

# 2020 VERMILION MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

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UNINCORPORATED  
VERMILION





# VERMILION PARISH MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

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## ACKNOWLEDGMENTS

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Unincorporated Vermilion Parish  
 City of Abbeville  
 Town of Delcambre  
 Town of Erath  
 Town of Gueydan  
 City of Kaplan  
 Village of Maurice

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## 1. Introduction

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

In that regard, this plan (a) documents the Vermilion Parish Hazard Mitigation Plan Update (HMPU) process; (b) identifies natural hazards and risks within the parish; and (c) identifies the parish's hazard mitigation strategy to make Vermilion Parish less vulnerable and more disaster resilient. It also includes mitigation project scoping to further identify scopes of work, funding sources, and implementation timing requirements of proposed selected mitigation projects. Information in the plan will be used to help guide and coordinate mitigation and local policy decisions affecting future land use.

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

- Unincorporated Vermilion Parish
- City of Abbeville
- Town of Delcambre
- Town of Erath
- Town of Gueydan
- City of Kaplan
- Village of Maurice

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 Vermilion 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.

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 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.

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 (CRS), a program that reduces flood insurance premiums in participating communities. This program is further described in Section Three: Capability Assessment.

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 CRS credit, and provides Vermilion Parish and its communities with a blueprint for reducing the impacts of these natural hazards on people and property.

## Geography and Population

### Geography

Vermilion Parish is located in the southwestern portion of Louisiana along the state's Gulf of Mexico coastline. Essentially bisected from the west to the east by the Gulf Intracoastal Waterway, Vermilion Parish is bordered to the north by Lafayette and Acadia Parishes, to the west by Cameron Parish, and to the east by Iberia Parish. Vermilion Parish includes a surface area of approximately 1539 square miles (or 985,156 acres), of which 37% (361,731 acres) is agricultural land, 59% (585,414 acres) is comprised of wetlands and open water, and a mere 3% (32,199 acres) is urban development. Below, *Figure 1-1* shows the geographical location of Vermilion Parish.



*Figure 1-1: Location of Vermilion Parish*

The geography of Vermilion Parish mainly consists of relatively flat floodplains and bodies of water. The largest concentration of urban development is found in the northeastern part of the parish. Coincidentally, this is also the area with the highest natural elevation in the parish. Vermilion Parish is bisected by the Gulf Intracoastal Waterway, resulting in two separate portions that are only commutable by the single road crossing of Highway 82. The majority of the population can be found on the portion of the parish north of the waterway, including all five of the incorporated jurisdictions within the parish.

Approximately 85% of the total land area of Vermilion Parish is located within FEMA's 100-year floodplain. The only significant area outside the 100-year floodplain is the land in the northern and northeastern portions of the parish around the jurisdiction of Maurice along Hwy 167, which is in the 500-year floodplain.

Vermilion Parish weather is typically warm and humid. Variations in daily temperature are determined by distance from the Gulf of Mexico and, to a much lesser degree, by differences in elevation. The average annual temperature for the state as a whole is 68°F. January is typically the coldest month for Louisiana, averaging approximately 54°F, while July is typically the warmest at an average of 91°F. Winter months are usually mild with cold spells of short duration. For Vermilion Parish in particular, the summer months are usually quite warm, with an average daily maximum temperature in July and August of 93°F. Winters are typically mild. Snowfall averages less than one inch per year. Average annual rainfall for the area is 61 inches. Vermilion Parish is susceptible to the normal weather dangers, such as tornados and floods, but due to its location within the state and its proximity to the Gulf of Mexico, the parish is extremely susceptible to tropical cyclones. Hurricane season lasts from June 1st to November 30th, with most hurricanes forming in August, September, and October.

### Population

The population of Vermilion Parish is estimated at 59,511 (2019 estimate) with a population percent change from April 1, 2010 – July 1, 2019 of 2.6%.

*Table 1-1: Vermilion Parish Population  
(Source: US Census)*

	2010 Census	2018 Estimate	2019 Estimate	Percent Change 2010 -2019
<b>Total Population</b>	57,999	59,830	59,511	2.6%
<b>Population Density (Pop/Sq. Mi.)</b>	49.4	-----		-----
<b>Total Households</b>	-----	21,632	-----	-----
<b>Persons Per Household</b>	-----	2.74	-----	-----

Table 1-2: Vermilion Parish Business Patterns  
(Source: US Census, CBP)

Business Description	Number of Establishments	Number of Employees	Annual Payroll (\$1,000)
Retail Trade	187	2,290	53,032
Manufacturing	35	500	31,758
Health Care and Social Assistance	96	1,706	55,672
Mining, Quarrying, Oil and Gas Extraction	33	429	28,521
Transportation and Warehousing	54	421	25,455
Construction	75	815	49,687
Administration/Support and Waste Management/Remediation Services	47	239	6,941
Real Estate and Rental and Leasing	31	207	7,990
Wholesale Trade	34	289	14,902
Other Services (except Public Administration)	90	489	11,360
Accommodation and Food Services	75	964	12,526
Financial and Insurance	73	380	15,570
Professional, Scientific, and Technical Services	110	286	12,440
Information	14	117	5,841
Educational Services	11	154	3,948
Arts, Entertainment, and Recreation	15	80	1,112
Agriculture, Forestry, Fishing and Hunting	11	37	1,988
Utilities	4	43	2,788
Management of Companies and Enterprises	4	66	3,413

## Hazard Mitigation

To fully understand hazard mitigation efforts in Vermilion 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 in advance of 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 1-2* 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 1-2* 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.

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.



*Figure 1-2: The Four Phases of Emergency Management and their Relation to Future Hazard Mitigation*  
(Source: Louisiana State Hazard Mitigation Plan 2014)

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 the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) encourages the parishes and the local communities 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 2020 Vermilion Parish Hazard Mitigation Plan (HMP) maintains much of the information from the 2015 plan version, but it now reflects the order and methodologies of the 2019 Louisiana State Hazard Mitigation Plan.

The sections in the 2015 Vermilion HMP were as follows:

- Section 1 Introduction
- Section 2 Hazard Identification and Risk Assessment
- Section 3 Capability Assessment
- Section 4 Mitigation Strategy
- Appendix A Planning Process
- Appendix B Plan Maintenance
- Appendix C Essential Facilities
- Appendix D Plan Adoption
- Appendix E State Required Worksheets

This plan update 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 Vermilion 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.

## 2020 Plan Update

This 2020 plan update proceeds with the previous goals of the Vermilion Parish Hazard Mitigation Plan. The current goals are as follows:

- Goal 1:** Identify and pursue preventative structural and non-structural measures that will reduce future damages.
- Goal 2:** Enhance public awareness and understanding of disaster preparedness.
- Goal 3:** Reduce repetitive flood losses in parish and municipalities.



**Goal 4:** Facilitate sound building practices in the parish and municipalities so as to reduce or eliminate the potential impact of hazards.

**Goal 5:** Improve the ability of the parish and municipalities to rapidly recover and restore facilities and services to the public.

This plan update makes a number of textual changes throughout, but the most obvious changes are data related and structural edits. First, the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information's (NCEI) Storm Events Database was used in the analysis, which provides historical hazard data from 1950 to 2019. Furthermore, all of the sections were updated to reflect the most current information and the most current vision of the plan update. The most significant changes are the newly developed hazard profiles and risk assessments, as well as the removal of much repetition between sections from the previous plan updates.

The 2020 plan update is organized in the exact same format as the 2015 update as you can see below:

*Table 1-3: 2020 Plan Update Crosswalk*

Plan Update Crosswalk	
Section 1: Introduction	Section 1: Introduction
Section 2: Hazard Identification and Risk Assessment	Section 2: Hazard Identification and Risk Assessment
Section 3: Capability Assessment	Section 3: Capability Assessment
Section 4: Mitigation Strategy	Section 4: Mitigation Strategy
Appendix A: Planning Process	Appendix A: Planning Process
Appendix B: Plan Maintenance	Appendix B: Plan Maintenance
Appendix C: Essential Facilities	Appendix C: Essential Facilities
Appendix D: Plan Adoptions	Appendix D: Plan Adoptions
Appendix E: State Required Worksheets	Appendix E: State Required Worksheets

Despite numerous 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 Vermilion Parish and its communities. The extent of this risk is dictated primarily by its geographic location. Most significantly, Vermilion Parish remains at high risk of water inundation from various sources, including flooding and tropical cyclone activity. The entire 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 communities, although not to such great degrees and not in such widespread ways. In all cases, the relative social vulnerability of areas threatened and affected plays a significant role in how governmental agencies and their partners (local, parish, state and federal) prepare for and respond to disasters.

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

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## 2. Hazard Identification and Parish-Wide Risk Assessment

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

The table below provides an overview of the hazards that had been previously profiled in the Vermilion Parish Hazard Mitigation Plan published in 2015, as well as the hazards that were identified in the state's 2019 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 2020 Update
<b>Coastal Hazards</b>	X		X
<b>Flooding</b>	X	X	X
<b>Sinkholes</b>	X		X
<b>Thunderstorms (Hail, Lightning, &amp; Wind)</b>	X	X	X
<b>Tornadoes</b>	X	X	X
<b>Tropical Cyclones</b>	X	X	X

### Prevalent Hazards to the Community

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

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

- a) Coastal Hazards
- b) Flooding
- c) Sinkholes
- d) Thunderstorms (Hail, Lightning, & Wind)
- e) Tornadoes
- f) Tropical Cyclones

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

- Flooding from rivers and waterways, rainstorms, 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)
  - e) Coastal
- High wind damage most commonly resulting from hurricanes, thunderstorms, and tornadoes
- Property damage resulting from all profiled natural hazards

The potential destructive power of tropical cyclones was determined to be the most prevalent hazard to the parish. Fourteen of the twenty-one disaster declarations Vermilion Parish has received resulted from tropical cyclones, which validates this as the most significant hazard. Therefore, the issue of hurricanes will serve as the main focus during the mitigation planning process. Hurricanes present risks from the potential for flooding, primarily resulting from storm surge, and high wind speeds. While storm surge is considered the hazard with the most destructive potential, the risk assessment will also assess non-storm surge flooding as well. Flooding can also occur from non-hurricane events, as flash floods are a common occurrence due to heavy rainfall.

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

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

*Table 2-2: Vermilion Parish Major Disaster Declarations.*

Disaster Number	Year	Declaration
315	10/13/1971	Tropical Cyclone - Hurricane Edith
448	9/23/1974	Tropical Cyclone - Hurricane Carmen
3031	2/22/1977	Drought and Freezing
622	5/21/1980	Severe Storm, Flood
728	10/31/1984	Severe Storm, Flood
829	5/4/1989	Severe Storm, Flood
835	7/17/1989	Tropical Cyclone - TS Allison
956	8/25/1992	Tropical Cyclone – Hurricane Andrew
1246	9/30/1998	Tropical Cyclone – Hurricane Georges
1380	6/5/2001	Tropical Cyclone – TS Allison
1437	10/3/2002	Tropical Cyclone – Hurricane Lili
1603	8/29/2005	Tropical Cyclone – Hurricane Katrina
1607	9/24/2005	Tropical Cyclone – Hurricane Rita
4080	8/29/2012	Tropical Cyclone – Hurricane Isaac
4102	2/22/2013	Severe Storm, Flood
4277	8/14/2016	Severe Storm, Flood
3392	10/6/2017	Tropical Cyclone – Tropical Storm Nate
4345	10/16/2017	Tropical Cyclone – Tropical Storm Harvey
4458	8/27/2019	Tropical Cyclone – Hurricane Barry
4484	3/24/2020	COVID-19 Pandemic
3527	6/7/2020	Tropical Cyclone – Tropical Storm Cristobal

### Probability of Future Hazard Events

The probability of a hazard event occurring in Vermilion Parish is estimated in the table on the following page. The percent chance of an event happening during any given year was calculated by posting past events and dividing by the time period. Unless otherwise indicated, the time period used to access probability followed the method used in the State of Louisiana’s most current Hazard Mitigation Plan. The primary source for historical data used throughout the plan is the National Oceanic and Atmospheric Administration’s (NOAA) National Centers for Environmental Information’s (NCEI) Storm Events Database, which provides historical hazard data from 1950 to 2019. In staying consistent with the state plan, the Storm Events Database was evaluated for the last thirty years (1989 – 2019) in order to determine future probability of a hazard occurring. While the 30-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 70-year record was used when Hazus 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.

The following table shows the annual probability for each hazard occurring across the parish:

*Table 2-3: Probability of Future Hazard Reoccurrence.*

Hazard	Probability						
	Vermilion Parish (Unincorporated)	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
<b>Coastal Hazards</b>	100%	100%	100%	100%	< 1%	< 1%	< 1%
<b>Flooding</b>	60%	37%	10%	20%	7%	13%	17%
<b>Sinkholes</b>	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%	< 1%
<b>Thunderstorms – Hail</b>	100%	100%	100%	100%	100%	100%	100%
<b>Thunderstorms - Lightning</b>	17%	17%	17%	17%	17%	17%	17%
<b>Thunderstorms - Winds</b>	3%	3%	3%	3%	3%	3%	3%
<b>Tornadoes</b>	100%	100%	100%	100%	100%	100%	100%
<b>Tropical Cyclones</b>	53%	53%	53%	53%	53%	53%	53%

As shown in the above table, coastal hazards in Abbeville, Delcambre, Erath, and the unincorporated areas of Vermilion Parish along with hailstorms and tornadoes, have the highest chance of occurrence in the parish (100%). These are followed by flooding for the unincorporated area of Vermilion Parish (60%), tropical cyclones (53%), flooding for Abbeville (37%), flooding for Erath (20%), lightning and flooding for Maurice (17%), flooding for Kaplan (13%), flooding for Delcambre (10%), flooding for Gueydan (7%), and thunderstorm winds (3%). Coastal hazards for Gueydan, Kaplan, and Maurice as well as sinkholes for the entire parish have an annual chance of occurrence of less than 1%.

### Inventory of Assets for the Entire Parish

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

Within the entire planning area, there is an estimated value of \$5,110,188,000 in structures throughout the parish. The tables on the next page provide the total estimated value for each type of structure by occupancy.



*Table 2-4: Estimated Total of Potential Losses throughout Vermilion Parish.*

Occupancy	Vermilion Parish	Unincorporated Area	Abbeville	Delcambre	Erath
Agricultural	\$25,718,000	\$15,712,119	\$4,032,697	\$0	\$483,696
Commercial	\$561,355,000	\$194,124,504	\$246,655,577	\$5,477,325	\$21,097,271
Government	\$21,455,000	\$9,978,623	\$9,243,638	\$132,348	\$275,809
Industrial	\$121,700,000	\$75,758,828	\$24,151,441	\$145,172	\$9,564,943
Religion	\$66,068,000	\$15,929,545	\$31,306,570	\$239,712	\$3,360,264
Residential	\$4,251,829,000	\$2,696,934,767	\$773,492,389	\$66,178,470	\$227,457,608
Education	\$62,063,000	\$8,638,312	\$23,618,348	\$4,675,320	\$12,466,347
<b>Total</b>	<b>\$5,110,188,000</b>	<b>\$3,017,076,698</b>	<b>\$1,112,500,661</b>	<b>\$76,848,346</b>	<b>\$274,705,939</b>

*Table 2-5: Estimated Total of Potential Losses throughout Vermilion Parish.*

Occupancy	Gueydan	Kaplan	Maurice
Agricultural	\$2,776,686	\$843,045	\$1,869,757
Commercial	\$19,602,322	\$65,591,811	\$8,806,190
Government	\$486,959	\$1,337,622	\$0
Industrial	\$1,306,137	\$9,203,654	\$1,569,825
Religion	\$4,401,882	\$9,391,756	\$1,438,271
Residential	\$102,640,835	\$318,649,229	\$66,475,702
Education	\$3,533,481	\$6,611,635	\$2,519,556
<b>Total</b>	<b>\$134,748,303</b>	<b>\$411,628,752</b>	<b>\$82,679,301</b>

## Essential Facilities of the Parish

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

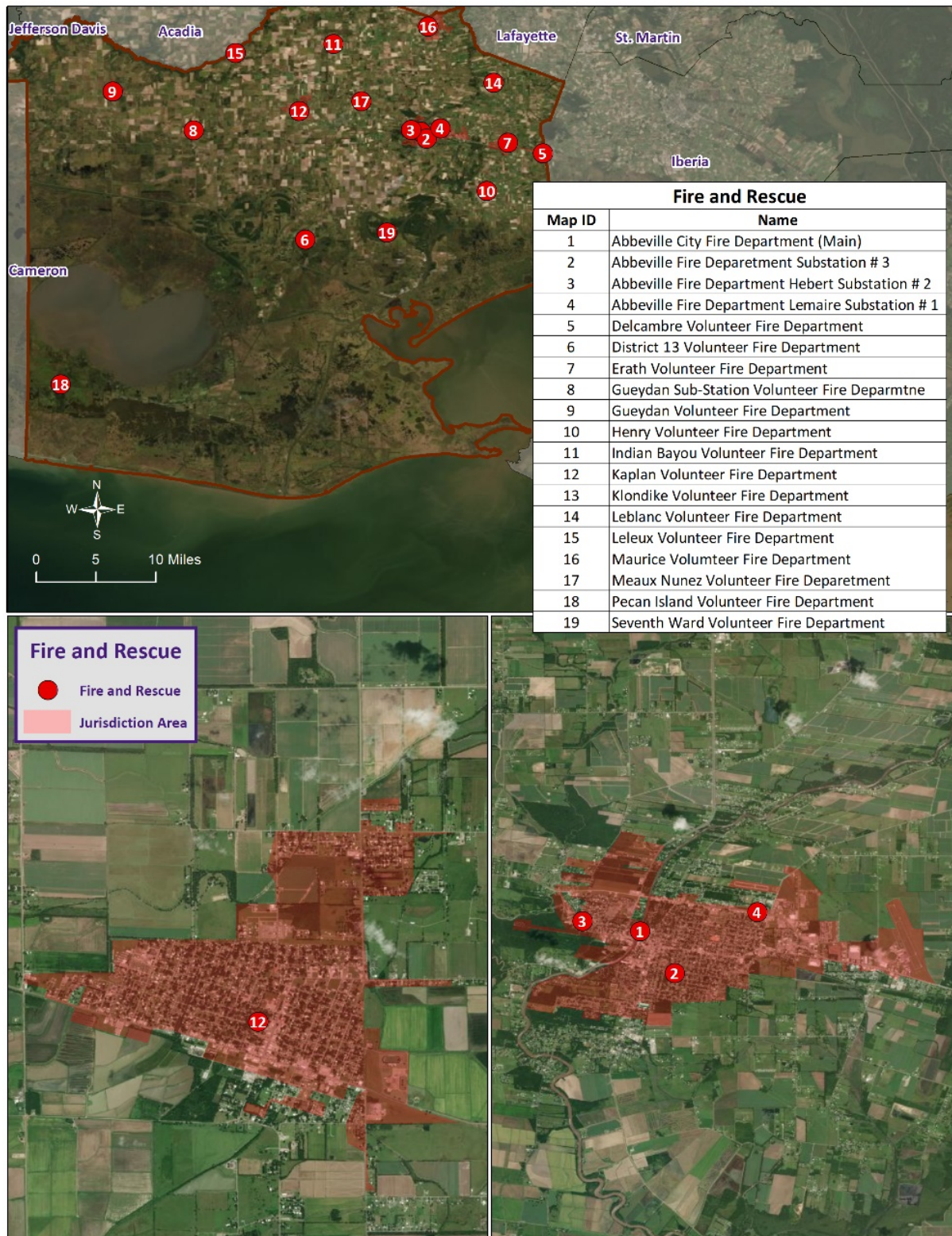


Figure 2-1: Fire and Rescue Facilities in Vermilion Parish.



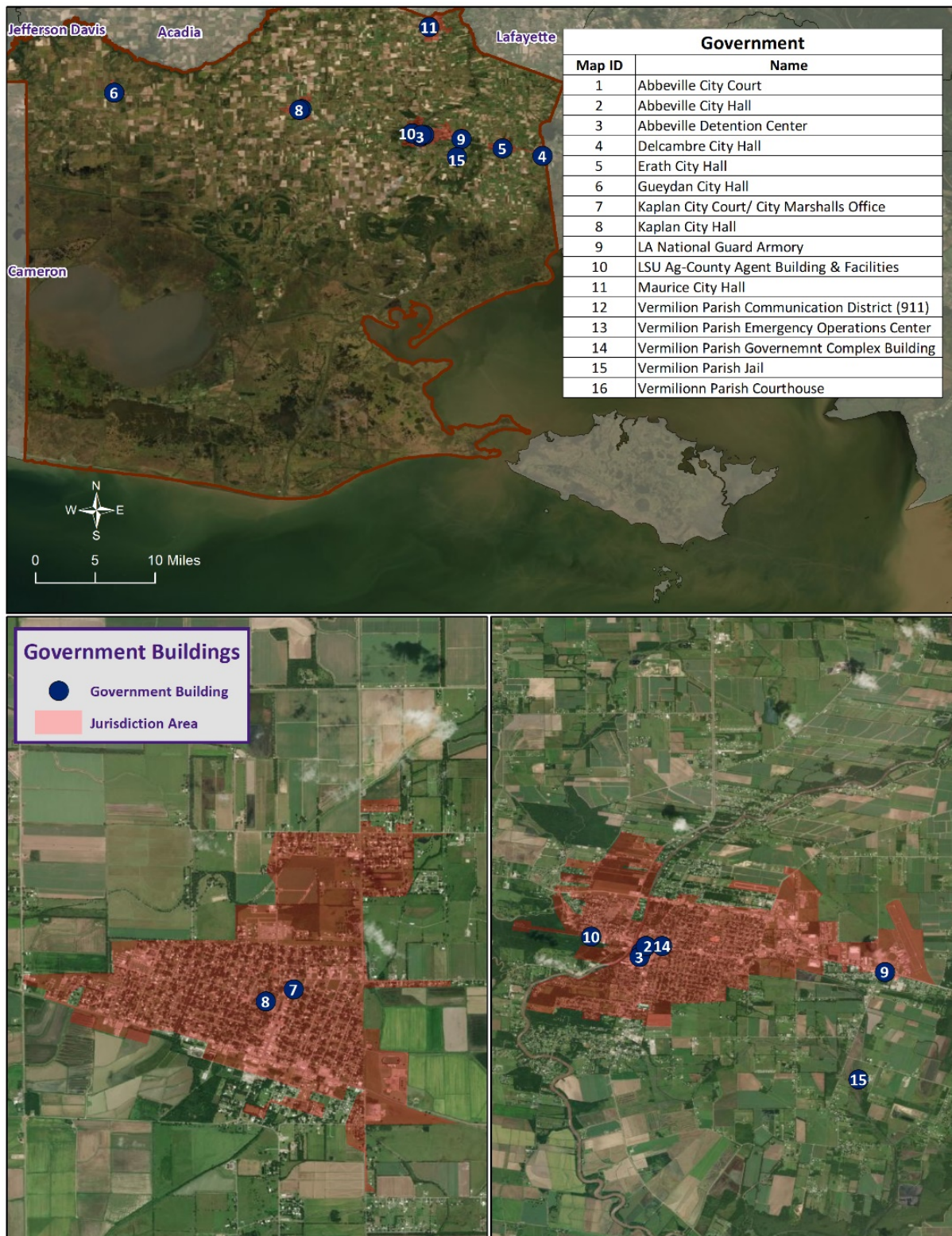
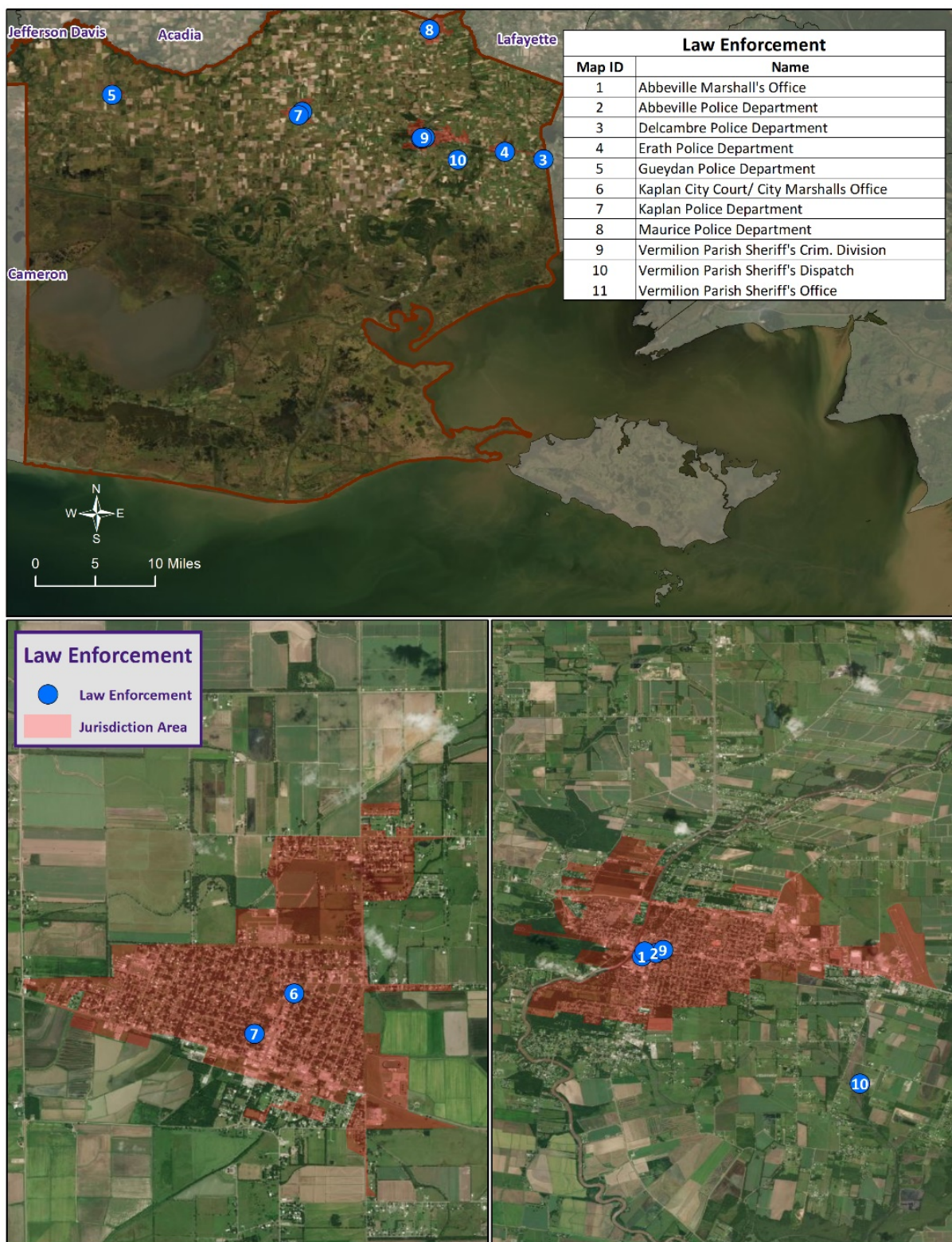


Figure 2-2: Government Buildings in Vermilion Parish.







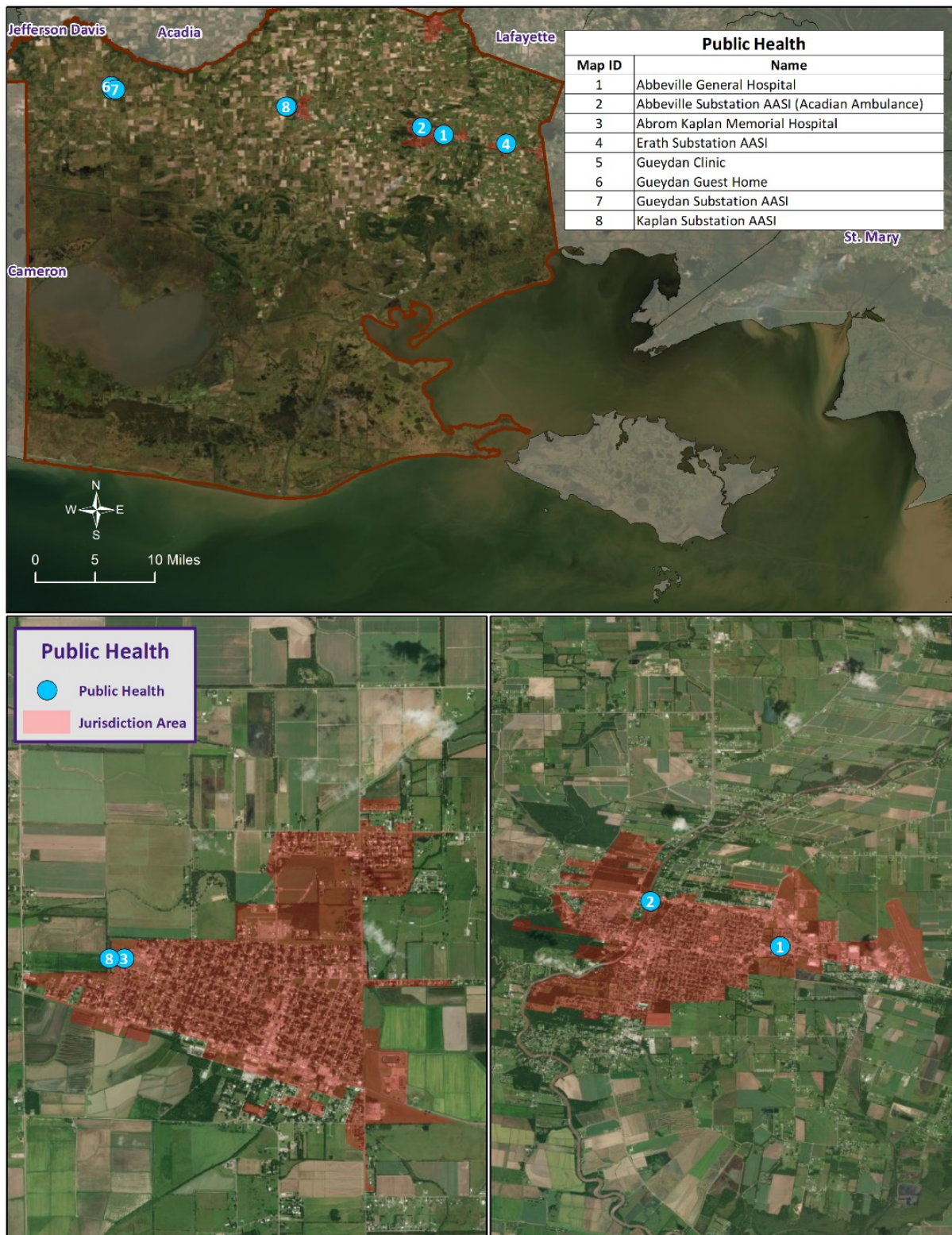


Figure 2-4: Public Health Facilities in Vermilion Parish.



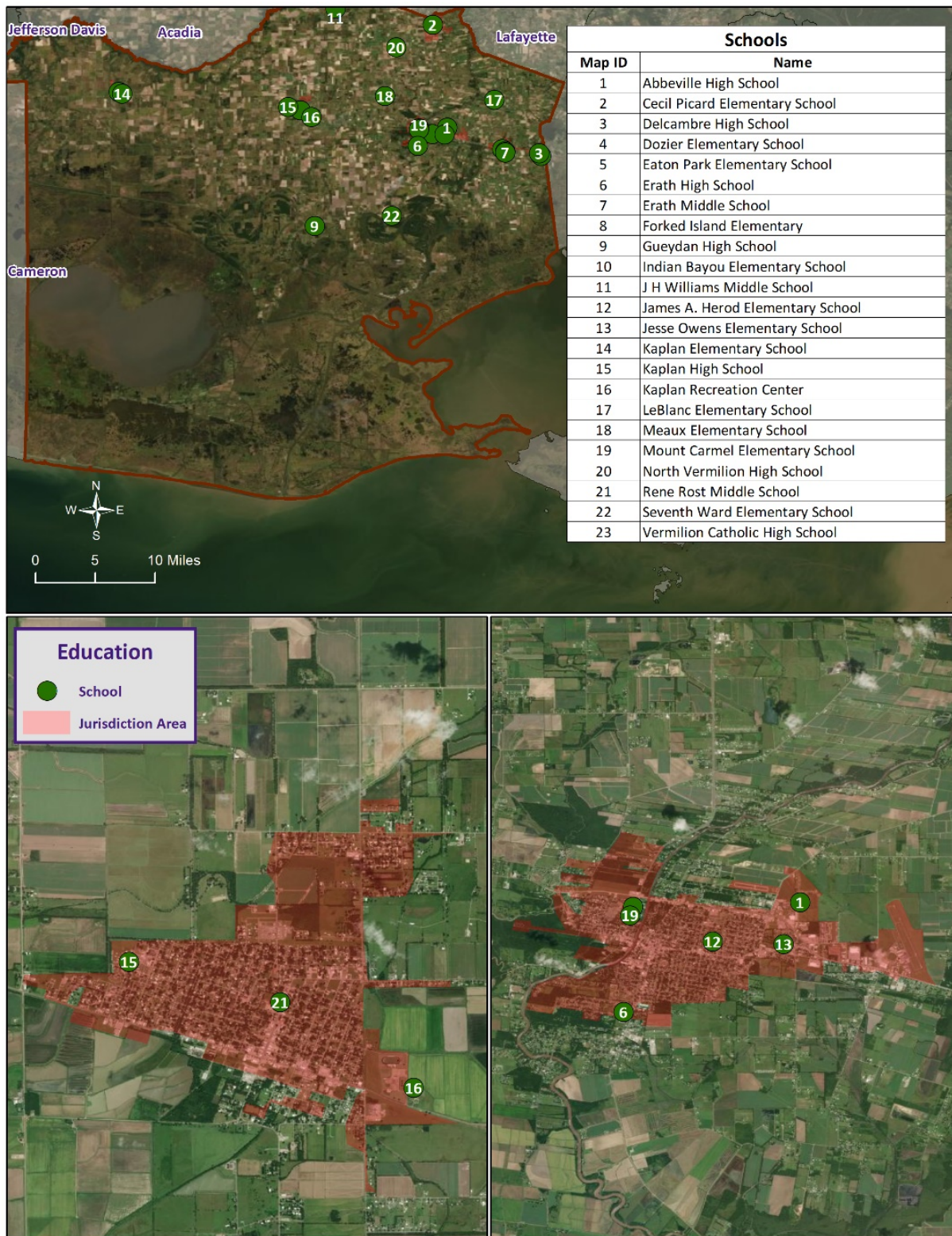


Figure 2-5: Educational Facilities in Vermilion Parish.



### Future Development Trends

Vermilion Parish experienced a growth in population and housing between the years of 2000 and 2019, increasing in population from 53,949 with 22,461 housing units in the year 2000 to a population of 59,511 with 26,935 housing units in the year 2019. Maurice experienced the largest population growth within the parish growing from a populace of 964 in 2010 to 1,424 in 2018 (47.7% overall growth). This is followed by Delcambre at 21.5% overall growth, and then the unincorporated areas of the parish at 0.4% overall growth from 2010 to 2019. The incorporated areas of Abbeville, Erath, Gueydan, and Kaplan all experienced a decline in population during this same time period.

*Table 2-6: Population Growth Rate for Vermilion Parish.*

Total Population	Vermilion Parish	Unincorporated Area	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
1-Apr-00	53,949	30,279	11,949	2,180	2,114	1,611	5,183	633
1-Apr-10	57,999	34,658	12,257	1,866	2,256	1,398	4,600	964
1-Jul-19	59,511	35,920	12,038	2,267	2,047	1,266	4,549	1,424
Population Growth between 2000 – 2010	7.5%	14.5%	2.6%	-14.4%	6.7%	-13.2%	-11.2%	52.3%
Average Annual Growth Rate between 2000 – 2010	0.8%	1.4%	0.3%	-1.4%	0.7%	-1.3%	-1.1%	5.2%
Population Growth between 2010 – 2019	2.6%	3.6%	-1.8%	21.5%	-9.3%	-9.4%	-1.1%	47.7%
Average Annual Growth Rate between 2010 – 2019	0.29%	0.40%	-0.20%	2.39%	-1.03%	-1.05%	-0.12%	5.30%

Maurice also experienced the largest growth of housing units from 2010 to 2019 growing from 276 in 2010 to 577 in 2019. The incorporated areas of Abbeville and Delcambre experienced the second largest growth in housing units during this time period with a 1.4% annual growth rate. The incorporated areas of Erath, Gueydan, and Kaplan all experienced a decline in housing units during this time period. 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 2019:

*Table 2-7: Housing Growth Rate for Vermilion Parish.*

Total Housing Units	Vermilion Parish	Unincorporated Area	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
1-Apr-00	22,461	12,281	5,125	903	887	724	2,265	276
1-Apr-10	25,235	14,931	5,257	823	943	723	2,144	414
1-Jul-19	26,935	15,915	5,905	923	937	703	1,975	577
Housing Growth between 2000 – 2010	12.4%	21.6%	2.6%	-8.9%	6.3%	-0.1%	-5.3%	50.0%
Average Annual Growth Rate between 2000 – 2010	1.2%	2.2%	0.3%	-0.9%	0.6%	0.0%	-0.5%	5.0%
Housing Growth between 2010 – 2019	6.7%	6.6%	12.3%	12.2%	-0.6%	-2.8%	-7.9%	39.4%
Average Annual Growth Rate between 2010 – 2019	0.7%	0.7%	1.4%	1.4%	-0.1%	-0.3%	-0.9%	4.4%

## Future Hazard Impacts

Hazard impacts were estimated for five years and ten years in the future (2025 and 2030). Yearly population and housing growth rates were applied to parish inventory assets for composite flood and tropical cyclones. Based on a review of available information, it is assumed that population and housing units will grow within Vermilion Parish from the present until 2030. 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%.

*Table 2-8: Estimated Future Impacts, 2018-2030.*

*(Source: Hazus, US Census Bureau)*

Hazard / Impact	Total in Parish (2018)	Hazard Area (2018)	Hazard Area (2025)	Hazard Area (2030)
<b>Flood Damage</b>				
<b>Structures</b>	26,935	4,371	4,402	4,424
<b>Value of Structures</b>	\$5,110,188,000	\$829,362,569	\$896,673,887	\$948,072,896
<b># of People</b>	59,511	9,658	9,856	10,000
<b>Tropical Cyclones</b>				
<b>Structures</b>	26,935	26,935	27,124	27,260
<b>Value of Structures</b>	\$5,110,188,000	\$5,110,188,000	\$5,524,932,409.97	\$5,841,631,772
<b># of People</b>	59,511	59,511	60,728	61,613

Interestingly, the population of Vermilion Parish and its jurisdictions has seen large variations of population increase and decrease. The jurisdictions of Erath and Gueydan have experienced almost double digit population decrease, while Delcambre and Maurice have experienced huge population increases. The changes in housing over the last decade have generally followed a similar trend. While the population has generally increased slightly since the last hazard mitigation plan update, the tremendous growth in those jurisdictions has triggered a strong effort to increase parish wide resiliency through initiatives such as active floodplain management. These initiatives have restricted the development of flood prone areas, particularly coastal flood zones, in an effort to continue the support and encouragement of safer communities within Vermilion Parish.

## Land Use

The Vermilion Parish Land Use table is provided on the next page. Residential, commercial and industrial areas account for only 3% of the parish's land use. Agricultural land at 361,731 acres and wetlands at 333,258 acres are by far the two largest categories accounting for 71% of land combined. The parish also consists of water areas (25%) and forest land (1%).

Table 2-9: Vermilion Parish Land Use.  
(Source: USGS Land Use Map)

Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	361,731	37%
Wetlands	333,258	34%
Forest Land (Not including forested wetlands)	5,812	1%
Urban/Development	32,199	3%
Water	252,156	25%

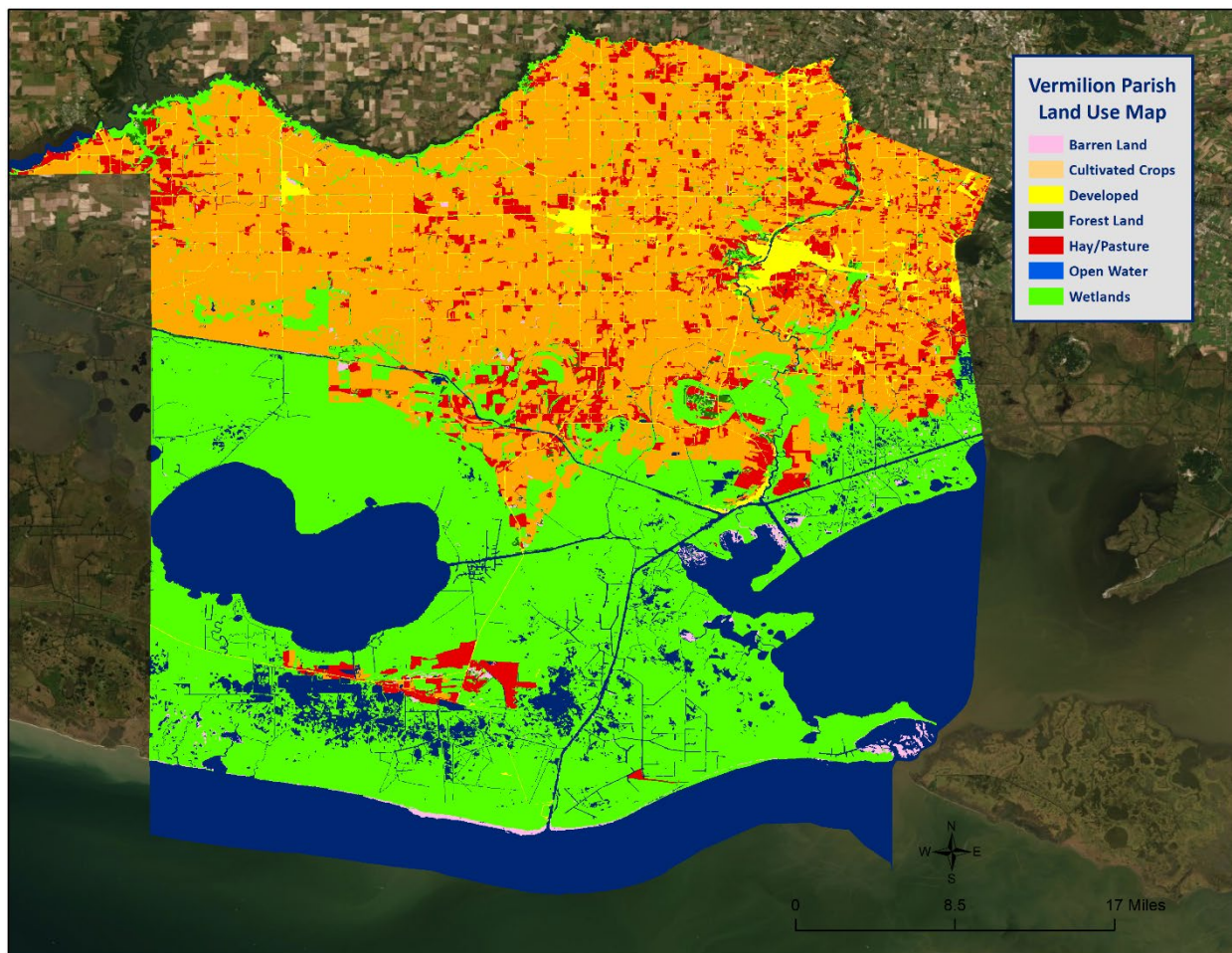


Figure 2-6: Vermilion Parish Land Use Map.  
(Source: USGS Land Use Map)

## Assessing Vulnerability Overview

The purpose of assessing vulnerability is to quantify and/or qualify exposure and determine how various threats and hazards impact life, property, the environment, and critical operations in Vermilion Parish. Vulnerability can be defined as the manifestation of the inherent states of the system (e.g., physical, technical, organizational, cultural) that can be exploited to adversely affect (cause harm or damage to) that system. For example, identifying areas in the parish that suffer disproportional damages from flooding compared with other areas, or overall exposure of an entire town to flooding. Identifying and understanding vulnerability to each threat and hazard provides a strong foundation for developing and pursuing mitigation actions.

The Vulnerability Assessment section for each hazard builds upon the information provided in the Risk Assessment by assessing the potential impact and amount of damage that each hazard has on the parish and each jurisdiction location. To complete the assessment, best available data were collected from a variety of sources, including local, state, and federal agencies, and multiple analyses were performed qualitatively and quantitatively. The estimates provided in the Vulnerability Assessment should be used to understand relative risk from each hazard and the potential losses that may be incurred; however, uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning specific hazards and their effects on the built environment, as well as incomplete datasets from approximations and simplifications that are necessary to provide a meaningful and complete analysis. Further, most datasets used in this assessment contain relatively short periods of records, which increases the uncertainty of any statistically-based analysis.

## Quantitative Methodology

The quantitative methodology consists of utilizing a detailed GIS-based approach informed through the development of comprehensive hazard and infrastructure databases. This data-centric approach forms the foundation for our quantitative vulnerability assessment. GIS technology allowed for the identification and analysis of potentially at-risk community assets such as people and infrastructure. This analysis was completed for hazards that can be spatially defined in a meaningful manner (i.e., hazards with an official and scientifically determined geographic extent) and for which GIS data were readily available.

## Qualitative Methodology

The qualitative assessment relies less on technology, but more on historical and anecdotal data regarding expected hazard impacts. The qualitative assessment completed for Vermilion Parish is based on the Priority Risk Index (PRI). The purpose of the PRI is to prioritize all potential hazards, and then group them into three categories of high, moderate, or low risk to identify and prioritize mitigation opportunities. The PRI is a good practice to use when prioritizing hazards because it provides a standardized numerical value for hazards to be compared. PRI scores were calculated using five categories:

- Probability
- Impact
- Spatial Extent
- Warning Time
- Duration

Each degree of risk is assigned a value (1-4) and a weighting factor. To calculate the Risk Factor for a given hazard, the assigned risk value for each category is multiplied by the weighted factor, and the sum of all six categories is totaled together to determine the final Risk Factor. The highest possible Risk Factor is 4.0.

$$\text{Risk Factor} = [(\text{Probability} * 0.25) + (\text{Impact} * 0.25) + (\text{Spatial Extent} * 0.20) + (\text{Warning Time} * 0.15) + (\text{Duration} * 0.15)]$$

### Priority Risk Index and Hazard Risk

Hazard risk is determined by calculating the Risk Factor for each hazard impacting Vermilion Parish. A summary of the PRI is found in the table below. The conclusions drawn from the qualitative and quantitative assessments are fitted into three categories based on High, Moderate, or Low designations. Hazards identified as high risk have risk factors of 2.5 or greater. Risk Factors ranging from 2.0 to 2.4 are deemed moderate risk hazards. Hazards with Risk Factors less than 2.0 are considered low risk.

*Table 2-10: Summary of the Priority Risk Index.*

PRI Category	Degree of Risk			Assigned Weighting Factor
	Level	Criteria	Index Value	
Probability	Unlikely	Less than 1% annual probability	1	25%
	Possible	Between 1 and 10% annual probability	2	
	Likely	Between 10 and 100% probability	3	
	Highly Likely	100% annual probability	4	
Impact	Minor	Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.	1	25%
	Limited	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	2	
	Critical	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than a week.	3	
	Catastrophic	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.	4	
Spatial Extent	Negligible	Less than 1% of area affected	1	20%
	Small	Between 1 and 10% of area affected	2	
	Moderate	Between 10 and 50% of area affected	3	
	Large	Between 50 and 100% of area affected	4	
Warning Time	More than 24 hours	Self-explanatory	1	15%
	12 to 24 hours	Self-explanatory	2	
	6 to 12 hours	Self-explanatory	3	
	Less than 6 hours	Self-explanatory	4	
Duration	Less than 6 hours	Self-explanatory	1	15%
	Less than 24 hours	Self-explanatory	2	
	Less than one week	Self-explanatory	3	
	More than one week	Self-explanatory	4	

*Table 2-11: Associated Risk Factor with PRI Value Range.*

Risk Factor	PRI Range
High Risk	2.5 to 4.0
Moderate Risk	2.0 to 2.4
Low Risk	0 to 1.9

*Table 2-12: Risk Assessment for Vermilion Parish.*

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	Overall Risk
Coastal Hazards	4	2	4	1	3	2.9
Flooding	3	4	3	4	3	3.4
Sinkholes	1	2	2	4	1	1.9
Thunderstorms - Hail	4	2	3	3	1	2.7
Thunderstorms – Lightning	3	2	2	3	1	2.25
Thunderstorms – Winds	3	2	2	3	1	2.25
Tornadoes	4	3	2	4	3	3.2
Tropical Cyclones	3	4	4	1	4	3.3



## Hazard Identification

### Coastal Hazards/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 concentrated 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 10–12 in. per century, while future sea level rise could be within the range of 1–4 ft. 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 ft./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.

Saltwater intrusion is one of the major causes of subsidence and marshland loss. Saltwater intrusion refers to the movement of saltwater into freshwater aquifers, or to the encroachment of saline water into freshwater estuaries. This intrusion flows into streams discharging into the Gulf of Mexico as well as the marsh areas, subsequently into freshwater streams. Intrusion of saltwater causes the loss of fresh and intermediate vegetation, which results in rapid erosion of marsh soils and the ultimate conversion of the area to open water.

#### *Location*

Historic areas of coastal land loss and gain (*Figure 2-7*) and subsidence rates (*Figure 2-8*) have been quantified for Vermilion 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 mi<sup>2</sup>, while the average annual land gain has been 3 mi<sup>2</sup> for a net loss of 32 mi<sup>2</sup> per year. Land loss is primarily occurring in the southern portions of unincorporated Vermilion Parish (*Figure 2-7*), while subsidence is occurring throughout southern unincorporated Vermilion Parish and in the incorporated areas of Abbeville, Erath, and Delcambre (*Figure 2-8*).

#### *Previous Occurrences / Extent*

Coastal land loss is an ongoing process, including discrete (hurricanes) and continuous (subsidence, sea level rise) processes. While historic flood loss data undoubtedly include the effects of coastal land loss, specific previous occurrences have not been identified as a source of direct disaster damage in Louisiana. Rather, the effects of the underlying flood or hurricane storm surge hazard are recorded. Land loss is a significant hazard, however, and assessment of the added flood impacts caused by land loss is quantified in the following sections. The southeastern portion of Vermilion Parish can expect to experience subsidence rates of approximately 10 mm annually while the incorporated areas of Abbeville, Erath, and Delcambre can expect subsidence rates of approximately 6 mm annually.

#### *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.). The table below displays the annual probability of occurrence for coastal land loss/subsidence for Vermilion and its jurisdictions. One item of note: while the annual probability for coastal land loss in Erath is estimated at 100%, the area impacted is not populated, nor does it contain any structures.

*Table 2-13: Estimated Annual Probability of Coastal Land Loss in Vermilion Parish.*

*(Source: Hazus)*

Unincorporated Area	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
100%	100%	100%	100%	< 1%	< 1%	< 1%



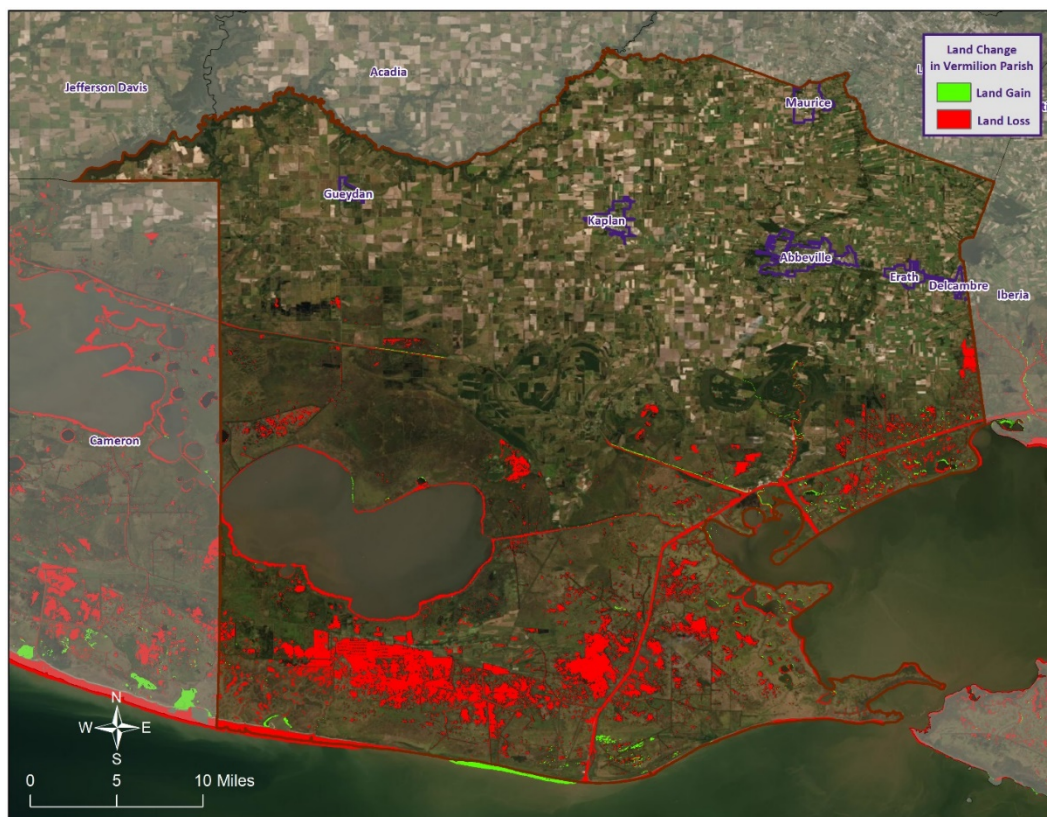


Figure 2-7: Historical Areas of Land Loss and Gain between 1932 and 2010.  
(Source: State of Louisiana Hazard Mitigation Plan)



Figure 2-8: Maximum Annual Subsidence Rates Based on Subsidence Zones in Coastal Louisiana.  
(Source: State of Louisiana Hazard Mitigation Plan)

### *Estimated Potential Losses*

To determine the estimated potential losses, the methodology implemented in the 2014 Louisiana State Plan Update was used. In the state plan, two parameters were considered to estimate the projected increase in coastal flood losses from storm surge scenarios – global sea level rise and subsidence. A timeframe of 10 years was used for evaluation of future effects of sea level rise and subsidence for comparison with current conditions. The NOAA Sea, Lake and Overland Surges from Hurricanes (SLOSH) model was used to estimate the maximum of maximum (MOM) storm surge elevations for a Category 1 hurricane at mean tide along the coast of Louisiana. The MOM scenario is not designed to describe the storm surge that would result from a particular event, but rather evaluates the impacts of multiple hurricane scenarios with varying forward speeds and storm track trajectories to create the maximum storm surge elevation surface that would occur given the simultaneous occurrence of all hurricane events for a given category.

There are many global sea level rise scenarios from which to select; however, within a 10-year timeframe, methods that predict accelerating sea level rise rates do not deviate significantly from straight line methods. Therefore, a linear sea level rise projection for the sea level rise occurring in 10 years (SLR<sub>2024</sub>) using a linear global sea level rise rate of 3.1 mm/year was used (IPCC, 2007), which is also in accordance with the CPRA Coastal Master Plan. This resulted in an increase of 0.1 feet, which was applied to the NOAA MOM storm surge elevation results over the model output domain.

$$SLR_{2024} = 0.0031 \frac{m}{year} \times 10 \text{ years}$$

$$SLR_{2024} = 0.031 \text{ meters} = 0.10 \text{ ft in 2024}$$

To estimate the effects of subsidence, the elevation profile for southern Louisiana was separated into sections based on subsidence zones. The 20th percentile values for subsidence were used, in accordance with the CPRA Master Plan, and subtracted from the digital elevation model (DEM) for each zone and re-joined to create a final subsided ground elevation layer.

To perform the economic loss assessment, depth grids were created for current conditions (SLOSH MOM Results – Current Land Elevation) and for projected 2024 conditions ([SLOSH MOM Results + 0.1 ft sea level rise] – [Current Land Elevation – Subsidence]). Hazus was used to calculate economic loss for the current and future depth grids.

On the next page, [Figure 2-9](#) shows the projected increase in total flood loss resulting from a SLOSH Category 1 MOM in the year 2014, with many areas expecting increase in losses. Some areas that would be currently unaffected by a SLOSH Category 1 MOM would be impacted in ten years based on subsidence and sea level rise projections ([Figure 2-10](#)).

To determine annual potential loss estimates for coastal land loss, increased exposure estimates over the next 10 years calculated using Hazus were annualized at the parish level ([Figure 2-11](#)). To provide an annual estimated potential loss per jurisdiction, the total loss for the census block groups within each jurisdiction were calculated. Based on hazard exposure, [Table 2-14](#) provides an estimate of annual potential losses for Vermilion Parish.



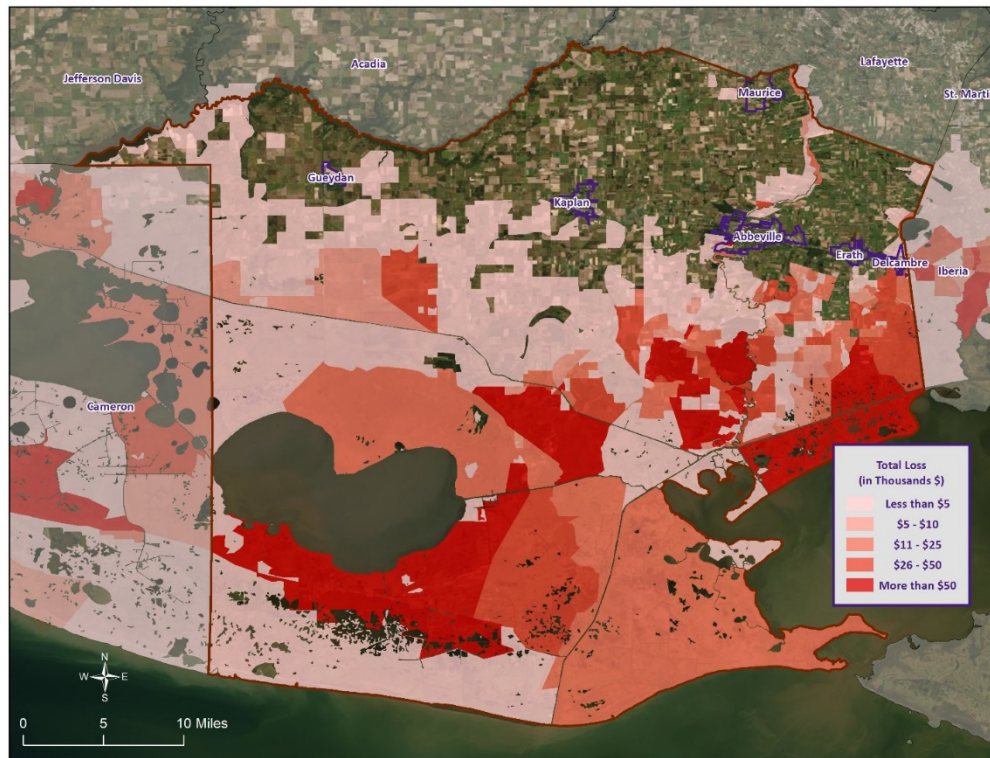


Figure 2-9: Increase in Total Loss Estimates in 2024 by Census Block Group Based on the Hazus Flood Model and NOAA SLOSH Model.

(Source: State of Louisiana Hazard Mitigation Plan)

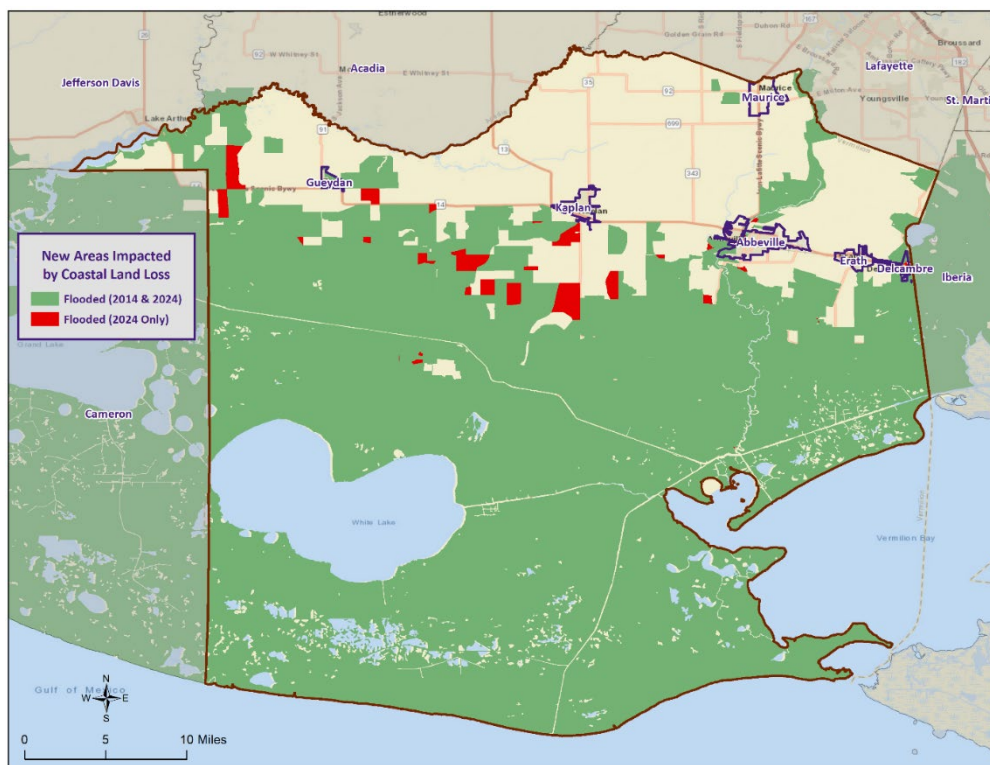


Figure 2-10: Census Block Groups not Currently Impacted by Category 1 Hurricane Storm Surge but Expected to be Impacted in 2024 are Shown in Red.

(Source: State of Louisiana Hazard Mitigation Plan)

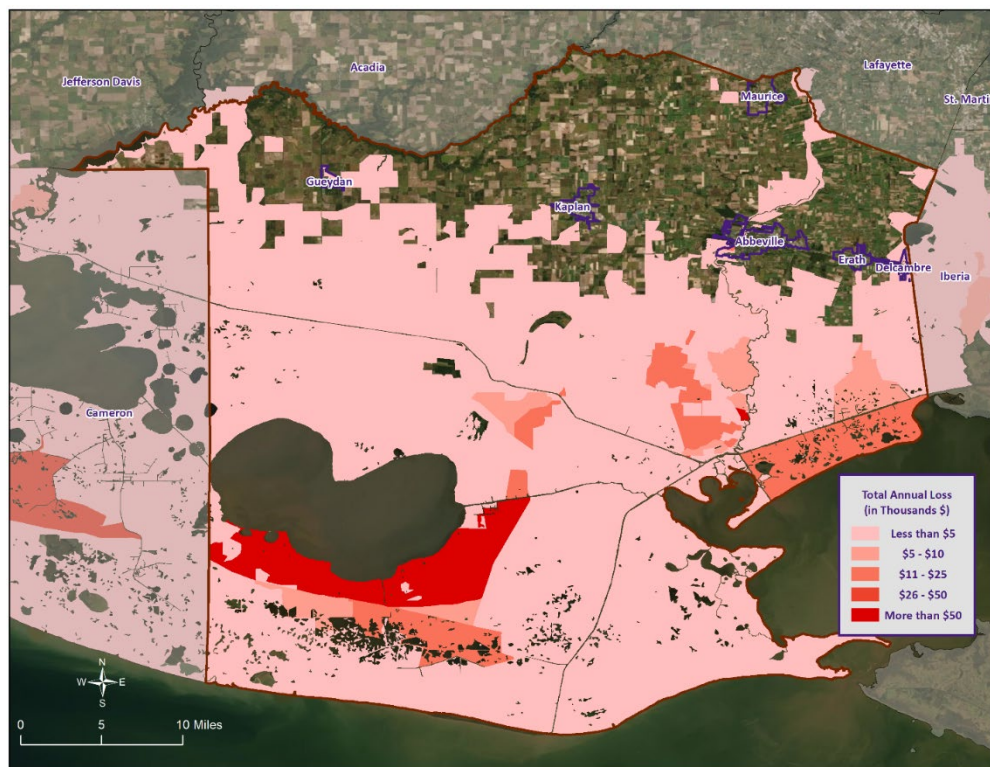


Figure 2-11: Estimated Annual Losses for Coastal Land Loss by Census Block Group.

The following table shows the current and future exposure potential based on the Hazus inventory database.

Table 2-14: Estimated Annual Losses for Coastal Land Loss in Vermilion Parish.  
(Source: Hazus)

Coastal Land Loss Estimated Annual Potential Losses						
Unincorporated Area	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
\$617,000	\$84,000	\$7,000	\$0	\$0	\$0	\$0

#### Threat to People

Coastal land loss can impact all demographics and age groups. Buildings located within highly vulnerable coastal land loss areas could be eventually permanently shut down and forced to re-locate. Long-term sheltering and permanent relocation could be a concern for communities that are at the highest risk for future coastal land loss. The total population within the parish that is susceptible to the effects of coastal land loss are shown in the table on the next page. And as mentioned previously, while the annual probability for coastal land loss in Erath is estimated at 100%, the area impacted is not populated, nor does it contain any structures.

*Table 2-15: Number of People Susceptible to Coastal Land Loss in Vermilion Parish.*

Number of People Exposed to Coastal Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
<b>Vermilion Parish (Unincorporated)</b>	34,800	7,500	21.6%
Abbeville	12,257	465	3.8%
Delcambre	1,866	811	43.5%
Erath	2,114	0	0%
Gueydan	1,398	0	0%
Kaplan	4,600	0	0%
Maurice	964	0	0%
<b>Total</b>	<b>57,999</b>	<b>8,776</b>	<b>15.1%</b>

The Hazus hurricane model was used to identify populations vulnerable to coastal land loss throughout the jurisdictions in the tables below:

*Table 2-16: Population Vulnerable to Coastal Land Loss in the Unincorporated Area of Vermilion Parish.*

Vermilion Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	7,500	21.6%
Persons Under 5 years	555	7.4%
Persons Under 18 years	1,446	19.3%
Persons 65 Years and Over	971	13.0%
White	6,068	80.9%
Minority	1,433	19.1%

*Table 2-17: Population Vulnerable to Coastal Land Loss in Abbeville.*

Abbeville		
Category	Total Numbers	Percentage of People in Hazard Area
<b>Number in Hazard Area</b>	465	3.8%
Persons Under 5 years	40	8.7%
Persons Under 18 years	93	20.1%
Persons 65 Years and Over	68	14.6%
White	233	50.0%
Minority	232	50.0%



*Table 2-18: Population Vulnerable to Coastal Land Loss in Delcambre.*

Delcambre		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	811	43.5%
Persons Under 5 years	63	7.7%
Persons Under 18 years	163	20.2%
Persons 65 Years and Over	106	13.0%
White	649	80.0%
Minority	162	20.0%

*Vulnerability*

See Appendix C for parish and municipality buildings that are susceptible to coastal land loss and subsidence.

## 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 Vermilion Parish, all six types of flooding events have historically 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

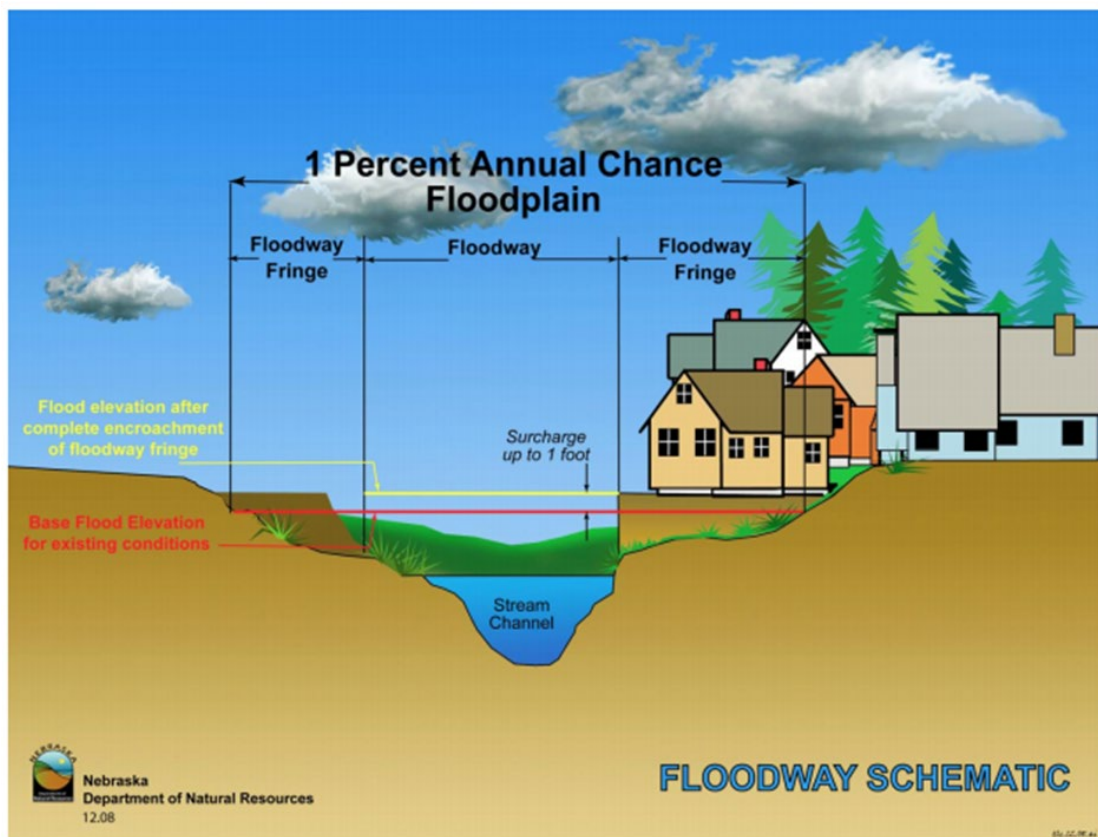
Based on stream gauge levels and precipitation forecasts, the National Weather Service (NWS) posts flood statements, watches, and warnings. The NWS issues the following weather statements with regard to flooding:

- **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 ( $\text{ft}^3/\text{s}$ ) 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 2-12*.



*Figure 2-12: 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 2-12*), 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.

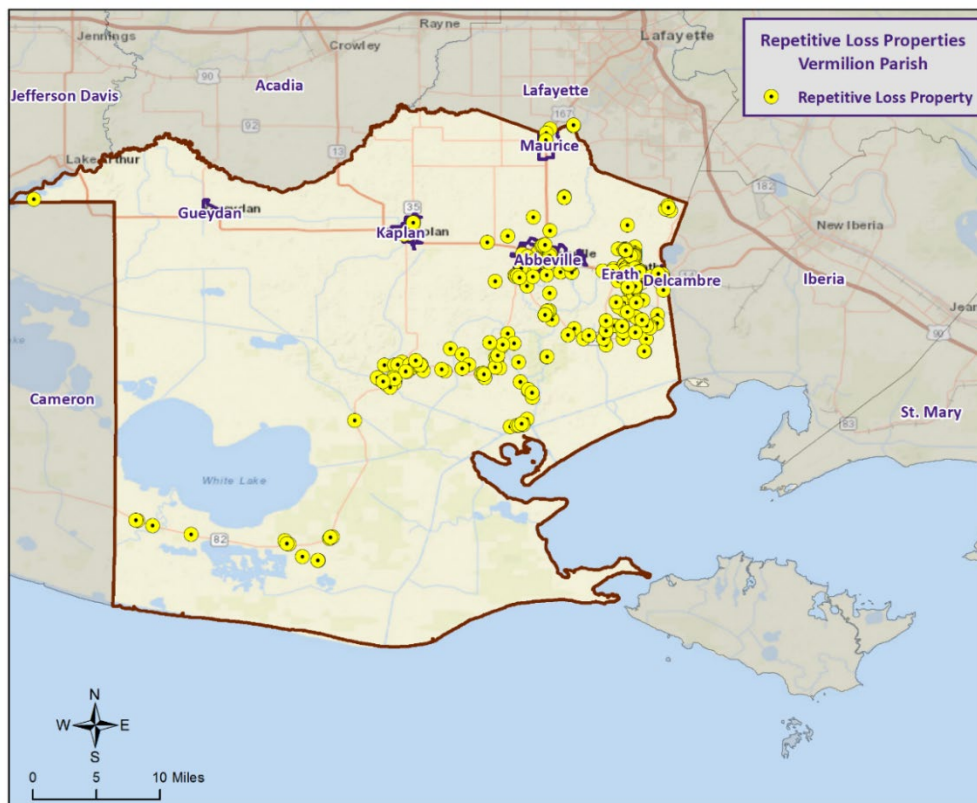


Figures regarding repetitive loss structures for Vermilion Parish are provided in the table below:

*Table 2-19: Repetitive Loss Structures for Vermilion Parish.*

Jurisdiction	Number of Structures	Residential	Commercial	Government	Total Claims	Total Claims Paid	Average Claim Paid
<b>Vermilion Parish (Unincorporated)</b>	325	316	9	0	725	\$31,318,056	\$43,197
<b>Abbeville</b>	24	22	2	0	89	\$2,558,425	\$28,746
<b>Delcambre</b>	73	62	11	0	149	\$6,526,332	\$43,800
<b>Erath</b>	91	89	2	0	91	\$7,612,777	\$83,657
<b>Gueydan</b>	0	0	0	0	0	\$0	\$0
<b>Kaplan</b>	2	2	0	0	5	\$37,419	\$7,484
<b>Maurice</b>	2	2	0	0	5	\$107,038	\$21,408
<b>Total</b>	<b>517</b>	<b>493</b>	<b>24</b>	<b>0</b>	<b>1064</b>	<b>\$48,160,047</b>	<b>\$45,263</b>

Of the 517 repetitive loss structures, 434 were geocoded in order to provide an overview of where the repetitive loss structures are located throughout the parish. *Figure 2-13* shows the approximate location of the structures, while *Figure 2-14* shows where the highest concentration of repetitive loss structures are located. Through the repetitive loss map, it is clear the primary concentrated area of repetitive loss structures is focused around the eastern portion of the parish near Delcambre Canal and in close proximity to Vermilion Bay.



*Figure 2-13: Repetitive Loss Properties in Vermilion Parish.*

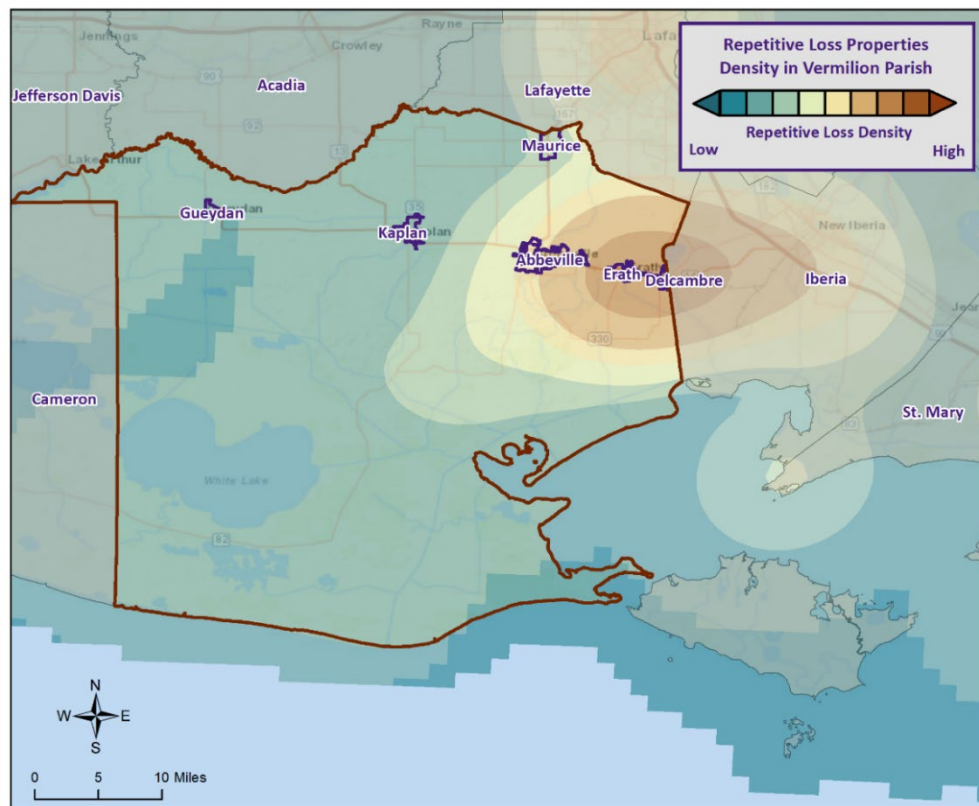


Figure 2-14: Repetitive Loss Property Densities in Vermilion Parish.

## National Flood Insurance Program

Flood insurance statistics indicate that Vermilion Parish has 6,367 flood insurance policies with the NFIP, with total annual premiums of \$4,929,576. Vermilion Parish and the jurisdictions of Abbeville, Delcambre, Erath, Gueydan, Kaplan, and Maurice are all participants in the NFIP. Vermilion Parish and all of its 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 Vermilion Parish and its jurisdictions is provided in the tables to follow.

*Table 2-20: Summary of NFIP Policies for Vermilion Parish.*

Location	No. of Insured Structures	Total Insurance Coverage Value	Annual Premiums Paid
Vermilion Parish	4,352	\$962,189,600	\$3,192,604
Abbeville	745	\$177,470,700	\$473,620
Delcambre	283	\$38,944,800	\$317,743
Erath	430	\$60,278,700	\$661,241
Gueydan	73	\$21,979,500	\$47,904
Kaplan	325	\$62,826,200	\$164,010
Maurice	159	\$46,635,600	\$72,454
<b>Total</b>	<b>6,367</b>	<b>\$1,370,325,100</b>	<b>\$4,929,576</b>

*Table 2-21: Summary of Community Flood Maps for Vermilion Parish.*

CID	Community Name	Initial FHBM Identified	Initial FIRM Identified	Current Effective Map Date	Date Joined the NFIP	Tribal
220221#	Vermilion Parish	5/31/1977	5/15/1985	1/19/2011	5/15/1985	No
220264#	Abbeville	3/15/1974	8/3/1981	1/19/2011	8/3/1981	No
220223#	Delcambre	4/5/1974	4/4/1983	12/2/2011	4/4/1983	No
220224#	Erath	3/8/1974	4/4/1983	1/19/2011	4/4/1983	No
220225#	Gueydan	10/26/1973	1/19/2011	1/19/2011	12/16/1977	No
220226#	Kaplan	11/2/1973	3/1/1982	1/19/2011	3/1/1982	No
220227#	Maurice	N/A	6/30/1976	1/19/2011	6/30/1976	No

According to the Community Rating System (CRS) list of eligible communities dated September 1, 2019, Vermilion Parish and the jurisdictions of Abbeville, Delcambre, Erath, Gueydan, Kaplan, and Maurice do not participate in the CRS program.

#### *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 Vermilion 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 Vermilion Parish experiences.

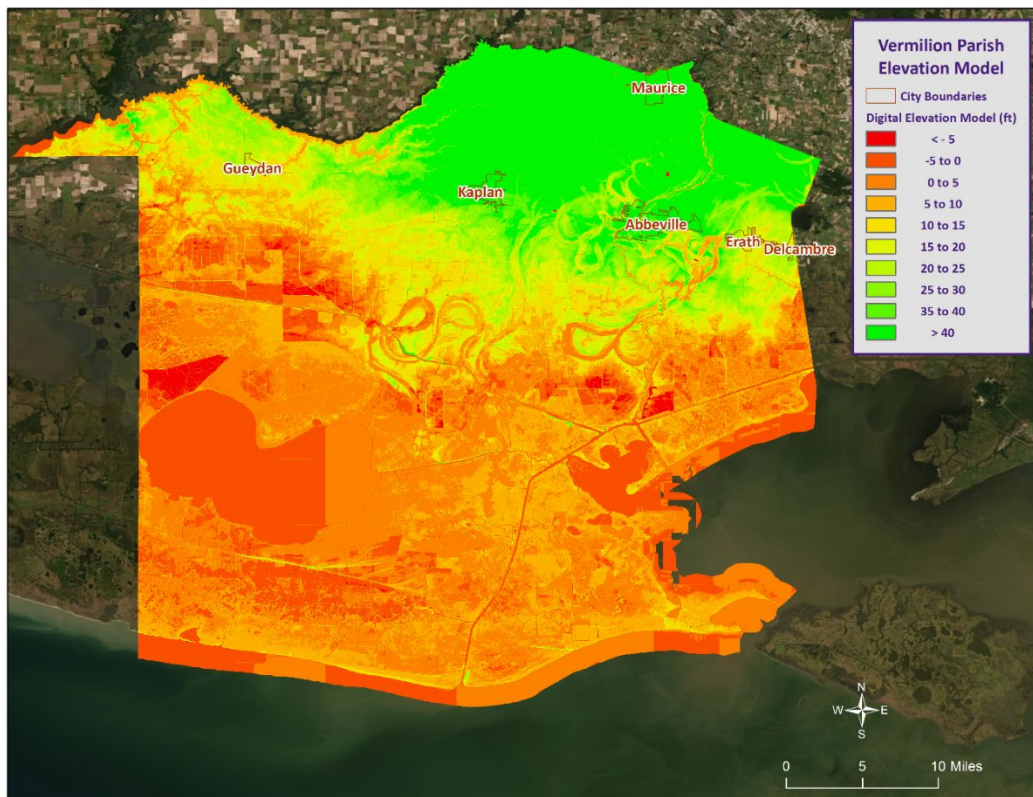
**Flash Floods:** Flash floods are characterized by a rapid rise in water level, high velocity, and large amounts of debris. They are capable of uprooting trees, undermining buildings and bridges, and scouring new channels. Major factors in flash flooding are the high intensity and short duration of 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 rivers crest at flood stage levels, causing extensive flooding in low-lying areas.

The digital elevation model (DEM) in the figure below for Vermilion Parish is instructive in visualizing where the low-lying and high risk areas are for the parish. Elevations in the northernmost sections of Vermilion Parish average approximately twenty feet while the majority of the southern and western sections of the parish have elevations no greater than three feet. The southern section of the parish is comprised mostly of marsh lands which covers over 50% of the parish. The highest elevations in the parish are located in the northeastern area of the parish with elevations exceeding twenty feet in and around the town of Maurice. The majority of the area in Delcambre, Erath, and Gueydan have elevations averaging around ten feet. Abbeville and Kaplan elevations are slightly higher ranging from sixteen to twenty-five feet.



*Figure 2-15: Elevation throughout Vermilion Parish.*

#### Location

Vermilion parish has experienced significant flooding in its history and can expect more in the future. The parish is susceptible to riverine flooding from the Vermilion River on its eastern border and several rivers in the northern portion of the parish including Indian Bayou and Coulee Ile des Cannes. Vermilion is also susceptible to storm surge in the southern and southeastern areas of the parish from the Gulf of Mexico and Vermilion Bay. Low lying coastal areas of Vermilion Parish including Delcambre and Erath are vulnerable to storm surge. Below are enlarged maps of the six incorporated areas showing the areas within each jurisdiction that are at risk to flooding. Based on previous flood events, the worst-case scenarios are based on several different types of flooding events. Storm water excesses affect primarily the low lying areas of the parish and flood depths of up to three feet can be expected in the southern and western unincorporated areas of the parish. The southern unincorporated areas of Vermilion parish as



well as the towns of Delcambre and Erath are susceptible to storm surge flooding and based on historical records the worst case scenario would be flooding levels of approximately fifteen feet. All six incorporated areas and low lying areas in the parish could expect to have flooding of one to five feet for worse case scenarios involving backwater and riverine flooding. The following is a flood zone map displaying 100- and 500-year flood zones for Vermilion Parish.

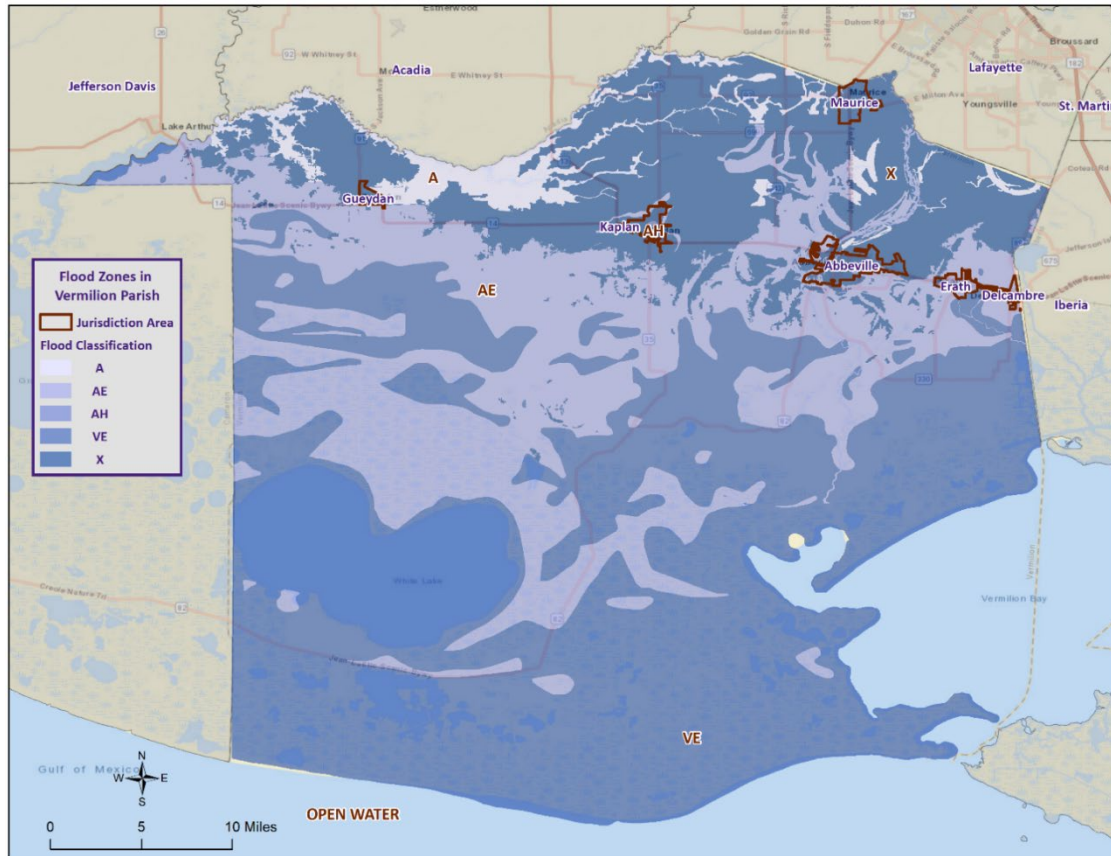
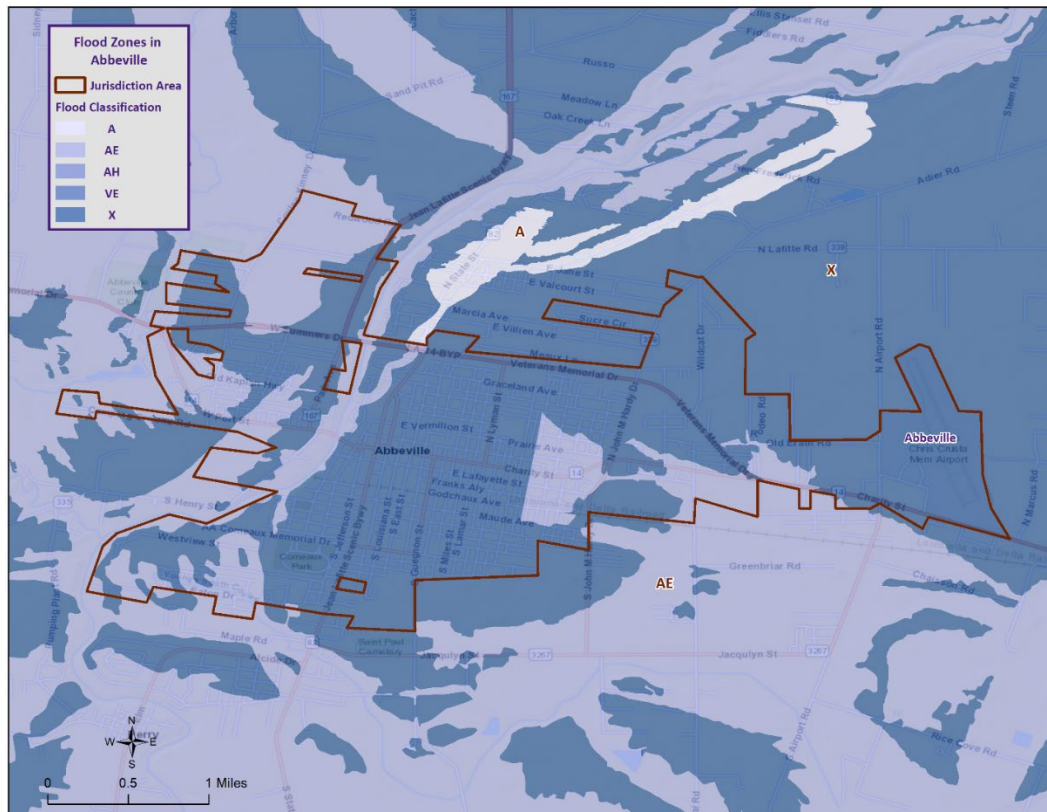


Figure 2-16: Vermilion Parish Areas within the Flood Zones.





*Figure 2-17: Abbeville Areas within the Flood Zones.*

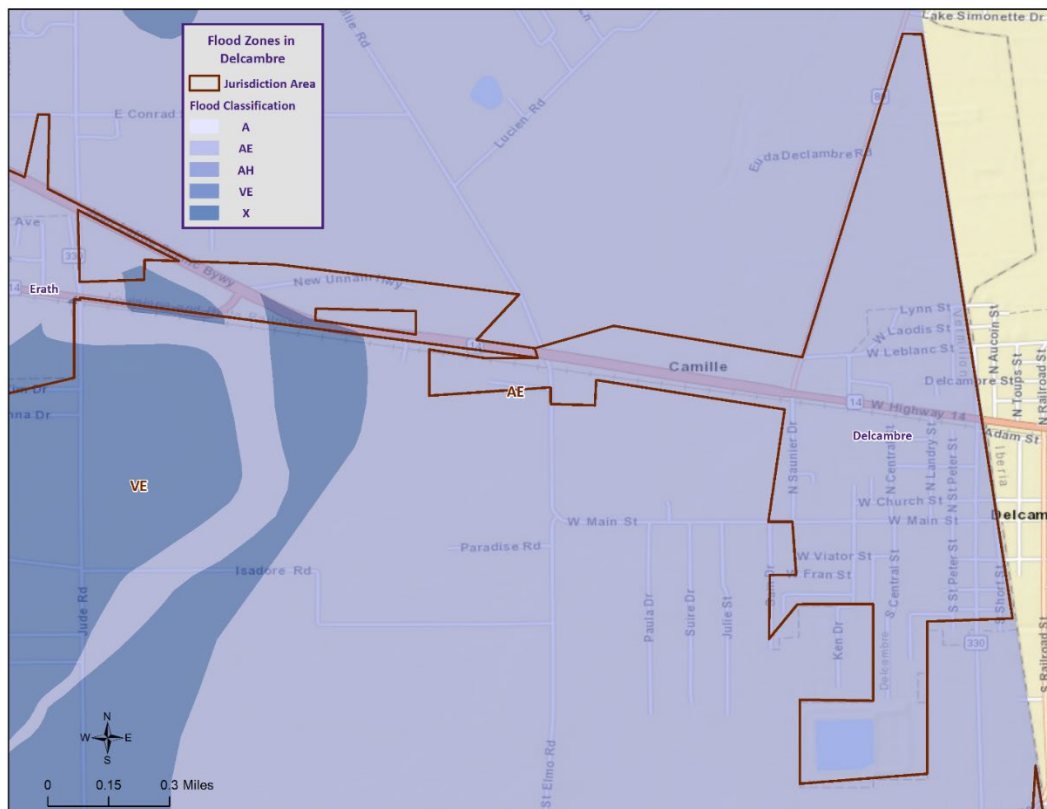


Figure 2-18: Delcambre Areas within the Flood Zones.

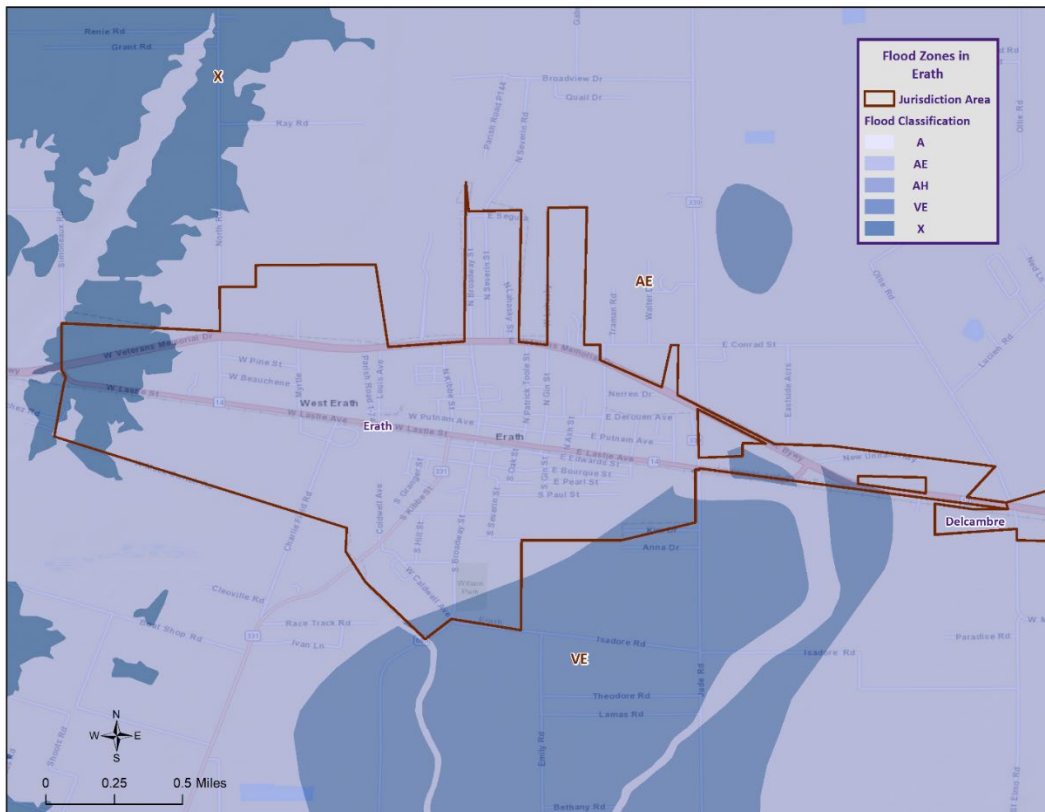


Figure 2-19: Erath Areas within the Flood Zones.

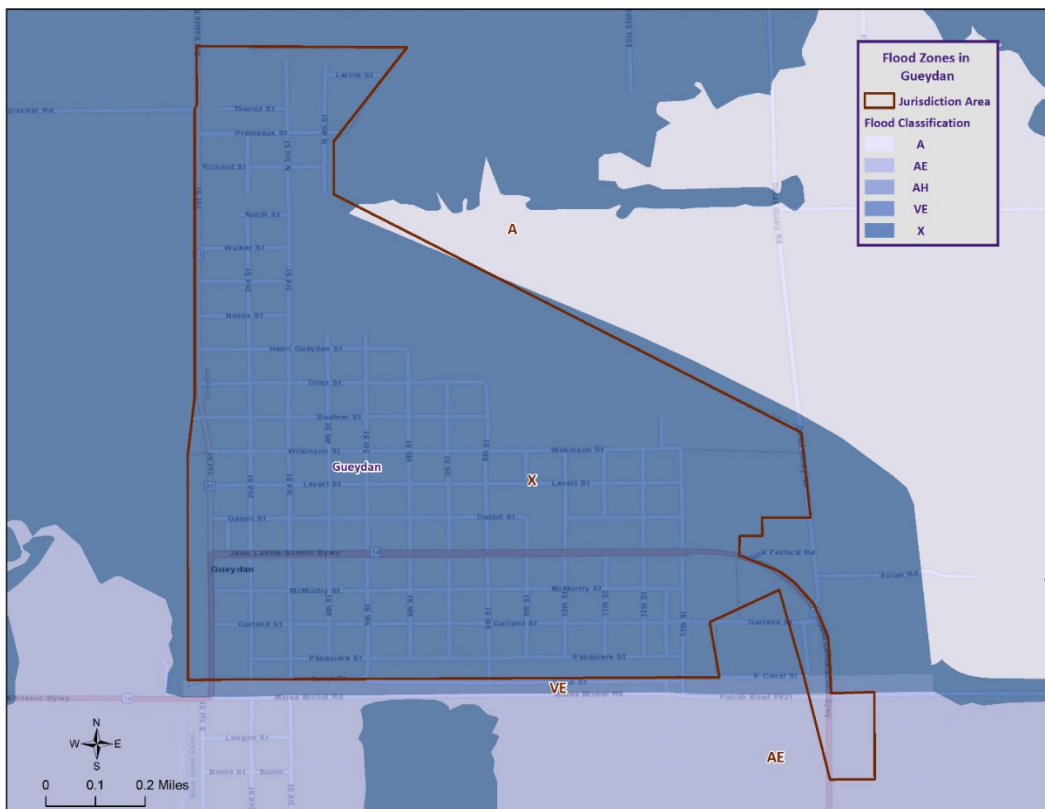


Figure 2-20: Gueydan Areas within the Flood Zones.

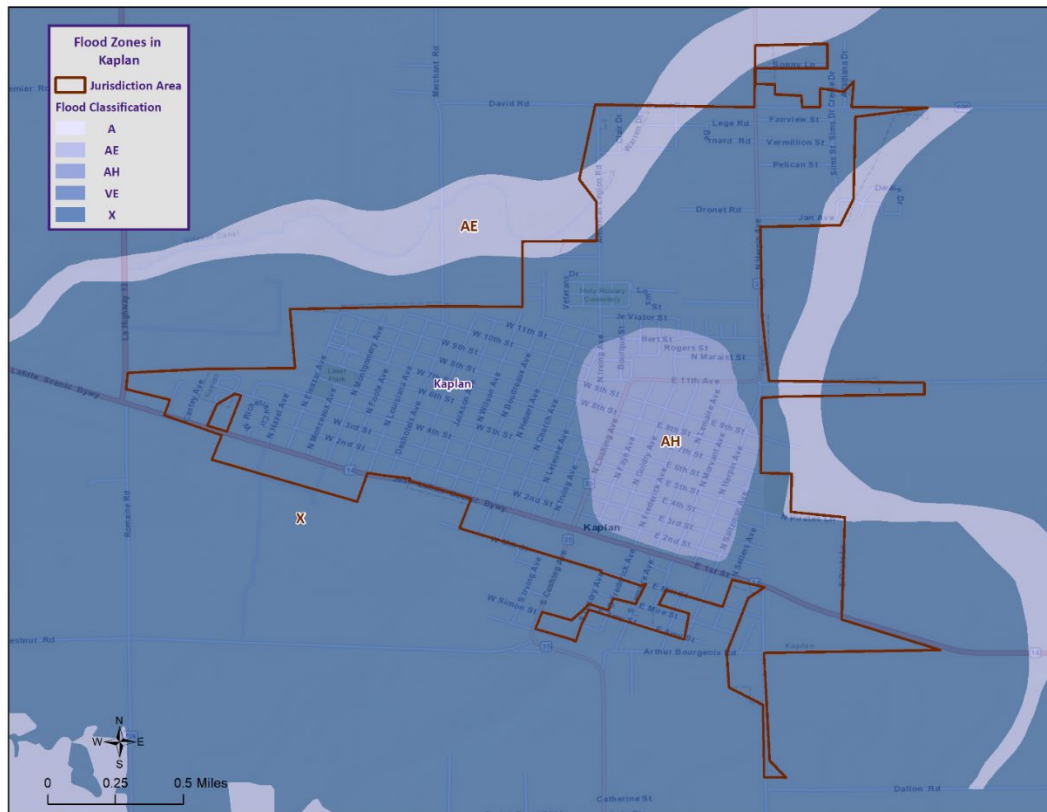


Figure 2-21: Kaplan Areas within the Flood Zones.

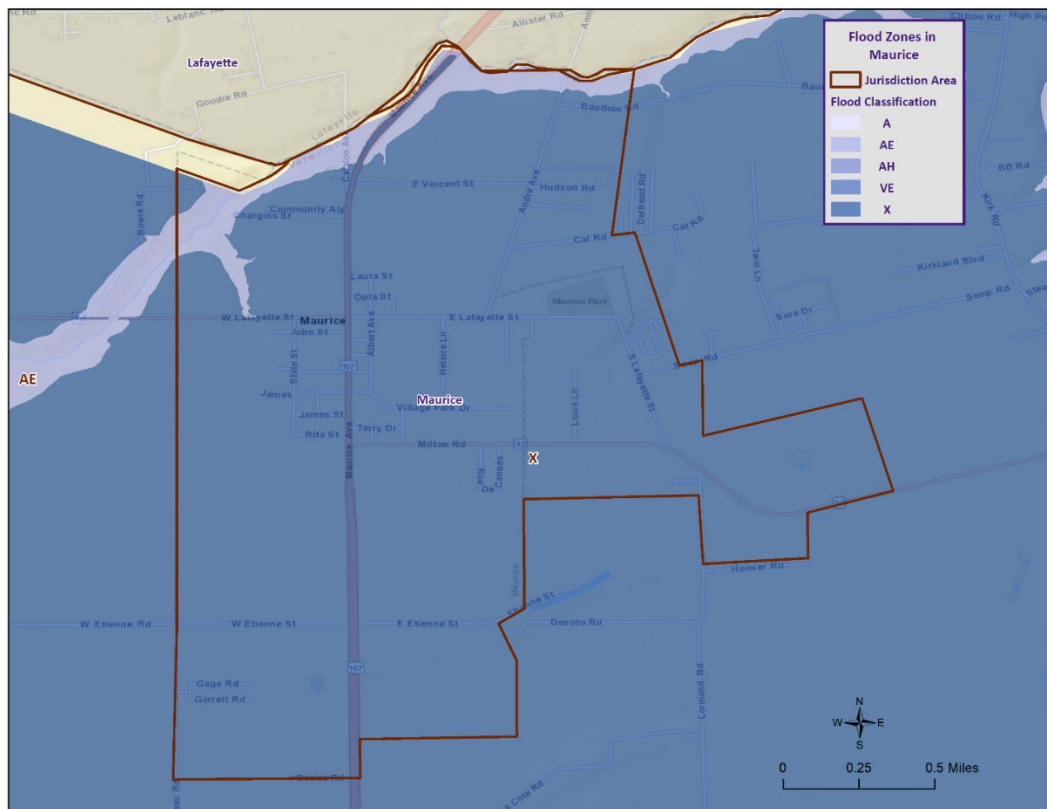


Figure 2-22: Maurice Areas within the Flood Zones.

*Previous Occurrences / Extents*

Historically, there have been 29 flooding events that have caused significant flooding in Vermilion Parish and its jurisdictions between 1989 and 2019. Below is a brief synopsis of the flooding event which occurred since the last Vermilion Parish HMP Update in 2015.

*Table 2-22: Historical Floods in Vermilion Parish with Locations since the 2015 Vermilion Parish HMP Update.*

Date	Extents	Type of Flooding	Estimated Damages	Location
May 1, 2016	Flooding caused by severe storms caused flooding and street closings in Abbeville.	Flash Flood	\$0	ABBEVILLE
August 13, 2016	Many flooded roadways were reported flooded during the heavy rain event. An estimated 1500 homes were also flooded from heavy rainfall.	Flash Flood	\$20,000,000	DELCAMBRE
August 14, 2016	The flood wave moved down the Vermilion River and crested during the morning of the 14th at 13.75 feet. An estimated 2520 homes flooded along the Vermilion River. The River at Perry dropped below major flood stage during the morning of the 18th.	Flood	\$75,000,000	MAURICE
August 14, 2016	The flood wave moved down the Mermentau River causing a crest of 10.8 feet at Lake Arthur. The flood stage is 4 feet. Many roads and some structures were flooded or remained flooded along the river into late in the month in far west sections of Vermilion Parish.	Flood	\$25,000,000	LOWRY
August 28, 2017	Several homes along LA 167 and Sandpit Road were flooded. Other roads near and around Abbeville flooded.	Flash Flood	\$0	ABBEVILLE
January 27, 2018	Strong storms caused street flooding in and around Abbeville.	Flash Flood	\$5,000	ABBEVILLE
October 16, 2018	A swath of 4 to 8 inches fell from around New Iberia to Abbeville and Forked Island. This flooded many roads in the area including Highways 14, 338, and 3267.	Flash Flood	\$0	NUNEZ
April 4, 2019	The emergency manager of Vermilion Parish reported roads flooded in Kaplan and Abbeville.	Flash Flood	\$0	ABBEVILLE MUNI ARPT
July 14, 2019	Heavy rain from Hurricane Barry resulted in flooded roads in portions of Vermilion Parish. 10 homes flooded during the heavy rainfall.	Flash Flood	\$500,000	VERMILION PARISH

*Frequency / Probability*

The NCEI Storm Events Database identified 29 flooding events within the Vermilion Parish planning area since 1989. The table below shows the probability and return frequency for each jurisdiction.

*Table 2-23: Annual Flood Probabilities for Vermilion Parish.*

Jurisdiction	Annual Probability	Return Frequency
Vermilion Parish (Unincorporated)	60%	1 event every 1 to 2 years
Abbeville	37%	1 event every 2 to 3 years
Delcambre	10%	1 event every 8 to 9 years
Erath	20%	1 event every 4 to 6 years
Gueydan	7%	1 event every 12 to 13 years
Kaplan	13%	1 event every 6 to 7 years
Maurice	17%	1 event every 5 years

Based on historical record, the overall flooding probability for the entire Vermilion Parish Planning area is 97% with 29 events occurring over a 30-year period.

*Estimated Potential Losses*

Using the Hazus Flood Model, the 100-year flood scenario, along with the Parish DFIRM, was analyzed to determine losses from this worst-case scenario. *Table 2-24* shows the total economic losses that would result from this occurrence.

*Table 2-24: Estimated Losses in Vermilion Parish from a 100-year Flood Event.*  
(Source: Hazus)

Jurisdiction	Estimated Total Losses from 100-Year Flood Event
Vermilion Parish (Unincorporated Area)	\$867,079,000
Abbeville	\$144,325,000
Delcambre	\$40,421,000
Erath	\$171,257,000
Gueydan	\$3,921,000
Kaplan	\$50,228,000
Maurice	\$316,000
<b>Total</b>	<b>\$1,277,547,000</b>



The Hazus Flood model also provides a breakdown for seven primary sectors (Hazus occupancy) throughout the parish. The losses for Vermilion Parish by sector are listed in the following table:

*Table 2-25: Estimated 100-year Flood Losses for Vermilion Parish by Sector.*

*(Source: Hazus)*

<b>Vermilion Parish (Unincorporated)</b>	<b>Estimated Total Losses from 100-Year Flood Event</b>
<b>Agricultural</b>	\$4,614,500
<b>Commercial</b>	\$25,800,750
<b>Government</b>	\$4,633,750
<b>Industrial</b>	\$9,885,000
<b>Religious / Non-Profit</b>	\$9,321,000
<b>Residential</b>	\$815,960,250
<b>Schools</b>	\$1,863,750
<b>Total</b>	<b>\$872,079,000</b>

*Table 2-26: Estimated 100-year Flood Losses for Abbeville by Sector.*

*(Source: Hazus)*

<b>Abbeville</b>	<b>Estimated Total Losses from 100-Year Flood Event</b>
<b>Agricultural</b>	\$978,000
<b>Commercial</b>	\$71,640,000
<b>Government</b>	\$233,000
<b>Industrial</b>	\$5,021,000
<b>Religious / Non-Profit</b>	\$1,321,000
<b>Residential</b>	\$62,111,000
<b>Schools</b>	\$21,000
<b>Total</b>	<b>\$141,325,000</b>

*Table 2-27: Estimated 100-year Flood Losses for Delcambre by Sector.*

*(Source: Hazus)*

<b>Delcambre</b>	<b>Estimated Total Losses from 100-Year Flood Event</b>
<b>Agricultural</b>	\$0
<b>Commercial</b>	\$5,348,000
<b>Government</b>	\$10,000
<b>Industrial</b>	\$291,000
<b>Religious / Non-Profit</b>	\$321,000
<b>Residential</b>	\$31,330,000
<b>Schools</b>	\$1,121,000
<b>Total</b>	<b>\$38,421,000</b>

Table 2-28: Estimated 100-year Flood Losses for Erath by Sector.

(Source: Hazus)

Erath	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$711,000
Commercial	\$28,235,000
Government	\$297,000
Industrial	\$14,131,000
Religious / Non-Profit	\$3,234,000
Residential	\$112,999,000
Schools	\$11,650,000
<b>Total</b>	<b>\$171,257,000</b>

Table 2-29: Estimated 100-year Flood Losses for Gueydan by Sector.

(Source: Hazus)

Gueydan	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$120,000
Commercial	\$391,000
Government	\$0
Industrial	\$365,000
Religious / Non-Profit	\$0
Residential	\$3,045,000
Schools	\$0
<b>Total</b>	<b>\$3,921,000</b>

Table 2-30: Estimated 100-year Flood Losses for Kaplan by Sector.

(Source: Hazus)

Kaplan	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$6,000
Commercial	\$8,910,000
Government	\$190,000
Industrial	\$732,000
Religious / Non-Profit	\$2,320,000
Residential	\$37,210,000
Schools	\$860,000
<b>Total</b>	<b>\$50,228,000</b>

*Table 2-31: Estimated 100-year Flood Losses for Maurice by Sector.  
(Source: Hazus)*

Maurice	Estimated Total Losses from 100-Year Flood Event
Agricultural	\$0
Commercial	\$14,000
Government	\$0
Industrial	\$0
Religious / Non-Profit	\$0
Residential	\$302,000
Schools	\$0
<b>Total</b>	<b>\$316,000</b>

*Threat to People*

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

*Table 2-32: Vulnerable Populations Susceptible to a 100-year Flood Event.  
(Source: Hazus)*

Number of People Exposed to Flood Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
<b>Vermilion Parish (Unincorporated)</b>	34,800	28,523	82%
Abbeville	12,257	4,125	33.7%
Delcambre	1,866	1,006	53.9%
Erath	2,114	2,114	100%
Gueydan	1,398	156	11.2%
Kaplan	4,600	1,893	41.2%
Maurice	964	212	22.0%
<b>Total</b>	<b>57,999</b>	<b>38,029</b>	<b>65.6%</b>

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

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

Vermilion Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	28,523	82.0%
Persons Under 5 Years	2,111	7.4%
Persons Under 18 Years	5,499	19.3%
Persons 65 Years and Over	3,694	13.0%
White	23,075	80.9%
Minority	5,448	19.1%

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

Abbeville		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	4,125	33.7%
Persons Under 5 Years	357	8.7%
Persons Under 18 Years	828	20.1%
Persons 65 Years and Over	601	14.6%
White	2,064	50.0%
Minority	2,061	50.0%

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

Delcambre		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,006	53.9%
Persons Under 5 Years	78	7.7%
Persons Under 18 Years	203	20.2%
Persons 65 Years and Over	131	13.0%
White	805	80.0%
Minority	201	20.0%

*Table 2-36: Vulnerable Populations Susceptible to a 100-year Flood Event in Erath.*  
(Source: Hazus)

Erath		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	2,114	100.0%
Persons Under 5 Years	141	6.7%
Persons Under 18 Years	413	19.5%
Persons 65 Years and Over	326	15.4%
White	1,868	88.4%
Minority	246	11.6%

*Table 2-37: Vulnerable Populations Susceptible to a 100-year Flood Event in Gueydan.*  
(Source: Hazus)

Gueydan		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	156	11.2%
Persons Under 5 Years	9	5.7%
Persons Under 18 Years	28	17.7%
Persons 65 Years and Over	30	19.1%
White	133	85.6%
Minority	23	14.5%

*Table 2-38: Vulnerable Populations Susceptible to a 100-year Flood Event in Kaplan.*  
(Source: Hazus)

Kaplan		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,893	41.2%
Persons Under 5 Years	131	6.9%
Persons Under 18 Years	319	16.9%
Persons 65 Years and Over	334	17.7%
White	1,561	82.5%
Minority	332	17.5%



*Table 2-39: Vulnerable Populations Susceptible to a 100-year Flood Event in Maurice.*  
*(Source: Hazus)*

Maurice		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	212	22.0%
Persons Under 5 Years	20	9.4%
Persons Under 18 Years	35	16.6%
Persons 65 Years and Over	29	13.5%
White	169	79.9%
Minority	43	20.1%

#### *Vulnerability*

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

## Sinkholes

Sinkholes are areas of ground—varying in size from a few square feet to hundreds of acres, and reaching in depth from 1 to more than 100 ft.—with no natural external surface drainage. 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, encounters water-soluble bedrock, and then begins to dissolve it, sinkholes start to form. The karst rock dissolves along cracks; as the fissures grow, soil and other particles fill the gaps, loosening the soil above the bedrock. Figure 1 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. 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 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 land in the United States 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.

## Location

Currently, there are two identifiable salt dome locations in Vermilion Parish and two salt dome locations which are within two miles of Vermilion Parish. [Figure 2-23](#) displays the location of the salt domes within and in proximity to Vermilion Parish. The locations of the salt domes are dispersed throughout Vermilion Parish. All four of the salt dome locations expose multiple people and homes within a two-mile buffer of the salt dome locations. The Jefferson Island Salt Dome buffer zone partially encompasses the incorporated area of Delcambre which also has the highest exposer amount of infrastructure, people, and homes within the two-mile buffer. Based off of current spatial data, the incorporated areas of Abbeville, Erath, Gueydan, Kaplan, and Maurice are not at risk from sinkholes; however, the unincorporated areas of the parish and the incorporated area of Delcambre are at risk based on the locations of the salt domes within and adjacent to the parish.

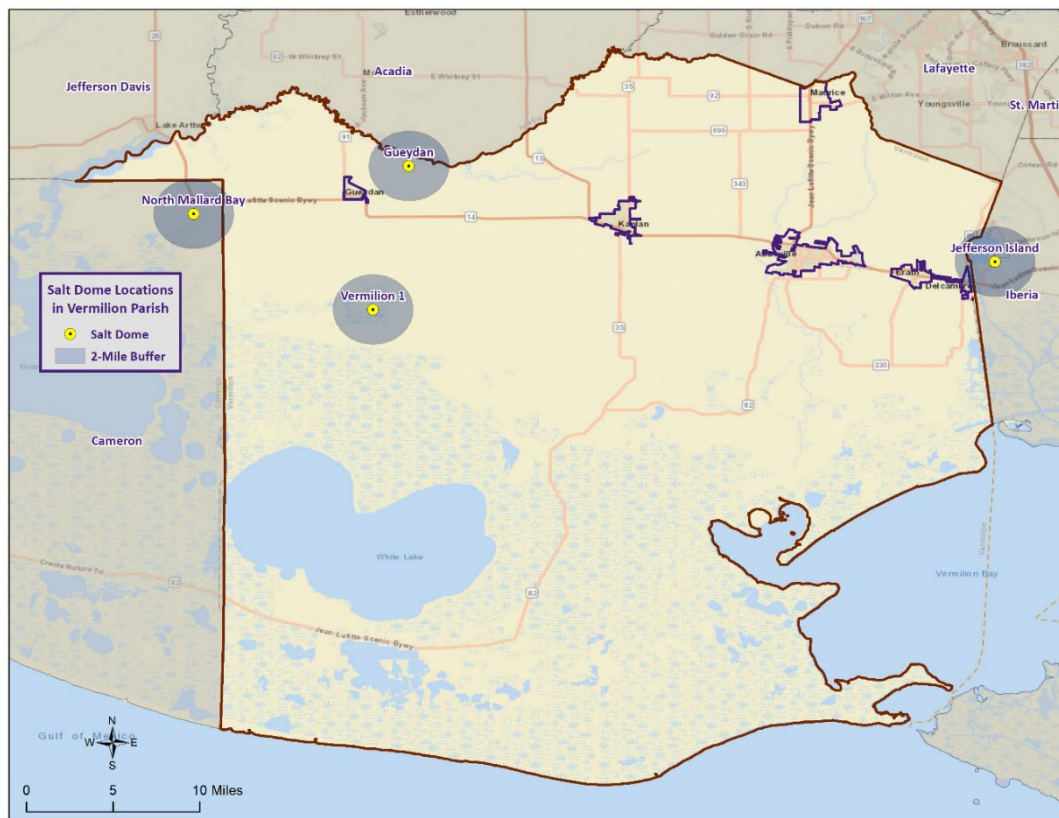


Figure 2-23: Salt Dome Locations in Vermilion Parish.

#### *Previous Occurrences / Extent*

The Jefferson Island Salt Dome, which is located in neighboring Iberia Parish but has a 2-mile buffer which extends into the Town of Delcambre in Vermilion Parish, was punctured on November 21, 1980 when a sinkhole formed from the salt dome breach. However, there has been no recorded incidents of sinkholes or salt dome collapses in Vermilion Parish since the last update to the Vermilion Parish Hazard Mitigation Plan.

#### *Frequency / Probability*

There has been only one instance of a sinkhole or salt dome collapse impacting Vermilion Parish. As mentioned above, the Jefferson Island salt dome in Iberia Parish was punctured on November 21, 1980. While the salt dome is located in Iberia Parish, the two mile buffer crosses the parish boundary into Vermilion Parish and encompasses portions of Delcambre. Since there has been only recorded incident of sinkhole or salt dome collapse in Vermilion Parish, the annual chance of occurrence is calculated at less than 1%.

#### *Estimated Potential Losses*

The salt domes were analyzed to determine the number of people and houses that are potentially susceptible to losses from a sink hole materializing from the salt dome. The table on the next page is 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 the salt dome. Critical facilities were also analyzed to determine if they fell within the two-mile buffer of the salt dome. Total value for all occupancy group from Hazus was used to estimate a total loss of all facilities that were within two miles of the salt domes.

*Table 2-40: Estimated Potential Losses from a Sinkhole formation.  
(Source: U.S. 2010 Census Data and Hazus)*

Salt Dome Name	Total Building Exposure	Critical Infrastructure Exposure	Number of People Exposed	Number of Houses Exposed
Gueydan	\$10,406,000	0	159	86
Jefferson Island	\$113,256,000	0	2,247	936
North Mallard Bay	\$4,961,000	0	41	41
Vermilion 1	\$968,000	0	16	8
<b>TOTAL</b>	<b>\$129,591,000</b>	<b>0</b>	<b>2,463</b>	<b>1,071</b>

The salt dome which poses the greatest threat to Vermilion Parish is the Jefferson Island Salt Dome, which encompasses portions of the incorporated area of Delcambre. While the other salt domes due pose some risk to the unincorporated areas, the risk is not nearly to the same degree as the Jefferson Island Salt Dome. There is a total of 2,463 people who could potentially be exposed to a sinkhole formation along with over \$129 million in total building exposure.

#### *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 and therefore 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, multicell, 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 multicell 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, and warming 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) have the ability to issue advisory messages based on forecasts and observations. The following are the advisory messages that may be issued 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 counties (parishes).



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

- Hail of 1 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 develops in the upper atmosphere initially as ice crystals that are bounced about by high-velocity updraft winds. The ice crystals grow through deposition of water vapor onto their surface, fall partially to a level in the cloud where the temperature exceeds the freezing point, melt partially, get caught in another updraft whereupon re-freezing and deposition grows another concentric layer of ice, and fall after developing enough weight, sometimes after several trips up and down the cloud. The size of hailstones varies depending on the severity and size of the thunderstorm. Higher surface temperatures generally mean stronger updrafts, which allows more massive hailstones to be supported by updrafts, leaving them suspended longer. This longer time means larger hailstone sizes. The following tables display the TORRO Hailstorm Intensity Scale along with a spectrum of hailstone diameters and their everyday equivalents.

Table 2-41: TORRO Hailstorm Intensity Scale.

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

Table 2-42: Spectrum of Hailstone Diameters and their Everyday Description.

(Source: National Weather Service)

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

Hailstorms can cause widespread damage to homes and other 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 *Table 2-43*.

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

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

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

*Table 2-44* presents the Beaufort Wind Scale, first developed in 1805 by Sir Francis Beaufort, which aids in determining relative force and wind speed based on the appearance of wind effects.

*Table 2-44: Beaufort Wind Scale.*  
(Source: NOAA's SPC)

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

Major damage directly caused by thunderstorm winds is relatively rare, while minor damage is common and pervasive, and most noticeable when it contributes to power outages. These power outages can have major negative impacts such as increased tendency for traffic accidents, loss of revenue for businesses, increased vulnerability to fire, food spoilage, and other losses that might be sustained by a loss of power.

Power outages may pose a health risk for those requiring electric medical equipment and/or air conditioning.

### Lightning

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

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

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

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

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

### *Hazard Profile*

#### **Hailstorms**

##### *Location*

Hailstorms are a meteorological phenomenon that can occur anywhere. Therefore, the entire planning area for Vermilion Parish and its jurisdictions are equally at risk for hailstorms. The worst-case scenario for hailstorms is hail up to a 2.75" diameter.

##### *Previous Occurrences / Extents*

Historically, there have been 50 hail incidents in Vermilion Parish. Hailstorm diameters have ranged from one inch to 2.75 inches per the National Climatic Data Center since 1989. The most frequently recorded hail sizes have been 1.75-inch in diameter. There have been two significant hailstorm events in Vermilion Parish since the 2015 Vermilion Parish HMP update. The table on the next page contains a brief synopsis of those events.



Table 2-46: Previous Occurrences for Hailstorm Events since the 2015 Hazard Mitigation Plan Update.  
(Source: NCEI Storm Events Database)

Date	Hail Size (inches)	Property Damage	Crop Damage
May 3, 2017	2.75	\$250,000	\$0
April 4, 2019	1	\$0	\$0

### Frequency

Hailstorms occur frequently within Vermilion Parish with an annual chance of occurrence calculated at 100% based on the records for the past 30 years (1989-2019). [Figure 2-24](#) displays the density of hail storm events in Vermilion Parish, while [Figure 2-25](#) provides an overview of hailstorm size based on location.

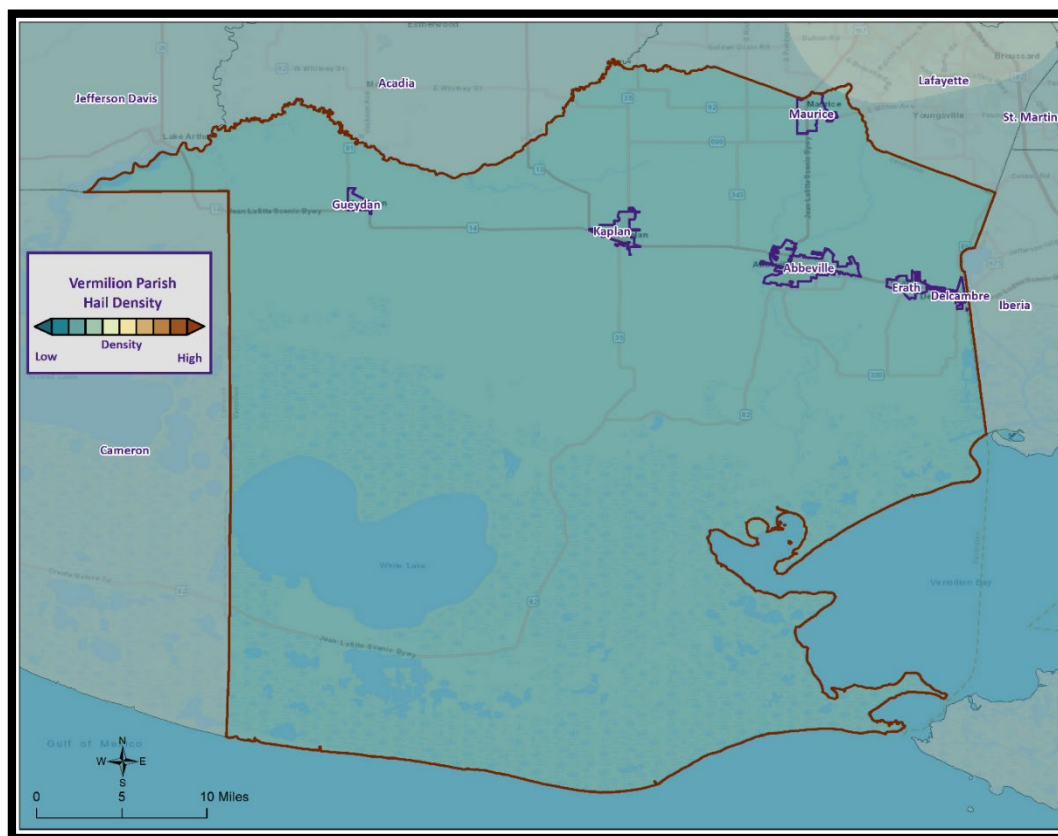


Figure 2-24: Density of Hailstorms by Diameter from 1950-2019.

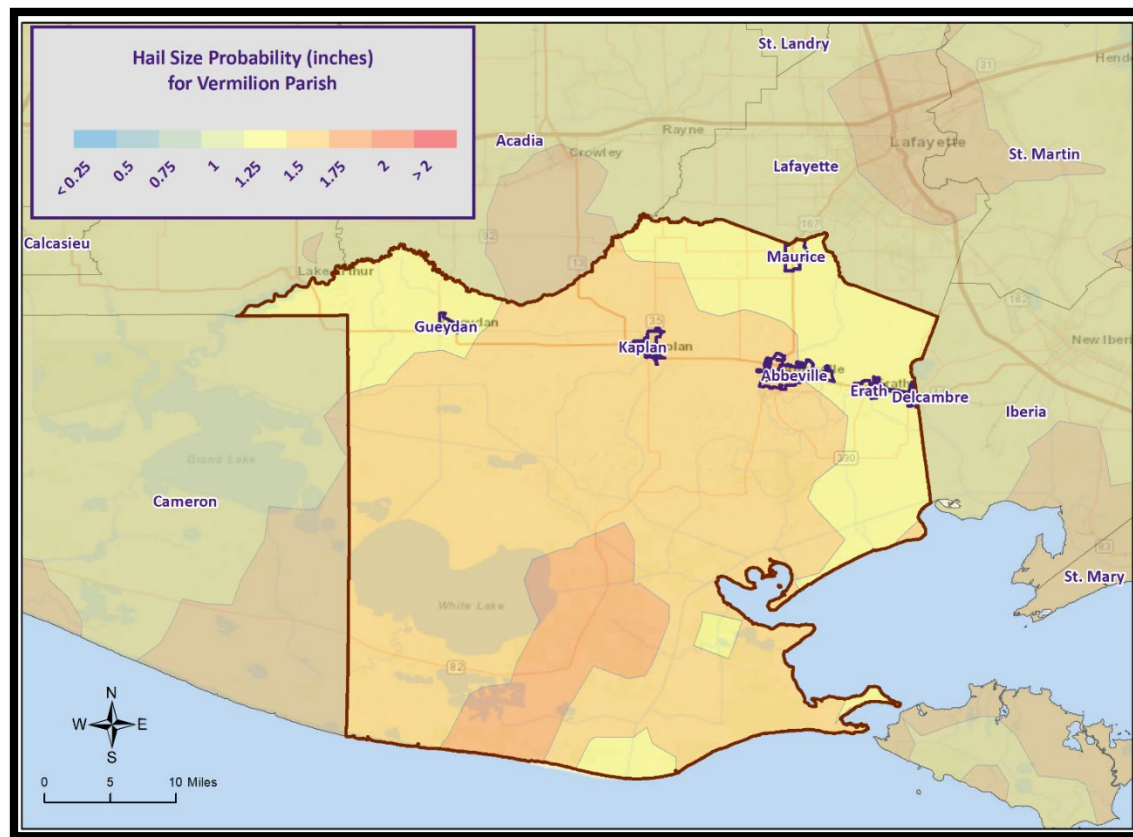


Figure 2-25: Hail Size Probability in Inches for Vermilion Parish.

## Estimated Potential Losses

Since 1989, there have been 50 significant hail events that have resulted in property damages according to NCEI Storm Events Database. The total property damages associated with those storms have totaled approximately \$250,000. To estimate the potential losses of a hailstorm 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 the NCEI Storm Events Database (1989 - 2019). This provides an annual estimated potential loss of \$8,333 and \$5,000 per event. The following table provides an estimate of potential property losses for Vermilion Parish:

*Table 2-47: Estimated Annual Losses to Vermilion Parish and its Jurisdictions Resulting from Hailstorms.*

Hailstorm Loss Estimated Annual Potential Losses						
Unincorporated Area	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
\$5,000	\$1,761	\$268	\$304	\$201	\$661	\$139

There have been no reported injuries or fatalities as a result of a hail events over the 30-year record.

## Vulnerability

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

## High Winds

### Location

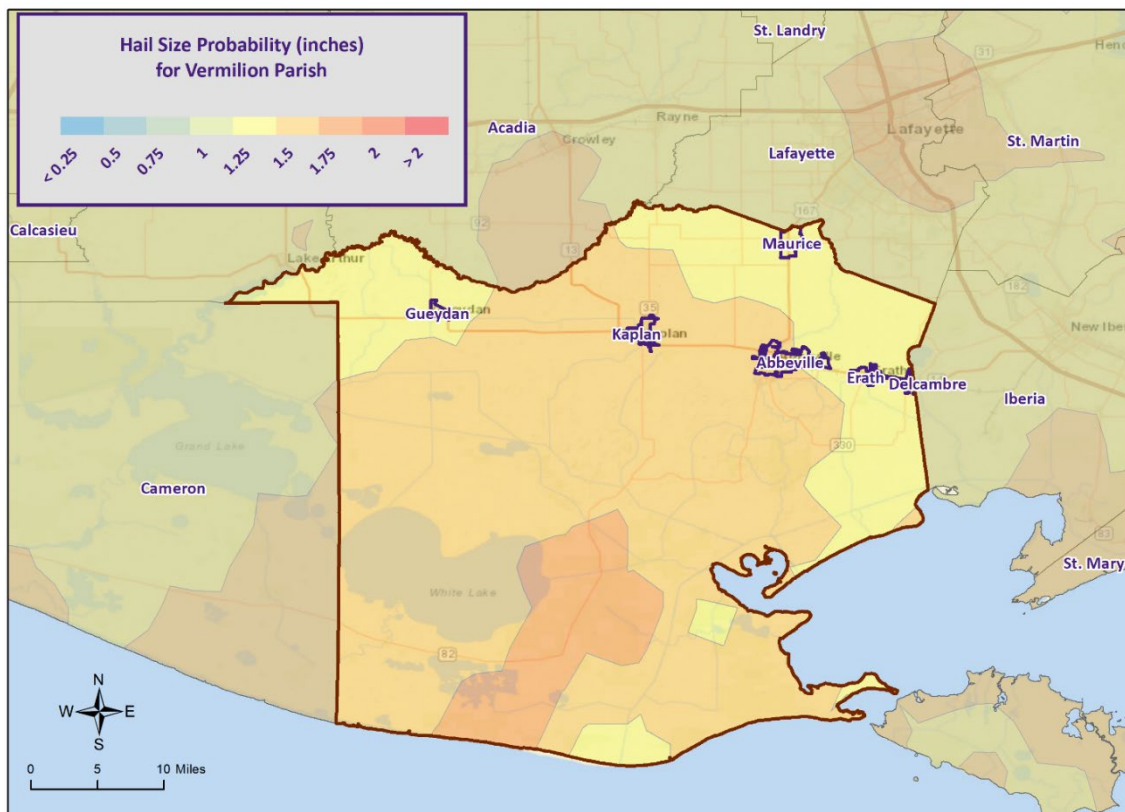
Because high winds are a meteorological phenomenon that can occur anywhere, the entire planning area for Vermilion Parish is equally at risk from high winds. The worst-case scenario for thunderstorm high wind is wind speeds of approximately 40 mph.

### Previous Occurrences / Extents

Historically, there has been one thunderstorm high wind event in Vermilion Parish. The high wind event has a wind speed of 40 mph per the National Climatic Data Center since 1989. There have been no high wind speeds events which impacted the Vermilion Parish Planning area since the 2015 Vermilion Parish HMP update.

### Frequency

High winds are a fairly uncommon occurrence within Vermilion Parish and its jurisdictions with an annual chance of occurrence calculated at 3% based on the records for the past 30 years (1989-2019). *Figure 2-26* displays the thunderstorm wind speed probability for Vermilion Parish and its jurisdictions.



*Figure 2-26: Thunderstorm High Wind Speed Probability in Miles Per Hour for Vermilion Parish.*

### Estimated Potential Losses

Since 1989, there has been one significant wind event that have resulted in property damages according to NCEI Storm Events Database. The total property damage associated with this storm totaled approximately \$25,000. 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 the NCEI Storm Events Database (1989 - 2019). This provides an annual estimated potential loss of \$8,333

and \$250,000 per event. The following table provides an estimate of potential property losses for Vermilion Parish:

*Table 2-48: Estimated Annual Property Losses in Vermilion Parish resulting from Wind Damage.*

Wind Loss Estimated Annual Potential Losses						
Unincorporated Area	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
\$500	\$176	\$27	\$30	\$20	\$66	\$14

There have been three deaths and three injuries as a result of a thunderstorm high wind event over the 30-year record.

#### Vulnerability

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

#### Lightning

##### Location

Like hail and high winds, lightning is a meteorological phenomenon that can occur anywhere within the Vermilion Parish planning area. The worst-case scenario for lightning events is a lightning activity level of 4 which is approximately 16 to 25 lightning strikes every 15 minutes.

##### Previous Occurrences / Extent

Historically, there has been 5 lightning events in Vermilion Parish and its jurisdictions between the years 1989 and 2019. Since the last HMP update, there has been one significant lighting event within the boundaries of Vermilion Parish. *Table 2-49* provides an overview of the lightning event which impacted the Vermilion Parish Planning area since the 2015 Vermilion Parish HMP update.

*Table 2-49: Previous Occurrences for Lightning Events since the 2015 Hazard Mitigation Plan Update.*

*(Source: NCEI Storm Events Database)*

Location	Date	Property Damage	Crop Damage
GUEYDAN	June 13, 2018	\$25,000	\$0

#### Frequency

Lightning can strike anywhere and is produced by every thunderstorm, so the chance of lightning occurring in Vermilion Parish is high. However, lightning that meets the definition that is used by the NCEI Storm Events Database that results in damages to property and injury or death to people is a less likely event. Vermilion Parish experienced five significant lightning events between the years 1989 and 2019, resulting in a 17% annual chance of occurrence.

#### Estimated Potential Losses

Since 1989, there have been five significant lightning events that have resulted in property damages according to NCEI Storm Events Database. The total property damages associated with those storms have totaled approximately \$649,500. 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

lightning data in the NCEI Storm Events Database (1989 - 2019). This provides an annual estimated potential loss of \$18,833 and \$113,00 per event. The following tables provide an estimate of potential property losses for Vermilion Parish:

*Table 2-50: Estimated Annual Property Losses in Vermilion Parish resulting from Lightning Damage.*

Lightning Estimated Annual Potential Losses						
Unincorporated Area	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
\$11,300	\$3,980	\$606	\$686	\$454	\$1,494	\$313

Per the NCEI Storm Events Database, there have been no injuries or deaths as a result of lightning in Vermilion Parish.

#### Vulnerability

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



## Tornadoes

Tornadoes (also called twisters and 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, which usually occurs in a counterclockwise direction 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 2-51* 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 2-51: 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 2-52: 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 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 Doppler 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 on 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 missiles 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 Vermilion Parish with actual locations, tornadoes in general are a climatological based hazard and have the same approximate probability of occurring in Vermilion Parish as all of its jurisdictions. Because a tornado has a similar probability of striking anywhere within the planning area for Vermilion Parish, all areas in the parish are equally at risk for tornadoes.

#### *Previous Occurrences / Extent*

The NCEI Storm Events Database reports a total of 33 tornadoes or waterspouts occurring within the boundaries of Vermilion Parish since 1989 ranging in extent from F0 to F1 under the Fujita Scale and EF0 to EF2 on the Enhanced Fujita Scale. Vermilion Parish can expect future tornadoes up to an EF2 under the Enhanced Fujita Scale as a worst-case scenario.

The most destructive tornado to impact Vermilion Parish was a F3 tornado which occurred on September 10, 1961. The tornado touched down just north of Kaplan and traveled 5.7 miles to the south towards Kaplan causing \$3,894,043 in property damage and 55 injuries. Since the 2015 HMP Update, two tornadoes have occurred within the boundaries of Vermilion Parish. The table on the next page contains a list and brief description of the impact for each event.

Table 2-53: Historical Tornadoes in Vermilion Parish with Locations since the 2015 Update.

Date	Impacts	Property Damage	Location	Magnitude
August 27, 2017	0.21 mile path with a 25 yard width. Some tin was pulled off a large barn, and a travel trailer was tipped over. Across the street, a large section of the sugar cane field was blown over.	\$5,000	WEST ERATH	EFO
August 29, 2017	0.02 mile path with a 25 yard width. A tornado briefly touched down in a field. No damage occurred.	\$0	HAIRE	EFO

### Frequency / Probability

Tornadoes occur frequently within Vermilion Parish and its jurisdictions with an annual chance of occurrence calculated at 100% based on the records for the past 30 years (1989-2019). *Figure 2-27* displays the density of tornado touchdowns in Vermilion Parish and neighboring parishes.

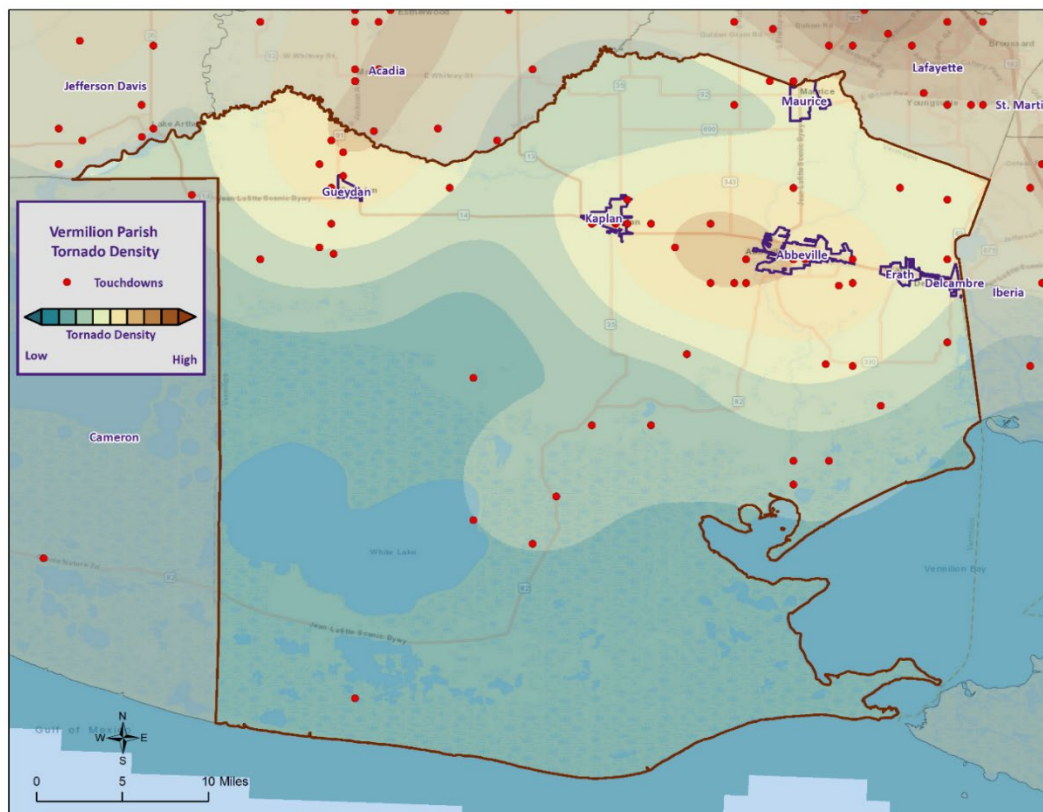


Figure 2-27: Location and Density of Tornadoes to Touchdown in Vermilion Parish.  
(Source: NOAA/SPC Severe Weather Database)

### Estimated Potential Losses

According to the NCEI Storm Events Database, there have been 33 tornadoes that have caused some level of property damage. The total damage from the actual claims for property is approximately \$4,567,000 with an average cost of \$138,394 per tornado event. When annualizing the total cost over the 30-year

record, total annual losses based on tornadoes are estimated to be \$152,233. The following tables provide an annual estimate of potential losses for Vermilion Parish.

*Table 2-54 Estimated Annual Losses for Tornadoes in Vermilion Parish.*

Tornado Estimated Annual Potential Losses						
Unincorporated Area	Abbeville	Delcambre	Erath	Gueydan	Kaplan	Maurice
\$91,342	\$32,172	\$4,898	\$5,549	\$3,669	\$12,074	\$2,530

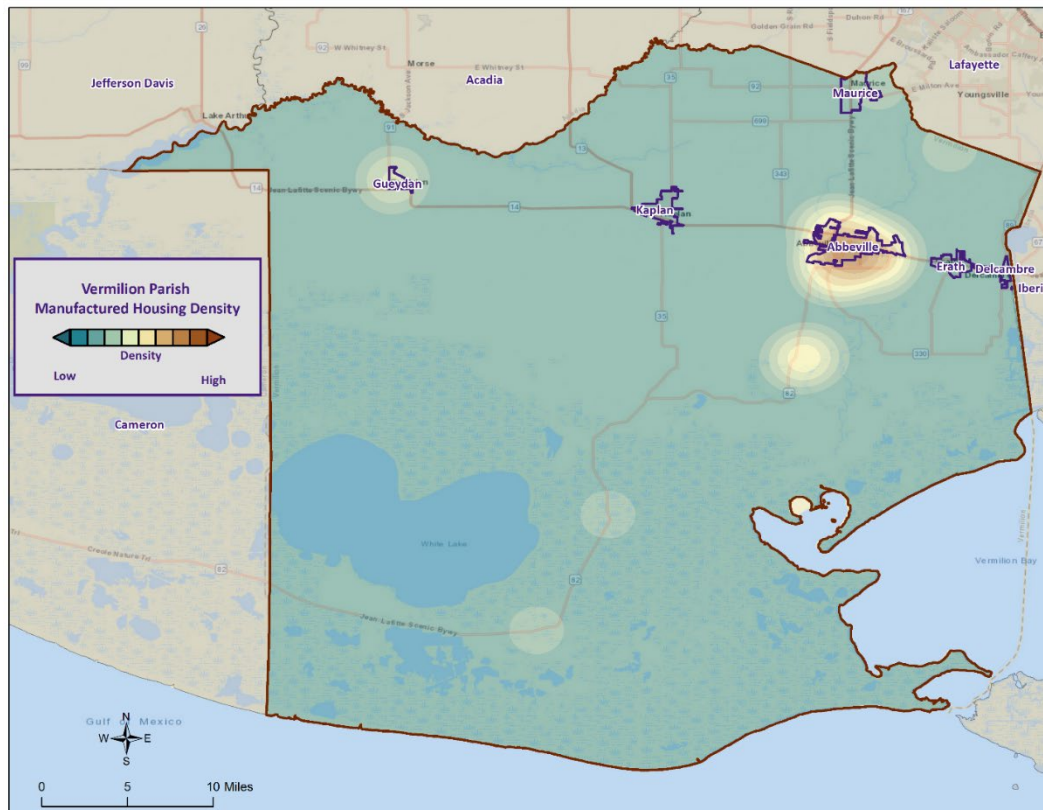
*Table 2-55* presents an analysis of building exposure that are susceptible to tornadoes by general occupancy type for Vermilion Parish along with the percentage of building stock that are mobile homes.

*Table 2-55: Building Exposure by General Occupancy Type for Tornadoes in Vermilion Parish.*  
(Source: Hazus)

Building Exposure by General Occupancy Type for Tornadoes Exposure Types (\$1,000)							
Residential	Commercial	Industrial	Agricultural	Religion	Government	Education	Mobile Homes (%)
4,251,829	561,355	121,700	25,718	66,068	21,455	62,063	21.8%

Vermilion Parish has suffered through a total of 25 days in which tornadoes or waterspouts have accounted for three injuries and no fatalities during this 30-year period.

In accessing the overall risk to population, the most vulnerable population throughout the parish are those residing in manufacturing housing. Approximately 21.8% of all housing in Vermilion Parish consists of manufactured housing. Based on location data collected in a previous hazard mitigation project, there are 18 known locations where manufactured housing is concentrated. The location and density of manufactured houses can be seen in *Figure 2-28*.



*Figure 2-28: Location and Approximate Number of Units in Manufactured Housing Locations throughout Vermilion Parish.*

### *Vulnerability*

See Appendix C for parish and municipality building exposure to tornadoes.



### Tropical Cyclones

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

Table 2-56: Saffir-Simpson Hurricane Wind Scale.

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

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

Property can be damaged by the various forces that accompany a tropical cyclone. High winds can directly impact structures in three ways: wind forces, flying debris, and pressure. By itself, the force of the wind can knock over trees, break tree limbs, and destroy loose items, such as television antennas and power lines. Many things can be moved by high winds. As winds increase, so does the pressure against stationary objects. Pressure against a wall rises with the square of the wind speed. For some structures, this force is enough to cause failure. The potential for damage to structures is increased when debris breaks the building “envelope” and allows the wind pressure to impact all surfaces (the building envelope includes all surfaces that make up the barrier between the indoors and the outdoors, such as the walls, foundation, doors, windows, and roof). Mobile homes and buildings in need of maintenance are most subject to wind damage. High winds mean bigger waves. Extended pounding by waves can demolish any poorly or improperly designed structures. The waves also erode sand beaches, roads, and foundations. When foundations are compromised, the building 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 tropical cyclone event having the potential to devastate multiple parishes at once, tropical cyclones are a significant threat to the entire Vermilion Parish planning area. The worst-case scenario for a tropical cyclone event in Vermilion Parish is a Category 5 Hurricane.

#### *Previous Occurrences / Extents*

Vermilion Parish has experienced nine major tropical cyclone events since 2002. Hurricane Rita has been by far the worst hurricanes to impact Vermilion Parish in recorded history. The table on the next page provides a list of tropical cyclones which have impacted Vermilion Parish since 2002.

*Table 2-57: Historical Tropical Cyclone Events in Vermilion Parish from 2002 – 2019.*

Date	Name	Storm Type At Time of Impact
2002	Isidore	Tropical Storm
2002	Lili	Hurricane – Cat 1
2005	Rita	Hurricane – Cat 1
2008	Edouard	Tropical Storm
2008	Gustav	Tropical Storm
2008	Ike	Tropical Storm
2011	Lee	Tropical Storm
2012	Isaac	Tropical Storm
2019	Barry	Tropical Storm

Since the last Vermilion Parish HMP update in 2015, there has been one tropical cyclone event which has impacted the parish. Below is a brief description of the event and the impact it had on Vermilion Parish.

#### *Tropical Storm Barry (2019)*

Hurricane Barry initial developed from a disturbance that moved from Georgia southwest to the northeast Gulf of Mexico on July 8-9, 2019. The weak low pressure system continued to move west-southwest and strengthen, and was eventually classified as Tropical Storm Barry on the morning of July 11<sup>th</sup>, 95 miles south-southeast of the mouth of the Mississippi River. Barry continued to move slowly west then northwest and briefly reached hurricane strength on the morning of July 13<sup>th</sup> before landfall in south-central Louisiana near Intracoastal City, Louisiana in Vermillion Parish. Tropical storm force winds reached the southeast Louisiana coast by midday on Friday, July 12<sup>th</sup> and spread slowly northwest reaching the Baton Rouge area during the evening of the 12<sup>th</sup>. Tropical storm wind impacts had ended across all of southeast Louisiana by midday on July 14<sup>th</sup>. Tropical storm force winds were primarily measured in gusts across southeast Louisiana. The exception was in Terrebonne and Assumption Parishes, close to the landfall location, where sustained tropical storm force winds and frequent gusts caused more significant power line and tree damage. A few tropical storm wind gusts were recorded in the metro New Orleans area but were not very impactful. No hurricane force wind gusts were recorded in southeast Louisiana.

Mostly minor to moderate storm surge flooding occurred across coastal southeast Louisiana, including Lake Pontchartrain, and a small part of the Mississippi Coast. Terrebonne Parish had significant storm surge flooding in the lower portion of the parish with storm tides of five to eight feet, locally up to nine feet. Several local levees were overtopped on the morning of July 13<sup>th</sup> flooding roads and a few homes. The highest storm tide reading was 9.11 feet NAVD88 at a USGS tide gauge at Caillou Lake near Dulac, Louisiana.

Storm total rainfall was generally between four and eight inches with a maximum rainfall of 8.83 inches recorded northeast of Denham Springs, Louisiana in Livingston Parish. Isolated flash flooding of streets and secondary roadways occurred on July 13<sup>th</sup> in the greater Baton Rouge area, but flash flooding was not widespread or significant. The lower Mississippi River was at unusually high stages from late August with the state at the New Orleans Carrollton gauge near 16.5 feet. The combination of storm surge entering the lower Mississippi River with very high river stages prompted concern of potential overtopping of levees along the Mississippi River in lower Plaquemines Parish prompting some evacuations of the area.

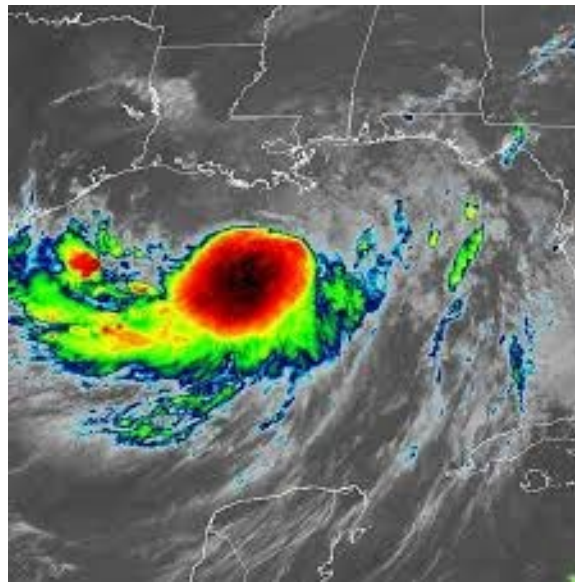


Figure 2-29: Hurricane Barry Rain Bands in the Gulf Coast Area.  
(Source: NOAA)

In Vermilion Parish, tropical storm conditions began on the 13<sup>th</sup> and lasted into the 14<sup>th</sup>. Scattered power outages were reported along with scattered downed trees. The highest wind gusts recorded at KIYA was 47 knots with a sustained wind of 35 knots. Freshwater Lock recorded a wind gust of 52 knots with a sustained wind of 40 knots.

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

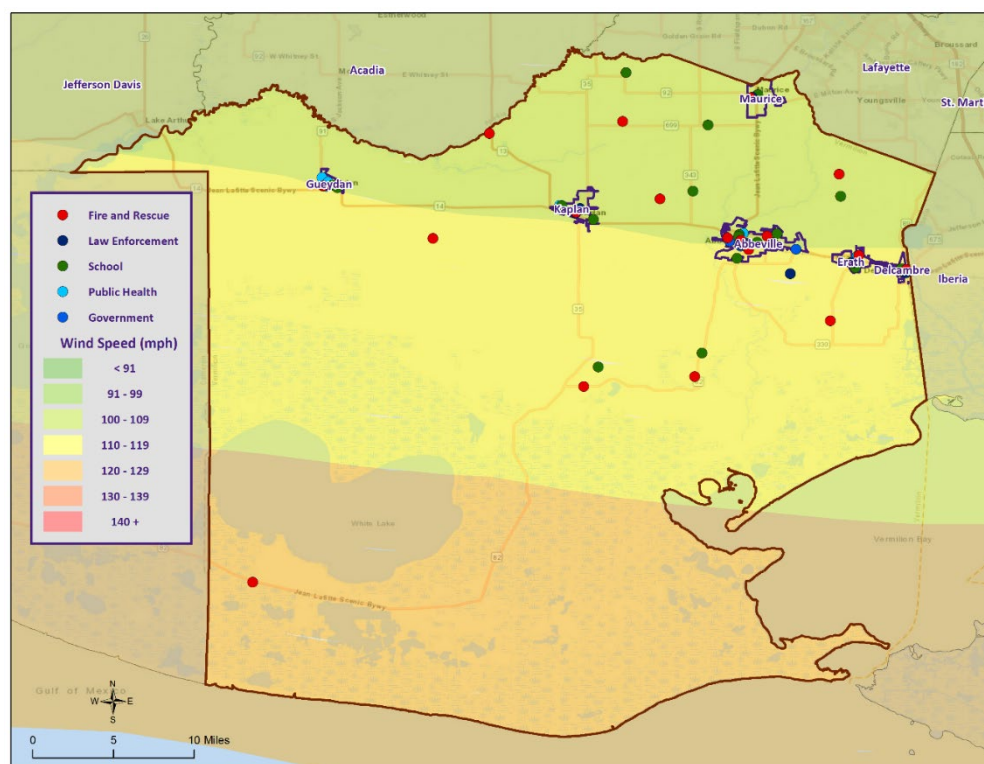


Figure 2-30: Winds Zones for Vermilion Parish in Relation to Critical Facilities



*Frequency / Probability*

Tropical cyclones are large natural hazard events that regularly impact Vermilion Parish. The annual chance of occurrence for a tropical cyclone is estimated at 53% for Vermilion Parish with 9 events occurring within 17 years (2002 to 2019). The tropical cyclone season for the Atlantic Basin is from June 1st through November 30<sup>th</sup>, 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, Vermilion Parish and its jurisdictions are 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 100-Year Hurricane Model, the 100-year hurricane scenario was analyzed to determine losses from this worst-case scenario. The following table shows the total economic losses that would result from this occurrence.

*Table 2-58: Total Estimated Losses for a 100-Year Hurricane Event  
(Source: Hazus)*

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event
Vermilion Parish (Unincorporated)	\$226,621,082
Abbeville	\$79,818,811
Delcambre	\$12,151,579
Erath	\$13,766,580
Gueydan	\$9,103,916
Kaplan	\$29,955,660
Maurice	\$6,277,664
<b>Total</b>	<b>\$377,695,292</b>

Total losses from a 100-year hurricane event for Vermilion Parish were compared with the total value of assets to determine the ratio of potential damage to total inventory in the table below.

*Table 2-59: Ratio of Total Losses to Total Estimated Value of Assets for Vermilion Parish  
(Source: Hazus)*

Jurisdiction	Estimated Total Losses from 100-Year Hurricane Event	Total Estimated Value of Assets	Ratio of Estimated Losses to Total Value
Vermilion Parish (Unincorporated)	\$226,621,082	\$3,017,076,698	7.5%
Abbeville	\$79,818,811	\$1,112,500,661	7.2%
Delcambre	\$12,151,579	\$76,848,346	15.8%
Erath	\$13,766,580	\$274,705,939	5.0%
Gueydan	\$9,103,916	\$134,748,303	6.8%
Kaplan	\$29,955,660	\$411,628,752	7.3%
Maurice	\$6,277,664	\$82,679,301	7.6%

Based on the Hazus Hurricane Model, estimated total losses for Vermilion Parish and its jurisdictions ranged from 5% to 15.8% of the total estimated value of all assets.

The Hazus Hurricane Model also provides a breakdown for seven primary sectors (Hazus occupancy) throughout the parish. The losses for Vermilion Parish by sector are listed in the tables below.

*Table 2-60: Estimated Losses in Unincorporated Vermilion Parish for a 100-Year Hurricane Event  
(Source: Hazus)*

Vermilion Parish (Unincorporated)	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$1,716,477
Commercial	\$22,276,449
Government	\$1,181,813
Industrial	\$5,000,029
Religious / Non-Profit	\$1,709,891
Residential	\$237,877,721
Schools	\$2,195,944
<b>Total</b>	<b>\$271,958,323</b>

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

Abbeville	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$503,780
Commercial	\$6,538,059
Government	\$346,858
Industrial	\$1,467,491
Religious / Non-Profit	\$501,847
Residential	\$69,816,274
Schools	\$644,502
<b>Total</b>	<b>\$79,818,811</b>

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

Delcambre	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$76,695
Commercial	\$995,351
Government	\$52,805
Industrial	\$223,410
Religious / Non-Profit	\$76,401
Residential	\$10,628,797
Schools	\$98,119
<b>Total</b>	<b>\$12,151,579</b>

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

<b>Erath</b>	<b>Estimated Total Losses from 100-Year Hurricane Event</b>
Agricultural	\$86,888
Commercial	\$1,127,638
Government	\$59,824
Industrial	\$253,102
Religious / Non-Profit	\$86,555
Residential	\$12,041,413
Schools	\$111,159
<b>Total</b>	<b>\$13,766,580</b>

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

<b>Gueydan</b>	<b>Estimated Total Losses from 100-Year Hurricane Event</b>
Agricultural	\$57,460
Commercial	\$745,713
Government	\$39,562
Industrial	\$167,378
Religious / Non-Profit	\$57,239
Residential	\$7,963,054
Schools	\$73,510
<b>Total</b>	<b>\$9,103,916</b>

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

<b>Kaplan</b>	<b>Estimated Total Losses from 100-Year Hurricane Event</b>
Agricultural	\$189,066
Commercial	\$2,453,706
Government	\$130,174
Industrial	\$550,743
Religious / Non-Profit	\$188,341
Residential	\$26,201,751
Schools	\$241,879
<b>Total</b>	<b>\$29,955,660</b>

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

Maurice	Estimated Total Losses from 100-Year Hurricane Event
Agricultural	\$39,622
Commercial	\$514,211
Government	\$27,280
Industrial	\$115,417
Religious / Non-Profit	\$39,470
Residential	\$5,490,976
Schools	\$50,689
<b>Total</b>	<b>\$6,277,664</b>

#### *Threat to People*

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

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

Number of People Exposed to Hurricane Hazards			
Location	# in Community	# in Hazard Area	% in Hazard Area
Vermilion Parish (Unincorporated)	34,800	34,800	100%
Abbeville	12,257	12,257	100%
Delcambre	1,866	1,866	100%
Erath	2,114	2,114	100%
Gueydan	1,398	1,398	100%
Kaplan	4,600	4,600	100%
Maurice	964	964	100%
<b>Total</b>	<b>57,999</b>	<b>57,999</b>	<b>100%</b>

The Hazus hurricane model was also extrapolated to provide an overview of vulnerable populations throughout Vermilion Parish. These populations are illustrated in the following tables:

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

Vermilion Parish (Unincorporated)		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	179,542	100.0%
Persons Under 5 Years	11,706	6.5%
Persons Under 18 Years	34,490	19.2%
Persons 65 Years and Over	22,766	12.7%
White	150,061	83.6%
Minority	29,481	16.4%

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

Abbeville		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	12,257	100.0%
Persons Under 5 Years	1,061	8.7%
Persons Under 18 Years	2,461	20.1%
Persons 65 Years and Over	1,786	14.6%
White	6,132	50.0%
Minority	6,125	50.0%

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

Delcambre		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,866	100.0%
Persons Under 5 Years	144	7.7%
Persons Under 18 Years	376	20.2%
Persons 65 Years and Over	243	13.0%
White	1,493	80.0%
Minority	373	20.0%

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

Erath		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	2,114	100.0%
Persons Under 5 Years	141	6.7%
Persons Under 18 Years	413	19.5%
Persons 65 Years and Over	326	15.4%
White	1,868	88.4%
Minority	246	11.6%



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

Gueydan		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	1,398	100.0%
Persons Under 5 Years	80	5.7%
Persons Under 18 Years	247	17.7%
Persons 65 Years and Over	267	19.1%
White	1,196	85.6%
Minority	202	14.5%

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

Kaplan		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	4,600	100.0%
Persons Under 5 Years	318	6.9%
Persons Under 18 Years	776	16.9%
Persons 65 Years and Over	812	17.7%
White	3,793	82.5%
Minority	807	17.5%

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

Maurice		
Category	Total Numbers	Percentage of People in Hazard Area
Number in Hazard Area	964	100.0%
Persons Under 5 Years	91	9.4%
Persons Under 18 Years	160	16.6%
Persons 65 Years and Over	130	13.5%
White	770	79.9%
Minority	194	20.1%

#### *Vulnerability*

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

### 3. Capability Assessment

This section summarizes the results of Vermilion 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, Vermilion Parish and the participating jurisdictions are able to identify strengths that could be used to reduce losses and reduce risk throughout the communities. 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

Vermilion 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, and take an integrated and strategic look holistically at hazard mitigation in Vermilion 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 Vermilion Parish and its jurisdictions include the following:

*Table 3-1: Planning and Regulatory Capabilities*

Worksheet 4.1: Capability Assessment Worksheet								
Local mitigation capabilities are existing authorities, policies and resources that reduce hazard impacts or that could be used to 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.								
	Vermilion Parish	Gueydan	Kaplan	Abbeville	Maurice	Erath	Delcambre	Comments
Plans	Yes / No							
Comprehensive / Master Plan	Yes	No	Yes	No	Yes	No	No	
Capital Improvements Plan	Yes	No	Yes	No	No	No	No	
Economic Development Plan	No	No	No	No	No	Yes	Yes	
Local Emergency Operations Plan	Yes	Yes	Yes	No	Yes	Yes	Yes	
Continuity of Operations Plan	Yes	Yes	Yes	No	Yes	No	No	
Transportation Plan	Yes	Yes	Yes	No	Yes	No	No	
Stormwater Management Plan	No	No	Yes	Yes	No	No	No	Updated annually
Community Wildfire Protection Plan	No	No	No	No	Yes	No	No	
Other plans (redevelopment, recovery, coastal zone management)	No	No	No	No	No	Yes	Yes	
Building Code, Permitting and Inspections	Yes / No							
Building Code	Yes	Yes	Yes	Yes	Yes	Yes	Yes	IBC and IRC 2012
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	No	No	No	No	No	No	
Fire Department ISO/PIAL rating	Yes	Yes	No	Yes	Yes	Yes	Yes/Rate-4	PIAL Ratings
Site plan review requirements	Yes	No	Yes	Yes	Yes	Yes	Yes	
Land Use Planning and Ordinances	Yes / No							
Zoning Ordinance	No	No	Yes	No	Yes	No	No	
Subdivision Ordinance	Yes	No	Yes	No	Yes	Yes	Yes	
Floodplain Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	No	No	No	No	No	No	
Flood Insurance Rate Maps	Yes	No	Yes	No	Yes	Yes	Yes	
Acquisition of land for open space and public recreation uses	Yes	No	Yes	No	Yes	No	No	
Other	No	No	No	No	No	No	No	

Vermilion Parish and its jurisdictions will work to expand their capabilities by adding to these plans, as well as work to create new plans that will address a long-term recovery and resiliency framework. In instances where there are no existing plans, there will be a commitment to explore opportunities to create new plans that will address long-term recovery and resiliency framework as parish and local resources allow.

### Building Codes, Permitting, Land Use Planning and Ordinances

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

As of the 2020 update, Vermilion Parish and its communities ensure that all adopted building codes are enforced and in compliance relating to the construction of any structure within the boundaries of the parish. Building permits are required prior to beginning any type of construction or renovation projects, installation of electrical wiring, plumbing or gas piping, moving manufactured/modular or portable buildings, and reroofing or demolitions.

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

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

While local capabilities for mitigation can vary from community to community, Vermilion Parish as a whole has a system in place to coordinate and share these capabilities through the OHSEP 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, Vermilion 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 Vermilion Parish.

Table 3-2: Administration and Technical Capabilities

Administration and Technical								
Identify whether your community has the following administrative and technical capabilities. For smaller jurisdictions without local staff resources, if there are public resources at the next higher level government that can provide technical assistance, indicate so in your comments.								
	Vermilion Parish	Gueydan	Kaplan	Abbeville	Maurice	Erath	Delcambre	Comments
<b>Administration</b>	Yes / No							
Planning Commission	No	No	Yes	Yes	Yes	No	Yes	
Mitigation Planning Committee	No	No	Yes	No	No	No	Yes	
Maintenance programs to reduce risk (tree trimming, clearing drainage systems)	Yes	No	Yes	Yes	Yes	Yes	Yes	
<b>Staff</b>	Yes / No							
Chief Building Official	Yes	No	Yes	No	Yes	Yes	Yes	
Floodplain Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Emergency Manager	Yes	Yes	Yes	No	Yes	No	Yes	
Community Planner	No	No	No	No	Yes	No	No	
Civil Engineer	Yes	No	Yes	No	Yes	No	No	Contractor
GIS Coordinator	No	No	Yes	No	Yes	No	Yes	
Grant Writer	Yes	No	Yes	No	Yes	No	No	
Other	No	No	No	No	No	No	No	Drainage
<b>Technical</b>	Yes / No							
Warning Systems / Service (Reverse 911, outdoor warning signals)	Yes	No	Yes	No	Yes	No	Yes	
Hazard Data & Information	No	No	Yes	No	No	No	Yes	
Grant Writing	No	No	Yes	No	Yes	No	Yes	
Hazus Analysis	Yes	No	No	No	No	No	State	
Other	No	No	No	No	No	No	Yes	

Financial capabilities are the resources that Vermilion Parish has access to or are eligible to use in order to fund mitigation actions. Costs associated with implementing the actions identified by the parish may vary from little to no cost actions, such as outreach efforts, or substantial action costs such acquisition of flood prone properties.

The following financial resources are available to fund mitigation actions in Vermilion Parish:

Table 3-3: Financial Capabilities

Financial								
Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation.								
	Vermilion Parish	Gueydan	Kaplan	Abbeville	Maurice	Erath	Delcambre	Comments
<b>Funding Resource</b>	Yes / No							
Capital Improvements project funding	Yes	No	Yes	Yes	Yes	No	Yes	
Authority to levy taxes for specific purposes	Yes	No	Yes	No	Yes	No	Yes	
Fees for water, sewer, gas, or electric services	No	No	Yes	Yes	Yes	No	Yes	
Impact fees for new development	No	No	No	No	No	No	Yes	
Stormwater Utility Fee	No	No	No	No	No	No	No	
Community Development Block Grant (CDBG)	Yes	No	Yes	Yes	Yes	No	Yes	
Other Funding Programs	No	No	No	No	No	No	No	

## Education and Outreach

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

Vermilion Parish has existing education and outreach programs to implement mitigation activities, as well as communicate risk and hazard related information to its communities. Specifically, focusing on advising repetitive loss property owners of ways they can reduce their exposure to damage by repetitive flooding remains a priority for the entire parish. The existing programs are as follows:

*Table 3-4: 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.								
	Vermilion Parish	Gueydan	Kaplan	Abbeville	Maurice	Erath	Delcambre	Comments
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	Yes	No	Yes	No	Yes	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	No	Yes	No	Yes	No	Yes	
Natural Disaster or safety related school program	Yes	No	Yes	No	Yes	No	Yes	
Storm Ready certification	No	No	No	No	No	No	No	
Firewise Communities certification	No	No	No	No	Yes	No	No	
Public/Private partnership initiatives addressing disaster-related issues	No	No	Yes	No	Yes	No	No	
Other	No	No	No	No	No	No	No	

The communities within Vermilion Parish rely on Vermilion OHSEP and/or Vermilion Parish Police Jury agencies for the above listed planning and regulatory, administrative and technical, financial, and education and outreach capabilities.

As reflected with above existing regulatory mechanisms, programs and resources within the parish, Vermilion Parish remains committed to expanding and improving on the existing capabilities within the parish. Communities, along with Vermilion Parish, will work together 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 parish, will all enhance and expand risk reduction for all of Plaquemines Parish.

### Flood Insurance and Community Rating System

Neither Vermilion Parish nor any of its jurisdictions are currently participating in the Community Rating System (CRS). Participation in the CRS strengthens local capabilities by lowering flood insurance premiums for jurisdictions that exceed NFIP minimum requirements.

The Federal Emergency Management Agency's National Flood Insurance Program (NFIP) administers the Community Rating System (CRS). 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.

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.			

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

As of September 2019, 317 communities in the State of Louisiana participate in the Federal Emergency Management Agency’s National Flood Insurance Program (NFIP). Of these communities, 47 (or 15%) participate in the Community Rating System (CRS). Jefferson Parish leads the state with a rating of Class 5, followed by the City of Mandeville in St. Tammany Parish with a Class 6 rating. Of the top fifty Louisiana communities, in terms of

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

The CRS provides an incentive not just to start new mitigation programs, but to keep them going. There are two requirements that “encourage” a community to implement flood mitigation activities. Once the parish has obtained a CRS rating and is a participant, 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 1 of each year. That report must be made available to the media and the public. Second, the parish must annually recertify to FEMA that it is continuing to implement its CRS credited activities. Failure to maintain the same level of involvement in flood protection can result in a loss of CRS credit points and a resulting increase in flood insurance rates to residents.

In 2011<sup>1</sup>, the National Flood Insurance Program (NFIP) completed a comprehensive review of the Community Rating System (CRS) that resulted 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 to evaluate the CRS and refine the program to meet its stated goals. The changes helped to 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.

Since the revision of the 2013 Coordinator’s Manual, FEMA released the 2017 CRS Coordinator’s Manual which continued the evolution of the CRS program and its mission to reward communities that prioritize mindful floodplain regulations. As with the 2013 manual, the changes made in the 2017 manual impact each CRS community differently. Some communities see an increase in the points they receive since points for certain activities have increased (e.g., Activity 420 Open Space Preservation). Other communities 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 have to identify new CRS credits in order

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

to remain in the CRS class. Most notably, as it relates to this hazard mitigation plan, more credit was made available for Activity 410 Floodplain Mapping.

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 2017 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 the 2017 manual will impact their community and when.

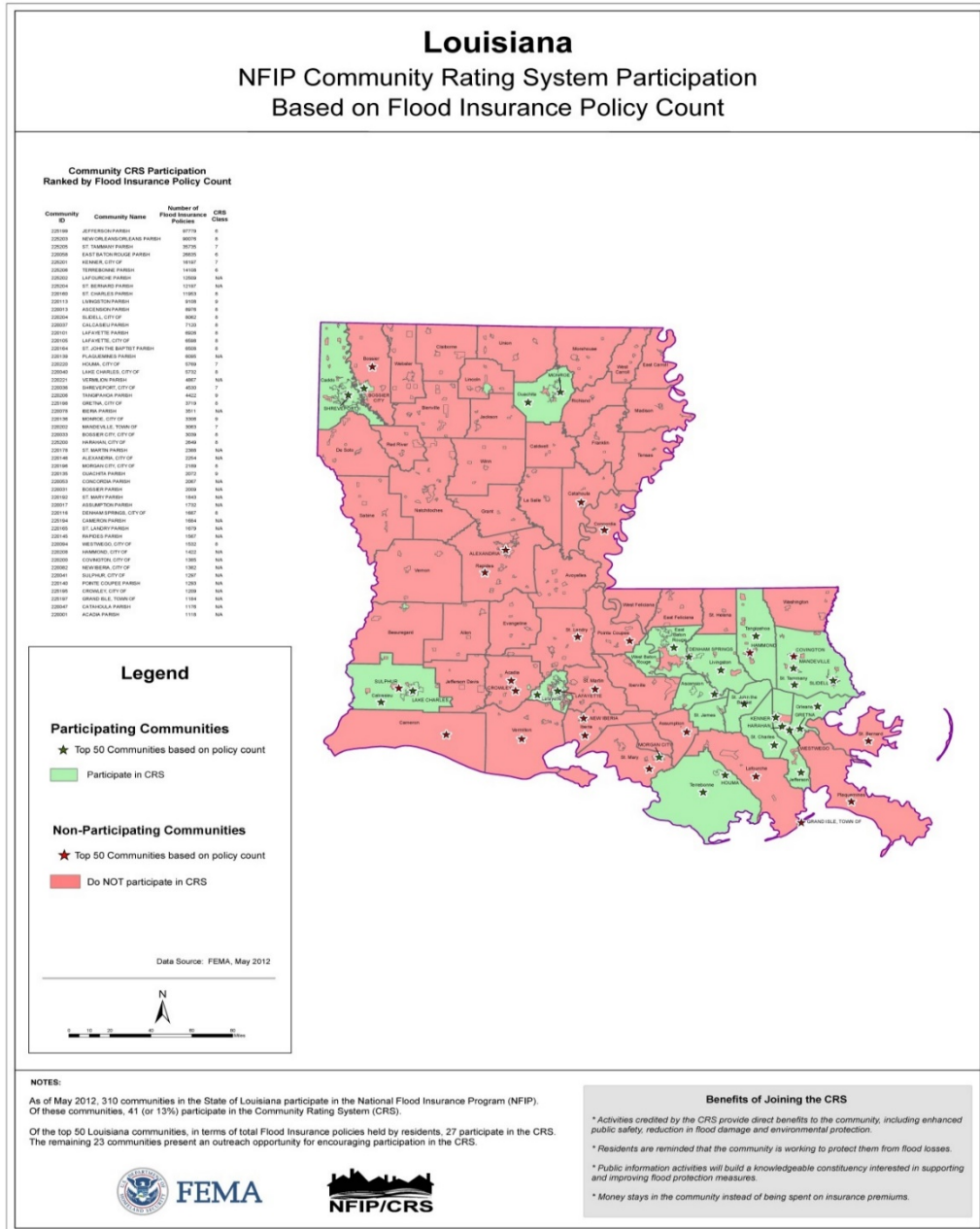


Figure 3-2: Louisiana CRS Participation  
(Source: FEMA<sup>2</sup>)

<sup>2</sup> [http://www.fema.gov/media-library-data/20130726-2128-31471-9581/ks\\_ky\\_la\\_crs\\_may\\_2012\\_508.zip](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 program 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 <https://www.fema.gov/national-flood-insurance-program-community-rating-system> \*\*

### NFIP Worksheets

Parish NFIP worksheets can be found in Appendix E: State Required Worksheets.

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## 4. Mitigation Strategy

### Introduction

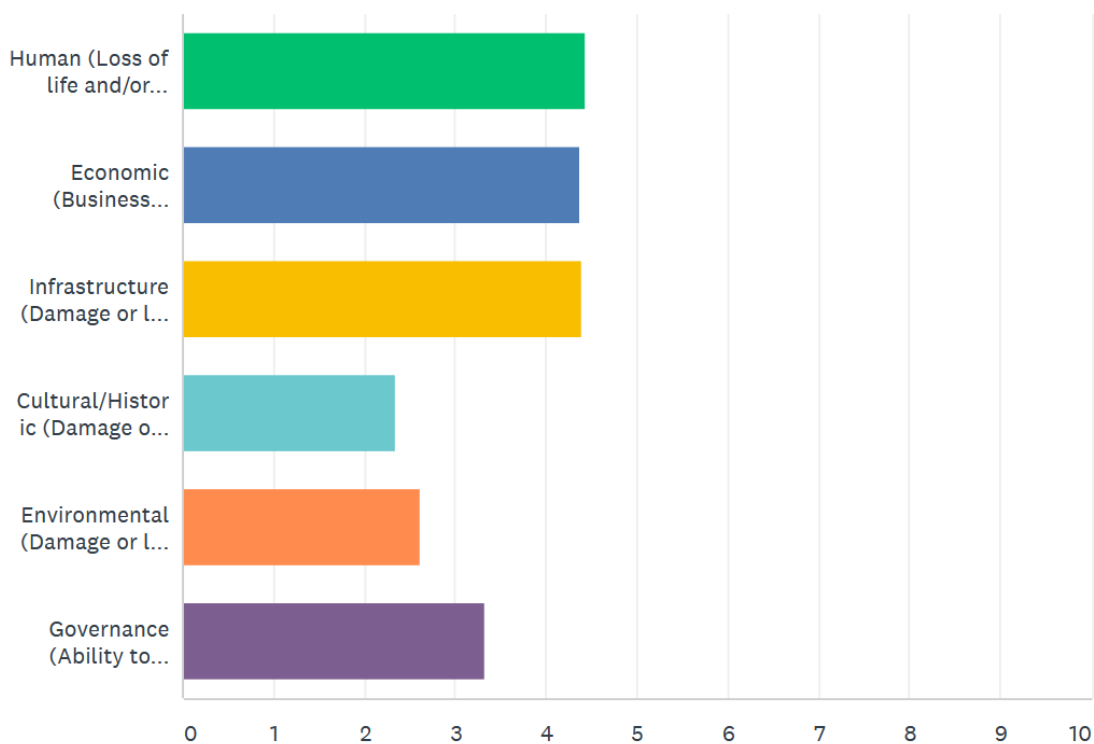
Vermilion Parish's Hazard Mitigation Strategy has a common guiding principle and is the demonstration of the parish's commitment to reduce risks from hazards. The strategy also serves as a guide for parish and local decision makers as they commit resources to reducing the effects of hazards.

Vermilion 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 2020 HMP update are a product of analysis and review of the Vermilion Parish Hazard Mitigation Plan Steering Committee under the coordination of the Vermilion Parish Office of Homeland Security and Emergency Preparedness. The committee was presented a list of projects and actions, new and from the 2015 plan, for review from April 2020 – August 2020.

An online public opinion survey of Vermilion Parish residents was conducted between May and August 2020. The survey was designed to capture public perceptions and opinions regarding natural hazards in Vermilion Parish. In addition, the survey collected information regarding the methods and techniques preferred by the respondents for reducing the risks and losses associated with local hazards.

When asked to gauge from a list which categories were most susceptible to impacts caused by natural hazards, the top three categories selected were:

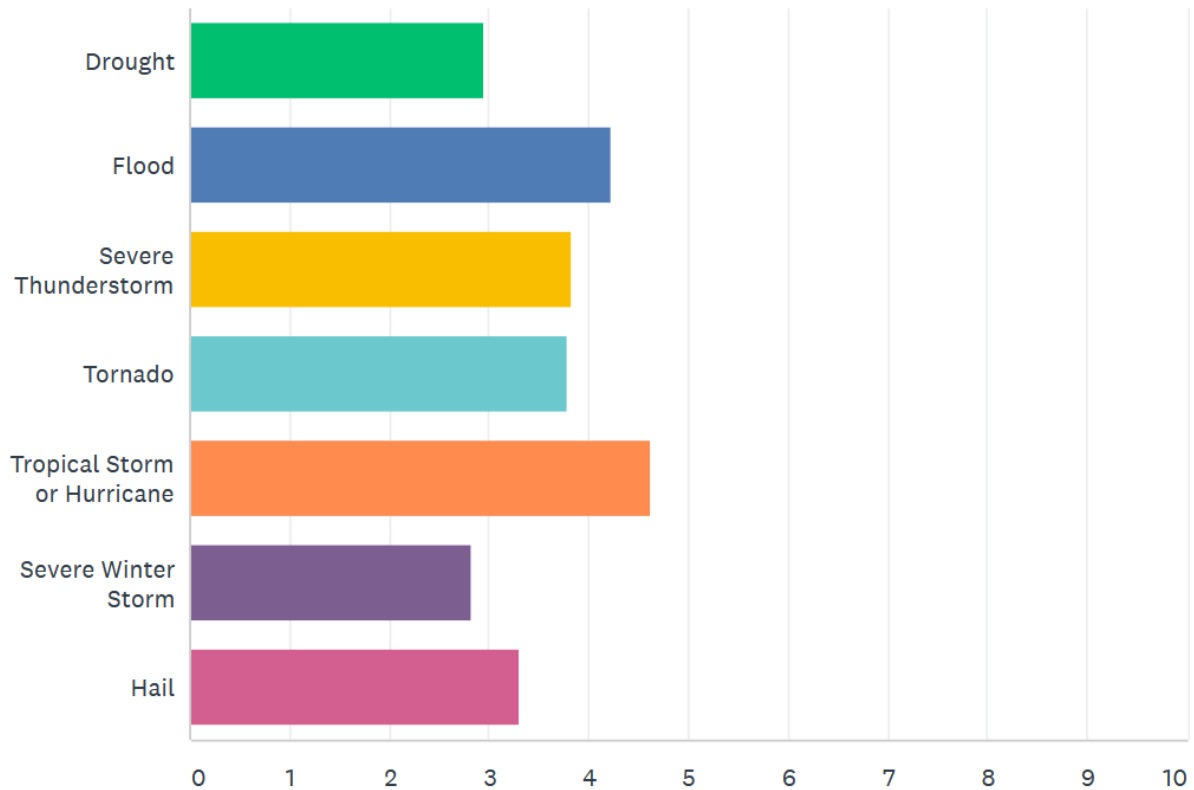
1. Human (Loss of life and/or injuries)
2. Economic (Business closures and/or job losses)
3. Infrastructure (Damage or loss of bridges, utilities, schools, etc.)

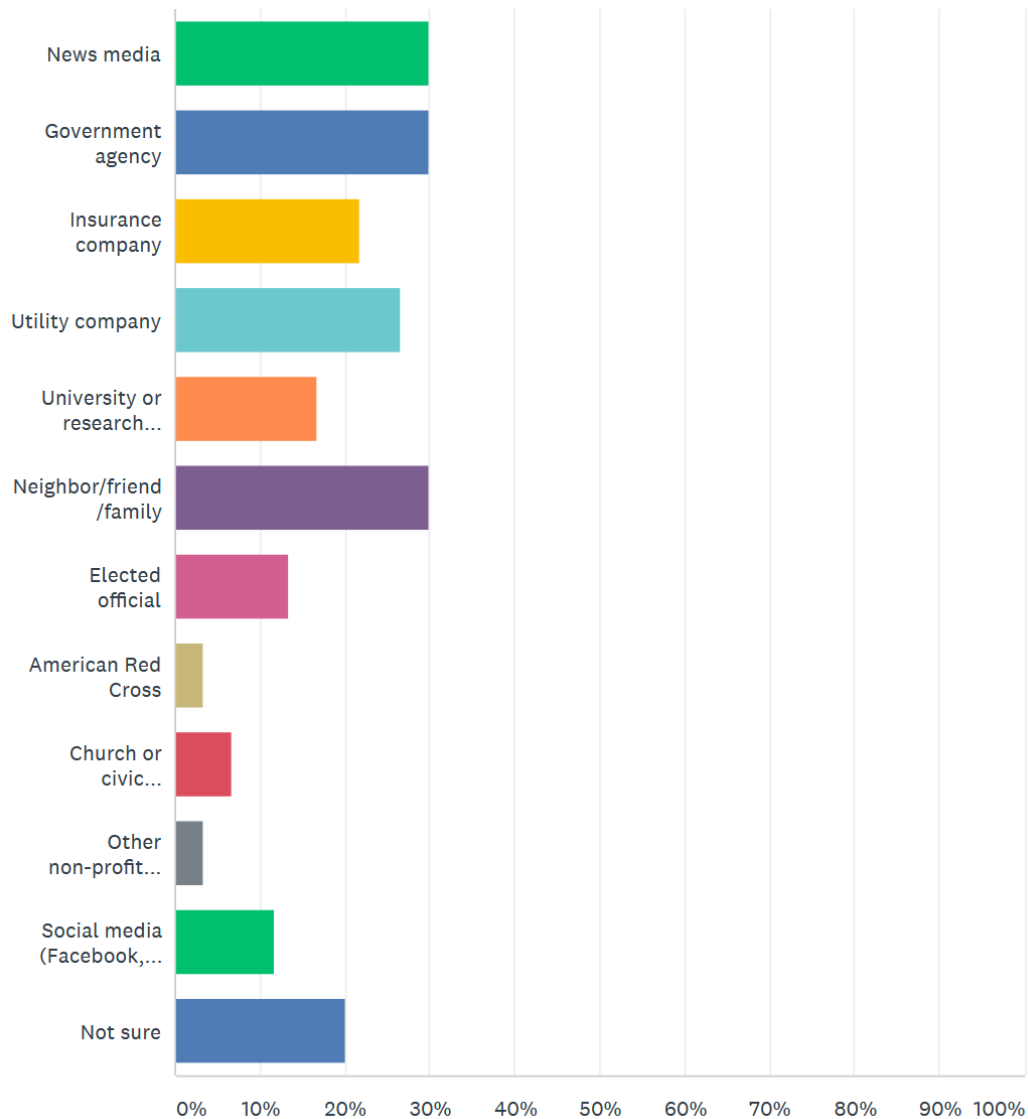




The survey results also indicated which natural disasters citizens were *most concerned* with being affected by in Vermilion Parish. The top three natural disasters selected were:

1. Tropical Storm or Hurricane
2. Flooding
3. Severe Thunderstorm





The results shown above are related to the manner in which the general population receives information on how to make their home safer from natural disasters. These results are encouraging because it shows that the public has high confidence in the information being disseminated by local government agencies. Implementation of the outreach activities put forth by parish officials and offices seem to have been executed in a successful manner.

This activity confirms that the goals and action items developed by the Vermilion Parish Hazard Mitigation Plan Steering Committee are representative of the outlook of the community at large. Full survey results can be found here:

<https://www.surveymonkey.com/results/SM-HN37887H7/>

## 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 Vermilion 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, Vermilion Parish 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 Vermilion Parish Hazard Mitigation Plan Update Steering Committee represent long-term commitments by the parish. After assessing these goals, the committee decided that the current remain valid.

The goals are as follows:

- Goal 1:** Identify and pursue preventative structural and non-structural measures that will reduce future damages.
- Goal 2:** Enhance public awareness and understanding of disaster preparedness.
- Goal 3:** Reduce repetitive flood losses in parish and municipalities.
- Goal 4:** Facilitate sound building practices in the parish and municipalities so as to reduce or eliminate the potential impact of hazards.
- Goal 5:** Improve the ability of the parish and municipalities to rapidly recover and restore facilities and services to the public.

The Mitigation Action Plan focuses on actions to be taken by Vermilion Parish and its jurisdictions. All of the activities in the Mitigation Action Plan will be focused on helping the parish and its communities 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 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.

## 2020 Mitigation Actions and Update on Previous Plan Actions

The Vermilion Parish Hazard Mitigation Plan Steering Committee identified new actions that would reduce and/or prevent future damage within Vermilion Parish and their respective communities. In that effort, the parish focused on a comprehensive range of specific mitigation actions. These actions were identified in thorough fashion by the consultant team and the committee by way of frequent and open communications and meetings held throughout the planning process. The addition of these new actions, coupled with any ongoing and/or carried over projects from their previous update, provide Vermilion Parish with a solid mitigation strategy through which risk and losses will be reduced throughout the parish and its communities.

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 actions relative to the parish-wide goals are below. Additionally, action updates from the previous plan updates can be found below the new actions.

## Vermilion Parish and Municipality Completed Mitigation Actions

Completed Mitigation Projects in Vermilion Parish and Municipalities					
	Action Description	Funding Source	Responsible Party, Agency, or Department	Hazard	Status
Hardening of Critical Facilities	Wind harden critical facilities and new structures	HMGP, local, regional, federal	Parish and Municipal Administrative Staff	Tropical Cyclones, Tornadoes	Completed
Flood Protection	Flood protection for Forked Island/E Broussard	HMPG, Local	Vermilion Parish Government, Vermilion Parish OHSEP	Flooding, Tropical Cyclones	Completed
Retrofitting of Critical Facilities	Retrofit of Delcambre Water Treatment Plant and Water Wells	HMPG, Local	Vermilion Parish Government, Vermilion Parish OHSEP, Mayors Office of Delcambre	Tropical Cyclone, Flooding	Completed
Wind hardening Abbeville Hospital	Wind hardening Abbeville Hospital	HMGP, local, and regional	City of Abbeville Mayors Office, Vermilion Parish Government/OHSEP	Tornado, Tropical Cyclone	Completed
Elevations and Acquisitions	Acquisitions of 15 properties in Vermilion Parish and 18 elevations	HMGP	Vermilion Parish Government, Vermilion Parish OHSEP	Flooding	Completed
Flood Protection	Flood protection for Seventh Ward Elementary	HMGP	City of Abbeville Mayors Office, Vermilion Parish Government/OHSEP	Tropical Cyclone, Flooding	Completed

Elevations and Acquisitions	Acquisition of 10 properties in Delcambre.	HMGP	Vermilion Parish OHSEP/Mayors Office Town of Delcambre/Iberia Parish OHSEP	Flooding, Tropical Cyclones	Completed
Retrofitting of Critical Facilities	Wind Retrofit of Sheriff's Buildings (TF Building and Courthouse Annex)	HMGP	Vermilion Parish Government, Vermilion Parish OHSEP/ Sheriff's Office	Tornado, Tropical Cyclone	Completed
Flood protection of parish prison	Installation of berm around parish prison	HGMP	Vermilion Parish Government, Vermilion Parish OHSEP	Flooding, Tropical Cyclones	Completed
Flood Protection	Flood protection for Victoria Acres Subdivision	HMGP	Vermilion Parish Government, Vermilion Parish OHSEP, Mayors Office Maurice	Tornado, Tropical Cyclone	Completed
Flood Protection	Flood Protection for Erath High and Erath Middle Schools	HMGP	Vermilion Parish Government, Vermilion Parish OHSEP/Town of Erath	Flooding, Tropical Cyclones	Completed
Retrofitting of Critical Facilities	Retrofitting of Public Facilities to mitigate flood and wind impacts. Government Office Complex, Cecil Picard Elementary	HMGP	Vermilion Parish Government, Vermilion Parish OHSEP	Tornado, Tropical Cyclone	Completed
SRL Properties	Severe Repetitive Loss Program Property elevations and Acquisitions throughout Vermilion Parish and Municipalities	HMGP	Vermilion Parish Government, Vermilion Parish OHSEP	Flooding, Tropical Cyclones	Completed
Hardening of Critical Facilities	Wind retrofit of Abbeville Airport	HMGP, local, regional, federal	City of Abbeville Mayors Office, Vermilion Parish Government/OHSEP	Tropical Cyclones, Tornadoes	Completed



## Vermilion Parish Previous and New Mitigation Actions

Vermilion Parish - Unincorporated						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
Drainage improvements	Widen drainage ditches and upgrade culverts	HMGP, local, and regional	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	In Progress
Road Elevations	Elevate roads with flood history	HMGP, local, regional	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding, Tropical Cyclones	In Progress
Generator Installation	Install generators at all critical facilities	HMGP, local, regional	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones, Tornadoes	In Progress
Safe Rooms	Construct Safe Rooms throughout the parish	HMGP	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Tornadoes	In Progress
Hardening of Critical Facilities	Wind harden critical facilities and new structures	HMGP, local, regional, federal	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones, Tornadoes	In Progress
Floodproof critical facilities	Floodproof critical facilities through the parish.	HMGP	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	In Progress
Coastal protection measures	Create additional marshland	CPRA	Ongoing	Parish engineering, public works, administrative, planning, and zoning staff, and city administrative and/or planning personnel	Coastal Land Loss	In Progress
Coastal protection measures	Increase sediment diversion	CPRA	Ongoing	Parish engineering, public works, administrative, planning, and zoning staff, and city administrative and/or planning personnel	Coastal Land Loss	In Progress
Outreach activities	Provide educational brochures to libraries, schools, and other public facilities including mitigation measures for all hazards including hurricanes, coastal/tropical storms, levee failure, tornadoes, and coastal erosion	No additional funds required	Ongoing	Parish administrative and planning and zoning staff, and city administrative and/or planning personnel.	Flooding, Tropical Cyclones, Tornadoes, Coastal Land Loss, Sinkholes	In Progress
Elevations and Acquisitions	Elevate, acquire, or pilot reconstruct all RL and SRL structures in Vermilion Parish	HMGP	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	In Progress
Future Development Plan	Ensure that future development does not increase hazard losses with better ordinance enforcement and plan creation.	No additional funds required	Ongoing	One full time member of each municipality and the parish planning department	Flooding, Tropical Cyclones, Tornadoes, Coastal Land Loss, Sinkholes	In Progress
Future Development Initiatives	Guide future development away from hazard areas while maintaining other parish goals such as economic development and improving the quality of life	No additional funds required	Ongoing	One full time member of the parish planning department and each municipality	Flooding, Tropical Cyclones, Tornadoes, Coastal Land Loss, Sinkholes	In Progress

Building Code Enforcement.	Enforce the International Building Code requirements for all new construction to strengthen buildings against high wind damage	No additional funds required	Ongoing	One current full time member of the parish and each municipality	Thunderstorms, Tropical Cyclones, Tornadoes	In Progress
NFIP Participation	All jurisdictions continue to participate in the NFIP—Vermilion Parish, Maurice, Kaplan, Gueydan, Abbeville, Erath, and Delcambre	No additional funds required	Ongoing	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	In Progress
NFIP Outreach	Establish a public outreach campaign to ensure all homeowners in floodplains are aware of the various types of coverage options under the NFIP	No additional funds required	Ongoing	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	In Progress
Flood education	Establish homeowner education program on flood mitigation measures	No additional funds required	Ongoing	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	In Progress
Safe Harbor identification	Locate safe harbor areas for boats and livestock	Local	Ongoing	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones	In Progress
Backup power for courthouse	Install backup power/supply generators at the courthouse and detention center	Local, HMGP	In progress	Vermilion Parish Government/ Vermilion Parish OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	In Progress
Bayou Protection	Phase I completed 33,016 linear feet of rock dike construction; Phase II will complete construction of remaining 3,250 linear feet.	Local, Restore Act	5 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal and Loss	In Progress
Generator for Mont Blanc Subdivision Drainage Pump Station	Furnish and install new standby emergency generator for Mont Blanc Subdivision Drainage Pump Station for reduced flooding impact of structures	HMGP, Local and Federal	0-6 months	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	In Progress
Repetitive loss ongoing project	Pursue elevation/acquisition/floodproofing projects and structural solutions to flooding for 47 repetitive loss structures	Local, HMGP	Ongoing	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	In Progress
Pump Station Improvements	Upgrade pump station capacity	HMGP, local, and regional	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	Not Started - Carried Over
Drainage improvements	Ensure drainage structures are adequate to ensure operation during a flood event	HMGP, local, and regional	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	Not Started - Carried Over
Floodwall upgrades	Upgrade floodwall heights to ensure storm surge protection	federal, local, and regional	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones	Not Started - Carried Over
Elevate levee and floodwall heights	Elevate levee and floodwall heights to further protect from storm surge	local, regional, federal	1-10 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones	Not Started - Carried Over
Pump Station Improvements	Provide additional pump station protection inside	local, regional, federal	1-10 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	Not Started - Carried Over
New Levee Construction	Construct new levees, floodwalls, floodgates, and other storm surge barriers therefore providing protection to existing and new developments	local, regional, federal	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones	Not Started - Carried Over

Communications System Upgrades	Acquire all-hazard warning system to ensure proper citizen notification of all hazards including hurricanes, coastal/tropical storms, tornadoes, sinkholes, and coastal erosion	HMGP, local, and regional	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes, Coastal Hazards, Sinkholes	Not Started - Carried Over
Record retention improvements	Provide safe locations for files, records, and computer equipment	HMGP, FMA	Ongoing	One current full time member of the parish, the drainage districts, and each municipality	Flooding, Tropical Cyclones, Thunderstorms, Tornadoes	Not Started - Carried Over
CRS Program	Each political subdivision to join the CRS	No additional funds required	Ongoing	Parish administrative and planning and zoning staff, drainage district personnel, and city administrative and/or planning personnel.	Flooding	Not Started - Carried Over
Sinkhole study	Conduct study on effects of sinkholes to surrounding areas.	Local, regional, and federal	n/a	Vermilion Parish Government/ Vermilion Parish OHSEP	Sinkholes	Not Started - Carried Over
Flood protection project	Coulee Kinney flood protection project	HMGP	1-2 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	Not Started - Carried Over
Drainage improvements	Broussard ditch culvert upgrade	HMGP	2-4 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	Not Started - Carried Over
Fire station wind retrofit	Wind hardening projects for Vermilion fire stations: Leblanc Fire Department, Indian Bayou Fire Department, Meaux Nunez Fire Department	HMGP, Local and Federal	2-3 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes	Not Started - Carried Over
Flood protection - levee upgrades	Upgrade levees at the following locations: Hebert Canal, behind Hwy 335	HMGP, Local and Federal	2-3 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding, Tropical Cyclones	Not Started - Carried Over
Floodgate upgrade projects	Upgrade floodgates at the following locations: Hwy 82 and Hebert Canal, Pleasant Road and Little Bayou, Meaux Ditch adjacent to Hwy 333 in Intracoastal City	HMGP, Local and Federal	2-3 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding	Not Started - Carried Over
Hardening of Waterworks District #1	North Vermilion Water Treatment Plant to provide a secure location in order to house critical employees to be on watch and provide continual operation of the facilities immediately before, during and after storm events	HMGP, Local and Federal	2-3 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes	Not Started - Carried Over
Hebert Watershed hurricane protection	Prevent future inundation in the project area by raising the level of existing protection levees that will afford increased protection to communities from saltwater intrusion damage and flooding from storm surges.	Local, Restore Act	5 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones	Not Started - Carried Over
Highway 82/Schooner Bayou Structure Bank Stabilization	Shoreline protection through rock breakwaters of approximately 21,000 feet of Schooner Bayou Canal bank line from Highway 82 to North Prong, to benefit preservation of shoreline integrity and reduction of wetland degradation	Local, Restore Act	5 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Land Loss	Not Started - Carried Over

Hydraulic Restoration of 4-Mile Canal Lowsill	Hydraulic restoration of eroded canal to reduce effects of storm surge	Local, Restore Act, CWPBRA	2 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones	Not Started - Carried Over
Hydraulic Restoration of Hebert Canal #2	Prevent future inundation in project area by installing a water control structure and by raising level of existing protection levees that will afford increased protection to communities from saltwater intrusion and storm surge damage	Local, Restore Act	5 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones	Not Started - Carried Over
Indian Point Shoreline Protection project	Prevent further peninsula loss by providing protection to the shoreline along Indian Point by providing 12,000 linear feet of onshore revetment or nearshore dikes.	Local, Restore Act	2 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Erosion	Not Started - Carried Over
Installation of lightning protection devices	Increase the number of utility switching stations and install lightning protection devices for the communication and utility systems to reduce damage from lightning strikes	HMGP	1 year	Vermilion Parish Government/ Vermilion Parish OHSEP	Thunderstorms	Not Started - Carried Over
Marsh Creation - Tom's Bayou	Protect existing healthy marsh from extended periods of high salinity or high water levels; restore degraded marsh to benefit bird species in wetlands	Local, Restore Act, CWPBRA	2 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Land Loss	Not Started - Carried Over
Oyster Reef at Chenier au Tigre, Phase II	Prevent further wetland loss through reduction of bank erosion and subsequent tidal scour of shoreline marshes as well as to enhance the bio-diversity of the project area with the creation of Oyster Reefs. Phase II will complete construction of remaining 2,855 linear feet.	Local, Restore Act	1 year	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Land Loss	Not Started - Carried Over
Red Fish Point Marsh Creation	Protect existing healthy marsh from extended periods of high salinity or high water levels; restore degraded marsh to benefit bird species in wetlands	Local, Restore Act	2 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Land Loss	Not Started - Carried Over
Shoreline Protection of Vermilion/Cote Blanche	Maintain shoreline integrity and stabilize critical shoreline areas of the Teche-Vermilion Bay systems; optimize riverine flows from GIWW into marshes and minimize flow into bays; reduce sedimentation in bays	Local, Restore Act, CWPBRA	5 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Land Loss	Not Started - Carried Over
Southwest Point at Southwest Pass	Prevent further peninsula loss by providing protection to shoreline between Southwest Point and Indian Point by providing approx.. 9,000 linear feet of onshore revetment or nearshore dikes.	Local, Restore Act, CIAP	1 year	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Land Loss	Not Started - Carried Over
Subdivision drainage improvements	Upgrade culverts for drainage improvements in Attakapa Ridge subdivision	HMGP	2-4 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding, Tropical Cyclones	Not Started - Carried Over

Tiger Point Wetland Reduction, Phase II	Prevent further wetland loss through reduction of bank erosion and subsequent tidal scour of shoreline marshes as well as to enhance the bio-diversity of the project area with the creation of Oyster Reefs. Phase I and II will complete the construction of the remaining 4,190 linear feet of oyster reef/shoreline protection designed in Phase I.	Local, Restore Act	1 year	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Land Loss	Not Started - Carried Over
Vermilion Hurricane Protection System	Raising the height of existing system of agricultural levees to serve as a sound base for increasing elevation.	Local, Restore Act	5 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Tropical Cyclones	Not Started - Carried Over
Water system elevation	Elevation of Pecan Island Water District #3	HMGP, Local and Federal	2-3 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Flooding, Tropical Cyclones	Not Started - Carried Over
Responsible Development	Guide future development away from hazard areas and ensuring that future development does not increase hazard losses while maintaining other parish goals such as economic development and improving the quality of life.	HMGP, Local and Federal	1-5 years, as funding permits	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Erosion, Flooding, Sinkholes, Tornadoes, Tropical Cyclones	New
Environmental Conservation Program Participation	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, Local and Federal	5 years	Vermilion Parish Government/ Vermilion Parish OHSEP	Coastal Hazards, Flooding, Tropical Cyclones	New

## Abbeville Previous and New Mitigation Actions

City of Abbeville						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
Hardening of critical facilities	Wind harden critical facilities and new structures	HMGP, local, regional, federal	1-5 years, as funding permits	City of Abbeville, parish and municipal administrative staff	Tornadoes, Tropical Cyclones	In Progress
Warning System	Acquire all-hazard warning system to ensure proper citizen notification of levee failure, hurricanes, and coastal/tropical storms	HMGP, local, and regional	1-5 years, as funding permits	City of Abbeville, Existing designated full-time personnel in Parish Administration, Vermilion Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes	In Progress
Hardening of critical facilities	Hardening Abbeville City Hall with impact-resistant window coverings and doors, and installing roof straps	Local	2-3 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Tornadoes, Tropical Cyclones	In Progress
Generator installation	Installation of generators for backup power at sewer treatment plant in Abbeville	HMGP	1-5 years, as funding permits	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Tornadoes, Tropical Cyclones	In Progress
Generator installation	Installation of generator at SE Water District #2	HMGP	1-2 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Tornadoes, Tropical Cyclones	In Progress
Hospital relocation project	Relocate detached inpatient psych unit into hardened hospital in Abbeville	HMGP	In Progress, 1-5 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	In Progress
Lift Station Generators	Portable/mobile generators for lift stations in the City of Abbeville	City of Abbeville, Generator Initiative Funding	2 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Tornadoes, Tropical Cyclones	In Progress
Repetitive loss ongoing project	Pursue elevation/acquisition/floodproofing projects and structural solutions to flooding for 47 repetitive loss structures	Local, HMGP	Ongoing	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	In Progress
Construct Safe Rooms	Safe room construction in Abbeville.	HMGP	1-5 years, as funding permits	City of Abbeville, parish and municipal administrative staff	Tornadoes	Not Started - Carried Over
Drainage Improvement Project	Upgrade 60" culverts to 72" for 2000' linear feet to improve the drainage of storm water into Young Coulee Tributary in Eaton Park Drive in Abbeville	Local, HMGP	1-2 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	Not Started - Carried Over
Flood protection project	Elevate Monte Blanc road in Abbeville	HMGP	3-4 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	Not Started - Carried Over
School backup power installation	Generator installation for Meaux Elementary in Abbeville	HMGP	1-2 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over



School wind retrofit	Wind hardening Meaux Elementary in Abbeville	HMGP	1-2 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Street elevation project	Elevation of Trahan Street to SE Water District #2 in Abbeville	HMGP	2-3 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	Not Started - Carried Over
Water treatment center backup power	Installation of generators for backup power at water treatment plant in Abbeville	local, HMGP	1-2 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Wind Hardening - Abbeville Recreation Center	Hardening the building with impact-resistant window coverings, doors, and roof straps	City of Abbeville, HMGP	2 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Wind Hardening - Abbeville Water Plant	Hardening the building with impact-resistant window coverings, doors, and roof straps	City of Abbeville, HMGP	2 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Roadway Improvement	Elevation of HWY 14 Bypass to mitigate future flooding impacts	HMGP, Local and Federal	5 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tropical Cyclones	New
Responsible Development	Guide future development away from hazard areas and ensuring that future development does not increase hazard losses while maintaining other parish goals such as economic development and improving the quality of life.	HMGP, Local and Federal	5 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Tropical Cyclones	New
Environmental Conservation Program Participation	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, Local and Federal	5 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Tropical Cyclones	New
Mitigation Outreach and Education	Increase public awareness of hazards and hazardous areas. Actions may include distribution of public awareness information regarding all hazards and potential mitigation measures; implementation of educational program for children and merchants; Integrate "Disaster Resistance Education" into the public school curriculum, providing education on the importance of maintaining ditches, promotion of the purchase of flood insurance for public. Sponsor a "Multi-Hazard Awareness Week", to educate the public on all hazards	HMGP, Local and Federal	5 years	City of Abbeville Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Thunderstorms, Tropical Cyclones	New

## Delcambre Previous and New Mitigation Actions

Town of Delcambre						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
Safe Rooms	Identify location and construct safe room in Town of Delcambre	HMGP	1-5 years, as funding permits	Town of Delcambre, parish and municipal staff/OHSEP	Tornadoes	In Progress
Hardening of critical facilities	Identify and harden critical facilities within the Town of Delcambre	HMGP, local, regional, federal	1-5 years, as funding permits	Town of Delcambre, parish and municipal staff/OHSEP	Tropical Cyclones, Tornadoes	In Progress
Warning Systems	Acquire all-hazard warning system to ensure proper citizen notification of levee failure, hurricanes, and coastal/tropical storms	HMGP, local, and regional	1-5 years, as funding permits	Town of Delcambre, Existing designated full-time personnel in Parish Administration/OHSEP	Flooding, Tropical Cyclones, Tornadoes	In Progress
Repetitive loss ongoing project	Pursue elevation/acquisition/ floodproofing projects and structural solutions to flooding for 47 repetitive loss structures	Local, HMGP	Ongoing	Town of Delcambre Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	In Progress
Delcambre Town Hall hardening project	Upgrade, harden, and floodproof Delcambre Town Hall	HMGP	2-3 years	Town of Delcambre Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Pump station upgrade	Pump station upgrade - submersible pumps	Local, HMGP	2-3 years	Town of Delcambre Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	Not Started - Carried Over
Wind retrofit - fire stations	Wind hardening of Delcambre Fire Station (In Iberia Parish)	HMGP	1-5 years, as funding permits	Town of Delcambre Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tropical Cyclones, Tornadoes	Not Started - Carried Over
Roadway Improvement	Elevation of HWY 14 Bypass to mitigate future flooding impacts	HMGP, Local and Federal	5 years	Town of Delcambre Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tropical Cyclones	New
Responsible Development	Guide future development away from hazard areas and ensure that future development does not increase hazard losses while maintaining other parish goals such as economic development and improving the quality of life.	HMGP, Local and Federal	5 years	Town of Delcambre Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Tropical Cyclones, Sinkholes	New
Environmental Conservation Program Participation	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, Local and Federal	5 years	Town of Delcambre Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Tropical Cyclones	New
Mitigation Outreach and Education	Increase public awareness of hazards and hazardous areas. Actions may include distribution of public awareness information regarding all hazards and potential mitigation measures; implementation of educational program for children and merchants; Integrate "Disaster Resistance Education" into the public school curriculum, providing education on the importance of maintaining ditches, promotion of the purchase of flood insurance for public. Sponsor a "Multi-Hazard Awareness Week", to educate the public on all hazards	HMGP, Local and Federal	5 years	Town of Delcambre Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Sinkholes, Thunderstorms, Tornadoes, Tropical Cyclones	New

## Erath Previous and New Mitigation Actions

Town of Erath						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
Safe Rooms	Identify location and construct safe room in Town of Erath	HMGP	1-5 years, as funding permits	Town of Erath, parish and municipal administrative staff, Vermilion Parish OHSEP	Tornadoes	In Progress
Hardening of critical facilities	Identify and harden critical facilities within the Town of Erath	HMGP, local, regional, federal	1-5 years, as funding permits	Town of Erath, parish and municipal administrative staff, Vermilion Parish OHSEP	Tropical Cyclones, Tornadoes	In Progress
Acquire all-hazard warning system to ensure proper citizen notification of levee failure, hurricanes, and coastal/tropical storms	Acquire all-hazard warning system to ensure proper citizen notification of levee failure, hurricanes, and coastal/tropical storms	HMGP, local, and regional	1-5 years, as funding permits	Town of Erath, parish and municipal administrative staff, Vermilion Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes	In Progress
Repetitive loss ongoing project	Pursue elevation/acquisition/floodproofing projects and structural solutions to flooding for 47 repetitive loss structures	Local, HMGP	Ongoing	Town of Erath Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	In Progress
Drainage Improvement Project	Improve and enlarge the laterals and drainage structures to provide better conveyance into Bayou Tigre in Erath	Local, HMGP	1-3 years	Town of Erath Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	Not Started - Carry Over
Town of Erath - flood protection	Flood protection of town of Erath	Local, HMGP	5 years	Town of Erath Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tropical Cyclones	Not Started - Carry Over
Roadway Improvement	Elevation of HWY 14 Bypass to mitigate future flooding impacts	HMGP, Local and Federal	5 years	Town of Erath Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tropical Cyclones	New
Responsible Development	Guide future development away from hazard areas and ensuring that future development does not increase hazard losses while maintaining other parish goals such as economic development and improving the quality of life.	HMGP, Local and Federal	5 years	Town of Erath Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Tropical Cyclones	New
Environmental Conservation Program Participation	Participate in existing programs at the state and federal levels oriented to environmental enhancement and conservation.	HMGP, Local and Federal	5 years	Town of Erath Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Tropical Cyclones	New
Mitigation Outreach and Education	Increase public awareness of hazards and hazardous areas. Actions may include distribution of public awareness information regarding all hazards and potential mitigation measures; implementation of educational program for children and merchants; Integrate "Disaster	HMGP, Local and Federal	5 years	Town of Erath Mayor's Office, Vermilion Parish Government/OHSEP	Coastal Hazards, Flooding, Thunderstorms, Tornadoes, Tropical Cyclones	New

	Resistance Education" into the public school curriculum, providing education on the importance of maintaining ditches, promotion of the purchase of flood insurance for public. Sponsor a "Multi-Hazard Awareness Week", to educate the public on all hazards					
Communications Systems	Implement upgrades and additions to communications systems, including the Auto call out system for the Sheriff's Department. Implement a public notification system, such as sirens or a call down system with backup capabilities.	HMGP, Local and Federal	5 years	Town of Erath Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones	New

## Gueydan Previous and New Mitigation Actions

Town of Gueydan						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
Construct Safe Rooms	Safe room construction in Town of Gueydan	HMGP	1-5 years, as funding permits	Town of Gueydan, parish and municipal administrative staff/Vermilion Parish OHSEP	Tornadoes	In Progress
Wind Hardening Project	Wind harden critical facilities and new structures	HMGP, local, regional, federal	1-5 years, as funding permits	Town of Gueydan, parish and municipal administrative staff/Vermilion Parish OHSEP	Tropical Cyclones, Thunderstorms, Tornadoes	In Progress
Warning Systems	Acquire all-hazard warning system to ensure proper citizen notification of levee failure, hurricanes, and coastal/tropical storms	HMGP, local, and regional	1-5 years, as funding permits	Town of Gueydan, Existing designated full-time personnel in Parish Administration/Vermilion Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes	In Progress
Repetitive loss ongoing project	Pursue elevation/acquisition/floodproofing projects and structural solutions to flooding for 47 repetitive loss structures	Local, HMGP	Ongoing	Town of Gueydan Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	In Progress
Flood Protection	Flood protection for Gueydan	Local, HMGP	1-5 years, as funding permits	Town of Gueydan Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tropical Cyclones	In Progress
Generator addition	Add generators to 2 main elevated sewer pump stations in Gueydan	Local, HMGP	1-2 years	Town of Gueydan Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Generator upgrade	Generator upgrade for Gueydan Memorial Guest Home	HMGP, local, and regional	1-2 years	Town of Gueydan Mayor's Office, Vermilion Parish Government/OHSEP	Tropical Cyclones, Tornadoes	Not Started - Carried Over
Gueydan drainage projects	Remove brush and debris, add storm sewer capacity along Highway 14 and Highway 91 in Gueydan	HMGP	2-4 years	Town of Gueydan Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Wind hardening project	Wind hardening of Gueydan Memorial Nursing Home - windows and roof	HMGP, local, and regional	2-3 years	Town of Gueydan Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Wind retrofit for police and fire stations	Wind hardening project for Gueydan Fire and Police Departments (Hwy 14 & 5th Street)	HMGP, local, and regional	2-3 years	Town of Gueydan Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Roadway Improvement	Elevation of HWY 14 Bypass to mitigate future flooding impacts	HMGP, Local and Federal	5 years	Town of Gueydan Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tropical Cyclones	New

## Kaplan Previous and New Mitigation Actions

City of Kaplan						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
Wind Hardening of Kaplan Hospital	Hardening building by reinforcing roof for high wind events	HMGP	1-2 years	City of Kaplan, Vermilion Parish Government/OHSEP	Tornadoes, Tropical Cyclones	In Progress
Safe Room Construction	Construction of safe room for City of Kaplan	HMGP	1-5 years, as funding permits	City of Kaplan, Existing designated full-time personnel in Parish Administration/Vermilion Parish OHSEP	Tornadoes	In Progress
Wind Hardening	Wind harden critical facilities and new structures	HMGP, local, regional, federal	1-5 years, as funding permits	City of Kaplan, Existing designated full-time personnel in Parish Administration/Vermilion Parish OHSEP	Tornadoes, Tropical Cyclones	In Progress
Warning Systems	Acquire all-hazard warning system to ensure proper citizen notification of levee failure, hurricanes, and coastal/tropical storms	HMGP, local, and regional	1-5 years, as funding permits	City of Kaplan, Existing designated full-time personnel in Parish Administration/Vermilion Parish OHSEP	Flooding, Tropical Cyclones, Tornadoes	In Progress
Generator Installation	Install portable generators for Kaplan lift stations	HMGP	1-2 years	City of Kaplan Mayor's Office, Vermilion Parish OHSEP	Tornadoes, Tropical Cyclones	In Progress
Repetitive loss ongoing project	Pursue elevation/acquisition/floodproofing projects and structural solutions to flooding for 47 repetitive loss structures	Local, HMGP	Ongoing	City of Kaplan Mayor's Office, Vermilion Parish OHSEP	Flooding	In Progress
School wind hardening project	Wind hardening for Rost Middle School gymnasium in Kaplan	HMGP	2-4 years	City of Kaplan Mayor's Office, Vermilion Parish OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Sewage pump project	Upgrade 10 sewage pump stations in Kaplan	Local, HMGP	2-4 years	City of Kaplan Mayor's Office, Vermilion Parish OHSEP	Flooding	Not Started - Carried Over
Drainage improvement project	Upgrade flap gates on Coulee Des Jons outflow pipes that drain the City of Kaplan	HMGP, local, regional, federal	5 years	City of Kaplan Mayor's Office, Vermilion Parish OHSEP	Flooding, Tropical Cyclones	Not Started - Carried Over
Roadway Improvement	Elevation of HWY 14 Bypass to mitigate future flooding impacts	HMGP, Local and Federal	5 years	City of Kaplan Mayor's Office, Vermilion Parish OHSEP	Flooding, Tropical Cyclones	New
Communications Systems	Implement upgrades and additions to communications systems, including the Auto call out system for the Sheriff's Department. Implement a public notification system, such as sirens or a call down system with backup capabilities.	HMGP, Local and Federal	5 years	City of Kaplan Mayor's Office, Vermilion Parish OHSEP	Flooding, Thunderstorms, Tornadoes, Tropical Cyclones	New



## Maurice Previous and New Mitigation Actions

Village of Maurice						
Jurisdiction-Specific Action	Action Description	Funding Source	Target Completion Date	Responsible Party, Agency, or Department	Hazard	Status
Hardening of critical facilities	Identify and harden critical facilities within the Village of Maurice	HMGP, local, regional, federal	1-5 years, as funding permits	Village of Maurice, Existing designated full-time personnel in Parish Administration/OHSEP	Tornadoes, Tropical Cyclones	In Progress
Warning Systems	Acquire all-hazard warning system to ensure proper citizen notification of levee failure, hurricanes, and coastal/tropical storms	HMGP, local, and regional	1-5 years, as funding permits	Village of Maurice, Existing designated full-time personnel in Parish Administration/OHSEP	Flooding, Tropical Cyclones, Tornadoes	In Progress
Backup power for lift stations	Portable generator installation for lift and water stations in Maurice	HMGP, local, and regional	3-4 years	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Tornadoes, Tropical Cyclones	In Progress
Repetitive loss ongoing project	Pursue elevation/acquisition/floodproofing projects and structural solutions to flooding for 47 repetitive loss structures	Local, HMGP	Ongoing	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	In Progress
School power backup system	Installation of generators at North Vermilion High School in Maurice	HMGP, local, and regional	1-2 years	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Tornadoes, Tropical Cyclones	In Progress
School power backup system	Installation of generators at Picard Elementary School in Maurice	HMGP, local, and regional	1-2 years	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Tornadoes, Tropical Cyclones	In Progress
Safe Rooms	Identify location and construct safe room in Village of Maurice	HMGP	1-5 years, as funding permits	Village of Maurice, Existing designated full-time personnel in Parish Administration/ OHSEP	Thunderstorms, Tornadoes	Not Started - Carried Over
Drainage Improvement Project	Upgrade culverts along LA Hwy 167 in Maurice	Local, HMGP	1-3 years	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Flooding	Not Started - Carried Over
Fire station wind retrofit	Wind hardening for Maurice Fire Station, 410 Chief H. Fred Street	HMGP, local, and regional	2 years	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Flood protection - levee elevation	Protect Victoria Acres subdivision by elevation of levees and road over levee in Maurice	HMGP	1-5 years, as funding permits	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tropical Cyclone	Not Started - Carried Over
School wind retrofit	Wind hardening of North Vermilion High School in Maurice	HMGP, local, and regional	2-4 years	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Thunderstorms, Tornadoes, Tropical Cyclones	Not Started - Carried Over
Responsible Development	Guide future development away from hazard areas and ensuring that future development does not increase hazard losses while maintaining other parish goals such as economic development and improving the quality of life.	HMGP, local, and regional	1-5 years, as funding permits	Village of Maurice Mayor's Office, Vermilion Parish Government/OHSEP	Flooding, Tropical Cyclones, Tornadoes	New

## Action Prioritization

During the prioritization process, 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. Therefore, many projects were prioritized with these factors in mind. In addition, prioritization of the mitigation actions was performed based on the following economic criteria: i) whether the action can be performed with the existing parish resources; ii) whether the action requires additional funding from external sources; and iii) relative costs of the mitigation actions.

In all cases, the committee 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 prioritized the possible activities that could be pursued. Steering committee members consulted appropriate agencies in order to assist with the prioritizations. The results were items that address the major hazards, are appropriate for those hazards, are cost-effective, and are affordable. The steering committee met internally for mitigation action meetings to review and approve St. Bernard mitigation actions. On-going actions, as well as actions which can be undertaken by existing parish 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.

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

## Appendix A: Planning Process

### Purpose

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

### The Vermilion Parish Hazard Mitigation Plan Update

The Vermilion Parish Hazard Mitigation Plan Update process began in March 2020 with a series of meetings and collaborations between the contractor (SDMI) and the participating agencies. Update activities were intended to give each participating agency 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.

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

Date	Meeting or Outreach	Location	Public Invited	Purpose
4/16/2020	Kick Off Meeting	Conference Call	No	Discuss with Parish HM Director the expectations and requirements of the project.
6/11/2020	Initial Planning Meeting	Abbeville, LA	No	Discuss with the plan Steering Committee expectations and requirements of the project. Assign plan worksheets to Parish.
7/10/2020	Risk Assessment Overview	Virtual; Zoom Meeting	No	Discuss and review the Risk Assessment with the Steering Committee. Discuss and review expectations for Public Meeting.
7/10/2020	Public Meeting	Virtual; Zoom Meeting	Yes	The Public Meeting allowed the public and community stakeholders to participate and provide input into the hazard mitigation planning process. Maps of the Plaquemines 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 St. Bernard Parish. In addition, questions covered the methods and techniques preferred for reducing the risks and losses associated with these hazards. Survey Results: <a href="https://www.surveymonkey.com/results/SM-HN37887H7/">https://www.surveymonkey.com/results/SM-HN37887H7/</a>
2 Week Period	Public Plan Review (Digital)		Yes	Parish Website or other locations determined by Steering Committee

## Planning

The plan update process consisted of several phases:

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7
<b>Plan Revision</b>							
<b>Data Collection</b>							
<b>Risk Assessment</b>							
<b>Public Input</b>							
<b>Mitigation Strategy and Actions</b>							
<b>Plan Review by GOHSEP and FEMA</b>							
<b>Plan Adoption</b>							
<b>Plan Approval</b>							

## Coordination

The Vermilion Parish Office of Homeland Security and Emergency Preparedness (OHSEP) oversaw the coordination of the 2020 Hazard Mitigation Plan Update Steering Committee during the update process. The parish OHSEP was 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. SDMI assisted the Parish Director with press releases 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 steering committee encouraged participation from a broad range of parish 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
- Action item development
- Plan document draft review
- Formal adoption of the Hazard Mitigation Plan document following provisional approval by the State of Louisiana and FEMA

The 2020 Hazard Mitigation Plan Update Steering Committee consisted of representatives from the following parish, municipal or community stakeholders:

- Vermilion Parish Police Jury
- Vermilion Parish Office of Homeland Security and Emergency Preparedness
- Vermilion Parish School Board
- Vermilion Parish Public Works
- Vermilion Parish Sheriff's Office
- Vermilion Parish Assessor's Office
- City of Abbeville
- Town of Delcambre
- Town of Erath
- Town of Gueydan
- City of Kaplan
- Village of Maurice
- Abbeville General Hospital
- Acadian Ambulance
- American Red Cross
- United Way
- LSU AgCenter

The Iberia Parish OHSEP Director was invited via email and phone call to participate in an effort to collaborate with neighboring communities. SDMI assisted Vermilion Parish with encouraging the collaboration with these neighboring communities via email by extending an invitation to the Vermilion Hazard Mitigation Plan Update Meetings. The participation of the GOHSEP Region 4 Coordinator during the process also contributed to neighboring community representation.

As part of the coordination and planning process, the parish was provided the State Required Hazard Mitigation Plan Update Worksheet. The completed worksheets can be found in Appendix E – State Required Plan Update Worksheets.

Below is a detailed list of the 2020 HMPU Steering Committee:

Vermilion Parish Hazard Mitigation Planning Committee				
Name	Title	Agency	Email	Phone
Keith Roy	Parish Administrator	Vermilion Parish	<a href="mailto:kroy.vppj@yahoo.com">kroy.vppj@yahoo.com</a>	337-898-4300
Rebecca M. Broussard	Director	Vermilion Parish OHSEP	<a href="mailto:vpoep@cox-internet.com">vpoep@cox-internet.com</a>	337-898-4308
Carly Vaughan	Secretary	Vermilion Parish OHSEP	<a href="mailto:vpoep@yahoo.com">vpoep@yahoo.com</a>	337-898-4308
Melissa White	Floodplain Manager	Vermilion Parish	<a href="mailto:melissa.vppj@yahoo.com">melissa.vppj@yahoo.com</a>	337-898-4300
Tommy Byler	Superintendent	Vermilion Parish School Board	<a href="mailto:tommy.byler@vpsb.net">tommy.byler@vpsb.net</a>	337-652-8315
William "Billy" Noegel	Director	Vermilion Parish Public Works	<a href="mailto:wpnoegel@gmail.com">wpnoegel@gmail.com</a>	337-898-4330
Clay Menard	Director	City of Abbeville Public Works	<a href="mailto:cmenard@connections-lct.com">cmenard@connections-lct.com</a>	337-893-8550

Keith Frederick	Solid Waste Supervisor	Vermilion Parish Public Works	<a href="mailto:keithF@kaplantel.com">keithF@kaplantel.com</a>	337-898-4338
Alex Crochet	Supervisor	Vermilion Parish Waterworks	<a href="mailto:jolexcro@cox.net">jolexcro@cox.net</a>	337-893-8711
Tony Richard	Supervisor	Southeast Water District	<a href="mailto:tony@schzoigl@coxmail.com">tony@schzoigl@coxmail.com</a>	337-652-8414
Carolyn Bessard	Assistant Parish Administrator	Vermilion Parish Police Jury	<a href="mailto:cbessard.vermilionppi@yahoo.com">cbessard.vermilionppi@yahoo.com</a>	337-898-4300
Ronald Darby	Police Jury Vice President	Vermilion Parish Police Jury	<a href="mailto:rdarby@cox.net">rdarby@cox.net</a>	337-898-4300
Wayne Touchet	District Five Police Juror	Vermilion Parish Police Jury	<a href="mailto:touchetbuilders@msn.com">touchetbuilders@msn.com</a>	337-898-4300
Gabriel Mathiew	Communications/ 911 Director	Vermilion Parish	<a href="mailto:vermilionparish911@yahoo.com">vermilionparish911@yahoo.com</a>	337-898-4350
Brandon Alleman	Patrol Division Captain	Vermilion Parish Sheriff's Office	<a href="mailto:brandon@vpso.net">brandon@vpso.net</a>	337-652-1000
Gabe Marceaux	Assessor	Vermilion Parish Assessor's Office	<a href="mailto:gabe.marceaux@vermilionassessor.org">gabe.marceaux@vermilionassessor.org</a>	337-893-2831
Nicole Soirez	Director of Accounting	Abbeville General Hospital	<a href="mailto:nicole.soriez@abbgen.net">nicole.soriez@abbgen.net</a>	337-898-6514
Bill Gerard	Operations Supervisor	Acadian Ambulance	<a href="mailto:wgerard@acadian.com">wgerard@acadian.com</a>	337-652-2996
Kara Murphy	Disaster Program Manager	American Red Cross	<a href="mailto:kara.murphy@redcross.org">kara.murphy@redcross.org</a>	337-234-7371
Jason Huffman	VP of Organizational and Impact Strategies	United Way of Acadiana	<a href="mailto:jason.huffman@unitedwayofacadiana.org">jason.huffman@unitedwayofacadiana.org</a>	337-706-1202
Andrew Granger	Extension Agent	LSU AgCenter - Vermilion Parish	<a href="mailto:agranger@agcenter.lsu.edu">agranger@agcenter.lsu.edu</a>	337-898-4335
Jude Reese	Mayor	Town of Gueydan	<a href="mailto:gueydan1@bellsouth.net">gueydan1@bellsouth.net</a>	337-536-9415
Pam Blakely	Mayor	Town of Delcambre	<a href="mailto:mayor@delcambre.net">mayor@delcambre.net</a>	337-685-4462
Michael Kloesel	Mayor	City of Kaplan	<a href="mailto:mayor@cityofkaplan.com">mayor@cityofkaplan.com</a>	337-643-8811
Mark Piazza	Mayor	City of Abbeville	<a href="mailto:mayor@cityofabbeville.net">mayor@cityofabbeville.net</a>	337-898-4206
Wayne Theriot	Mayor	Village of Maurice	<a href="mailto:villageofmaurice.mayor@cox-internet.com">villageofmaurice.mayor@cox-internet.com</a>	337-893-6406
Taylor Mencacci	Mayor	Town of Erath	<a href="mailto:taylor.mencaccio@gmail.com">taylor.mencaccio@gmail.com</a>	337-937-8401

## 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 Vermilion Parish programs and planning.

A measure of integration and coordination is achieved through the HMPU participation of Steering Committee members and community stakeholders who administer programs such as: floodplain management under the National Flood Insurance Program (NFIP), coastal protection and restoration, parish planning and zoning and building code enforcement.

Vermilion Parish will continue to integrate the requirements of this Hazard Mitigation Plan into other local planning mechanisms that are to be identified through future meetings of the Parish, 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 any 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 Vermilion Parish Hazard Mitigation Steering Committee will remain charged with ensuring that the goals and strategies of new and updated local planning documents for their communities 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 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 2015 Hazard Mitigation Plan was also used in the planning process. Other existing data and plans used in the planning process include those listed below:

- Louisiana Coastal Master Plan
- Vermilion Parish Emergency Operations Plan
- State of Louisiana Hazard Mitigation Plan
- Flood Insurance Rate Maps
- Vermilion Parish COOP

Further information on the plans can be found in the Capabilities Assessment, Section 3.

### Meeting Documentation and Public Outreach Activities

The following pages contain documentation of the meetings and public outreach activities conducted during this hazard mitigation plan update for Plaquemines Parish.

#### Meeting #1: Hazard Mitigation Plan Update Kick-Off

**Date:** April 16, 2020

**Location:** Conference Call

**Purpose:** Discuss the expectations and requirements of the hazard mitigation plan update process and establish an initial project timeline with the Parish's OHSEP Director and any additional personnel.

**Public Initiation:** No

**Meeting Invitees:**

Name	Title	Agency
Rebecca Broussard	Director	Vermilion Parish OHSEP
Carly Vaughan	Secretary	Vermilion Parish OHSEP
Lee John	Region 4 Coordinator	GOHSEP
Marion Pearson	Senior Problem Resolution Officer	GOHSEP
Jeffery Giering	State Hazard Mitigation Officer	GOHSEP
Lauren Morgan	Associate Director	Stephenson Disaster Management Institute
Chris Rippetoe	Program Manager	Stephenson Disaster Management Institute

**Meeting #2: Hazard Mitigation Plan Update Initial Planning Meeting****Date:** June 11, 2020**Location:** Abbeville, Louisiana

**Purpose:** Discuss the expectations and requirements of the hazard mitigation plan update process and establish an initial project timeline with the Parish's Hazard Mitigation Plan Steering Committee. Assign each individual the parish data collection for the plan update.

**Meeting Invitees:**

Name	Title	Agency
Keith Roy	Parish Administrator	Vermilion Parish
Rebecca M. Broussard	Director	Vermilion Parish OHSEP
Carly Vaughan	Secretary	Vermilion Parish OHSEP
Melissa White	Floodplain Manager	Vermilion Parish
Tommy Byler	Superintendent	Vermilion Parish School Board
William "Billy" Noegel	Director	Vermilion Parish Public Works
Clay Menard	Director	City of Abbeville Public Works
Keith Frederick	Solid Waste Supervisor	Vermilion Parish Public Works
Alex Crochet	Supervisor	Vermilion Parish Waterworks
Tony Richard	Supervisor	Southeast Water District
Carolyn Bessard	Assistant Parish Administrator	Vermilion Parish Police Jury
Ronald Darby	Police Jury Vice President	Vermilion Parish Police Jury
Wayne Touchet	District Five Police Juror	Vermilion Parish Police Jury
Gabriel Mathiew	Communications/911 Director	Vermilion Parish
Brandon Alleman	Patrol Division Captain	Vermilion Parish Sheriff's Office
Gabe Marceaux	Assessor	Vermilion Parish Assessor's Office
Nicole Soirez	Director of Accounting	Abbeville General Hospital
Bill Gerard	Operations Supervisor	Acadian Ambulance
Kara Murphy	Disaster Program Manager	American Red Cross
Jason Huffman	VP of Organizational and Impact Strategies	United Way of Acadiana
Andrew Granger	Extension Agent	LSU AgCenter - Vermilion Parish
Jude Reese	Mayor	Town of Gueydan
Pam Blakely	Mayor	Town of Delcambre
Michael Kloesel	Mayor	City of Kaplan
Mark Piazza	Mayor	City of Abbeville
Wayne Theriot	Mayor	Village of Maurice
Taylor Mencacci	Mayor	Town of Erath
Lee John	Region 4 Coordinator	GOHSEP
Marion Pearson	Senior Problem Resolution Officer	GOHSEP
Jeffery Giering	State Hazard Mitigation Officer	GOHSEP
Lauren Morgan	Associate Director	Stephenson Disaster Management Institute
Chris Rippetoe	Program Manager	Stephenson Disaster Management Institute

### Meeting #3: Risk Assessment Overview

**Date:** July 10, 2020

**Location:** Virtual; Zoom Meeting

**Purpose:** Members of the Vermilion Parish Hazard Mitigation Plan Update Steering Committee were presented the results of the risk assessment and an overview of the public meeting presentation during this overview. The assessment was conducted based on hazards identified during previous plans and on any newly identified risks.

**Public Initiation:** No

**Meeting Invitees:**

Name	Title	Agency
Keith Roy	Parish Administrator	Vermilion Parish
Rebecca M. Broussard	Director	Vermilion Parish OHSEP
Carly Vaughan	Secretary	Vermilion Parish OHSEP
Melissa White	Floodplain Manager	Vermilion Parish
Tommy Byler	Superintendent	Vermilion Parish School Board
William "Billy" Noegel	Director	Vermilion Parish Public Works
Clay Menard	Director	City of Abbeville Public Works
Keith Frederick	Solid Waste Supervisor	Vermilion Parish Public Works
Alex Crochet	Supervisor	Vermilion Parish Waterworks
Tony Richard	Supervisor	Southeast Water District
Carolyn Bessard	Assistant Parish Administrator	Vermilion Parish Police Jury
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Gabriel Mathiew	Communications/911 Director	Vermilion Parish
Brandon Alleman	Patrol Division Captain	Vermilion Parish Sheriff's Office
Gabe Marceaux	Assessor	Vermilion Parish Assessor's Office
Nicole Soirez	Director of Accounting	Abbeville General Hospital
Bill Gerard	Operations Supervisor	Acadian Ambulance
Kara Murphy	Disaster Program Manager	American Red Cross
Jason Huffman	VP of Organizational and Impact Strategies	United Way of Acadiana
Andrew Granger	Extension Agent	LSU AgCenter - Vermilion Parish
Jude Reese	Mayor	Town of Gueydan
Pam Blakely	Mayor	Town of Delcambre
Michael Kloesel	Mayor	City of Kaplan
Mark Piazza	Mayor	City of Abbeville
Wayne Theriot	Mayor	Village of Maurice
Taylor Mencacci	Mayor	Town of Erath
Lee John	Region 4 Coordinator	GOHSEP
Marion Pearson	Senior Problem Resolution Officer	GOHSEP
Jeffery Giering	State Hazard Mitigation Officer	GOHSEP
Lauren Morgan	Associate Director	Stephenson Disaster Management Institute
Chris Rippetoe	Program Manager	Stephenson Disaster Management Institute

**Meeting #4: Public Meeting****Date:** July 10, 2020**Location:** Virtual; Zoom Meeting**Purpose:** The Public Meeting allowed the public and community stakeholders to participate and provide input into the hazard mitigation planning process.**Public Initiation:** Yes**Meeting Invitees:**

Name	Title	Agency
Keith Roy	Parish Administrator	Vermilion Parish
Rebecca M. Broussard	Director	Vermilion Parish OHSEP
Carly Vaughan	Secretary	Vermilion Parish OHSEP
Melissa White	Floodplain Manager	Vermilion Parish
Tommy Byler	Superintendent	Vermilion Parish School Board
William "Billy" Noegel	Director	Vermilion Parish Public Works
Clay Menard	Director	City of Abbeville Public Works
Keith Frederick	Solid Waste Supervisor	Vermilion Parish Public Works
Alex Crochet	Supervisor	Vermilion Parish Waterworks
Tony Richard	Supervisor	Southeast Water District
Carolyn Bessard	Assistant Parish Administrator	Vermilion Parish Police Jury
Ronald Darby	Police Jury Vice President	Vermilion Parish Police Jury
Wayne Touchet	District Five Police Juror	Vermilion Parish Police Jury
Gabriel Mathiew	Communications/911 Director	Vermilion Parish
Brandon Alleman	Patrol Division Captain	Vermilion Parish Sheriff's Office
Gabe Marceaux	Assessor	Vermilion Parish Assessor's Office
Nicole Soirez	Director of Accounting	Abbeville General Hospital
Bill Gerard	Operations Supervisor	Acadian Ambulance
Kara Murphy	Disaster Program Manager	American Red Cross
Jason Huffman	VP of Organizational and Impact Strategies	United Way of Acadiana
Andrew Granger	Extension Agent	LSU AgCenter - Vermilion Parish
Jude Reese	Mayor	Town of Gueydan
Pam Blakely	Mayor	Town of Delcambre
Michael Kloesel	Mayor	City of Kaplan
Mark Piazza	Mayor	City of Abbeville
Wayne Theriot	Mayor	Village of Maurice
Taylor Mencacci	Mayor	Town of Erath
Lee John	Region 4 Coordinator	GOHSEP
Marion Pearson	Senior Problem Resolution Officer	GOHSEP
Jeffery Giering	State Hazard Mitigation Officer	GOHSEP
Lauren Morgan	Associate Director	Stephenson Disaster Management Institute
Chris Rippetoe	Program Manager	Stephenson Disaster Management Institute

Outreach Activity: Public Opinion Survey

**Date:** Ongoing throughout planning process

**Location:** Web survey

**Public Initiation:** Yes

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## Appendix B: Plan Maintenance

### Purpose

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

### Monitoring, Evaluating, and Updating the Plan

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

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

### Responsible Parties

Vermilion Parish has designated an entity that will perform a regular review and update of the Hazard Mitigation Plan. 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

Vermilion 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 Vermilion 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 Vermilion Parish OHSEP Director at least 30 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

An evaluation of the plan will be conducted in the annual planning committee meeting. The planning committee will review each goal and objective to determine their relevance to changing situations in the parish, as well as changes to state or federal policy, and to ensure that they are addressing current and expected conditions. The planning committee will evaluate if any change in hazard profile and risk in the parish occurred during the past year. In addition, the evaluation will include the following criteria in respect of plan implementation:

- 1) Any local staffing changes that would warrant inviting different members to the planning committee
- 2) Any new organizations that would be valuable in the planning process or project implementation need to be included in the planning committee
- 3) Are there any procedures that can be done more efficiently
- 4) Are there more ways to gain more diverse and widespread cooperation
- 5) Are there any different or additional funding sources available for mitigation planning and implementation

The HMP will be updated every five years to remain eligible for continued HMGP funding. The planning committee will be responsible for updating the HMP. The OHSEP Director will be the lead person for the HMP update. The HMP update process will commence at least one year prior to the expiration of the

plan. The HMP will be updated after a major disaster if an annual evaluation of the plan indicates a substantial change in hazard profile and risk assessment in the parish.

Additionally, the public will be canvassed to solicit input to continue Vermilion 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.

### 2020 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 2015 update were adequate. 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 the responsibility of the Plaquemines Parish Hazard Mitigation Plan Steering Committee to determine additional implementation procedures when appropriate. This may include integrating the requirements of the Vermilion Parish Hazard Mitigation Plan into planning documents, processes, or mechanisms as follows:

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

The above referenced ordinances, building codes, and regulations will be amended by a resolution in the parish council in order to incorporate the mitigation actions identified in the HMP.

Opportunities to integrate the requirements of this plan into other local planning mechanisms will continue to be identified through future meetings of the Vermilion 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 individual plans that require specific planning and administrative tasks (e.g. risk

assessment, plan amendments, ordinance revisions, capital improvement projects, etc.). The members of the steering committee will meet with Department Heads to discuss what should be included in the changes that are necessary before the changes are introduced to the city council or police jury meetings. 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 agencies are consistent with the goals and actions of the Vermilion 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, such as a Risk Assessment, Comprehensive Plan, Capital Improvements Plan, or Emergency Operations Plan, the parish 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 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. And while the development and maintenance of this stand-alone plan has been recognized as the most effective course of mitigation action implementation, individual facets of this plan have been used to bolster other planning and mitigation efforts. The following parish plans incorporate requirements of the Vermilion Parish Hazard Mitigation Plan Update as follows:

**Vermilion Unincorporated**

- Comprehensive Master Plan – Updated as needed by Vermilion Parish Police Jury
- Capital Improvements Plan – Updated as needed by Vermilion Parish Police Jury
- Economic Development Plan – Updated as needed by Vermilion Parish Police Jury
- Local Emergency Operations Plan – Updated as needed by Vermilion Parish OHSEP
- Continuity of Operations Plan - Updated as needed by Vermilion Parish OHSEP
- Transportation Plan – Updated as needed by Plaquemines Parish OHSEP

**City of Abbeville**

- Stormwater Management Plan – Updated as needed by Vermilion Parish Public Works and Abbeville Mayor's Office

**Town of Delcambre**

- Economic Development Plan – Updated as needed by Vermilion Parish Police Jury and Delcambre Mayor's Office
- Local Emergency Operations Plan – Updated as needed by Vermilion Parish OHSEP and Gueydan Mayor's Office

**Town of Erath**

- Economic Development Plan – Updated as needed by Vermilion Parish Police Jury and Erath Mayor's Office
- Local Emergency Operations Plan – Updated as needed by Vermilion Parish OHSEP and Erath Mayor's Office

**Town of Gueydan**

- Local Emergency Operations Plan – Updated as needed by Vermilion Parish OHSEP and Gueydan Mayor's Office
- Continuity of Operations Plan - Updated as needed by Vermilion Parish OHSEP and Gueydan Mayor's Office
- Transportation Plan – Updated as needed by Vermilion Parish OHSEP and Gueydan Mayor's Office

**City of Kaplan**

- Comprehensive Master Plan – Updated as needed by Vermilion Parish Police Jury and Kaplan Mayor's Office
- Capital Improvements Plan – Updated as needed by Vermilion Parish Police Jury and Kaplan Mayor's Office
- Local Emergency Operations Plan – Updated as needed by Vermilion Parish OHSEP and Kaplan Mayor's Office
- Continuity of Operations Plan - Updated as needed by Vermilion Parish OHSEP and Kaplan Mayor's Office
- Transportation Plan – Updated as needed by Vermilion Parish OHSEP and Kaplan Mayor's Office
- Stormwater Management Plan – Updated as needed by Vermilion Parish Public Works and Kaplan Mayor's Office

**Village of Maurice**

- Comprehensive Master Plan – Updated as needed by Vermilion Parish Police Jury and Maurice Mayor's Office
- Local Emergency Operations Plan – Updated as needed by Vermilion Parish OHSEP and Maurice Mayor's Office
- Continuity of Operations Plan - Updated as needed by Vermilion Parish OHSEP and Maurice Mayor's Office
- Transportation Plan – Updated as needed by Vermilion Parish OHSEP and Maurice Mayor's Office
- Community Wildfire Protection Plan - Updated as needed by Vermilion Parish OHSEP and Maurice Fire Department

### 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.



## Appendix C: Essential Facilities

### Unincorporated Vermilion Parish Essential Facilities

Vermilion Parish Unincorporated Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	7 <sup>th</sup> Ward Fire District	X	X		X	X	X	X	X
	District 13 Fire Department		X		X	X	X	X	X
	District 13 Volunteer Fire Department		X		X	X	X	X	X
	District 13 Volunteer Fire Department		X		X	X	X	X	X
	Fire Protection District 7		X		X	X	X	X	X
	Henry Volunteer Fire Dept	X	X		X	X	X	X	X
	Henry Volunteer Fire Dept 15	X	X		X	X	X	X	X
	Indian Bayou Community Volunteer Fire Department		X		X	X	X	X	X
	K.V.F.D. Substation No. 1		X		X	X	X	X	X
	Leblanc Community Satellite Fire Station				X	X	X	X	X
	Leleux Districts 2 & 10				X	X	X	X	X
	Meaux/Nunex Community Satellite Fire Station				X	X	X	X	X
	Pecan Island Volunteer Fire Department	X	X		X	X	X	X	X
Government	City of Kaplan Maintenance Yard				X	X	X	X	X
	Vermilion Public Works	X	X		X	X	X	X	X

Vermilion Parish Unincorporated Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Law Enforcement	United States K-9 Unlimited		X		X	X	X	X	X
	Vermilion Law Enforcement		X		X	X	X	X	X
	Vermilion Parish Police Jury Area 3 Barn				X	X	X	X	X
	Vermilion Parish Police Jury Barn 4				X	X	X	X	X
Schools	7 <sup>TH</sup> Ward Elementary	X	X		X	X	X	X	X
	Forked Island Elementary	X	X		X	X	X	X	X
	Fort Island Elementary				X	X	X	X	X
	I Bayou				X	X	X	X	X
	Kaplan High School				X	X	X	X	X
	Leblanc Elementary School		X		X	X	X	X	X
	Meaux Elementary		X		X	X	X	X	X
	North Vermilion High				X	X	X	X	X
	OCS Headstart Program				X	X	X	X	X
	Pecan Island School	X	X		X	X	X	X	X
	St. Mary CAA Head Start Center		X		X	X	X	X	X
	St. Mary CAA/Head Start		X		X	X	X	X	X

## City of Abbeville Essential Facilities

Abbeville Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Harold Lemaire Fire Substation	X			X	X	X	X	X
	Hebert Fire Substation		X		X	X	X	X	X
	Herbert J. Miles Fire Substation No. 3	X			X	X	X	X	X
	Main Fire Station		X		X	X	X	X	X
	Main Fire Station				X	X	X	X	X
Government	Abbeville DOTD		X		X	X	X	X	X
	Abbeville Tourist Center/Vermilion Parish Tourist Commission	X			X	X	X	X	X
	City of Abbeville Maintenance Yard	X	X		X	X	X	X	X
	City of Abbeville Municipal Services				X	X	X	X	X
	Courthouse				X	X	X	X	X
	Department of Motor Vehicles	X	X		X	X	X	X	X
	Dept of Social Services	X			X	X	X	X	X
	HUD Section 8				X	X	X	X	X
	LA Department of VA Parish Service Office				X	X	X	X	X
	LA Public Works	X			X	X	X	X	X
	LA Army National Guard HQ	X	X		X	X	X	X	X

Abbeville Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
	LA Department of Public Safety	X			X	X	X	X	X
	LA Workforce Commission				X	X	X	X	X
	Public Workforce Commission				X	X	X	X	X
	The City Court of Abbeville				X	X	X	X	X
	USDA Service Center				X	X	X	X	X
	Vermilion Parish Council on Aging				X	X	X	X	X
	Vermilion Parish Courthouse Annex				X	X	X	X	X
	Vermilion Parish School Board Annex				X	X	X	X	X
	Vermilion Parish School Board Maintenance Office				X	X	X	X	X
	Vermilion Parish School Board Office				X	X	X	X	X
	Vermilion Parish School Board Parenting Center	X			X	X	X	X	X
	Vermilion Parish School Board Special Services Department				X	X	X	X	X
	Vermilion Parish School Board Transportation Department		X		X	X	X	X	X
Law Enforcement	Abbeville Holding Facility – City Marshall		X		X	X	X	X	X
	Abbeville Police Department		X		X	X	X	X	X
	Sheriff's Office				X	X	X	X	X
	Vermilion Parish Sheriff's Office				X	X	X	X	X

Abbeville Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
<b>Public Health</b>	Abbeville General Health	X			X	X	X	X	X
<b>Schools</b>	Abbeville High	X			X	X	X	X	X
	Acadiana Technical College	X	X		X	X	X	X	X
	Administration and Student Affairs	X			X	X	X	X	X
	Easton Park Elementary				X	X	X	X	X
	Harvest Time Christian Academy	X	X		X	X	X	X	X
	Herod Elementary	X	X		X	X	X	X	X
	J.H. Williams Middle School	X			X	X	X	X	X
	Kiddie Land Learning Center				X	X	X	X	X
	Mount Carmel Elementary				X	X	X	X	X
	Vermilion High	X	X		X	X	X	X	X

### Town of Delcambre Essential Facilities

Delcambre Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
<b>Government</b>	Water System Improvement		X		X	X	X	X	X
<b>Schools</b>	Delcambre Elementary	X	X		X	X	X	X	X
	Delcambre High	X	X		X	X	X	X	X

## Town of Erath Essential Facilities

Erath Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Erath Fire Station		X		X	X	X	X	X
	Erath Volunteer Fire Department		X		X	X	X	X	X
Government	Erath City Court		X		X	X	X	X	X
	Erath City Hall		X		X	X	X	X	X
	Erath Public Works		X		X	X	X	X	X
Schools	Dozier Elementary		X		X	X	X	X	X
	Erath High		X		X	X	X	X	X
	Erath Middle		X		X	X	X	X	X

## Town of Gueydan Essential Facilities

Gueydan Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Gueydan Vol. Fire				X	X	X	X	X
	Gueydan Substation Volunteer Fire Department				X	X	X	X	X
Government	Gueydan City Hall				X	X	X	X	X
	Gueydan Street Department				X	X	X	X	X
	Louisiana Farm Bureau				X	X	X	X	X
Law Enforcement	Gueydan Police Department				X	X	X	X	X



Gueydan Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Public Health	Gardner Community Health Center				X	X	X	X	X
Schools	Gueydan Head Start				X	X	X	X	X
	Gueydan High School				X	X	X	X	X
	Jesse Owens Elementary School				X	X	X	X	X
	St. Peter School				X	X	X	X	X

## City of Kaplan Essential Facilities

Kaplan Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
Fire and Rescue	Kaplan Fire Department		X		X	X	X	X	X
Government	Kaplan City Court		X		X	X	X	X	X
Law Enforcement	Kaplan Police Department		X		X	X	X	X	X
Public Health	Abrom Kaplan Memorial Hospital				X	X	X	X	X
Schools	Early Years				X	X	X	X	X
	Kaplan Elementary School				X	X	X	X	X
	Maltrait Memorial Catholic School				X	X	X	X	X
					X	X	X	X	X
	Rene A Host Middle School		X		X	X	X	X	X

## Village of Maurice Essential Facilities

Maurice Essential Facilities									
Type	Name	Coastal Hazards	Flooding	Sinkholes	Hail	Lightning	Wind	Tornadoes	Tropical Cyclones
<b>Fire and Rescue</b>	Maurice Volunteer Fire Department				X	X	X	X	X
<b>Government</b>	Maurice City Hall				X	X	X	X	X
<b>Law Enforcement</b>	Maurice Police Department				X	X	X	X	X
<b>Schools</b>	Cecil Picard Elementary				X	X	X	X	X
	Maurice Head Start				X	X	X	X	X

## Appendix D: Plan Adoption

Vermilion Parish

Louisiana

**Resolution  
2021-R-04**

A RESOLUTION OF THE VERMILION PARISH

2021 HAZARD MITIGATION PLAN

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

WHEREAS the Vermilion Parish has prepared a multi-hazard mitigation plan, hereby known as 2021 Vermilion Parish Hazard Mitigation Program in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS 2021 Vermilion Parish Hazard Mitigation Program identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Vermilion Parish from the impacts of future hazards and disasters; and

WHEREAS adoption by the Vermilion Parish Police Jury demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2021 Vermilion Parish Hazard Mitigation Program.

NOW THEREFORE, BE IT RESOLVED BY THE VERMILION PARISH, LOUISIANA, THAT:

Section 1. In accordance with GOHSEP AND THE VERMILION PARISH POLICE JURY adopts the 2021 VERMILION PARISH HAZARD MITIGATION PROGRAM.

The motion to approve the foregoing resolution was made by Police Jury Member Mr. Errol Domingues seconded by Police Jury Member Mr. Chad Vallo, and the following vote was recorded.


YEAS: Mr. Dane Hebert, Mr. Jason Picard, Mr. Brent Landry, Mr. Ronald Darby, Mr. Wayne Touchet, Mr. Mark Poche', Mr. Paul Bourgeois, Mr. Errol J. Domingues, Mr. Ronald Menard, Mr. Scott Broussard, Mr. Dexter Callahan, Mr. Sandrus Stelly, Mr. Chad Vallo

NAYS: NONE

ABSENT: Mr. Chad Lege

And the resolution was declared adopted on this, the 4<sup>th</sup> day of January, 2021.

ATTEST:

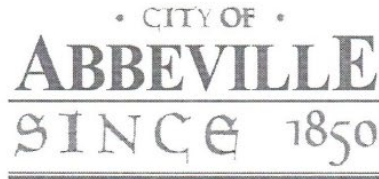
By:   
Keith Roy, Parish Administrator

APPROVED AS TO FORM:

By:   
Dane Hebert, Parish President

MARK PIAZZA  
Mayor

KATHLEEN S. FAULK  
Secretary - Treasurer



**CERTIFICATE**

I, Kathleen S. Faulk, Secretary-Treasurer for the City of Abbeville, Louisiana do hereby certify that the attached Resolution #R21-03 adopted at the regular Abbeville City Council meeting held on February 2, 2021 is a true and correct copy.

**IN WITNESS THEREOF**, I hereunto affix my hand and the seal of the City of Abbeville, Louisiana on this 3<sup>rd</sup> of February, 2021.

  
KATHLEEN S. FAULK  
Secretary-Treasurer



**COUNCILMEN:**  
**FRANCIS J. PLAISANCE**  
Councilman at Large

**ROSLYN R. WHITE**  
District A

**FRANCIS TOUCHET, JR.**  
District B

**BRADY BROUSSARD, JR.**  
District C

**TERRY Y. BROUSSARD**  
District D

*City of Abbeville*  
*101 N. State Street*  
*P.O. Box 1170*  
*Abbeville, LA 70511-1170*  
*(337) 893-8550*  
*Fax: (337) 898-4298*

**RESOLUTION NO.: R-21-\_\_\_**

**BE IT KNOWN AND REMEMBERED**, that pursuant to a public notice, a regularly scheduled meeting of the City Council of the City of Abbeville was held on the 2nd day of February, 2021, commencing at 5:30 o'clock p.m. at City Hall, Abbeville, Louisiana, where the following resolution was moved, duly seconded, passed and adopted, to-wit:

**2021 HAZARD MITIGATION GRANT PROGRAM**

**WHERE AS**, the VERMILION PARISH OHSEP recognizes the threat that natural hazards pose to people and property within VERMILION PARISH; and

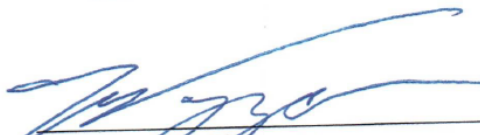

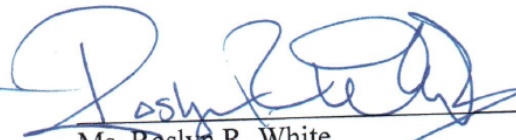
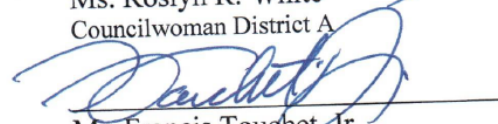
**WHERE AS**, the VERMILION PARISH OHSEP has prepared a multi-hazard plan, hereby known as 2021 HAZARD MITIGATION GRANT PROGRAM in accordance with the Disaster Mitigation Act of 2000; and

**WHERE AS**, the 2021 HAZARD MITIGATION GRANT PROGRAM identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in VERMILION PARISH from the impacts of future hazards and disasters; and

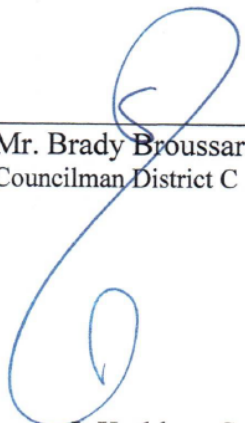
**WHERE AS**, adoption of the plan by the CITY OF ABBEVILLE demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2021 HAZARD MITIGATION GRANT PROGRAM.

**NOW, BE IT RESOLVED** that in accordance with GOSEP, the City Council of the City of Abbeville, acting as the governing authority of said city does hereby adopt the 2021 HAZARD MITIGATION GRANT PROGRAM.

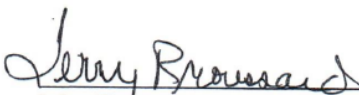
**APPROVED AND ADOPTED** by a vote of 5 favor, and 0 against, and 0 abstaining on this 2nd day of February, 2021.

  
\_\_\_\_\_  
Hon. Mark F. Piazza, Mayor  
\_\_\_\_\_  
Mr. Francis J. Plaisance  
Councilman at Large  
\_\_\_\_\_  
Ms. Roslyn R. White  
Councilwoman District A  
\_\_\_\_\_  
Mr. Francis Touchet, Jr.  
Mayor Pro-Tem/Councilman District B





\_\_\_\_\_  
Mr. Brady Broussard, Jr.  
Councilman District C




\_\_\_\_\_  
Ms. Terry Y. Broussard  
Councilwoman District D

### CERTIFICATE

I, Kathleen S. Faulk, the duly qualified and appointed Clerk of the City of Abbeville, State of Louisiana, do hereby certify that the above and foregoing resolution was duly approved at the regular meeting of the Mayor and City Council of the City of Abbeville held on February 2, 2021.

THUS DONE AND SIGNED in Abbeville, Louisiana on this 2<sup>nd</sup> day of February, 2021.



\_\_\_\_\_

Kathleen S. Faulk, City Secretary/Treasurer

MAYOR, PAM BLAKELY

CLERK, PATTI L. VINCENT

# TOWN OF DELCAMBRE

*Shrimp Capital of the World*

107 N. RAILROAD

DELCAMBRE, LA 70528

PHONE: 337-685-4462 FAX: 337-685-4466

VERMILION PARISH

LOUISIANA

**RESOLUTION NO. 2021-01**

A RESOLUTION OF THE TOWN OF DELCAMBRE

2021 HAZARD MITIGATION GRANT PROGRAM

WHEREAS the VERMILION PARISH OHSEP recognizes the threat that natural hazards pose to people and property within VERMILION PARISH

WHEREAS the VPOHSEP has prepared a multi-hazard mitigation plan, hereby known as 2021 HAZARD MITIGATION GRANT PROGRAM in accordance with Disaster Mitigation Act of 2000; and

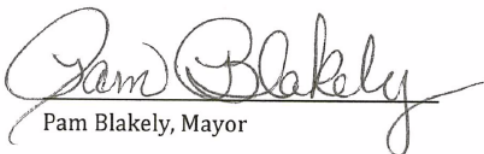
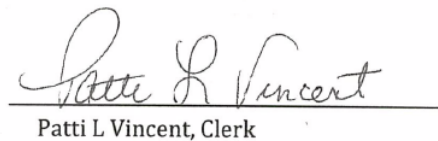
WHEREAS THE 2021 HAZARD MITIGATION GRANT PROGRAM identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in VERMILION PARISH from the impacts of future hazards and disasters; and

WHEREAS adoption by the TOWN OF DELCAMBRE demonstrates their commitment to hazard mitigation and achieving the goals outlined in the 2021 HAZARD MITIGATION GRANT PROGRAM.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF DELCAMBRE, LOUISIANA, THAT:

Section 1. In accordance with GOHSEP, THE TOWN OF DELCAMBRE adopts the 2021 HAZARD MITIGATION PROGRAM.

Adopted by vote of **4** in favor **0** against, **0** abstaining, **1** absent, on this **8<sup>th</sup>** day of

**FEBRUARY 08, 2021**  
Pam Blakely, Mayor  
Patti L Vincent, Clerk

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USDA is an equal opportunity provider, employer, and lender.



VERMILION PARISH

LOUISIANA

RESOLUTION NO. 2040

A RESOLUTION FOR THE TOWN OF ERATH

2021 HAZARD MITIGATION GRANT PROGRAM

WHEREAS the Vermilion Parish OHSEP recognizes the threat that natural hazards pose to people and property within Vermilion Parish

WHEREAS the VERMILION PARISH OHSEP has prepared a multi-hazard mitigation plan, hereby known as 2021 HAZARD MITIGATION GRANT PROGRAM in accordance with the Disaster Mitigation Act of 2000; and

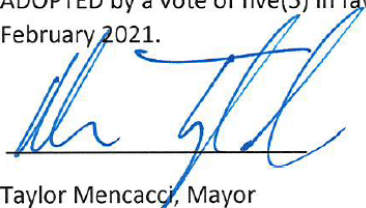
WHEREAS THE 2021 HAZARD MITIGATION GRANT PROGRAM identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in VERMILION PARISH from the impacts of future hazards and disasters; and

WHEREAS adoption by the TOWN OF ERATH demonstrates their commitment to hazard mitigation and achieving the goals outlined in the 2021 HAZARD MITIGATION GRANT PROGRAM.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF ERATH LOUISIANA, THAT:

Section 1. in accordance with GOHSEP, THE TOWN OF ERATH adopts the 2021 HAZARD MITIGATION PROGRAM.

ADOPTED by a vote of five(5) in favor and zero(0) against, and zero(0) abstaining, this 8th day of February 2021.



Taylor Mencacci, Mayor



Raquel Harris, Town Clerk

**VERMILION PARISH  
LOUISIANA**

**RESOLUTION NO. 2-2021**

A RESOLUTION FOR THE TOWN OF GUEYDAN

2021 HAZARD MITIGATION GRANT PROGRAM

WHEREAS the VERMILION PARISH OHSEP recognizes the threat that natural hazards pose to people and property in VERMILION PARISH

WHEREAS the VERMILION PARISH OHSEP has prepared a multi-hazard mitigation plan, hereby known as 2021 HAZARD MITIGATION GRANT PROGRAM in accordance with the Disaster Mitigation Act of 2020; and

WHEREAS THE 2021 HAZARD MITIGATION GRANT PROGRAM identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in VERMILION PARISH from the impact of future hazards and disasters; and

WHEREAS adoption by the TOWN OF GUEYDAN demonstrates their commitment to hazard mitigation and achieving the goals outlined in the 2021 HAZARD MITIGATION GRANT PROGRAM.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF GUEYDAN, LOUISIANA adopts the 2021 HAZARD MITIGATION PROGRAM.

ADOPTED by a vote of 4 in favor and 0 against, 1 absent and 0 abstaining, this 2<sup>nd</sup> day of March 2021.

By: JOHN LASETER, SCOTT VALLO, ANITA DUPUIS & JASON SUIRE

ATTEST BY: S/Roxanna Richard  
Roxanna Richard, Clerk

APPROVED AS TO FORM BY: S/Jude D. Reese  
Jude D. Reese, Mayor

The following resolution was offered by Councilwoman Morrison, seconded by Councilwoman Guidry and duly resolved:

### RESOLUTION

#### **A RESOLUTION FOR THE CITY OF KAPLAN 2021 HAZARD MITIGATION GRANT PROGRAM**

WHEREAS the VERMILION PARISH OHSEP recognizes the threat that natural hazards pose to people and property within VERMILION PARISH

WHEREAS the VERMILION PARISH OHSEP has prepared a multi-hazard mitigation plan, hereby known as 2021 HAZARD MITIGATION GRANT PROGRAM in accordance with the Disaster Mitigation Act of 2000; and

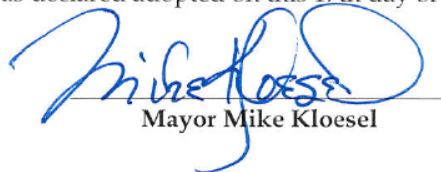
WHEREAS THE 2021 HAZARD MITIGATION GRANT PROGRAM identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in VERMILION PARISH from the impacts of future hazards and disasters; and

WHEREAS adoption by the CITY OF KAPLAN demonstrates their commitment to hazard mitigation and achieving the goals outlined in the 2021 HAZARD MITIGATION GRANT PROGRAM.

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

Section 1. In accordance with GOHSEP, THE CITY OF KAPLAN adopts the 2021 HAZARD MITIGATION PROGRAM.

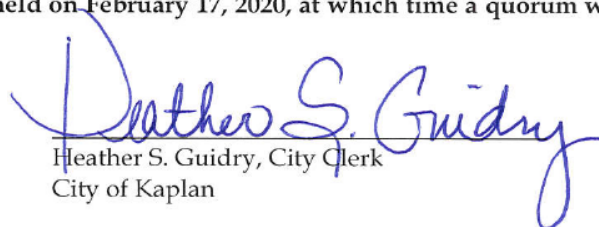
This resolution was declared adopted on this 17th day of February, 2020.



Mayor Mike Kloesel

\*\*\*\*\*

I, Heather S. Guidry, City Clerk, of the City of Kaplan, Louisiana, do hereby certify that the above is a true and exact copy of a resolution adopted by the City of Kaplan, Board of Alderman, at their regular meeting held on February 17, 2020, at which time a quorum was present and acting.



Heather S. Guidry, City Clerk  
City of Kaplan



VERMILION PARISH  
LOUISIANA

RESOLUTION NO. 21-02

A RESOLUTION ADOPTING 2021 VERMILION PARISH'S HAZARD MITIGATION  
GRANT PROGRAM

WHEREAS, the VERMILION PARISH OHSEP recognizes the threat that natural hazards pose to people and property within VERMILION PARISH

WHEREAS, the VERMILION PARISH OHSEP has prepared a multi-hazard mitigation plan, hereby known as 2021 HAZARD MITIGATION GRANT PROGRAM in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the 2021 HAZARD MITIGATION GRANT PROGRAM identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in VERMILION PARISH from the impacts of future hazards and disasters; and


WHEREAS, adoption by the VILLAGE OF MAURICE demonstrates their commitment to hazard mitigation and achieving the goals outlined in the 2021 HAZARD MITIGATION GRANT PROGRAM.

NOW THEREFORE, be it resolved by the Council of the Village of Maurice that the Mayor and Council does hereby adopt the 2021 Hazard Mitigation Program.

The following resolution was offered by Alderman Jonathan Schlicher, seconded by Alderwoman Phyllis Johnson, and duly resolved:

ADOPTED by a vote of 2 in favor and 0 against, and 0 abstaining, on this 17<sup>th</sup> day of February 2021


By: \_\_\_\_\_

  
Wayne Theriot, Mayor  
Village of Maurice

\*\*\*\*\*

CERTIFICATE

I, Melanie Denais, Clerk of the Village of Maurice, do hereby certify that the above is a true and exact copy of a resolution adopted by the Mayor and the Council of the Village of Maurice on Wednesday, February 17, 2021, at which time a quorum was present and voting.

  
MELANIE DENAIS  
MUNICIPAL CLERK  
VILLAGE OF MAURICE



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## Appendix E: State Required Worksheets

During the planning process (Appendix A) the Hazard Mitigation Plan Update Steering Committee was provided state-required plan update process worksheets to be filled out. The worksheets were presented at the Initial Planning Meeting by SDMI as tools for assisting in the update of the Hazard Mitigation Plan, but also as a State Requirement (Element E) for the update. 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 state required worksheets.

### Mitigation Planning Team

Vermilion Parish Hazard Mitigation Planning Committee				
Name	Title	Agency	Email	Phone
Keith Roy	Parish Administrator	Vermilion Parish	<a href="mailto:kroy.vppj@yahoo.com">kroy.vppj@yahoo.com</a>	337-898-4300
Rebecca M. Broussard	Director	Vermilion Parish OHSEP	<a href="mailto:vpoeep@cox-internet.com">vpoeep@cox-internet.com</a>	337-898-4308
Carly Vaughan	Secretary	Vermilion Parish OHSEP	<a href="mailto:vpoeep@yahoo.com">vpoeep@yahoo.com</a>	337-898-4308
Melissa White	Floodplain Manager	Vermilion Parish	<a href="mailto:melissa.vppj@yahoo.com">melissa.vppj@yahoo.com</a>	337-898-4300
Tommy Byler	Superintendent	Vermilion Parish School Board	<a href="mailto:tommy.byler@vpsb.net">tommy.byler@vpsb.net</a>	337-652-8315
William "Billy" Noegel	Director	Vermilion Parish Public Works	<a href="mailto:wpnoegel@gmail.com">wpnoegel@gmail.com</a>	337-898-4330
Clay Menard	Director	City of Abbeville Public Works	<a href="mailto:cmenard@connections-lct.com">cmenard@connections-lct.com</a>	337-893-8550
Keith Frederick	Solid Waste Supervisor	Vermilion Parish Public Works	<a href="mailto:keithF@kaplantel.com">keithF@kaplantel.com</a>	337-898-4338
Alex Crochet	Supervisor	Vermilion Parish Waterworks	<a href="mailto:jolexcro@cox.net">jolexcro@cox.net</a>	337-893-8711
Tony Richard	Supervisor	Southeast Water District	<a href="mailto:tony@schzoigl@coxmail.com">tony@schzoigl@coxmail.com</a>	337-652-8414
Carolyn Bessard	Assistant Parish Administrator	Vermilion Parish Police Jury	<a href="mailto:cbessard.vermilionppj@yahoo.com">cbessard.vermilionppj@yahoo.com</a>	337-898-4300
Ronald Darby	Police Jury Vice President	Vermilion Parish Police Jury	<a href="mailto:rdarby@cox.net">rdarby@cox.net</a>	337-898-4300
Wayne Touchet	District Five Police Juror	Vermilion Parish Police Jury	<a href="mailto:touchetbuilders@msn.com">touchetbuilders@msn.com</a>	337-898-4300
Gabriel Mathiew	Communications/911 Director	Vermilion Parish	<a href="mailto:vermilionparish911@yahoo.com">vermilionparish911@yahoo.com</a>	337-898-4350
Brandon Alleman	Patrol Division Captain	Vermilion Parish Sheriff's Office	<a href="mailto:brandon@vpso.net">brandon@vpso.net</a>	337-652-1000
Gabe Marceaux	Assessor	Vermilion Parish Assessor's Office	<a href="mailto:gabe.marceaux@vermilionassessor.org">gabe.marceaux@vermilionassessor.org</a>	337-893-2831
Nicole Soirez	Director of Accounting	Abbeville General Hospital	<a href="mailto:nicole.soriez@abbgen.net">nicole.soriez@abbgen.net</a>	337-898-6514
Bill Gerard	Operations Supervisor	Acadian Ambulance	<a href="mailto:wgerard@acadian.com">wgerard@acadian.com</a>	337-652-2996

Kara Murphy	Disaster Program Manager	American Red Cross	<a href="mailto:kara.murphy@redcross.org">kara.murphy@redcross.org</a>	337-234-7371
Jason Huffman	VP of Organizational and Impact Strategies	United Way of Acadiana	<a href="mailto:jason.huffman@unitedwayofacadiana.org">jason.huffman@unitedwayofacadiana.org</a>	337-706-1202
Andrew Granger	Extension Agent	LSU AgCenter - Vermilion Parish	<a href="mailto:agranger@agcenter.lsu.edu">agranger@agcenter.lsu.edu</a>	337-898-4335
Jude Reese	Mayor	Town of Gueydan	<a href="mailto:gueydan1@bellsouth.net">gueydan1@bellsouth.net</a>	337-536-9415
Pam Blakely	Mayor	Town of Delcambre	<a href="mailto:mayor@delcambre.net">mayor@delcambre.net</a>	337-685-4462
Michael Kloesel	Mayor	City of Kaplan	<a href="mailto:mayor@cityofkaplan.com">mayor@cityofkaplan.com</a>	337-643-8811
Mark Piazza	Mayor	City of Abbeville	<a href="mailto:mayor@cityofabbeville.net">mayor@cityofabbeville.net</a>	337-898-4206
Wayne Theriot	Mayor	Village of Maurice	<a href="mailto:villageofmaurice.mayor@cox-internet.com">villageofmaurice.mayor@cox-internet.com</a>	337-893-6406
Taylor Mencacci	Mayor	Town of Erath	<a href="mailto:taylor.mencaccio@gmail.com">taylor.mencaccio@gmail.com</a>	337-937-8401

## Capability Assessment

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

### Administration and Technical

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

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

### Financial

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

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

### Education and Outreach

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

Program / Organization	Yes / No	Comments
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	No	
Ongoing public education or information program (responsible water use, fire safety, household preparedness, environmental education)	Yes	
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	



### Capability Assessment Worksheet

#### Abbeville

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	No	
Economic Development Plan	No	
Local Emergency Operations Plan	No	
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	Comments
Building Code	Yes	
Building Code Effectiveness Grading Schedule (BCEGS) Score	No	
Fire Department ISO/PIAL rating	Yes	
Site plan review requirements	Yes	
Land Use Planning and Ordinances	Yes / No	Comments
Zoning Ordinance	No	
Subdivision Ordinance	No	
Floodplain Ordinance	Yes	Follows Parish
Natural Hazard Specific Ordinance (stormwater, steep slope, wildfire)	No	
Flood Insurance Rate Maps	No	
Acquisition of land for open space and public recreation uses	No	
Other	No	

### Administration and Technical

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

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

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

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

### Capability Assessment Worksheet

#### Erath

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

### Administration and Technical

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

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

### Financial

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

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

### Education and Outreach

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

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

### Capability Assessment Worksheet

#### Gueydan

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



### Administration and Technical

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

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

### Financial

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

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

### Education and Outreach

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

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

### Capability Assessment Worksheet

#### Kaplan

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

### Administration and Technical

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

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

### Financial

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

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

### Education and Outreach

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

Program / Organization	Yes / No	Comments
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	
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	Yes	
Other	No	

### Capability Assessment Worksheet

**Maurice**

Local mitigation capabilities are existing authorities, polices and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities. Please complete the tables and questions in the worksheet as completely as possible.

#### Planning and Regulatory

Please indicate which of the following plans and regulatory capabilities your jurisdiction has in place.

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

### Administration and Technical

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

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



### Financial

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

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

### Education and Outreach

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

Program / Organization	Yes / No	Comments
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	
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	Yes	
Public/Private partnership initiatives addressing disaster-related issues	Yes	
Other	No	

## Building Inventory

Vermilion Parish Owned Building Information								
Vermilion Unincorporated								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Area 1 Barn	Parish Maintenance Building	13115 Mack Switch Road	Erath	29.57628	-92.03396	\$75,000	1997	Metal
Area 2 Barn	Parish Maintenance Building & Office	12002 Calvin Lebouef Road	Abbeville	29.572058	-92.110788	\$215,000		
Area 3 Barn	Parish Maintenance Building	29429 Veterans Memorial Drive	Gueydan	30.00417	-92.28216	\$240,000	1985	Metal
Area 4 Barn	Parish Maintenance Building	13531 Gladu Road	Kaplan	30.03855	-92.12073	\$56,500	2001	Metal
VP Parish Library - Erath Branch	Parish Library	111 West Edwards Street	Erath	29.57451	-92.02118	\$554,518	2002	Reinforced Masonry
VP Parish Library - Gueydan Branch	Parish Library	704 10th Street	Gueydan	30.01684	-92.30204	\$619,843	2005	Reinforced Masonry
VP Parish Library - Kaplan Branch	Parish Library	815 North Cushing Avenue	Kaplan	30.00307	-92.16965	\$767,843	2001	Reinforced Masonry
VP Parish Library - Maurice Branch	Parish Library	100 East Joseph Street	Maurice	30.06361	-92.07465	\$303,256	2004	Reinforced Masonry
Vermilion Parish Library - Delcambre Branch	Parish Library	206 West Main Street	Delcambre	29.565483	-91.592368			
Vermilion Parish Library - Main Branch - Abbeville	Parish Library	405 East St. Victor Street	Abbeville	29.582906	-92.075274			
Vermilion Parish Courthouse	Courthouse	100 North State Street	Abbeville	29.582630	-92.080605	\$5,889,329		
Courthouse Annex	Sheriff's Office	101 South State Street	Abbeville	29.582513	-92.080820	\$595,000		
Vermilion Parish Government Complex	Sheriff's Deputies, Assist Agency, etc.	407 Charity Street	Abbeville	29.582554	-92.075425	\$1,924,889		
Vermilion Parish Rabies Control	Rabies Control Facility/Dog Pound	11303 Pioneer Road	Kaplan	29.591174	-92.143003	\$398,000		
Old Hollier's Building	Clerk of Court's Records Storage	105 South State Street	Abbeville	29.582473	-92.080828	\$85,000		
Solid Waste Facility	Parish Landfill, Office Building & Buildings	8500 Birch Road	Abbeville	30.014195	-92.081183	\$1,977,000		
Public Works Complex	Public Works Department, Mosquito Control, Storage, Equipment Maintenance Storage, Public Works Maintenance, Gas Pumps/Tanks & Gas Filling Station	2211 Leonie Street	Abbeville	29.570961	-92.083980	\$1,122,650		

Vermilion Law Enforcement Center	Jail Complex, Mechanic Shop, Trustee Bed Dorm, Research Classroom, Exercise Building, Commissary, Storage Building, Sheriff's Training Center, & Covered Area/Exercise Yard	14202 Allen Bares Road	Abbeville	29.564894	-92.053015	\$5,770,035		
Community Health Center	Abbeville Health Unit	2501 Charity Street	Abbeville	29.582075	-92.063004	\$70,000		
Old Earth Health Unit	State Representative Blake Miguez's Office	410 North Broadway	Erath	29.57642	-92.02064	\$152,240	1960	Reinforced Masonry
Kaplan Health Unit	Community Health Services	419 North Cushing Avenue	Kaplan	30.00098	-92.17031	\$193,064	1960	Reinforced Masonry
Old Abbeville Health Unit Building	Old Health Unit Building	401 North St. Charles	Abbeville	29.581323	-92.080641	\$616,350		
Gueydan Health Unit	Community Health Services	406 7th Street	Gueydan	30.012853	-92.302485			
Co-Op Extension Office	LSU Ag Center & Meeting Room	1105 West Port Road	Abbeville	29.583306	-92.084653	\$1,698,000		
Livestock Building	Livestock Building for 4-H shows, etc.	1102 West Port Road	Abbeville	29.583088	-92.084464	\$1,593,300		
Old Herod School	Old Herod School Facility	1411 East Martin Luther King Drive	Abbeville	29.574988	-92.072774	\$1,809,711		
District 13 Fire Station	Fire Department	18838 West LA Highway 82	Kaplan	29.504527	-92.172232	\$515,844	2000	Metal
Henry Fire Station	Fire Department	5010 Frank Road	Erath	29.54283	-92.03388	\$461,841	2009	Metal
Gueydan Fire Substation (Little Chapel Fire Station)	Fire Department	13007 LA Highway 3093	Kaplan	29.57819	-92.24697	\$190,083	1991	Metal
Indian Bayou Fire Station	Fire Department	4723 LA Highway 700	Kaplan	30.04978	-92.14543	\$308,475	1991	Wood
LeBlanc Fire Station	Fire Department	3843 Bares Road	Abbeville	30.020985	-92.021575			
Leleux Fire Station	Fire Department	5801 LA Highway 13	Kaplan	30.041470	-92.213949	\$407,980	1990	Reinforced Masonry
Maurice Fire Station	Fire Department	410 Chief H. Fred Avenue	Maurice	30.06253	-92.07635	\$469,902	1988	Reinforced Masonry
Meaux/Nunez Fire Station	Fire Department	9124 Romules Road	Abbeville	30.010634	-92.123020			
Pecan Island Fire Station	Fire Department	28702 West LA Highway 82	Kaplan	29.38794	-92.27085	\$616,210	2008	Metal
7th Ward Fire Station	Fire Department	20206 North LA Highway 82	Abbeville	29.512527	-92.103873			
Abbeville High School	School	1305 Wildcat Drive	Abbeville	29.5859165	-92.062100			
Cecil Picard Elementary School	School	203 South Albert Avenue	Maurice	30.062460	-92.072293			
Dozier Elementary School	School	415 West Primeaux	Erath	29.572359	-92.022142			

Eaton Park Elementary School	School	1502 Sylvester Street	Abbeville	29.573937	-92.083119			
Erath High School	School	808 South Broadway	Erath	29.570783	-92.020961			
Erath Middle School	School	800 South Broadway	Erath	29.571246	-92.020847			
Forked Island/E Broussard Elementary School	School	19635 Columbus Road	Abbeville	29.514656	-92.155711			
Gueydan High School	School	901 Main Street	Gueydan	30.013386	-92.301446			
Herod Elementary School	School	120 Odea Street	Abbeville	29.582487	-92.062757			
Indian Bayou School	School	1603 LA Highway 700	Rayne	30.073726	-92.142879			
Jesse Owens Elementary	School	203 13th Street	Gueydan	30.012454	-92.295910			
Kaplan Elementary School	School	608 Eleazar Avenue	Kaplan	30.002761	-92.175695			
Kaplan High School	School	200 East Pirate Lane	Kaplan	29.594377	-92.161931			
LeBlanc Elementary School	School	4511 East LA Highway 338	Abbeville	30.005644	-92.025940			
Meaux Elementary School	School	12419 LA Highway 696	Abbeville	30.011322	-92.105510			
North Vermilion High School	School	11609 LA Highway 699	Maurice	30.044711	-92.100635			
North Vermilion Middle School	School	11609-A LA Highway 699	Maurice	30.045385	-92.100711			
Rene Rost Middle School	School	112 West 6th Street	Kaplan	30.001162	-92.170263			
Seventh Ward Elementary School	School	12012 Audubon Road	Abbeville	29.523070	-92.102345			
J. H. Williams Middle School	School	1105 Prairie Avenue	Abbeville	29.582935	-92.072330			
Maltrait Memorial School	School	1 Crusader Square	Kaplan	30.001572	-92.171728			
Mount Carmel Elementary School	School	405 Park Avenue	Abbeville	29.585002	-92.082518			
St. Peter Elementary School	School	513 Sixth Street	Gueydan	30.012950	-92.302943			
Vermilion Catholic High School	School	425 Park Avenue	Abbeville	29.585305	-92.082396			
Lighthouse Christian Prep.	School	6526 Chiasson Road	Abbeville	29.574204	-92.044648			
Henry Education Complex	School	6305 LA Highway 330	Erath	29.525436	-92.044361			
Harvest Time Christian Academy	School	901 Wildcat Drive	Abbeville	29.584215	-92.062114			

Abbeville								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Riviana Electric Substation	Electric Substation	400 S. Main Street	Abbeville			\$175,000	1950	
Felicity Electric Substation	Electric Substation	404 Felicity Avenue	Abbeville			\$250,000	1950	
Rodeo Road Electric Substation	Electric Substation	2791 Rodeo Rd	Abbeville			\$750,000	2003	
Gertrude Electric Substation	Electric Substation	209 N. Gertrude	Abbeville			\$750,000	1950	
By-Pass Electric Substation	Electric Substation	1131 Veterans Memorial Dr	Abbeville			\$500,000	1975	
Pete Noel Electric Substation	Electric Substation	1307 Wildcat Drive	Abbeville			\$2,000,000	1983	
Louisiana Electric Substation	Electric Substation	401 S. Louisiana	Abbeville			\$350,000	2003	
Water Treatment Plant	Water Treatment and production	615 Veterans Memorial Dr	Abbeville			\$3,000,000	1975	Reinforced Masonry
Wastewater Treatment Plant	Sewer treatment	1908 Lafayette St	Abbeville			\$3,000,000	1989	Reinforced Masonry
St. Theresa Water Tower	Water Tower	209 A. N. Gertrude Street	Abbeville			\$500,000		
Jacqueline Water Tower	Water Tower	202 E Woodman Road	Abbeville			\$500,000		Reinforced Masonry
City Hall	City Government	101 N. State Street	Abbeville			\$2,000,000	1928	
Abbeville Police Station	Police Department	304 Charity Street	Abbeville			\$1,000,000	2010	
Main Fire Station	Fire Department	210 E. Vermilion Street	Abbeville			\$755,000	1965	
Harold Lemaire Fire Substation	Fire Department	2021 Veterans Memorial Dr	Abbeville			\$380,000	1990	
Herbert Myles Fire Substation	Fire Department	800 Maude Ave	Abbeville			\$359,000	1989	
Hebert Fire Substation	Fire Department	307 Joffre	Abbeville			\$400,000	2018	
City Barn	Street Maintenance Dept	1811 Godchaux	Abbeville			\$200,000	1975	
Utility Building	Electric,water,sewer crews	717 Veterans Memorial Dr	Abbeville			\$200,000	1973	
Waterloo Sewer Lift Station	Sewer lift station	Waterloo @ White Street	Abbeville					
Washington Sewer Lift Station	Sewer lift station	S. Washington @ Railroad	Abbeville					
Bailey Sewer Lift Station	Sewer lift station	S. Bailey @ Prairie Ave	Abbeville					
Loraine Sewer Lift Station	Sewer lift station	Loraine @ Gauraud	Abbeville					
Alley Sewer Lift Station	Sewer lift station	Alley St @ Prairie Ave	Abbeville					

Barn Sewer Lift Station	Sewer lift station	Franks Alley @ Godchaux	Abbeville					
Hollingsworth Sewer Lift Station	Sewer lift station	N. Hollingsworth Drive	Abbeville					
North Henry Sewer Lift Station	Sewer lift station	Eleazar Street	Abbeville					
Trade School Sewer Lift Station	Sewer lift station	Graceland Ave @ Lamar St	Abbeville					
Sellers Sewer Lift Station	Sewer lift station	Eaton Drive	Abbeville					
Heritage Sewer Lift Station	Sewer lift station	Acadiana Drive	Abbeville					
Guegnon Sewer Lift Station	Sewer lift station	S. Guegnon	Abbeville					
Wildcat Sewer Lift Station	Sewer lift station	Wildcat Drive	Abbeville					
Roy Young Sewer Lift Station	Sewer lift station	Dairy Festival Road	Abbeville					
Godchaux Sewer Lift Station	Sewer lift station	Rue De Chene Vert	Abbeville					
Highway 167 Sewer Lift Station	Sewer lift station		Abbeville					
Tiffany Plaza sewer lift station	Sewer lift station	Sweet Lane @ Hwy 14 bypass	Abbeville					
Eaton Park Sewer lift station	Sewer lift station	Eaton Drive @ Regina	Abbeville					
Old Kaplan Sewer Lift Station	Sewer lift station	Port Street @ Hwy 14	Abbeville					
Cypress Sewer Lift Station	Sewer lift station	Cypress @ Texas	Abbeville					
Magnolia Gardes Sewer lift station	Sewer lift station	Lafitte @ Marcia	Abbeville					
Ollie Drive Sewer lift station	Sewer lift station	Wildcat @ Ollie	Abbeville					
Willis Sewer Lift station	Sewer lift station	Behind Willis auto	Abbeville					
Highway 167 Courtesy lift Station	Sewer lift station	Next to Courtesy motors	Abbeville					
Lowes Sewer lift station	Sewer lift station	NW corner of Lowes	Abbeville					
East Jane sewer lift station	Sewer lift station	Hwy 338 @ Jane Street	Abbeville					
West Jane sewer lift station	Sewer lift station	Jane Street @ Harvest Street	Abbeville					
The Palms Sewer lift station	Sewer lift station	Off of Hwy 167 @ Phoenix	Abbeville					
Stonebridge Sewer lift station	Sewer lift station	Front of StoneBridge apts	Abbeville					
Ray Chevy Sewer Lift station	Sewer lift station	N E corner @ Hwy 167	Abbeville					

Delcambre								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Delcambre Library (Co-owned)	Library	206 W. Main St	Delcambre	29°56'54.65"	91°59'21.90"	550,000	1999	Unreinforced Masonry
Delcambre Elementary School	School	706 Martin Luther King Dr.	Delcambre	29°57'07.18"	91°59'41.57"	Unknown	Unknown	Steel
Delcambre High School	School	601 West Main St.	Delcambre	29°56'52.04"	91°59'35.45"	Unknown	Unknown	Wood
DELCAMBRE VOLUNTEER FIRE DEPARTMENT	Fire Department	302 N RAILROAD STREET	Delcambre	29°57'01.88"N	91°59'17.59"W	Unknown	Unknown	Concrete
DELCAMBRE POLICE DEPARTMENT	Law Enforcement	109 N RAILROAD STREET	Delcambre	29°56'56.42"N	91°59'18.89"W	Unknown	Unknown	Concrete
DELCAMBRE CITY HALL	Government (municipality-owned)	107 N RAILROAD STREET	Delcambre	29°56'56.00N	91°59'18.92"W	Unknown	Unknown	Concrete
DELCAMBRE CITY BARN	Government (municipality-owned)	507 E HICKMAN STREET	Delcambre	29°56'50.00"N	91°59'01.96"W	Unknown	Unknown	Metal
ELEVATED MUNICIPAL BUILDING	Government (municipality-owned)	107 1/2 N RAILROAD STREET	Delcambre	29°56'56.22"N	91°59'19.65"W	Unknown	Unknown	Concrete
LIFT STATION	Utilities (wastewater)	401 HWY 14 EAST	Delcambre	29°56'32.37"N	91°59'00.97"W	Unknown	Unknown	Concrete
LIFT STATION	Utilities (wastewater)	306 WILFRED LANDRY STREET	Delcambre	29°56'37.47"N	91°59'09.89"W	Unknown	Unknown	Concrete
Delcambre Volunteer Fire Department	Fire Department	302 North Railroad Street	Delcambre	29°57'02.01"	91°59'18.06"	Unknown	Unknown	Unknown

Erath								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Henry Fire Station	Fire Department	5010 Frank Road	Erath	29.54283	-92.03388	\$461,841	2009	Metal
Area 1 Barn	Parish Maintenance Building	13115 Mack Switch Road	Erath	29.57628	-92.03396	\$61,000	1997	Metal
VP Parish Library - Erath Branch	Parish Library	111 West Edwards Street	Erath	29.57451	-92.02118	\$554,518	2002	Reinforced Masonry
Blake Miguez	State Representative	410 North Broadway	Erath	29.57642	-92.02064	\$152,240	1960	Reinforced Masonry



Gueydan								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Area 3 Barn	Parish Maintenance Building	29429 Veterans Memorial Drive	Gueydan	30.00417	-92.28216	\$240,000	1985	Metal
VP Parish Library - Gueydan Branch	Parish Library	704 10th Street	Gueydan	30.01684	-92.30204	\$619,843	2005	Reinforced Masonry

Kaplan								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Indian Bayou Fire Station	Fire Department	4723 LA Highway 700	Kaplan	N 30.04978	W - 92.14543	\$308,475.00	1991	Wood
Gueydan Fire Substation (Little Chapel Fire Station)	Fire Department	13007 LA Highway 3093	Kaplan	N 29.57819	W - 92.24697	\$190,083.00	1991	Metal
Area 4 Barn	Parish Maintenance Building	13531 Gladu Road	Kaplan	N 30.03855	W - 92.12073	\$56,500.00	2001	Metal
Pecan Island Fire Station	Fire Department	28702 West LA HighWAY 82	Kaplan	N 29.38794	W - 92.27085	\$616,210.00	2008	Metal
Pecan Island Fire Station	Fire Department	28702 West LA HighWAY 82	Kaplan	N 29.38794	W - 92.27085	\$616,210.00	2008	Metal
VP Parish Library - Kaplan Branch	Parish Library	815 North Cushing Avenue	Kaplan	N 30.00307	W - 92.16965	\$767,843.00	2001	Reinforced Masonry
Kaplan Health Unit	Community Health Services	419 North Cushing Avenue	Kaplan	N 30.00098	W - 92.17031	\$165,564.00	1960	Reinforced Masonry
Leleux Fire Station	Fire Department	5801 LA Highway 13	Kaplan	N 30.041470	W - 92.213949	\$407,980.00	1990	Reinforced Masonry
Diatrict 13 Fire Station	Fire Department	18838 West LA Highway 82	Kaplan	N 29.504527	W - 92.172232	\$515,844.00	2000	Metal

Maurice								
Name of Building	Purpose of Building	Address	City	Latitude	Longitude	Assessed Value	Date Built	Construction Type
Maurice Fire Station	Fire Department	410 Chief H. Fred Avenue	Maurice	30.06253	-92.07635	\$469,902.00	1988	Reinforced Masonry
VP Parish Library - Maurice Branch	Parish Library	100 East Joseph Street	Maurice	30.06361	-92.07465	\$303,256.00	2004	Reinforced Masonry

## Vulnerable Populations

Vulnerable Populations Worksheet					
Vermillion Parish					
All Hospitals (Private or Public)	Address	City	Zip Code	Latitude	Longitude
Gueydan Clinic	710 5th Street	Gueydan	70542	N 30.01706	W - 92.30567
Gueydan Guest Home	1201 3rd Street	Gueydan	70542	N 30.01988	W - 92.30685
Gueydan Substation AASI	805 Eighth Street	Gueydan	70542	N 30.01786	W - 92.30330
Abrom Kaplan Memorial Hospital	1310 West 7th Street	Kaplan	70548	N 30.00460	W - 92.97830
Kaplan Substation AASI	710 North Eleazar	Kaplan	70548	N 30.00484	W - 92.17902
Abbeville Substation AASI (Acadian Ambulance)	218 West Summers Drive	Abbeville	70510	N 29.58977	W - 92.08036
Abbeville General Hospital	118 North Hospital Drive	Abbeville	70510	N 29.58419	W - 92.06452
Erath Substation AASI	419 East Veterans Memorial Drive	Erath	70533	N 29.57799	W - 92.01846
Nursing Homes (Private or Public)	Address	City	Zip Code	Latitude	Longitude
Vermilion Healthcare Nursing Home	14008 Cheneau Road	Kaplan	705487	N 29.505626	W -92.123058
Maison Du Monde Nursing Home	4000 Rodeo Road	Abbeville	70510	N 29.583060	W -92.052770
Gueydan Memorial Guest Home	1201 Third Street	Gueydan	70542	N 30.015879	W - 92.304019
Gardiner Clinic - Gueydan	710 5th Street	Gueydan	70542	N 30.014323	W - 92.303416
Vermilion Health Care Center	14008 Cheneau Road	Kaplan	70548	N 29.595649	W - 92.123072
Integrated Health Services	1300 West 8th Street	Kaplan	70548	N 30.003114	W - 92.174797
Kaplan Home Care	1402 West 8th Street	Kaplan	70548	N 30.003130	W - 92.174991
Eastridge Nursing Home	2305 Richard Street	Abbeville	70510	N 29.585466	W - 92.063332
Eastridge Assisted Living	2309 Richard Street	Abbeville	70510	N 29.585615	W - 92.062969
Maison du Monde Living Center	4000 Rodeo Road	Abbeville	70510	N 29.582909	W - 92.052743
Acadian Home Care	302 North Hospital Drive	Abbeville	70510	N 29.582541	W - 92.062459
MD Home Care Network	2018 Veterans Memorial Drive	Abbeville	70510	N 29.584757	W - 92.064785
Woodlake Addiction Recovery Center	1314 North Lafitte Road	Abbeville	70510	N 29.590698	W - 92.063947
Palm Surgery Center	204 North Magdalen Square	Abbeville	70510	N 29.582919	W - 92.081277
Pelican Pointe Nursing Home	405 Milton Road	Maurice	70555	N 30.061013	W - 92.070946

Mobile Home Parks	Address	City	Zip Code	Latitude	Longitude
Broussard Rental Homes	East Lafayette	Maurice	70555	N 30.06514	W -92.07234
Clyve Broussard Trailer Park	East Lafayette	Maurice	70555	N 30.1086407	W -92.12224365
Eastern Oaks Mobile Park	126 Andre Avenue	Maurice	70555	N 30.1154445	W -92.1156292
Trahan Trailer Park	West Lafayette	Maurice	70555	N 30.1086502	W -92.1246414
Bud Chauvin Mobile Home Park	3037 Jacquelyn Street	Abbeville	70510	N 29.571992	W -92.054600
Touchet Mobile Home Park	Jacquelyn Street	Abbeville	70510	N 29.571985	W -92.055416
Country Living Park	Paul Ed Drive	Abbeville	70510	N 29.565459	W -92.065452
Elite Living	Sara Drive	Maurice	70555	N 30.06513	W -92.06253
Fuselier Mobile Home Park	Fuselier Road	Maurice	70555	N 30.04769	W -92.07313
Lil Prairie Mobile Home Park	LA Highway 82	Kaplan	70548	N 29.445199	W -92.194501
RV Park	Audubon Road	Abbeville	70510	N 29.523993	W -92.093118
Bourgeois Mobile Home Park	East Mill Street	Kaplan	70548	N 29.594320	W -92.1656602
Johnny Gaudet Trailer Park	326 Easat Elina Street	Abbeville	70510	N 29.572813	W -92.081758
Stafford Labry Trailer Park	8338 Labry Road	Abbeville	70510	N 29.594900	W -92.070625
Cjun Haven RV Park	111 Trahan Street	Abbeville	70510	N 29.570960	W -92.083277
Southland Mobile Home Park	2830 Rodeo Road	Abbeville	70510	N 29.582823	W -92.055463
Whitney LeBlanc Trailer Park	4932 East LA Highway 338	Abbeville	70510	N 30.003994	W -92.032703
Abbeville Country Estates LLC	1200 Old Kaplan Highway	Abbeville	70510	N 29.585604	W -92.090924
Abbeville RV Park	1501 West Port Street	Abbeville	70510	N 29.583935	W -92.094281
Country Living Park II	Pine Street	Abbeville	70510	N 29.580515	W -92.052787
Dova Properties (Trailer Park)	Graceland Street	Abbeville	70510	N 29.584591	W -92.071273
Betty's RV Park	2118 South State Street	Abbeville	70510	N 29.953094	W -92.142970
Crawfish Haven RV Park	LA Highway 82	Pecan Island	70548	N 29.646608	W -92.453192
Intracoastal RV Lot & Dock	25175 Pintail Avenue	Abbeville	70510	N 29.784854	W -92.150749
Ken's Campground	11934 Ken Private Road	Erath	70533	N 29.980712	W -91.994958
Palmetto Island State Park	19501 Leasant Road	Abbeville	70510	N 29.880643	W -92.155015
Parc De Pleasant Trailer Park	Mouton Cove Area	Abbeville	70510	N 29.879050	W -92.176352
Quality Sports Authority RV Park	12712 North Road	Erath	70533	N 29.966863	W -92.048232
Lil Prairie Mobile Home Park	LA Highway 82	Kaplan	70548	N 29.445199	W - 92.194501

Bourgeois Mobile Home Park	East Mill Street	Kaplan	70548	N 29.594320	W - 92.1656602
Southland Mobile Home Park	2830 Rodeo Road	Abbeville	70510	N 29.582823	W - 92.055463
Abbeville RV Park	LA Highway 14	Abbeville	70510	N 29.583935	W - 92.094281
Broussard Rental Homes	East Lafayette	Maurice	70555	N 30.06514	W - 92.07234
Clyve Broussard Trailer park	East Lafayette	Maurice	70555	N 30.1086407	W - 92.1224365
Eastern Oaks Mobile Park	126 Andre Ave	Maurice	70555	N 30.1154445	W - 92.1156292
Trahan Trailer park	West Lafayette	Maurice	70555	N 30.1086502	W - 92.1246414
Elite Landing	Sara Drive	Maurice	70555	N 30.06513	W - 92.06253
Fuselier Mobile Home Park	Fuselier Road	Maurice	70555	N 30.04769	W - 92.07313
Iry Melancon Trailer Park	Iry Melancon	Erath	70533		
Nerren Trailer Park	Nerren Drive	Erath	70533		

## National Flood Insurance Program (NFIP)

National Flood Insurance Program (NFIP)							
	Vermillion Unincorporated	Gueydan	Kaplan	Abbeville	Maurice	Erath	Delcambre
<b>Insurance Summary</b>							
How many NFIP policies are in the community? What is the total premium and coverage?	4,415 - Policies, \$3,028,035 premium, \$979,728.400 Coverage	29 - policies, \$24,230 - premium, \$9,939,000 - coverage	Policies: 315; Premiums: \$151,576; Coverage: \$45,726,000	Unknown	Policies - 29, Premium \$11,969, \$7,339,000 Coverage	483 - policies, 525,434 premium, \$61,150,000 Coverage	422 policies in force; \$55,209,200 insurance in force
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	Vermillion Flood Losses - 2,963, Paid claims - \$131,779,413, substantial damage - 1,028.	5 - paid claims, \$31,866 - paid claims, Unknown - substantial damages.	65/ CLAIMS 409,582	Unknown	14 Loss, \$181,870.00 Claims paid, unknown substantial damages	Flood Losses - 649, Paid claims - 22,284,612; substantial damage - unknown.	Total number of closed paid losses: 501; Total payments: \$18, 297, 841.40
How many structures are exposed to flood risk with in the community?	All structures are exposed to flood risk within the parish.	All are exposed to flood risk.	ALL	All of them	All	All structures are exposed to flood risk within the Town of Erath.	All structures are at risk for flooding
Describe any areas of flood risk with limited NFIP policy coverage.	None.	None.	None	None	None	None.	Unknown
<b>Staff Resources</b>							
Is the Community FPA or NFIP Coordinator certified?	Yes	No	No	No	No	N/A - the Town does not have anyone in this position	Yes
Is flood plain management an auxiliary function?	Yes	Yes, auxiliary function	Yes	No	Yes	Yes	No
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Permits, education and outreach	Permits	Permits - Education	Permitting	Permit review	Permits	All permits are issued through Vermillion Parish Zoning, Permits, and Planning through a certified representative to comply with FEMA regulations and standards

What are the barriers to running an effective NFIP program in the community, if any?	Communicating with the residents & making sure they understand changes	Financial	Financial	Financial Restraints	Financial resources	Financial	Unknown
<b>Compliance History</b>							
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)?	Yes	No	No	None	No	No	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact(CAC)?	2020 / Cindy O'Neal	No	Never Had One		Yes, 2014, Tommy Mimnaugh	N/A - there has never been one	September 2013 (Parish visit)
Is a CAV or CAC scheduled or needed? If so when?	No	No	No		No	No	No
<b>Regulation</b>							
When did the community enter the NFIP?	Emergency Plan - 1974, Legal Entry 1985.		2-Nov-73	1981	5/15/1985	14-Mar-83	April 5, 1974
Are the FIRMs digital or paper?	Both.	Both.	BOTH	Paper	Both	Both.	Digital
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Meet FEMA & State Minimum Requirements.	Meets FEMA & State minimum requirements.	MEETS	Met because City adopted FEMA model ordinance and Flood Maps	Yes	Meet both FEMA & State minimum requirements.	Yes; However the Town of Delcambre recognizes the base flood elevation throughout the incorporated areas of the Town of Delcambre as 9', 10', OR 11' as approved by FEMA
<b>Community Rating System (CRS)</b>							
Does the community participate in CRS?	No, planning to in the future.	No	No	No	No	No	No
What is the community's CRS Class Ranking?	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Does the plan include CRS planning requirements?	N/A	N/A	N/A	N/A	N/A	N/A	N/A