



Iberia Parish Hazard Mitigation Plan Update Public Meeting

July 7, 2020

New Iberia, LA



Introductions

- **Stephenson Disaster Management Institute (SDMI) at LSU**
 - Lauren Stevens – Associate Director, Disaster Management Programs
 - Chris Rippetoe – Hazard Mitigation Program Manager
- **Iberia Parish OHSEP Director/Parish Staff**
 - Prescott Marshal– OHSEP Director
- **Governor’s Office of Homeland Security and Emergency Preparedness (GOHSEP)**
 - Jeffrey Giering – State Hazard Mitigation Officer

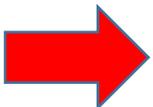
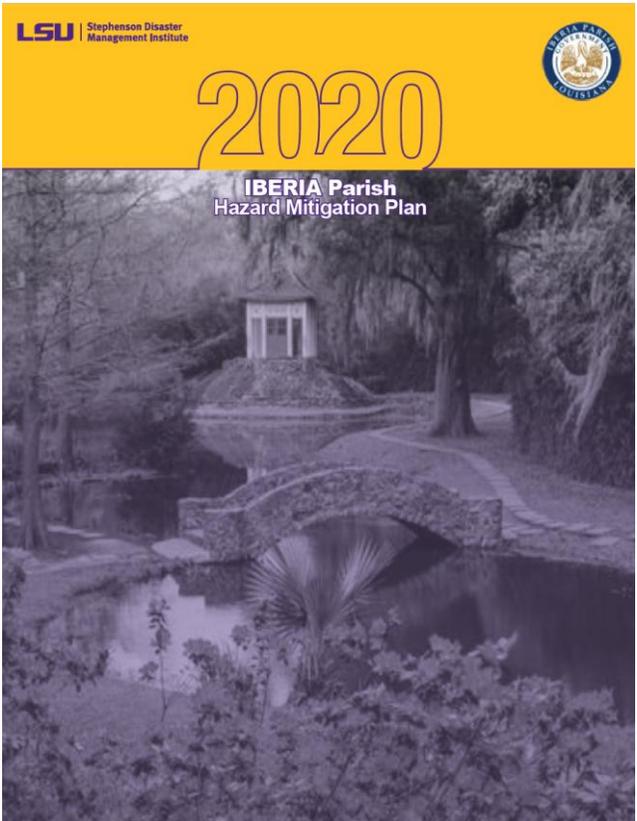
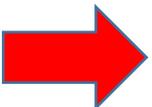


Agenda

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



Why are we here?



This document has been prepared by
Louisiana Governor's Office of Homeland Security
and Emergency Preparedness
7667 Independence Blvd.
Baton Rouge, LA 70806

With Support From:
Department of Geography and Anthropology
Department of Construction Management
Louisiana State University
Baton Rouge, LA 70803

University of New Orleans Center for Hazards Assessment, Response & Technology
(UNO-CHART)
2000 Lakeshore Drive
New Orleans, LA 70148



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!



Why Are We Required To Have A Hazard Mitigation Plan?

- Disaster Mitigation Act of 2000 (DMA 2000)

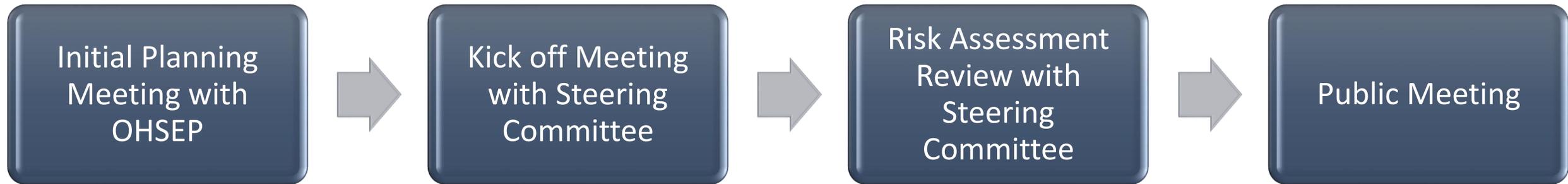
Section 322 of the Act specifically addresses mitigation planning and requires state and local governments to prepare multi-hazard migration plans as a precondition for receiving FEMA mitigation project grants.

- 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.

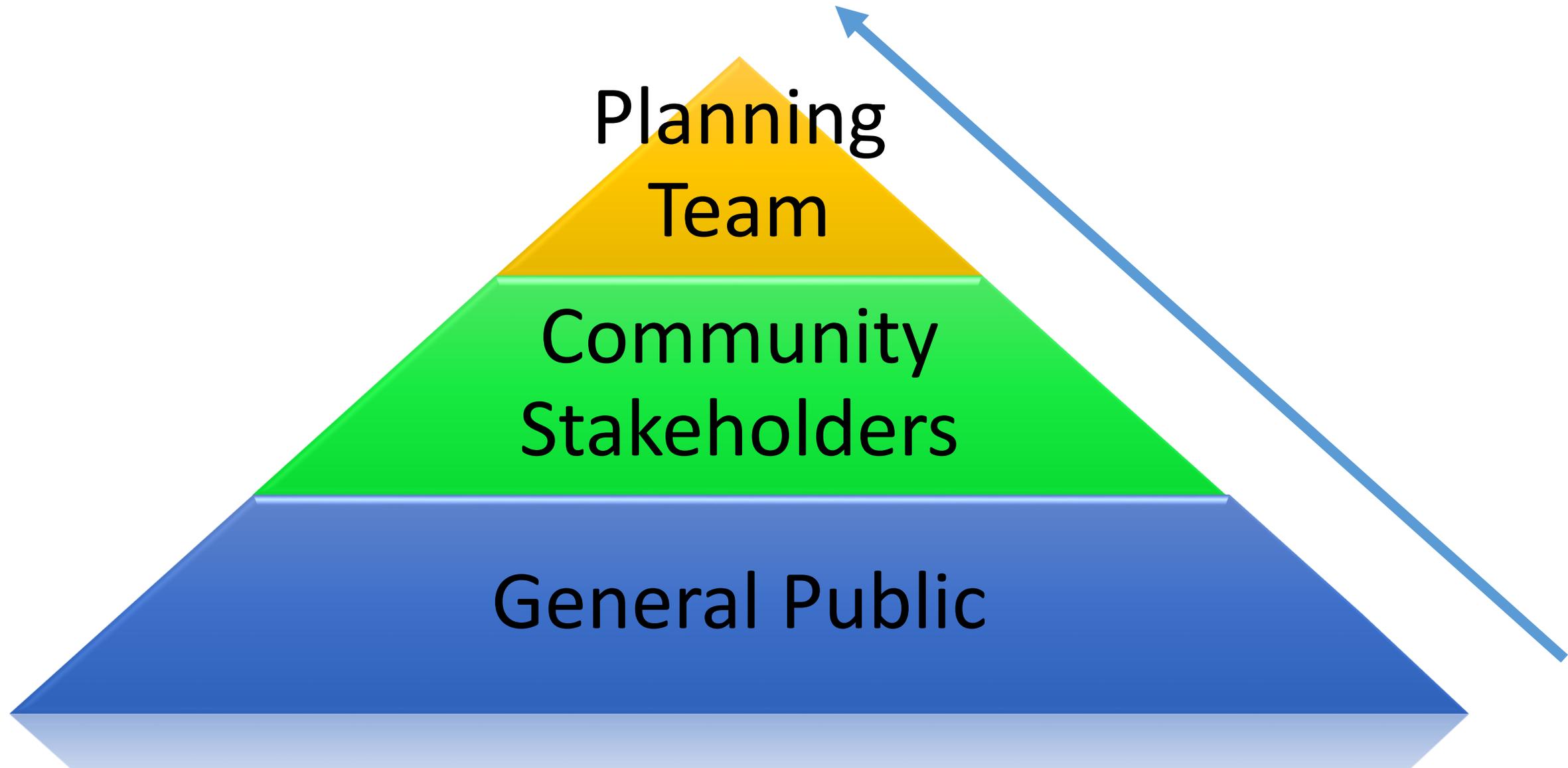


- The approved Iberia Parish Hazard Mitigation Plan will allow for distribution of HM funding following future disasters.

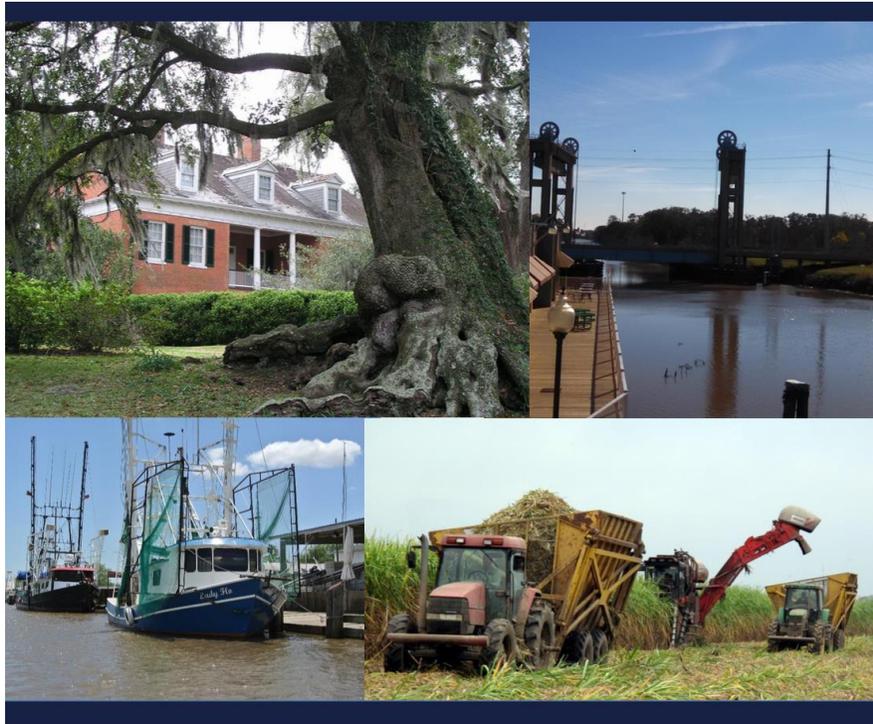
Planning Process to Date



Collaborative Planning Approach



Planning Development



IBERIA PARISH HAZARD MITIGATION PLAN UPDATE - 2015



MARCH 2015



LSU | Stephenson Disaster
Management Institute

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



Plan Layout

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



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*



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



Hazard Identification and Risk Assessment



- Coastal Land Loss
- Dam/Levee Failure
- Drought - **Discounted**
- Flooding



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



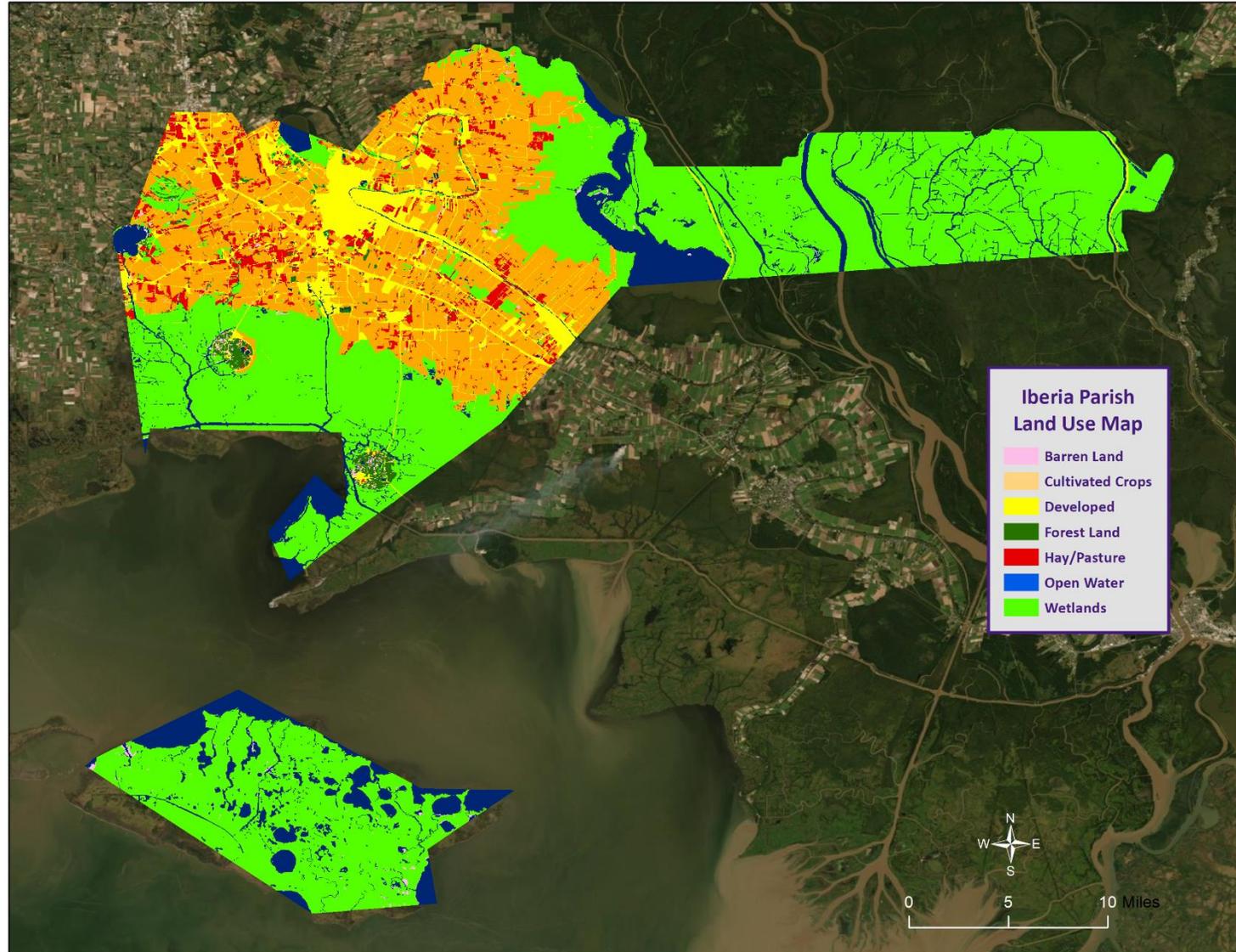
Risk Matrix for Iberia Parish

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
Flooding	3	4	3	4	3	3.4
Levee Failure	1	3	2	4	2	2.3
Sinkholes	1	2	1	4	1	1.9
Thunderstorms - Hail	3	2	3	3	1	2.45
Thunderstorms - Lightning	3	2	2	3	1	2.25
Thunderstorms - Winds	3	2	2	3	1	2.25
Tornadoes	3	3	2	4	3	2.95
Tropical Cyclones	4	4	4	1	4	3.55

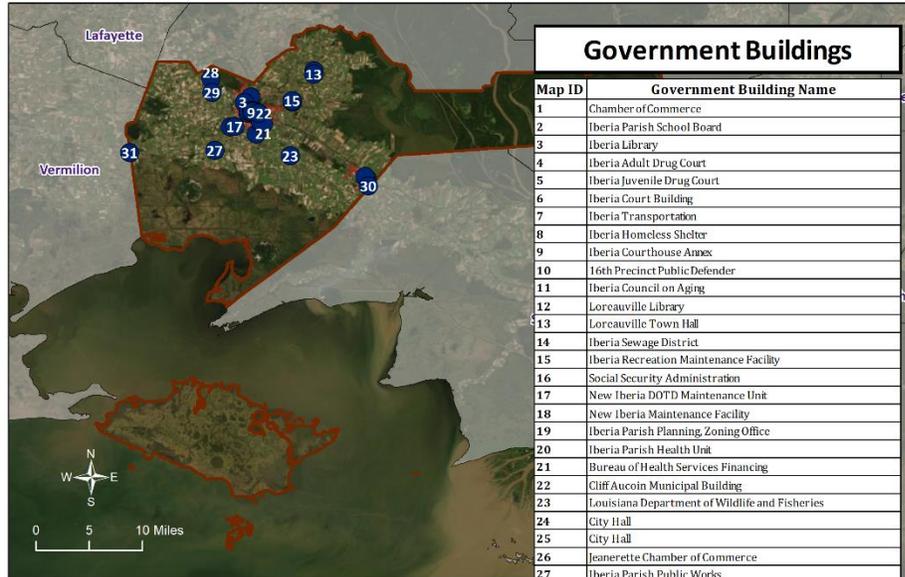
Risk Assessment Maps



Iberia Parish - Land Use



Critical Facilities: Civil Government

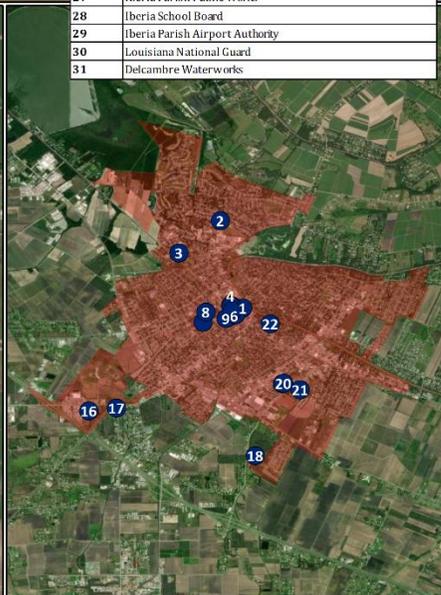


Government Buildings

Map ID	Government Building Name
1	Chamber of Commerce
2	Iberia Parish School Board
3	Iberia Library
4	Iberia Adult Drug Court
5	Iberia Juvenile Drug Court
6	Iberia Court Building
7	Iberia Transportation
8	Iberia Homeless Shelter
9	Iberia Courthouse Annex
10	16th Precinct Public Defender
11	Iberia Council on Aging
12	Loreauville Library
13	Loreauville Town Hall
14	Iberia Sewage District
15	Iberia Recreation Maintenance Facility
16	Social Security Administration
17	New Iberia DOTD Maintenance Unit
18	New Iberia Maintenance Facility
19	Iberia Parish Planning Zoning Office
20	Iberia Parish Health Unit
21	Bureau of Health Services Financing
22	Cliff Aucoin Municipal Building
23	Louisiana Department of Wildlife and Fisheries
24	City Hall
25	City Hall
26	Jeanerette Chamber of Commerce
27	Iberia Parish Public Works
28	Iberia School Board
29	Iberia Parish Airport Authority
30	Louisiana National Guard
31	Delcambre Waterworks

Government Buildings

- Government Buildings
- Jurisdiction Area



Critical Facilities: Fire & Rescue

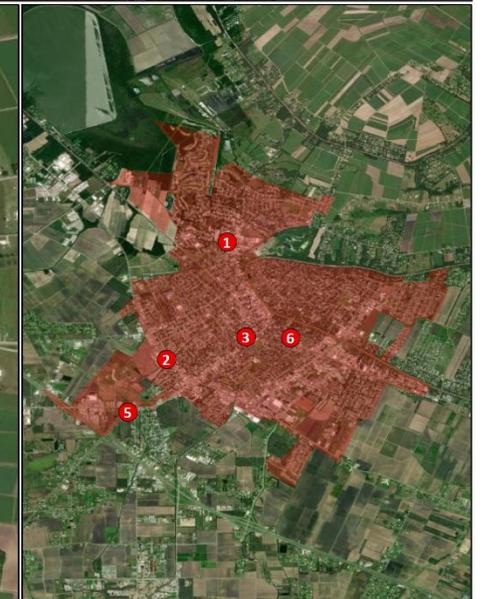


Fire Stations

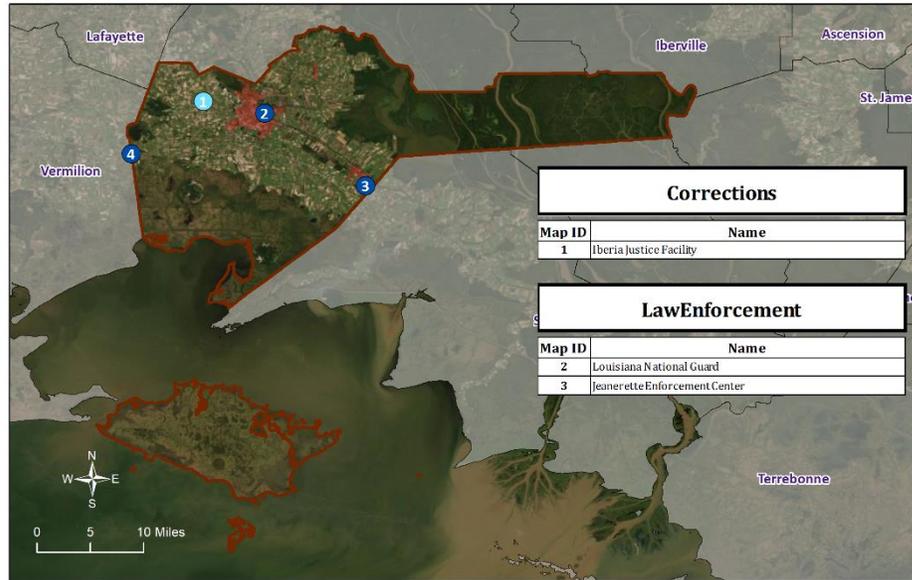
Map ID	Name
1	New Iberia Fire Department
2	Iberia Fire Station #5
3	New Iberia Fire Department
4	Loreauville Fire Department
5	Iberia Parish Fire Protection District #1
6	New Iberia Fire Department
7	B.O.M. Volunteer Fire Department
8	Lydia Volunteer Fire Department
9	Grand Marais Volunteer Fire Department
10	Volunteer Fire Department
11	Robert Gretner Memorial Fire Station
12	Rynella Volunteer Fire Department
13	Coteau Volunteer Fire Department

Fire and Rescue Buildings

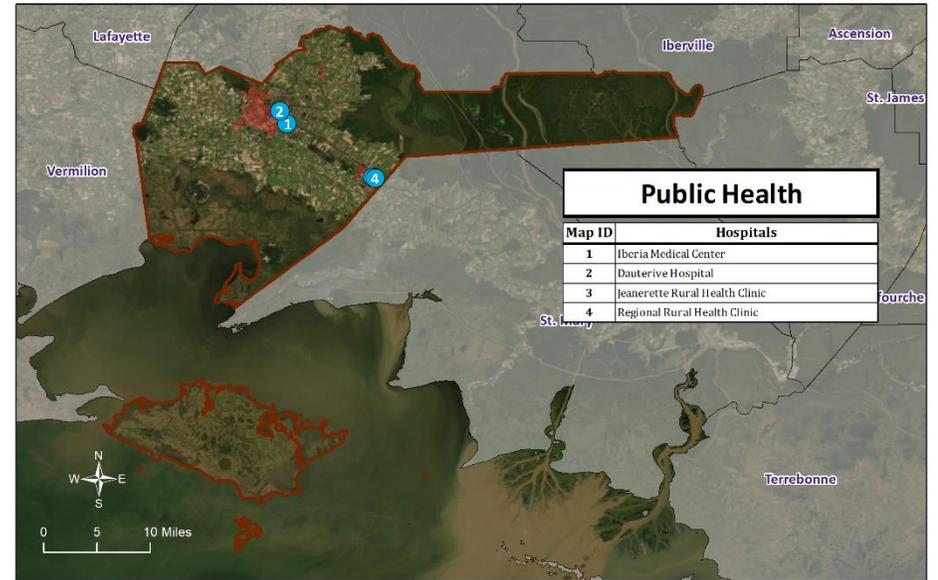
- Fire and Rescue
- Jurisdiction Area



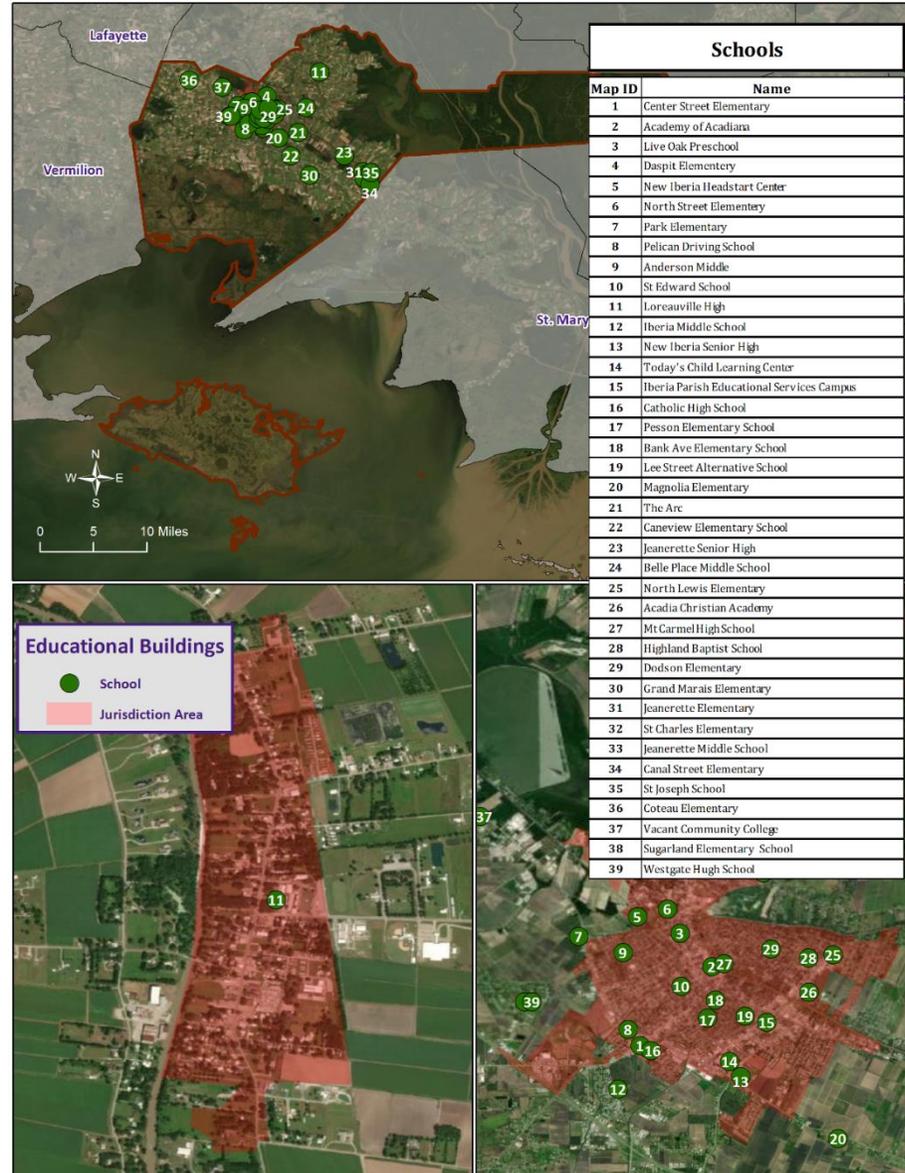
Critical Facilities: Law Enforcement



Critical Facilities: Public Health



Critical Facilities: Education

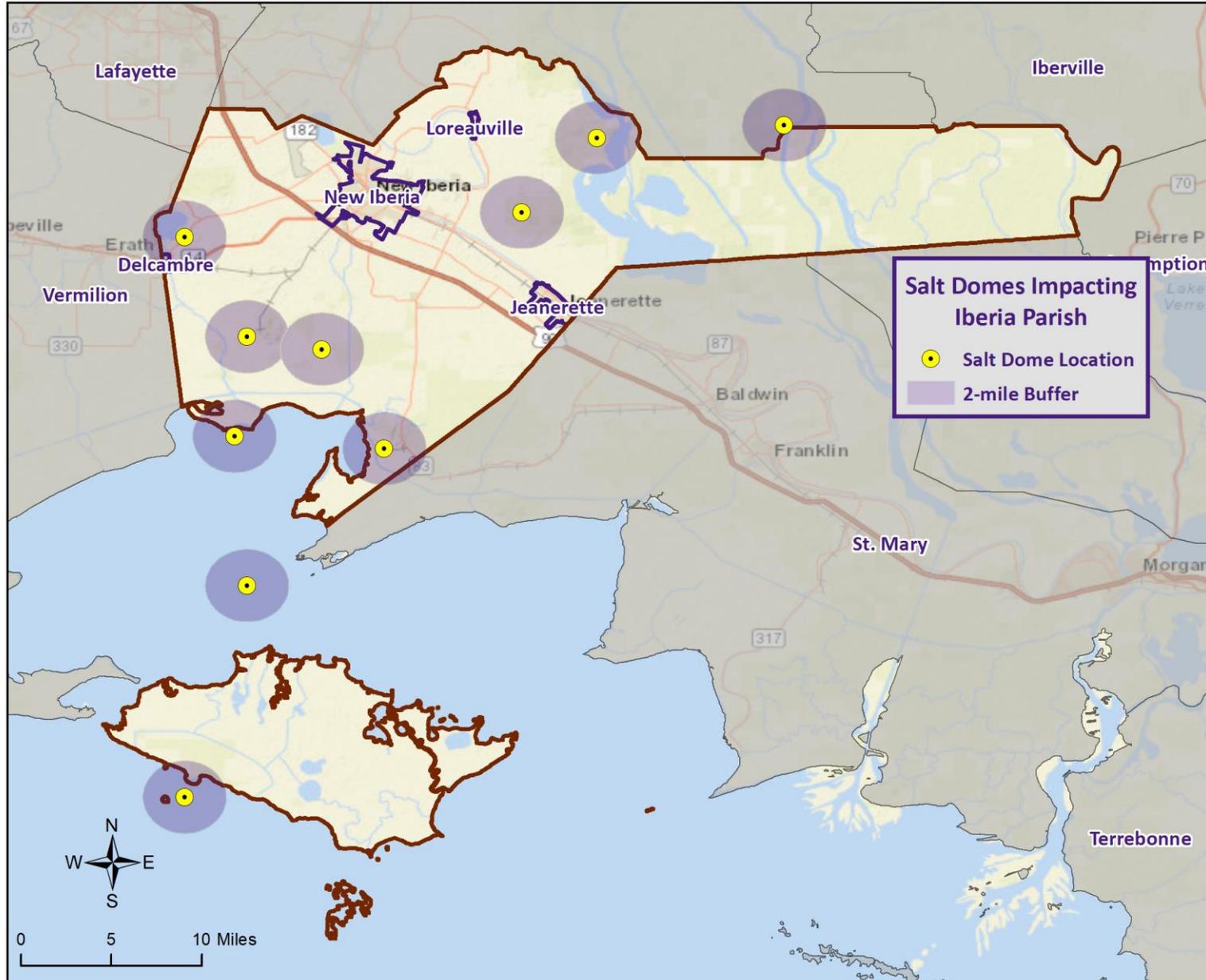


Sinkholes

- A sinkhole is an area of ground that has no natural external surface drainage – when it rains, all of the water stays inside the sinkhole and typically drains into the subsurface.
- Sinkholes form in areas where the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that can naturally be dissolved by groundwater circulating through them.
- As the rock dissolves, spaces and caverns develop underground. Once the spaces underground become too large, there is not enough support for the land above the spaces which causes a sudden collapse on the land surface.



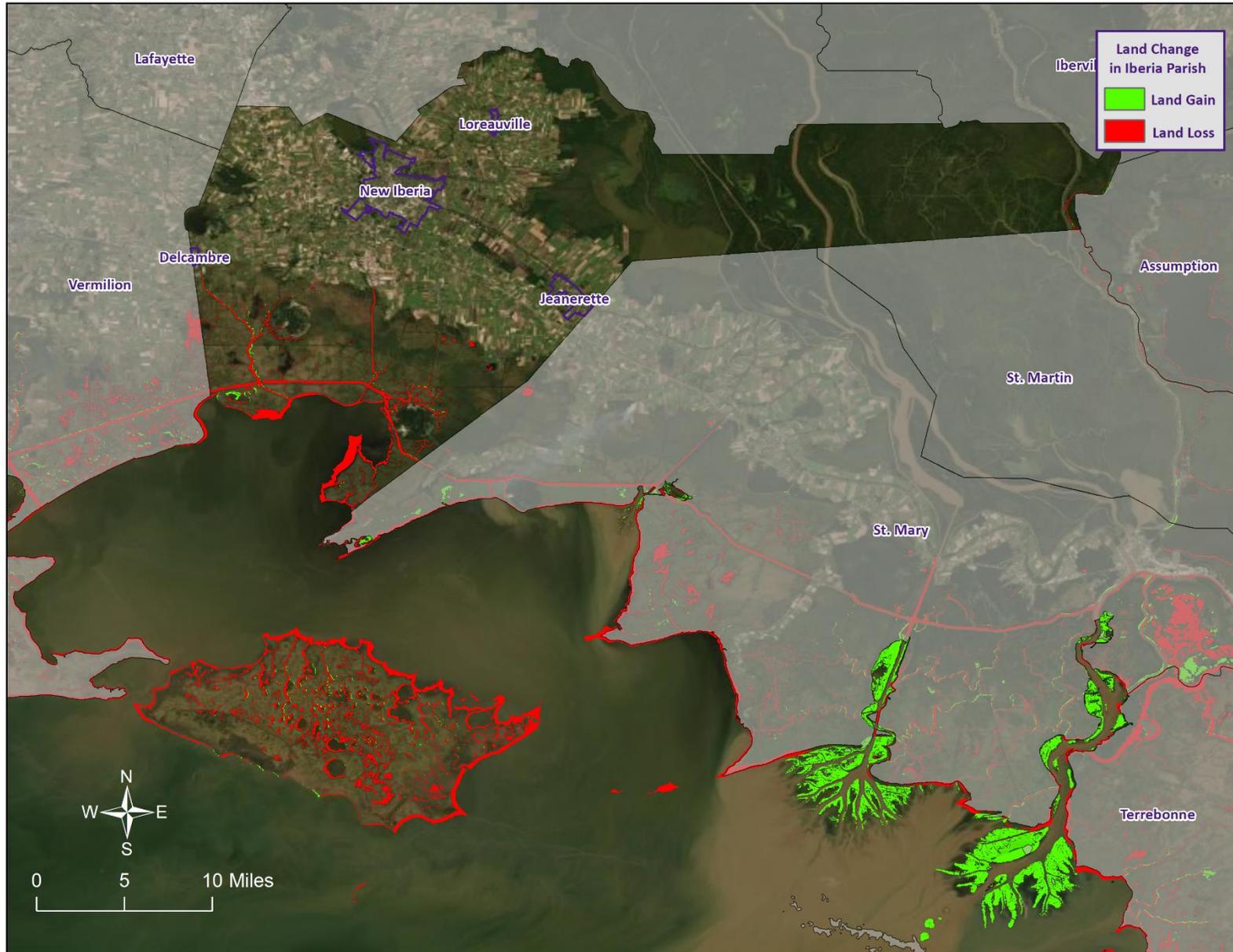
Salt Dome Locations



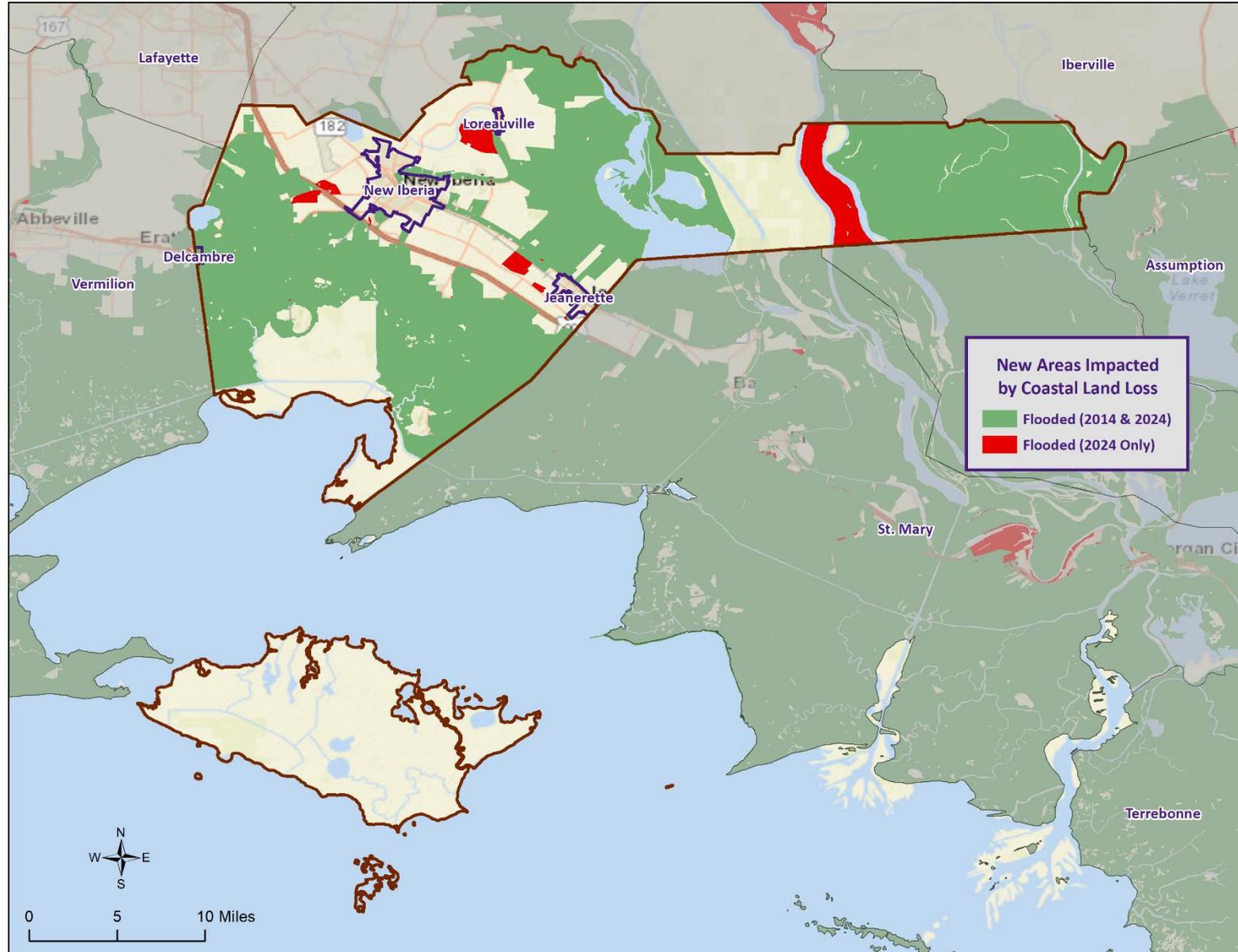
Coastal Hazards

- **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** 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

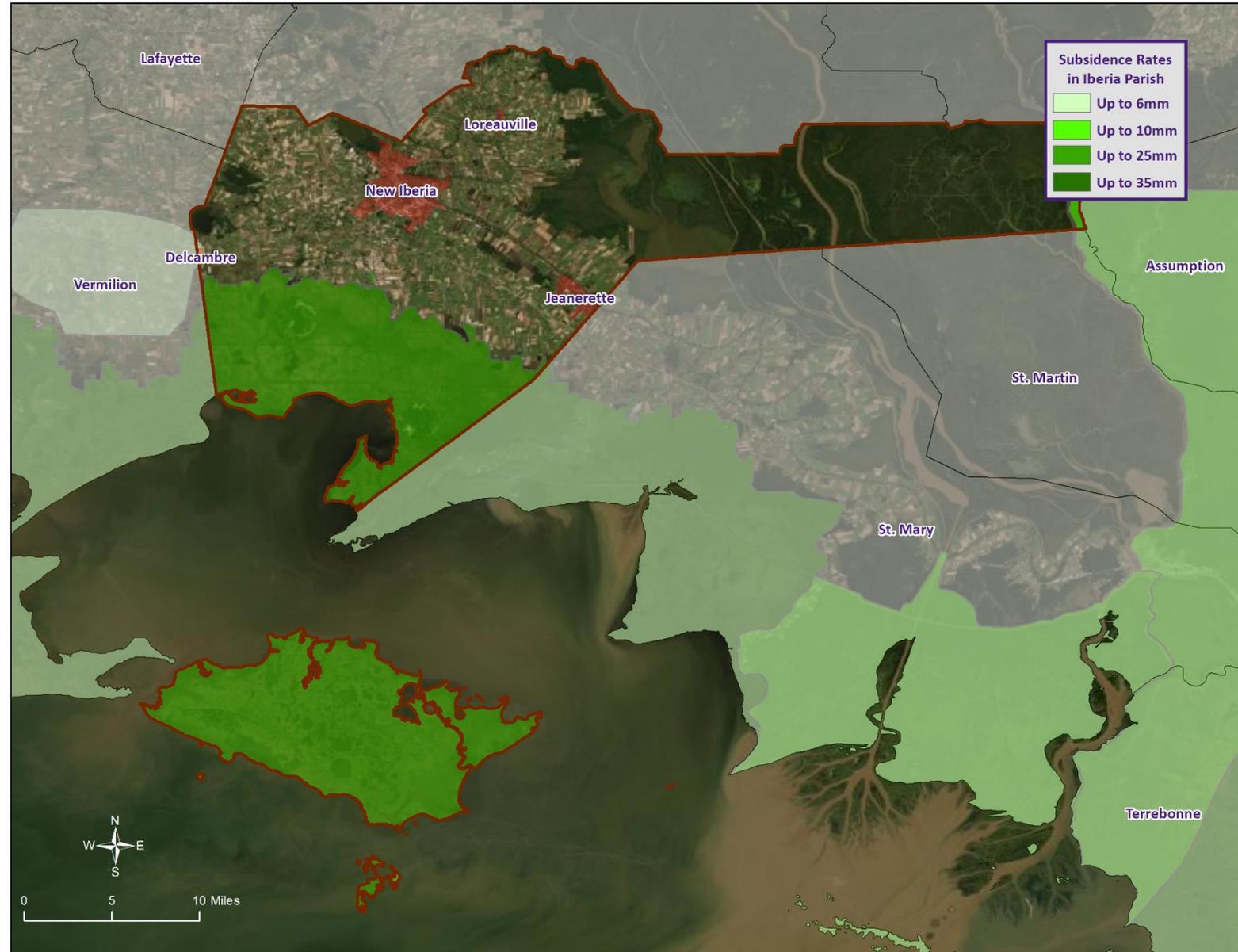
Land Gain & Loss



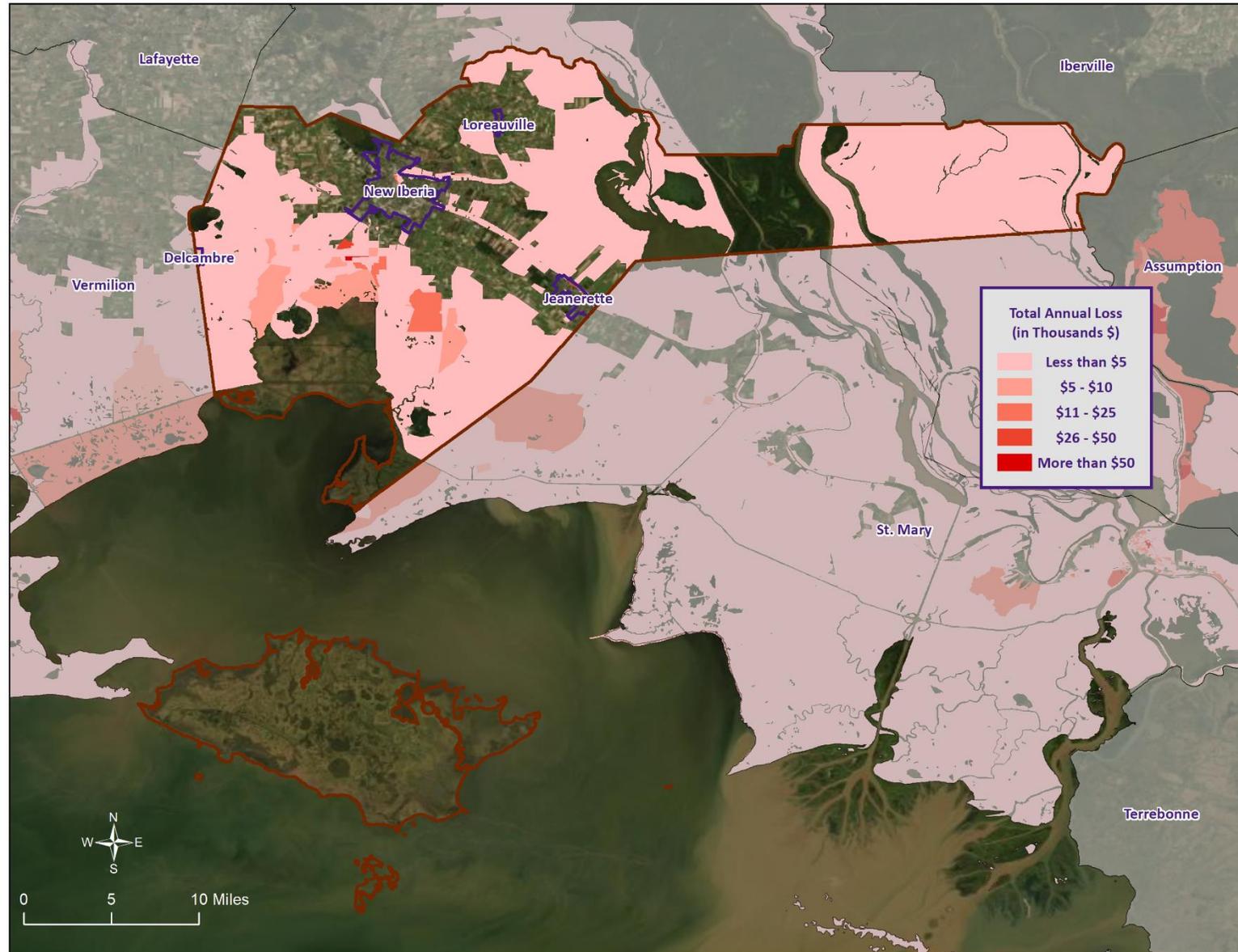
Coastal Land Loss



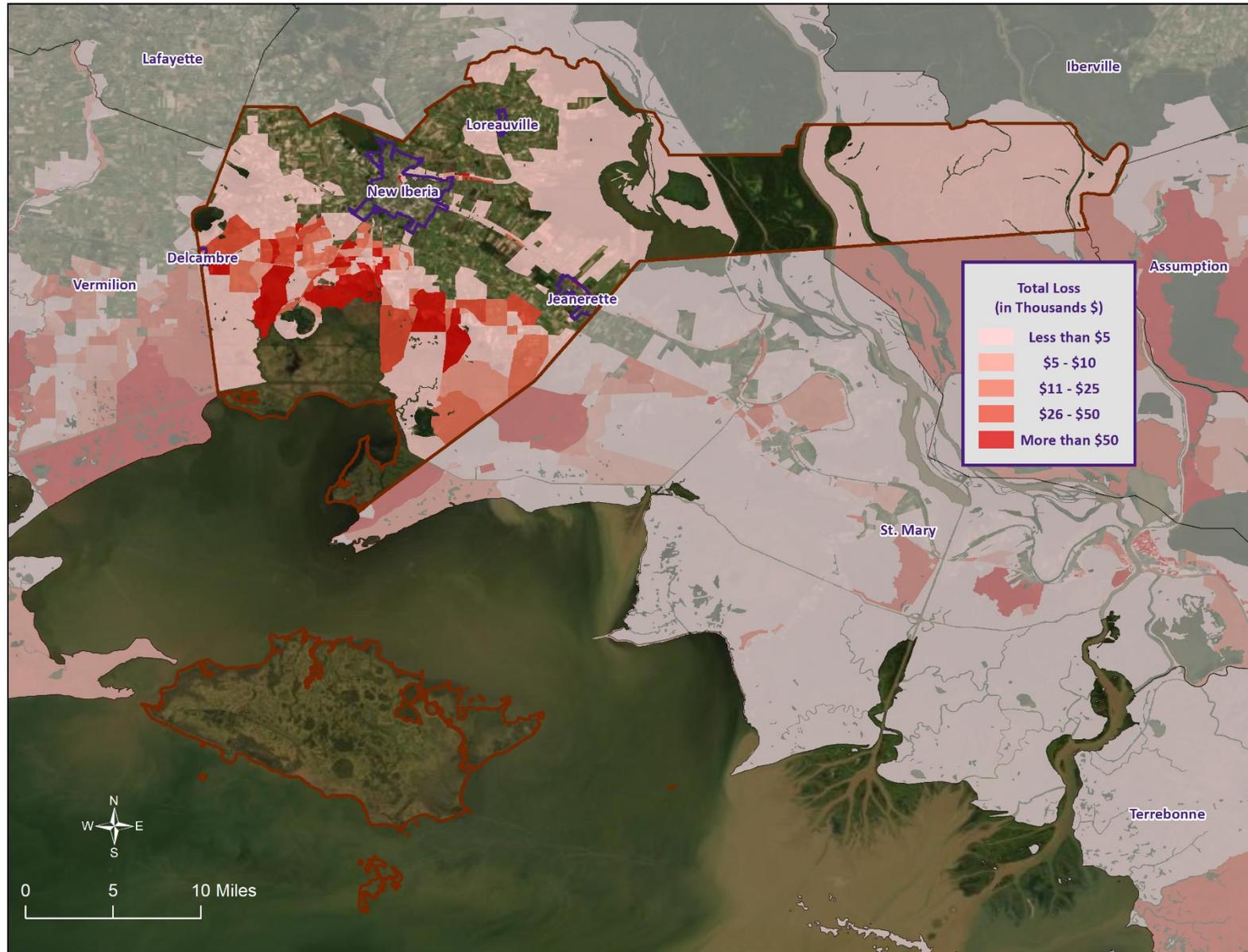
Subsidence Rates



Annual Loss - Subsidence



Total Loss - 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.”



Flooding

Types of flooding may include the following:

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

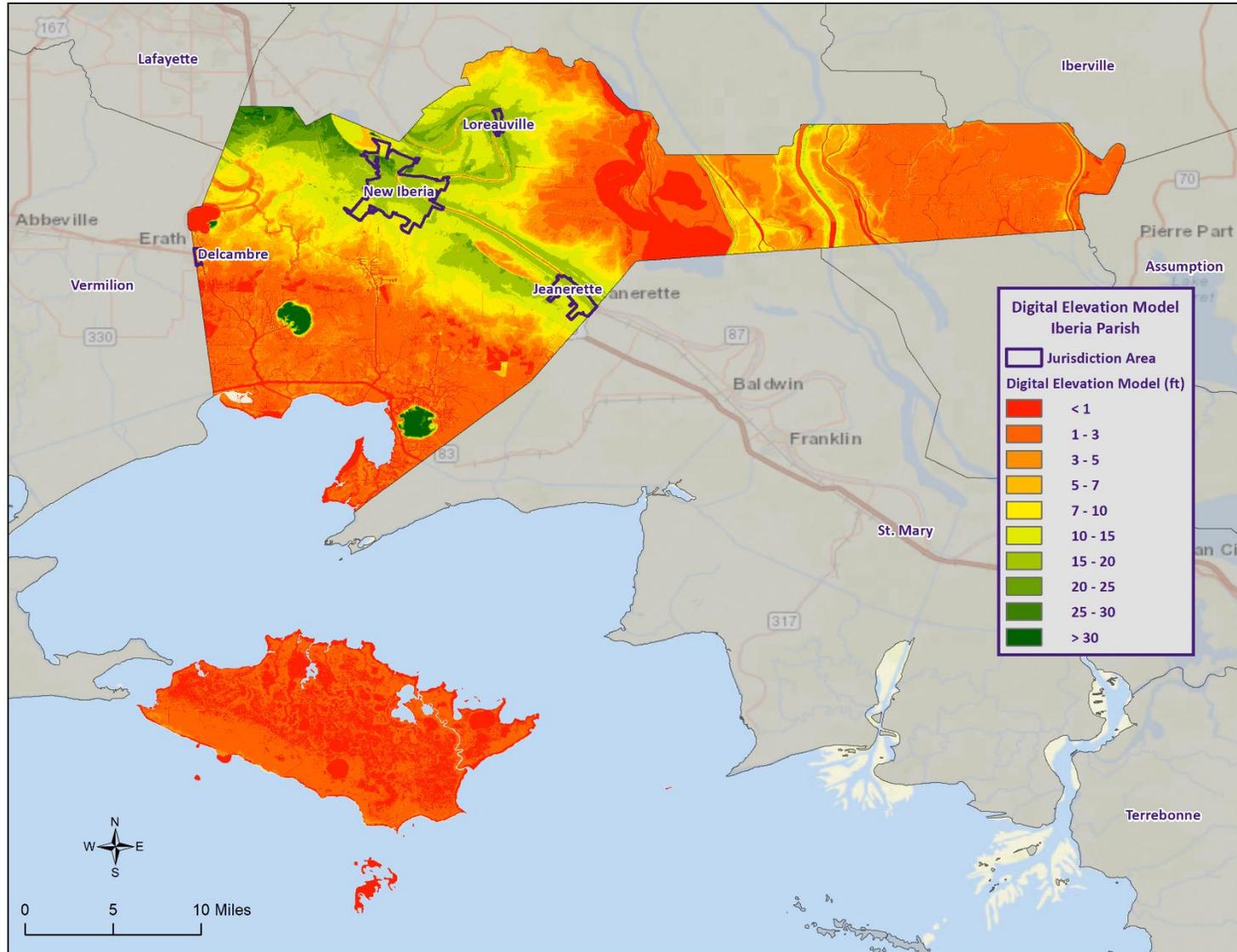


Flooding

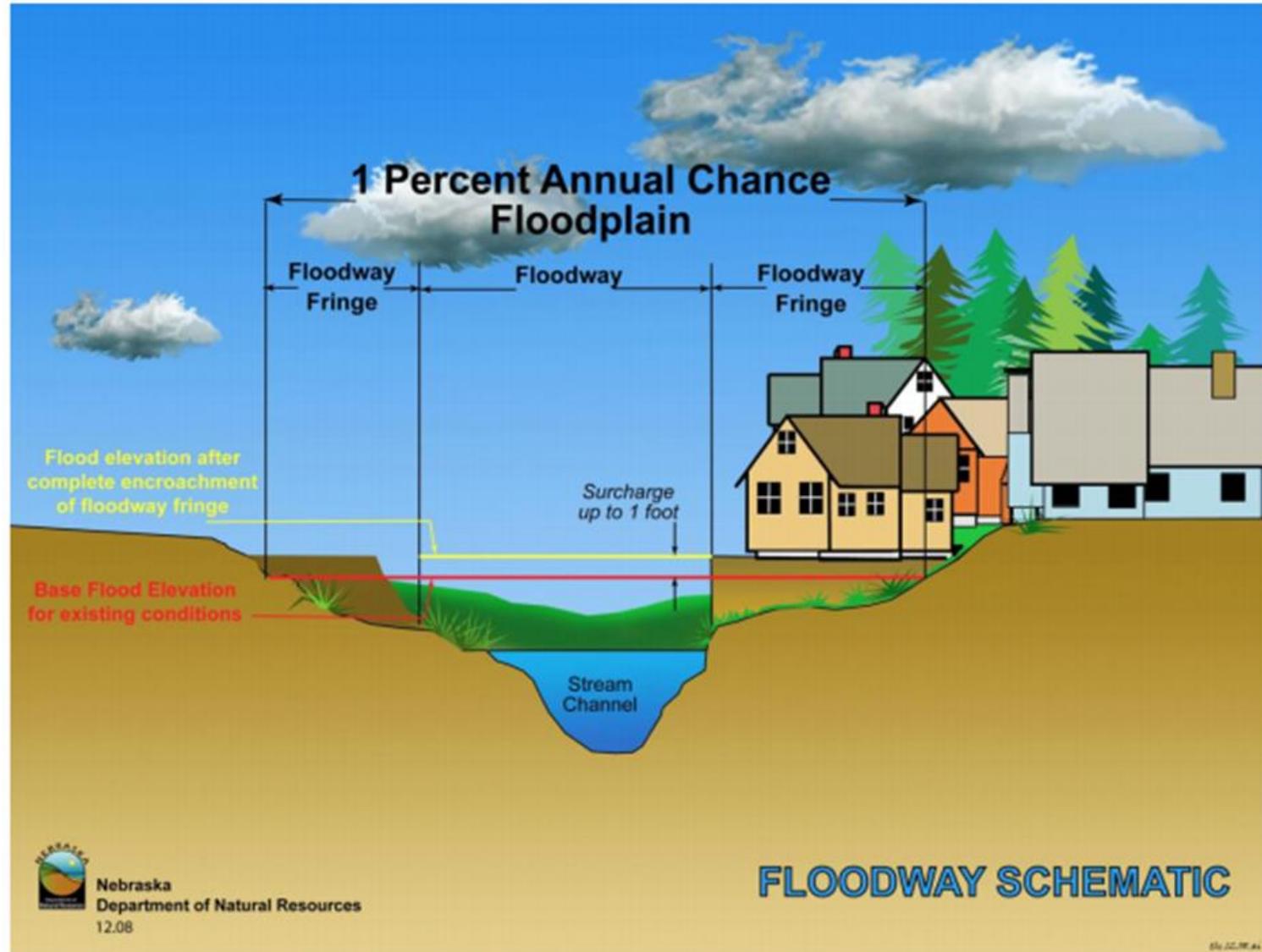
- Some areas flood more often than other properties, even more than those in the mapped 100-year floodplain.
- FEMA defines a “repetitive loss” property as one which has received two flood insurance claim payments for at least \$1,000 over any 10-year period since 1978.
- These properties are important 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.



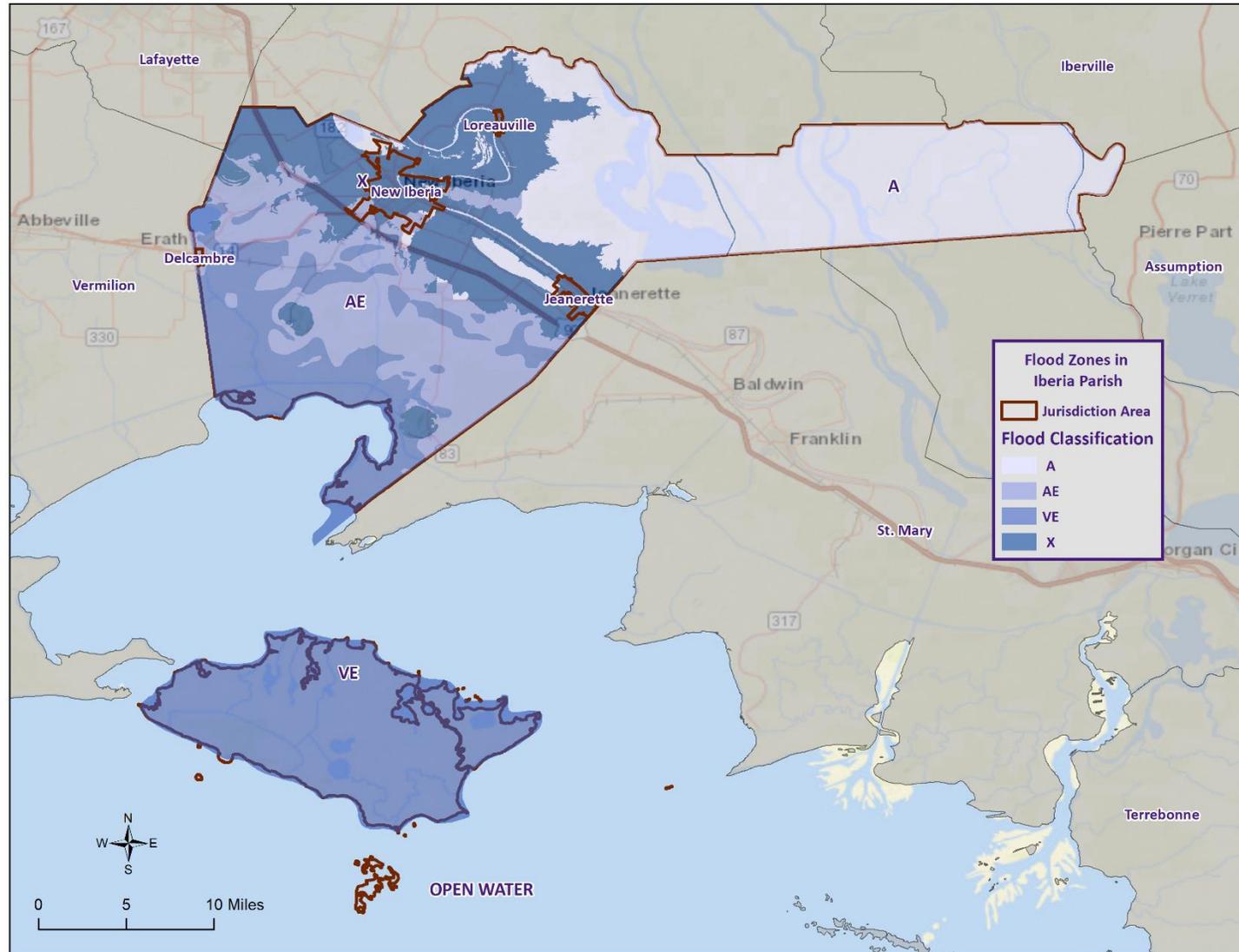
Digital Elevation Model



Floodway Diagram

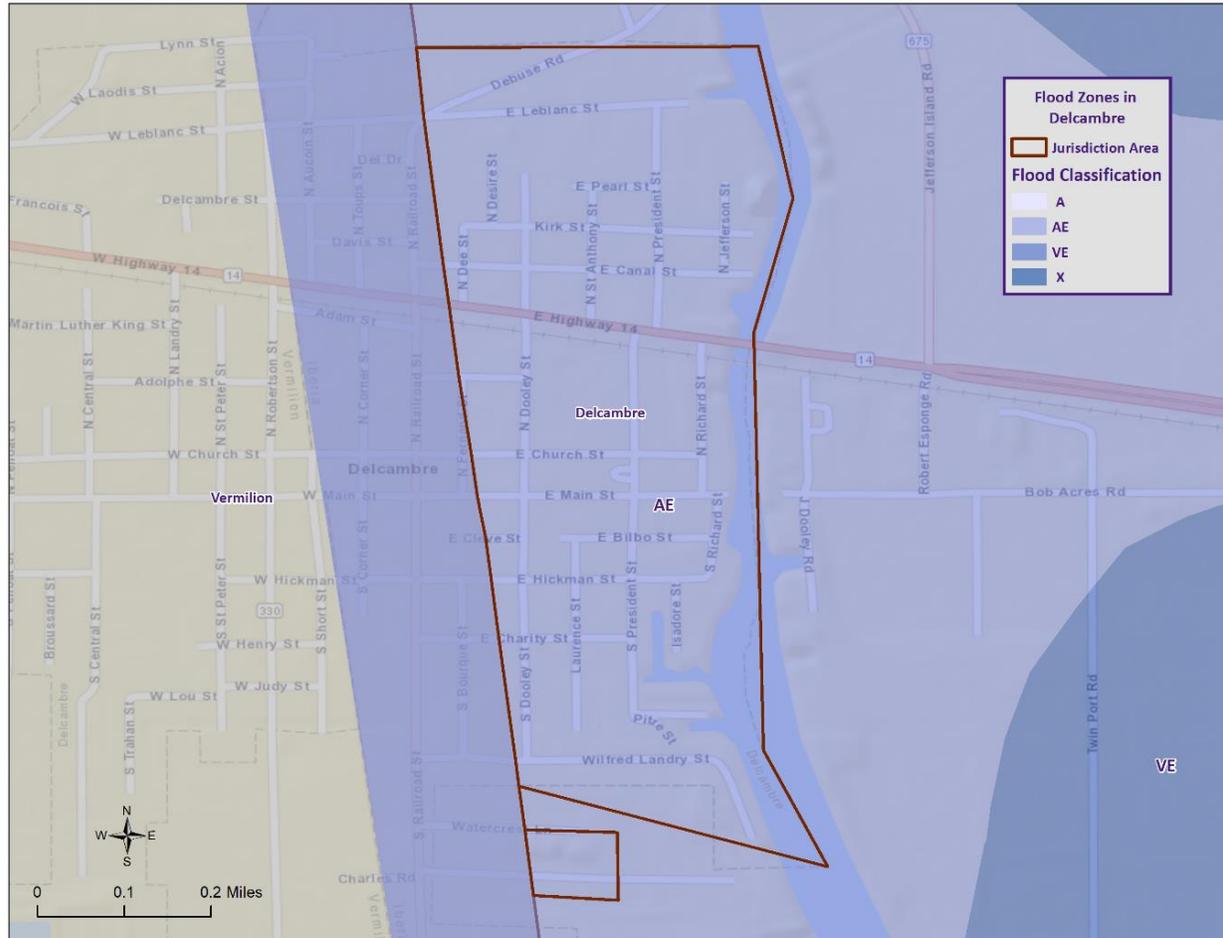


Iberia Parish Flood Map

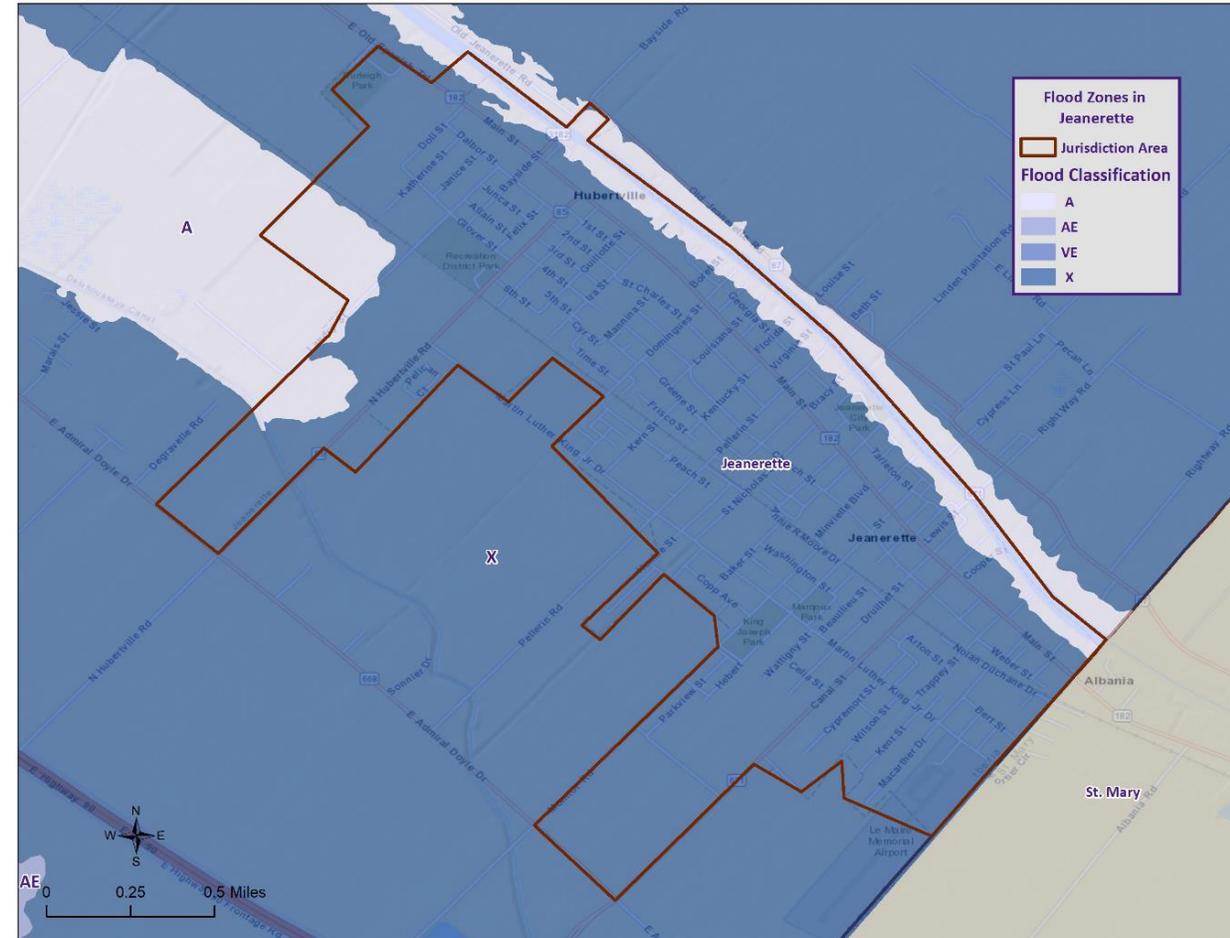


Flood Maps

Delcambre

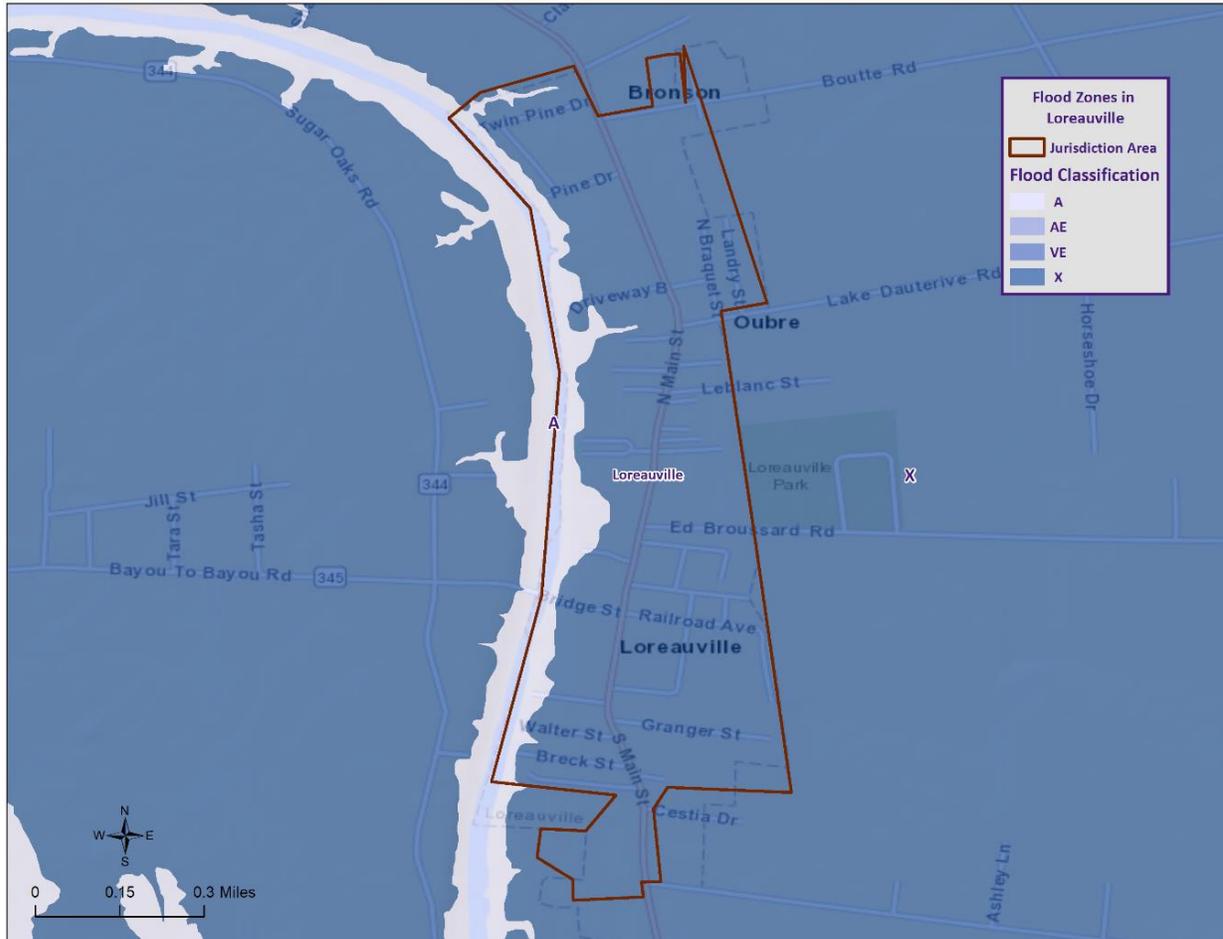


Jeanerette

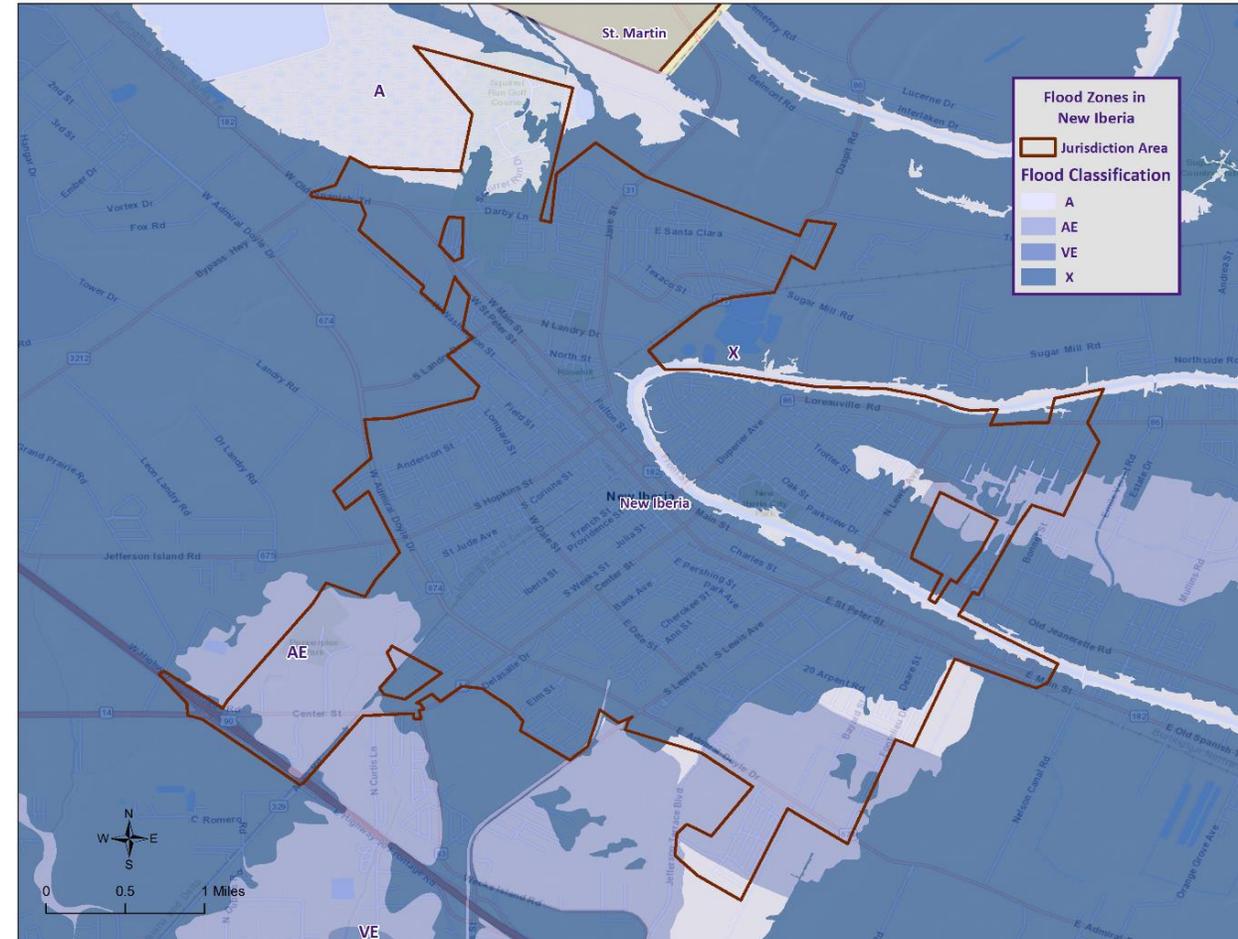


Flood Maps

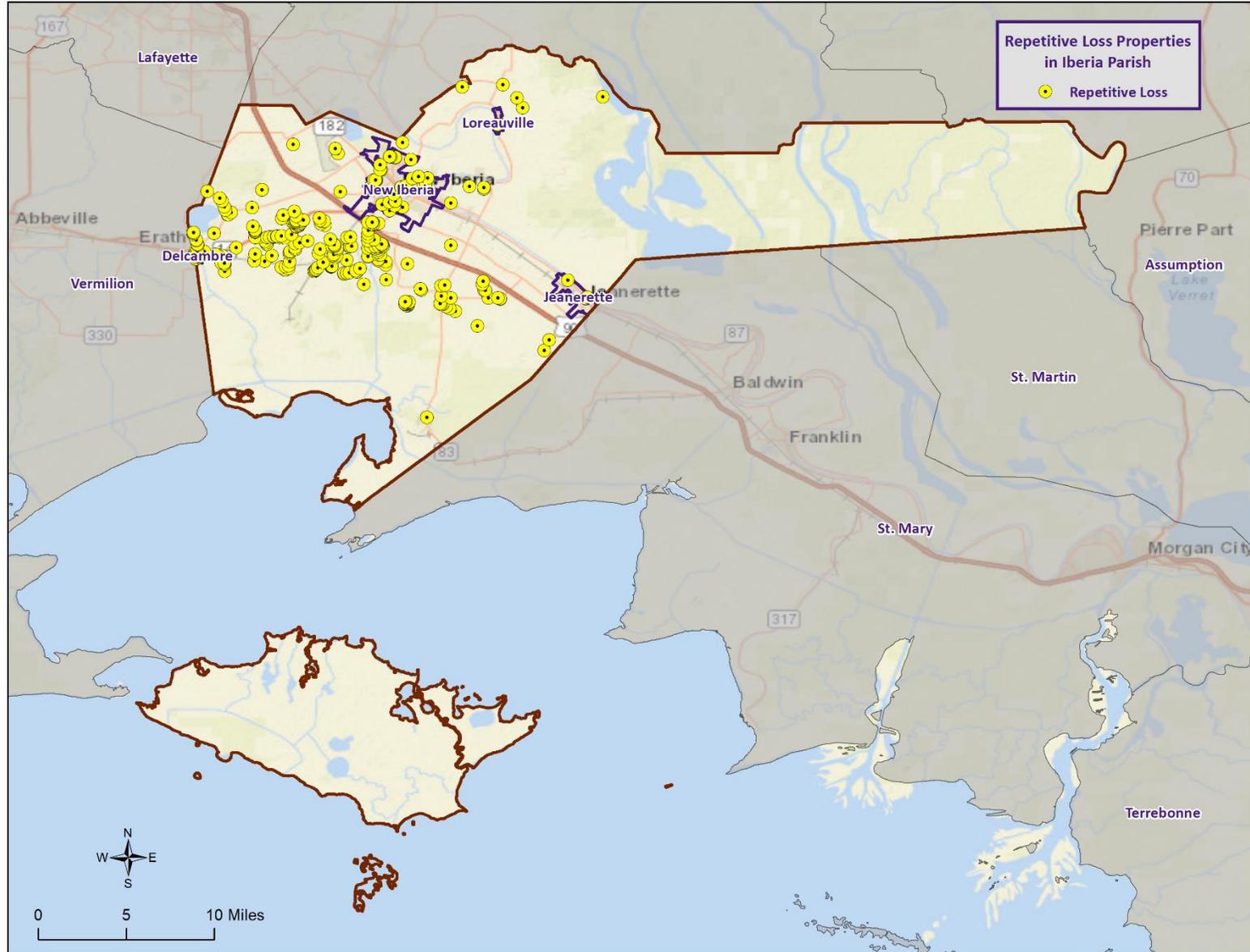
Loreauville



New Iberia



Repetitive Loss Properties

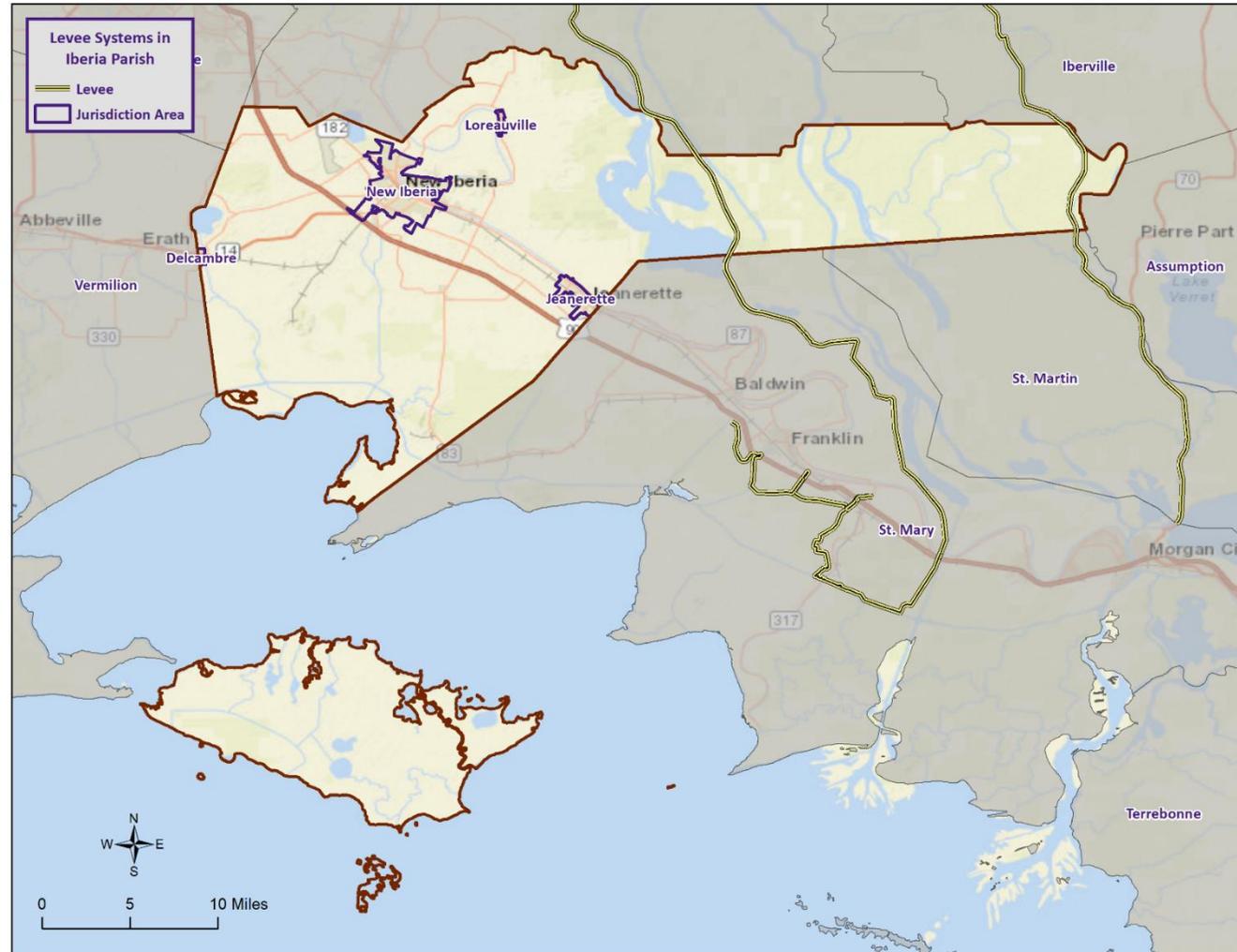


Levee Failure

- Levees are flood control barriers constructed of earth, concrete, or other materials that protect significant areas of residential, commercial, or industrial development.
- Levee failure involves the overtopping, breach, or collapse of the levee.



Levee Locations

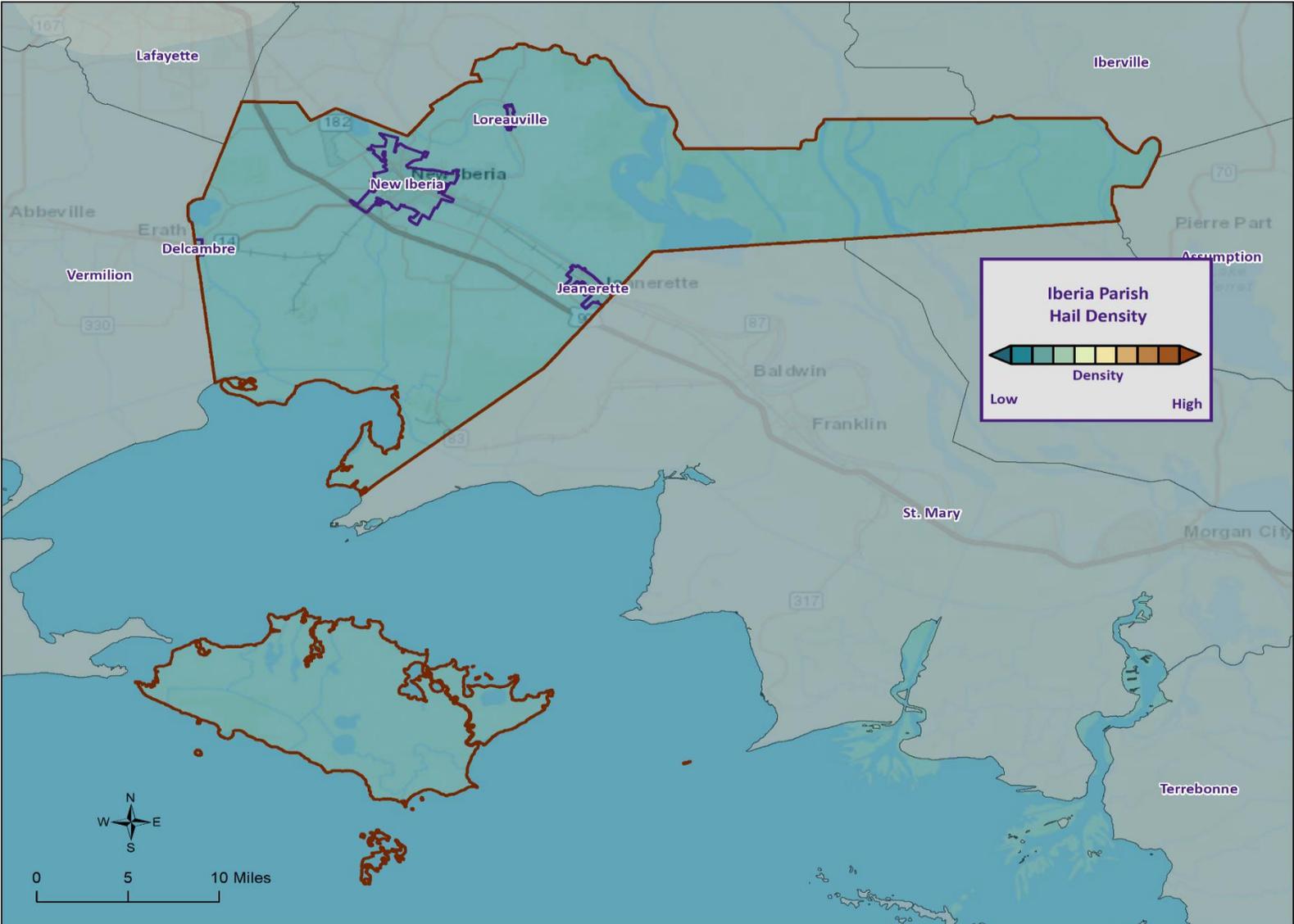


Thunderstorms

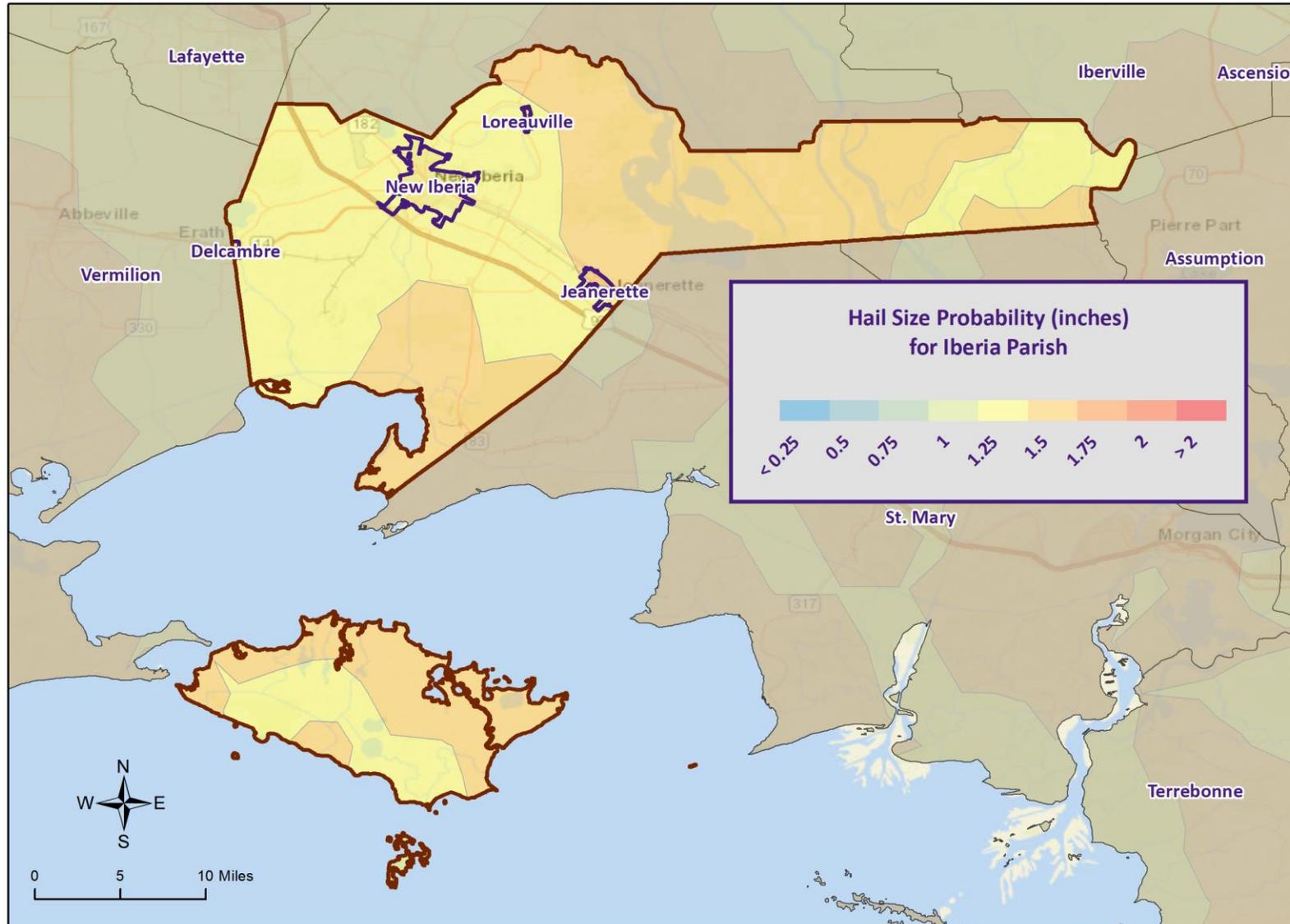
- A **thunderstorm**, also known as an **electrical storm**, a **lightning storm**, or a **thundershower**, is a type of storm characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere known as thunder.
- They are usually accompanied by strong winds, heavy rain, and 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 shear causes a deviation in their course at a right angle to the wind shear direction.



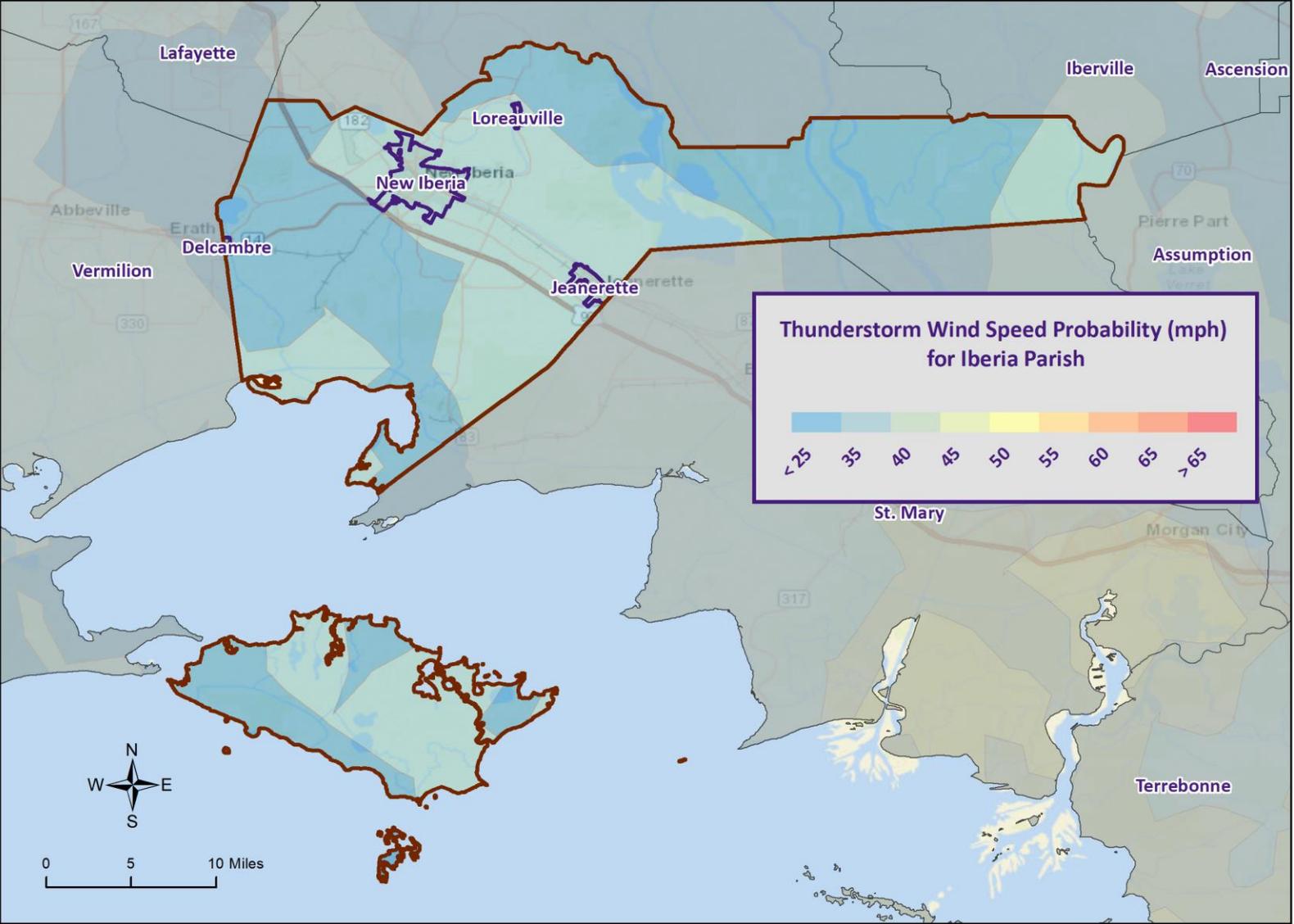
Density of Prior Hailstorms



Hail Size Probability



Wind Speed Probability



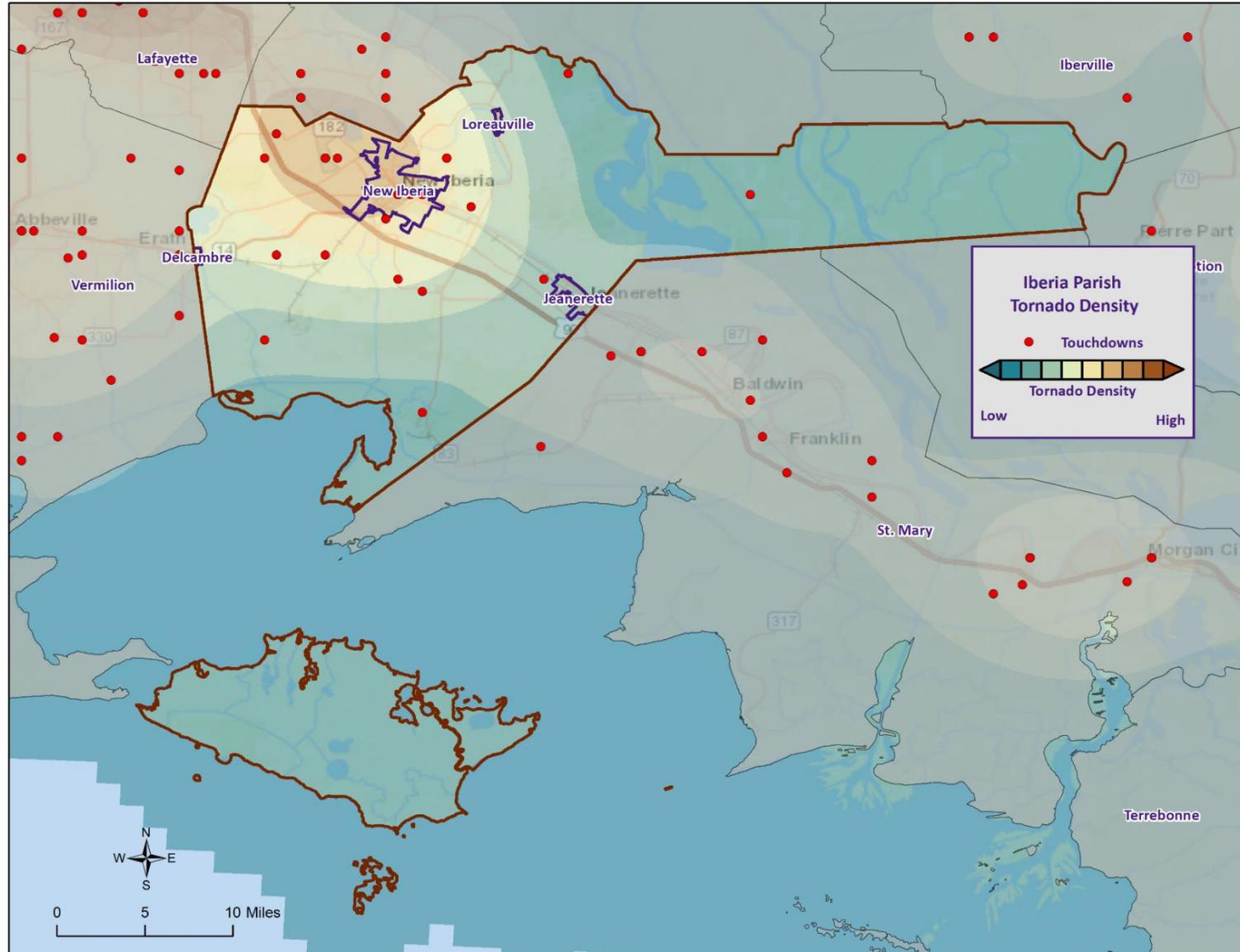
Tornadoes

- 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.

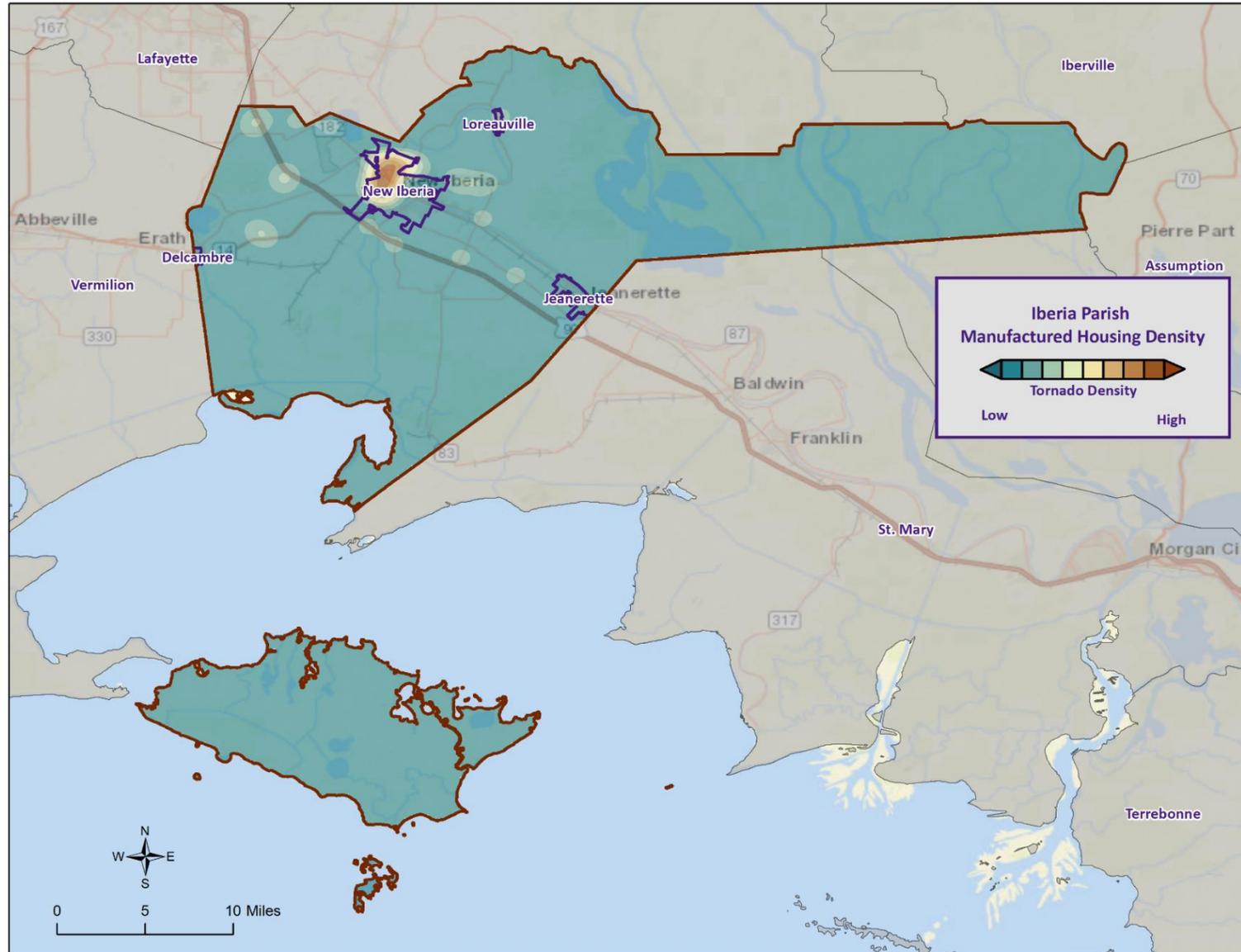
ORIGINAL FUJITA SCALE		ENHANCED FUJITA SCALE	
F5	261-318 mph	EF5	+200 mph
F4	207-260 mph	EF4	166-200 mph
F3	158-206 mph	EF3	136-165 mph
F2	113-157 mph	EF2	111-135 mph
F1	73-112 mph	EF1	86-110 mph
F0	<73 mph	EF0	65-85 mph



Tornadoes



Manufactured Home Density



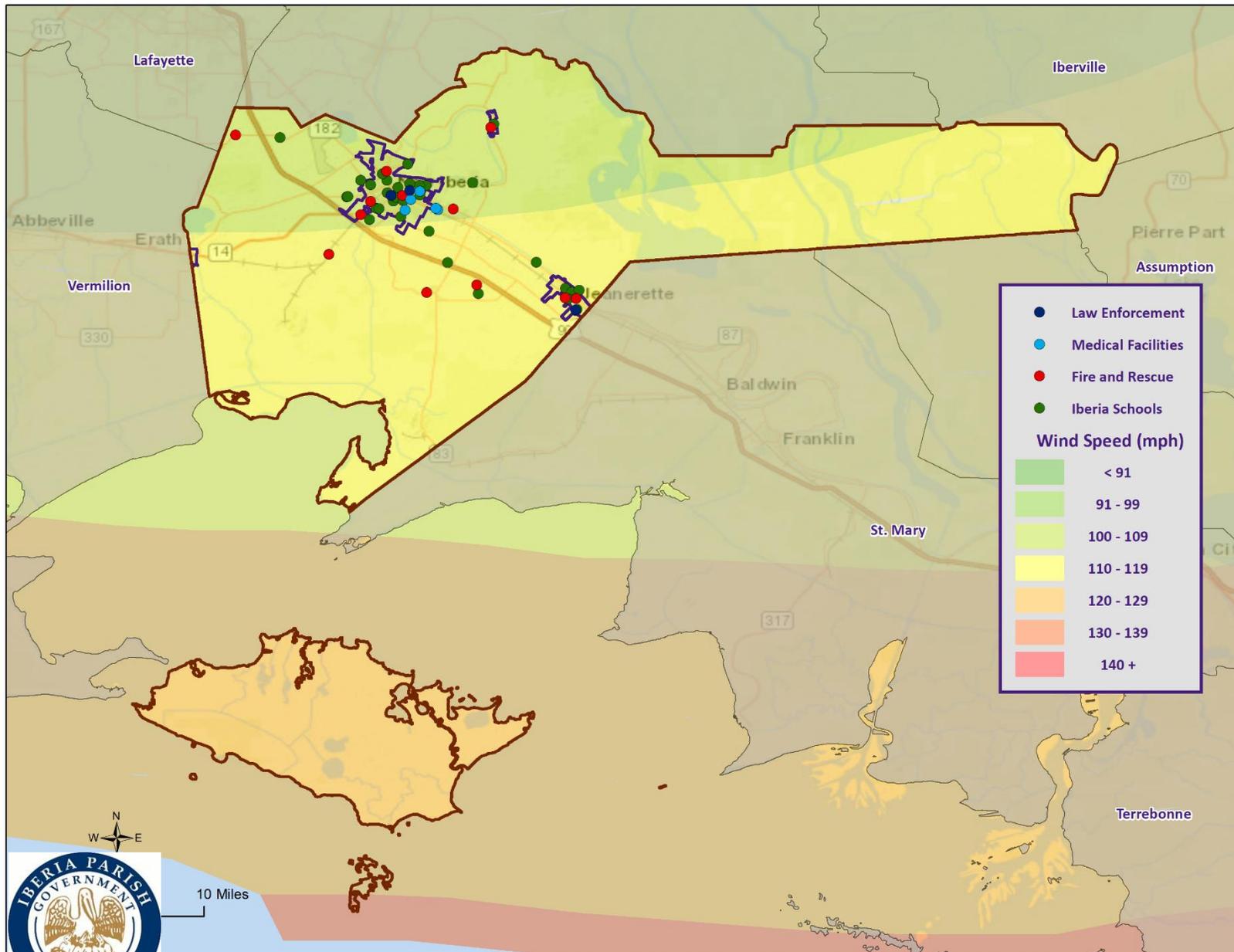
Tropical Cyclones

- 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

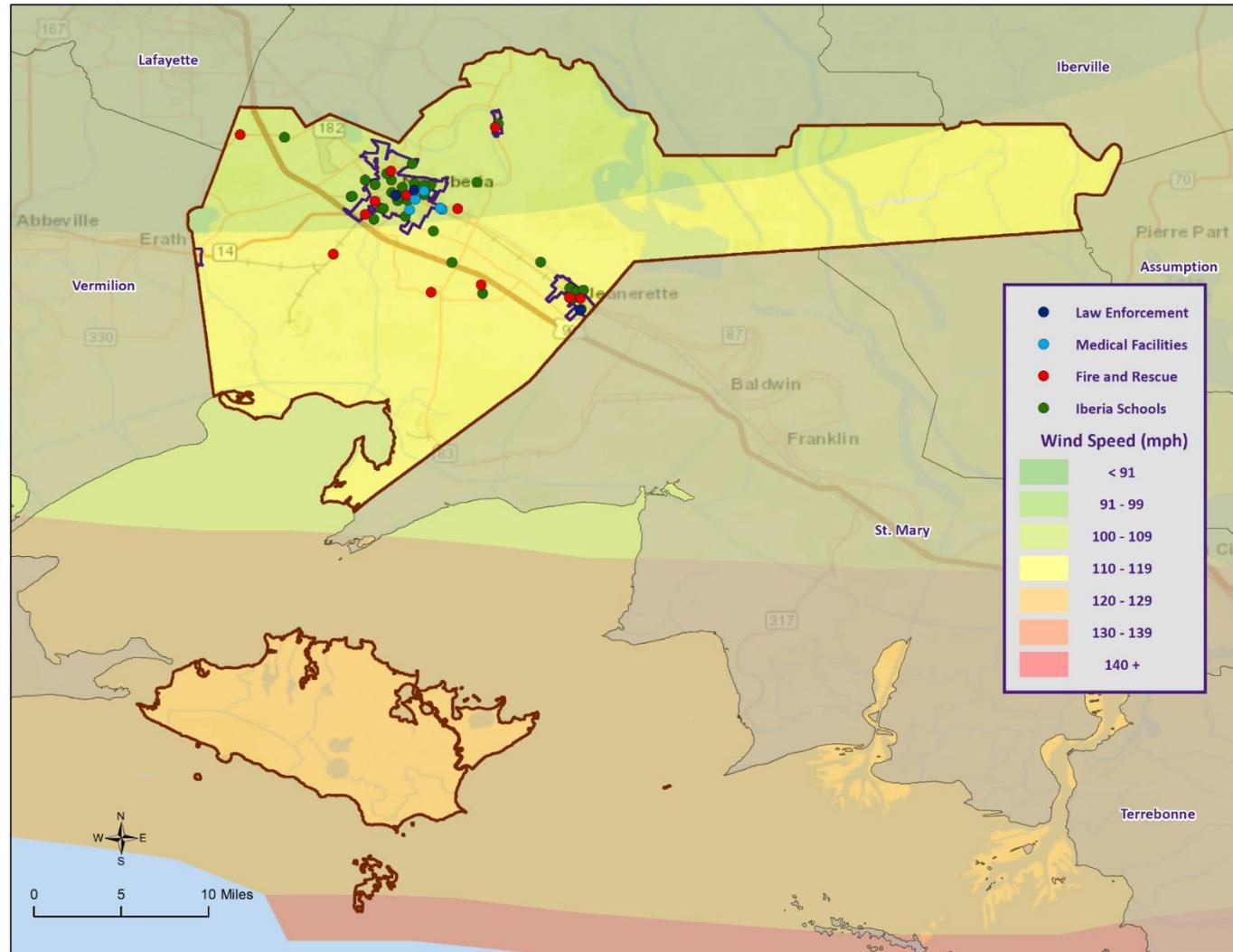
Saffir-Simpson Hurricane Wind Scale		
	Sustained Wind Speed	Effects
Category 1	74-95 mph (119-153 km/hr)	Very dangerous winds will produce some damage. Low-lying coastal roads flooded, minor pier damage
Category 2	96-110 mph (154-177 km/hr)	Extremely dangerous winds will cause extensive damage. Major 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.



Wind Speed Impacts on Critical Infrastructure

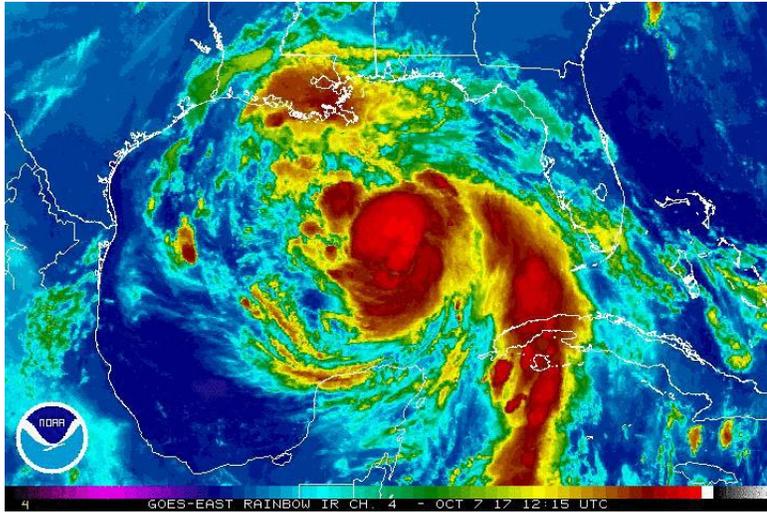


Wind Speed Impacts on Critical Infrastructure

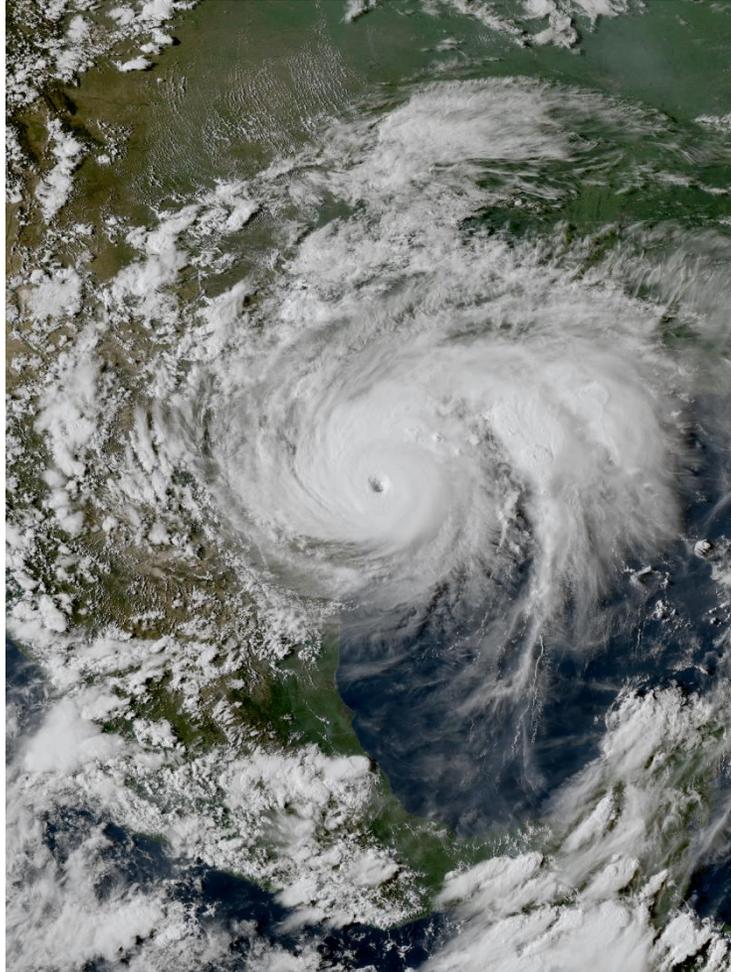


Recent Tropical Cyclone Events

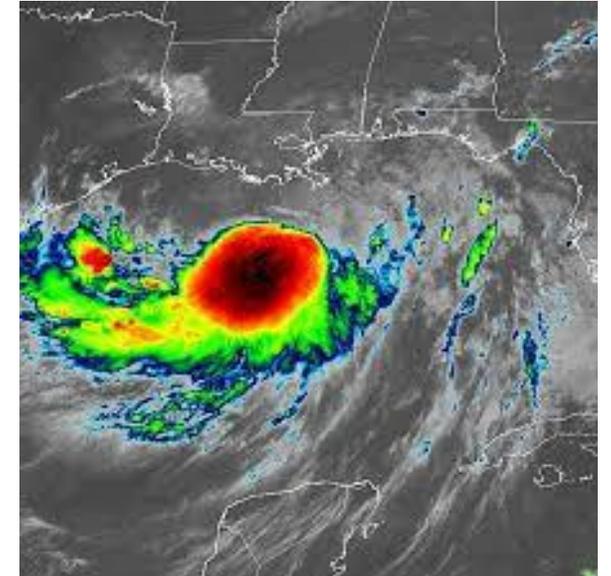
Hurricane Nate (2017)



Hurricane Harvey (2017)



Tropical Storm Barry (2019)



Parish Mitigation Goals

- **Goal 1:** Increase public awareness of hazard mitigation opportunities within the community and what individuals and the public and private sectors can do.
- **Goal 2:** Ensure that there is safe and accessible shelter from violent storms.
- **Goal 3:** Reduce Losses from Flooding.
- ~~**Goal 4:** Reduce Impacts from Drought.~~
- **Goal 5:** Reduce Impacts of Hurricanes, Storm Surge, and Coastal Erosion.



Parish Hazard Mitigation Project Update

- Iberia Parish OHSEP/Iberia Parish Government Discussion



Public Outreach Activity

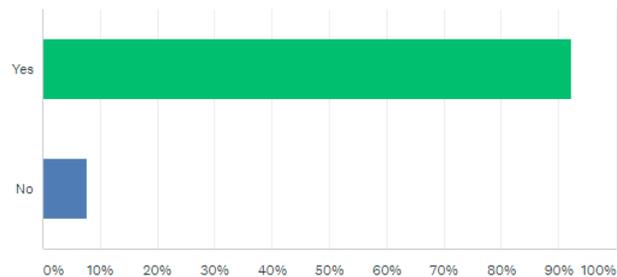
Hazard Mitigation Public Opinion Survey

<https://www.surveymonkey.com/r/IberiaHM2020>

- Average survey time is 10 minutes! Please do your part!

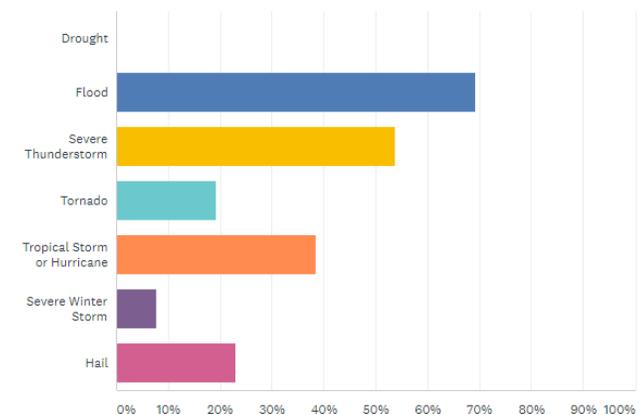
During the past five years in the parish you currently reside in, have you or someone in your household directly experienced a natural disaster such as a severe windstorm, flood, tropical storm or other type of natural disaster?

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

Brant Mitchell, SDMI Director, MPA, CEM, CISSP

Lauren Stevens, Associate Director, MEPP

lstevens@lsu.edu

Chris Rippetoe, HM Program Manager, CFM

crippe2@lsu.edu

Stephenson Disaster Management Institute

www.sdmi.lsu.edu



Stephenson Disaster
Management Institute

