certify that the foregoing is a true and exact copy of the resolution adopted at the Regular City Council Meeting, held on April 14, 2016 at which meeting, a quorum was present and voting.

Youngsville, Louisiana, this 15th day of April, 2016

Sally M. Angers
 Sally M. Angers, City Clerk

TOWN OF DUSON RESOLUTION # 16-770
A RESOLUTION ADOPTING THE PARISH-WIDE MITIGATION PLAN

BE IT RESOLVED BY THE MAYOR AND COUNCIL MEMBERS OF THE TOWN OF DUSON, in regular session, April 19, 2016 the following resolution was offered by Carroll Pepper, duly seconded by Coby Duhon, and resolved and adopted.

WHEREAS, the Lafayette Consolidated Government working with the Lafayette Parish Office of Homeland Security and Emergency Preparedness has prepared a multi-hazard mitigation plan hereby known as the LAFAYETTE PARISH HAZARD MITIGATION PLAN 2016 in accordance with the Disaster Mitigation Act of 2000; and WHEREAS, our community has participated in the process to prepare a DMA compliant Hazard Mitigation Plan based in the FEMA guidance available in the How to Guides;

WHEREAS, our community is participating in the Hazard Mitigation Plan prepared by the Lafayette Office of Homeland Security and Emergency Preparedness under the oversight of a Steering Committee comprised of Parish-Wide representatives;

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

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

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

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

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

Therefore, the Town of Duson does hereby adopt the Lafayette Parish Hazard Mitigation Plan on the 19th day of April, 2016.

The above being submitted to a vote and the results were as follows:

YEAS: Coby Duhon, Wade Robin, Carolyn Richard, Carroll Pepper, and Stephen Hanks.

NAYS: None.

ABSENT: None.

ABSTAIN: None.

THEREUPON, the above resolution was duly adopted.


Johnny Paul Thibodeaux
Mayor

ATTEST:

Karen Laviolette
Town Clerk

CERTIFICATE

I, Karen Laviolette, Town Clerk of the Town of Duson do hereby certify that the above is a true and correct copy of the Resolution adopted by the Council Members on April 19, 2016, at which time a quorum was present.


Karen Laviolette
Town Clerk
Town of Duson

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

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Dee Stanley	CAO	deestanley@lafayettela.gov
Craig Stansbury	Director - Lafayette OHSEP	cstansbury@lafayettela.gov
Linda Lavergne	Assistant Director - Lafayette OHSEP	eoc@lafayettela.gov
Melanie Jumonville	Codes	mjumonville@lafayettela.gov
Bobby Cormier	Emergency Operations/Security Coordinator	bcormier@lafayettela.gov
Carlee Alm-Labar	Parish President's Office	calmlabar@lafayettela.gov
Kerwin Woodard	Flood Plain Administrator	kwoodard@lafayettela.gov
Eleanor Bouy	Planning Zoning & Codes	ebouy@lafayettela.gov
Melinda Felps	Accounting Manager	mfelps@lafayettela.gov
Nicolette English	Plans Manager (Hazard Mitigation) GOHSEP	nicolette.english@la.gov
Terry Huval	Utilities Director	thuval@lus.org
Kevin Blanchard	Public Works Director	kblanchard@lafayettela.gov

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Mayor Charles Langlinais	City of Broussard	mayor@broussardla.com
Mayor Glenn Brasseaux	City of Carencro	mayor@carencro.org
Mayor Johnny Paul Thibodeaux	Town of Duson	dusonla@cox-internet.com
Mayor Purvis Morrison	City of Scott	pmorrison@cityofscott.org
Mayor Ken Ritter	City of Youngsville	kenritter@youngsvillela.gov
Joey Pons	The University of Louisiana at Lafayette	safetyman@louisiana.edu
Steven Picou	Lafayette Regional Airport	stevenp@lftairport.com
Mike Hollier	Planning Manager - Traffic & Transportation	mhollier@lafayettela.gov
Mona Bernard	Lafayette School Board	mbernard@lpsonline.com
Chief Jim Craft	Lafayette Police Department	jcraft@lafayettela.gov
Sheriff Mike Neustrom	Lafayette Sheriff's Office	mike.neustrom@lafayettesheriff.com
Chief Robert Benoit	Lafayette Fire Department	rpbenoit@lafayettela.gov
Anjanette Hebert	Director of Security & Safety	ahebert@lgmc.com
Jason El Koubi	One Acadiana (f/k/a Chamber of Commerce)	jason@oneacadiana.org
Troy Guidry	Acadian Ambulance Service, Inc.	tguidry@acadian.com
Greg Davis	Cajundome	gdavis@cajundome.com

STEERING COMMITTEE		
<u>NAME</u>	<u>TITLE</u>	<u>EMAIL ADDRESS</u>
Tim Tolbert	LCG Building Official	ttolbert@lafayettela.gov
Lee John	GOHSEP Region 4 Coordinator	Lee.JohnIII@la.gov
Brenda Cooper	GOHSEP	Brenda.cooper@la.gov

Capability Assessment
Lafayette Unincorporated

Worksheet 4.1: Capability Assessment Worksheet - Lafayette Unincorporated		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	Yes / No	Comments
Comprehensive / Master Plan	Yes	2014
Capital Improvements Plan	No	
Economic Development Plan	Yes	2011
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	Yes	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections	Yes / No	
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	2
Site plan review requirements	Yes	
Land Use Planning and Ordinances	Yes / No	
Zoning Ordinance	Yes	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	Yes	
Other		

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

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

City of Broussard

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

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

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

City of Carencro

Worksheet 4.1: Capability Assessment Worksheet - City of Carencro		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	Yes / No	Comments
Comprehensive / Master Plan	No	
Capital Improvements Plan	Yes	Short Term Plan
Economic Development Plan	No	
Local Emergency Operations Plan	Yes	Updated yearly
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	Yes	Ord. # 2007-024/1-22-08
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections	Yes / No	
Building Code	Yes	1988; 2003, 2010, 2013
Building Code Effectiveness Grading Schedule (BCEGS) Score	Yes	2013 (99/4)
Fire Department ISO/PIAL rating	Yes	2013
Site plan review requirements	Yes	
Land Use Planning and Ordinances	Yes / No	
Zoning Ordinance (Performance Land Use)	Yes	2009
Subdivision Ordinance	Yes	2002
Floodplain Ordinance	Yes	1988, 2002, 2008, 2012
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	2008
Flood Insurance Rate Maps	Yes	Effective 1996/Prelim 2015
Acquisition of land for open space and public recreation uses	Yes	
Other-Drainage Anlysis	Yes	1988, 2002, 2008, 2012

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes / No	
Planning Commission	Yes	Carencro City Council
Mitigation Planning Committee	Yes	Combined with Parish
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	PW Maintenance Schedule
Staff	Yes / No; FT/PT; % Hazard Mitigation	
Chief Building Official	Yes/FT/0%	Contracted with BCIS
Floodplain Administrator	Yes/FT/0%	Bonnie Anderson, CFM
Emergency Manager	Yes/FT/0%	City Manager
Community Planner	Yes/FT/0%	Planning Administrator
Civil Engineer	Yes/FT/0%	Contracted with Fenstermaker
GIS Coordinator	No	
Grant Writer	Yes/PT/0%	Contracted out as needed
Other	No	
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	Portable message boards
Hazard Data & Information	No	
Grant Writing	Yes	Contracted out as needed
Hazus Analysis	No	
Other	No	
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes / No	
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	Council approval/public vote
Fees for water, sewer, gas, or electric services	Yes	Water, Sewer, & Gas only
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	FP&C, DOTD, USDA, Local

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

Town of Duson

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

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

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

City of Lafayette

Worksheet 4.1: Capability Assessment Worksheet - City of Lafayette		
Local mitigation capabilities are existing authorities, policies and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	Yes / No	Comments
Comprehensive / Master Plan	Yes	2014
Capital Improvements Plan	No	
Economic Development Plan	Yes	2011
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	Yes	
Stormwater Management Plan	Yes	
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)		
Building Code, Permitting and Inspections	Yes / No	
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	2
Site plan review requirements	Yes	
Land Use Planning and Ordinances	Yes / No	
Zoning Ordinance	Yes	
Subdivision Ordinance	Yes	
Floodplain Ordinance	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	Yes	
Flood Insurance Rate Maps	Yes	
Acquisition of land for open space and public recreation uses	Yes	

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes / No	
Planning Commission	Yes	
Mitigation Planning Committee	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	
Staff	Yes / No; FT/PT; % Hazard Mitigation	
Chief Building Official	Yes/FT/20%	
Floodplain Administrator	Yes/FT	
Emergency Manager	Yes/FT/10%	
Community Planner	Yes/FT	
Civil Engineer	Yes/FT	
GIS Coordinator	Yes/FT	
Grant Writer	Yes/FT	
Other	Yes/FT	
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	
Hazard Data & Information	No	
Grant Writing	Yes	
Hazus Analysis	No	
Other		
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes / No	
Capital Improvements project funding	Yes	
Authority to levy taxes for specific purposes	Yes	
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Stormwater Utility Fee	No	
Community Development Block Grant (CDBG)	Yes	
Other Funding Programs	Yes	

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

City of Scott

Worksheet 4.1: Capability Assessment Worksheet - City of Scott		
Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.		
Planning and Regulatory		
Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.		
Plans	Yes / No	Comments
Comprehensive / Master Plan	Yes	2014
Capital Improvements Plan	Yes	
Economic Development Plan	Yes	2011
Local Emergency Operations Plan	Yes	
Continuity of Operations Plan	No	
Transportation Plan	No	
Stormwater Management Plan	YES	Ord #2007-9,2007-12,2007-13,2007-14,2007-15
Community Wildfire Protection Plan	No	
Other plans (redevelopment, recovery, coastal zone management)	No	
Building Code, Permitting and Inspections		
Building Code	YES	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	YES	Rating 3
Site plan review requirements	YES	
Land Use Planning and Ordinances		
Zoning Ordinance	No	
Subdivision Ordinance	YES	
Floodplain Ordinance	YES	Ord #1995-13, 2011-11
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	YES	Ord #2007-14, 2011-9
Flood Insurance Rate Maps	YES	Effective 1996/1999 Prelim 2015
Acquisition of land for open space and public recreation uses	YES	
Other Drainage Analysis	YES	1995-13, 2011-11

Administration and Technical		
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.		
Administration	Yes / No	
Planning Commission	YES	
Mitigation Planning Committee		
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	YES	
Staff	Yes / No; FT/PT; % Hazard Mitigation	
Chief Building Official	Yes/FT/0%	Contracted with BCIS
Floodplain Administrator	Yes/FT/0%	Tammy Vincent, CFM
Emergency Manager	Yes/FT/0%	City Manager
Community Planner	Yes/FT/0%	Planning Administrator
Civil Engineer	YES	Contracted with Fenstermaker
GIS Coordinator	NO	
Grant Writer	YES/PT/0%	Contracted as needed
Other	NO	
Technical	Yes / No	
Warning Systems / Service (Reverse 911, outdoor warning signals)	YES	Portable message board
Hazard Data & Information	NO	
Grant Writing	YES	Contracted as needed
Hazus Analysis	NO	
Other	NO	
Financial		
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.		
Funding Resource	Yes / No	
Capital Improvements project funding	YES	
Authority to levy taxes for specific purposes	YES	Council approval/ public vote
Fees for water, sewer, gas, or electric services	YES	Gas, water and Sewer
Impact fees for new development	NO	
Stormwater Utility Fee	NO	
Community Development Block Grant (CDBG)	YES	
Other Funding Programs		

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

City of Youngsville

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

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

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

Building Inventory

Critical Facility (If Yes, Mark X)	Name of Building	Purpose of Building	Address	City	Assessed Value	Date Built	Construction Type
Unincorporated Lafayette and City of Lafayette							
	**See Separate Sheet provided by Parish and City						
Broussard							
	**See Separate Sheet Provided By Parish						
Carencro							
X	Carencro City Hall	City administrative office/Council Chambers	210 E. St. Peter Street	Carencro	800,000	1983	Concrete
	Carencro Community Center	Public building open for rent/holding events	5005 N. University Avenue	Carencro	1,540,000	2004	Concrete
X	Carencro Fire Station # 1	Public building housing fire fighters/fire trucks/equipment	5201N. University Avenue	Carencro	912,490	2010	Wood
X	Carencro Fire Station # 2	Public building housing fire fighters/fire trucks/equipment	400 Hector Connolly Road	Carencro	493,042	1994	Metal
X	Carencro Police Station	Police administrative office/ house policeman/equipment	110 Centennial Drive	Carencro	550,000	2006	Wood
	Carencro Public Works Building	Office space and break room for Public Works Department	121 Andre' Street	Carencro	72,000	1950	Concrete
	Carencro Old Water Plant	Houses equipment for water and sewer	120 Andre' Street	Carencro	46,000	1950	Metal
X	Carencro New Water Plant	New water well operations	125 Andre' Street	Carencro	3,054,000	2010	Concrete
X	EOC @ Carencro Community Center	Houses emergency personnel & equipment during emergency operations	5005 N. University Avenue	Carencro	15,843.47	2014	Concrete
	Carencro Catholic School	Private School that houses PreK3 thru 8 grade	200 W. Saint Peter Street	Carencro	6,236,000	1963	Concrete
	Carencro High School	Public High School that houses 9th thru 12th grade	721 W. Butcher Switch Road	Carencro	21,060,500.00	1969	Reinforced Masonry
	Carencro Middle School	Public Middle School that houses 6th thru 8th grade	4301 N. University Avenue	Carencro	12,308,750	1982	Reinforced Masonry
	Carencro Heights Elem School	Public Elementary School that houses K thru 5th grade	601 Tee Ma Road	Carencro	6,207,875	1958	Reinforced Masonry
X	Our Lady of Lourdes Urgent Care	Private Urgent Care Facility	3824 NE Evangeline Thruway	Carencro	800,000	2010	Wood
Duson							
	**See Separate Sheet Provided By Parish						
Scott							
X	SCOTT CITY HALL	City administrative office	125 Lions Club Rd	Scott		1994	Concrete
X	SCOTT POLICE/FIRE #1	Police and Fire administrative office	129 Lions Club Rd	Scott		2010	Concrete
	SCOTT MAINTANCE	Public works administrative office	116 Lions Club Rd	Scott			Concrete
	SCOTT MAINTANCE	Public works shop	118 Lions Club Rd	Scott			Metal
X	SEWER PLANT	Waste water treatment facility	200 Mills	Scott			Metal
	SCOTT EVENT CENTER	Public building open to rent/holding events	110 Lions Club Rd	Scott			Metal
	SCOTT COMMUNITY CENTER	Meeting room for non profit orginazations	302 Lions Club Rd	Scott			Concrete
	SCOTT PARK	Public park with baseball field and playground	124 Lions Club Rd	Scott			
	ACADIANA HIGH SCHOOL	9-12 GRADE	315 Rue De Belier	Scott			
	SCOTT MIDDLE SCHOOL	5-8 GRADE	116 Marie	Scott			
	WESTSIDE ELEMENTARY	K-4 GRADE	912 Delhomme Ave	Scott			
	L. LEO JUDICE	k-5 GRADE	Alfred	Scott			
	Sts PETER AND PAUL CATHOLIC	PRE K - 8 GRADE	1301 Old Spanish Trail	Scott			
	FAMILY LIFE CHRISTIAN SCHOOL	PRE K - 8 GRADE	2223 Dulles	Scott			
	FIRE DEPARTMENT #2	Houses fire trucks and equipment	2133 Dulles dr	Scott			
Youngsville							
	**See Separate Sheet Provided By Parish						

Vulnerable Populations

Vulnerable Populations Worksheet

Lafayette Parish

Name	Street	City	Zip Code	Latitude	Longitude
All Hospitals (Private or Public)					
Our Lady of Lourdes Quick Care	3824 NE Evangeline Thruway	Carencro	70520		
Amelia Manor Nursing Home	903 Center Street	uninc Lafayette Parish	70501	30.239364	-91.992516
Courtyard Manor Nurse Care Center	306 Sidney Martin	uninc Lafayette Parish	70507	30.278010	-92.010526
Acadia Vermillion Hospital	2520 North University Avenue	City of Lafayette	70507	30.271300	-92.046054
AMG Specialty Hospital – Lafayette	310 Youngsville Highway	City of Lafayette	70508	30.155873	-91.992003
AMG Specialty Hospital – Regional Campus	2810 Ambassador Caffery Pkwy	City of Lafayette	70506	30.197966	-92.077243
AMG Specialty Hospital - Park Place Campus	811 Ambassador Caffery 4th Floor	City of Lafayette	70508	30.232103	-92.062458
Compass Behavioral - Lafayette Campus	1015 Saint John Street	City of Lafayette	70501	30.222718	-92.022845
Heart Hospital of Lafayette	1105 Kaliste Saloom Road	City of Lafayette	70508	30.173161	-92.026973
Lafayette General Medical Center	1214 Coolidge Avenue	City of Lafayette	70503	30.202780	-92.019565
Lafayette General Surgical Hospital	1000 West Pinhook Road	City of Lafayette	70508	30.204212	-92.014576
Lafayette Physical Rehabilitation Hospital	207 Polly Lane	City of Lafayette	70508	30.176969	-92.027589
Lafayette Surgical Specialty Hospital	1101 Kaliste Saloom Road	City of Lafayette	70508	30.176328	-92.027359
Louisiana Extended Care Hospital of Lafayette	1214 Coolidge Avenue, 8th Floor	City of Lafayette	70503	30.202780	-92.019565
Optima Specialty Hospital	1131 Rue de Belier	City of Lafayette	70501	30.224090	-92.019843
Our Lady of Lourdes Regional Medical Center	4801 Ambassador Caffery Parkway	City of Lafayette	70508	30.150517	-92.036983
Park Place Surgery Center	901 Wilson St.	City of Lafayette	70503	30.207156	-92.017760
Post Acute Medical Specialty Hospital of Lafayette	204 Energy Pkwy	City of Lafayette	70508	30.180227	-92.011628
Regional Medical Center of Acadiana	2810 Ambassador Caffery Parkway	City of Lafayette	70506	30.197966	-92.077243
University Hospital and Clinics	2390 W Congress Street	City of Lafayette	70596	30.217096	-92.046423
Women's & Children's Hospital	4600 Ambassador Caffery Pkwy	City of Lafayette	70508	30.152439	-92.046403
Nursing Homes (Private or Public)					
Beau Se Jour	125 Ola Street	Carencro	70520		
Belle Rose Gardens	211 Arceneaux Road	Carencro	70520		
Evangeline Oaks	240 Arceneaux Road	Carencro	70520		
Bethany MHS Health Care Center	406 St. Julien Street	City of Lafayette	70506	30.214815	-92.026471
Cornerstone Village South, Inc.	103 W. Matrial Avenue	City of Lafayette	70508	30.165867	-92.041939
Lady of the Oaks Retirement Manor	1005 Eraste Landry Road	City of Lafayette	70506	30.223168	-92.054792
Lafayette Care Center	325 Baque Crescent Drive	City of Lafayette	70503	30.203710	-92.027043
Magnolia Estates	1511 Dulles Dr	City of Lafayette	70506	30.209646	-92.077500
Maison de Lafayette	2707 Kaliste Saloom Road	City of Lafayette	70508	30.152768	-92.049787
River Oaks Retirement Manor	2500 E Simcoe Street	City of Lafayette	70501	30.223250	-91.992136

Mobile Home Parks					
Daves Mobile Home Park	5215 North University Avenue	Carencro	70520		
Clifton Mobile Home Park	235 Smalley Road	Lafayette	70507		
Sugar Ridge Mobile Home Park	211 East Gloria Switch Road	Lafayette	70507		
Stacy Acres Mobile Home Park # 1	701 West Gloria Switch Road	Lafayette	70507		
Executive Choice Mobile Home Park	5217 North Univerisity Avenue	Carencro	70520		
North Acadian Mobile Home Park	515 Sonnier Road	Carencro	70520		
Stacy Acres Mobile Home Park # 2	339 East Gloria Switch Road	Lafayette	70507		
La Roulette Mobile Home Park	201 Andre Street	Carencro	70520		
ACADIAN ACRES MOBILE HOME PARK	1410 Westgate Rd	Lafayette	70506		
ACADIANA MOBILE HOME PARK	2900 West Willow St	Scott	70583		
ASA BROUSSARD TRAILER PARK	120 Desjacque Rd	Lafayette	70506		
AUDBON ACRES MOBILE HOME PARK	1112 Lebesque Rd	Lafayette	70507		
GARY'S TRAILER PARK	721 Lebesque Rd	Lafayette	70507		
JOE THIBODEAUX'S TRAILER PARK	1400 St. Mary St	Scott	70583		
SHORT'S MOBILE HOME PARK	204 Mills St	Scott	70583		
SHORT'S MOBILE HOME PARK	6209 Cameron St	Scott	70583		
Acadiana Country Estates	619 Breaux Road	uninc Lafayette Parish	70506	92°7'2.957"W	30°8'41.862"N
Angelle MHP	2321 Mills Street	uninc Lafayette Parish	70507	92°5'36.321"W	30°16'45.69"N
Belle Place MHP	600 Saint Nazaire Road	uninc Lafayette Parish	70518	91°56'10.389"W	30°8'21.489"N
Belle Ville MHP	900 Blk South Fieldspan Road	uninc Lafayette Parish	70529	92°8'22.71"W	30°13'43.148"N
Bridgewood MHP	1912 Carmel Drive	uninc Lafayette Parish	70501	91°58'17.474"W	30°14'8.822"N
C & D MHP	417 Louveteau Road	uninc Lafayette Parish	70520	92°3'13.341"W	30°20'30.297"N
Cajun Country MHP	215 Gireer Road	uninc Lafayette Parish	70518	91°57'22.954"W	30°5'4.131"N
Cajun Mobile Home Village	314 Malapart Road	uninc Lafayette Parish	70507	92°3'28.047"W	30°17'31.195"N
Chester Mobile Home Estates	110-142 Peltier Road	uninc Lafayette Parish	70520	91°59'34.652"W	30°21'1.647"N
Charlie's MHP	109 Tabb Road	uninc Lafayette Parish	70583	92°7'15.957"W	30°12'48.389"N
Conques MHP	3008 North University Avenue	uninc Lafayette Parish	70507	92°2'54.366"W	30°17'1.977"N
Country Aire MHP	100 Blk Lagneaux Road	uninc Lafayette Parish	70529	92°7'21.399"W	30°11'36.424"N
Country Corner MHP	840 Jenkins Road	uninc Lafayette Parish	70529	92°7'28.761"W	30°13'35.683"N
Country Mobile Living	1731 Lagneaux Road	uninc Lafayette Parish	70506	92°7'42.176"W	30°8'28.487"N
Country Run MHP	200-349 Country Run Drive	uninc Lafayette Parish	70518	91°57'29.807"W	30°6'21.602"N
Cozy Acres MHP	304 Rue Septembre	uninc Lafayette Parish	70583	92°7'34.118"W	30°15'0.63"N
Cypress MHP	1312 Roper Drive	uninc Lafayette Parish	70583	92°3'50.523"W	30°16'0.776"N
D & D MHP	2925 Mills Street	uninc Lafayette Parish	70507	92°5'37.175"W	30°17'30.284"N
Deer Park Subdivision	400 Blk Cormier Road	uninc Lafayette Parish	70520	92°3'43.636"W	30°20'0.515"N
G & R MHP	307 Pecan Grove Road	uninc Lafayette Parish	70583	92°4'22.608"W	30°14'10.455"N
Gardemal MHP	143 Albarado Road	uninc Lafayette Parish	70583	92°3'38.419"W	30°15'25.081"N
Glen Oaks MHP	207 Lormand Road	uninc Lafayette Parish	70583	92°8'6.273"W	30°15'8.021"N

Golden Acres MHP	440 Heide Circle	uninc Lafayette Parish	70583	92°4'37.636"W	30°15'55.956"N
Hillside MHP	205 Mineral Road	uninc Lafayette Parish	70518	91°59'9.221"W	30°9'35.831"N
Holiday Villa MHP	2808 West Pinhook Road	uninc Lafayette Parish	70508	92°0'12.88"W	30°10'28.624"N
Indian Hill MHP	100-121 Apache Circle	uninc Lafayette Parish	70520	92°1'45.042"W	30°20'6.077"N
King's Court MHP	728 West Gloria Switch Road	uninc Lafayette Parish	70507	92°2'32.426"W	30°17'54.289"N
Luxury Living MHP	401 D Arceneaux Road	uninc Lafayette Parish	70583	92°8'2"W	30°14'16.407"N
Marie Jean MHP	1409 East Broussard Road	uninc Lafayette Parish	70508	92°3'17.289"W	30°7'46.463"N
Melanie Rose MHP	630 Brothers Road	uninc Lafayette Parish	70507	92°3'21.445"W	30°16'20.992"N
Mes Amis MHP	400 Louveteau Road	uninc Lafayette Parish	70520	92°3'10.219"W	30°20'40.733"N
Mouton MHP	201 Porter Lane	uninc Lafayette Parish	70501	91°59'6.571"W	30°14'25.183"N
Northgate MHP	210 West Pont des Mouton	uninc Lafayette Parish	70507	92°1'21.962"W	30°16'16.861"N
Oakview MHP	748 Malapart Road	uninc Lafayette Parish	70507	92°4'39.981"W	30°17'30.229"N
Parkland MHP	106 LA 1252	uninc Lafayette Parish	70520	92°2'9.97"W	30°20'13.099"N
Pecan Acres MHP	1130, 1132, 1138 Breaux Road	uninc Lafayette Parish	70506	92°6'43.667"W	30°9'30.396"N
Plauche MHP	100-150 Plauche Drive	uninc Lafayette Parish	70520	92°5'35.969"W	30°19'38.371"N
Potpourri Village	1000 Renaud Drive	uninc Lafayette Parish	70583	92°3'43.722"W	30°15'17.897"N
Queen's Row MHP	342 Queen's Row	uninc Lafayette Parish	70508	91°59'33.443"W	30°10'35.734"N
Quiet Living, LLC	150 Ray Pardue Road	uninc Lafayette Parish	70529	92°8'43.758"W	30°11'28.612"N
River Oaks MHP	241 Beau Bassin Road	uninc Lafayette Parish	70520	91°59'14.793"W	30°17'55.906"N
Royal MHP	7727 Cameron Street	uninc Lafayette Parish	70529	92°8'58.071"W	30°14'0.434"N
Royal Vista MHP	700 Blk Young St.	uninc Lafayette Parish	70592	91°58'47.323"W	30°5'57.339"N
Shiloh MHP	1111 Roper Drive	uninc Lafayette Parish	70583	92°3'49.724"W	30°15'41.815"N
Smiling C MHP	1626 Duhon Road	uninc Lafayette Parish	70529	92°7'57.677"W	30°10'8.445"N
Sunrise MHP	105 Amireau Drive	uninc Lafayette Parish	70592	92°1'30.609"W	30°5'12.441"N
Teco's MHP	230 Jenkins Road	uninc Lafayette Parish	70529	92°7'4.509"W	30°13'45.636"N
Trail's End MHP	409 Petite Road	uninc Lafayette Parish	70555	92°7'47.565"W	30°7'11.626"N
Westgate MHP	3750 Landry Road	uninc Lafayette Parish	70583	92°6'54.265"W	30°12'53.541"N
Avalon Park	125 Avalon Road	City of Lafayette	70508	91°59'51.73"W	30°10'10.341"N
Floyd's Trailer Park	125 Floyd Street	City of Lafayette	70501	92°1'11.077"W	30°14'42.112"N
Mobile Home Acres	200-268 John Wayne Drive	City of Lafayette	70508	92°1'13.612"W	30°10'26.76"N
Mr B's MHP	2520 Ambassador Caffery Pkwy	City of Lafayette	70506	92°4'38.03"W	30°12'13.598"N
Oak Park Estates	1717 Eraste Landry Road	City of Lafayette	70506	92°3'43.882"W	30°13'8.364"N
Presley Benoit MHP	200 blk Conrad St, 100 blk Benoit Falgout	City of Lafayette	70501	92°1'3.67"W	30°15'23.839"N
Smitty's MHP	1301 Verot School Road	City of Lafayette	70508	92°1'7.393"W	30°10'9.108"N
Summerwood MHP	3201 Kalist Saloom Road	City of Lafayette	70508	92°3'14.75"W	30°8'46.846"N
Sunny Acres MHP	2114 Ambassador Caffery Pkwy	City of Lafayette	70506	92°4'38.146"W	30°12'49.362"N
Willow Springs MHP	131 Hebert Road	City of Lafayette	70506	92°3'6.43"W	30°14'15.856"N

Staff Resources							
Is the Community FPA or NFIP Coordinator certified?	Yes	Yes	Yes	Yes, Bonnie Anderson, CFM	Yes	YES Tammy Vincent, CFM	Yes
Is flood plain management an auxiliary function?	No	No	Yes	Yes	Yes	YES	Yes
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	development permit review, plat review, GIS, education and outreach, inspections, engineering	development permit review, plat review, GIS, education and outreach, inspections, engineering	Permit review, education and outreach, inspetcitons enforcement, insurance requirements	education & outreach, inspections, enforcement, engineering, insurance requirements, online tools, etc.	Permit review, education and outreach, inspetcitons enforcement, insurance requirements	Permit review, education and outreach, inspetcitons enforcement, insurance requirements	Permit review, education and outreach, inspetcitons enforcement, insurance requirements
What are the barriers to running an effective NFIP program in the community, if any?	None	None	Funding for mitigation	Funding for mitigation	Funding for mitigation	help funding for mitigation	Funding for mitigation
Compliance History							
Is the community in good standing with the NFIP?	Yes	Yes	Yes	Yes	Yes	YES	Yes
Are there any outstanding compliance issues(i.e., current violations)?	No	No	No	No	No	NO	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact(CAC)?	March 7th, 2014	March 7th, 2014	Unk	2013	Unk	2012	Unk
Is a CAV or CAC scheduled or needed? If so when?	No	No	No	No	No	NO	No
Regulation							
When did the community enter the NFIP?	8/1/1980	8/1/1980	3/16/1988	9/11/1979	9/30/1981	3/30/1982	
Are the FIRMs digital or paper?	effective paper, preliminary digital and paper	effective paper, preliminary digital and paper	effective paper, preliminary digital and paper	Both	effective paper, preliminary digital and paper	BOTH	effective paper, preliminary digital and paper
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	exceed - freeboard, open space, development regs, drainage system maintenance, outreach	exceed - freeboard, open space, development regs, drainage system maintenance, outreach	exceed - freeboard, open space, development regs, drainage system maintenance, outreach	Exceed. Freeboard requirements, zero rise of water in developments, etc.	exceed - freeboard, open space, development regs, drainage system maintenance, outreach	Exceed FREE BOARD and zero run off in developments	exceed - freeboard, open space, development regs, drainage system maintenance, outreach
Community Rating System (CRS)							
Does the community participate in CRS?	Yes	Yes	Yes, Parish	Yes	Yes, Parish	YES	Yes, Parish
What is the community's CRS Class Ranking?	8	8	Yes, Parish	8	Yes, Parish	8	Yes, Parish
Does the plan include CRS planning requirements?	Yes	Yes	Yes, Parish	Yes	Yes, Parish	YES	Yes, Parish

Appendix F: Community Rating System (CRS)

LCG Floodplain Management Plan 2016

LCG (Lafayette City & Unincorporated Lafayette) Drainage Projects:

The following projects are included in the budget for improvements affecting the LCG Floodplain Management Plan included in the Lafayette Parish 5 year Hazard Mitigation Plan.

BAYOU CARENCRO LATERALS 5-9

BEAU BASSIN COULEE DRNG IMP

COULEE BEND IMPRS-MOORE PARK

COULEE ILE DES CANNES, PH V*

COULEE ILE DES CANNES, SCOTT IGA

COULEE MINE-I10 NORTH

EDITH BAYOU

GIRARD PARK COULEE IMPRV

HOLIDAY GARDENS-DRNG IMP

ISAAC VEROT COULEE/CUE RD.

L3 OF ACORN DRIVE COULEE

MARAIS DES CANNES

PREJEAN RD. BRIDGE

SECONDARY DRAINAGE-PARISH

WEBB COULEE-TERRY DR

WEST FARREL ROAD OUTFALL

WILL'S DRIVE OUTFALL

CAMILLE STREET DRNG IMPRV

CONCRETE COULEE RENOVATIONS

COULEE ILE DES CANNES, LAT 7

FANNY DRIVE COULEE

IMPROVED COULEE MAINTAINENCE

PEMBROKE DRIVE DRAINAGE

RIVER OAKS PUMP RENOVATION
RIVER OAKS PUMP STA ENGINE RPL
RPL/RPR SUBSURFACE/ UNDGR DRAIN
RPR SUBSURFACE/UNDGR DRG LINES
WEST FARREL ROAD OU

ALONDA DR. COULEE
AMARYLLIS DR. DRNG
BECKY LANE OUTFALL
BELLE TERRE OUTFALL PH IIA
BELLFONTAINE DRAIN
BROADMOOR COULEE-P
CIDC, LAT 7-CURRAN/DULLES
CONCRETE COULEE RENOVATIONS
COULEE BEND IMPROV
COULEE MINE (WEST)
FERNWOOD DRIVE OUT
GIRARD PARK COULEE IMPRV
MCKINLEY/ST MARY DRAINAGE
NOTTINGHAM DRAIN/RAINTREE COULEE
OLE COLONY RD DRAINAGE/BRIDGE
SUNBEAM COULEE PH I, II, III
WALKER RD DRAINAGE
WALL ST/EASY ST DRAINAGE
ZION CIRCLE DRAINAGE

LCG Floodplain Management Plan update 2014



To: LCG Hazard Mitigation Plan Steering Committee Members

From: Kerwin Woodard – LCG Floodplain Administrator
Melanie Jumonville – LCG Codes Department Administrative Assistant
Jessica Cornay – LCG Public Works Engineer
Larry Broussard – LCG City Engineer
Mark Lavergne – LCG Public Works Engineer
Terry Cordick – Associate Director LCG Public Works Operations & Maintenance
Linda Lavergne – EOC Assistant Director

Subject: Annual update of Floodplain Management portion of Hazard Mitigation Plan 2010
***** This report is for the City of Lafayette (220105) & the Lafayette Parish unincorporated areas (220101) *****

Date: August 26, 2014

Resolution #R008-2006, February 7, 2006, adopted the Lafayette Parish Hazard Mitigation Plan. Resolution#R-025-2011, adopted the 2010 *Update* to that plan. This memo is our annual progress report for the Floodplain Management portion of the plan. It was prepared by Lafayette City-Parish Consolidated Government's Floodplain Management Section.

For credit under the Community Rating System, this memo must be distributed to the media and be made available to the public. It is being sent to the paper that covers Lafayette Parish. Copies of this report and of the 2010 *Plan Update* are available for review at the Office of Homeland Security and Emergency Preparedness located at 800 S. Buchanan St., Courthouse Basement, Lafayette, La 70501

1. Background

The original *Hazard Mitigation Plan* was drafted by the Steering Committee during a series of meetings held 2004.

The *Plan* reviews a variety of measures that can reduce the problems and/or protect people and property when flooding occurs. Measures reviewed include ditch improvements, retention basins, culvert and storm sewer improvements, flood proofing, flood insurance, emergency response planning, building regulations, public information, erosion and sediment control and regulation of fence construction and yard grading. The *Plan* recommended 7 action items to reduce or prevent flood damage.

An *Update* to the original plan was prepared in 2010. The *Update* was completed as the result of the five (5) year life span of the *Plan*.



Status of *Plan* Implementation
August 26, 2014
Page 2.

The *Update* has 15 action items for the incorporated area (City) and 12 action items for the unincorporated area (Parish) of the Lafayette City-Parish Consolidated Government.

2. A review of the *Plan*'s action items:

The action items found in Chapter 7 of the 2010 Lafayette Parish Hazard Mitigation Plan Update are reviewed here. They are organized according to the Responsible Party, Agency or Department.

Lafayette City-Parish Consolidated Government (City and Parish)

1.A.5: Work to improve CRS rating.

Status: Ongoing review of revised requirements for future CRS rating based on 2013 CRS coordinators manual and crosswalk vs. 2007 coordinators manual.

2.A.2: Work with FEMA to update FIRMS/DFIRMS

Status: CTP agreement with FEMA

LCG public works engineering department in conjunction with CH Fenstermaker providing data for FEMA approval to map improvements along Coulee Ile des Cannes & Isaac Verot/Anselm Coulee areas. A 316-PMR Letter was received in July 2013 by LCG approving the data for the revision to the model/map for the Ile des Cannes basin. The appeal to the Isaac Verot/Anselm Coulee area has been submitted and accepted by FEMA and is awaiting adoption and mapping. Monthly meetings scheduled for updates.

2.A.3: Continue to include and update mitigation requirements in floodplain development regulations. Possible changes to drainage analyses for new subdivisions.

Status: Ongoing

2.B.2: Update and implement floodplain development regulations, which limit the opportunity for new homes and businesses to be constructed in the floodplain. A new Unified Development Code is being assembled and reviewed.

Status: Ongoing



Status of *Plan* Implementation
August 26, 2014
Page 3.

- 3.A.3: Work to enhance monitoring and communications systems to improve ability to predict and prepare for flood events, including connection with Lafayette Parish Flood Warning System.

Status: Ongoing

- 3.B.3: Develop additional subdivision guidelines that would help reduce flooding, such as requiring proper drainage with adequate grade, storm water retention/detention ponds, levees and floodwalls if appropriate, and requiring a minimum of one foot of freeboard above the Base Flood Elevation (BFE) in Special Flood Hazard areas. Encourage new subdivision developments to install underground utilities, which would help reduce the chances of power outages. Discussion on subsurface drainage requirements.

Status: Ongoing

- 4.A.3: Upgrade the capacity of storm water retention and detention reservoirs along the Vermillion River and at La Highways 90 and 92, by removing any obstructions, dredging the reservoirs, and replacing any inferior culverts along the major drainage laterals.

Status: Completed work at outfall W-21 @ coulee Lasalle/Cypress Bayou

- 4.A.4 Along Beau Basin Coulee, Coulee Acadiana Lat. 8A, Coulee Mine, LaFlamme Road Coulee and Ile de Cannes Coulee increase the drainage capacity of the drainage laterals by installing larger volume pumps and larger pipes.

Status: Laflamme Road coulee needs coordination with the City of Broussard for outfall #1 & #2. Also wetland issues going into St. Martin Parish
Beau Bassin Coulee – changed bridge to increase flow.
Ile des Cannes lateral 7 – widening, deepening, & lining \$3M improvement project. Bridge replacement complete – 2014 continuing project
Rue des Babineaux – replaced bridge on Bayou Que de Tortue
Coulee Bend – design project to update model – 2014 construction plans in progress

2011 - 2012 completed projects:

Replaced bridge along coulee Ile des Cannes @ Sellers Road
Replaced bridge along Bayou Carencro lateral 1 @ Kidder Rd



Status of *Plan* Implementation

August 26, 2014

Page 4.

2012 – 2013 completed projects:

Cypress Bayou Coulee drainage improvements

McKinley Street drainage improvements

Acorn Drive Coulee Lateral 3 drainage improvements

Bruce Street bridge replacement

Elias G. Road drainage improvements

Acacia Road outfall @ Vermilion River drainage improvements

Bridge replacements – Leblanc Coulee & Mermentau Coulee lateral

4.A.6: Pursue elevation, acquisition, and flood proofing projects and structural solutions to flooding for repetitive loss structures and severe repetitive loss structures.

Status: 5 completed acquisitions and demolitions for the City of Lafayette and 4 for the unincorporated areas of Lafayette Parish. 1 completed Elevation within the City of Lafayette. 1 completed pilot reconstruction project within the City of Lafayette.

2013: accepted approx. \$1.7M in grant funds to pursue acquisition and/or elevation projects within the parish possibly including other municipalities. Accepting bids for elevation of 1 Rep Loss home in City of Lafayette (2014 update – this elevation is complete). Advertising for consultant to manage grant program. (2014 update – HGA hired as consultant to manage program – LCG notified rep loss properties for potential participation on 75/25 match) Preparing applications for GOHSEP approval.

4.A.8: Pursue the development of retention and detention ponds to reduce flooding impacts.

Status: Ongoing – Marais des Cannes proposal as nationwide pilot program to mitigate floodway.

Lafayette City-Parish Consolidated Government (City) Lafayette Public Works Department

Page-7-41: Flood Control Infrastructure-Conduct a review of the existing pump capacity data and determine best method of increasing pumping volume along the Vermillion River and at La Highways 90 and 92, and implement the best method.

Status: Changed the culvert crossing along Cypress Bayou @ LA 92



Status of *Plan* Implementation
August 26, 2014
Page 5.

Replaced bridge at Coulee des Poches
Sunbeam Coulee – Concrete lined the channel & updated any crossing laterals to larger sizes. Made significant upgrades to the Kaliste Saloom Road drainage outfalls.

Status: Complete

2013-2014 update: Holiday Gardens drainage project underway using hazard mitigation to reduce repetitive flooding of 13 homes in this neighborhood by improving the drainage channel Cypress Bayou lateral 4-C. East Amedee Drive bridge replacement under construction. Zion Circle – subsurface system upgrade (replace 60 inch metal culverts with 72 inch concrete culverts)

Page 7-42: Public Awareness-Promote the purchase of flood insurance. Advertise the availability, cost and coverage of flood insurance through the National Flood Insurance Program (NFIP).

Status: Continue to provide FIRM and preliminary FIRM information to citizens at the Planning, Zoning, & Development office, local libraries and LCG website

Page 7-43: Flood Mitigation-Elevation/Acquisition/Flood Proofing-Pursue elevation, acquisition, and flood proofing projects and structural solutions to flooding for repetitive loss structures and severe repetitive loss structures.

Status: Ongoing

Page 7-43: Flood Mitigation/Outreach-Work to improve CRS rating.

Status: Ongoing

Page 7-45: Flood Control/Infrastructure-Resize culverts and catch basins as needed on the main ULL campus along Hebrard Blvd. and St. Mary.

Status: The Wharton Hall drainage project is complete



Status of *Plan* Implementation
August 26, 2014
Page 6.

**Lafayette City-Parish Consolidated Government (Parish)
Lafayette Public Works Department**

4.A.5: Determine the most feasible drainage projects for each repetitive loss area, as seen on Map 3 in *The Plan*, to reduce its flood potential (e.g. Beau Basin Coulee and Ile des Cannes Coulee, which are located in the unincorporated areas of the Parish) and implement the identified interior localized project.

Status: Ongoing & updated based on 2012 Flood event (ongoing study and modeling by Ronkartz/Ostreicher for the Oak Springs/Frenchman's Trail subdivisions to improve drainage and alleviate repetitive flooding.

2013-2014: Replaced bridge on West Congress St. over Bayou Que de Tortue to increase drainage capacity.

Replaced Kidder Road bridge and Sellers Road bridge.

4.A.7: Update the comprehensive drainage plan ensuring future protection for areas in the Parish that experience flooding and drainage problems.

3. Status of Action Items

These items are still ongoing.

4. Recommendations

Continue to monitor ongoing projects.

Floodplain Management

City of Lafayette and Lafayette Parish, unincorporated areas

Does your community have a flood study that has been done within the last 5 years? If yes, please list the name and date of the plan.

Yes

1. Anselm Coulee/Isaac Verot Coulee FIRM appeal 2014
2. Coulee Ile des Cannes PMR 2013
3. Coulee Bend Drainage Study 2013
4. Holiday Gardens Subdivision Drainage Improvement 2013
5. Coulee Mine East Drainage Study 2015

Have there been any areas in your community that have flooded within the last 5 years that are not mapped on your FIRM? If so please explain.

Yes, there are areas that have localized flooding not due to riverine waters but local inlet capacities and debris.

Has any other surface flooding been identified in other studies? If so please explain.

No areas have been identified at this time.

Please describe the known flood hazards in your community, including source of water, depth of flooding, velocities and warning time.

Most floods occur during heavy rain events. This is because inlets have a limited capacity that is overwhelmed during the event. Another reason is the main outfall for the parish is the Vermilion River which can flow backwards depending on the Gulf level and wind. When the Vermilion River is high, there is a higher risk of flooding throughout the parish.

Please describe any past flooding events within the last 5 years.

The most notable flooding event was the March 2012 500-year event. There was approximately 17 inches of rain that fell in the northern part of Lafayette Parish and the City of Carencro in approximately 6 hours. This rain event was well above the 100-year design storm of 12.6 inches in 24 hours. There were over 900 structures that were inundated – some from inlet capacity issues and debris, and some a few days later as the riverine, Bayou Carencro, rose with the discharge from the farthest reaches of the watershed reaching the channel.

Identify areas likely to be flooded and flood problems that are likely to get worse in the future as a result of:

- (1) changes in development and demographics
- (2) development in the watershed
- (3) climate change or sea level rise

Anselm Coulee/Isaac Verot watershed – (1) this area is experiencing development and the growth of neighborhoods. Recently this area was studied and will become a designated flood zone. This designation will give the community more authority in regulating development and its impacts. This watershed is affected by unique factors since it flows both upstream and downstream depending on the water surface level within the channel. (2) Development will increase the runoff, which has difficulty vacating the areas since it is dependent of the water surface elevation of the channel. (3) Climate change or more specifically sea level rise could impact this area since it is along the southern reaches of the larger Vermilion River watershed which is a direct conduit to the Gulf of Mexico and only has 4 feet of fall in the 40 miles it traverses to the Gulf.

Bayou Carencro watershed – this channel has a very long time of concentration, therefore any (1) increase in runoff from development and (2) reduction of agricultural lands will likely affect the frequency of flooding in the area. (3) Since this channel is 40 miles north of the Gulf of Mexico it is unlikely that climate change or sea level rise will affect this watershed.

Bayou Queue de Tortue and Indian Bayou watersheds – these channels are located primarily within agricultural areas and have very little natural elevation changes. If these areas were to (2) develop rapidly and land would be converted from permeable to non-permeable surfaces, even with detention/retention requirements, it is possible for the areas to experience additional flooding. (1) Development within the watershed could impact water surface levels, however the development would have to be on a large scale since the watersheds themselves are quite extensive. (3) It is unlikely climate change or sea level rise would affect the problems in this area.

Please describe the impact the flooding hazards identified in the hazard assessment (Step 4) have on the features listed below:

- (1) Life safety and the need for warning and evacuating residents and visitors.

LCG's policy is to have all structures within a flood zone to be built one-foot above the base flood elevation. This is to help protect the life safety of the residents and the structural integrity of the homes. By having the structures elevated, the need for evacuation is reduced. This policy is community wide so it addresses all flood hazards.

- (2) Public health, including health hazards to individuals from flood waters and mold.

Due to the humid climate of this region and flood waters that inundate a structure pose a mold risk. It is imperative that structures be able to dry and wet materials be removed as quickly as possible. Most flood events are limited to a 4-foot maximum depth so objects can be raised and individuals may salvage much if they are able to return to the site or have not left the site.

(3) Critical facilities and infrastructure.

It is LCG's policy to locate critical facilities in areas that have limited flood risk and to evaluate any infrastructure after a flood for damage. New roadway crossings are designed for uplift considering rising water levels; therefore, debris is the largest concern for infrastructure. Impact loading from debris can cause damage to guardrails and culverts.

(4) The community's economy and major employers.

Given the general topography of this community, flooding is always a concern of the residents and employers. During building permit reviews particular attention is paid to local site drainage to make sure the buildings are reasonably safe from flooding. LCG has a requirement the parking lots may not flood more than 7 inches during a 10-year storm to protect parked vehicles and make ingress and egress from the site viable.

(5) The number and types of affected buildings (e.g., residential, commercial, industrial, with or without basements, etc.). For this credit, the assessment must include an inventory of all buildings owned by the community that are located in flood-prone areas and that identifies which buildings are insured for flood damage.

There are thousands of buildings within flood zones throughout the community. LCG does not know whether every building has flood insurance, however, LCG does have the elevation certificates on file.

Describe areas within the floodplain that provide natural functions, such as wetlands, riparian areas, sensitive areas, and habitat for rare or endangered species. If none, provide statement to that fact.

Throughout the parish there are some wetlands within the floodplain, particularly along the Vermilion River. While this community does not have any rare or endangered species, the Nature Station has several acres of property located within a flood zone that is for natural research and study. Lafayette Parish is not located in an aquifer recharge zone.

Provide a description of development, redevelopment, and population trends and a discussion of what the future brings for development and redevelopment in the community, the watershed, and natural resource areas.

Most development within the community is expanding into areas that were once agricultural. While this is increasing runoff with non-permeable surfaces, development regulations are limiting the discharge to the channels and monitoring impacts. Agricultural endeavors are exempt from regulations, so in some ways, development limits the impact to the area. A developer must design new infrastructure such that it does not impact the surrounding property, whereas a farmer changing the direction of the rows can drastically impact the surrounding properties if the outfall changes. LCG has a strict policy of making sure developments do not impact their neighbors. Redevelopment is considered new development so the detention/retention requirements are the

same unless the developer chooses to prove the existing drainage system has the capacity to handle increased runoff without detention. This is usually not the case.

Provide a description/narrative of the impact of the future flooding conditions described in Step 4.c on people, property and natural floodplain functions.

Anselm Coulee/Isaac Verot watershed – The floodplain will continue to function as it currently does in the future since it has the ability to reverse flow direction. The people and property will be impacted if flood levels rise. Since this area has been recently mapped, new construction will be elevated and have an increased level of protection, but existing structures may have been built at elevations that are below flood elevations. These structures are at a greater risk. While the area was recently mapped, the people in the area are familiar with the low lying areas which are now designated flood zone areas.

Bayou Carencro – This floodplain functions are well established and should not be impacted by future flooding. This watershed experienced a significant flood event in March of 2012, therefore, the people in this basin are very aware of the flood hazards. Many properties that were inundated have been repaired and elevated to heights greater than that event (which exceeded the 100 year BFE in most cases). Since this area had a significant flood event, they may be better prepared for future flood events based on the previous experience.

Bayou Queue de Tortue and Indian Bayou watersheds – These watersheds are currently very agricultural in nature. Most structures are elevated, so they would not have increased risk in future flood events, but the roads are typically low. The people in this area will have limited transportation options during flood events. The function of the floodplain should remain similar in nature since the area is prime for crops and cattle.

Codes and Zoning:

- Comprehensive or land use plan – LCG’s comprehensive plan, PlanLafayette, addresses the need to reduce flooding throughout the community. It upholds all federal regulations and participation in CRS. It looks to encourage and create more open space while allowing high density development.
- Building code – Our building code has been enhanced to require finish floor elevations that are one-foot higher than the base flood elevation in any designated flood zone. LCG is reviewing additional requirements for buildings outside the designated flood zones to protect new structures from localized non-mapped flooding, but this policy is still under discussion.
- Zoning ordinance – our Zoning Ordinance does not reference flooding since that is addressed in the building code and floodplain management.

- Floodplain management regulations – LCG is compliant with all federal regulations. All developments within the floodway must certify that there is no rise of the water surface elevation along the channel for the 100-year storm. All developments within the floodplain must evaluate their impacts and not affect the surrounding properties.
- Subdivision ordinance – the subdivision ordinance is the Unified Development Code (UDC) of which the building code, zoning code, floodplain management and stormwater management regulations are all a part.
- Stormwater management regulations – LCG has a 5-year stormwater detention/retention limit for residential developments and 10-year for commercial developments. We also require lot grading plans on all new developments.

Possible Activities to Reduce Impacts of Flooding

Property Protection:

- Relocation – Pro: removes the individuals from flooding problem. Con: can be quite expensive, owner's reluctance to move from home, property after relocating still has to be maintained
- Retrofitting – Pro: can reduce damage from flooding problem. Con: flooding can still occur and disrupt resident's routine, does not prevent flooding
- Acquisition – Pro: resident is removed from flooding problem. Con: government must maintain property
- Sewer backup protection – Pro: can limit damage from flood event. Con: mechanical systems need to be maintained which costs money and time
- Building elevation – Pro: removes building from flooding source. Con: how is height of elevation determined?, the impacts of an elevated home on the local drainage system, verifying no obstructions are placed beneath structure
- Insurance – Pro: resident has financial protection from flooding disaster. Con: does not prevent flooding, can be costly for individual and insurance agency

Natural resource protection:

- Wetlands protection – Pro: preserves low lying areas for flood waters. Con: government ownership requires tax payer maintenance. The federal government has regulations to protect the limited wetlands within the parish already so creating additional regulations may not be very effective.

- Water quality improvement – Pro: reduced maintenance of the system from sediment removal. Con: the soils in this community are very fine and are constantly eroding into waterways, maintenance is continual
- Erosion and sediment control - Pro: maintains efficiency of drainage system. Con: with over 600 miles of public channels and unmeasured roadside ditches, erosion is always occurring.
- Coastal barrier protection – Not applicable since the community does not have a coast
- Natural area preservation – Pro: preserves open space and undisturbed areas. Con: at times even natural areas need to be maintained to the extent to not be a public hazard which costs money.
- Environmental corridors – Pro: creating environmental corridors can preserve low areas for floodwater storage. Con: these corridors would need to be maintained.
- Natural area restoration – Pro: returning areas to a natural state will allow floodwaters additional storage and remove any structures that were inundated. Con: the cost of restoration and the benefit associated with the area since our floodplains are so large.
- Natural functions protection – Pro, preserving natural functions can limit flood impacts. Con: the natural functions of most of the floodplains in this area are limited to storage areas. Preventing use of land based on its elevation would greatly reduce the options landowners would have with their property.

Emergency Services Measures

- Hazard threat recognition – Pro: giving the first responders the correct information and tools to address the emergency at hand. Con: emergencies often are multi-faceted and difficult to recognize all aspects in advance.
- Critical facilities protection – Pro: facilities need during an emergency are able to function during an emergency. Con: Cost and available technology and land
- Hazard warning – Pro: provides community with advanced notification to prepare. Con: the public's understanding of the warning, how to react and what protection is required.
- Health and safety maintenance – Pro: Maintaining systems always reduces flood risks. Con: Maintenance costs.
- Hazard response operations – Pro: having a response program assists the public during times of need and has trained professionals available. Con: the cost to train and activate personnel when needed.
- Post-disaster mitigation actions – Pro: after an event lessons can be learned and individuals removed from harm's way. Con: cost

Structural

- Reservoirs – Pro: additional storage for stormwater. Con: cost and maintenance. In this area there is little elevation differential so site location is also extremely limited.

- Channel modifications- Pro: increases channel efficiency and reduces water surface elevations. Con: cost and property acquisition
- Levees/floodwalls – Pro: can protect areas from floodwaters. Con: location is limited since flooding sources in this community are so vast, cost of construction is high as well as maintenance activities.
- Storm drain improvements – Pro: increases system’s effectiveness. Con: Cost and limitation of improvement is primarily based on the outfall channel.
- Diversions – Pro: can create an alternate path for stormwater. Con: our drainage system is so diverse there is little area for a diversion.

Public Information

- Map information – Pro: provides information to the individual. Con: must be maintained. LCG does maintain public access to the FIRMS.
- Library – Pro: provides free information to the individual. Con: advertising that the information is available.
- Outreach projects - Pro: Provides contact for an individual. Con: each individual’s case is unique and there may be several options available which can be confusing.
- Technical assistance – Pro: Gives an individual access to technical data. Con: most individuals are not familiar with the basis of technical information.
- Real estate disclosure – Pro: allows individuals to make informed decisions about property purchases. Con: not all individuals understand the implications of items listed on a disclosure.
- Environmental education – Pro: the more information the better. Con: the more information the better.