



Ascension Parish Hazard Mitigation Plan Update Public Meeting

October 16, 2024

Gonzales, LA



LSU | Stephenson Disaster
Management Institute

Agenda



Introductions



**Hazard Mitigation
Overview**



Planning Process



**Risk Assessment
Maps**



**Public Outreach
Activities**



Introductions

- **Ascension Parish OHSEP Director & Planning Section Chief**
 - Rachael Wilkinson – Director
 - Michele Rayborn – Planning & Intelligence Section Chief
- **Stephenson Disaster Management Institute (SDMI) at LSU**
 - Chris Rippetoe – Hazard Mitigation Program Manager
 - Jason Martin – Emergency Management Analyst
 - Brian Stevens – Special Projects Manager
- **Governor's Office of Homeland Security and Emergency Preparedness**
 - Jeffrey Giering – State Hazard Mitigation Officer
 - Marion Pearson – Hazard Mitigation Planner

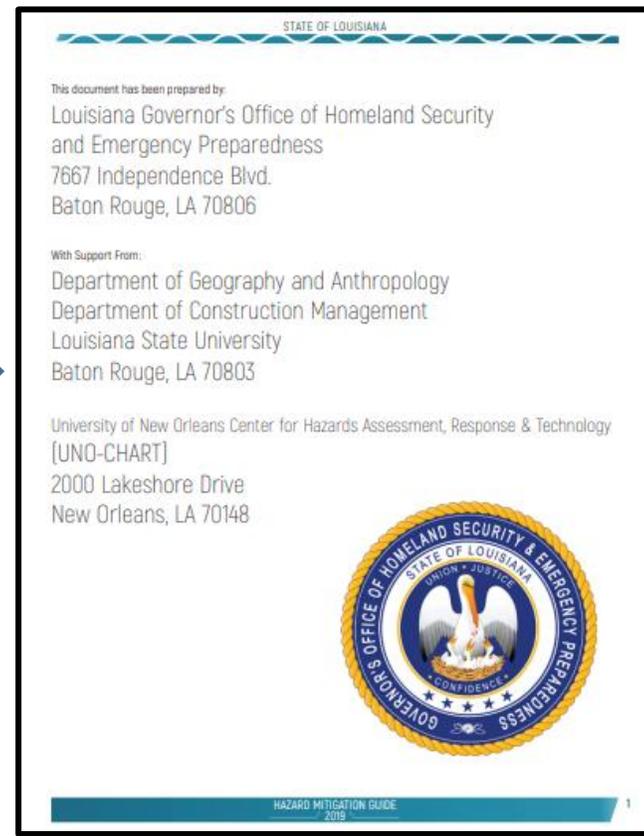
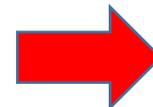
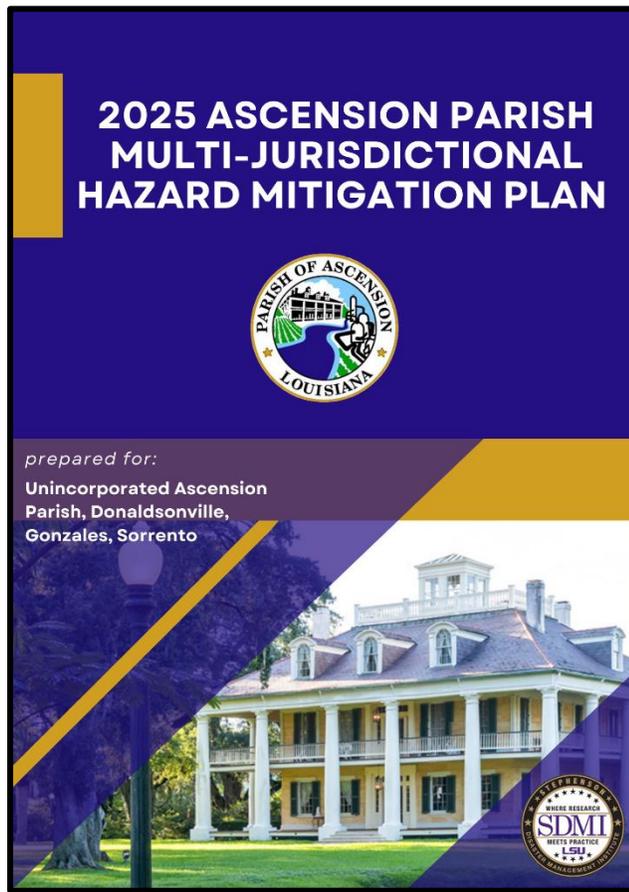
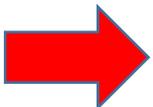


Who is SDMI?

- Stephenson Disaster Management Institute (SDMI) at Louisiana State University
- Non-Academic, Applied Research Unit on campus
- Specialize in providing programmatic support and decision making tools for state and local emergency managers
 - Hazard Mitigation Plans
 - Emergency Operations Plans
 - Geographic Information Systems
 - Application Development
 - Data Visualization
 - Aerial Imagery Collection/Processing



Why We're 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;
- Minimize operational downtime and accelerate recovery of government and the private sector after an event;
- ***Implementation of mitigation actions leads to building stronger, safer and smarter!***



Why the Plan is Required

- 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 mitigation plans as a precondition for receiving FEMA mitigation project grants.
- Title 44 Code of Regulations (CFR) §201.6
 - Meet federal requirements for approval and eligibility for FEMA Hazard Mitigation Assistance grant programs.



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



Planning Process to Date

Initial Planning Meeting with DHSEP



Full Planning Committee Meeting



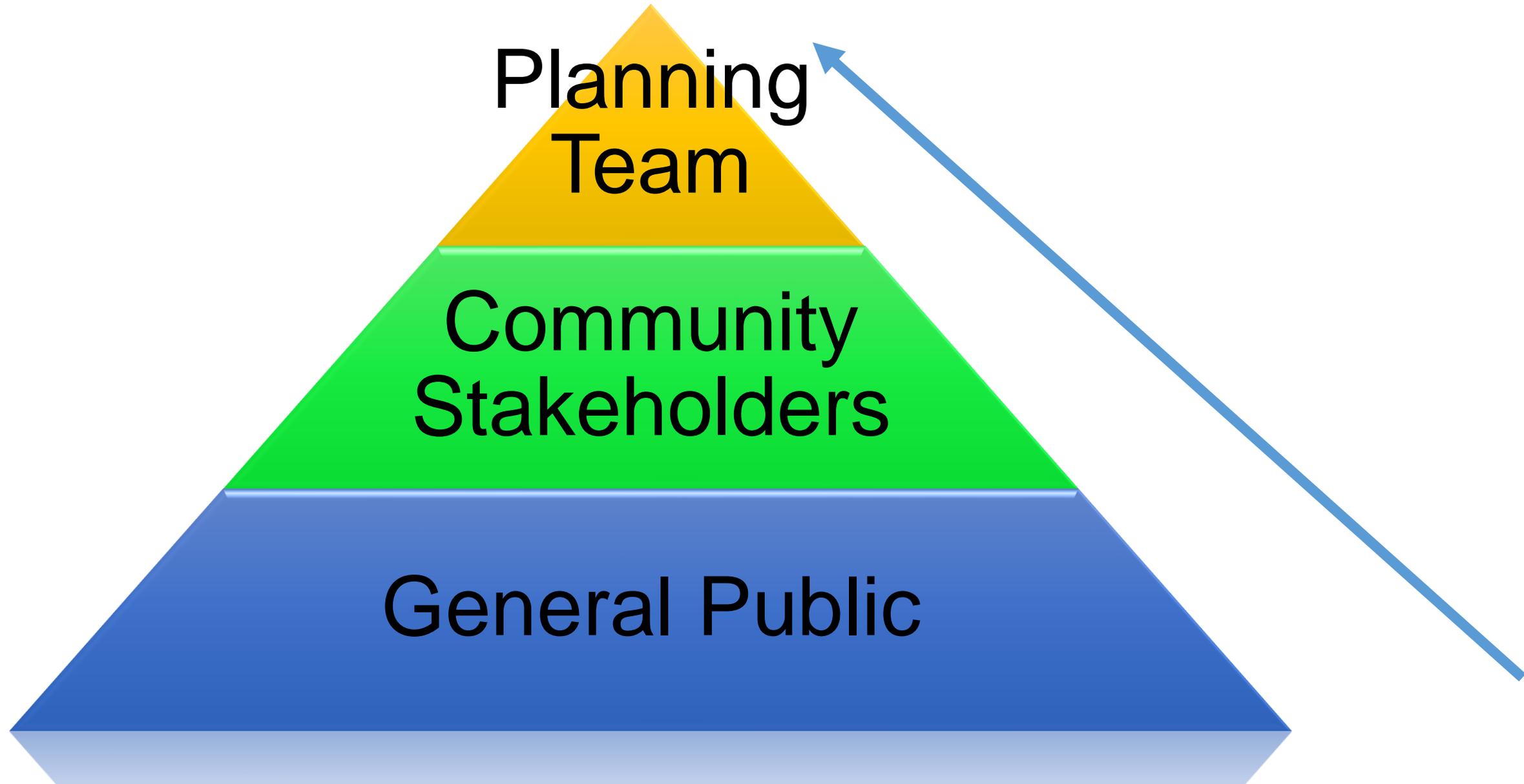
Risk Assessment Review with Planning Committee

Constant communication with Parish and Committee members!

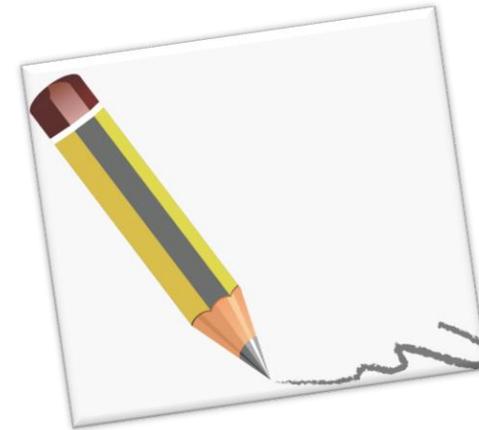
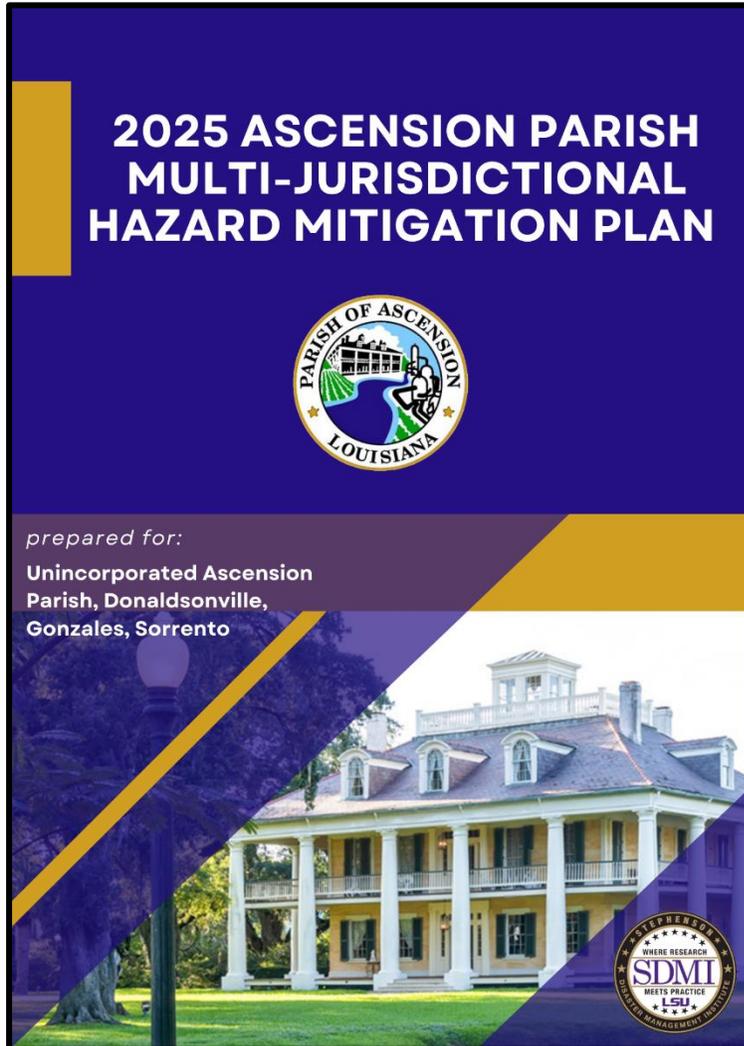
Public Meeting



Collaborative Planning Approach



Hazard Mitigation Plan Development



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



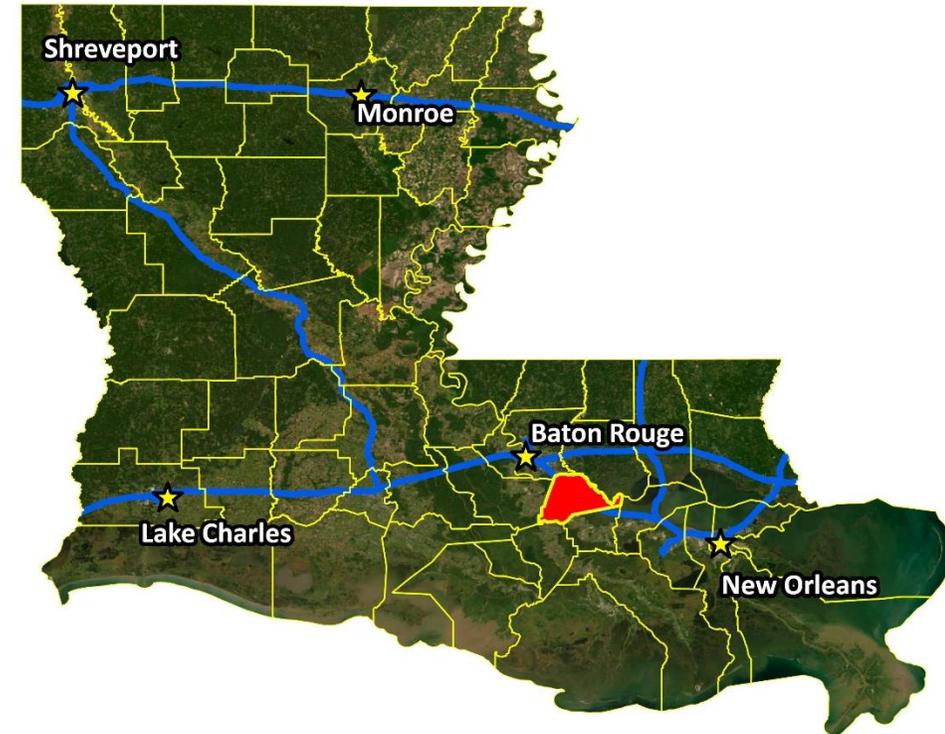
Plan Layout

- **Appendix A:** Planning Process
- **Appendix B:** Plan Maintenance
- **Appendix C:** Parish Critical 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 parish planning area.
- The hazards identification includes the following:
 - *locations affected*
 - *extent or strength*
 - *previous occurrences*
 - *probability of future events*



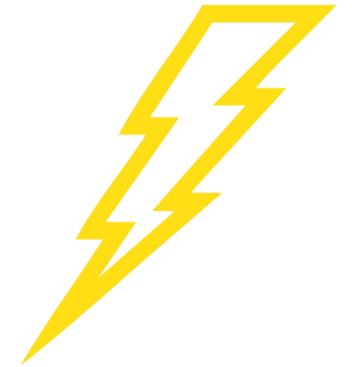
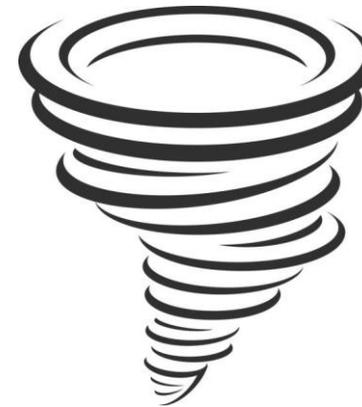
Hazard Identification And Risk Assessment

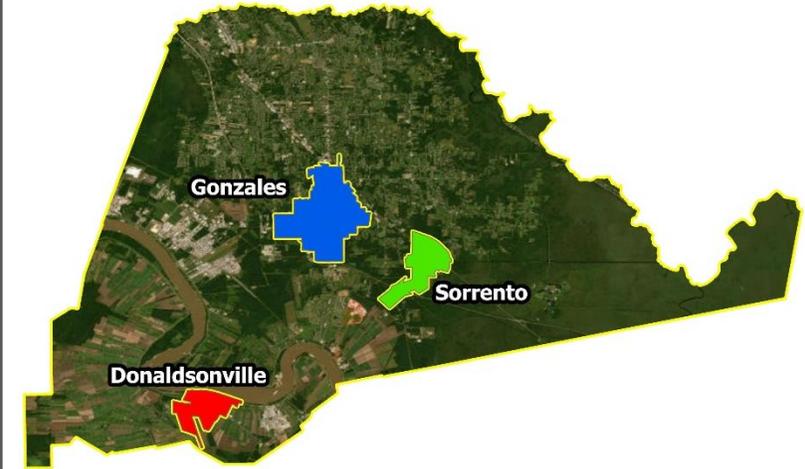
- Based on Currently Profiled Prevalent Natural Hazards
- Identify Any New Hazards
- Previous Occurrences
- Impact from Events
- Probability of Future Events
- Critical Facilities
- Future Development Trends
- Future Hazard Impacts
- Zoning and Land Use



Hazard Identification And Risk Assessment

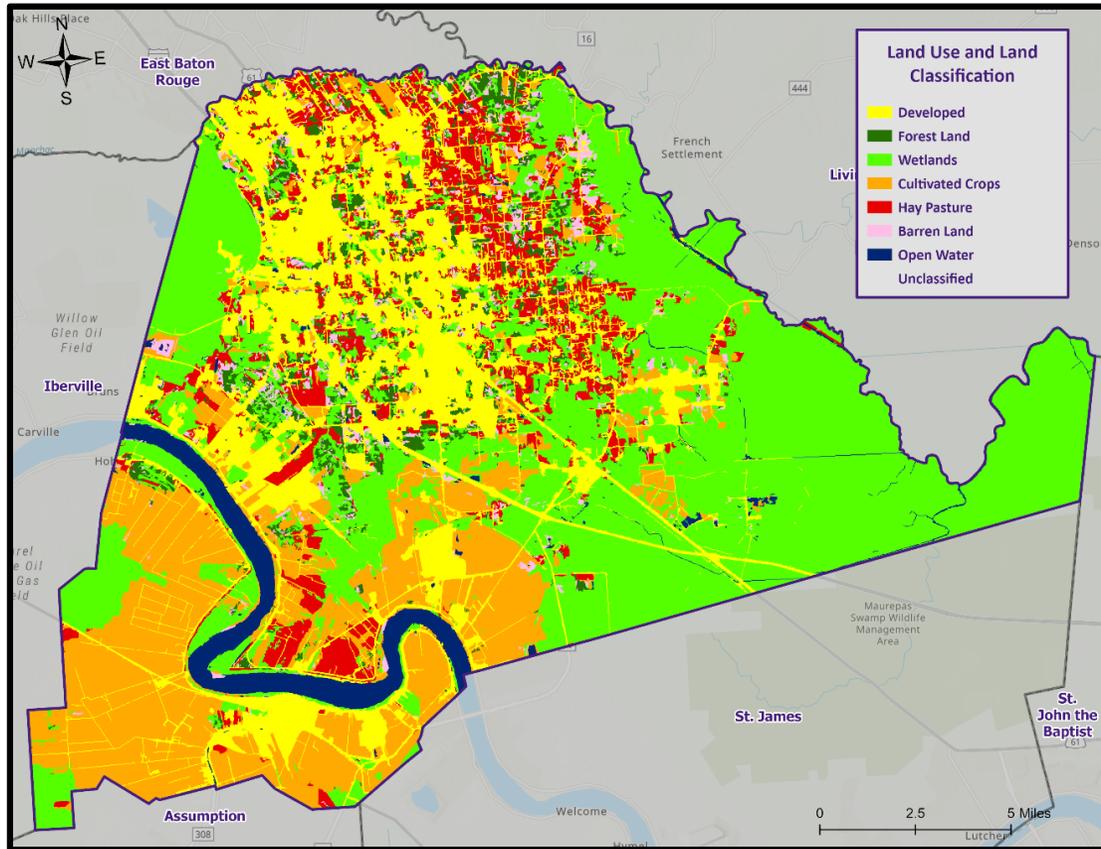
- Drought
- Excessive Heat
- Flooding
- Levee Failure
- Sinkholes
- Subsidence
- Thunderstorms
- Tornadoes
- Tropical Cyclones
- Wildfires
- Winter Weather





Risk Assessment Maps

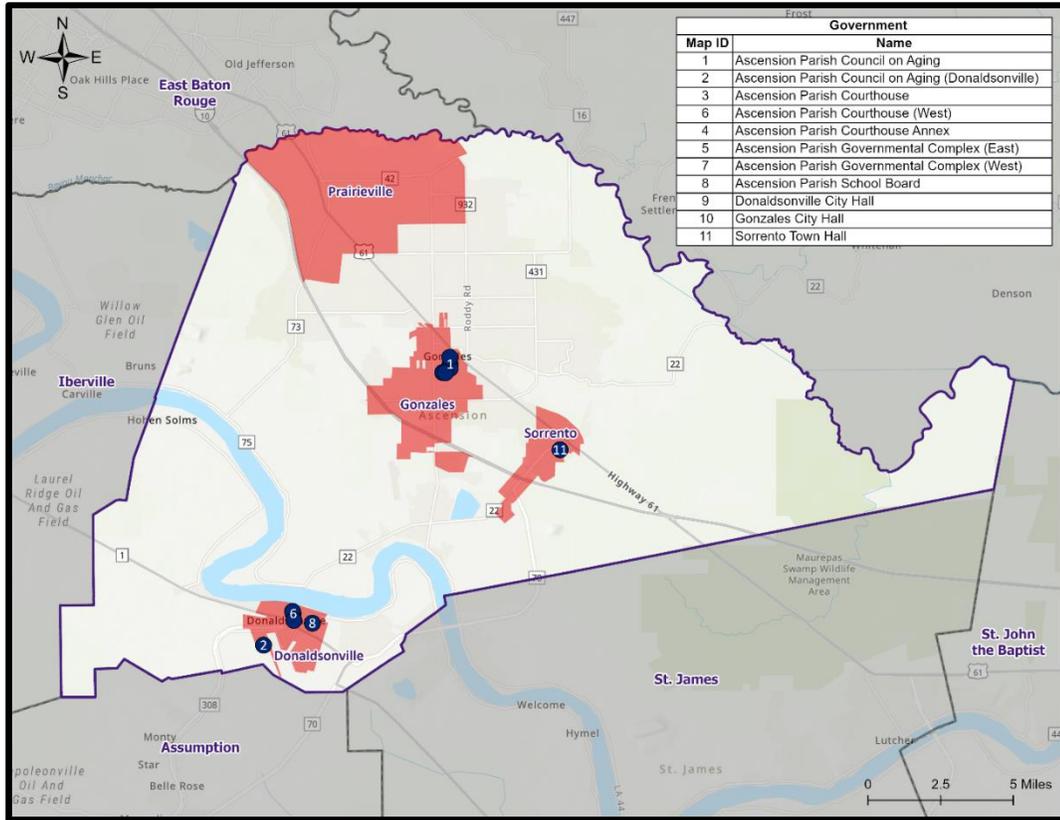
Ascension Parish Land Use



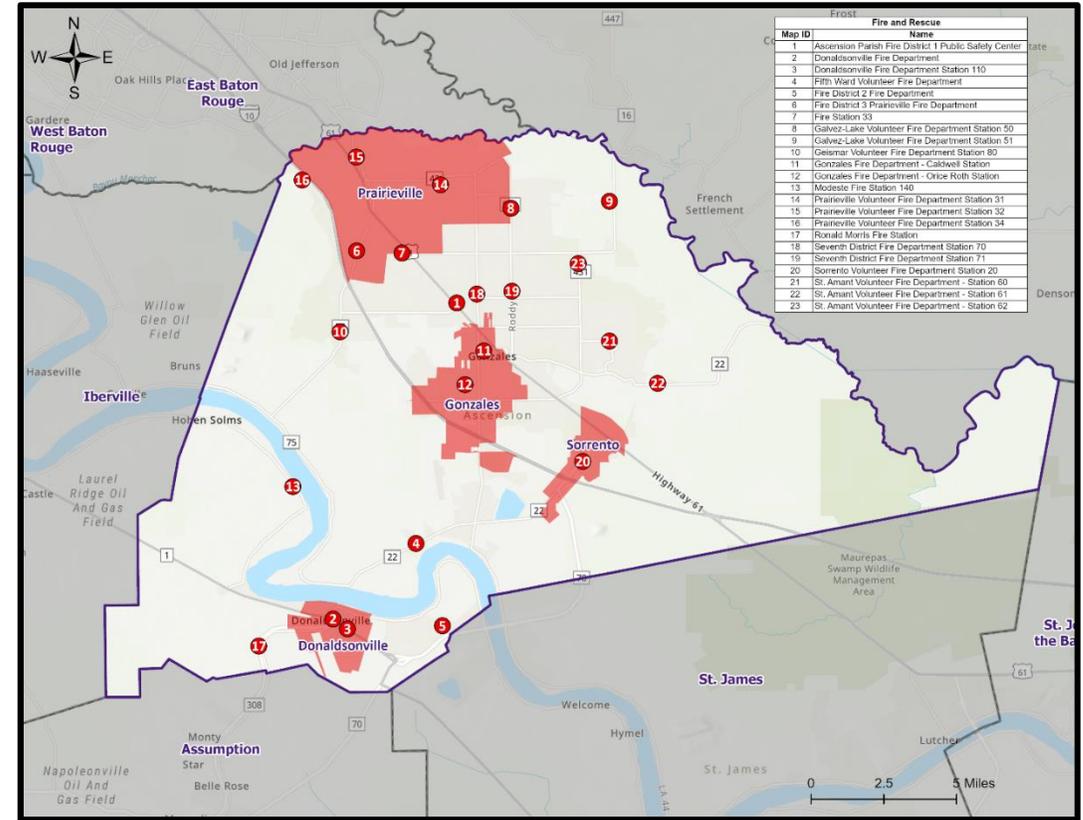
Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	57,433	30%
Wetlands	79,963	41%
Forest Land (Not including forested wetlands)	7,547	4%
Urban/Development	41,621	21%
Water	7,356	4%



Ascension Parish Critical Facilities

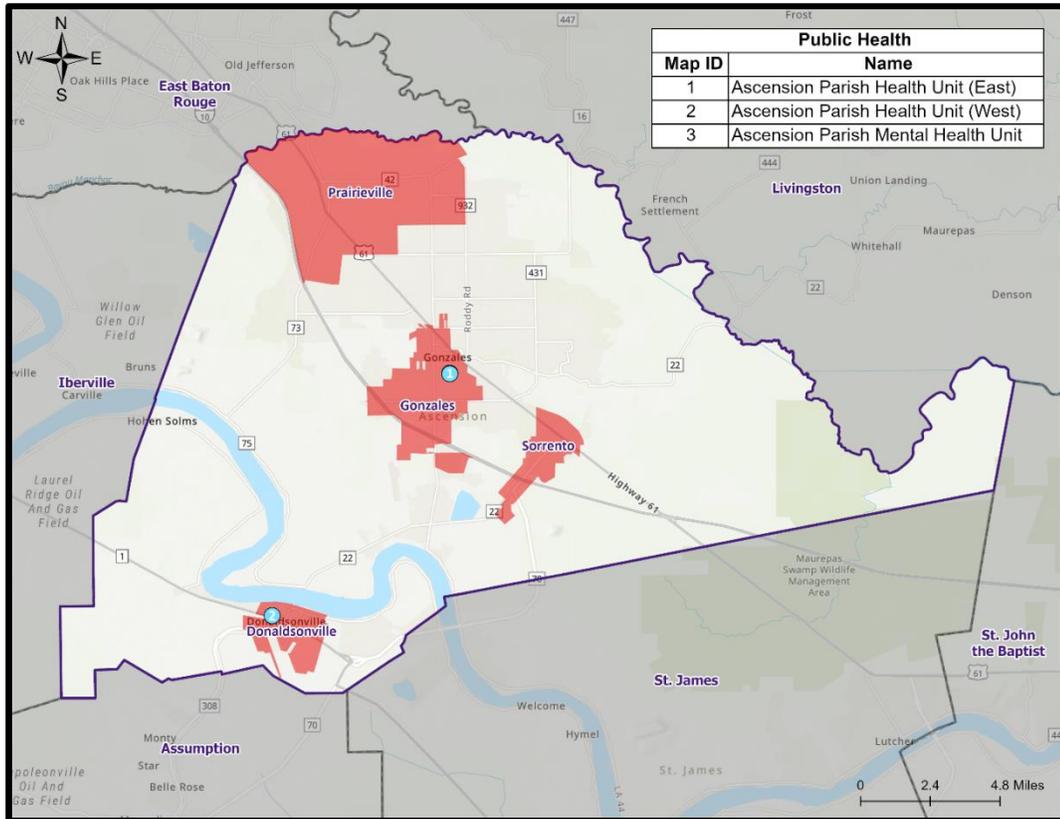


Civil Government

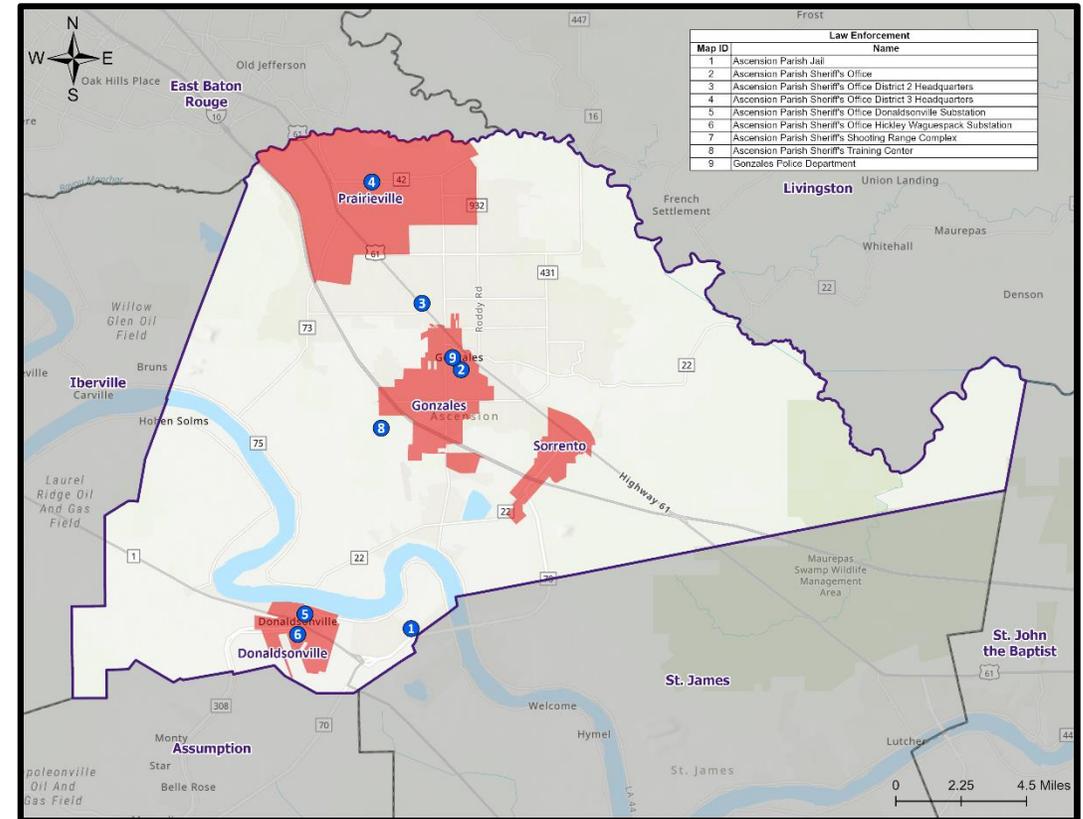


Fire & SAR

Ascension Parish Critical Facilities

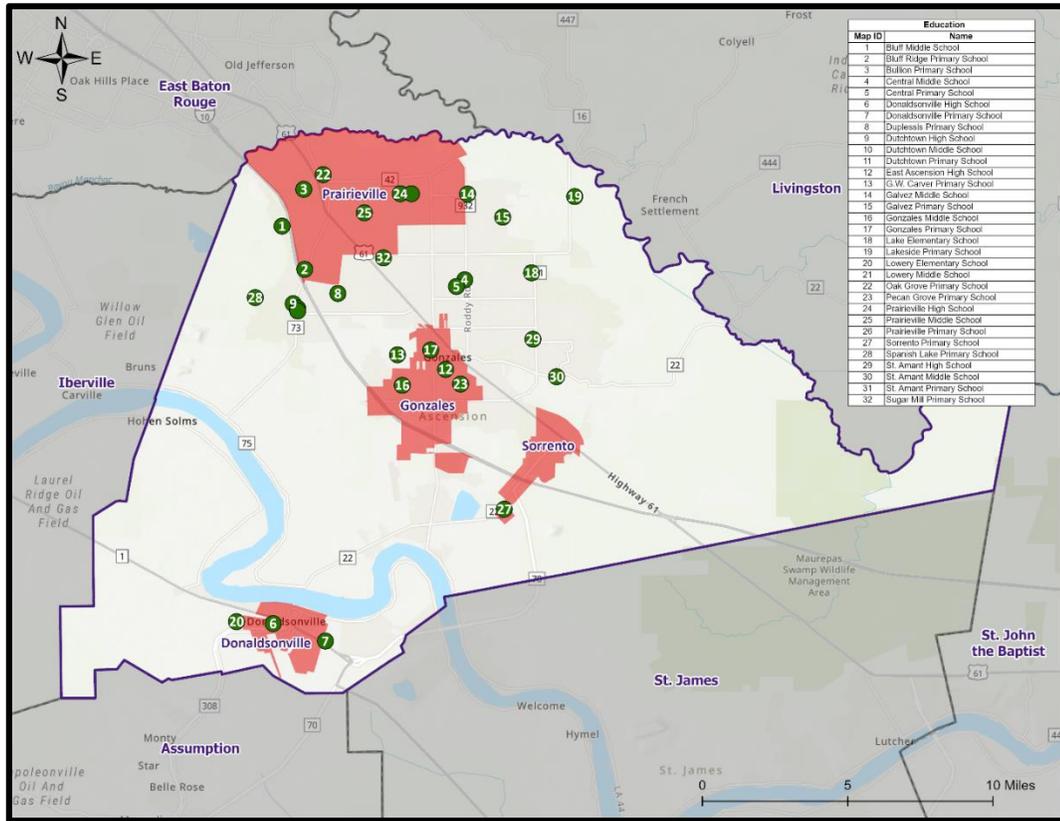


Public Health

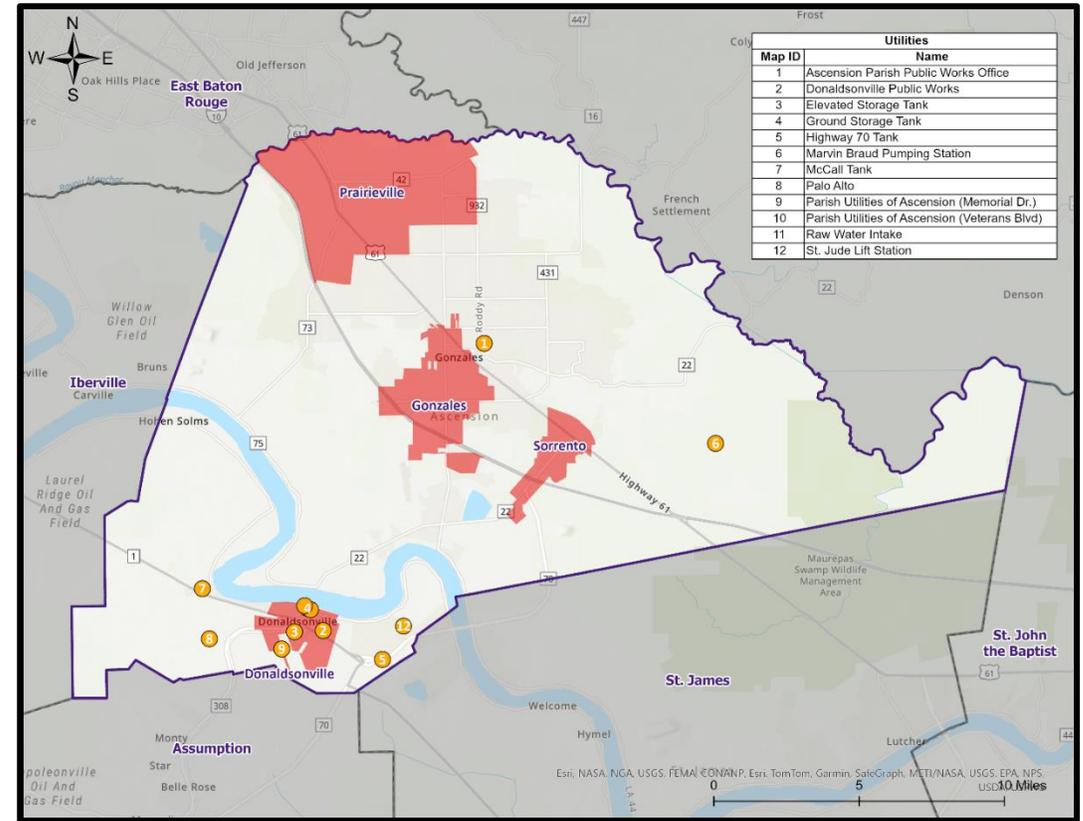


Law Enforcement

Ascension Parish Critical Facilities



Public Education



Public Utilities

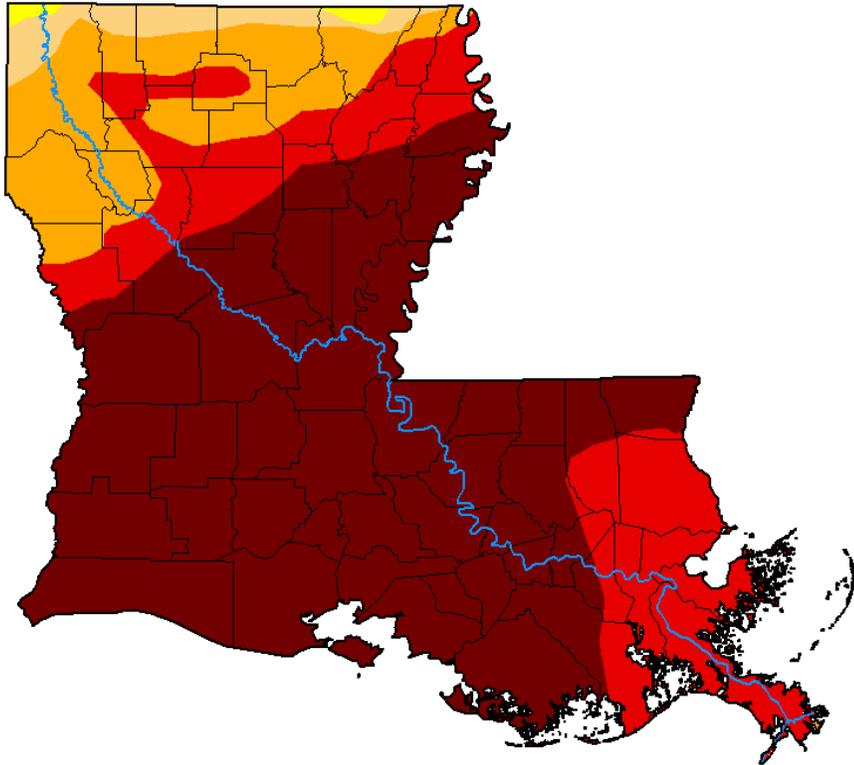
Drought



- 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:
 - ✓ Meteorological Drought
 - ✓ Hydrologic Drought
 - ✓ Agricultural Drought
 - ✓ Socioeconomic Drought
- Generally, the entire parish will be affected by drought
 - Not limited to one particular location within the parish

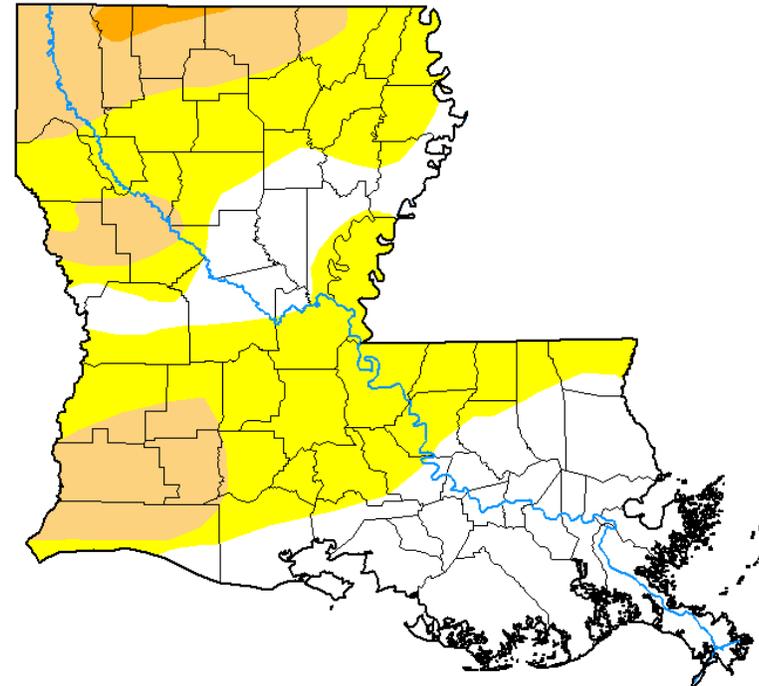
State-wide Drought Monitor

October 10, 2023



U.S. Drought Monitor Louisiana

October 8, 2024
(Released Thursday, Oct. 10, 2024)
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 <http://droughtmonitor.unl.edu/About.aspx>

Author:

Richard Tinker
CPC/NOAA/NWS/NCEP



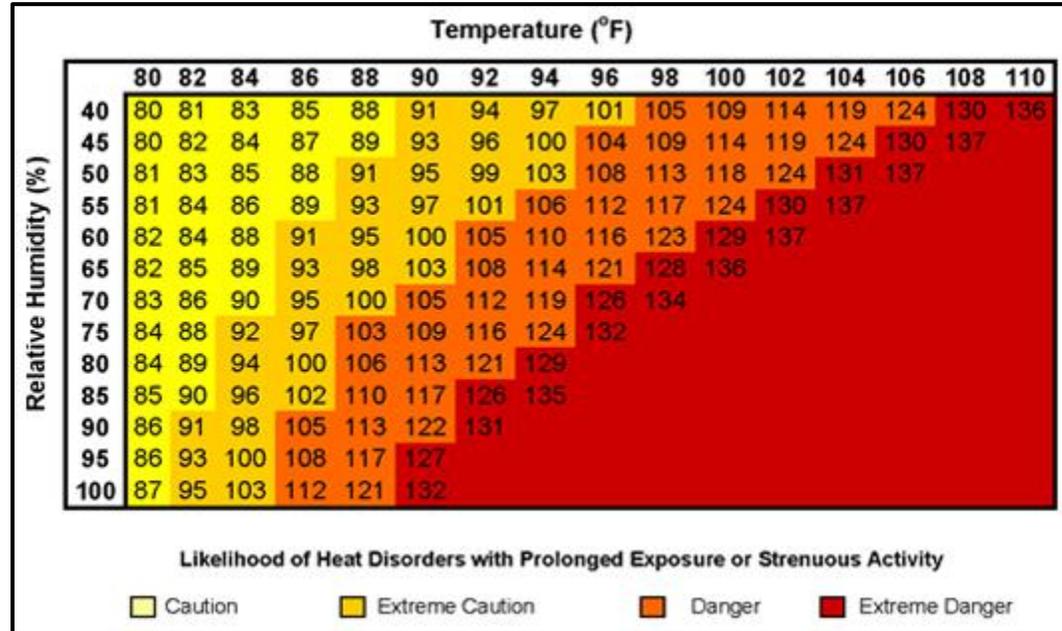
droughtmonitor.unl.edu

Excessive Heat

- No universal definition for Excessive Heat
- Often seen in conjunction with regional drought
- Heat waves are easier to define
 - At least 5 consecutive days where the daily max temperature exceeds the average max temperature by 9 degrees



Excessive Heat



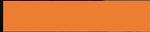
Heat Index	Risk Level	Protective Measures
Less than 91°F	Lower (Caution)	Basic heat safety and planning.
91°F to 103°F	Moderate	Implement precautions and heighten awareness.
103°F to 115°F	High	Additional precautions to protect workers.
Greater than 115°F	Very High to Extreme	Triggers even more aggressive protective measures.



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.”



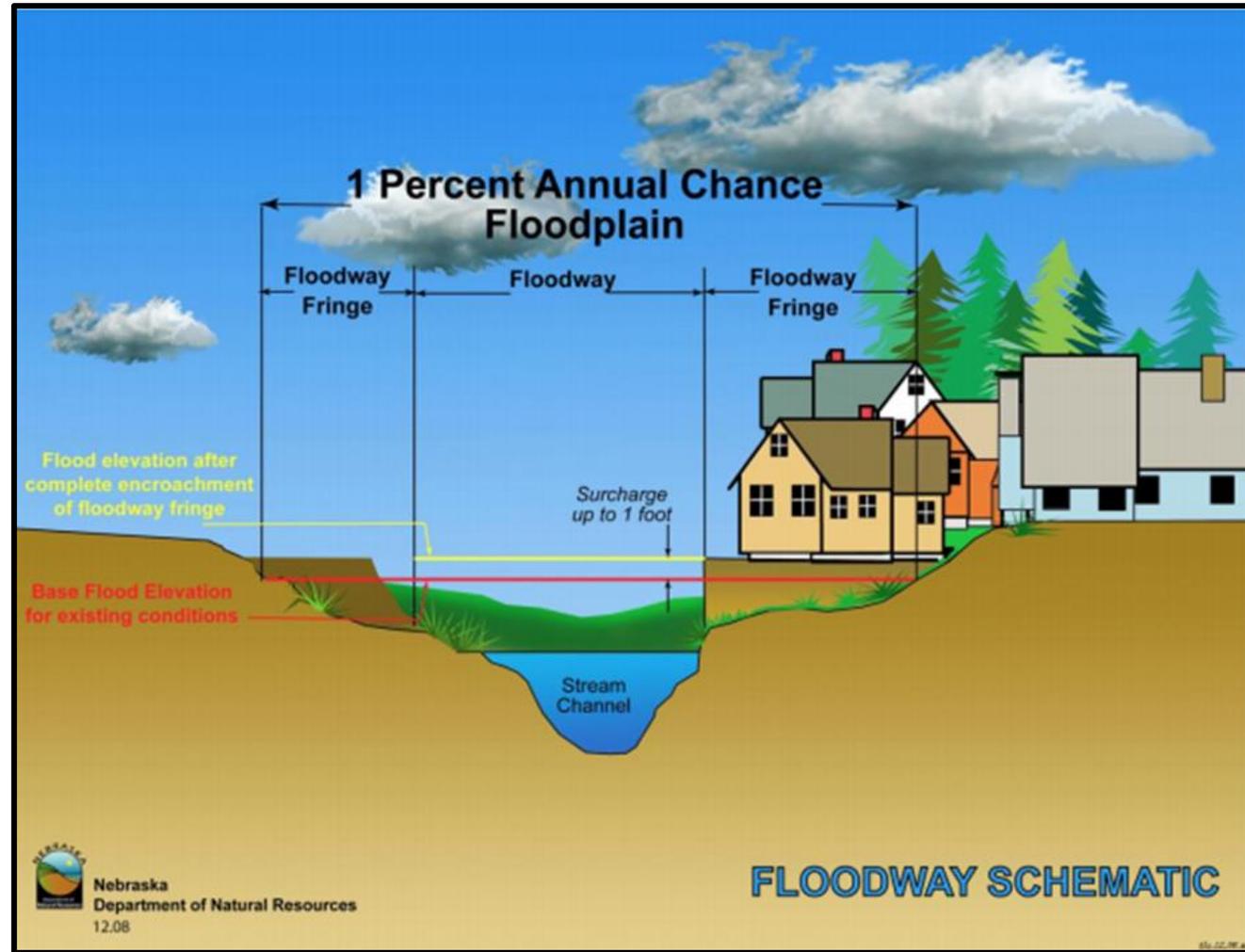


Flooding

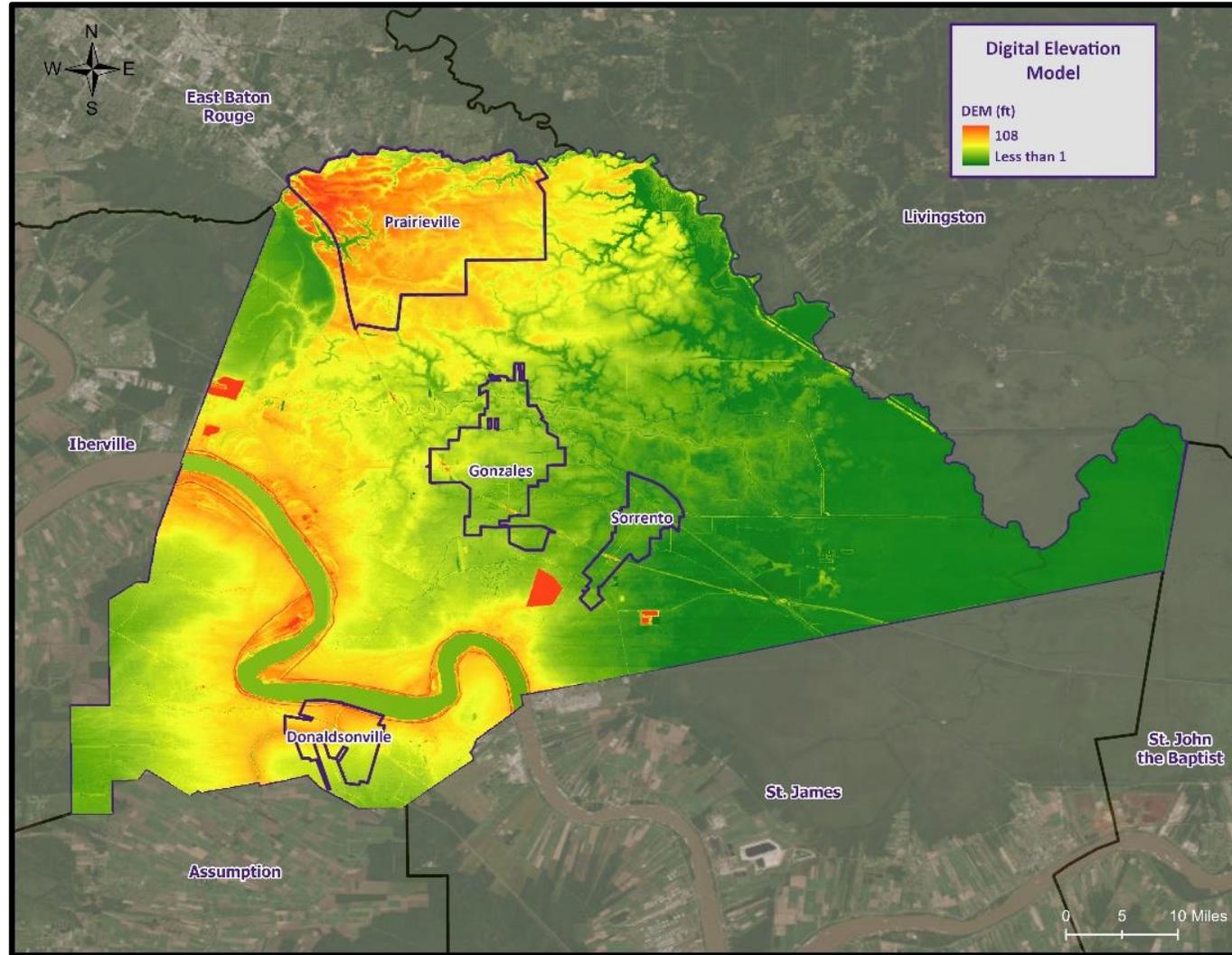
- In Louisiana, six specific types of flooding are of main concern:
 - Riverine
 - Flash
 - Ponding
 - Backwater
 - Urban
 - Coastal



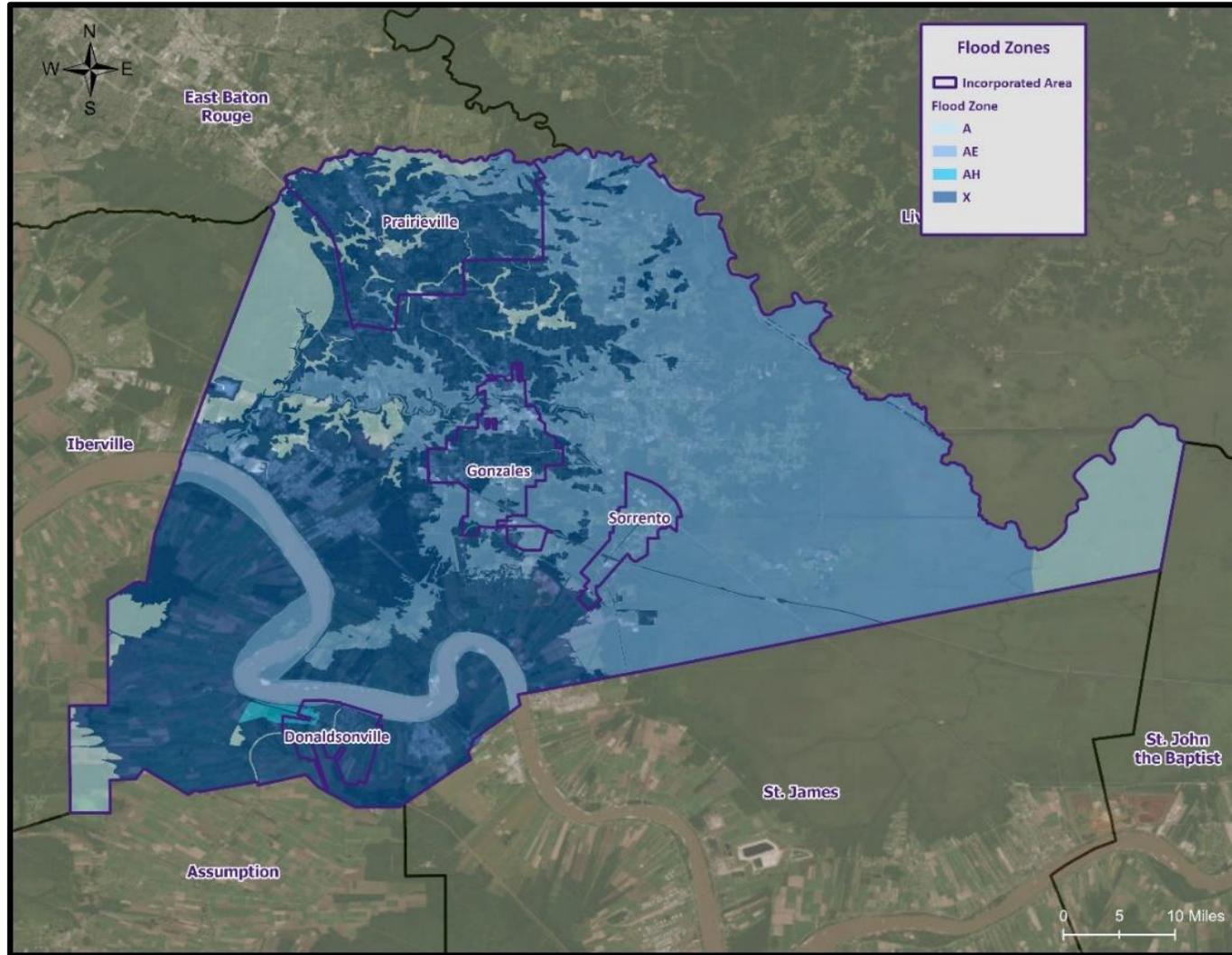
Floodway Diagram



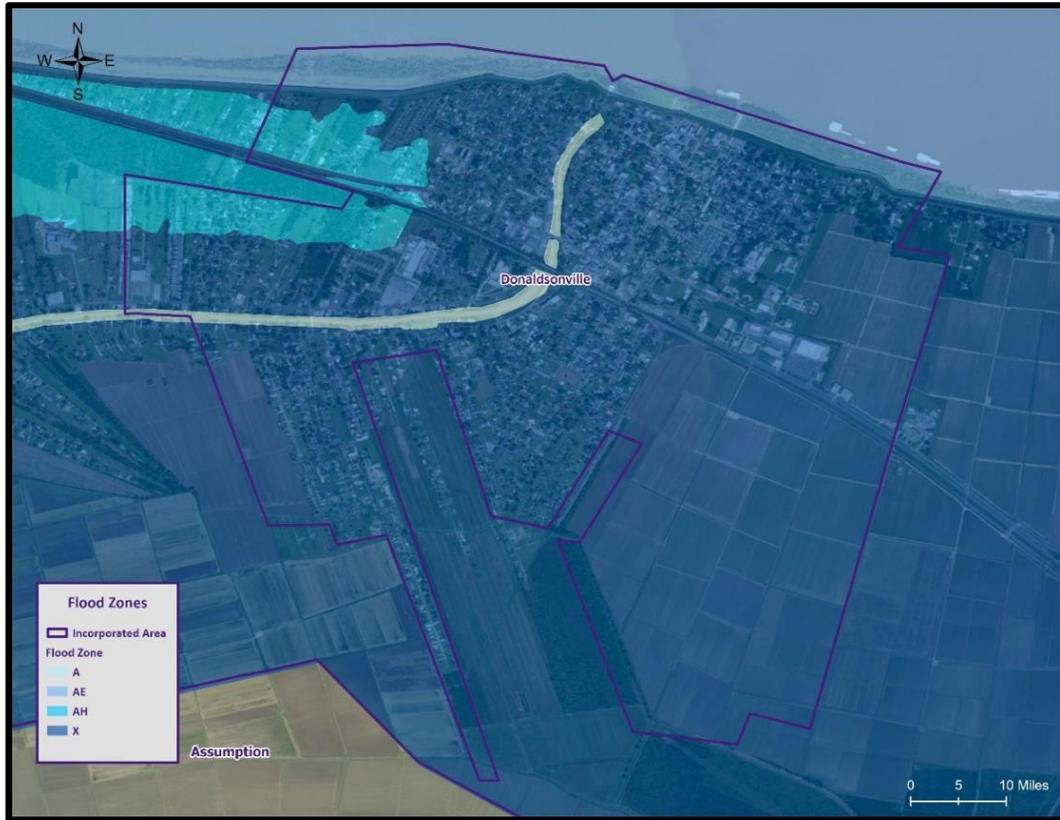
Digital Elevation Model



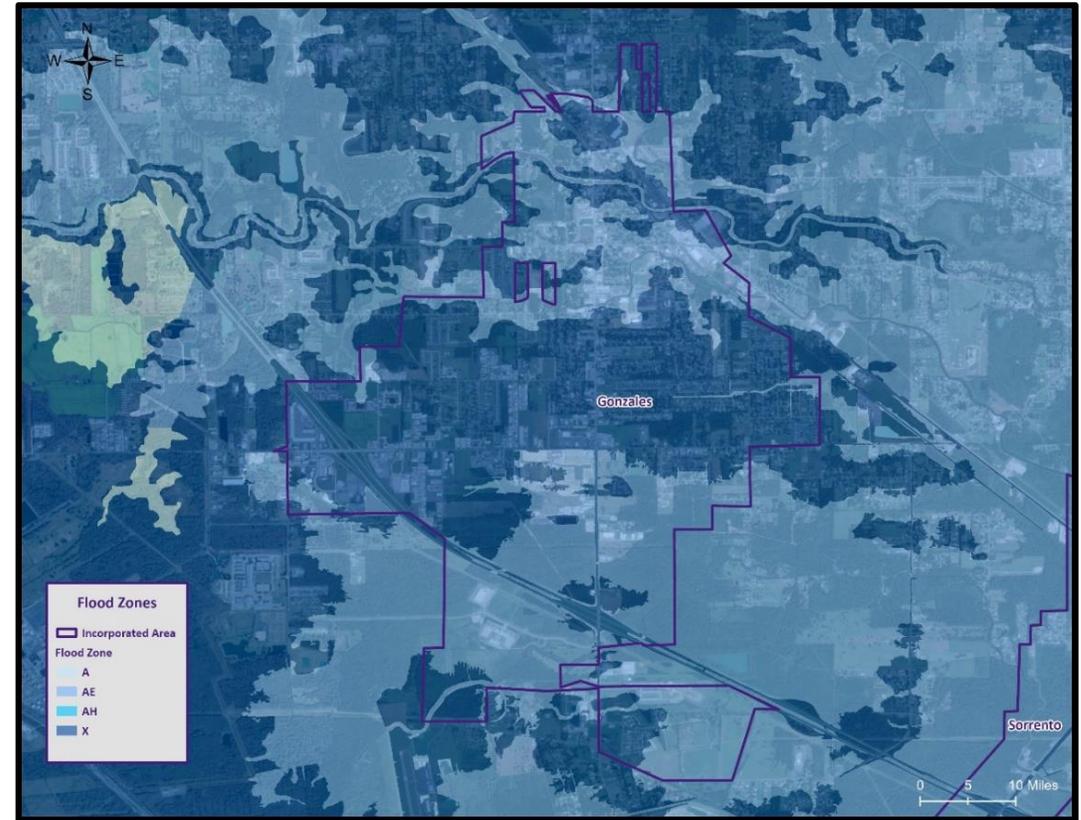
Ascension Parish Flood Map



Ascension Parish Flood Maps

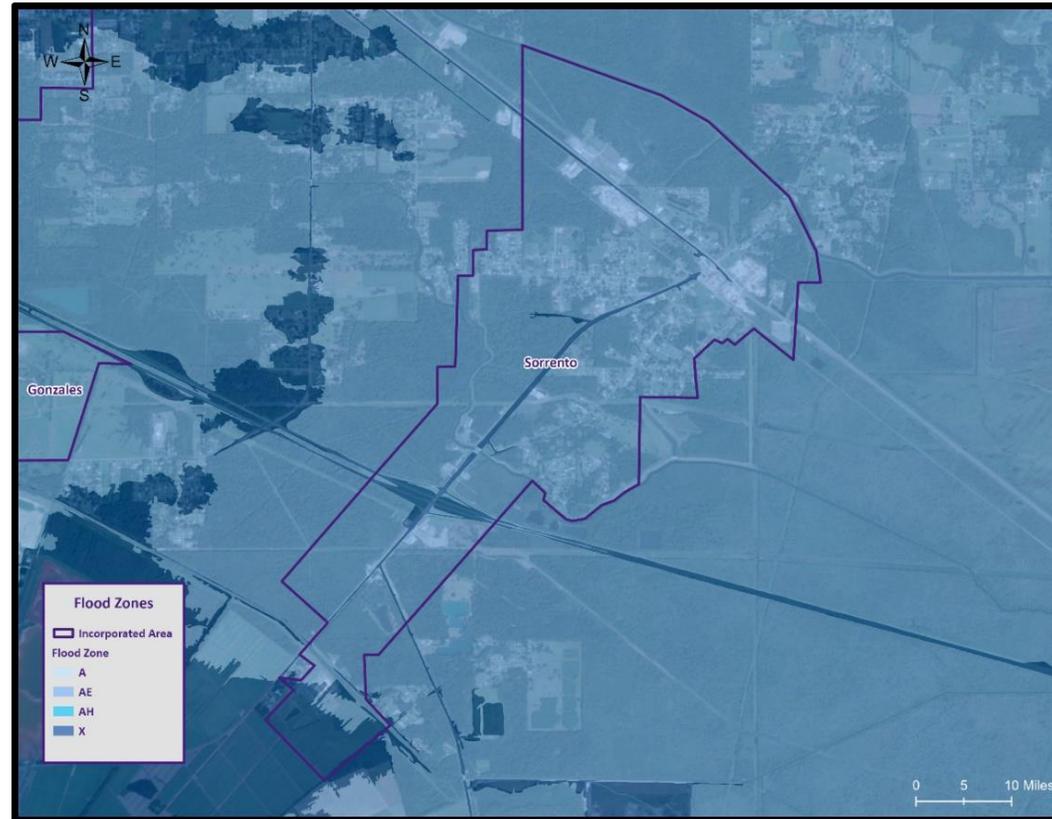


Donaldsonville



Gonzales

Ascension Parish Flood Maps



Sorrento

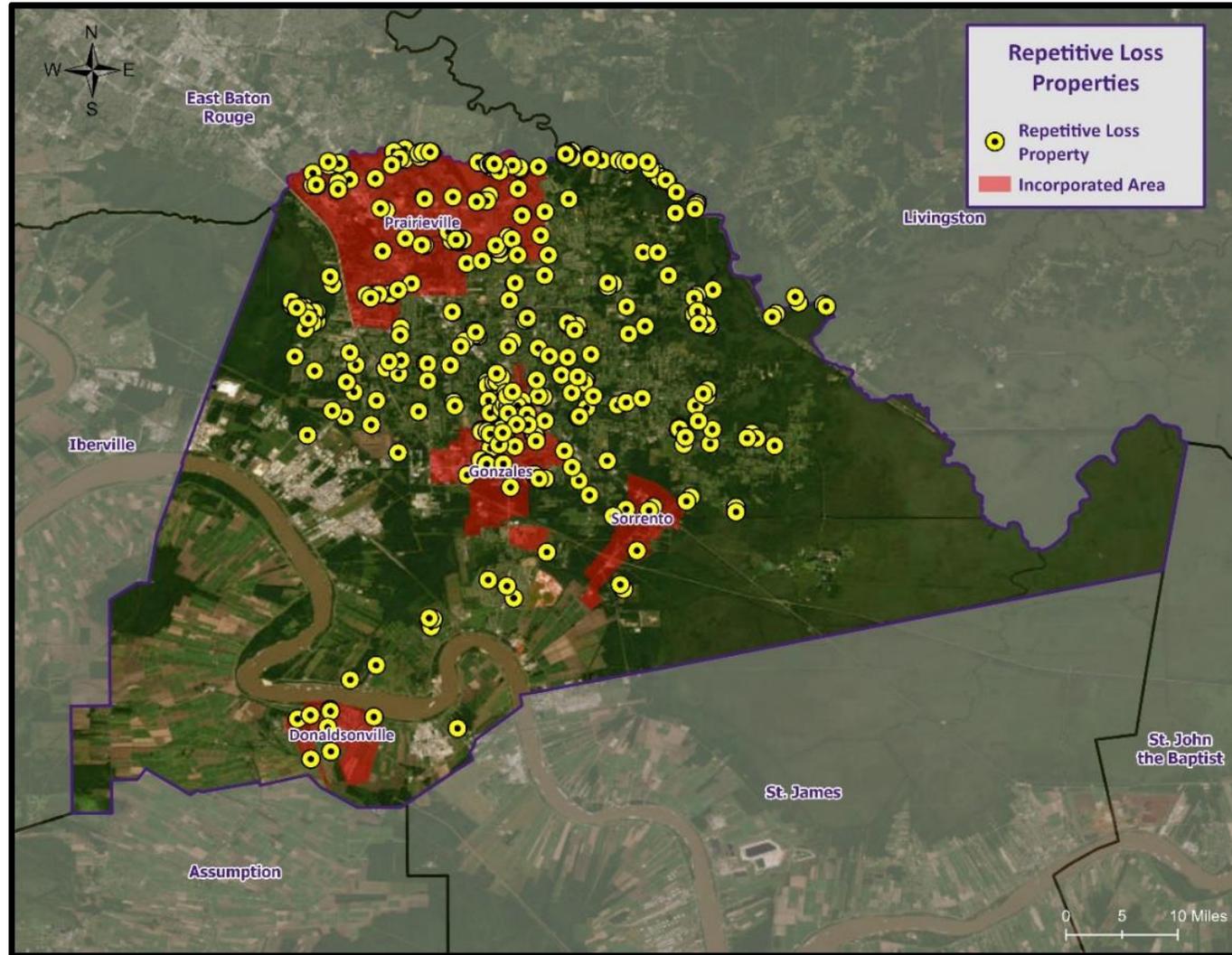


Flooding

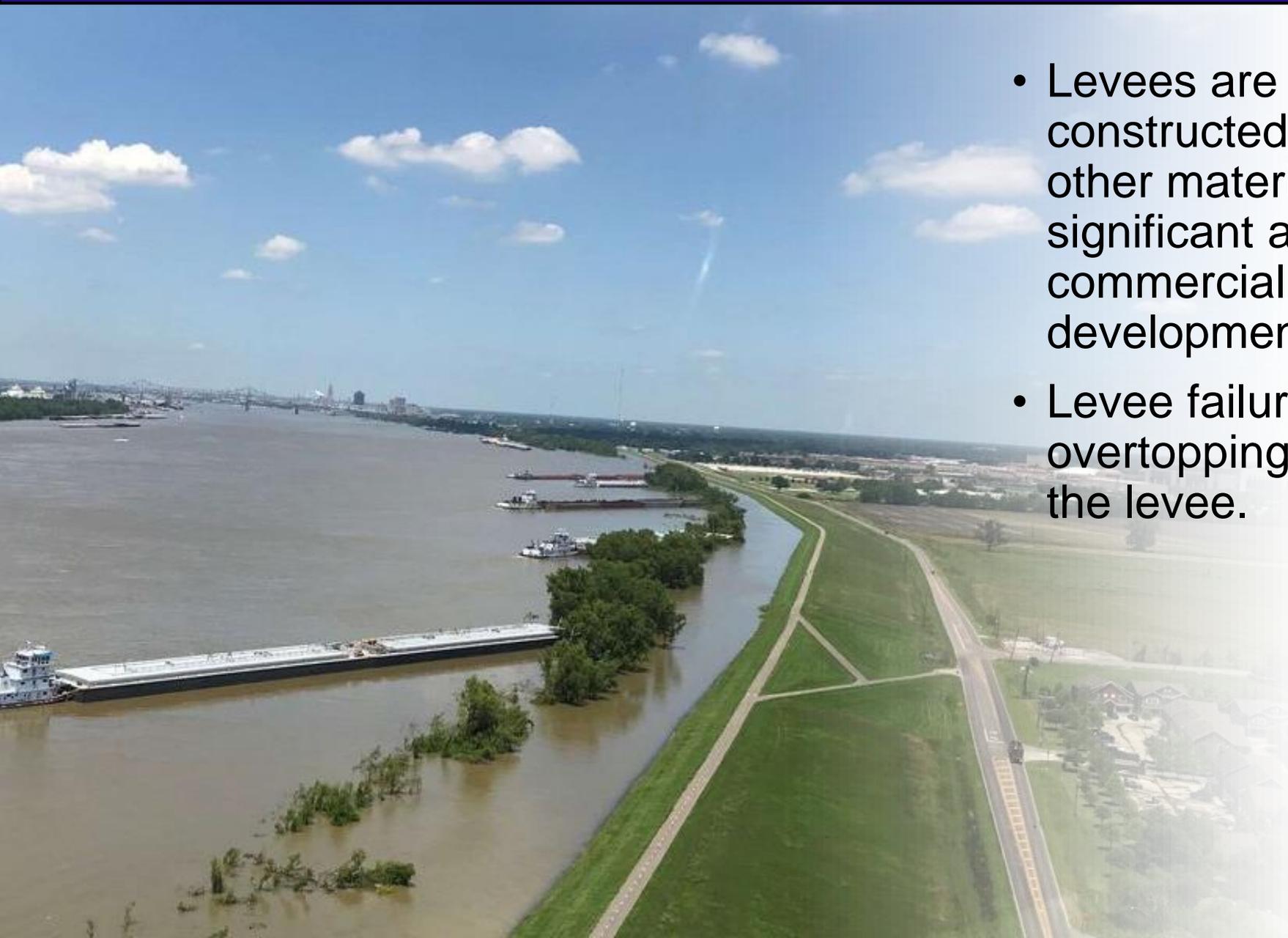


- Some areas flood more often than other properties, even more than those in the mapped 100-year floodplain.
- FEMA defines a “repetitive loss” property as one which has received two flood insurance claim payments for at least \$1,000 over any 10-year period since 1978.
- There are currently around 160,000 repetitive loss properties in the U.S.
- These properties comprise 1% of the NFIP policy base, but they account for approximately 30% of the country’s flood insurance claim payments.

Repetitive Loss Properties

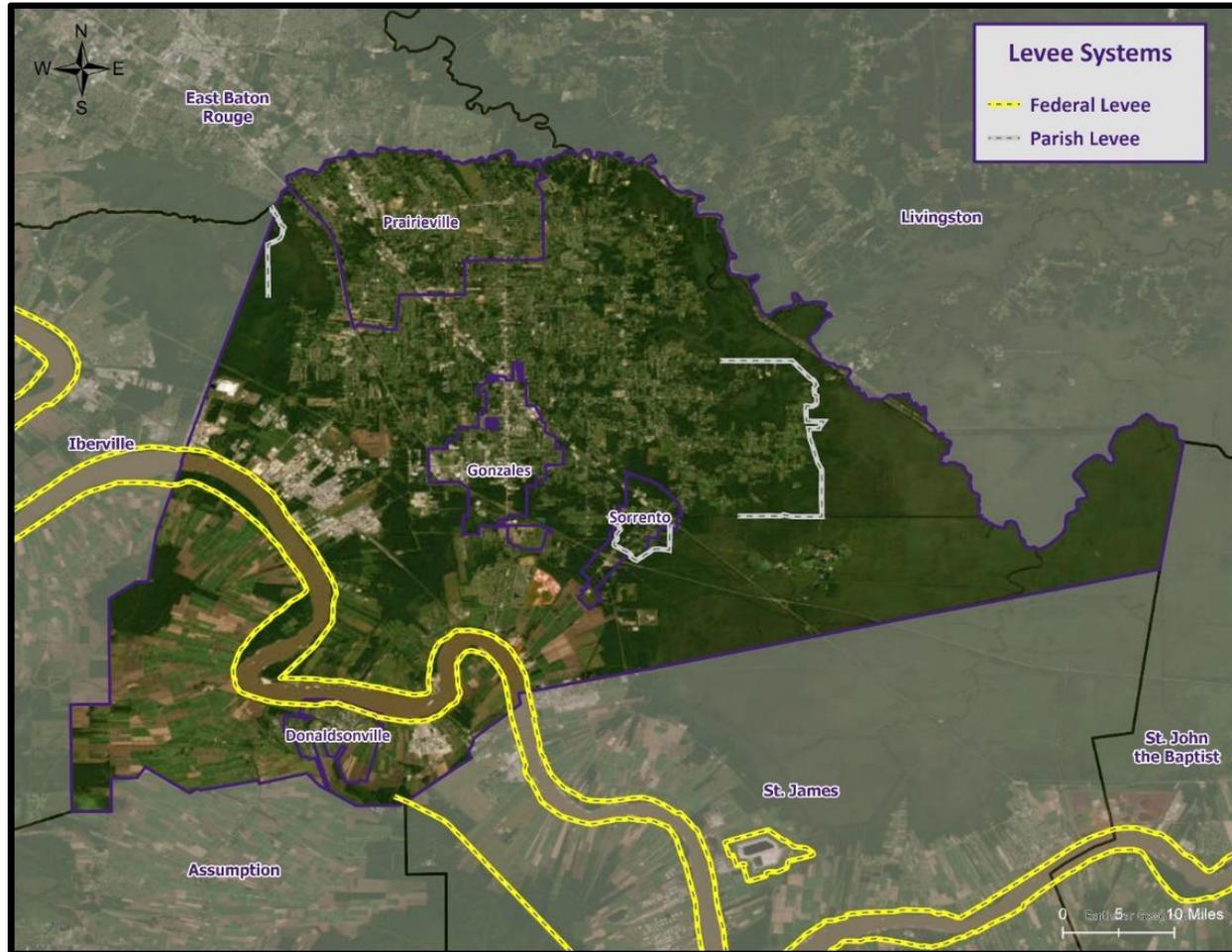


Levee Failure



- 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 in Ascension Parish



System	System ID	Length (miles)	Height (ft)
Laurel Ridge System	300005009195	5.448	No Data
Mississippi River East Bank	4405000501	107.108	22
Mississippi River West Bank – Below Morganza	4405000525	183.634	20
Mississippi River West Bank – LaFourche Basin	4405000526	58.386	32
Sorrento System	300005009185	4.282	No Data

System	Population	Buildings	Property Value
Laurel Ridge System	634	275	\$130 million
Mississippi River East Bank	429,480	178,846	\$62 billion
Mississippi River West Bank – Below Morganza	243,744	129,113	\$20 billion
Mississippi River West Bank – LaFourche Basin	73,459	36,223	\$9 billion
Sorrento System	913	357	\$180 million

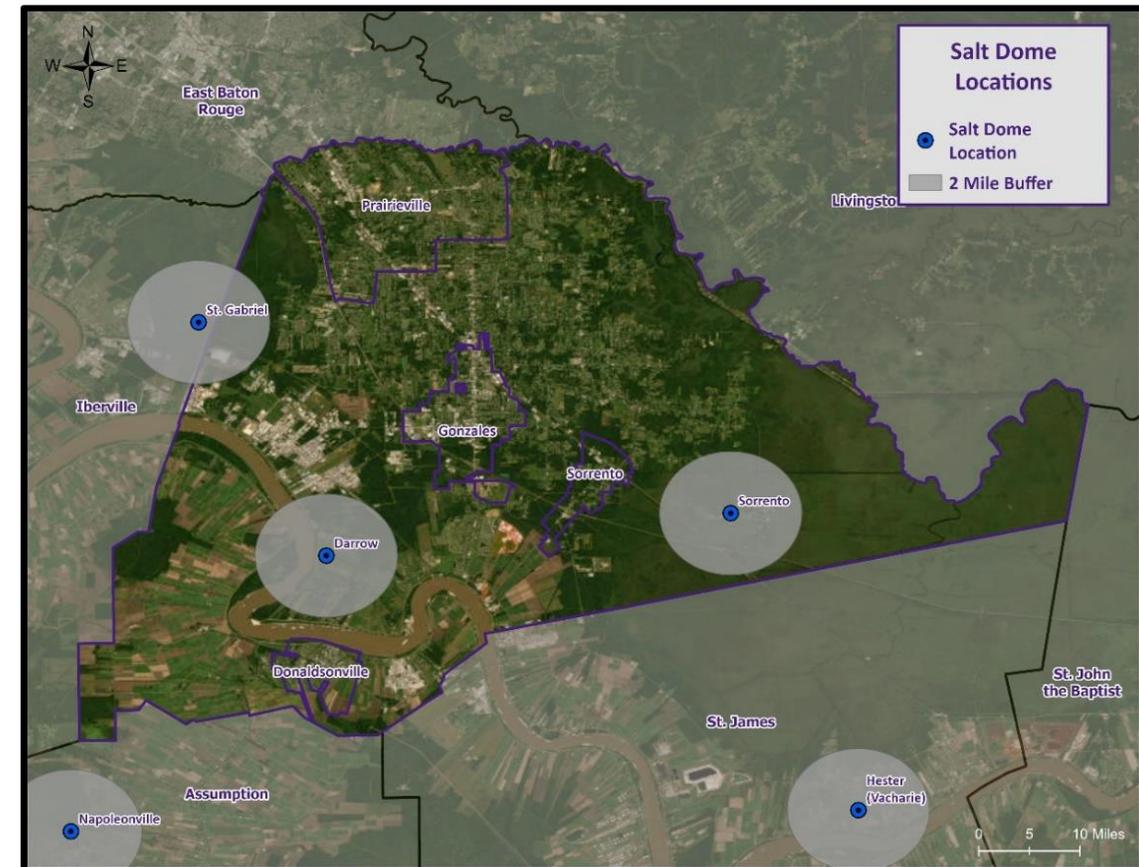
Sinkholes

- 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

Salt Dome Name	Total Building Exposure	Critical Infrastructure Exposure	Number of People Exposed	Number of Houses Exposed
Darrow Salt Dome	\$1,333,370,000	0	186	57
Sorrento Salt Dome	\$375,470,000	0	0	0
St. Gabriel Salt Dome	\$6,346,000	0	0	0

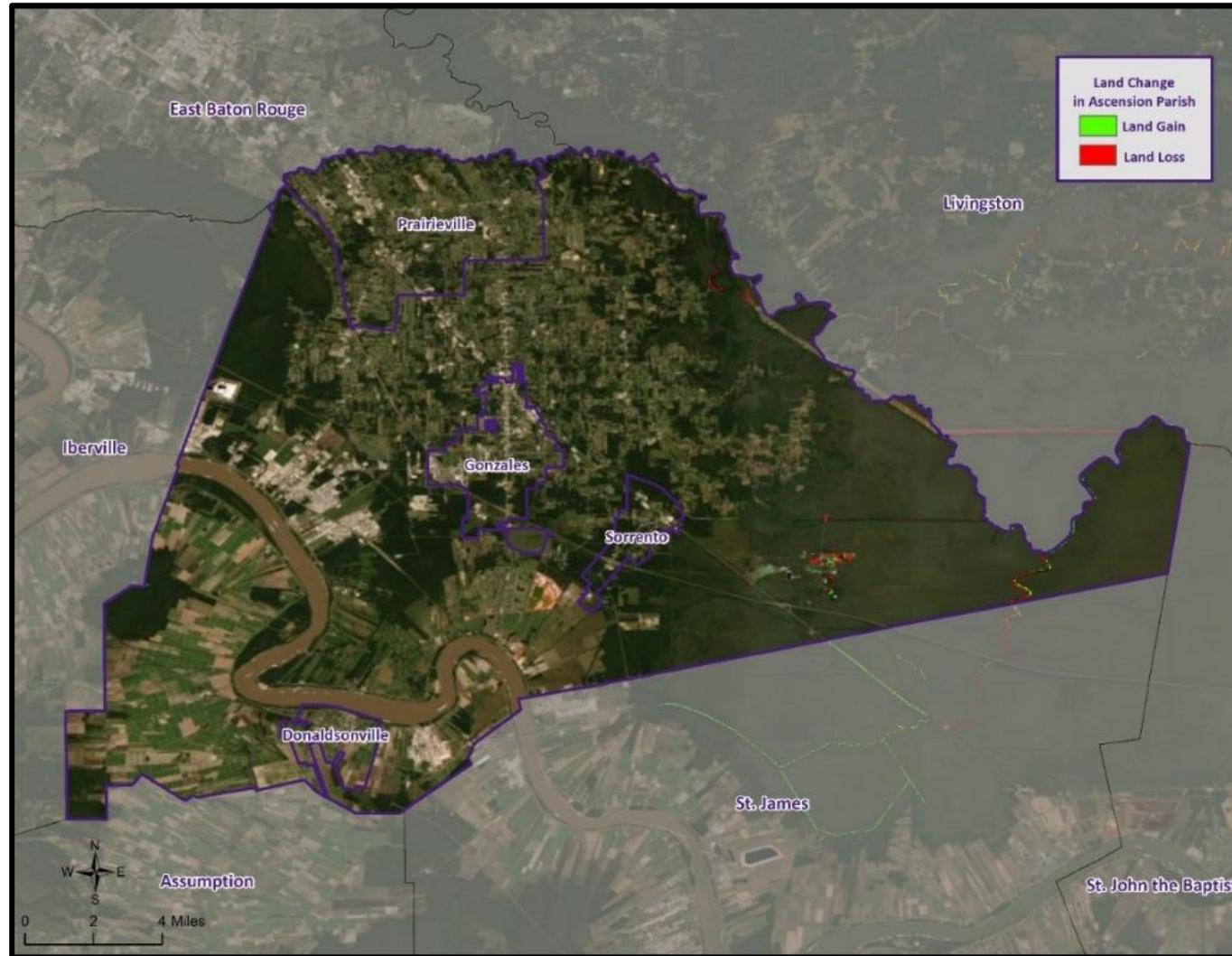


Subsidence

- Since 1932, the average annual land loss in Louisiana is 35 square miles, while the average annual land gained is 3 square miles.
- Subsidence and sea level rise are the main culprits for land loss but other “discrete hazards” i.e. hurricanes, also contribute.
- Lowering elevation accelerates saltwater intrusion



Subsidence



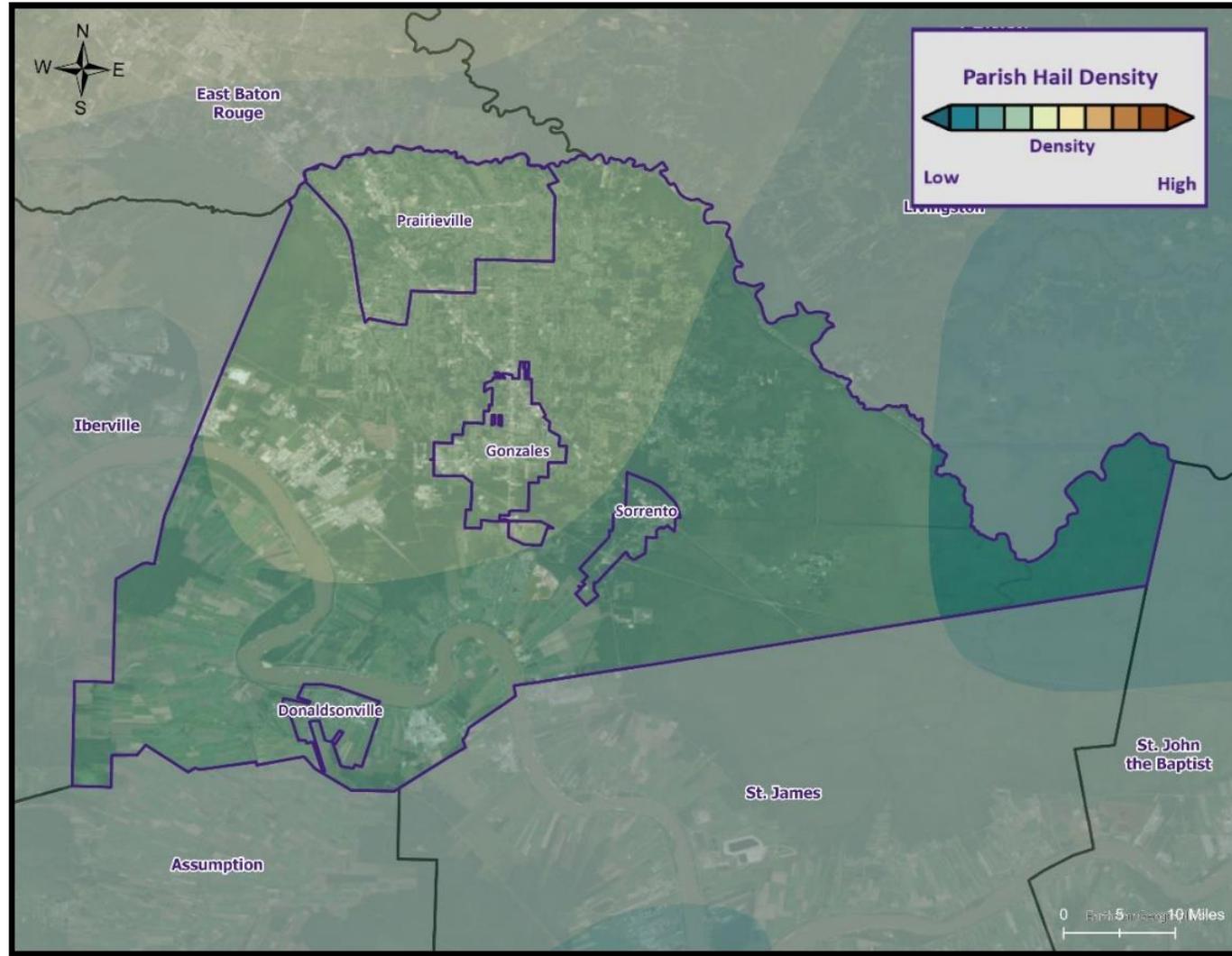
Thunderstorms



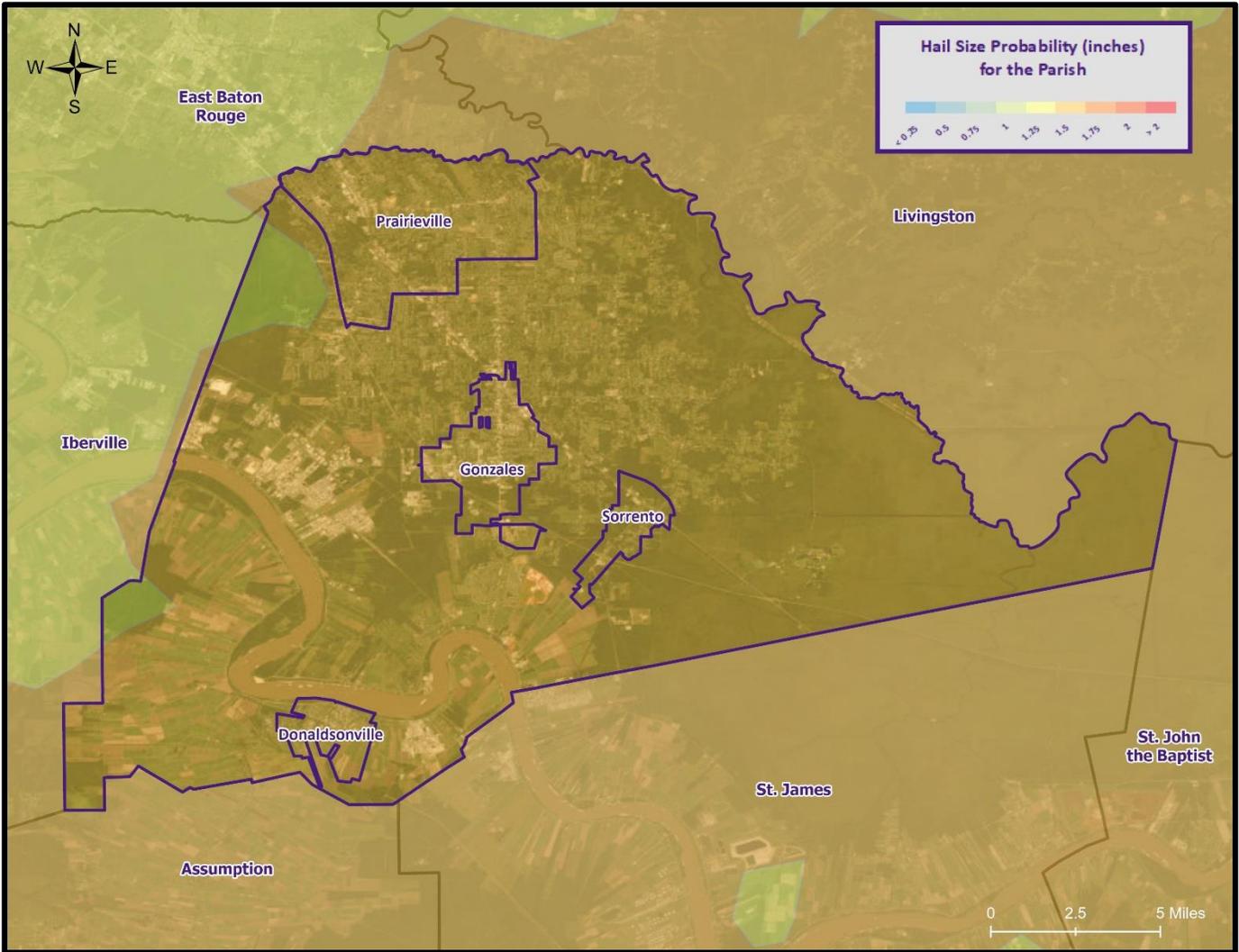
- A **thunderstorm**, also known as an **electrical storm**, a **lightning storm**, or a **thundershower**, is a type of storm characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere known as thunder.
- They are usually accompanied by strong winds, heavy rain, and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



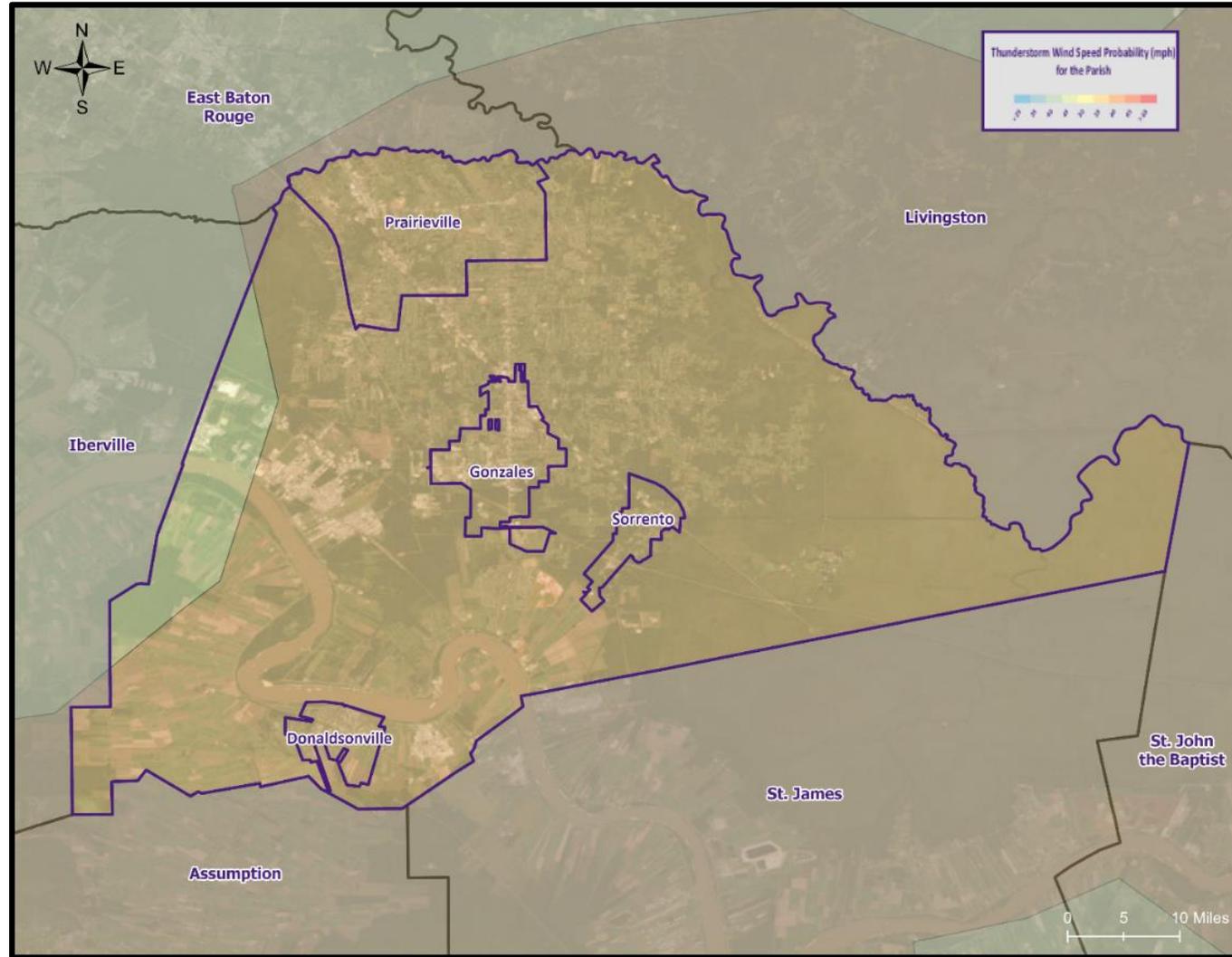
Hailstorm Density in Ascension Parish



Maximum Hail Size Probability



Maximum Wind Speed Probability



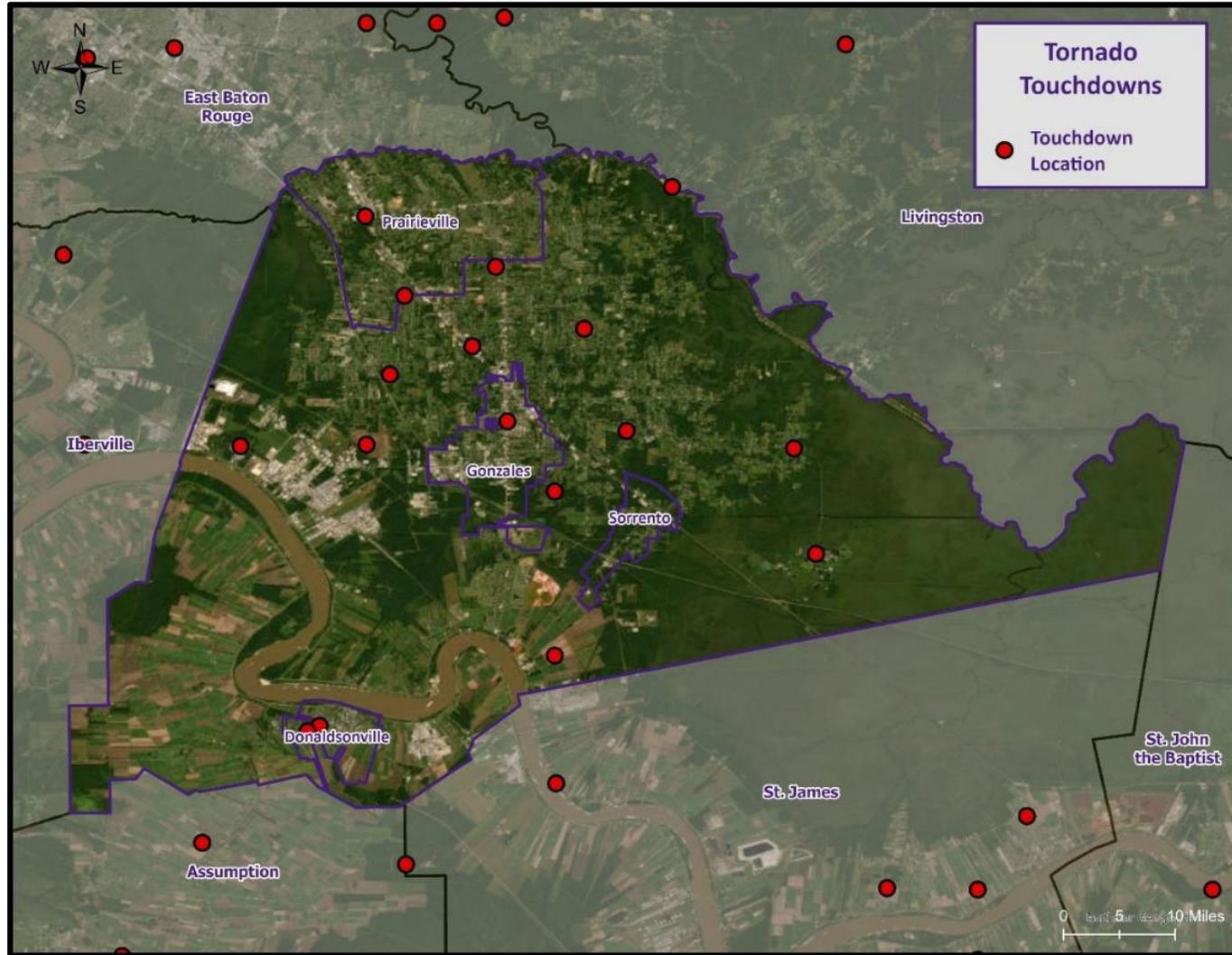
Tornadoes

- Tornadoes 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.

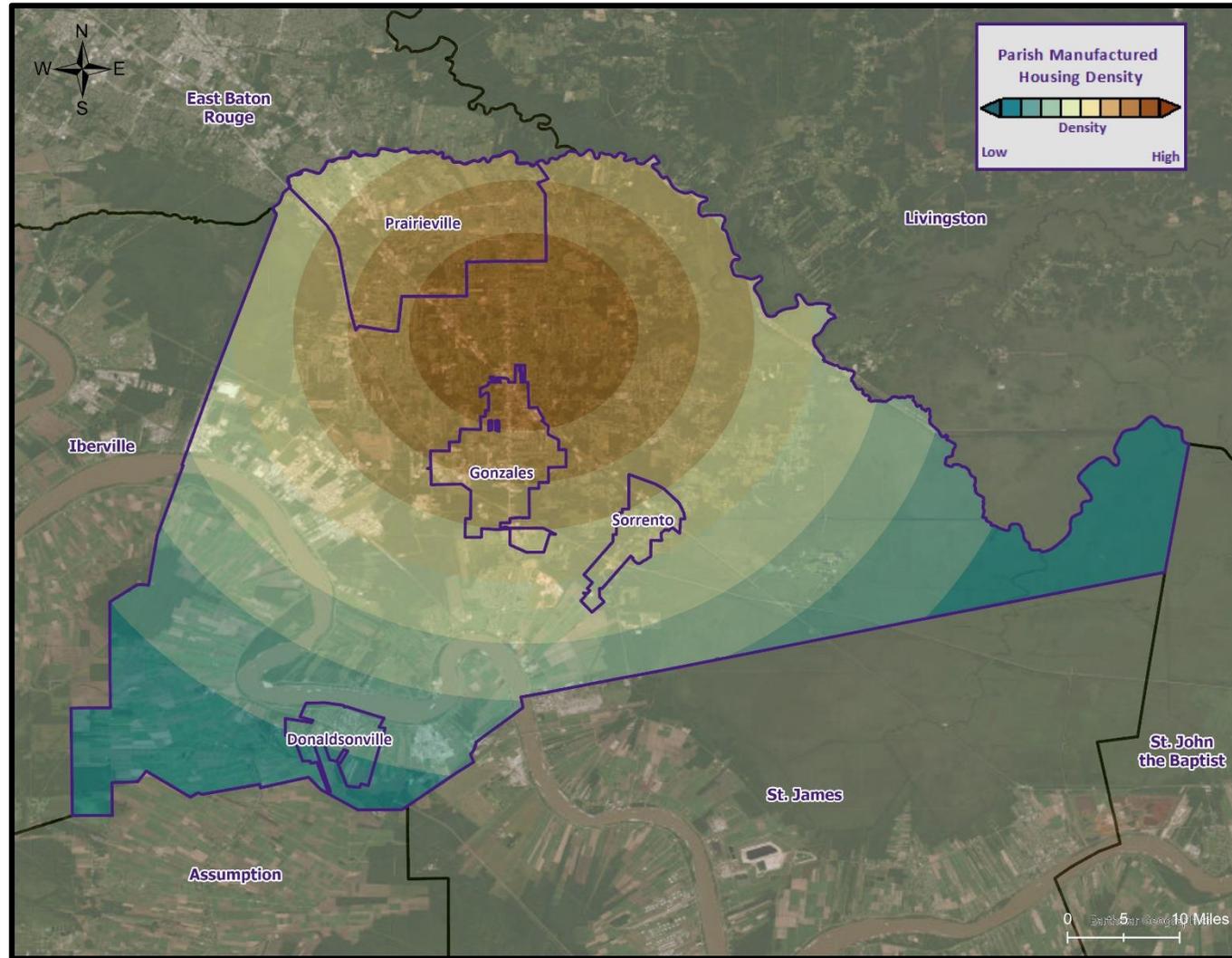
ORIGINAL FUJITA SCALE		ENHANCED FUJITA SCALE	
F5	261-318 mph	EF5	+200 mph
F4	207-260 mph	EF4	166-200 mph
F3	158-206 mph	EF3	136-165 mph
F2	113-157 mph	EF2	111-135 mph
F1	73-112 mph	EF1	86-110 mph
F0	<73 mph	EF0	65-85 mph



Tornadoes in Ascension Parish



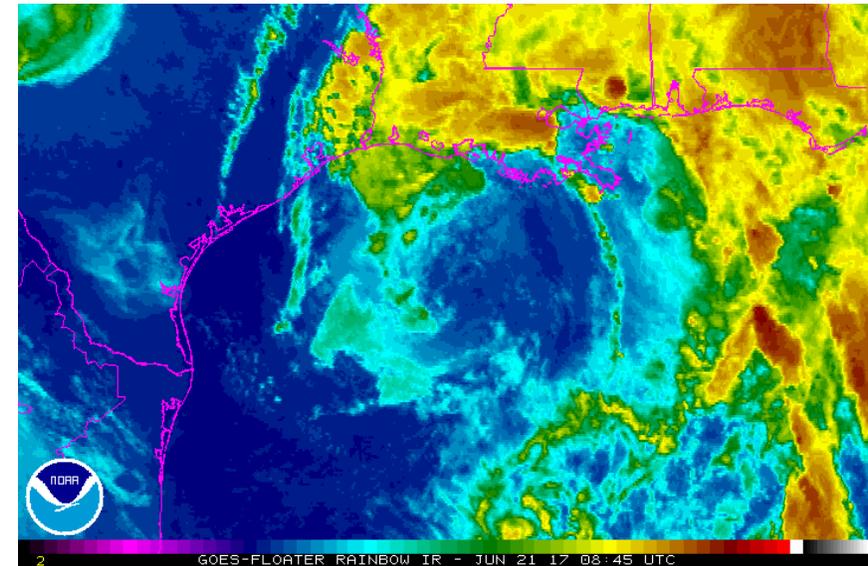
Manufactured Home Density



Tropical Cyclones

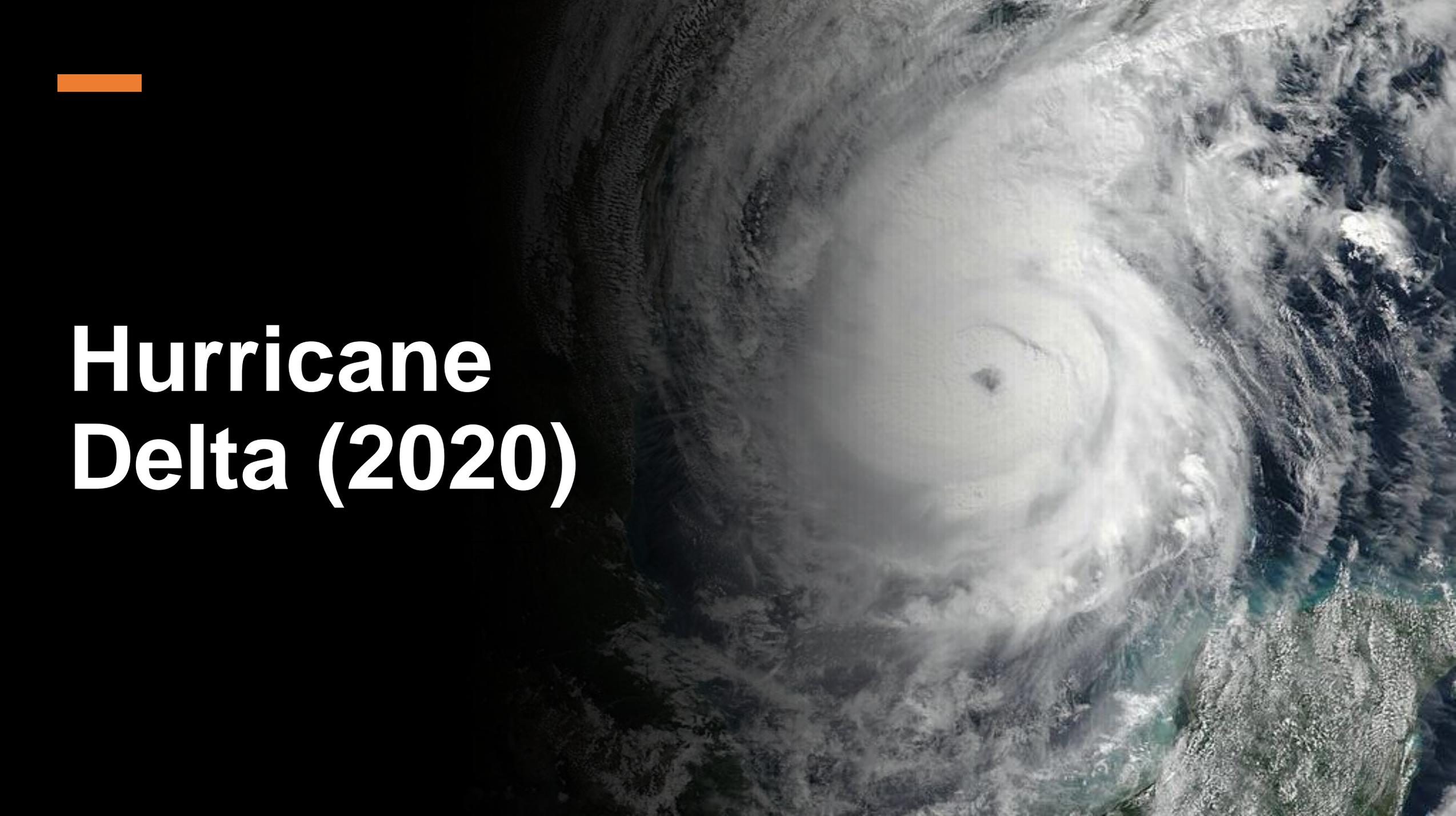
- Tropical cyclones are defined spinning, low-pressure air masses that draw surface air into their centers and attain strength ranging from weak tropical waves to the most intense hurricanes

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.



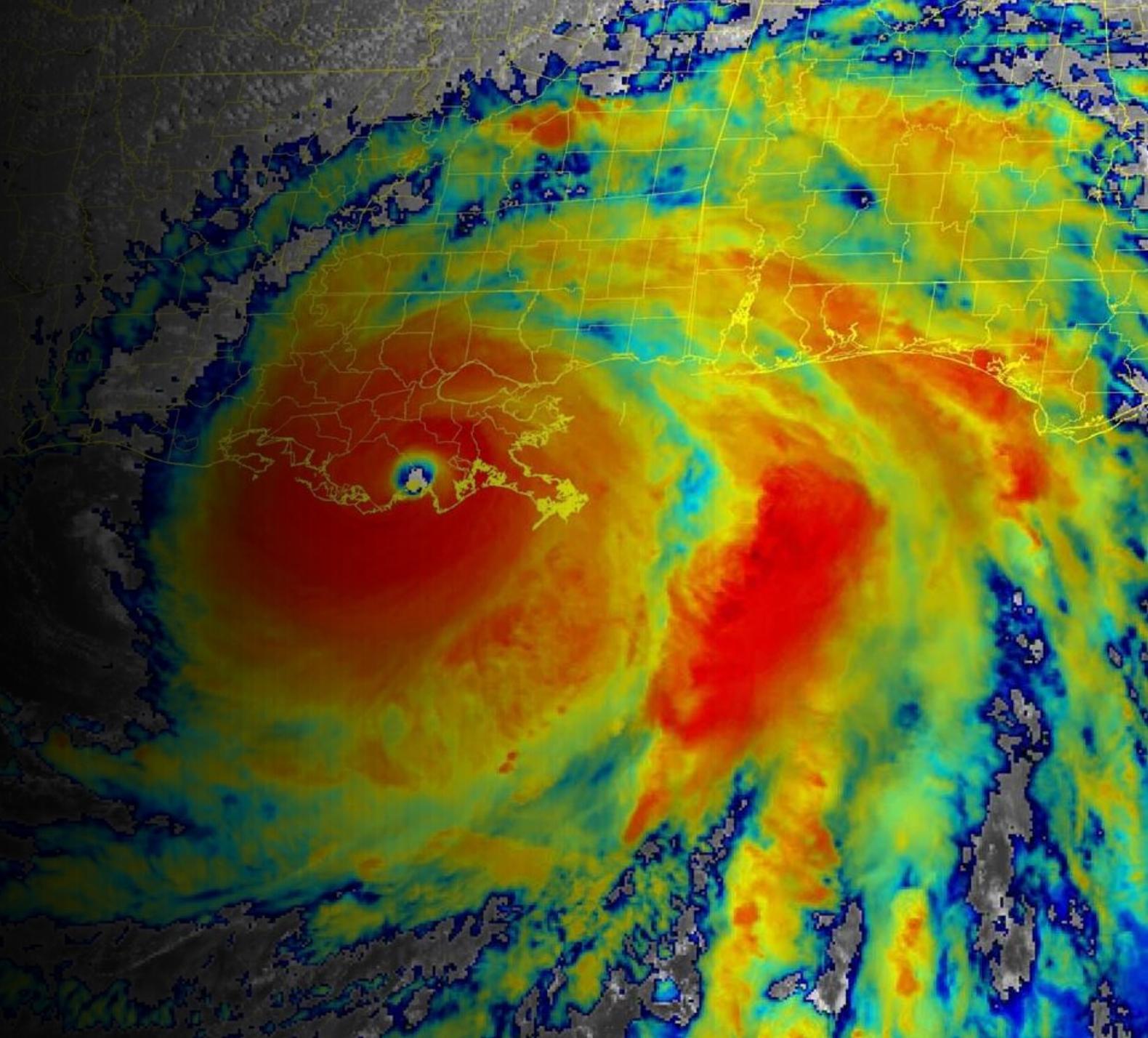


Hurricane Delta (2020)

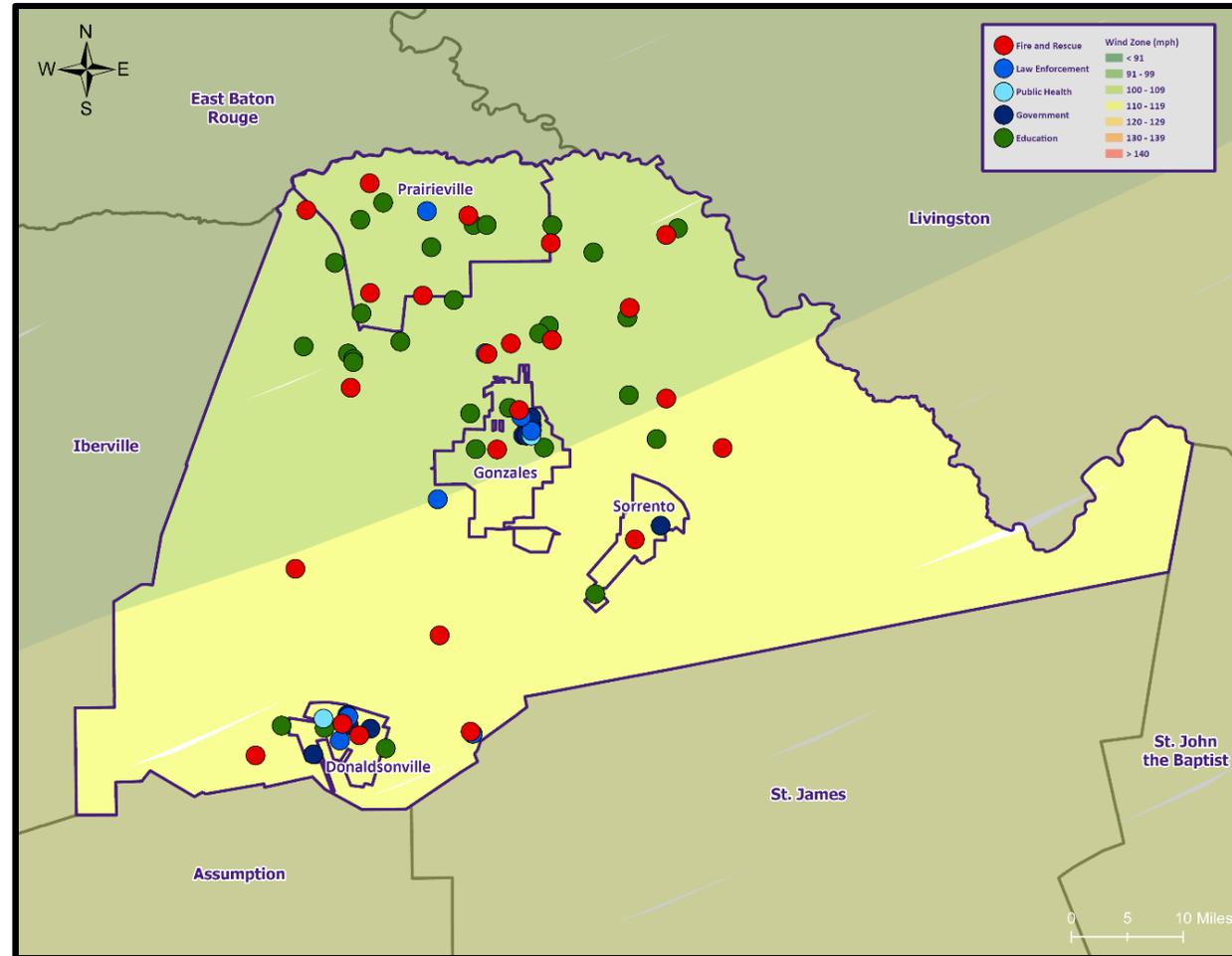




Hurricane Ida (2021)



Wind Speed Impacts on C.I.

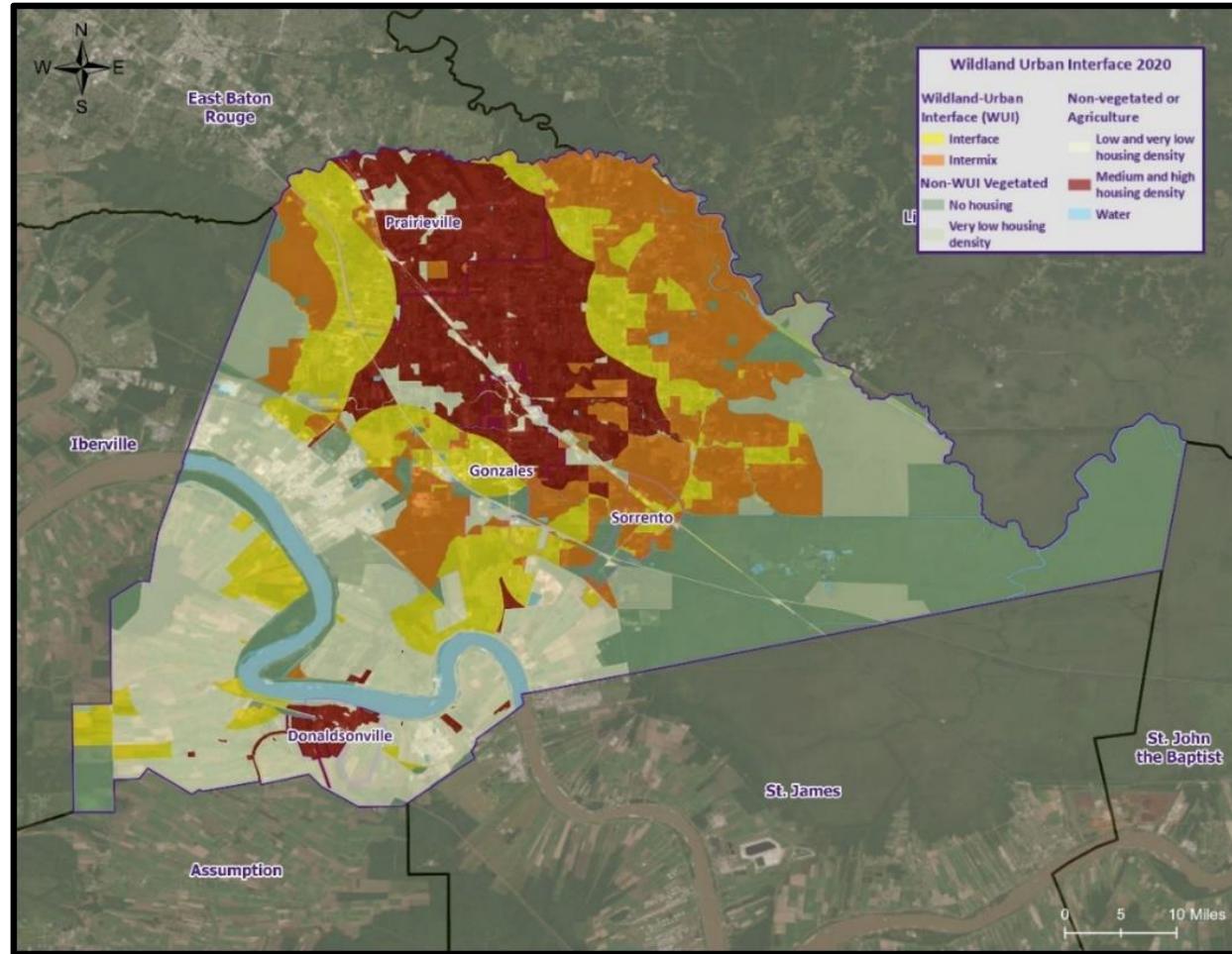


Wildfires

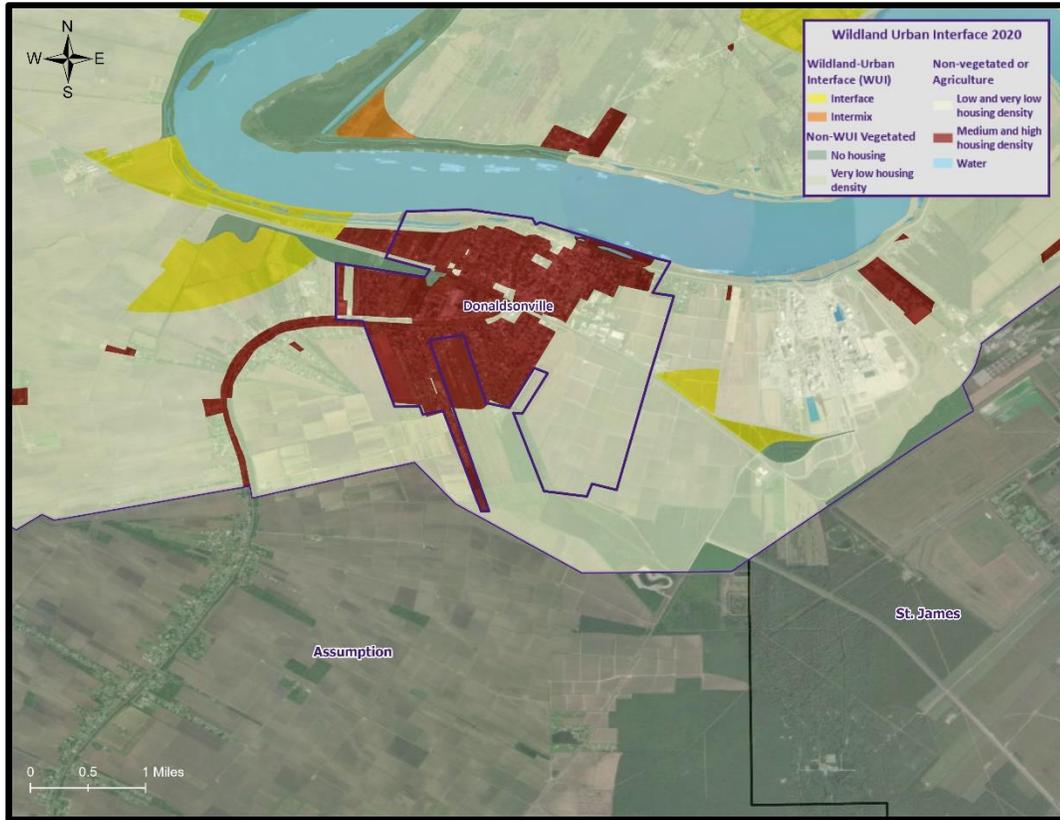


- A wildfire is combustion in a natural setting, marked by flames or intense heat.
- Most frequently, wildfires are ignited by lightning or unintentionally by humans. Fires set purposefully (but lawfully) are referred to as controlled fires or burns
- While loss of timber is a problem, the real hazard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

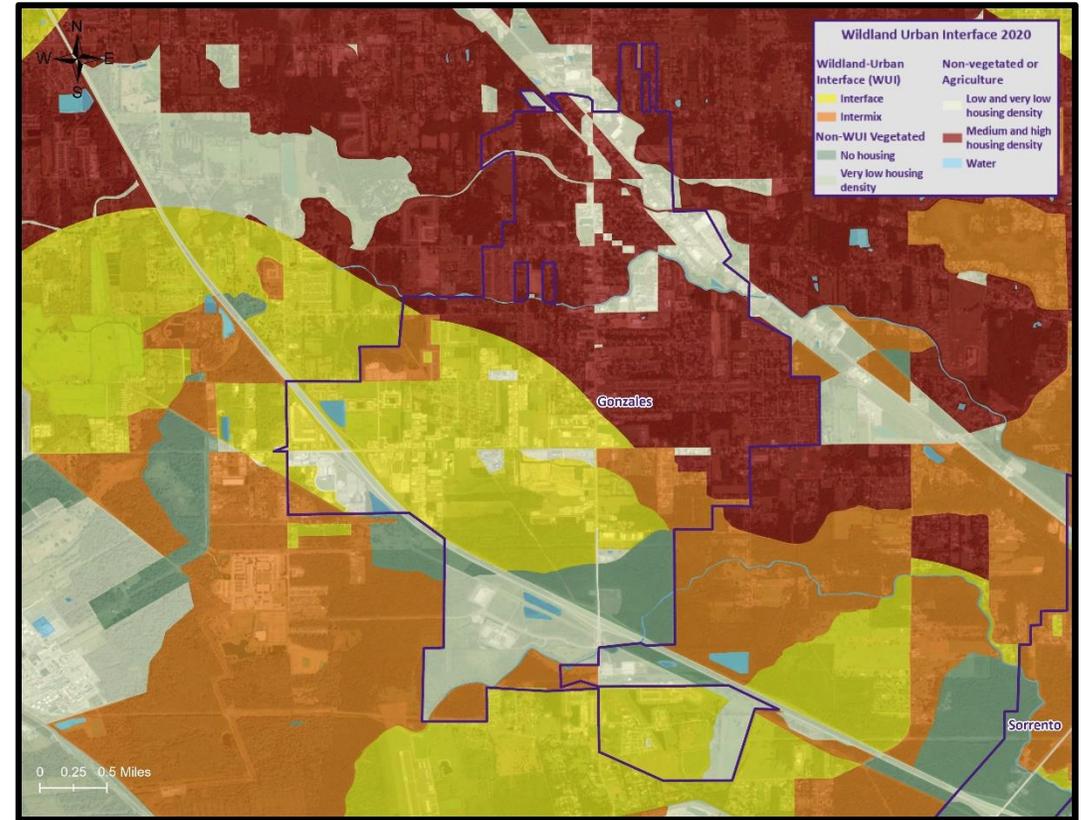
Wildland-Urban Interaction Map



Wildland Urban Interaction Maps

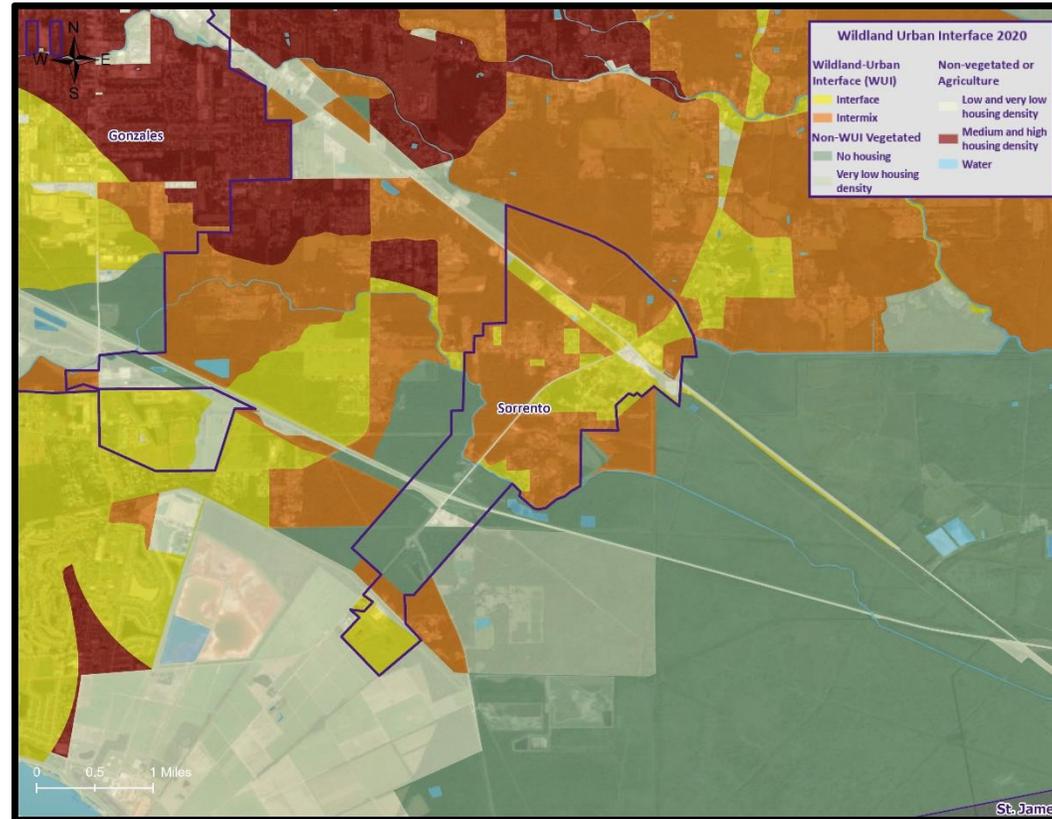


Donaldsonville



Gonzales

Ascension Parish Flood Maps



Sorrento



Winter Weather

- Occurs when humid air from the Gulf of Mexico meets a cold air mass from the north.
- As the temperature falls, precipitation may fall in the form of snow or sleet.
- If the ground temperature is cold enough but air temperature is above freezing, rain can freeze instantly on contact with the surface, causing massive ice storms.



Ascension Parish Mitigation Goals

Goals & Objectives

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





Parish Hazard Mitigation Project Update

Ascension Parish OHSEP/
Ascension Parish Government Discussion

Public Outreach Activity #1

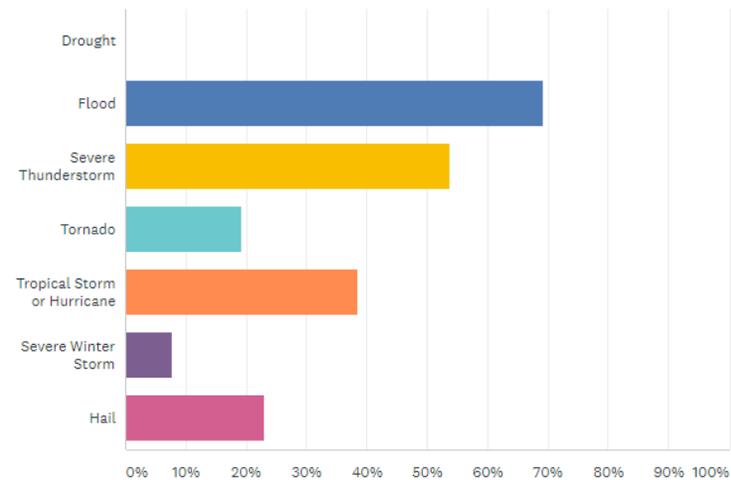
Hazard Mitigation Public Opinion Survey

https://lsu.qualtrics.com/jfe/form/SV_0xfGyPobXEId7BI



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



Public Outreach Activity #2

Please fill out an incident questionnaire!



ASCENSION PARISH PUBLIC MEETING

**PUBLIC ACTIVITY:
INCIDENT/ ISSUE
QUESTIONNAIRE**

1. HAZARD TYPE(S):

A. DROUGHT
B. EXCESSIVE HEAT
C. FLOODING
D. LEVEE FAILURE
E. SINKHOLES
F. SUBSIDENCE
G. THUNDERSTORMS
H. TORNADOES
I. TROPICAL CYCLONES
J. WILDFIRES
K. WINTER WEATHER

2. DESCRIBE INCIDENT OR ISSUE:

3. LOCATION:

A. CITY:
B. ADDRESS OR AREA:

4. INTENSITY:

A. DEPTH (FLOODING) OR SIZE (HAIL ETC.):
B. WIND STRENGTH

5. RECURRING OR ONE TIME:

A. IF RECURRING, HOW OFTEN:

**6. WHAT TYPE OF INTERRUPTIONS
DOES/DID THE INCIDENT OR ISSUE
CAUSE? (BUSINESS CLOSURE, DAMAGE,
EVACUATION, ETC.)**

**7. HOW LONG WAS THE INTERRUPTION
(HOURS, DAYS, WEEKS ETC.)**

**8. HOW COULD THIS HAZARD OR
IMPACT BE PREVENTED, FIXED
OR ALLEVIATED?**



SDMI Hazard Mitigation Website

- Repository for materials used during update process
- <https://hmplans.sdmi.lsu.edu/Home/Parish/ascension>



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HAZARD MITIGATION

Intro Events FEMA Resources Parish Plans Settings

Ascension Parish

PLAN DUE DATE: **SEPTEMBER 9 2025**

DEVELOPMENT STATUS

PLAN DEVELOPMENT PLAN REVIEW PLAN ADOPTION COMPLETED

KICKOFF MEETING JUN 2024 TBD TBD TBD

PARTICIPATING JURISDICTIONS

- City of Donaldsonville
- City of Gonzales
- Town of Sorrento
- Ascension Parish, Unincorporated Areas

AUG 20 2025 ASCENSION PARISH INITIAL PLANNING COMMITTEE MEETING
615 E Worthey St
01:30 PM - 03:00 PM 8/20/2024 Download

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