Cameron Parish Hazard Mitigation Plan Update Public Meeting

July 8, 2020

Cameron, LA

Cameron Parish OHSEP Office of Homeland Security & Emergency Preparedness

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Introductions

- **Stephenson Disaster Management Institute (SDMI) at LSU**
  - Lauren Stevens – Associate Director, Disaster Management Programs
  - Chris Rippetoe – Hazard Mitigation Program Manager
- **Cameron Parish OHSEP Director/Parish Staff**
  - Danny Laverne – Director, Cameron Parish OHSEP
  - Ashley Buller – Assistant Director, Cameron Parish OHSEP
- **Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP)**
  - Jeffrey Giering – State Hazard Mitigation Officer

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Agenda

- Introductions
- Hazard Mitigation Overview
- Hazard Mitigation
- Planning Process Risk Assessment
- Public Outreach Activity

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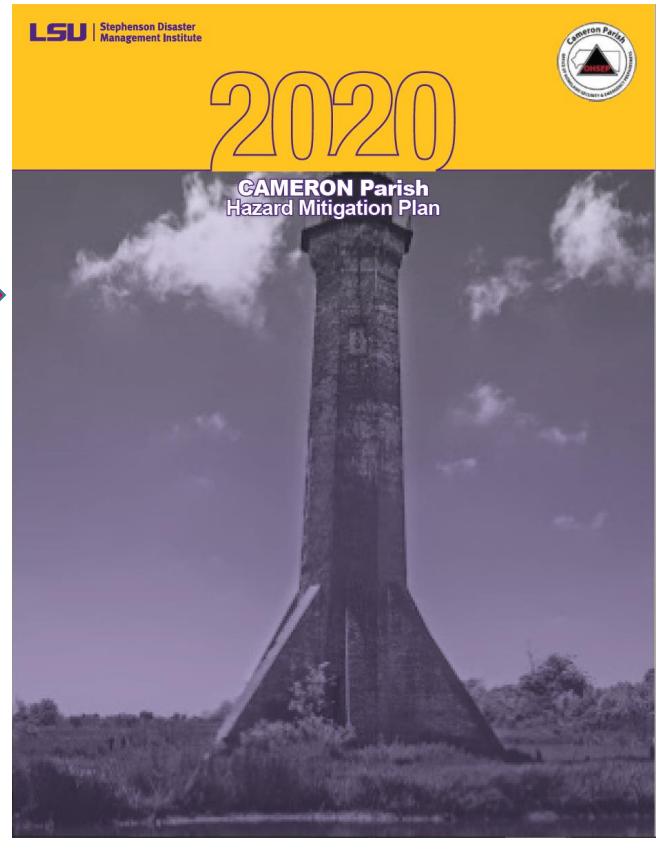
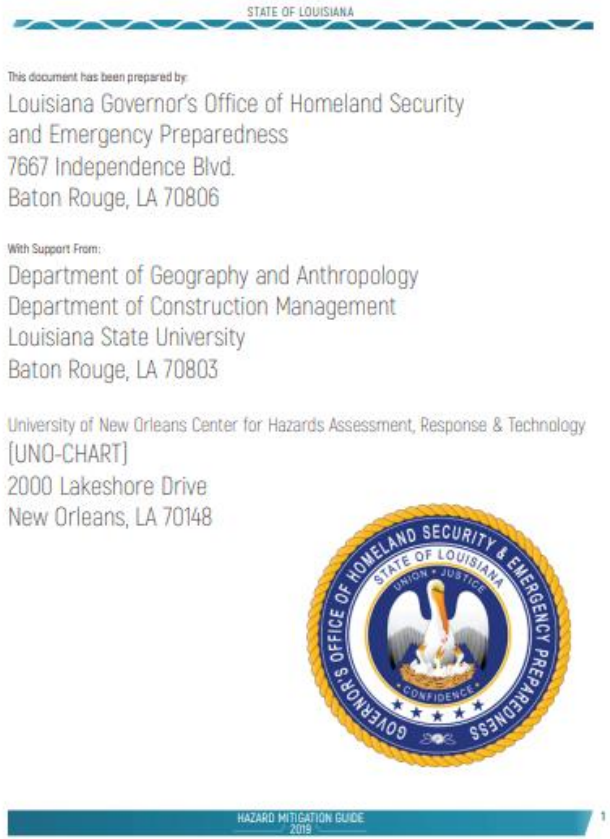
Why Are We Here?





Hazard Mitigation Is…..

- Any action taken to reduce long term risk to life and property;
- On-going process that occurs before, during, and after disasters;
- Mitigation actions help prevent damage to a *community's infrastructure*, *economic, cultural* and *environmental assets*;
- Implementation of mitigation actions leads to building stronger, safer and smarter!

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Why Are We Required To Have A Hazard Mitigation Plan?

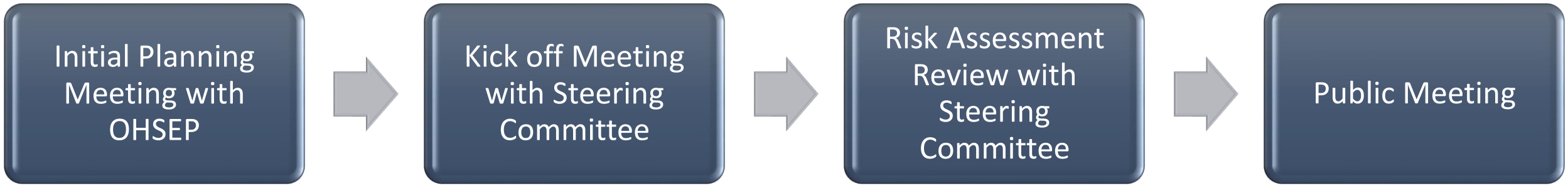
- Disaster Mitigation Act of 2000 (DMA 2000)

Section 322 of the Act specifically addresses mitigation planning and requires state and local governments to prepare multi-hazard migration plans as a precondition for receiving FEMA mitigation project grants.

- Meet federal requirements of Title 44 Code of Regulations (CFR) §201.6 for approval and eligibility to apply for FEMA Hazard Mitigation Assistance grant programs.

- The approved Cameron Parish Hazard Mitigation Plan will allow for distribution of HM funding following future disasters.

Planning Process to Date



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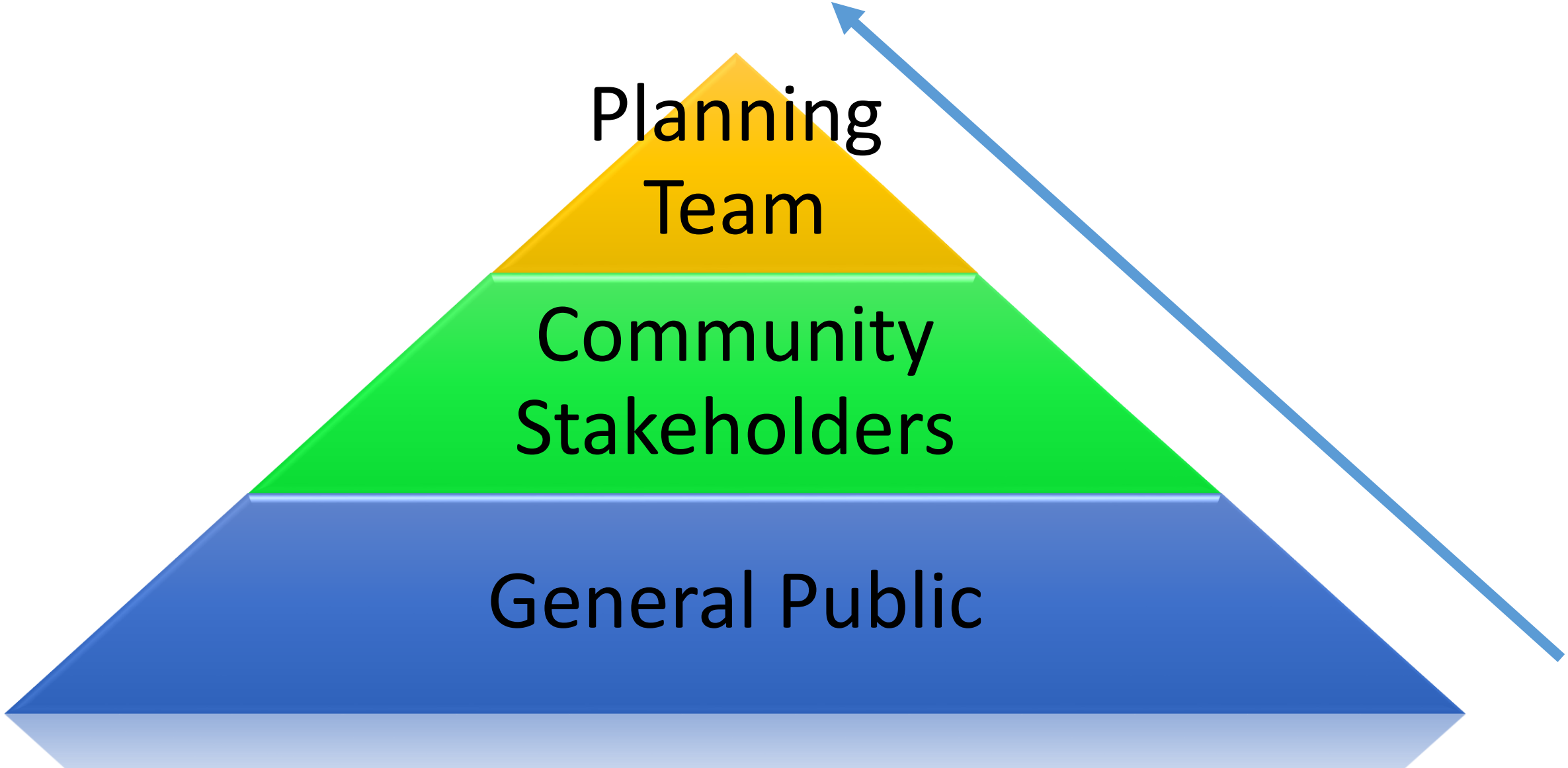
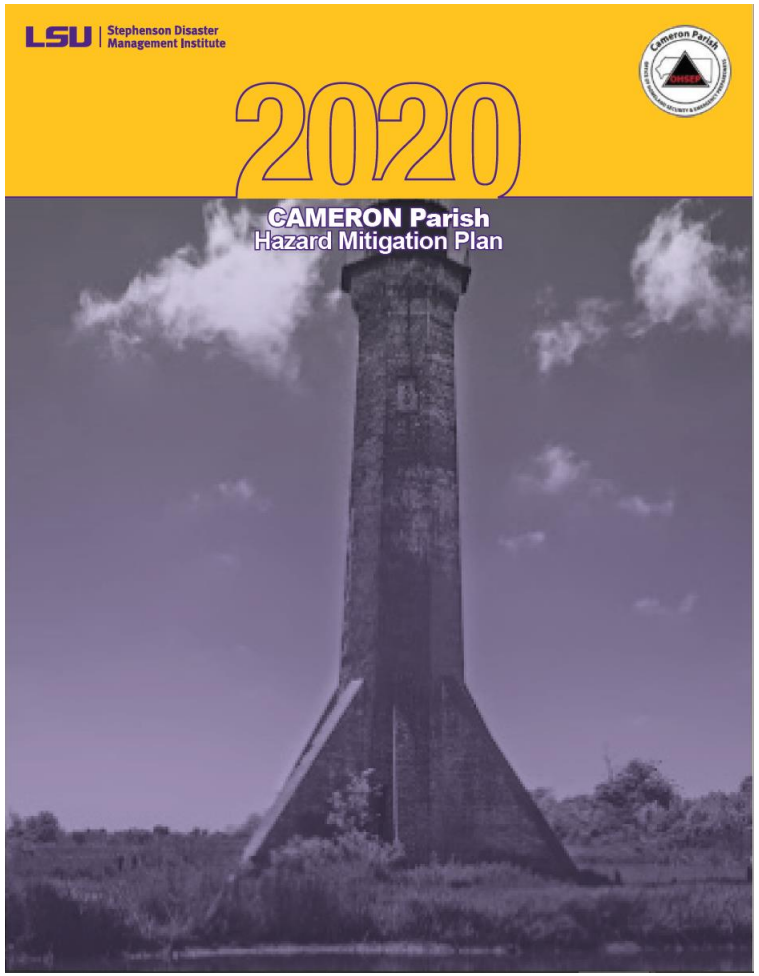
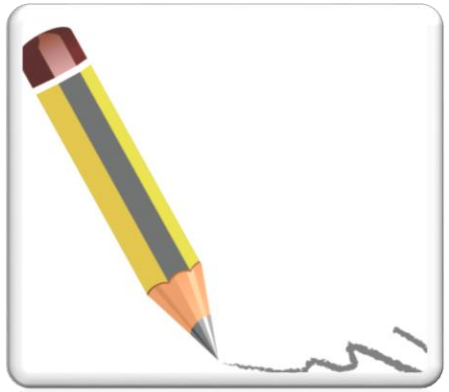
Collaborative Planning Approach



Planning Development





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Plan Layout

- **Section 1: Introduction**
  - Updated parish description
  - Updated demographics
  - Economics
- **Section 2: Hazard Identification and Parish-wide Risk Assessment**
- **Section 3: Capability Assessment**
- **Section 4: Mitigation Strategies**
  - New actions
  - Action updates
  - Survey results

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Plan Layout

- **Appendix A**: Planning Process
- **Appendix B**: Plan Maintenance
- **Appendix C**: Parish Essential Facilities
- **Appendix D**: Plan Adoption
- **Appendix E**: State Required Worksheets

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Hazard Identification and Risk Assessment

- The plan includes descriptions of the natural hazards that affect the jurisdictions in the planning area.

- The hazards identification includes the following:
  - *locations affected*
  - *extent or strength*
  - *previous occurrences*
  - *probability of future events*

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Hazard Identification and Risk Assessment

- Based on Currently Profiled Risks
- Any Newly Identified Risks
- Prevalent Hazards
- Previous Occurrences
- Probability of Future Events
- Assets Inventory
- Essential Facilities
- Hazard Impact
- Future Development
- Future Hazard Impacts
- Zoning and Land Use
- Hazard Profiles

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Hazard Identification and Risk Assessment

- Coastal Land Loss
- Drought
- Excessive Heat
- Flooding
- Sinkholes

- Thunderstorms/Lightning /High Winds
- Tornadoes
- Tropical Cyclones
- Wildfire

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Priority Risk Index for Cameron Parish

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	Overall Risk
Coastal Hazards	4	2	4	1	3	2.9
Drought	2	4	4	1	4	3.05
Excessive Heat	1	1	4	1	2	1.75
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 (High Winds)	4	2	2	3	1	2.5
Thunderstorms (Lightning)	3	2	2	3	1	2.25
Tornadoes	4	3	2	4	3	3.2
Tropical Cyclones	3	4	4	1	4	3.3
Wildfires	1	3	3	4	4	2.8

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Risk Assessment Maps

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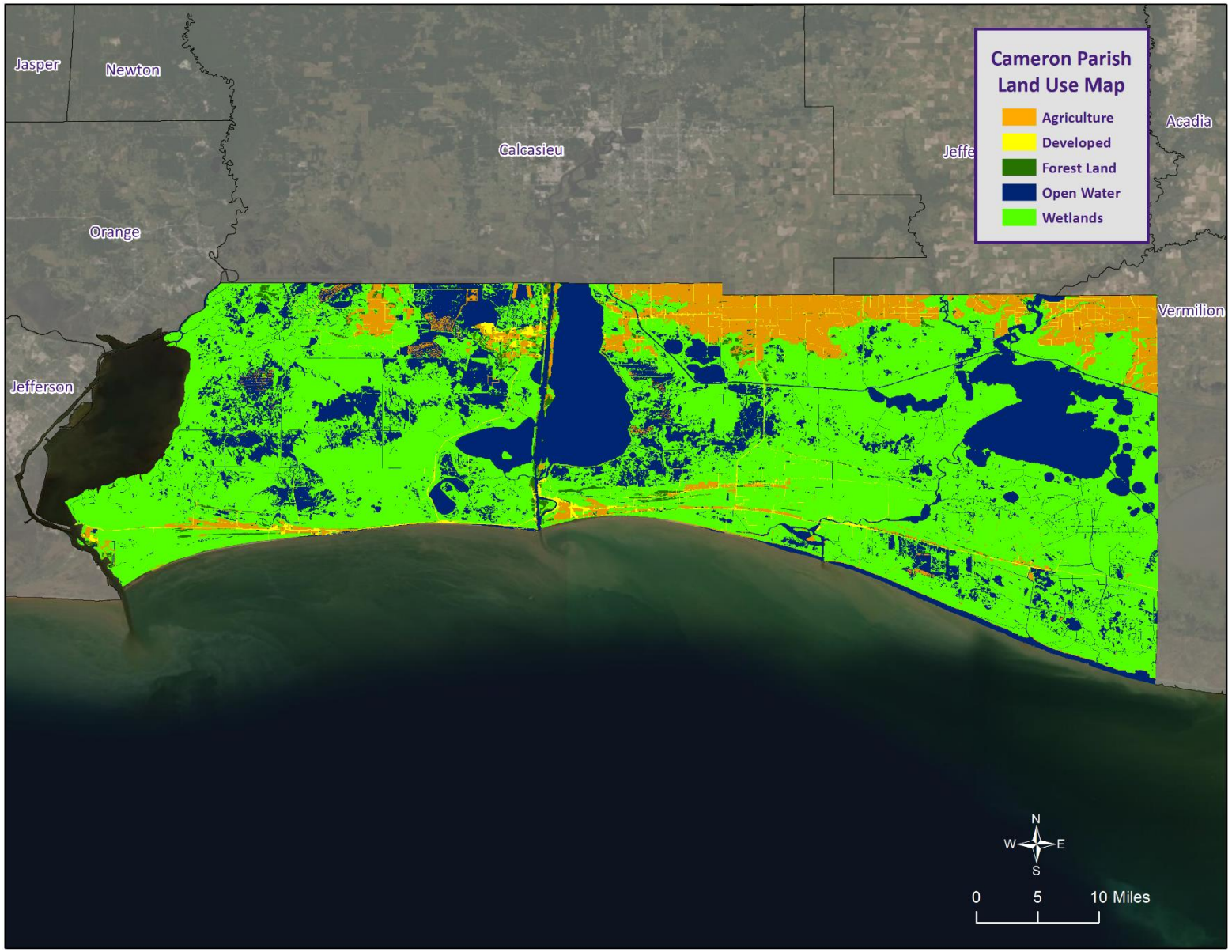
Cameron Parish Land Use



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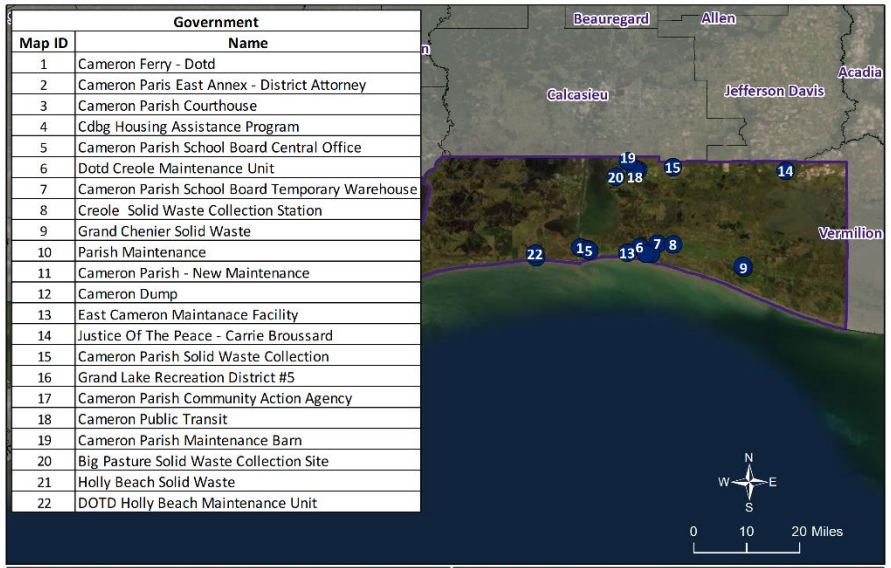
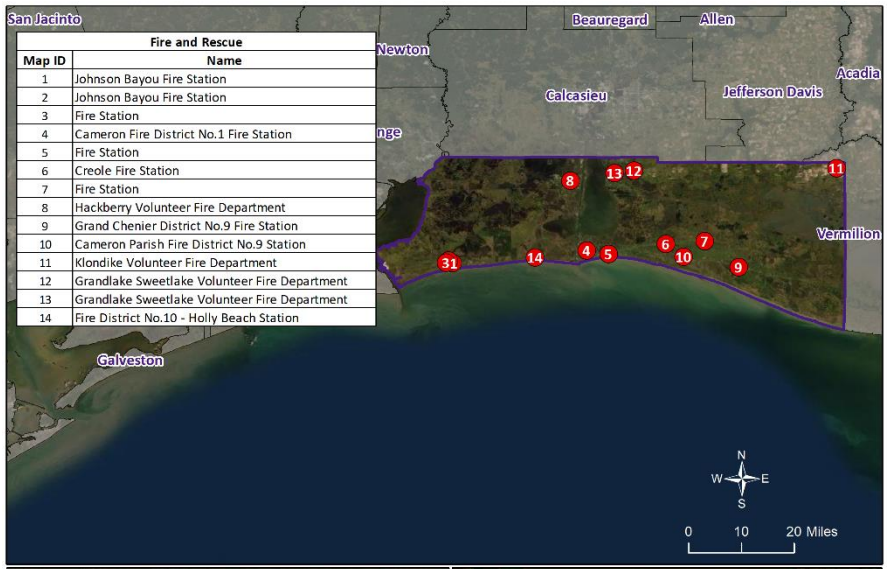
Critical Facilities: Civil Government

Government	
Map ID	Name
1	Cameron Ferry - Dotd
2	Cameron Paris East Annex - District Attorney
3	Cameron Parish Courthouse
4	Cdbg Housing Assistance Program
5	Cameron Parish School Board Central Office
6	Dotd Creole Maintenance Unit
7	Cameron Parish School Board Temporary Warehouse
8	Creole Solid Waste Collection Station
9	Grand Chenier Solid Waste
10	Parish Maintenance
11	Cameron Parish - New Maintenance
12	Cameron Dump
13	East Cameron Maintanace Facility
14	Justice Of The Peace - Carrie Broussard
15	Cameron Parish Solid Waste Collection
16	Grand Lake Recreation District #5
17	Cameron Parish Community Action Agency
18	Cameron Public Transit
19	Cameron Parish Maintenance Barn
20	Big Pasture Solid Waste Collection Site
21	Holly Beach Solid Waste
22	DOTD Holly Beach Maintenance Unit



Critical Facilities: Fire & SAR

Fire and Rescue	
Map ID	Name
1	Johnson Bayou Fire Station
2	Johnson Bayou Fire Station
3	Fire Station
4	Cameron Fire District No.1 Fire Station
5	Fire Station
6	Creole Fire Station
7	Fire Station
8	Hackberry Volunteer Fire Department
9	Grand Chenier District No.9 Fire Station
10	Cameron Parish Fire District No.9 Station
11	Klondike Volunteer Fire Department
12	Grandlake Sweetlake Volunteer Fire Department
13	Grandlake Sweetlake Volunteer Fire Department
14	Fire District No.10 - Holly Beach Station



Critical Facilities: Law Enforcement

Law Enforcement	
Map ID	Name
1	Cameron Parish Sheriff's Office

Critical Facilities: Public Health

Public Health	
Map ID	Name
1	South Cameron Hospital
2	South Cameron Memorial Hospital System Rural

Critical Facilities: Education

Education	
Map ID	Name
1	Johnson Bayou School
2	Hackberry High School
3	South Cameron School Sports Complex
4	South Cameron High School
5	Grand Lake School

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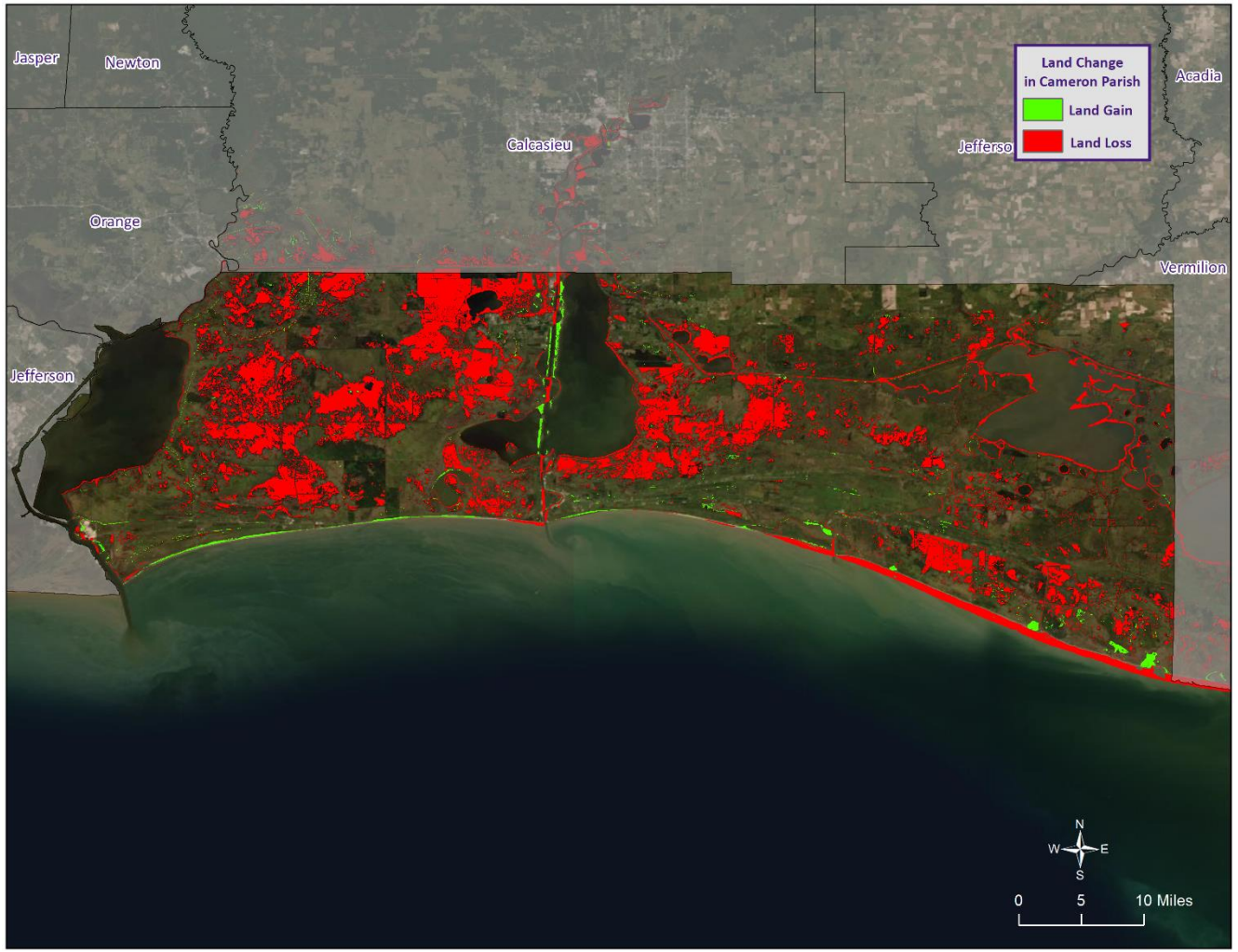
Coastal Hazards

- **Subsidence** is the gradual caving in or sinking of an area of land
  - Slow-acting process with impacts that can be readily seen in coastal parishes over the course of decades
  - Lowers elevations in coastal Louisiana, accelerates the effects of saltwater intrusion
  - Causes structures to become more vulnerable to flooding by lowering elevations
- **Saltwater intrusion/Coastal Land Loss** is the movement of salty water into freshwater aquifers or is the encroachment of saline water into freshwater estuaries
  - One of the major causes of subsidence and marshland loss
  - 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

Land Gain & Loss



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Subsidence Rates

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Drought

- A drought is a deficiency in water availability over an extended period of time, caused by precipitation totals and soil water storages that do not satisfy the environmental demand for water either by evaporation or transpiration through plant leaves.

- There are four classes of drought, based upon what is impacted by the shortage of water:
  - Meteorological Drought
  - Hydrologic Drought
  - Agricultural Drought
  - Socioeconomic Drought

- The entire parish can be affected by drought

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Drought

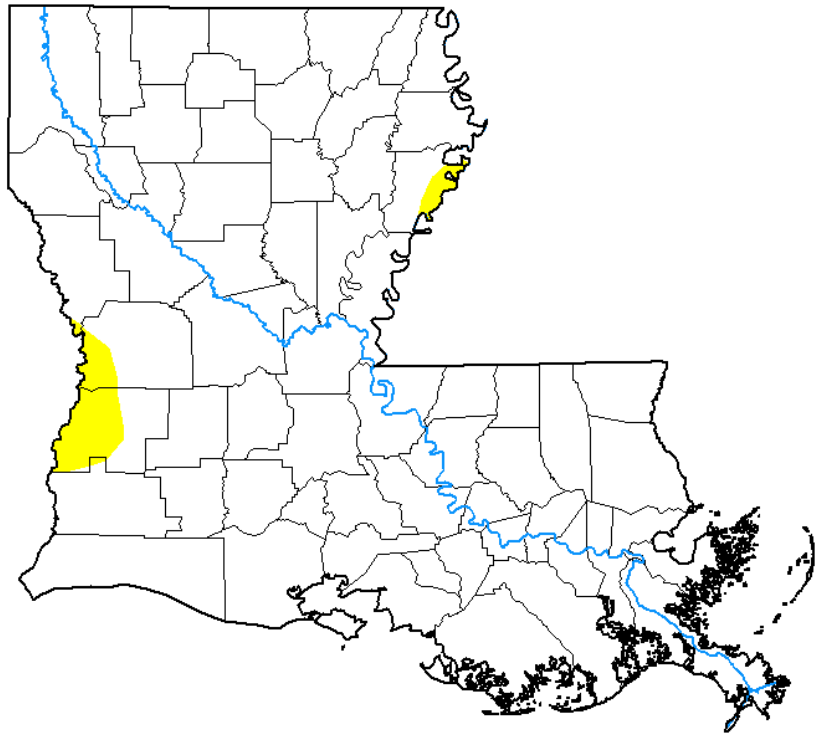
U.S. Drought Monitor

Louisiana

June 30, 2020

(Released Thursday, Jul. 2, 2020)

Valid 8 a.m. EDT



Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

Adam Hartman
NOAA/NWS/NCEP/CPC

droughtmonitor.unl.edu

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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.”

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Flooding

Types of flooding may include the following:

- Riverine
- Flash
- Ponding
- Backwater
- Urban
- Coastal

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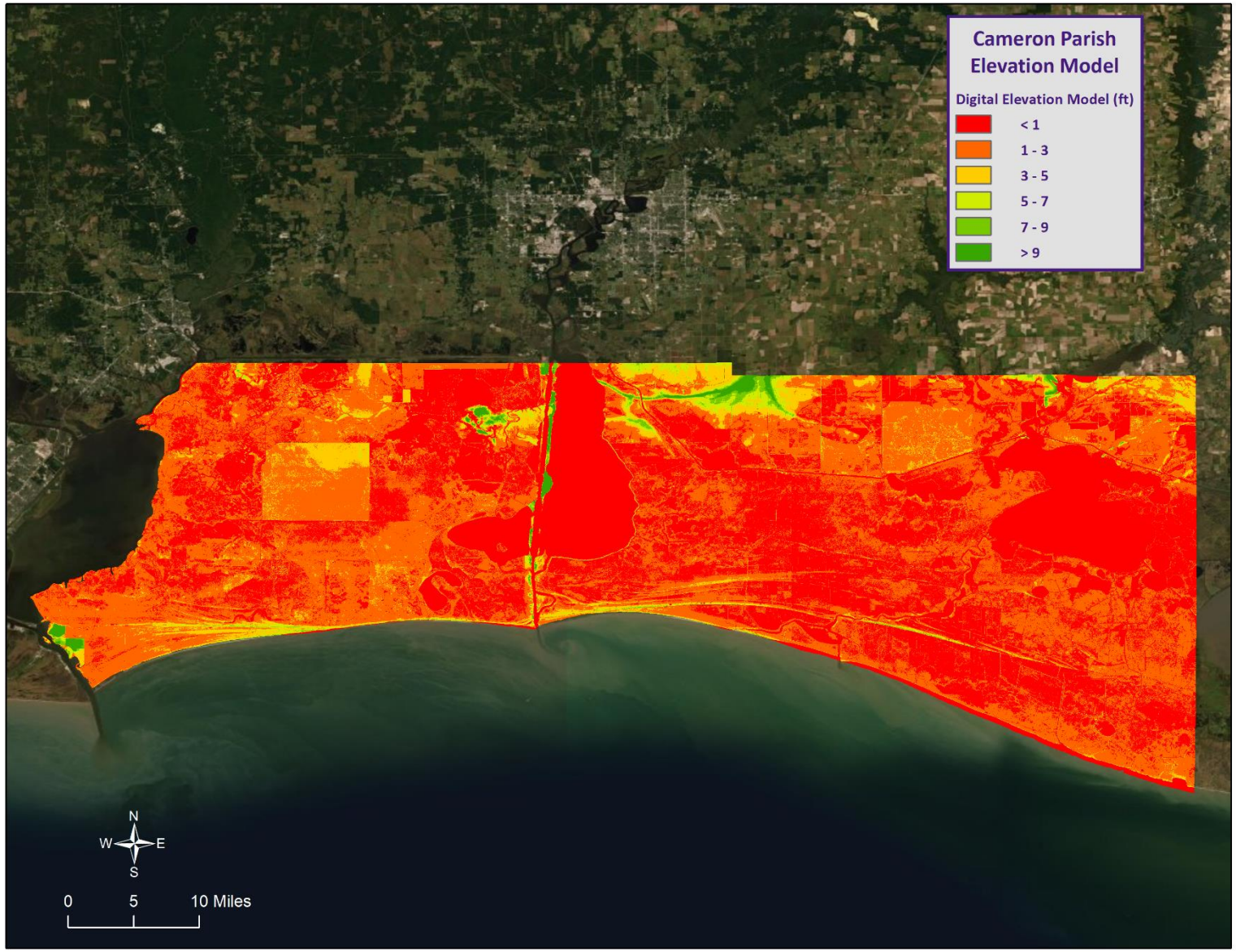
Digital Elevation Model



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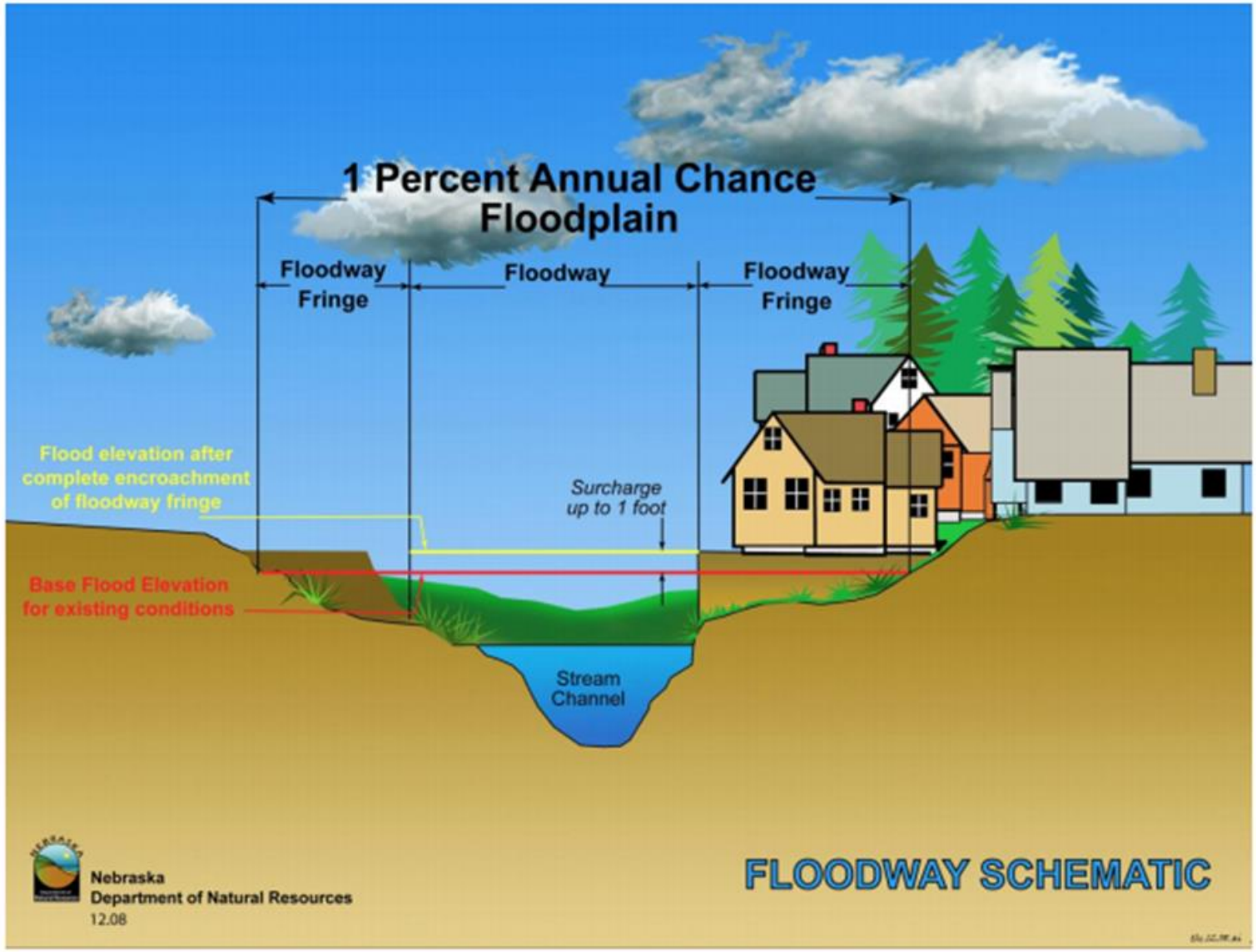
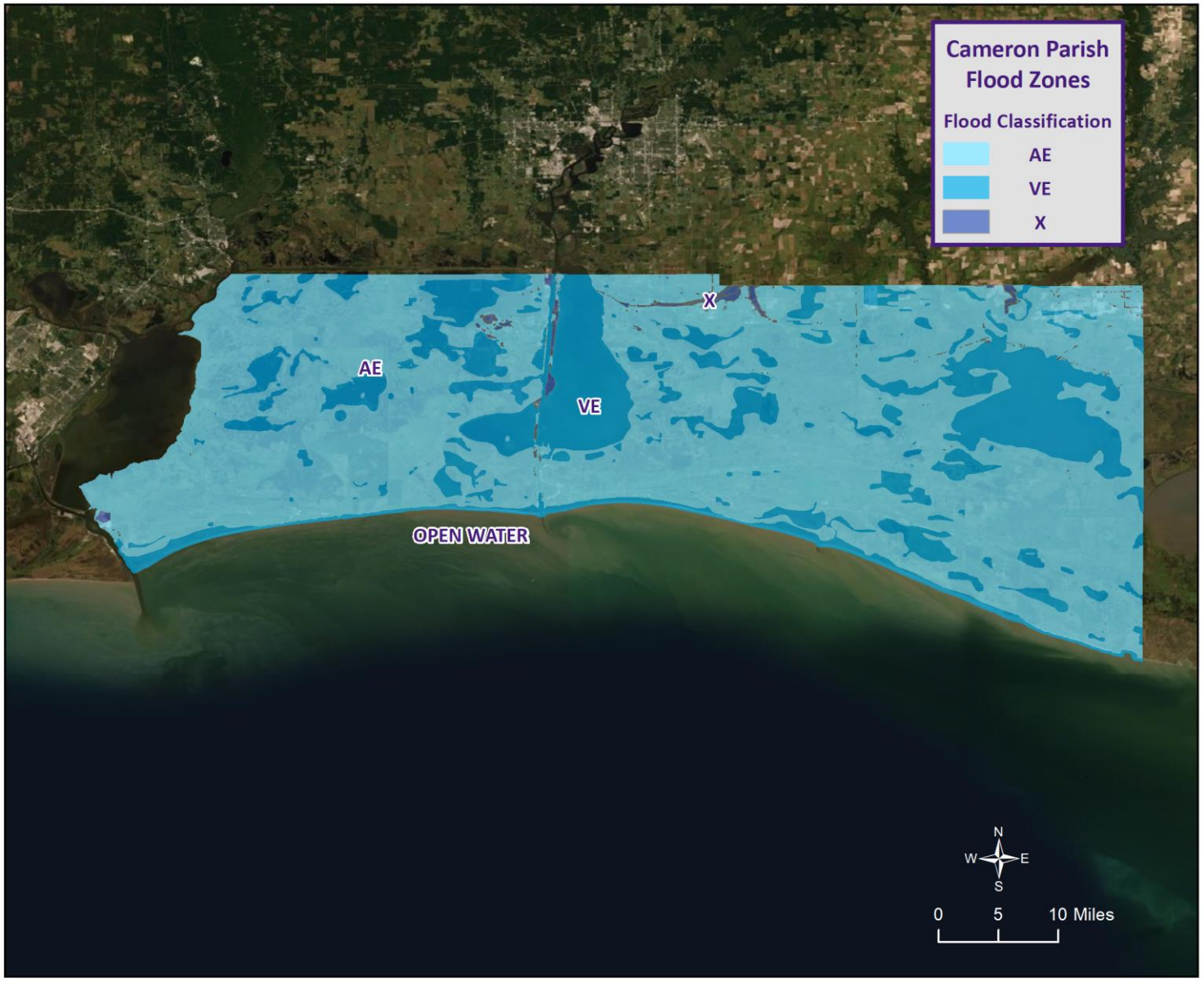
Floodway Diagram



Cameron Parish Flood Map



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Repetitive Loss Properties

- Some areas flood more often than other properties, even more than those in the mapped 100-year floodplain.
- FEMA defines a “repetitive loss” property as one which has received two flood insurance claim payments for at least $1,000 over any 10-year period since 1978.
- These properties are important to the National Flood Insurance Program and the Community Rating System because even though they comprise 1% of the policy base, they account for 30% of the country’s flood insurance claim payments.

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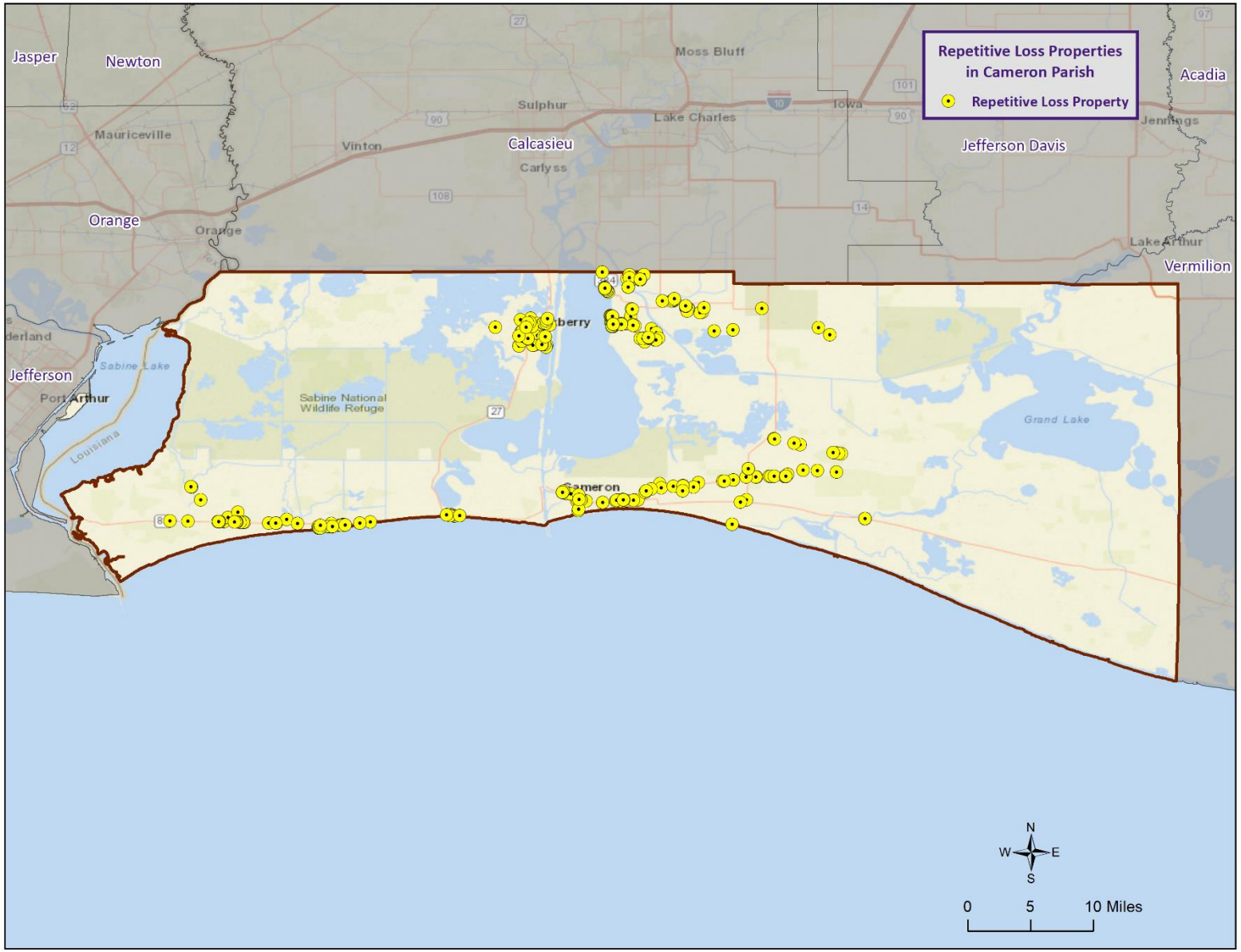
Repetitive Loss Properties



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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 can occur naturally or through human influence.
- In Louisiana, most of the sinkholes are precipitated by the human-influenced collapse of salt dome caverns.
- Currently, there are two identifiable salt dome locations in Cameron Parish and one salt dome within a two-mile radius of Cameron Parish.

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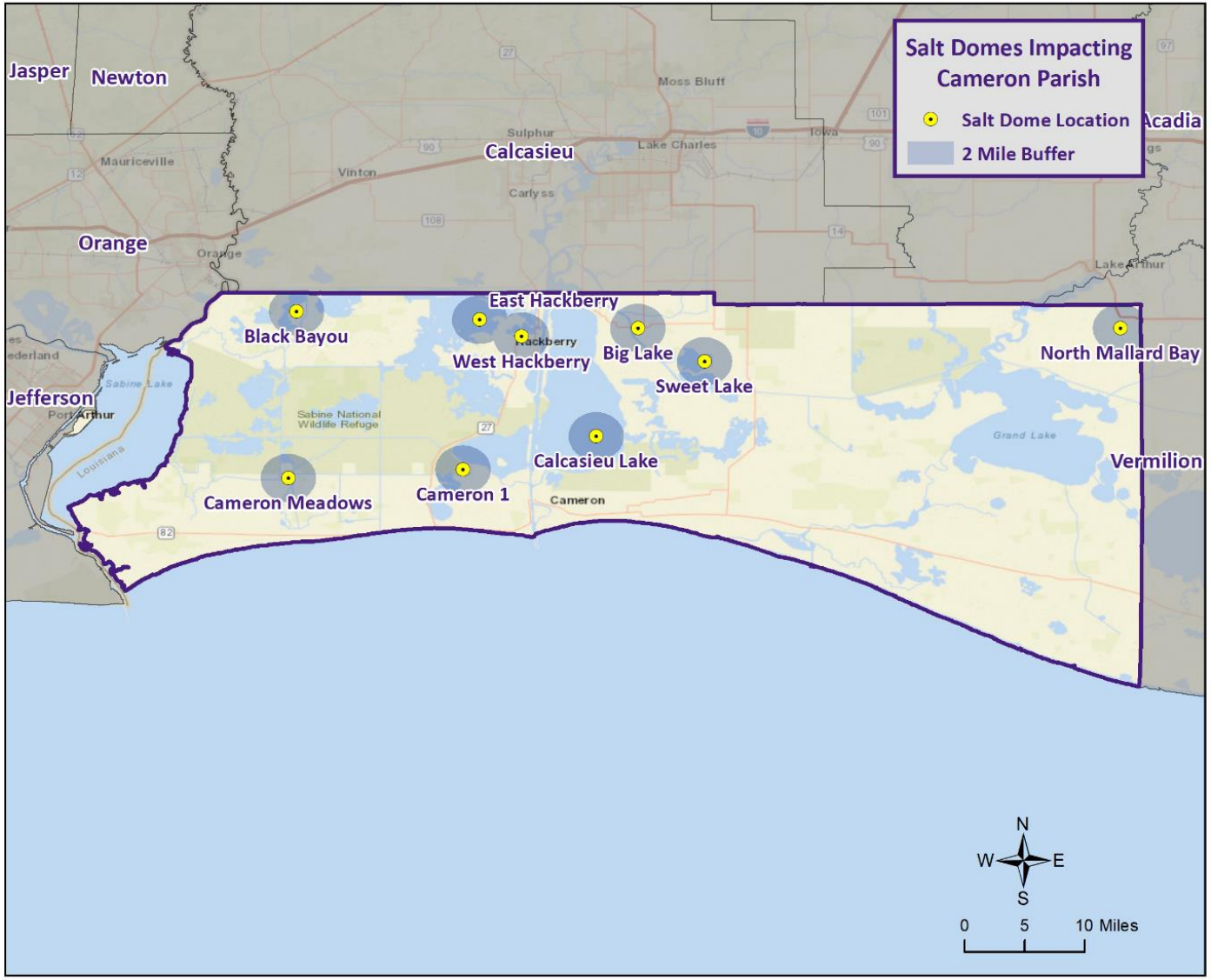
Salt Dome Locations



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Thunderstorms

- A **thunderstorm**, also known as an **electrical storm**, a **lightning storm**, or a **thundershower**, is a type of storm characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere known as thunder.

- They are usually accompanied by strong winds, heavy rain, and sometimes snow, sleet, or hail.

- Thunderstorms may line up in a series or rainband, known as a squall line. Strong or severe thunderstorms may rotate, known as supercells. While most thunderstorms move with the mean wind flow through the layer of the troposphere that they occupy, vertical wind sheer causes a deviation in their course at a right angle to the wind shear direction.

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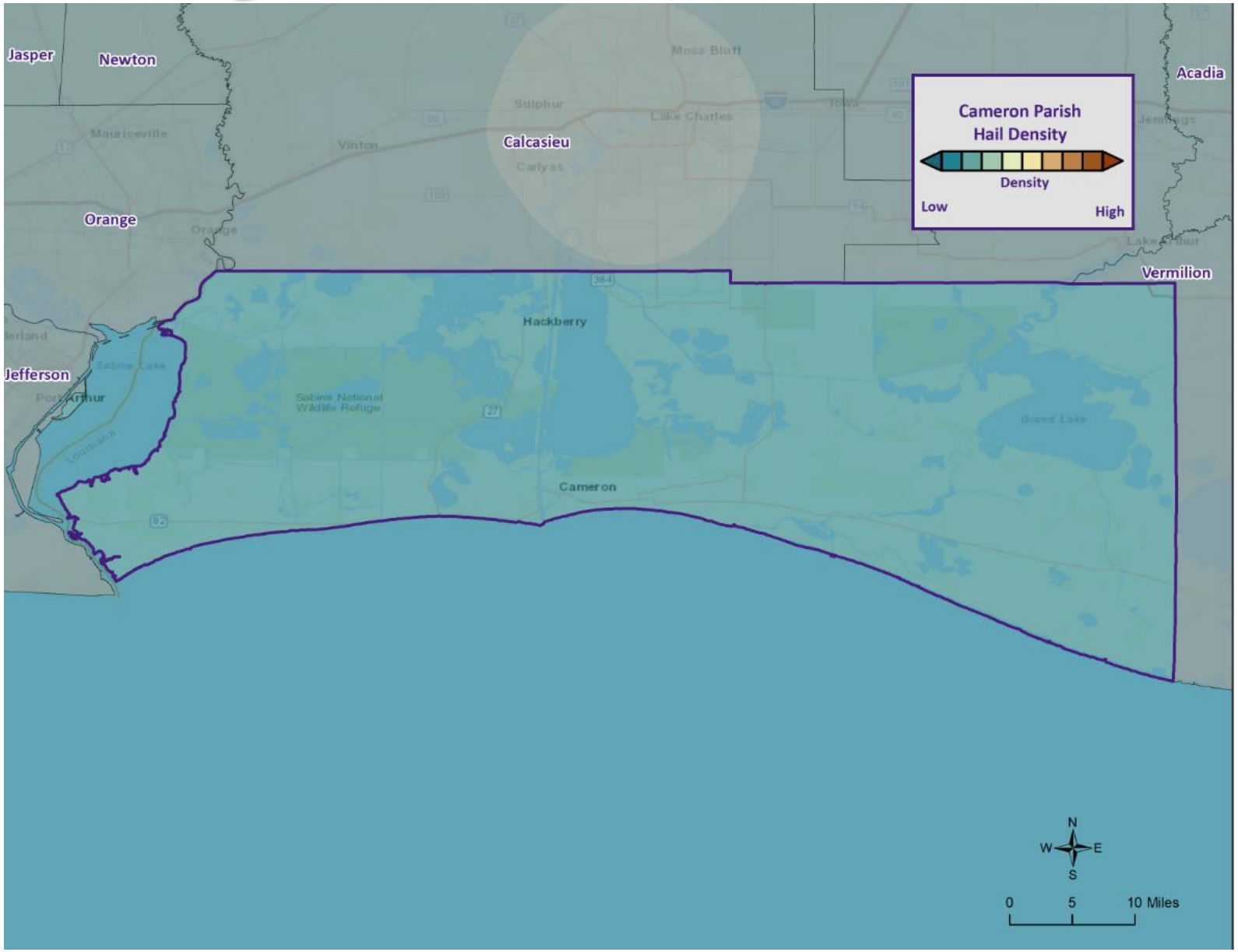
Density of Prior Hailstorms



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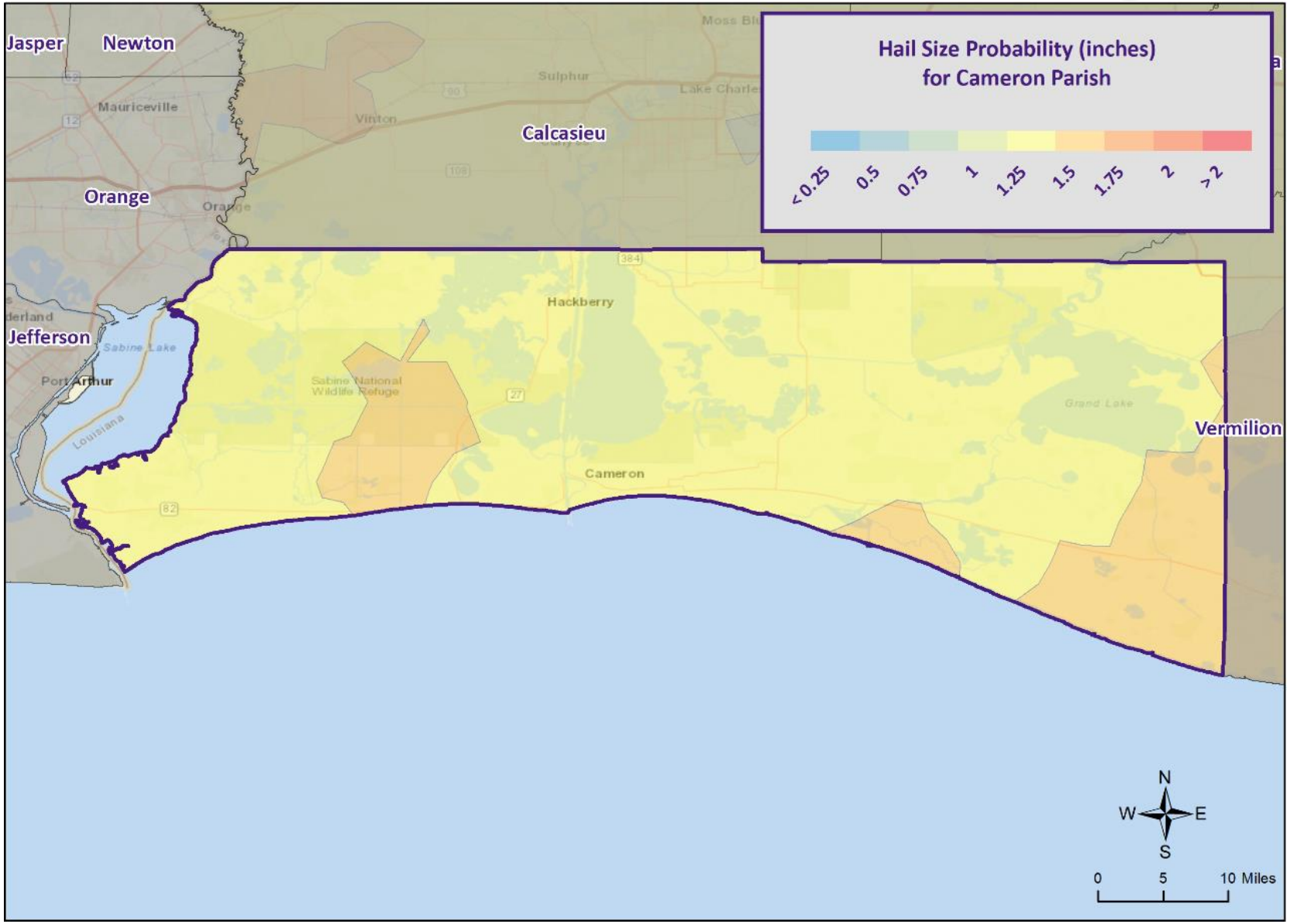
Hail Size Probability



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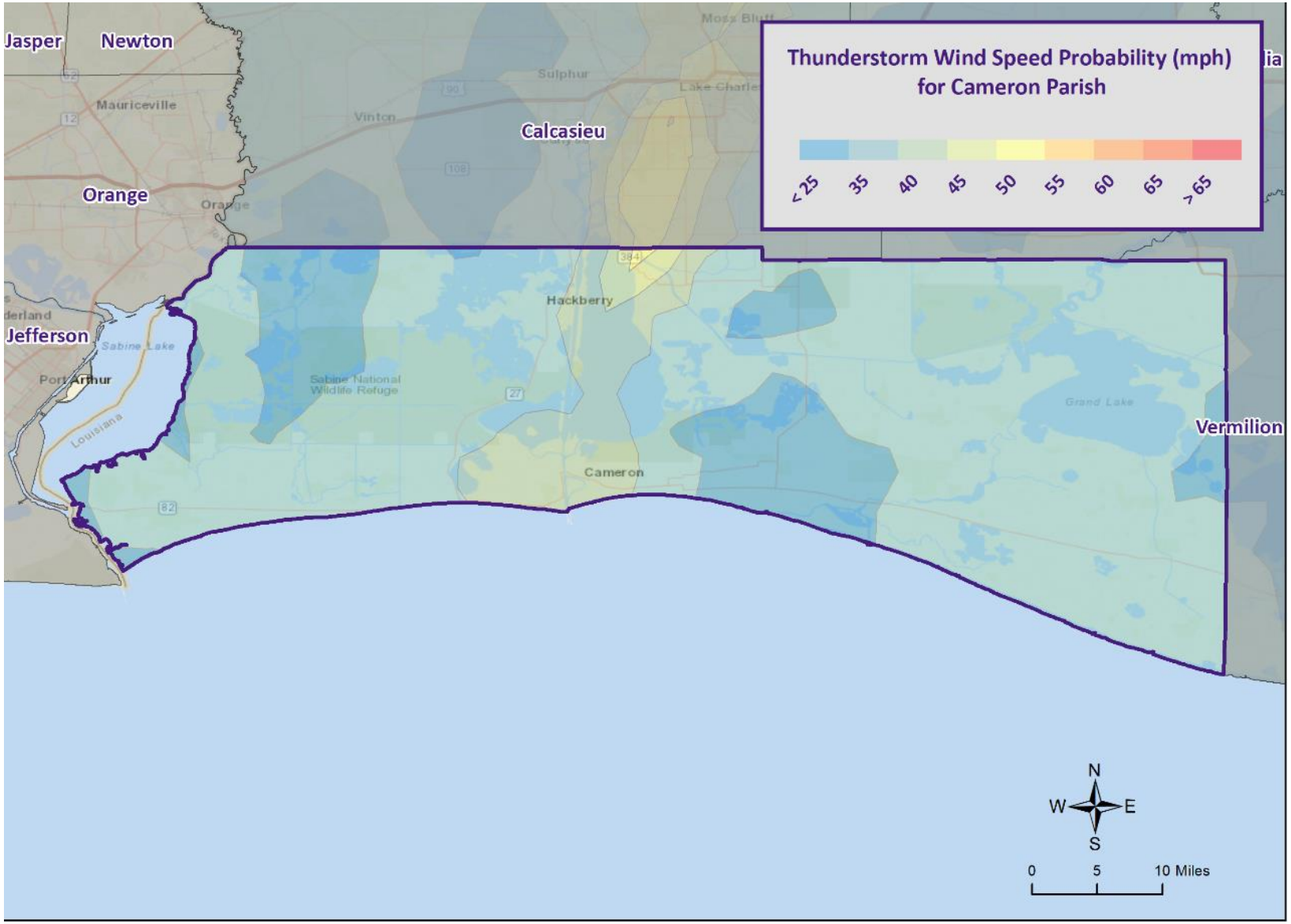
Wind Speed Probability



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Tornadoes

- Tornadoes (also called twisters and cyclones) are rapidly rotating funnels of wind extending between storm clouds and the ground.
- Tornadoes are the most severe storms for their size, and 70% of the world's reported tornadoes occur within the continental United States.

ORIGINAL FUJITA SCALE		ENHANCED FUJITA SCALE	
F5	261-318 mph	EF5	+200 mph
F4	207-260 mph	EF4	166-200 mph
F3	158-206 mph	EF3	136-165 mph
F2	113-157 mph	EF2	111-135 mph
F1	73-112 mph	EF1	86-110 mph
F0	<73 mph	EF0	65-85 mph

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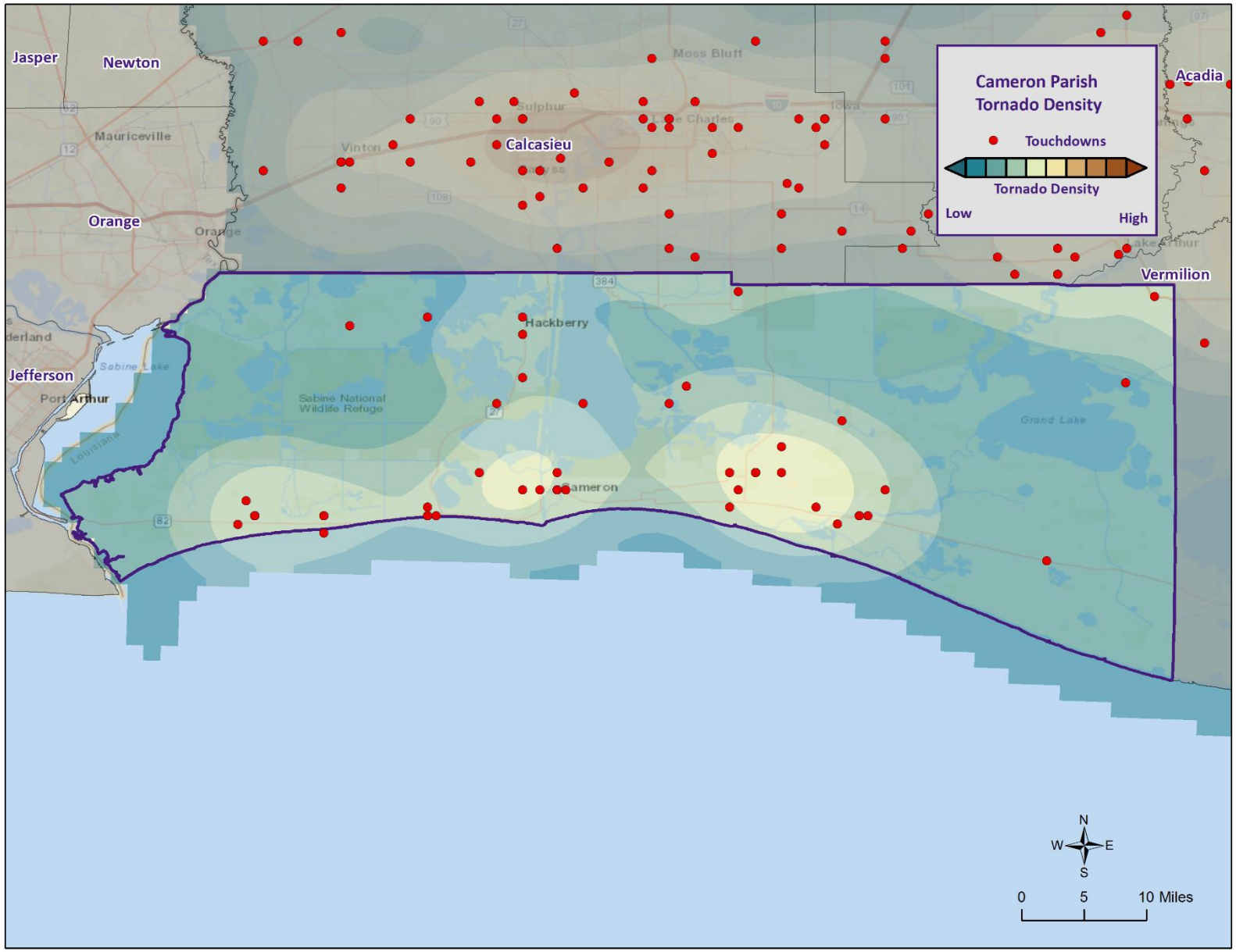
Tornadoes



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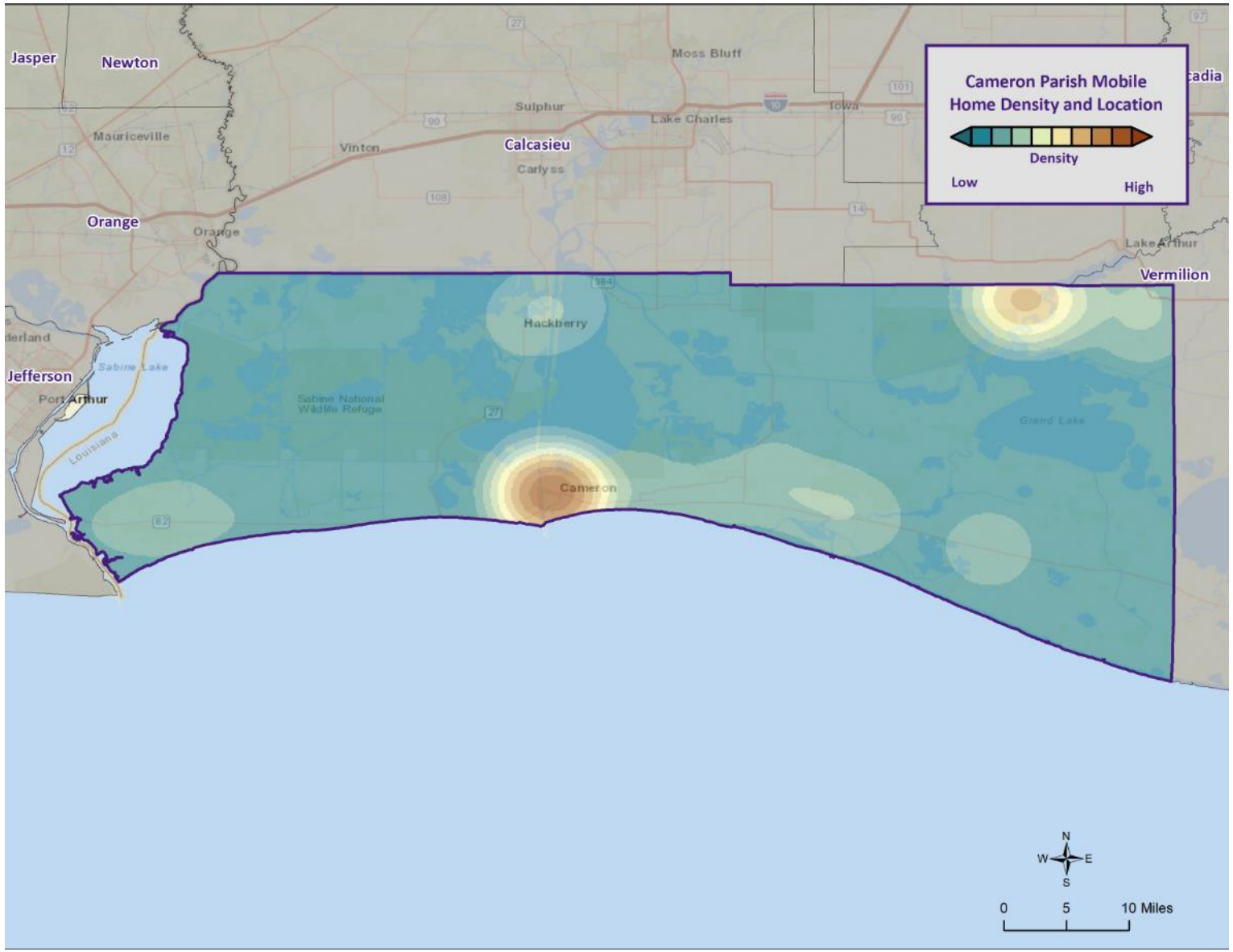
Manufactured Home Density



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Tropical Cyclones

- Tropical cyclones are defined spinning, low-pressure air masses that draw surface air into their centers and attain strength ranging from weak tropical waves to the most intense hurricanes

Saffir-Simpson Hurricane Wind Scale		
	Sustained Wind Speed	**Effects**
Category 1	74-95 mph (119-153 km/hr)	Very dangerous winds will produce some damage. Low-lying coastal roads flooded, minor pier damage
Category 2	96-110 mph (154-177 km/hr)	Extremely dangerous winds will cause extensive damage. Major damage to exposed mobile homes, evacuation of some shoreline residents
Category 3	111-130 mph (178-209 km/hr)	Devastating damage will occur. Some structural damage to small buildings; serious flooding at coast and many smaller structures near coast destroyed
Category 4	131-155 mph (210-249 km/hr)	Catastrophic damage will occur. High risk of injury or death to people, livestock, and pets due to flying and falling debris. Long-term water shortages will increase human suffering. Most of the area will be uninhabitable for weeks or months.
Category 5	> 155 mph (249 km/hr)	Catastrophic damage will occur. People, livestock, and pets are at very high risk of injury or death from flying or falling debris. A high percentage of frame homes will be destroyed. Long-term power outages and water shortages will render area uninhabitable for weeks or months.

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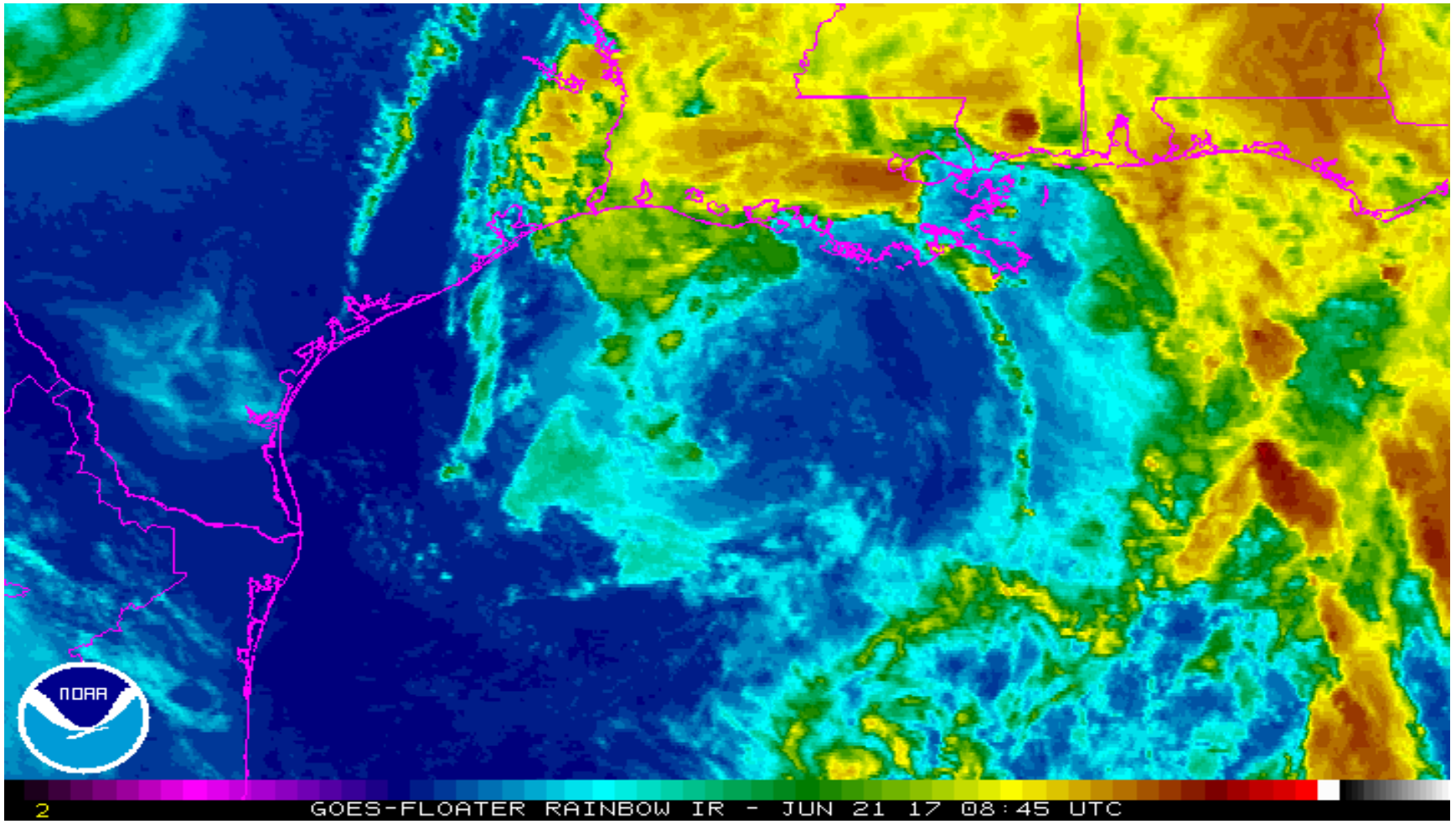
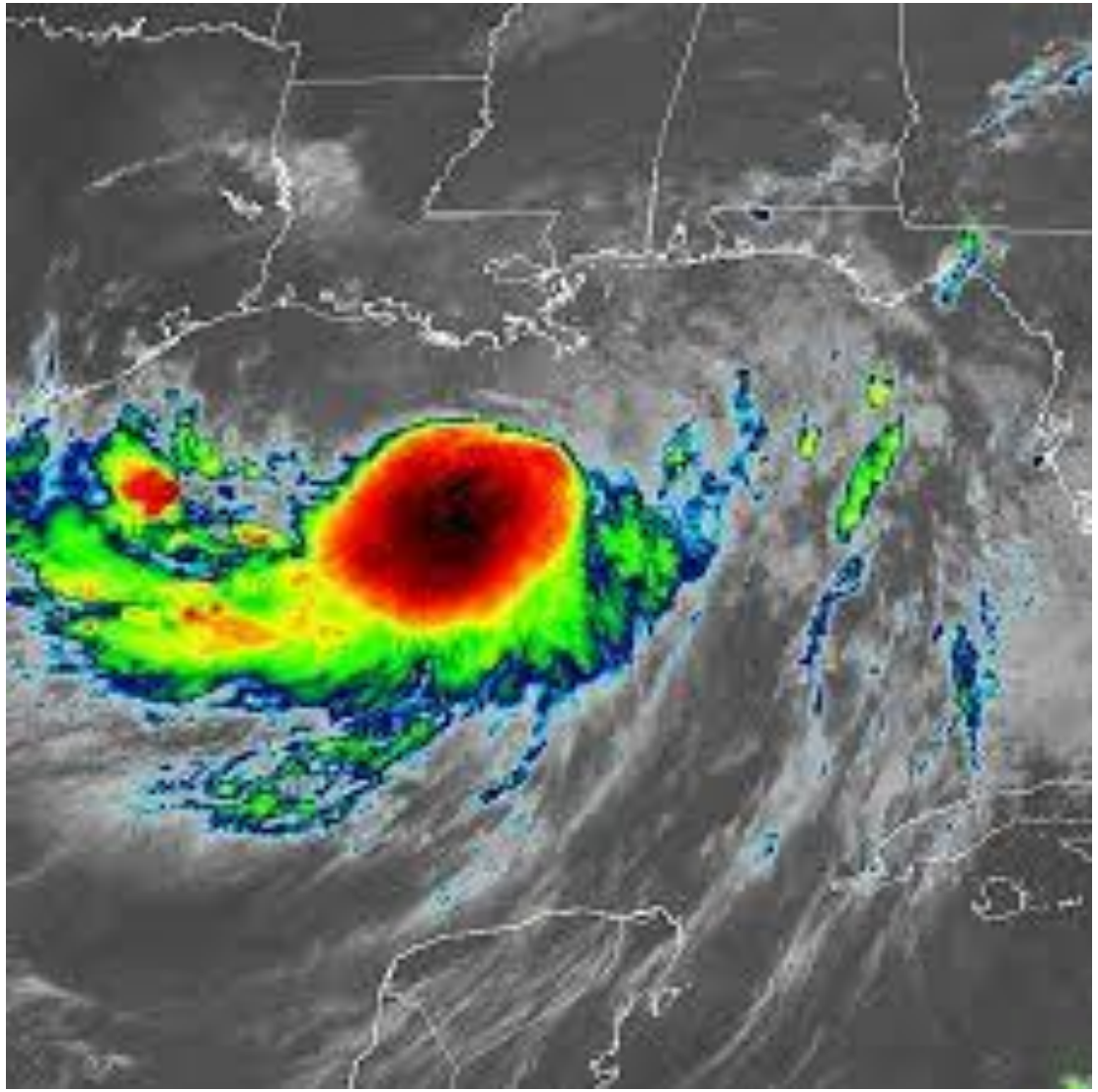
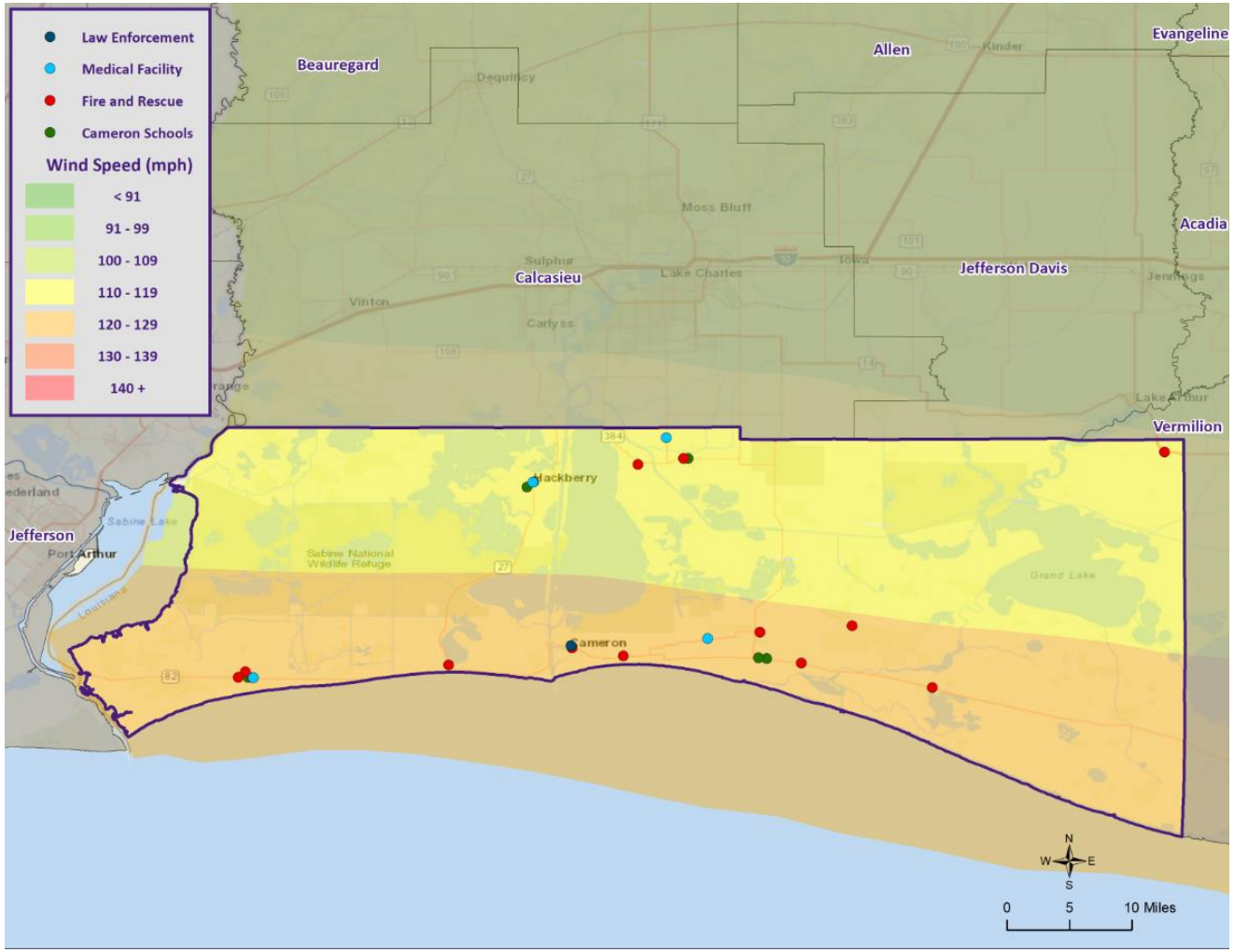
Tropical Storm Cindy



Hurricane Barry



Wind Speed Impacts on Critical Infrastructure



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Wildfire

- A wildfire is combustion in a natural setting, marked by flames or intense heat.
- Most frequently, wildfires are ignited by lightning or unintentionally by humans. Fires set purposefully (but lawfully) are referred to as controlled fires or burns
- The primary areas affected by wildfires are the forests. Sixty-five percent of St. Tammany Parish is covered in timber.
- While loss of timber is a problem, the real hazard is when wildfires threaten developed areas. As more development moves into and next to forested areas, the hazards to people and property increases.

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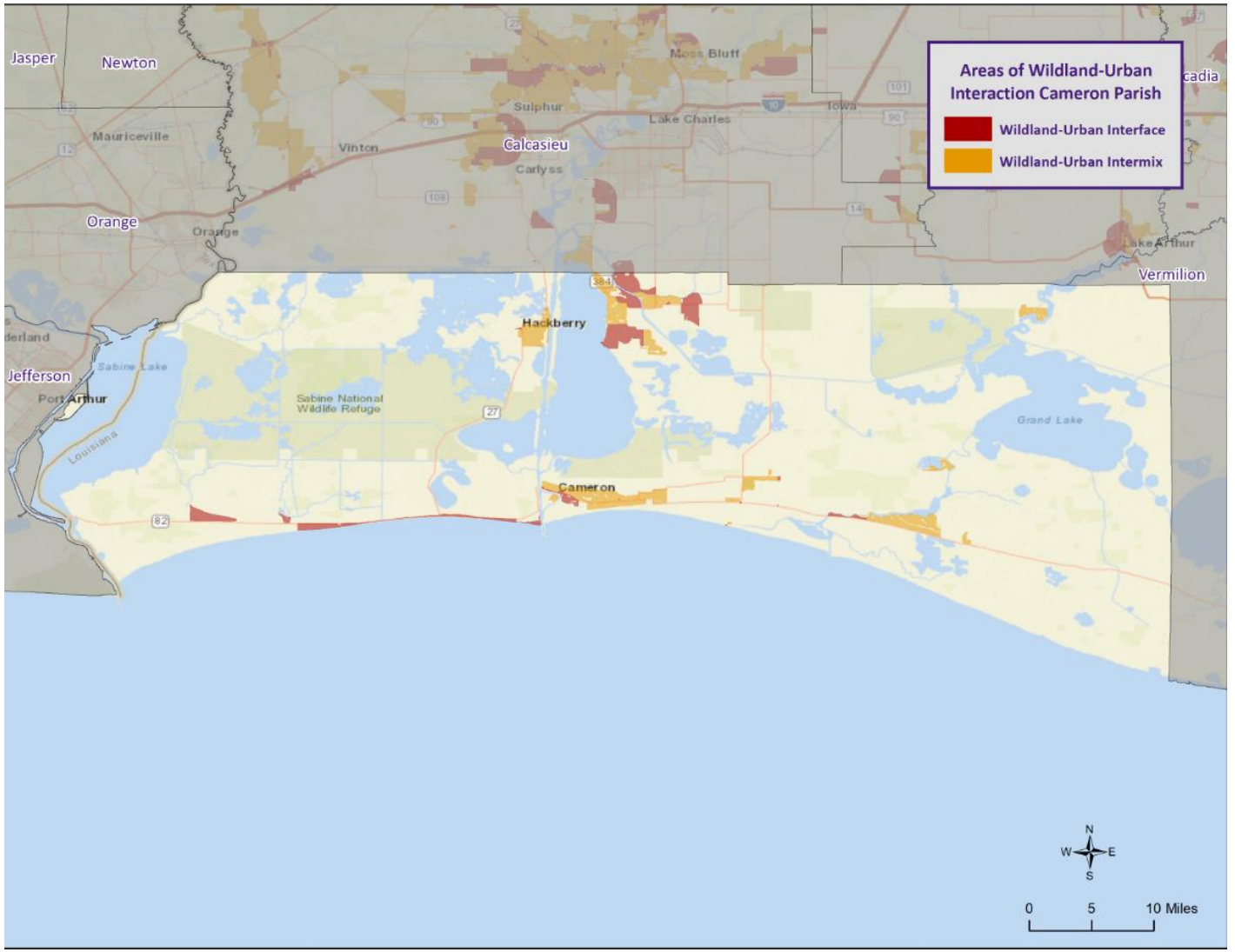
Wildfire Interaction Cameron Parish



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Parish Mitigation Goals

- **Goal 1:** Reduce the loss of life or property
- **Goal 2:** Protect critical public facilities and thoroughfares
- **Goal 3:** Ensure post-disaster operability of strategic facilities and thoroughfares
- **Goal 4:** Develop incentive and community outreach/education programs that assist homeowners in
- **Goal 5:** Protecting residential properties
- **Goal 6:** Provide a long term mitigation solution in locations which experience repetitive hazard damage
- **Goal 7:** Provide a cooperative, inter-jurisdictional / inter-agency solution to a problem
- **Goal 8:** Show development and implementation of comprehensive programs, standards, and regulations that reduce future hazard damage
- **Goal 9:** Avoid inappropriate future development in areas that are vulnerable to hazard damage
- **Goal 10:** Reduce the level of hazard vulnerability in existing structures and developed property
- **Goal 11:** Restore or protect natural resources, recreational areas, open space, or other environmental values

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Parish Hazard Mitigation Project Update

- Cameron Parish OHSEP/Cameron Parish Government Discussion

Cameron Parish OHSEP Office of Homeland Security & Emergency Preparedness

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Public Outreach Activity

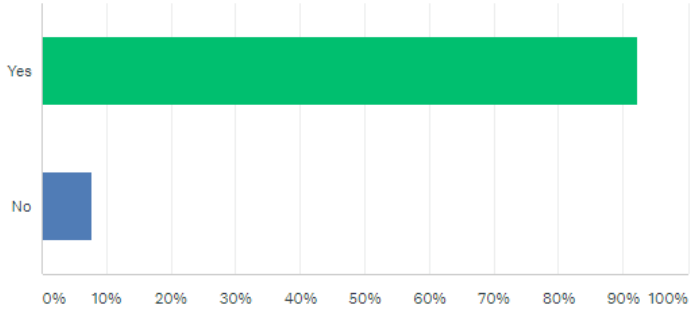
Hazard Mitigation Public Opinion Survey

https://www.surveymonkey.com/r/CameronHM2020

- Average time to complete survey is 10 minutes, please take the time!

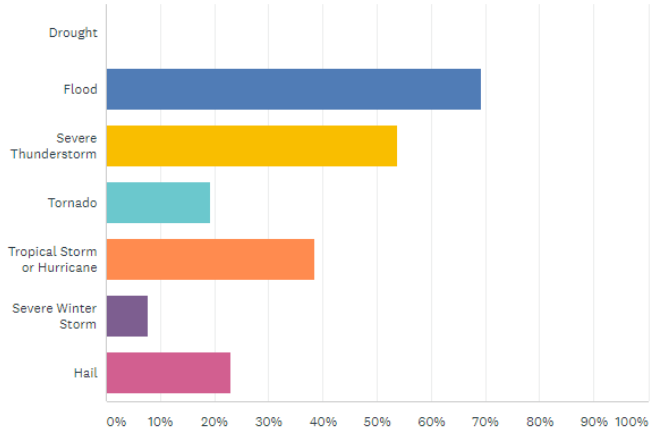
During the past five years in the parish you currently reside in, have you or someone in your household directly experienced a natural disaster such as a severe windstorm, flood, tropical storm or other type of natural disaster?

Answered: 26 Skipped: 1



Which of these natural disasters have you or someone in your household experienced in the past five years? (Check all that apply)

Answered: 26 Skipped: 1



Contact Us

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