2026 Livingston Parish Hazard Mitigation Plan Update

Risk Assessment Review

December 16th, 2025

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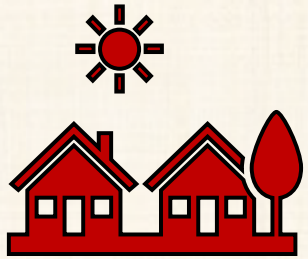
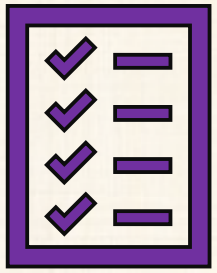
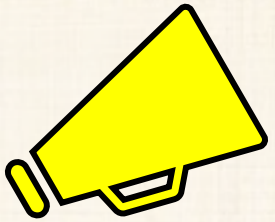
Agenda



Community Profile



Hazard Identification & Risk Assessment Review



Public Outreach Activities

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Livingston's Community Profile

↑ 8.5%

Population

152,886*

Census Estimate, July 2024

Housing Units

62,209*

Census Estimate, July 2024

↑ 6.8%

↑ 18.1%

Population per sq/mi

236.1*

Census Estimate, July 2024

Persons Per Household

2.45*

Census Estimate, July 2024

↑ 1.7%

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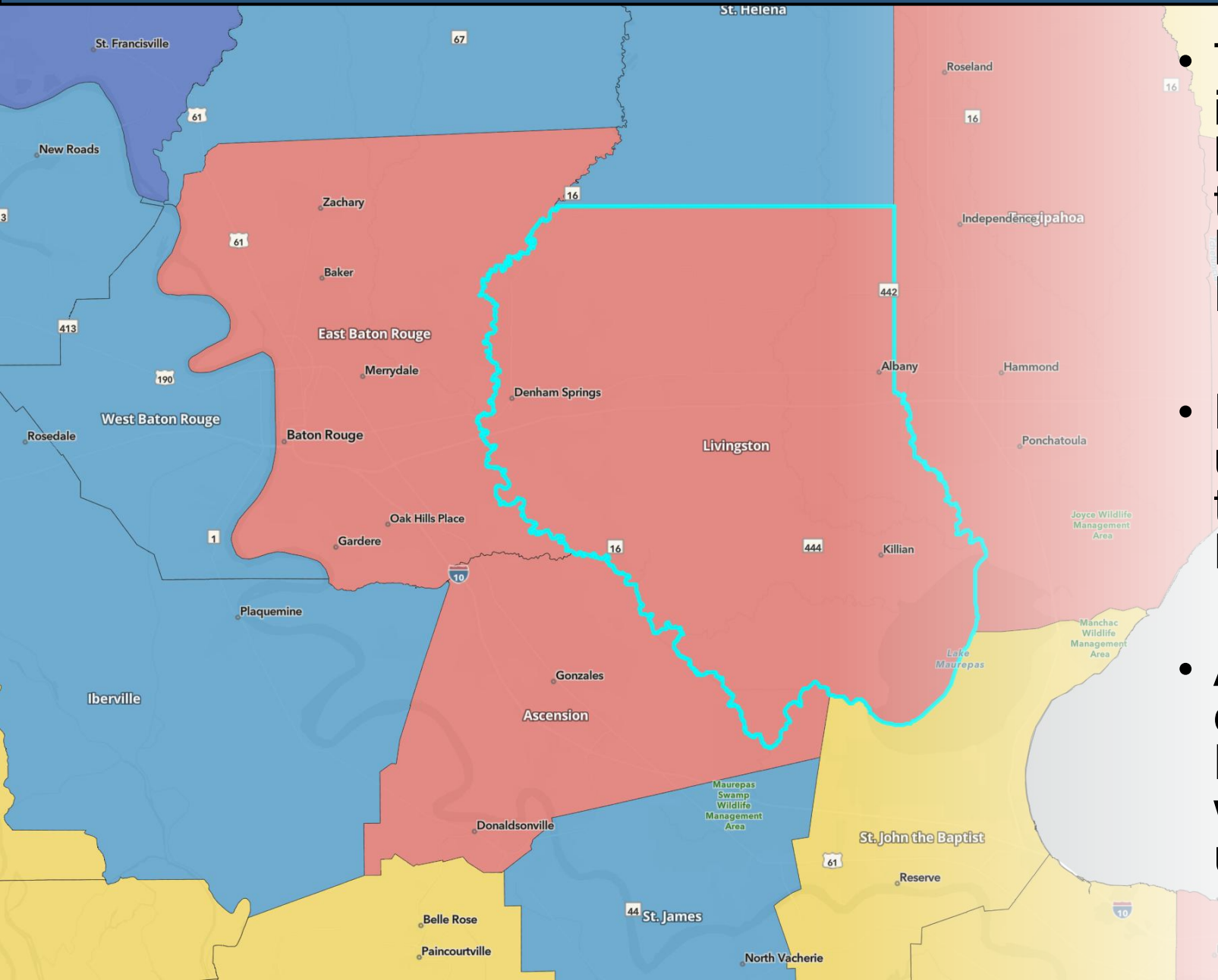
Hazard Identification And Risk Assessment

- 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

National Risk Index

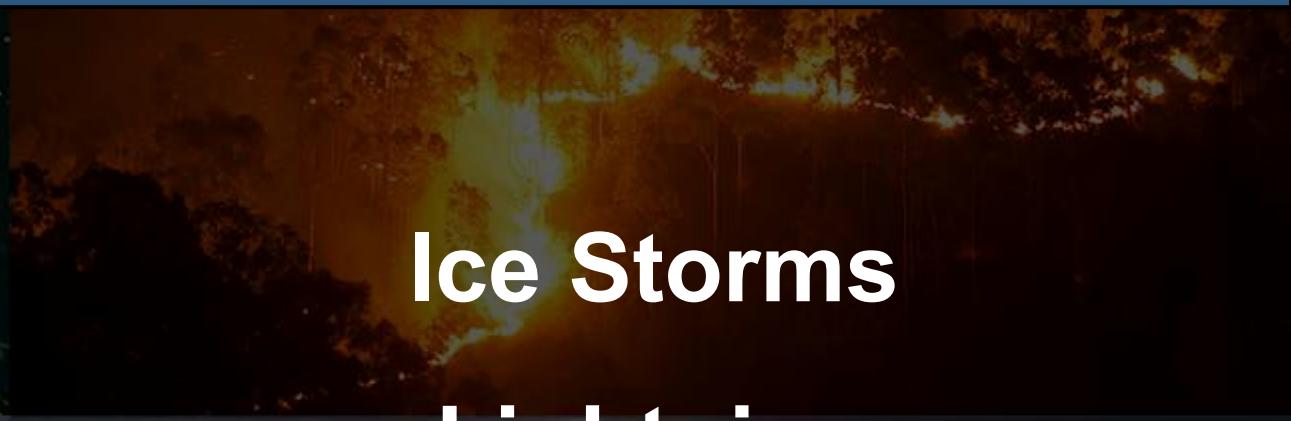


- The National Risk Index (NRI) is an online tool that is used to help convey the communities in the US most at risk for the 18 Natural Hazards classified by FEMA.
- For the 2026 update, NRI was used to identify the hazards that are prevalent in Livingston Parish.
- Any hazard that was given the designation of “Relatively Moderate” or “Relatively High” was profiled for this plan update.

Hazard Identification And Risk Assessment

Coastal Flooding

Drought



Ice Storms

Lightning

Flooding

Heat Wave

Hurricanes

Tornadoes

Winter Weather

Risk Matrix for Livingston Parish

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	Overall Risk
Coastal Flooding	2	2	2	4	2	2.3
Drought	3	2	2	4	2	2.55
Heat Wave	1	3	4	4	2	2.7
Flooding	3	4	3	4	3	3.4
Hurricanes	3	4	4	1	4	3.3
Ice Storm	2	2	3	3	1	2.2
Lightning	3	2	2	3	1	2.25
Tornadoes	3	3	2	4	3	2.95
Winter Weather	3	4	4	1	2	3

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

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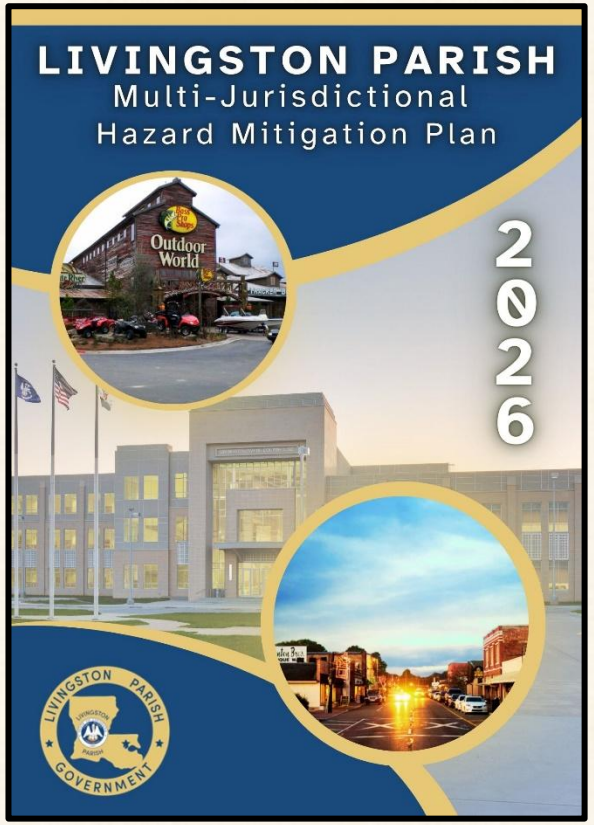
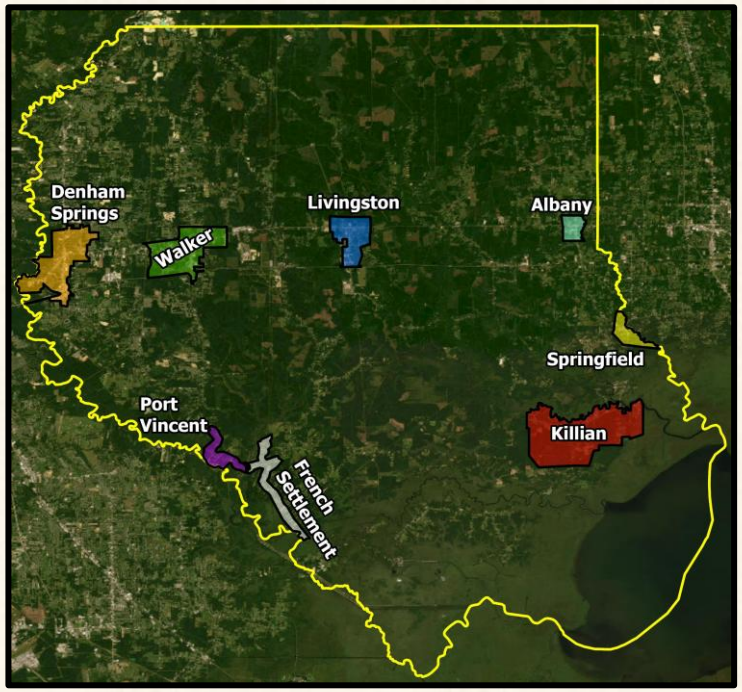
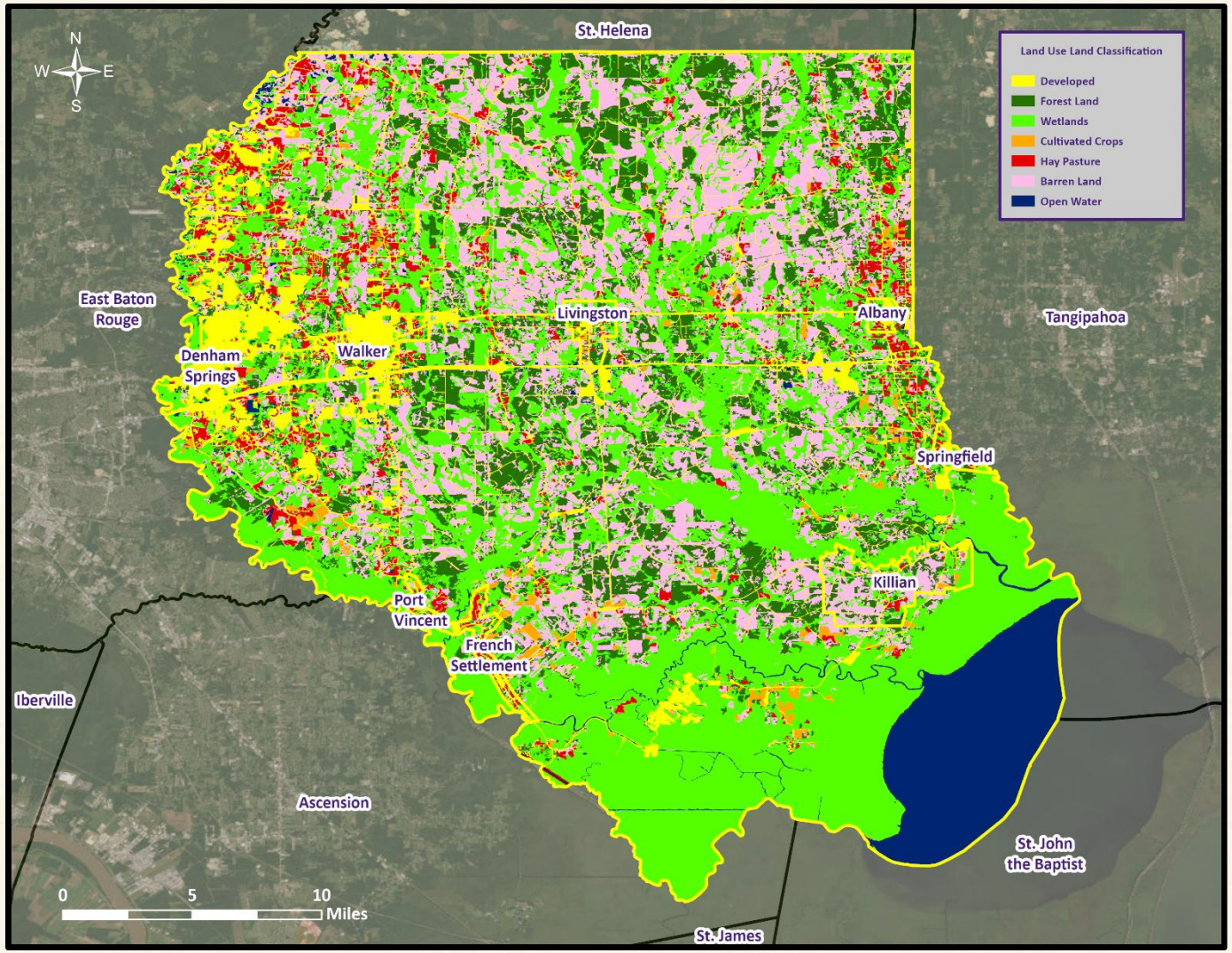




Risk Assessment Maps

Livingston Parish Land Use



Land Use	Acres	Percentage
Agricultural Land, Cropland, and Pasture	127,256	28%
Wetlands	171,878	38%
Forest Land (Not including forested wetlands)	72,470	16%
Urban/Development	41,997	9%
Water	36,220	8%

Source: USGS Land Use Map

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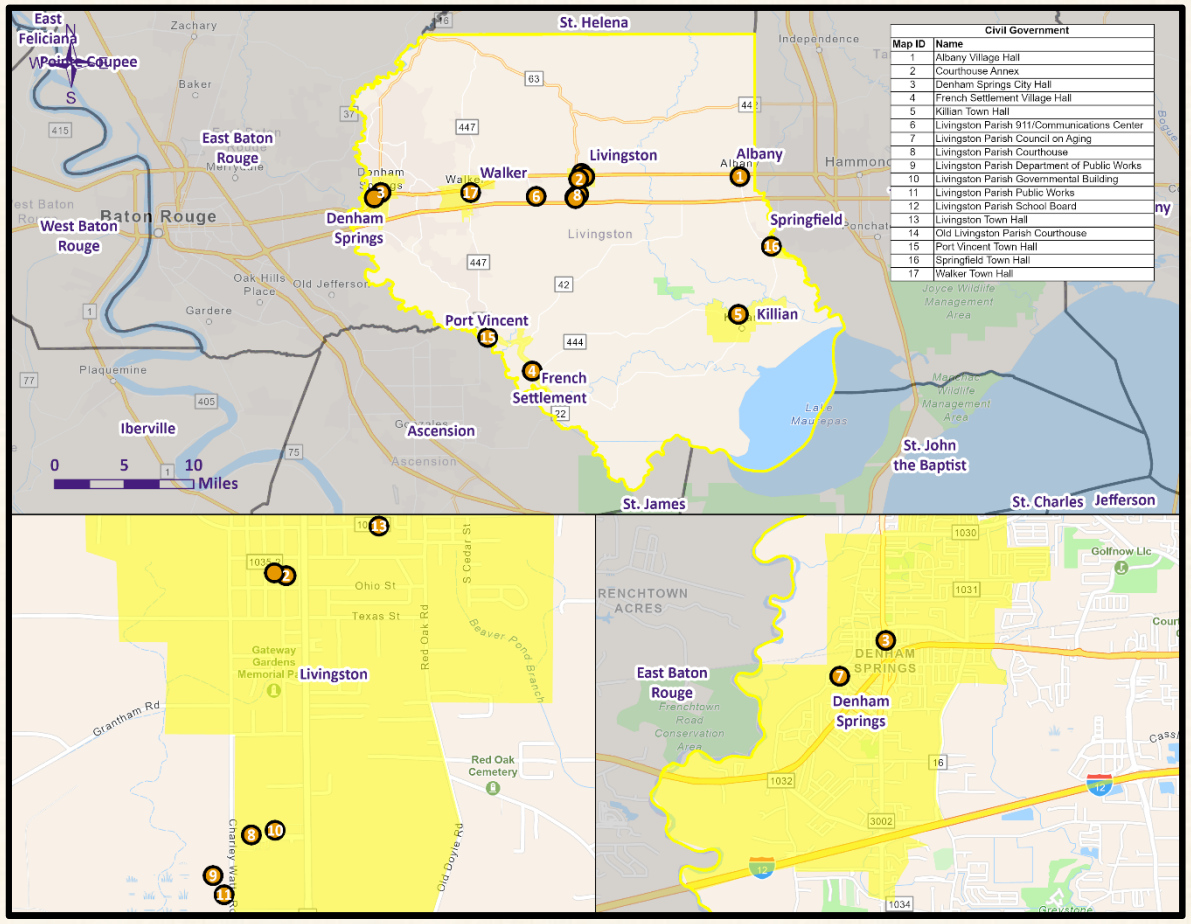
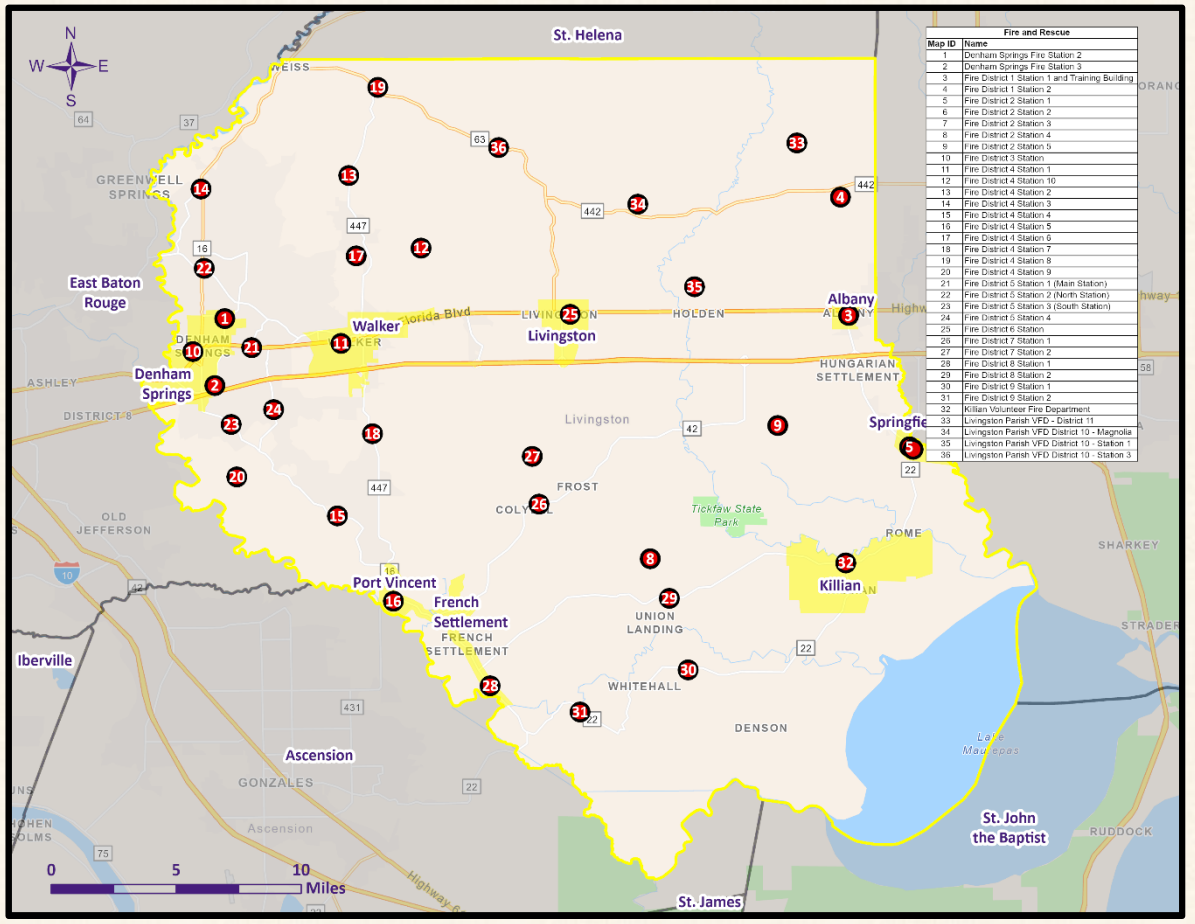
Livingston Parish Critical Facilities



Civil Government	
Map ID	Name
1	Albany Village Hall
2	Courthouse Annex
3	Denham Springs City Hall
4	French Settlement Village Hall
5	Killian Town Hall
6	Livingston Parish 911/Communications Center
7	Livingston Parish Council on Aging
8	Livingston Parish Courthouse
9	Livingston Parish Department of Public Works
10	Livingston Parish Governmental Building
11	Livingston Parish Public Works
12	Livingston Parish School Board
13	Livingston Town Hall
14	Old Livingston Parish Courthouse
15	Port Vincent Town Hall
16	Springfield Town Hall
17	Walker Town Hall

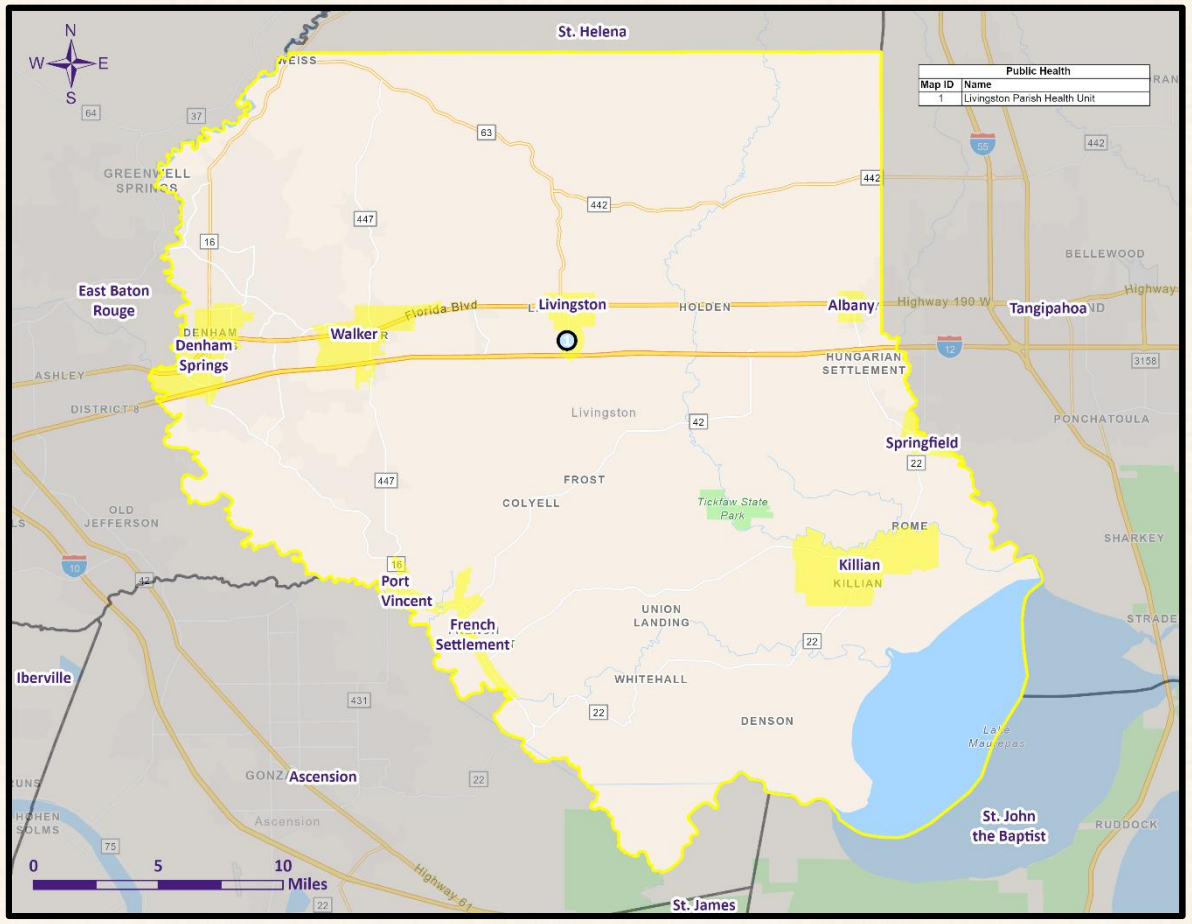


Fire and Rescue	
Map ID	Name
1	Denham Springs Fire Station 2
2	Denham Springs Fire Station 3
3	Fire District 1 Station 1 and Training Building
4	Fire District 1 Station 2
5	Fire District 2 Station 1
6	Fire District 2 Station 2
7	Fire District 2 Station 3
8	Fire District 2 Station 4
9	Fire District 2 Station 5
10	Fire District 3 Station
11	Fire District 4 Station 1
12	Fire District 4 Station 10
13	Fire District 4 Station 2
14	Fire District 4 Station 3
15	Fire District 4 Station 4
16	Fire District 4 Station 5
17	Fire District 4 Station 6
18	Fire District 4 Station 7
19	Fire District 4 Station 8
20	Fire District 4 Station 9
21	Fire District 5 Station 1 (Main Station)
22	Fire District 5 Station 2 (North Station)
23	Fire District 5 Station 3 (South Station)
24	Fire District 5 Station 4
25	Fire District 6 Station
26	Fire District 7 Station 1
27	Fire District 7 Station 2
28	Fire District 8 Station 1
29	Fire District 8 Station 2
30	Fire District 9 Station 1
31	Fire District 9 Station 2
32	Killian Volunteer Fire Department
33	Livingston Parish VFD - District 11
34	Livingston Parish VFD District 10 - Magnolia
35	Livingston Parish VFD District 10 - Station 1
36	Livingston Parish VFD District 10 - Station 3

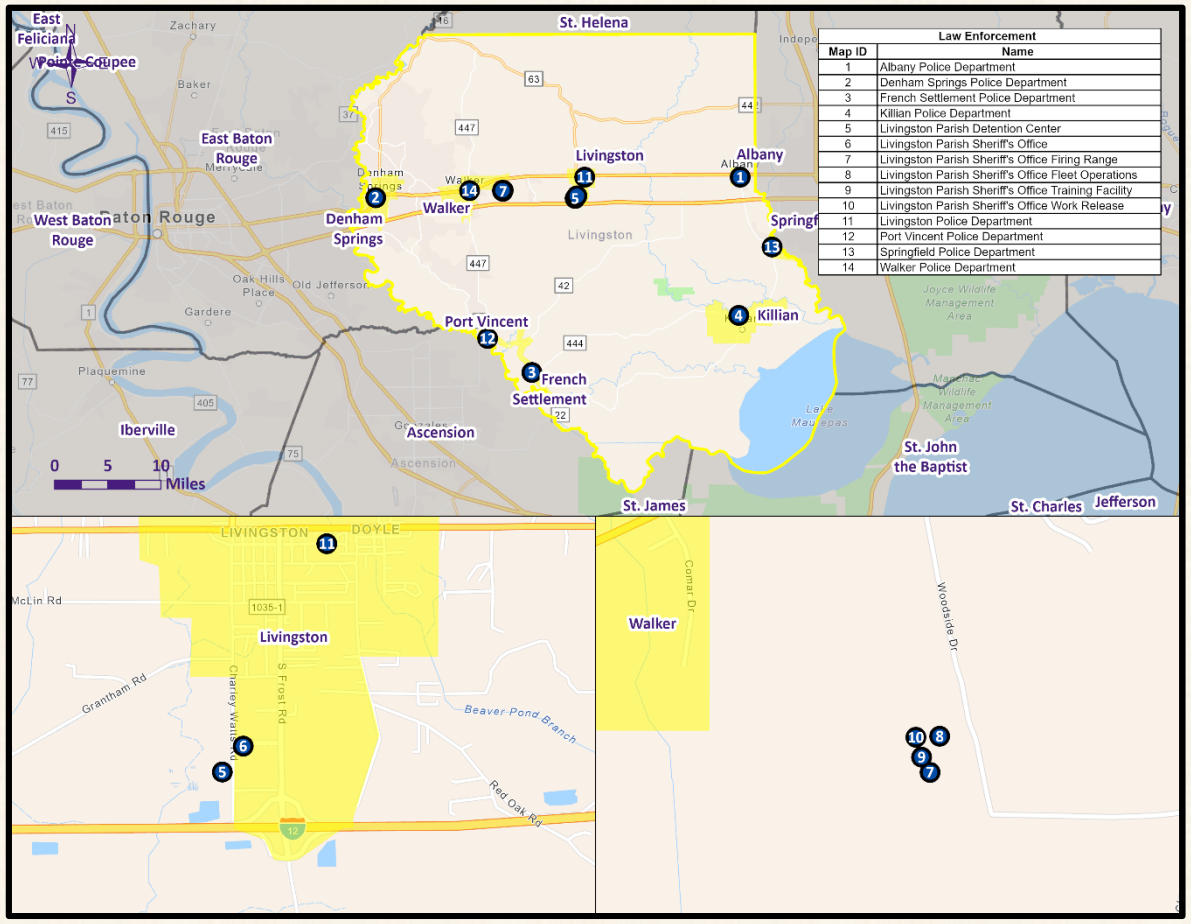
Civil Government

Fire & SAR

Livingston Parish Critical Facilities

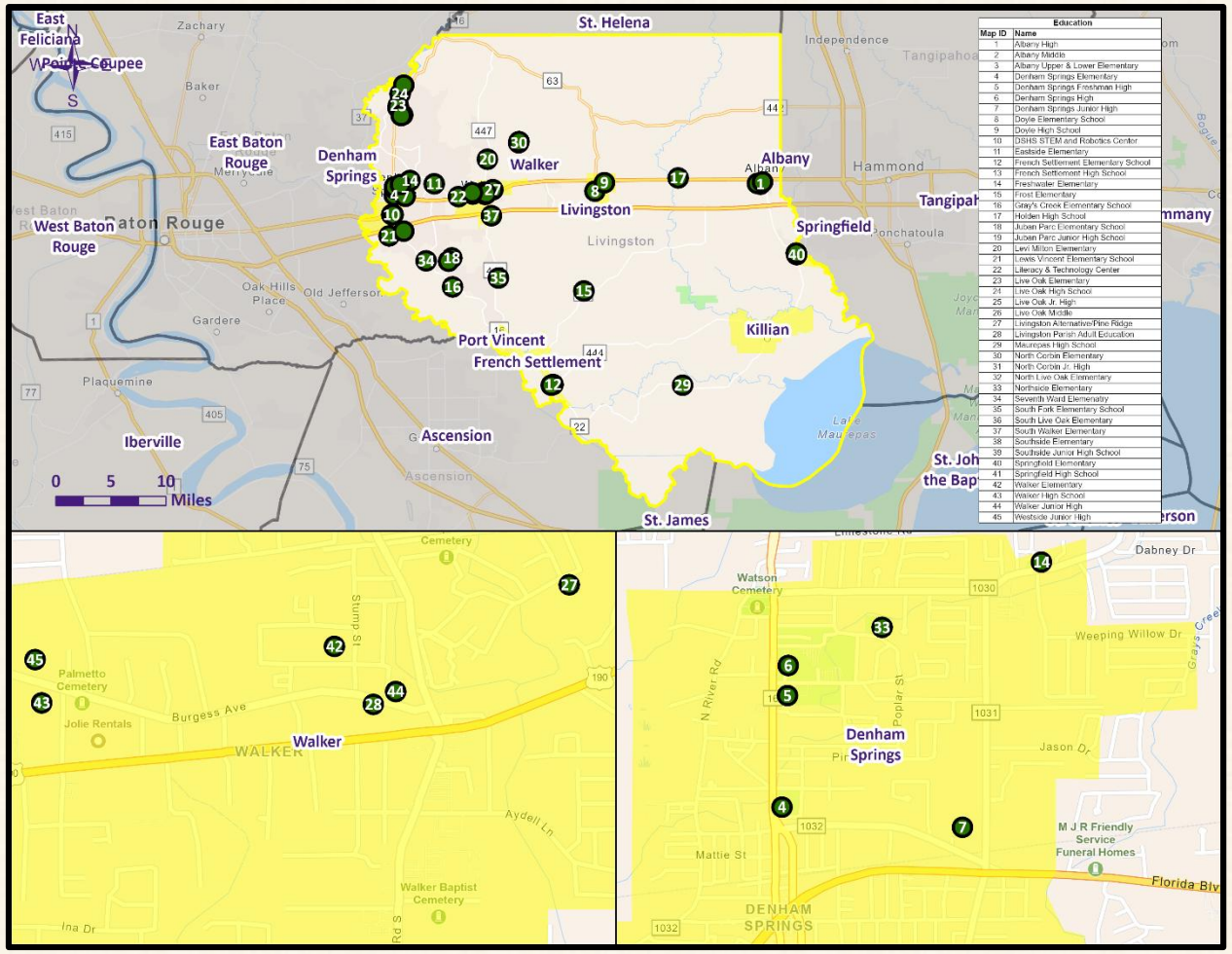


Public Health



Law Enforcement

Livingston Parish Critical Facilities

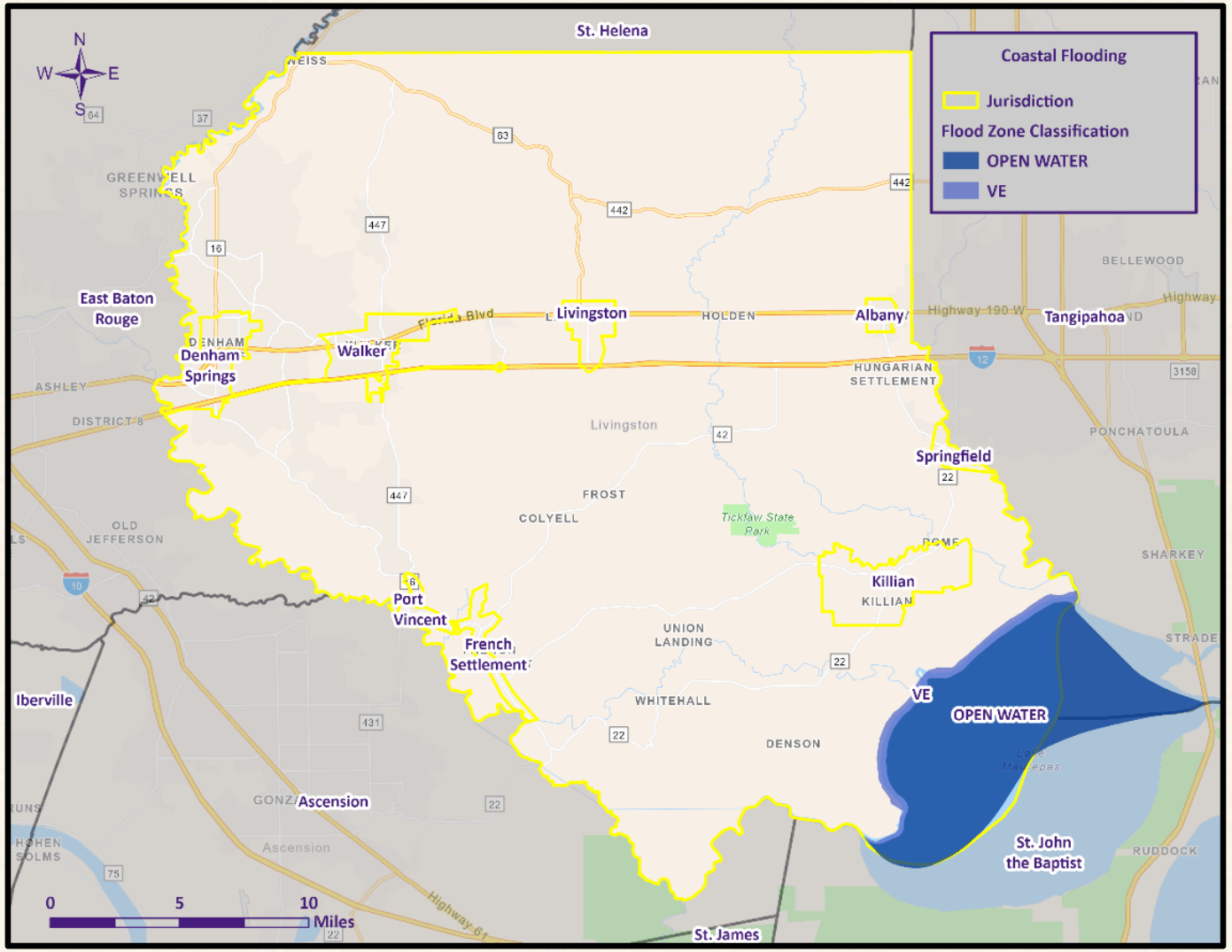


Public Education

Coastal Flooding

- Inundation of coastal areas surrounded by bodies of water.
- Some of the most severe Coastal Flooding instances have been tied to other extraneous hazards events (tropical cyclones/hurricanes)
- Closely related to the combined effects of subsidence and sea level rise, also know as, relative sea level rise
- Usually driven by one, or more, of these factors: storm surge, high tides, heavy precipitation, sea level rise, or subsidence.

Coastal Flood Map



Source: FEMA Maps Service Center

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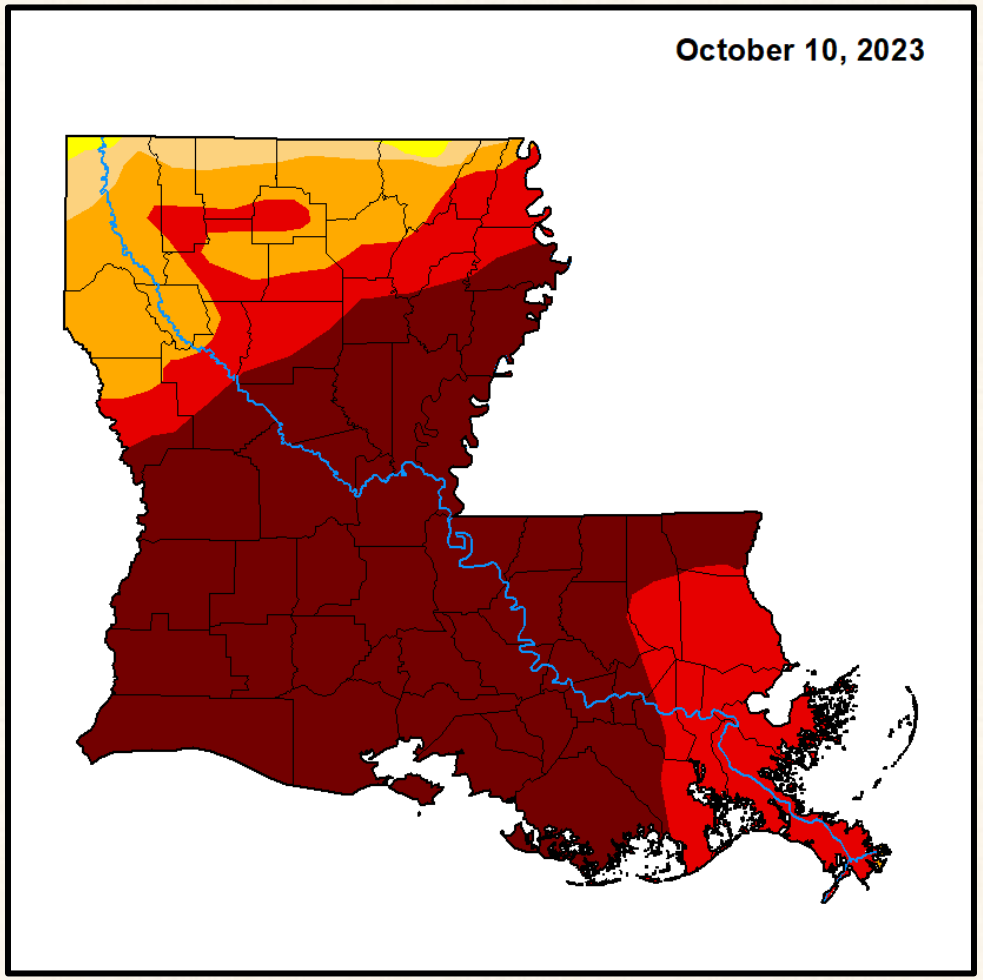
Drought

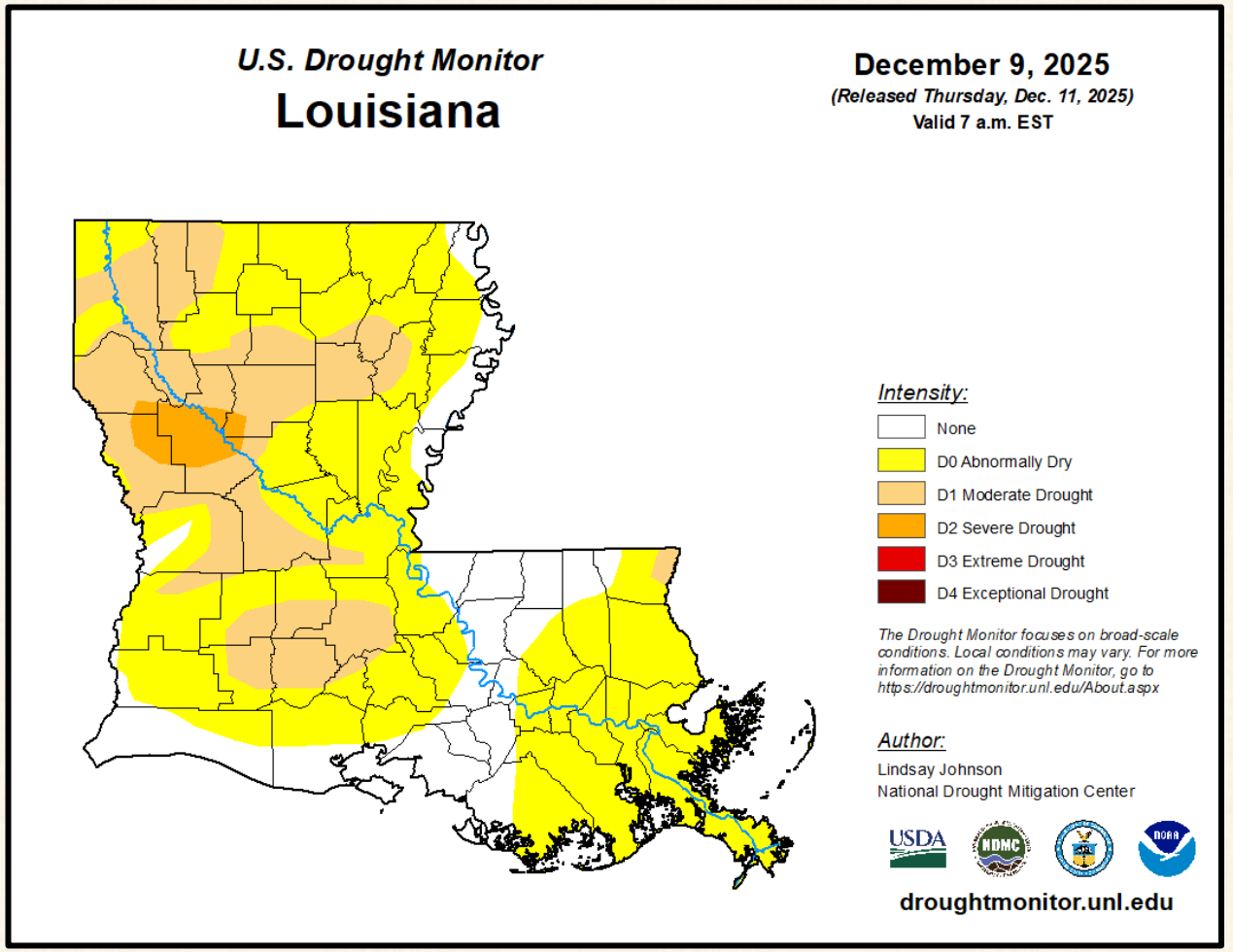
- A drought is a deficiency in water availability over an extended period of time, caused by precipitation totals and soil water storages that do not satisfy the environmental demand for water either by evaporation or transpiration through plant leaves.

- There are four classes of drought:
  - ✓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



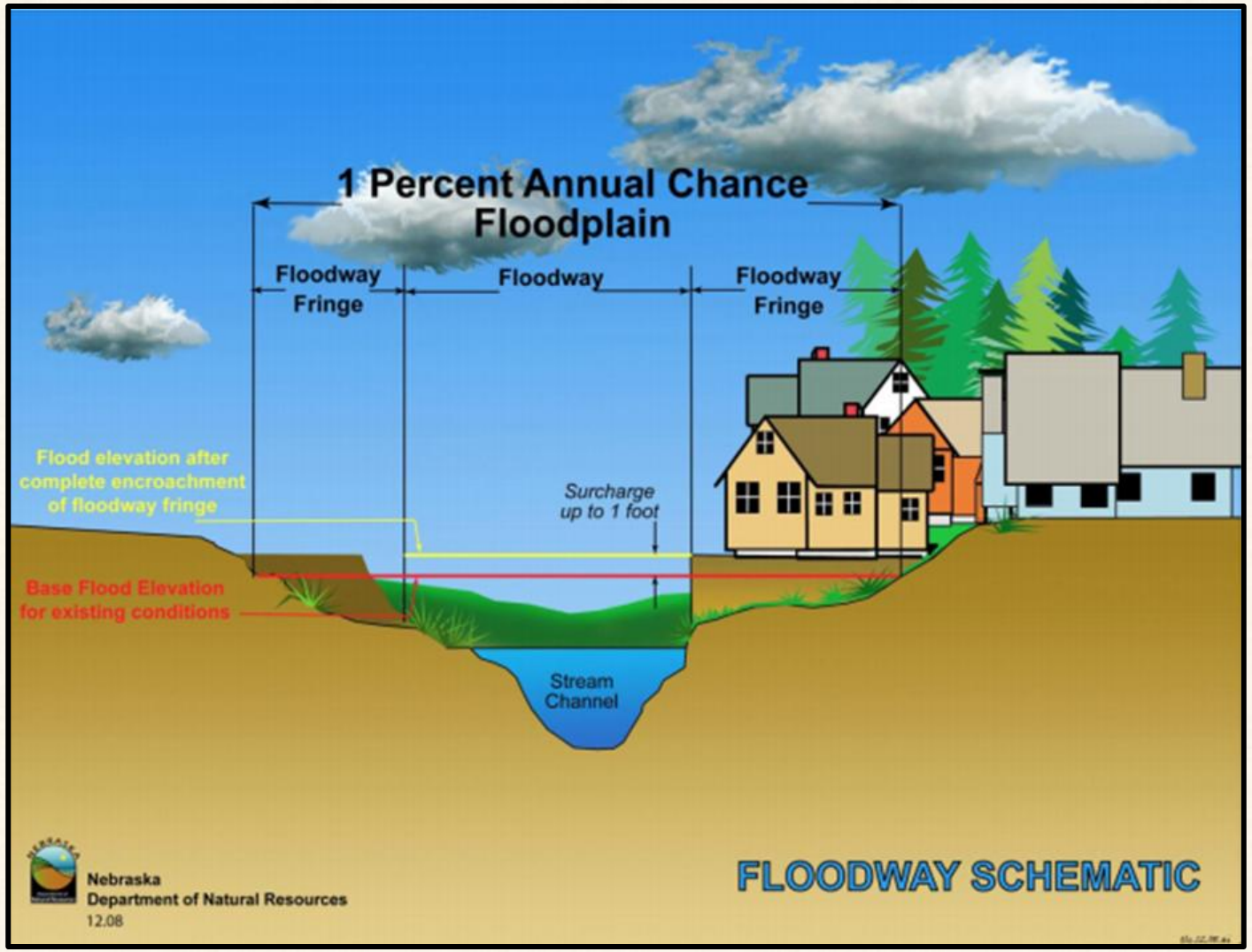


Flooding

- A flood is the overflow of water onto land that is usually not inundated.

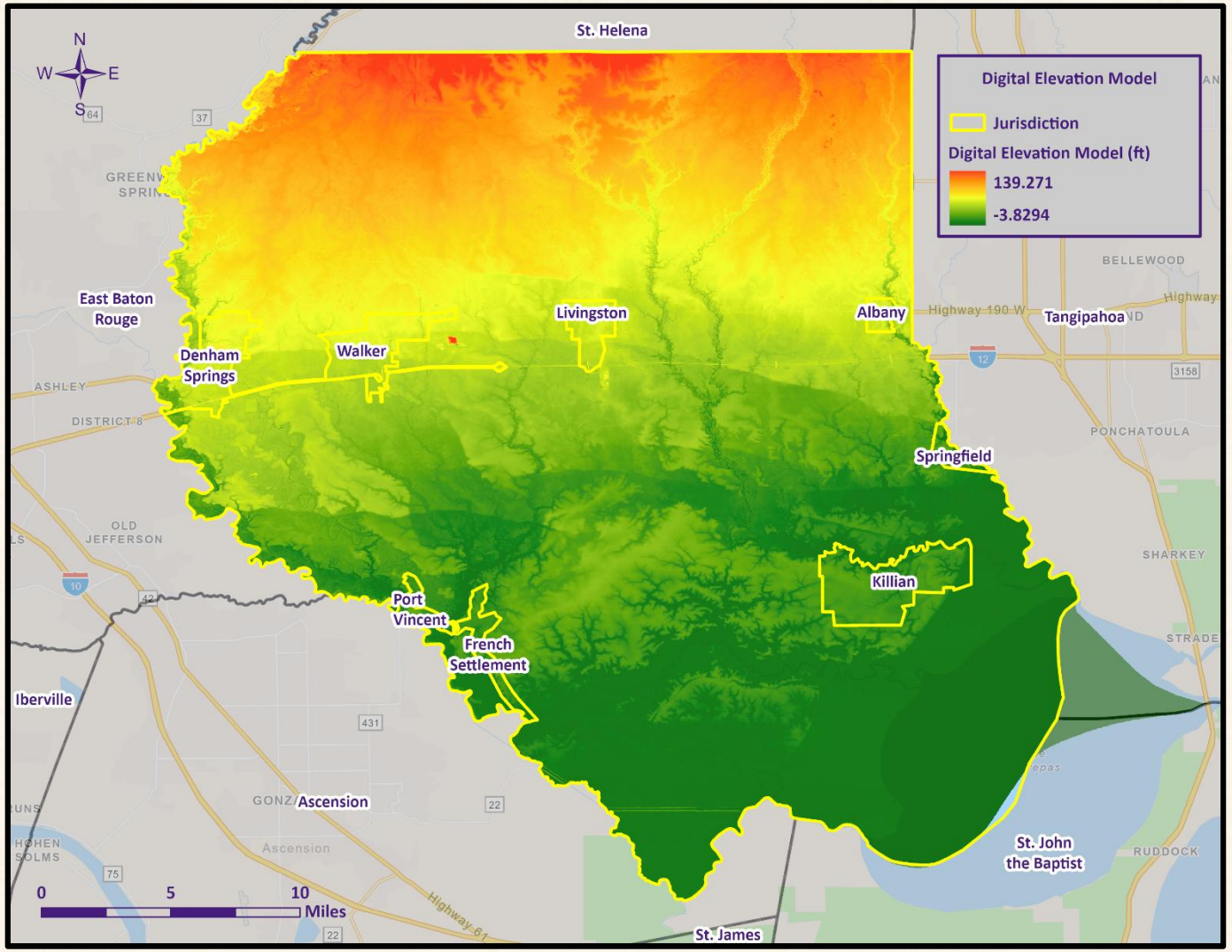
- The National Flood Insurance Program defines a flood as “a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties from overflow of inland or tidal waves, unusual and rapid accumulation or runoff of surface waters 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.”

Floodway Diagram



Source: Nebraska Department of Natural Resources

Digital Elevation Model



Source: USGS

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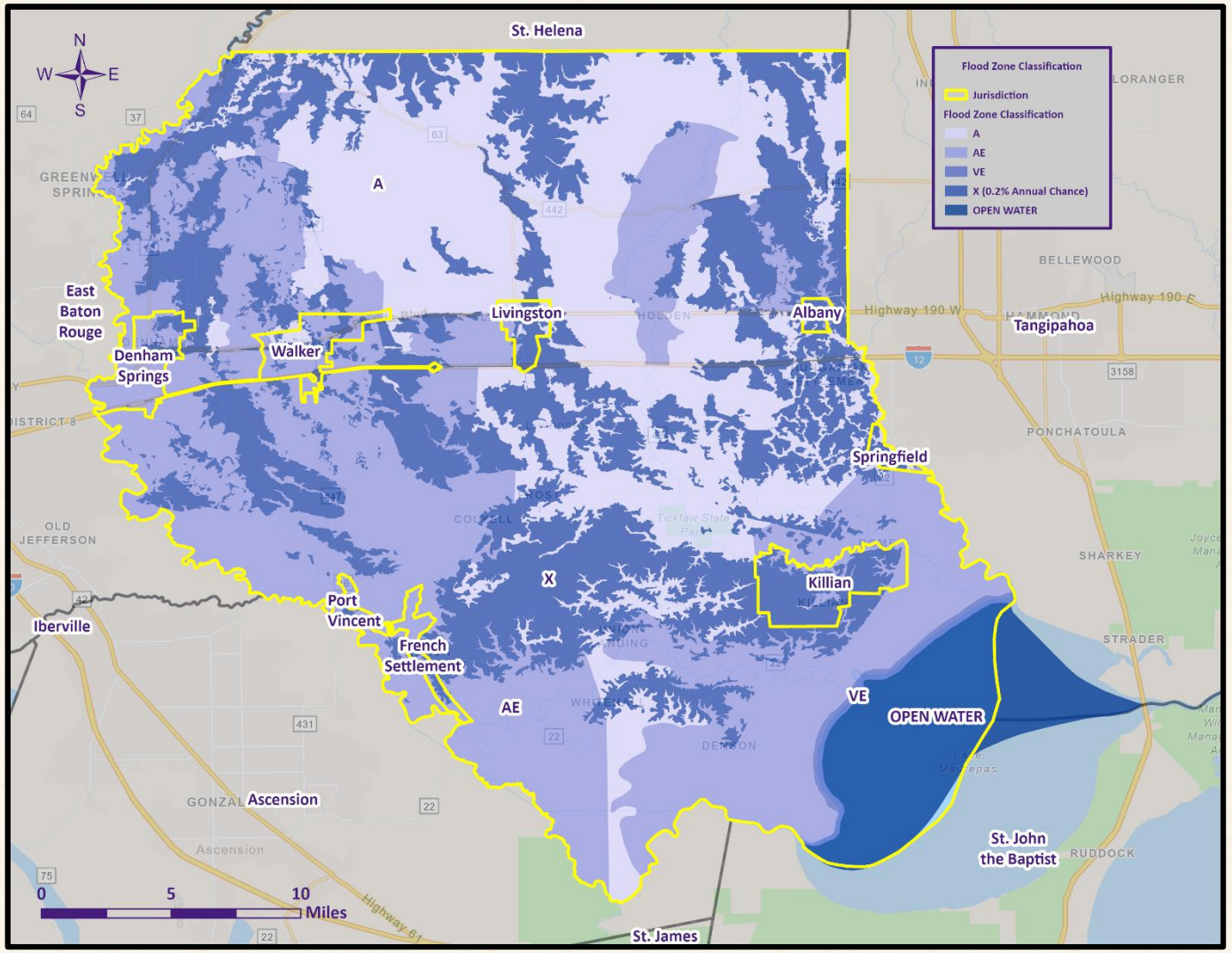
Livingston Parish Flood Map



Source: FEMA Maps Service Center

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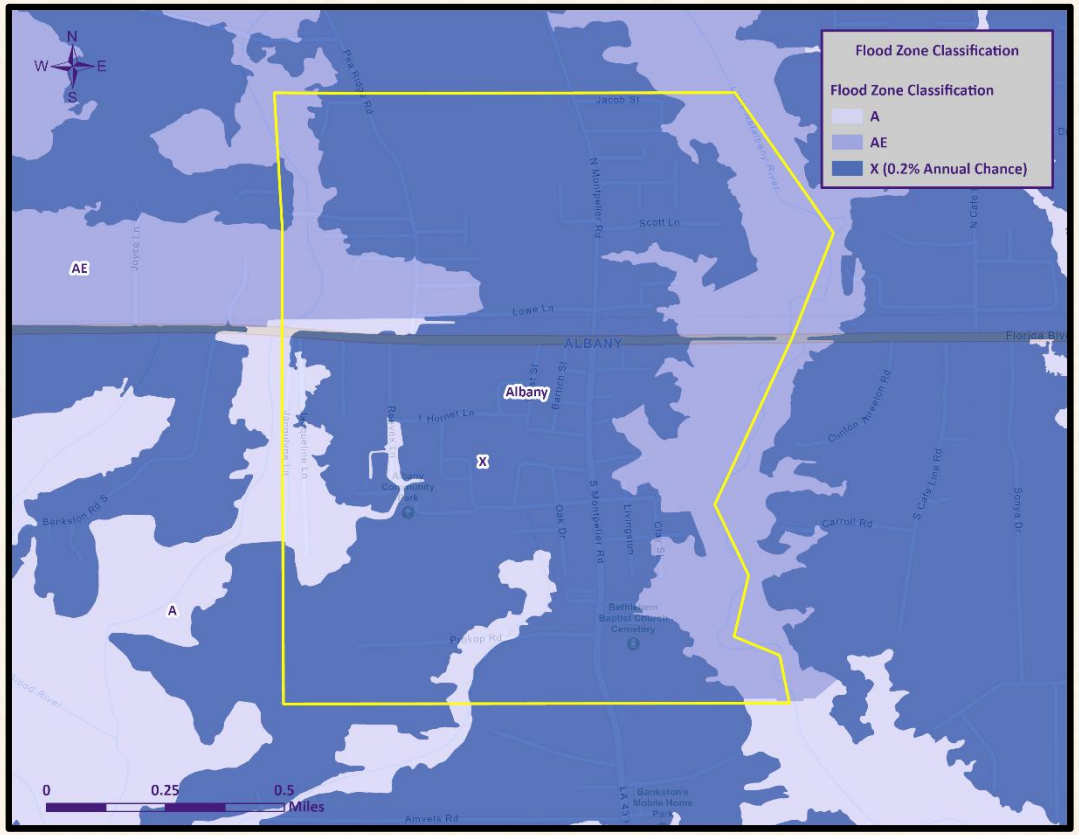
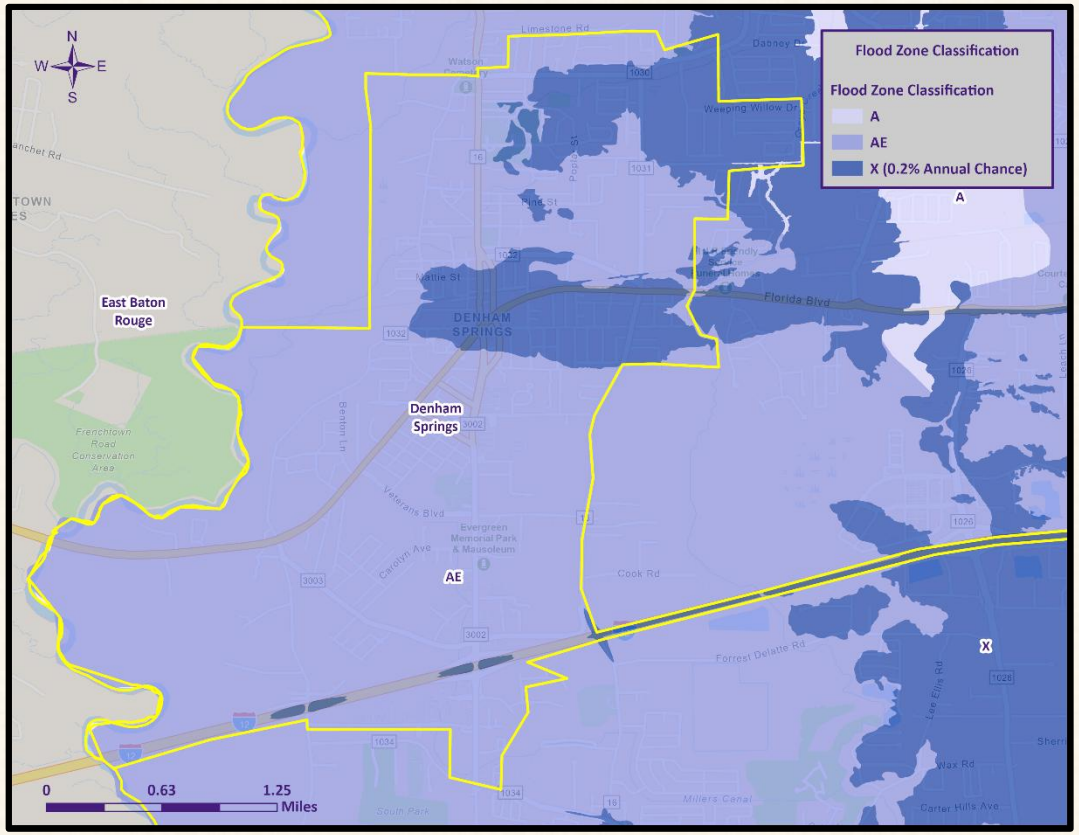
Livingston Parish Flood Maps

Source: FEMA Maps Service Center



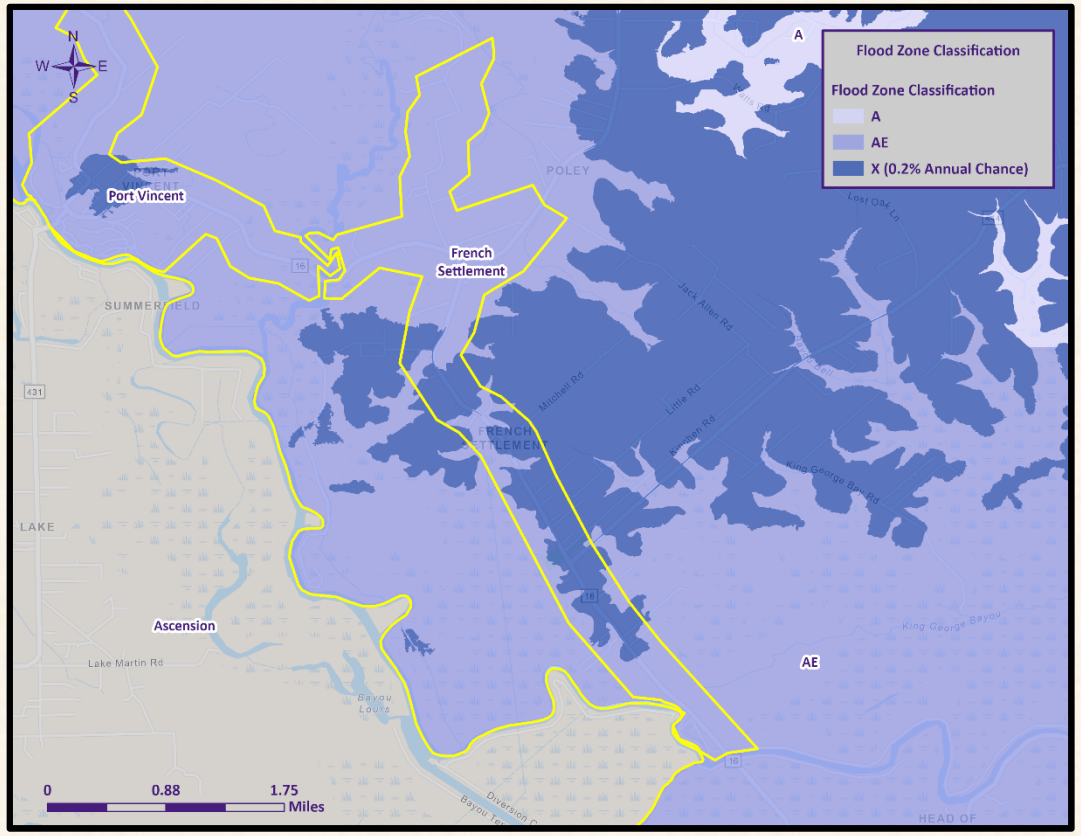
Albany



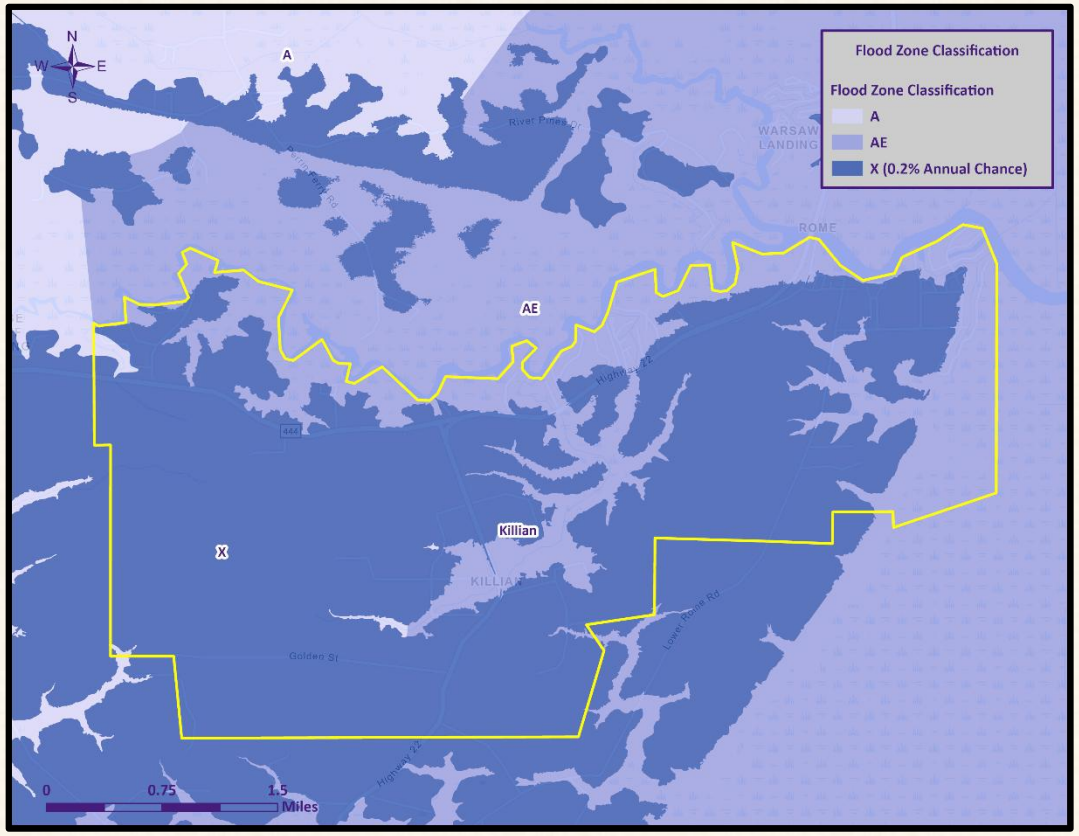
Denham Springs

Livingston Parish Flood Maps

Source: FEMA Maps Service Center



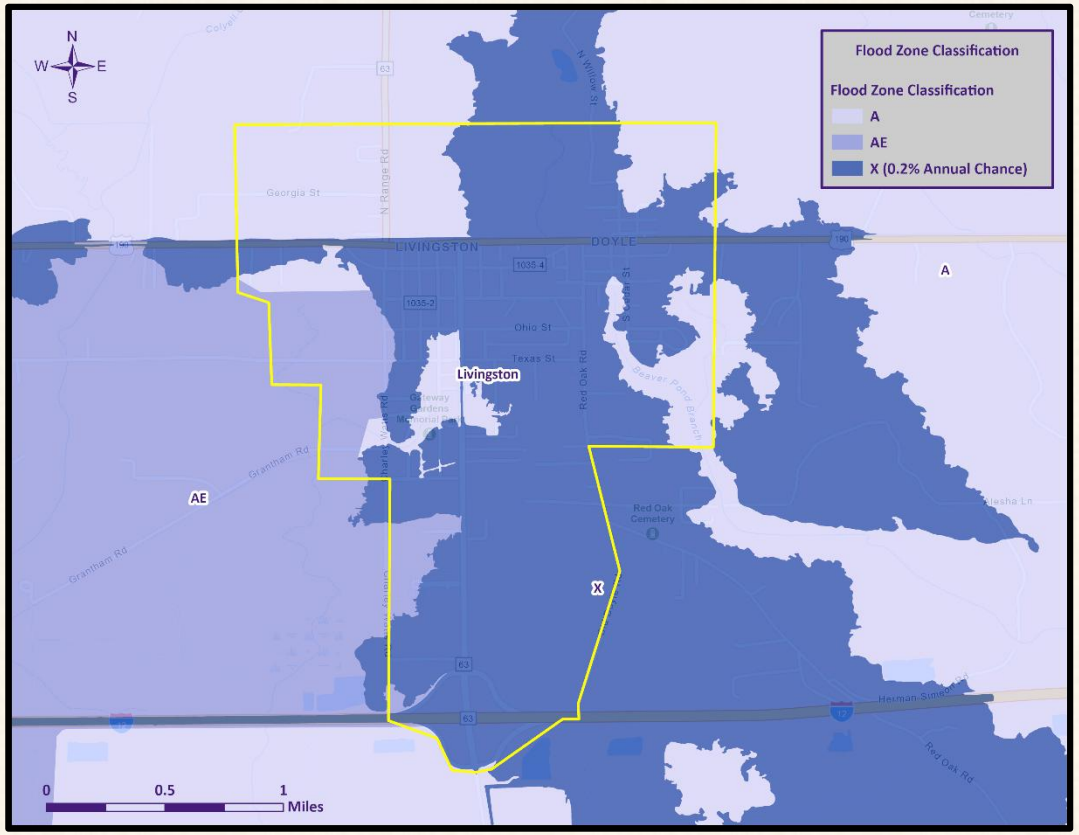
French Settlement



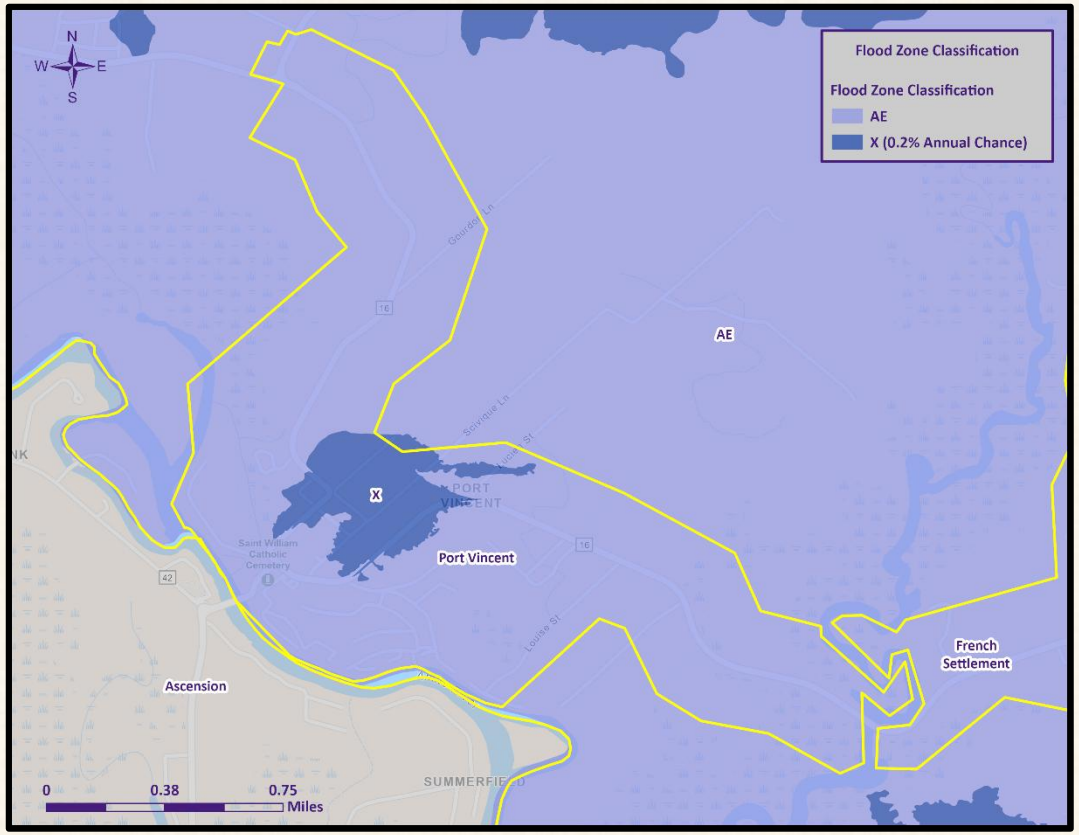
Killian

Livingston Parish Flood Maps

Source: FEMA Maps Service Center



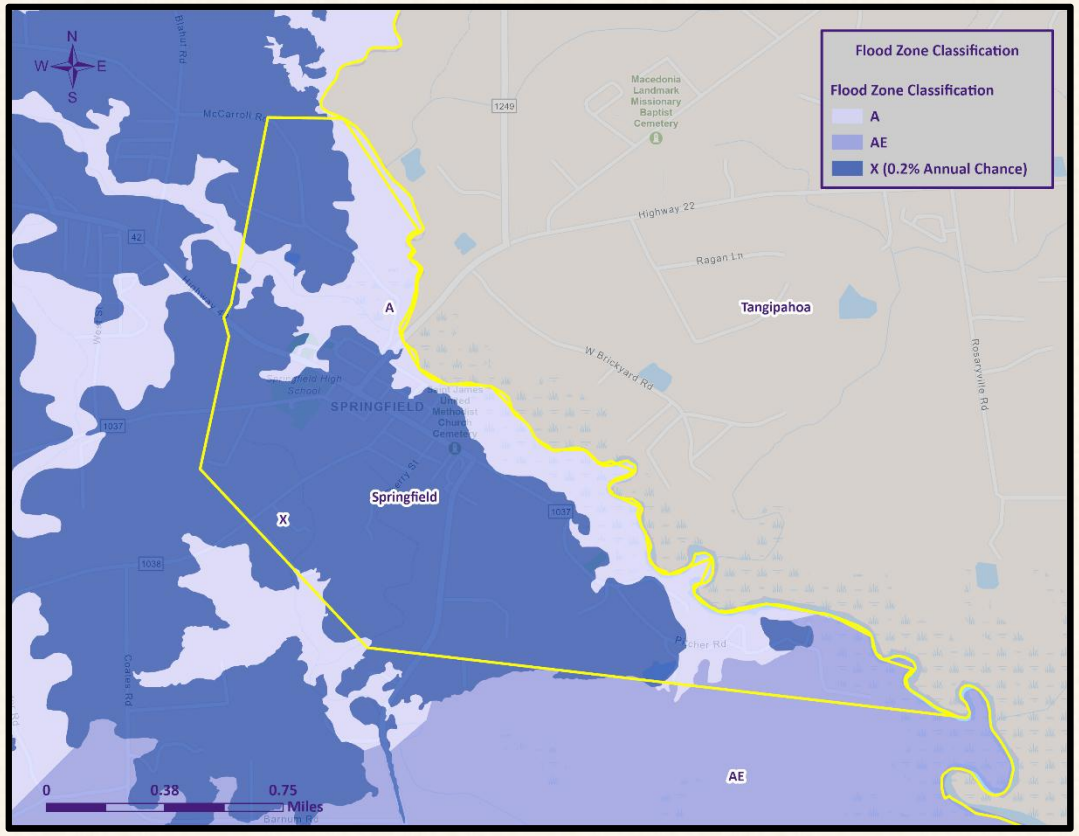
Livingston



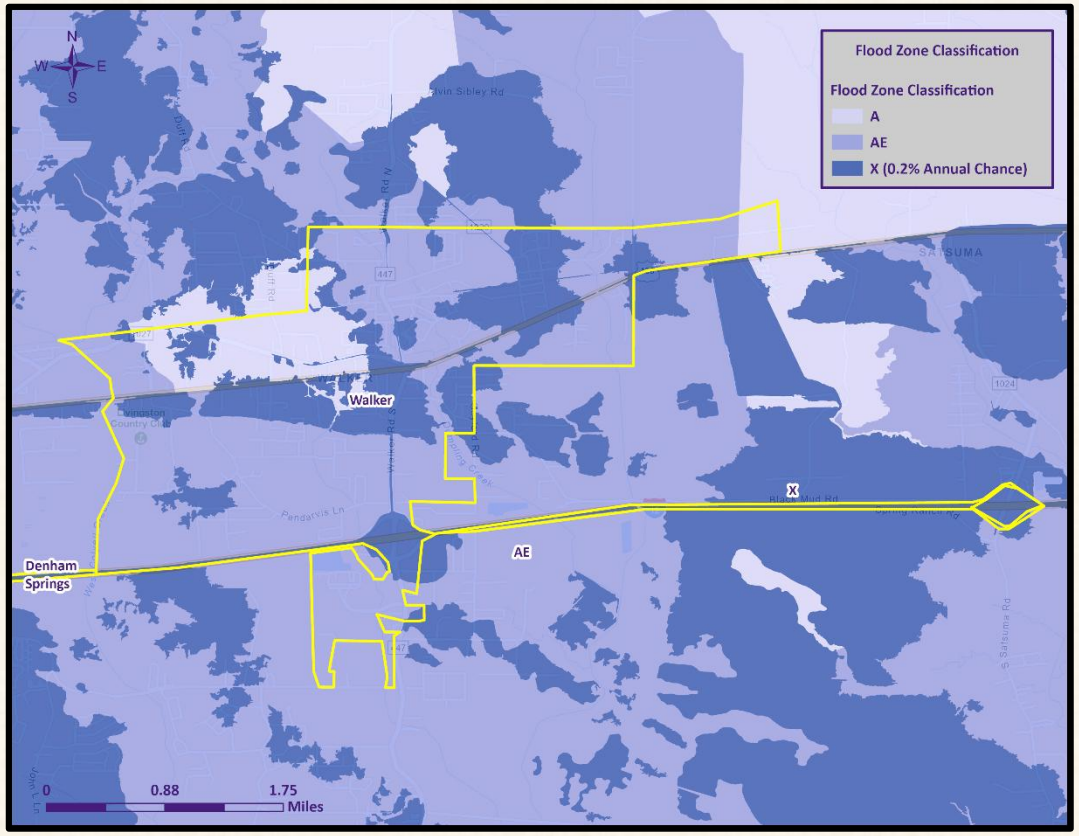
Port Vincent

Livingston Parish Flood Maps

Source: FEMA Maps Service Center



Springfield

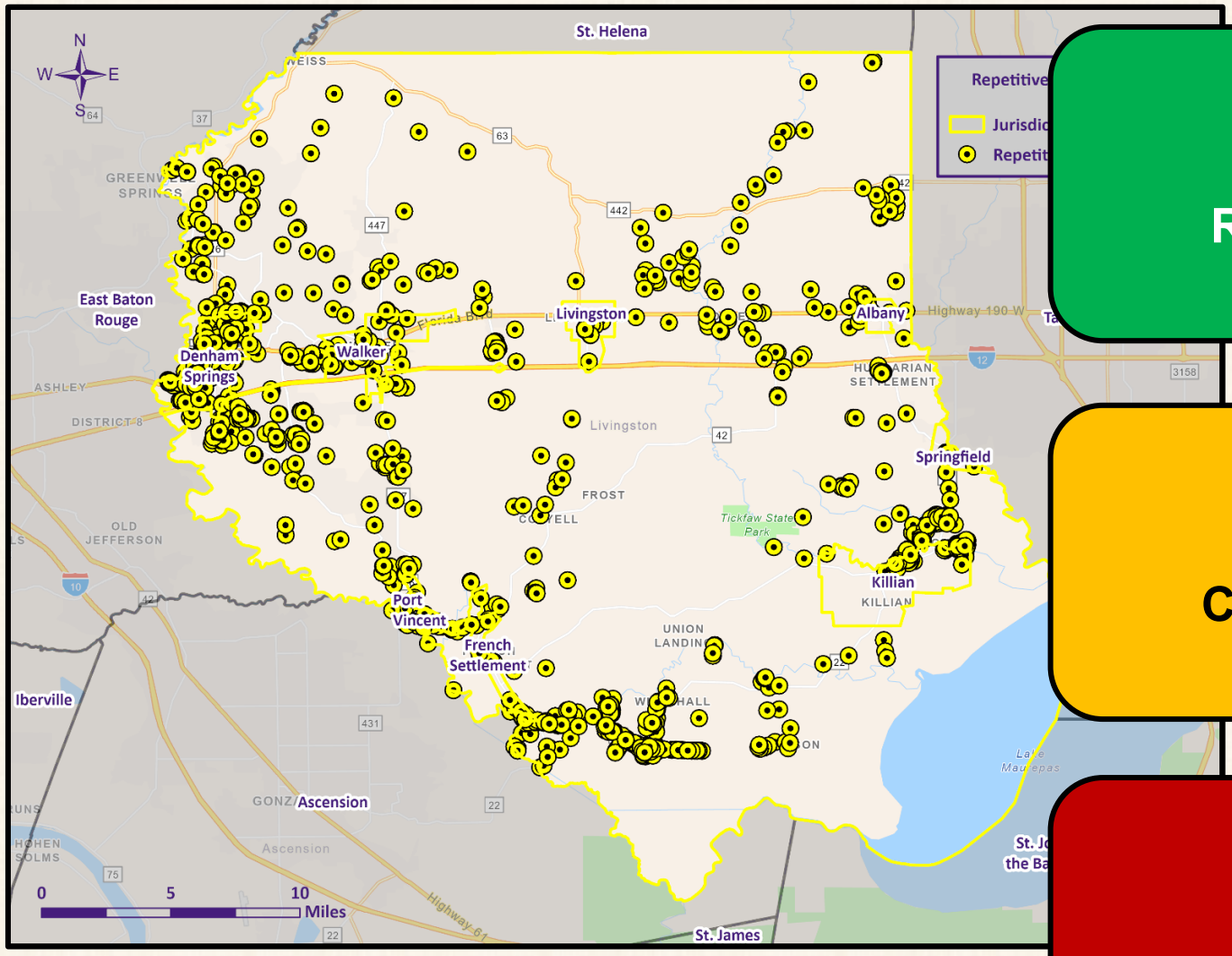


Walker

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.
- There are currently over 250,000 repetitive loss properties in the U.S.
  - ~43,000 in Louisiana alone
- These properties comprise 1.3% of the NFIP policy base, but they account for approximately 25-30% of the country’s flood insurance claim payments.

Repetitive Loss Properties



Residential
1,503

Commercial
48

Government
0

Total Structures: 1,551

Claims Paid: $163,068,394

Flooding Discussion

- For CRS credit under Steps 4 & 5, the following items need to be assessed by Livingston and the participating jurisdictions in the CRS Program.
- Step 4:
  - Less frequent flood hazards
    - Uncertain flow paths, closed basin lakes, subsidence, coastal erosion.
  - Source of water, depth of flooding, velocities and warning times
  - Areas not mapped on the FIRM that have flooded in the past
  - Surface flooding identified in previous studies
  - Areas likely to flood and likely to get worse over time
    - Changes in floodplain development and demographics, development in the watershed, climate change or sea level rise.

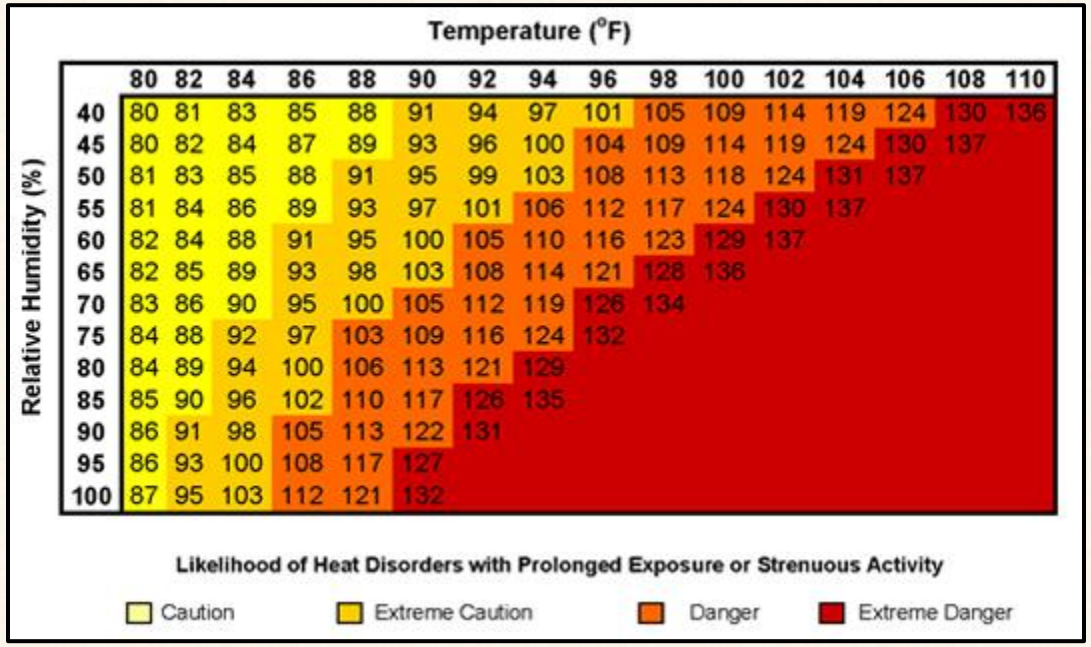
Flooding Discussion

- For CRS credit under Steps 4 & 5, the following items need to be assessed by Livingston and the participating jurisdictions in the CRS Program.
- Step 5:
  - Impact from hazards on the following items:
    - Life, safety, warning, evacuating the public (CRS Activity 610)
    - Community's economy and major employers
    - Inventory of all community owned buildings, those in flood prone areas, and which buildings are insured for flood damage
  - Areas within the floodplain that act as natural functions (i.e., wetlands, riparian areas, sensitive areas, etc.)
  - Development and redevelopment in the community and what impacts that can bring on the watershed, natural resource areas, etc.

Heat Wave

- 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

Heat Wave



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.

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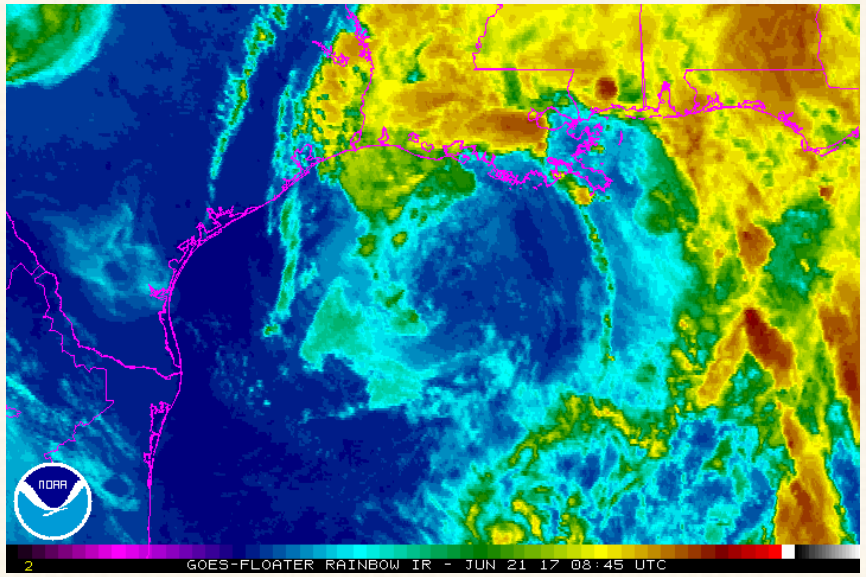
Hurricanes

- 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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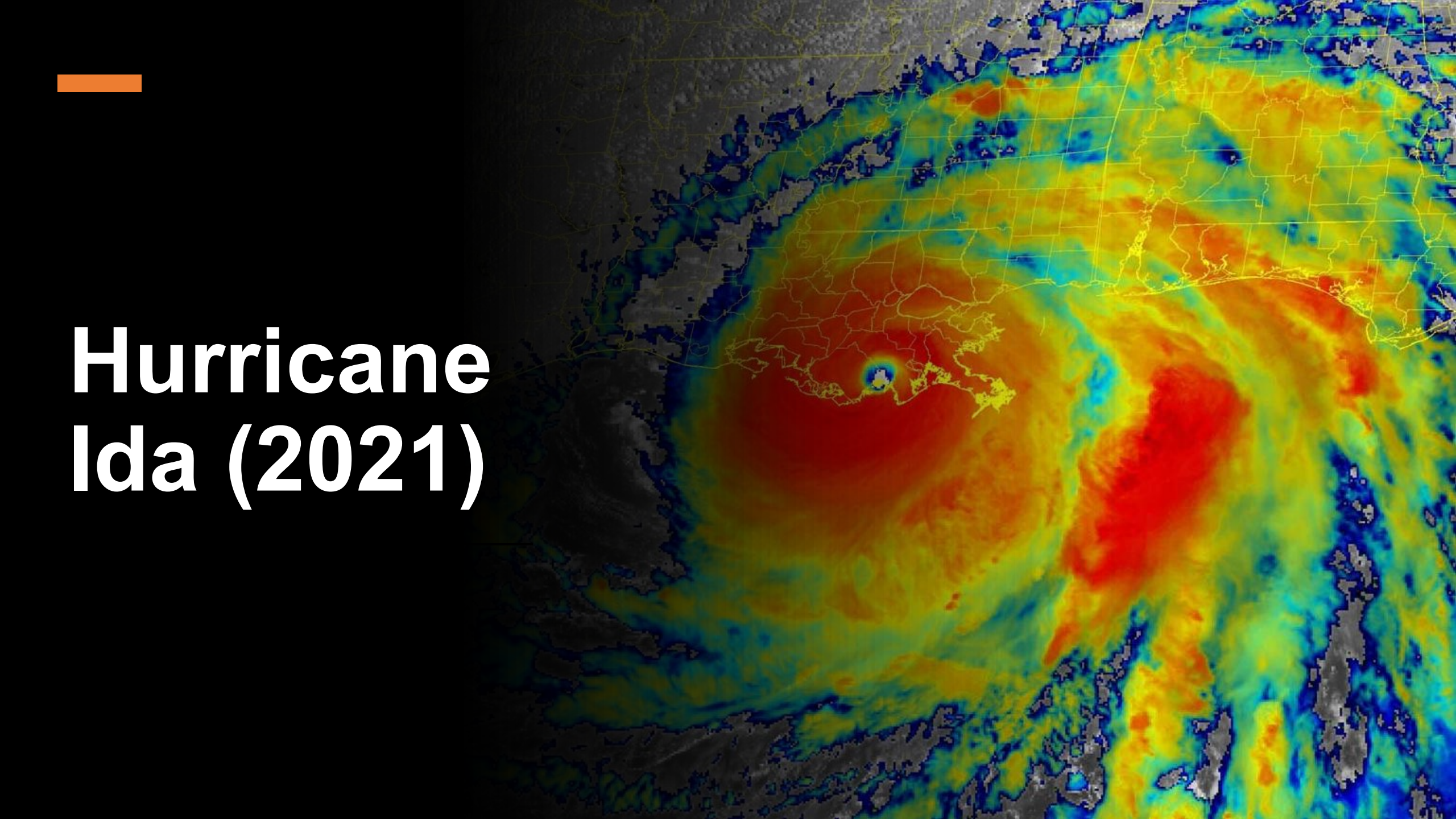
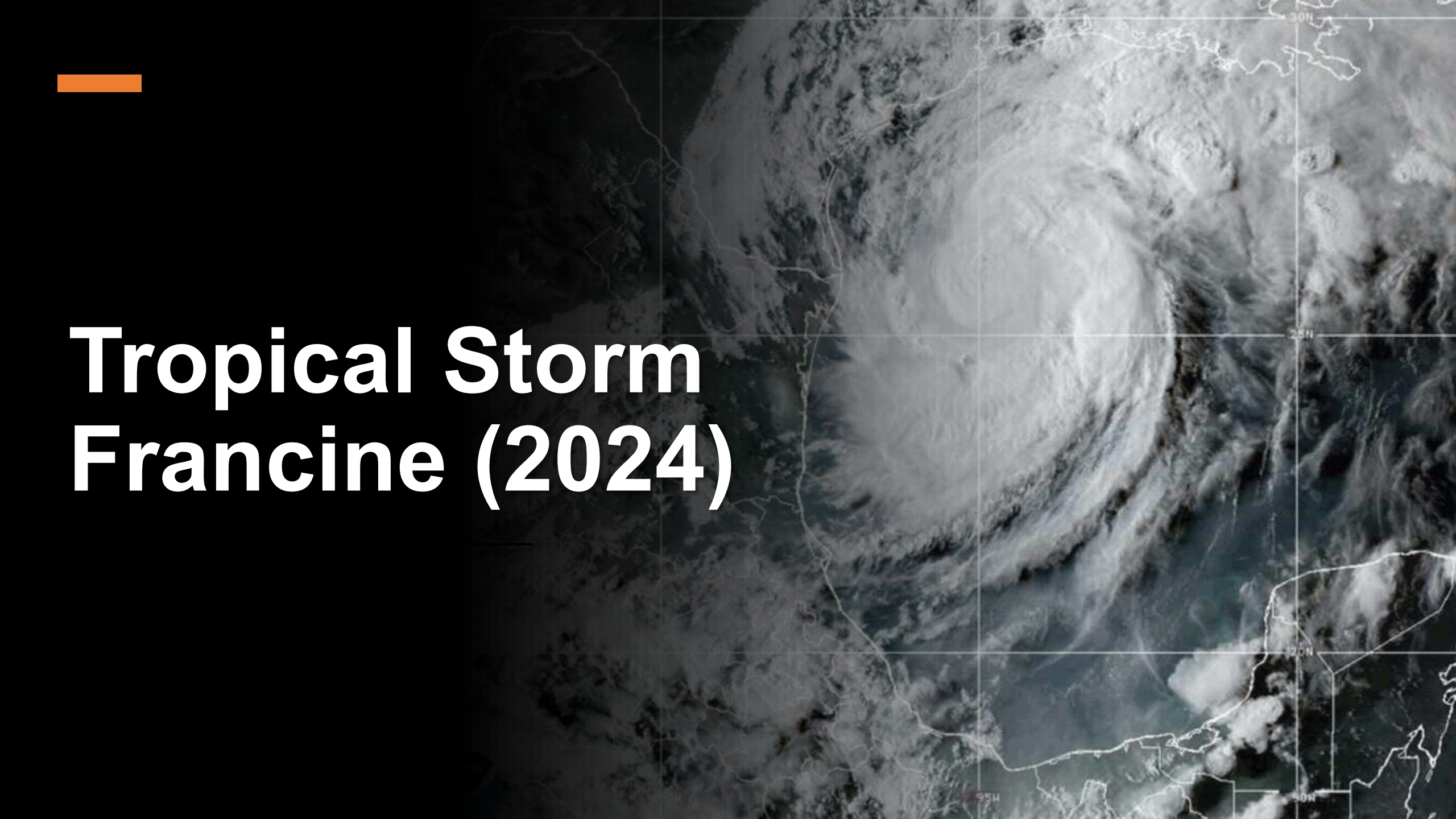
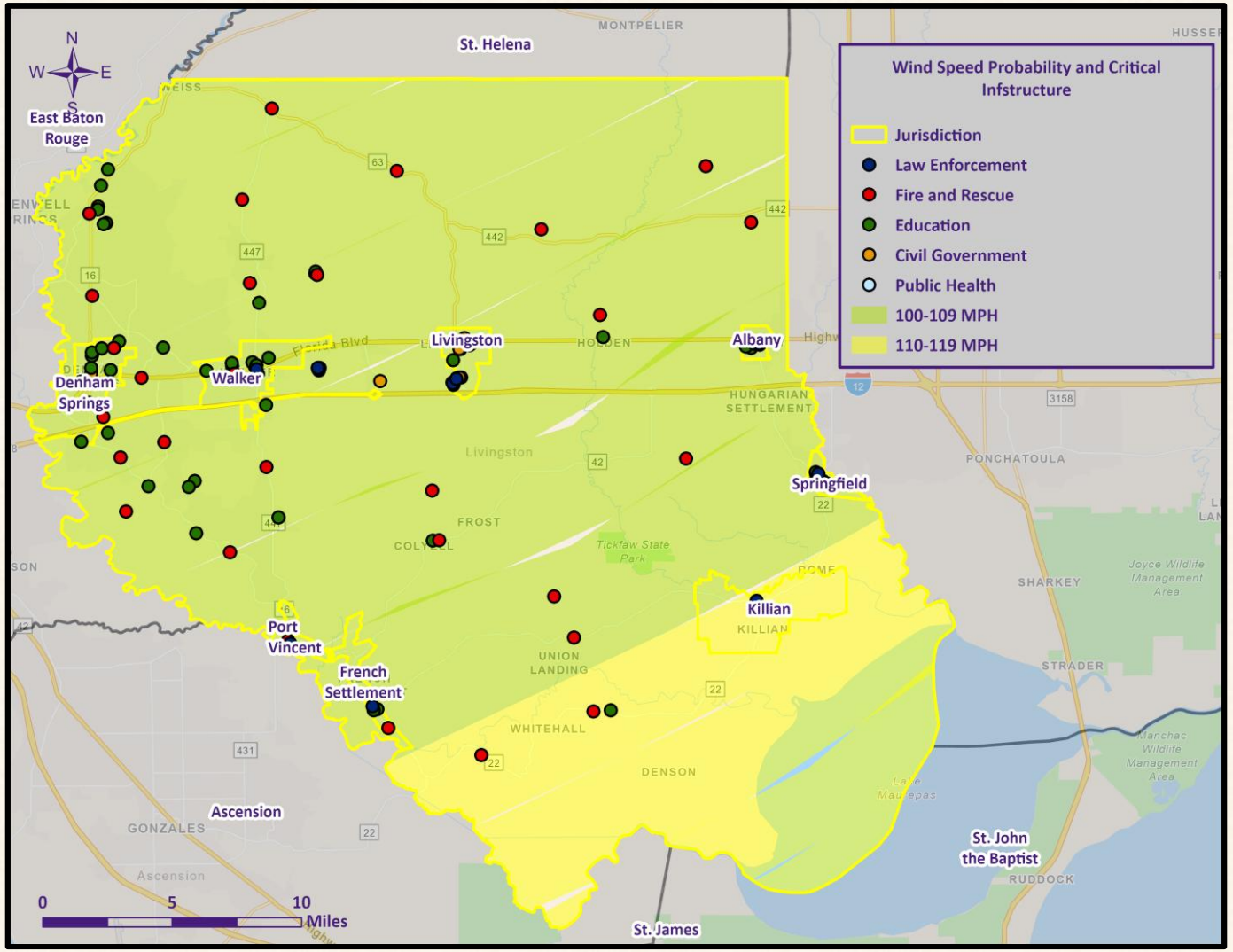
Hurricane Ida (2021)



Tropical Storm Francine (2024)



Hurricane Wind Speed & C.I.



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Ice Storm

- Severe winter weather events characterized by the rapid accumulation of ice on surfaces such as roads, trees, powerlines, and buildings.

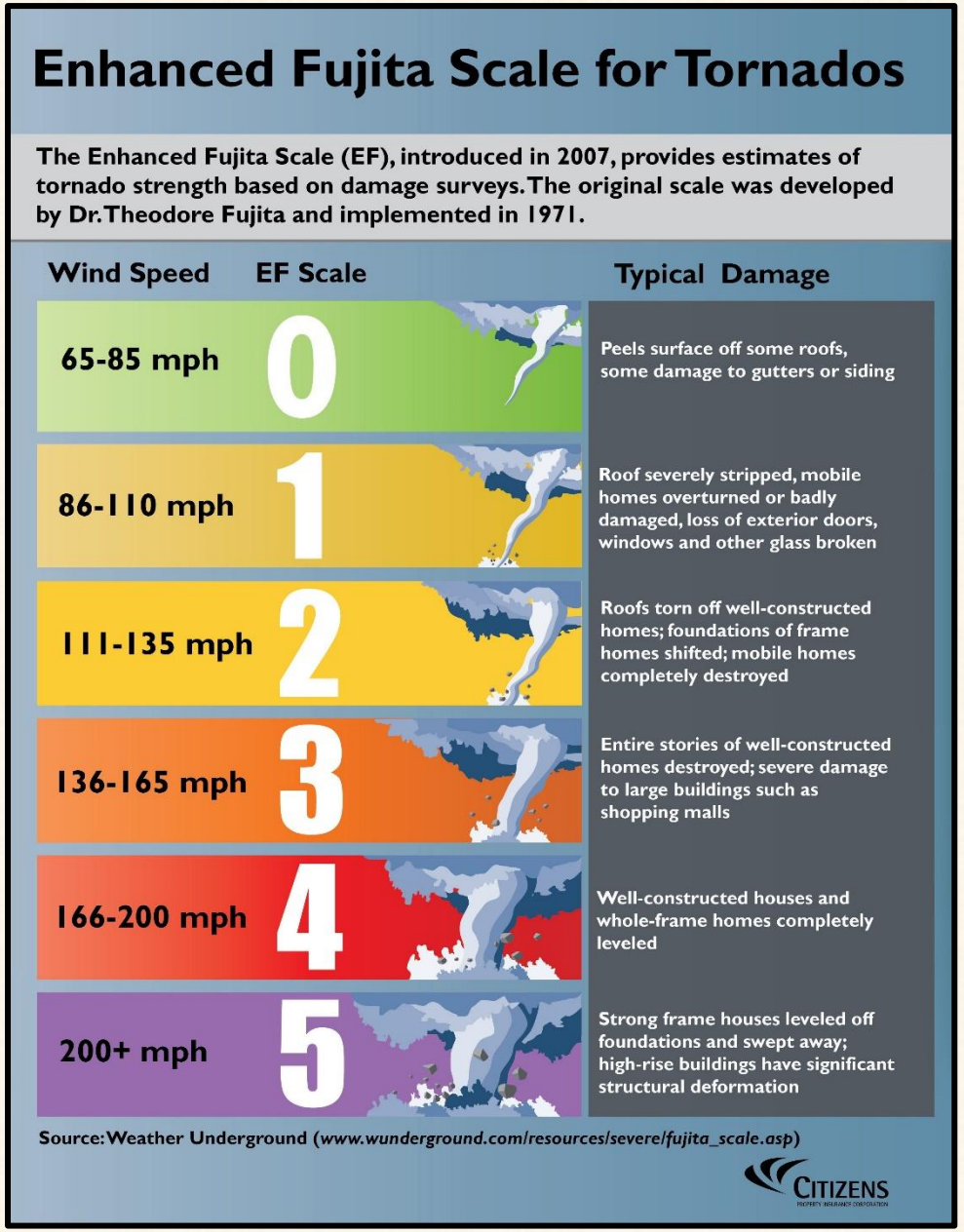
- Powerful systems can generate intense bands of freezing rain that can deposit a thick layer of ice, leading to widespread power outages, impassable roads, and significant structural damage.

- Major transportation routes like I-12, LA-190, and LA-22 have a close proximity to wetland areas which increase the likelihood of black ice road conditions.

Lightning

- As defined by the National Weather Service, Lightning is any and all of the various forms of visible electrical discharge caused by thunderstorms.
- Cloud-to-ground lightning is the form associated with the most risk to property and the wellbeing of the public. Objects struck can result in explosion, burning, or destruction while people struck can result in major injury or even death.

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.

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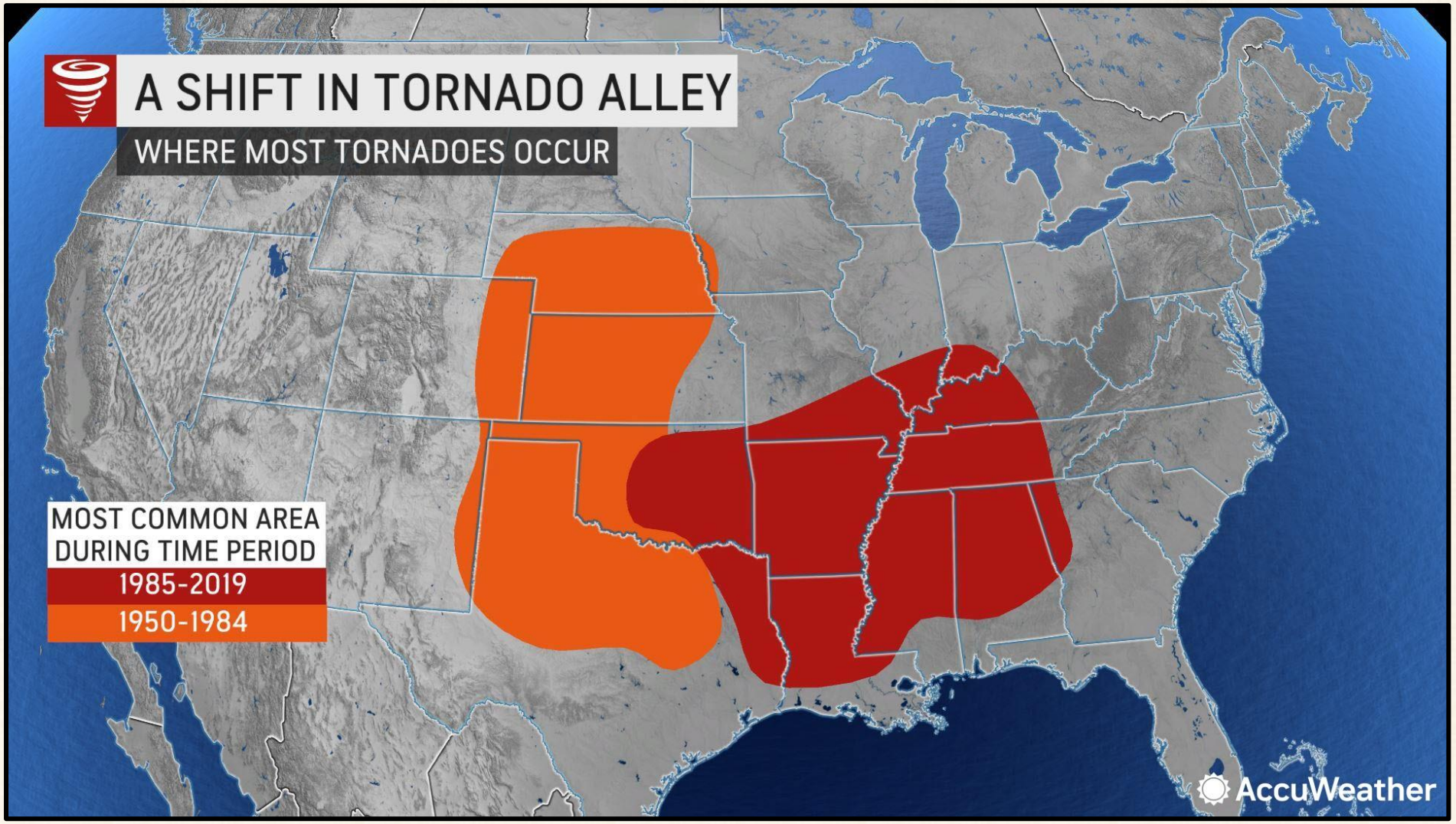
“Tornado Alley” Shift



Source: AccuWeather

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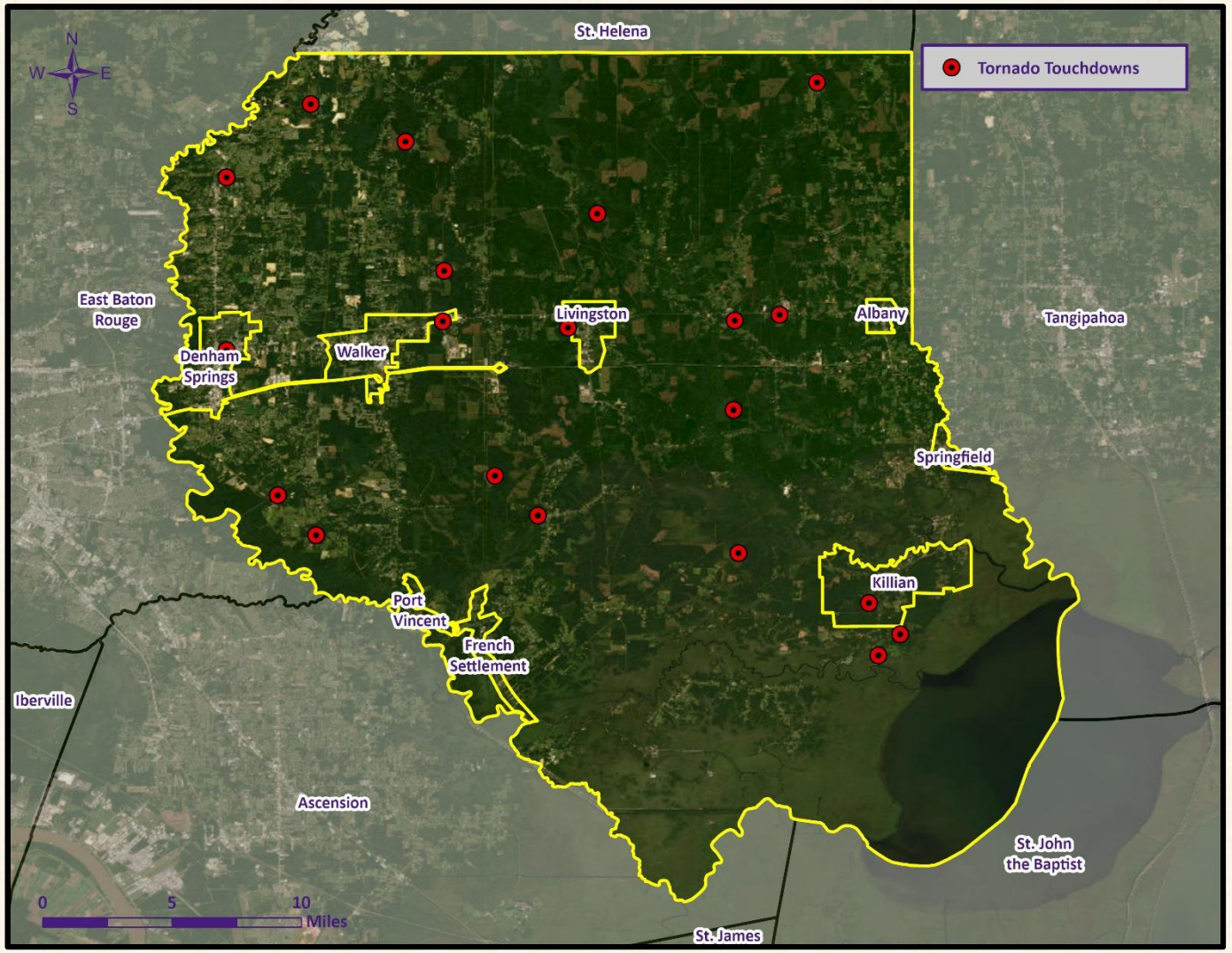
Tornadoes in Livingston Parish



Source: NCEI Storm Events Database

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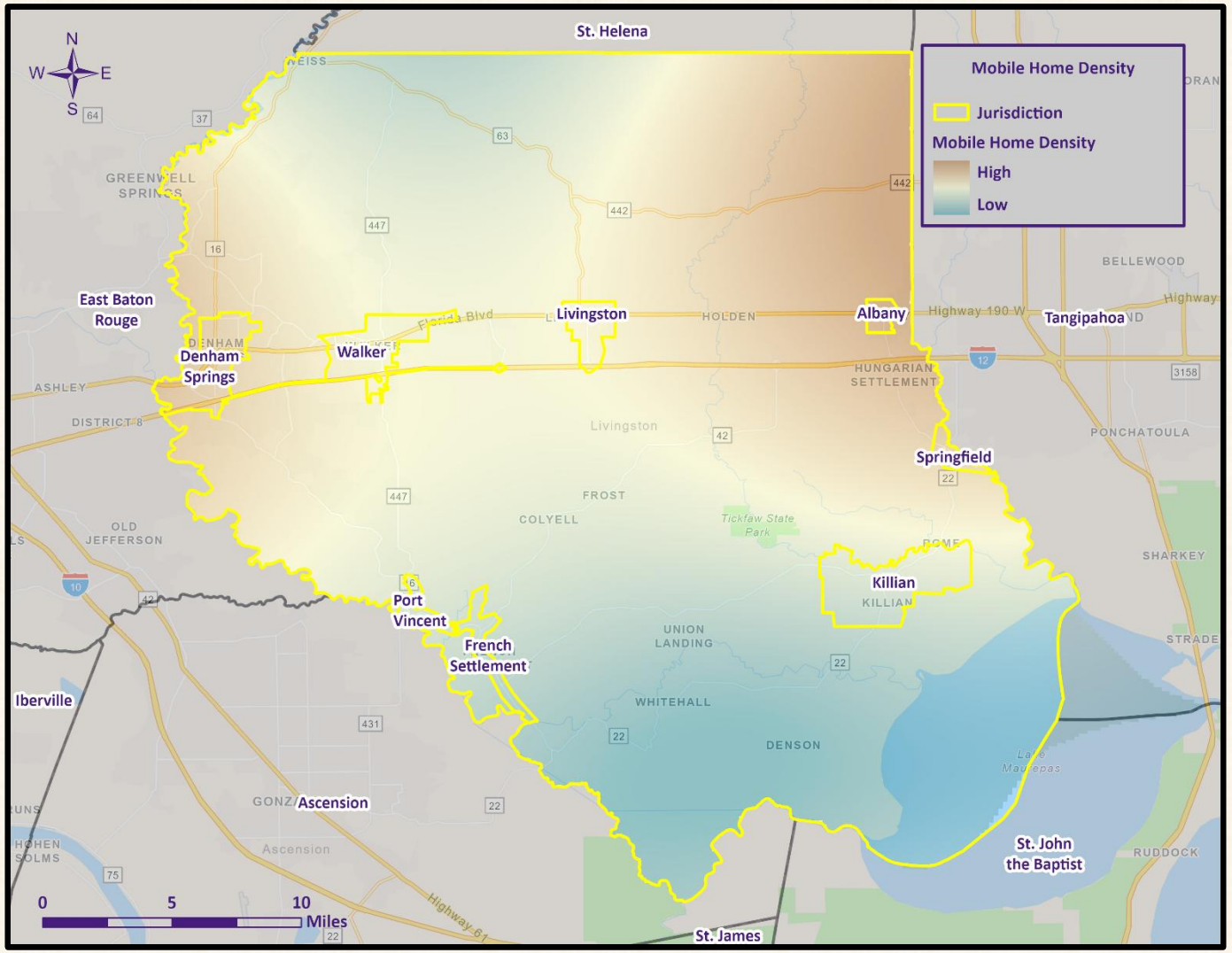
Manufactured Home Density



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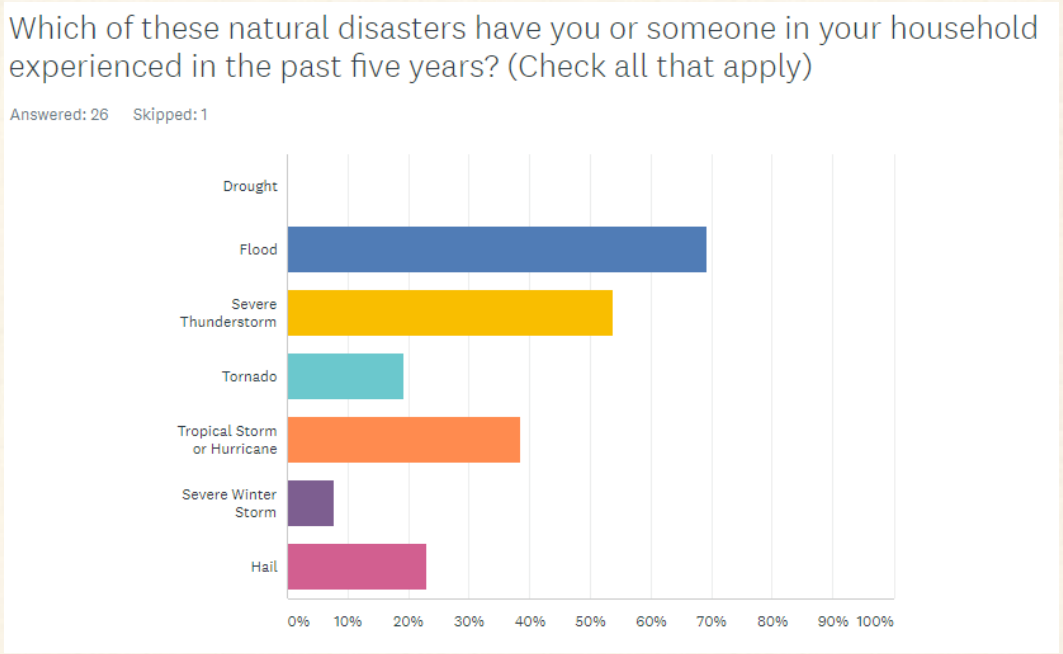
Winter Weather

- Occurs when humid air from the Gulf of America 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.

Public Outreach Activity #1

Hazard Mitigation Public Opinion Survey

https://tinyurl.com/LivingstonHMP



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Survey Trends So Far...

- As of December 15, 2025…
  - **102** responses collected
    - ***52*** *responses collected since previous meeting! (10/28/25)*
  - **Flooding, Hurricanes, and Tornadoes** are the hazards of greatest concern to respondents.
  - Almost **40%** of residents place more trust in their local government for hazard information than in **twelve** other external sources.
    - **61%** say social media is the most effective way to get information on making their home safe from disasters
  - **30%** of respondents are unaware if their home is in a flood zone.

Public Outreach Activity #2

Please fill out an incident questionnaire!

LIVINGSTON PARISH PUBLIC OUTREACH

PUBLIC ACTIVITY: INCIDENT/ ISSUE QUESTIONNAIRE

1. HAZARD TYPE(S):

A. COASTAL FLOODING
B. DROUGHT
C. FLOODING
D. HEAT WAVE
E. HURRICANES
F. ICE STORM
G. LIGHTNING
H. TORNADOES
I. 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/DIDTHE 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?

LIVINGSTON PARISH GOVERNMENT

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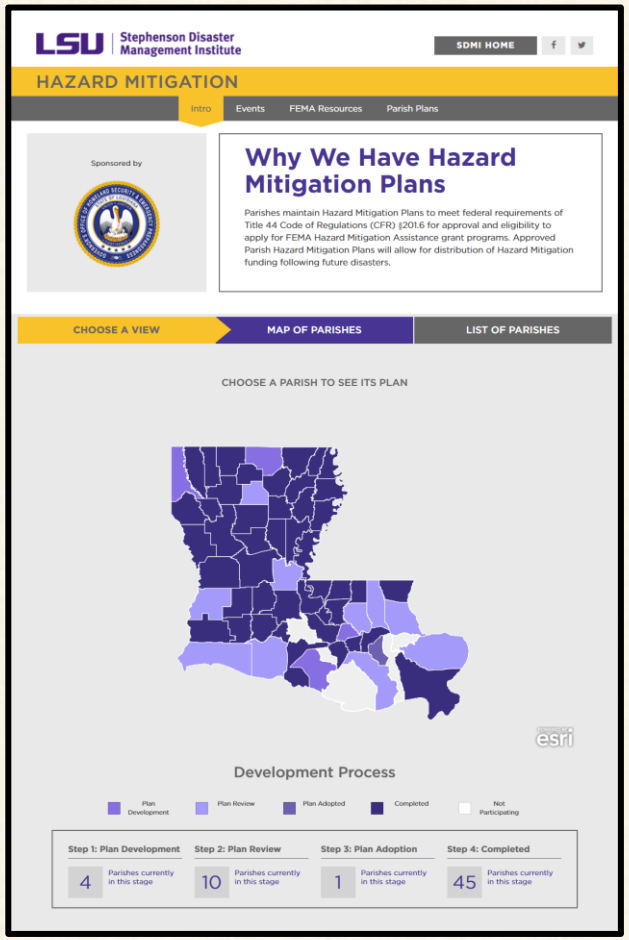
SDMI Hazard Mitigation Website

- Repository for materials used during the plan update process
- https://hmplans.sdmi.lsu.edu/



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Contact Us

Chris Rippetoe, CFM

HM Program Manager

crippe2@lsu.edu

(225) 578-6667

Jason Martin

Emergency Management Analyst

jmar293@lsu.edu

(225) 578-6264


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