Washington Parish Hazard Mitigation Plan Update Public Meeting

July 13, 2021

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Introductions

- **Washington Parish OHSEP Director/Parish Staff**
- **Stephenson Disaster Management Institute (SDMI) at LSU**
  - Lauren Stevens – Associate Director, Disaster Management Programs
  - Chris Rippetoe – Hazard Mitigation Program Manager
  - Anna Daigle – Emergency Management Specialist
- **Governor's Office of Homeland Security and Emergency Preparedness**
  - Jeffrey Giering – State Hazard Mitigation Officer
  - Marion Pearson – Hazard Mitigation Planner

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Agenda

Introductions

Hazard Mitigation Overview

Planning Process

Risk Assessment

Maps

Public Outreach Activities

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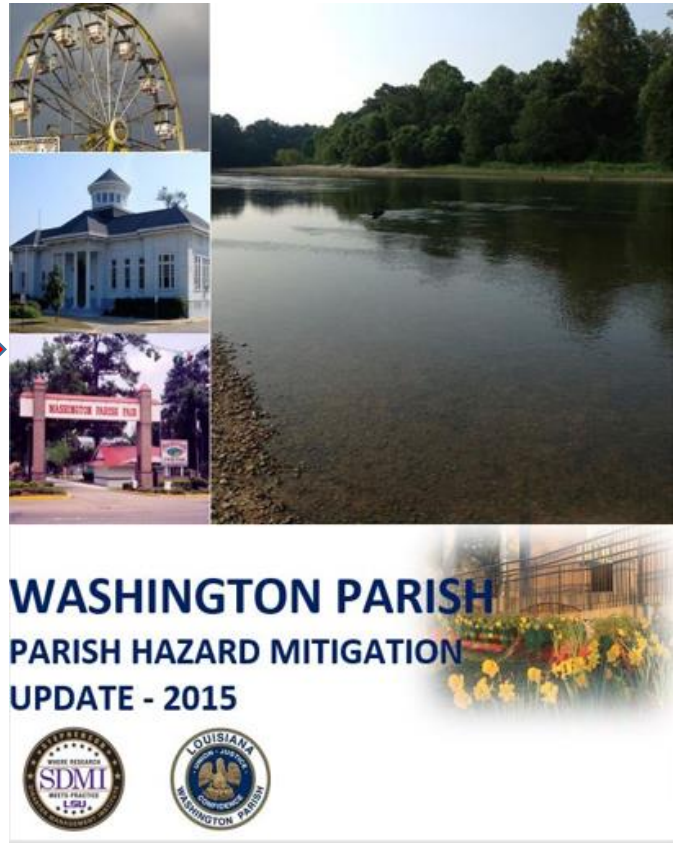
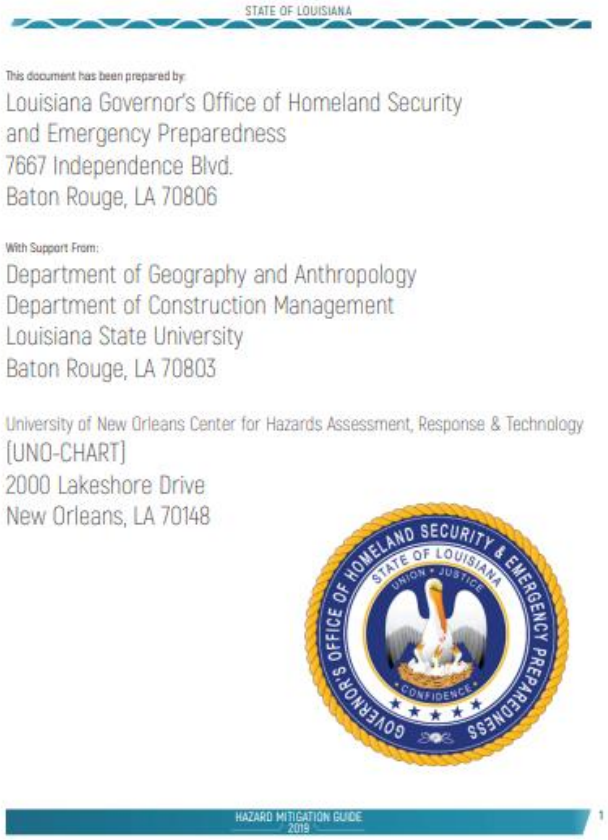
Why Are We Here?





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!

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 Washington Parish Hazard Mitigation Plan will allow for distribution of HM funding following future disasters.

Planning Process to Date

Initial Planning Meeting with OHSEP

Full Steering Committee Meeting

Mitigation Action Meeting

Risk Assessment Review with Steering Committee

Constant communication with Parish and Committee members!

Public Meeting #1

Public Meeting #2

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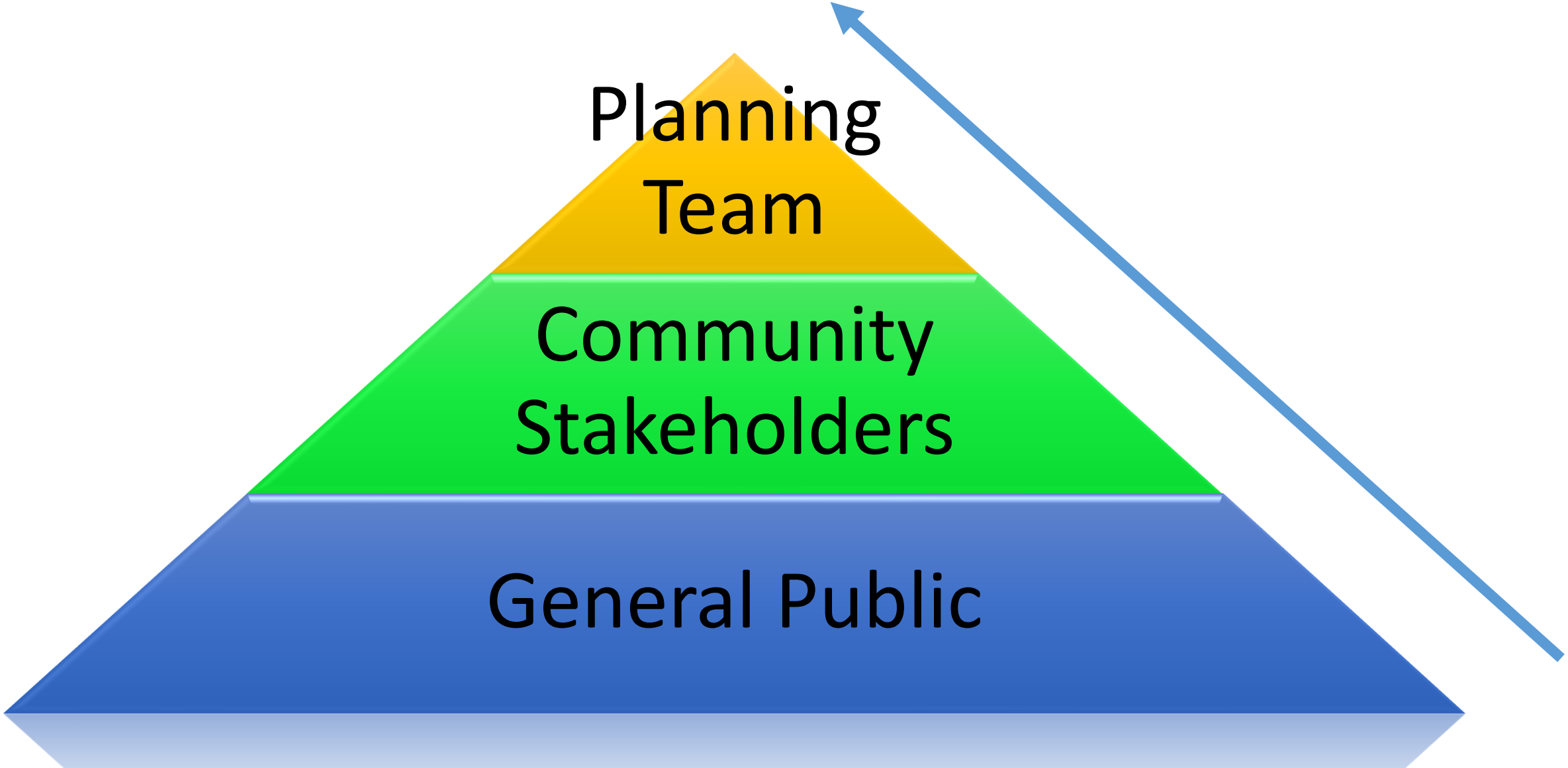
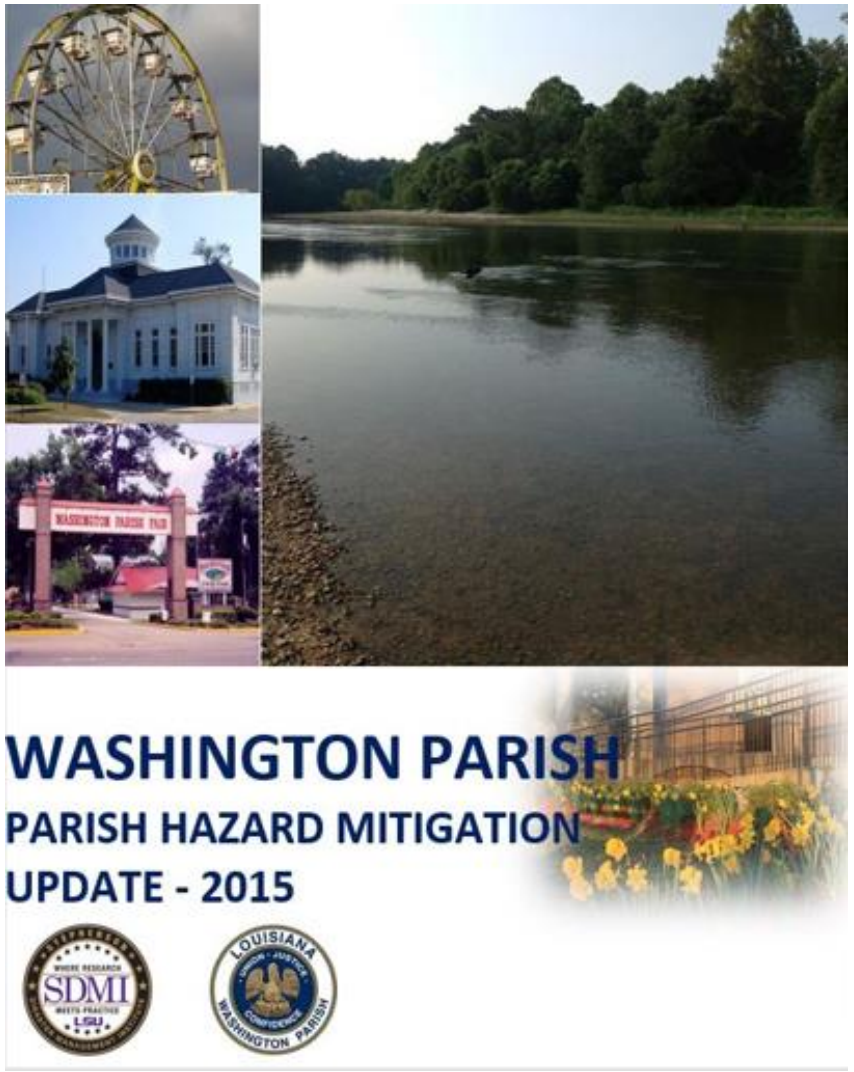
Collaborative Planning Approach



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

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

Hazard Identification and Risk Assessment

- Flooding
- Tropical Cyclones
- Thunderstorms

- Tornadoes
- Wildfires
- Winter Weather

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Risk Matrix for Washington Parish

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	Overall Risk
Flooding	3	4	3	4	3	3.4
Thunderstorms - Hail	4	2	3	3	1	2.7
Thunderstorms - Lightning	2	2	2	3	1	2
Thunderstorms - Wind	4	2	3	3	1	2.7
Tornadoes	3	3	2	4	3	2.95
Tropical Cyclones	3	4	4	1	4	3.3
Wildfires	1	3	4	1	2	2.25
Winter Storms	2	3	4	1	2	2.5

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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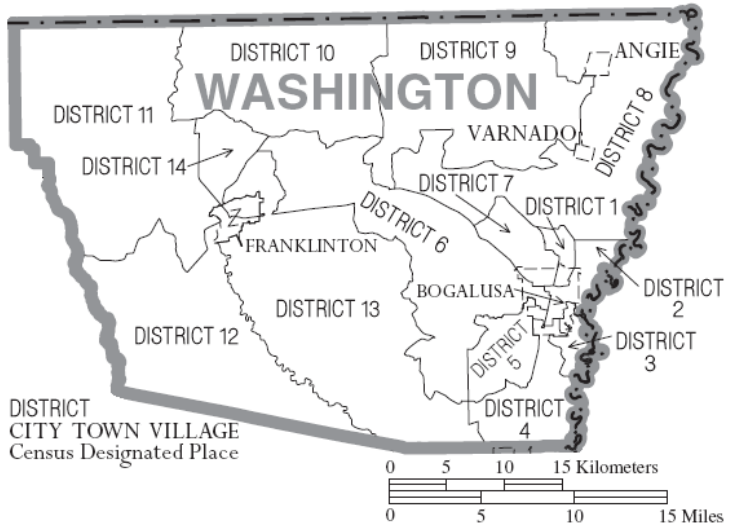
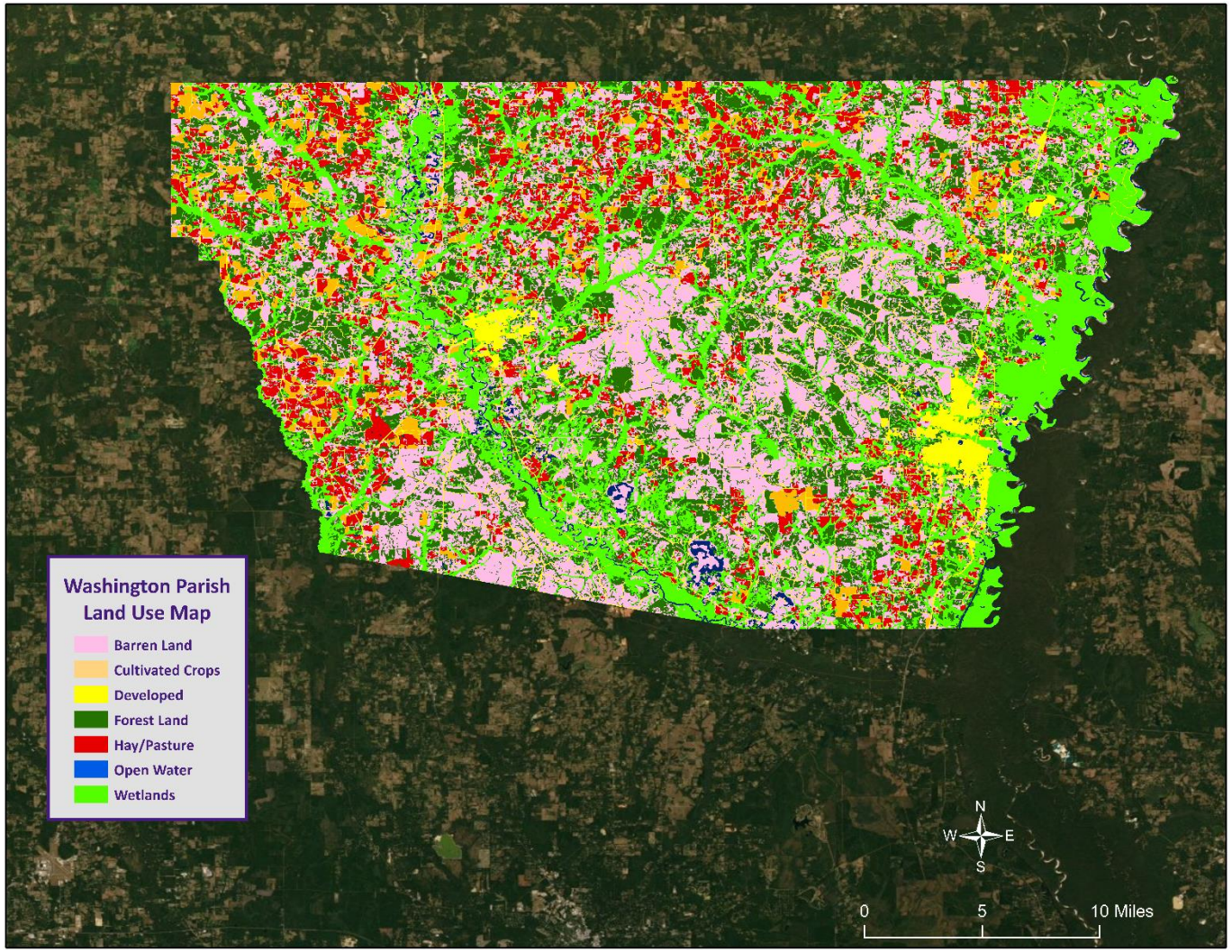


Risk Assessment Maps

Washington Parish Land Use



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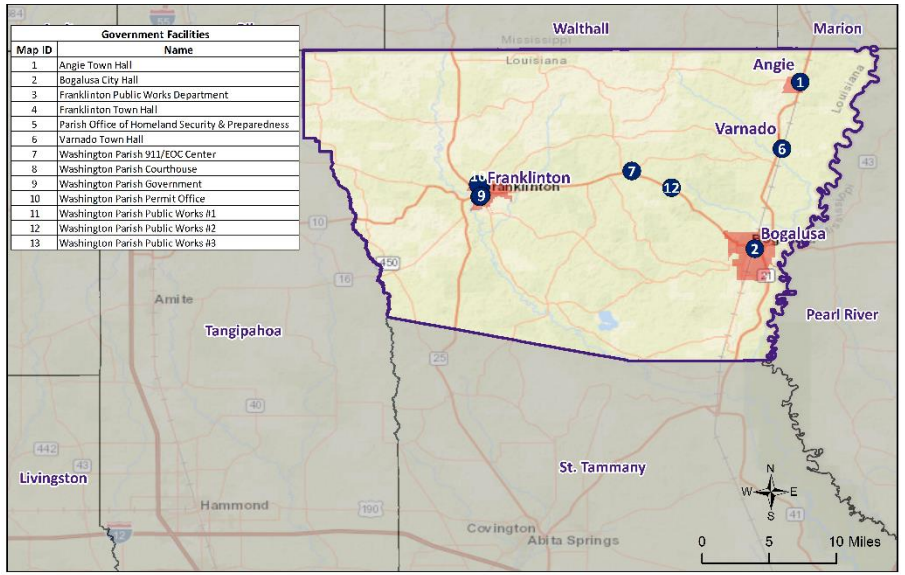
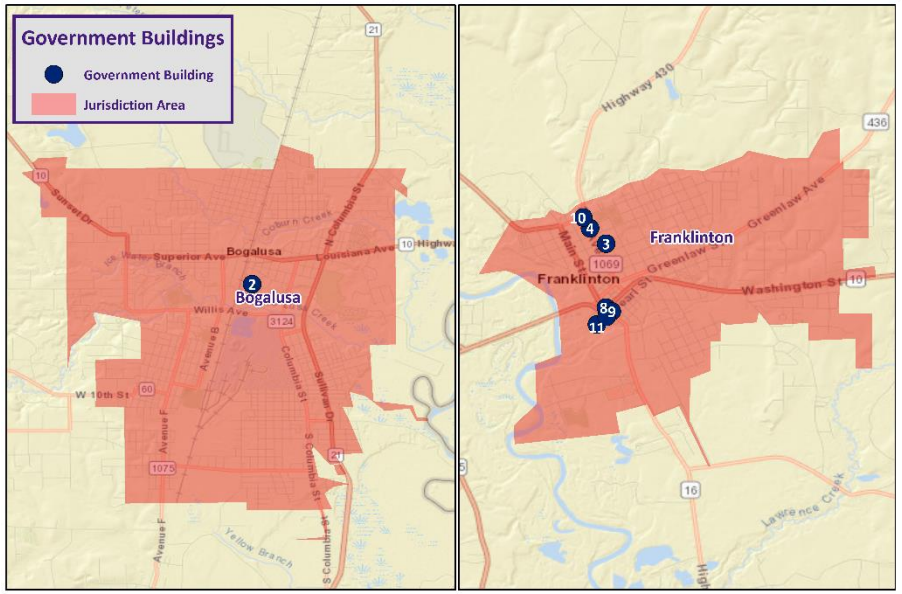
Critical Facilities: Civil Government

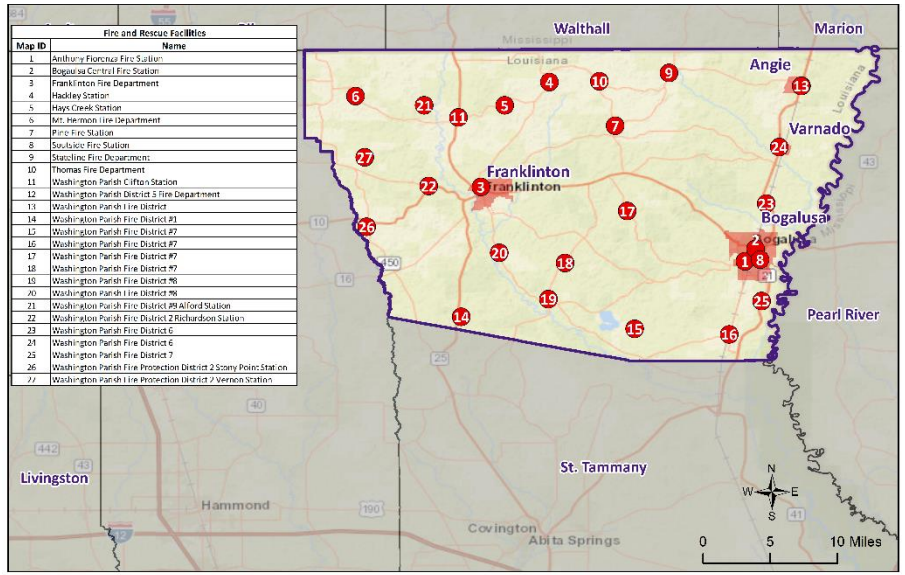
Government Facilities	
Map ID	Name
1	Angie Town Hall
2	Bogalusa City Hall
3	Franklinton Public Works Department
4	Franklinton Town Hall
5	Parish Office of Homeland Security & Preparedness
6	Varnado Town Hall
7	Washington Parish 911/EOC Center
8	Washington Parish Courthouse
9	Washington Parish Government
10	Washington Parish Permit Office
11	Washington Parish Public Works #1
12	Washington Parish Public Works #2
13	Washington Parish Public Works #3

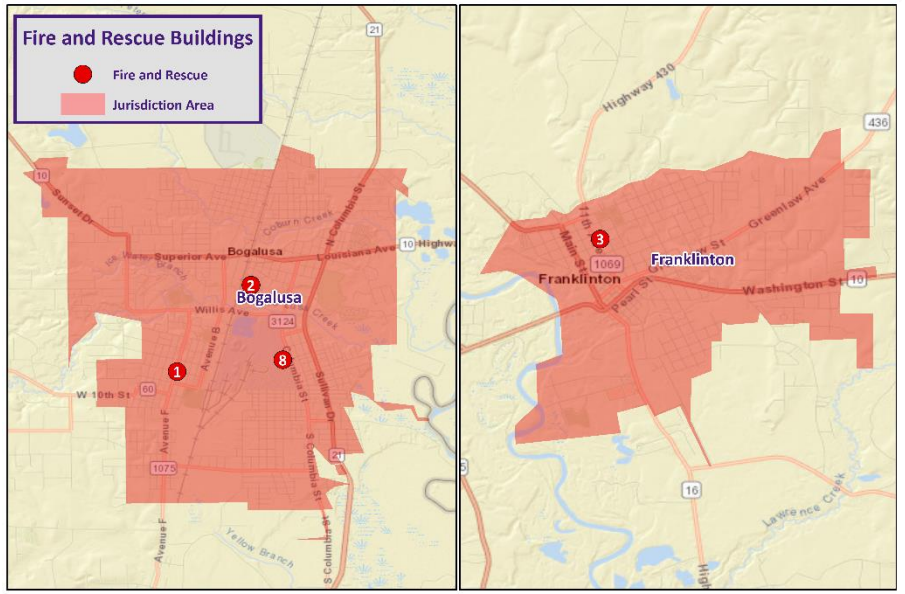




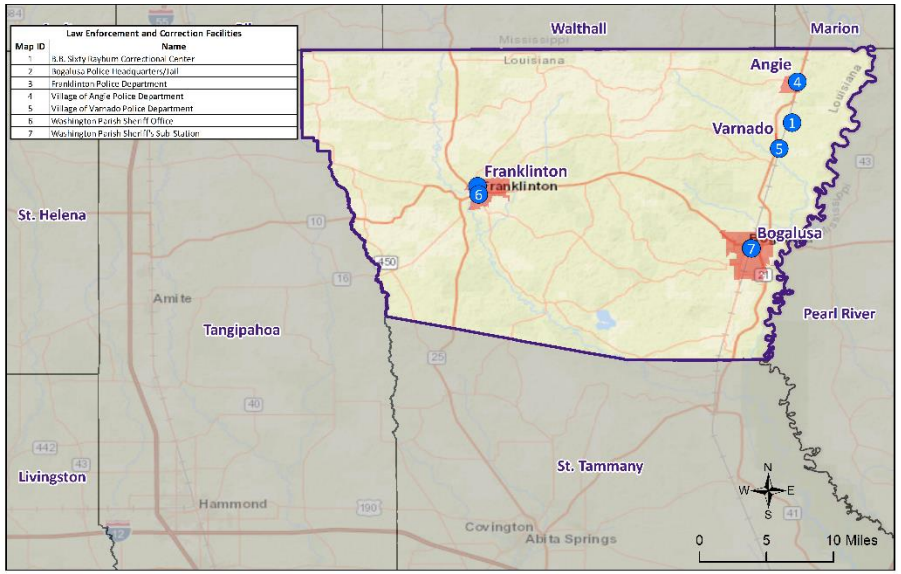
Critical Facilities: Fire & SAR

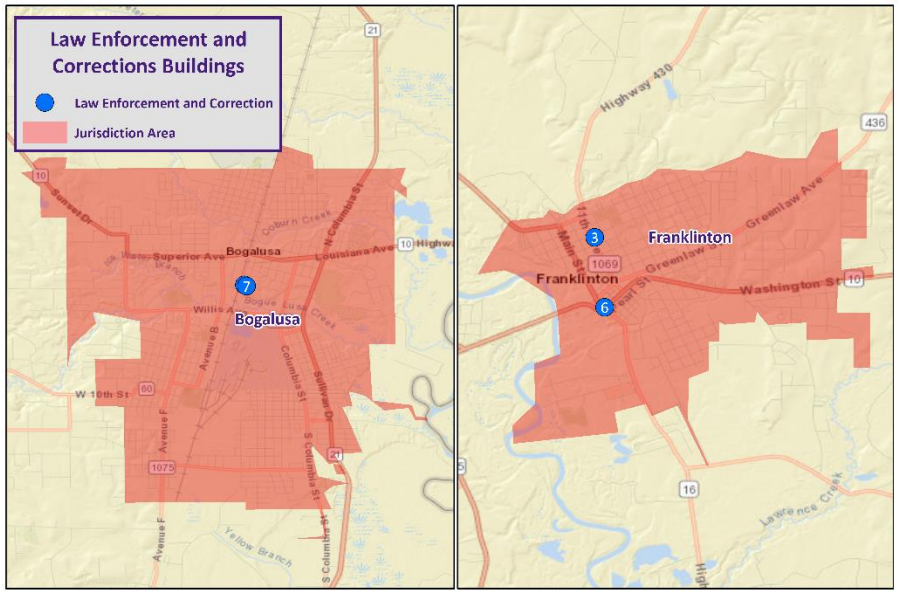
Fire and Rescue Facilities	
Map ID	Name
1	Anthony Florenza Fire Station
2	Bogalusa Central Fire Station
3	Franklinton Fire Department
4	Hackley Station
5	Hays Creek Station
6	Mt. Hermon Fire Department
7	Pine Fire Station
8	Southside Fire Station
9	Stateline Fire Department
10	Thomas Fire Department
11	Washington Parish Clifton Station
12	Washington Parish District 3 Fire Department
13	Washington Parish Fire District
14	Washington Parish Fire District #1
15	Washington Parish Fire District #7
16	Washington Parish Fire District #7
17	Washington Parish Fire District #7
18	Washington Parish Fire District #7
19	Washington Parish Fire District #8
20	Washington Parish Fire District #8
21	Washington Parish Fire District #8 Alford Station
22	Washington Parish Fire District 2 Richardson Station
23	Washington Parish Fire District 6
24	Washington Parish Fire District 6
25	Washington Parish Fire District 7
26	Washington Parish Fire Protection District 2 Stony Point Station
27	Washington Parish Fire Protection District 2 Vernon Station



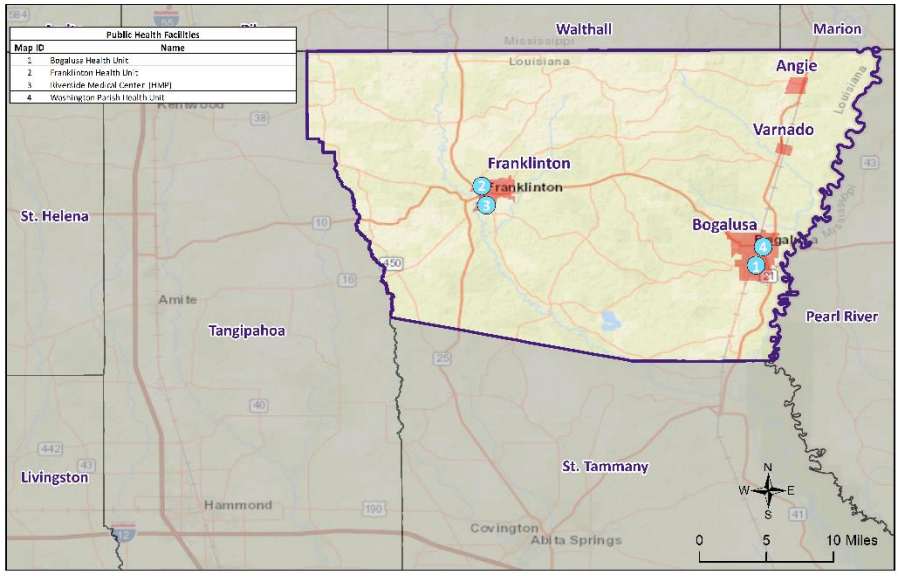


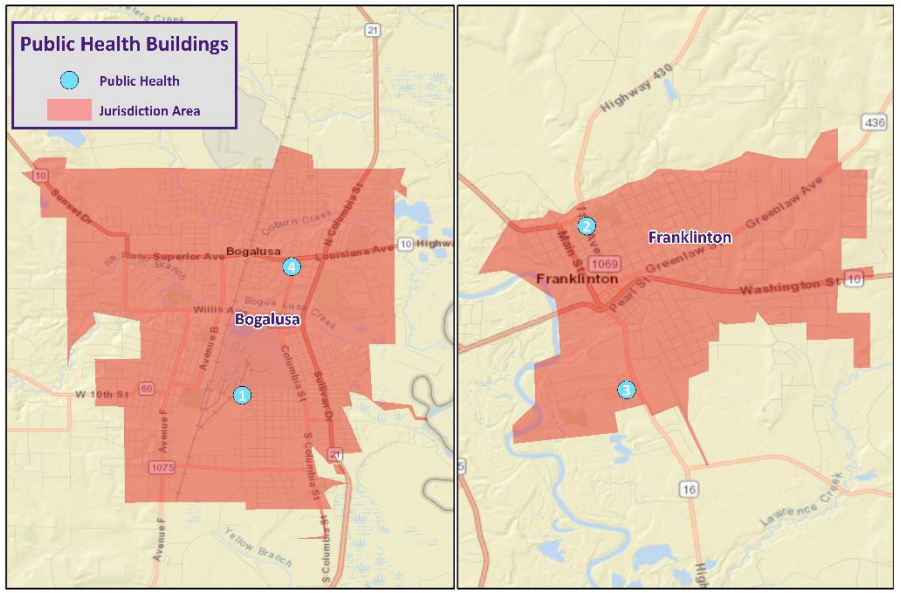
Critical Facilities: Law Enforcement





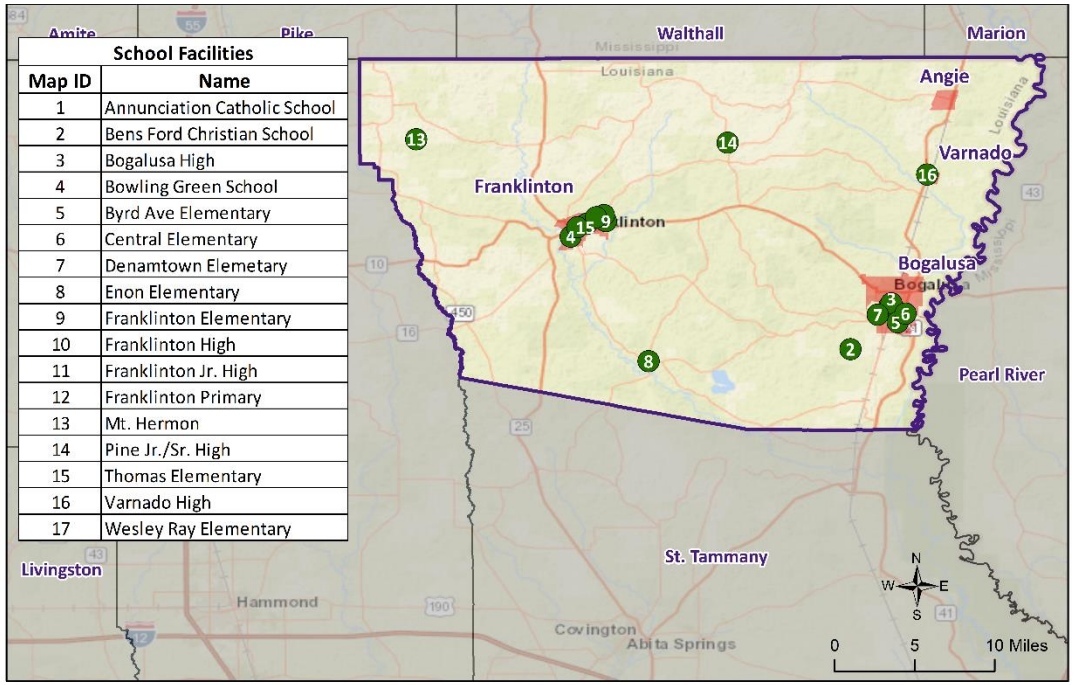
Critical Facilities: Public Health

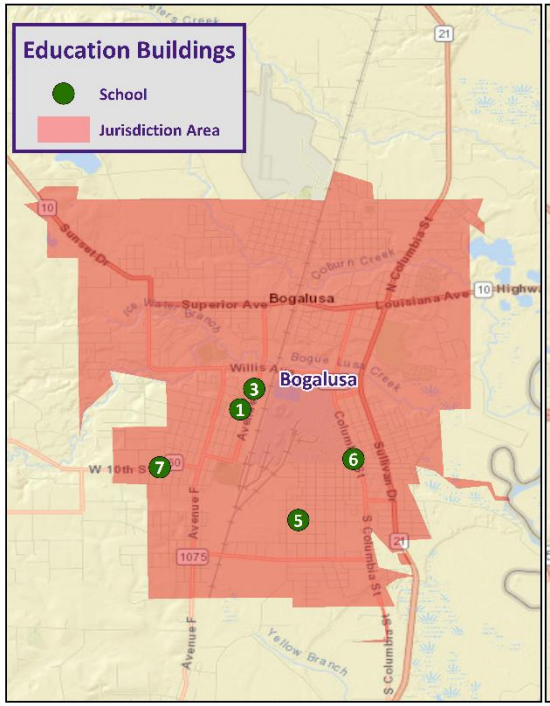


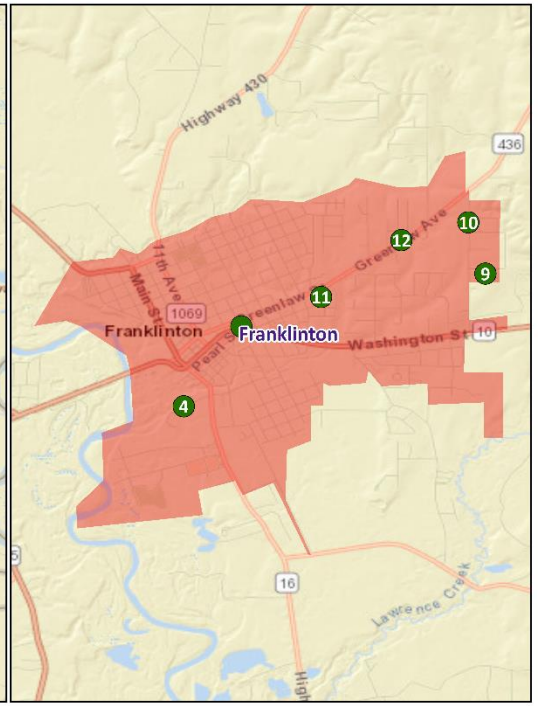


Critical Facilities: Education

School Facilities	
Map ID	Name
1	Annunciation Catholic School
2	Bens Ford Christian School
3	Bogalusa High
4	Bowling Green School
5	Byrd Ave Elementary
6	Central Elementary
7	Denamtown Elemetary
8	Enon Elementary
9	Franklinton Elementary
10	Franklinton High
11	Franklinton Jr. High
12	Franklinton Primary
13	Mt. Hermon
14	Pine Jr./Sr. High
15	Thomas Elementary
16	Varnado High
17	Wesley Ray Elementary







Flooding

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

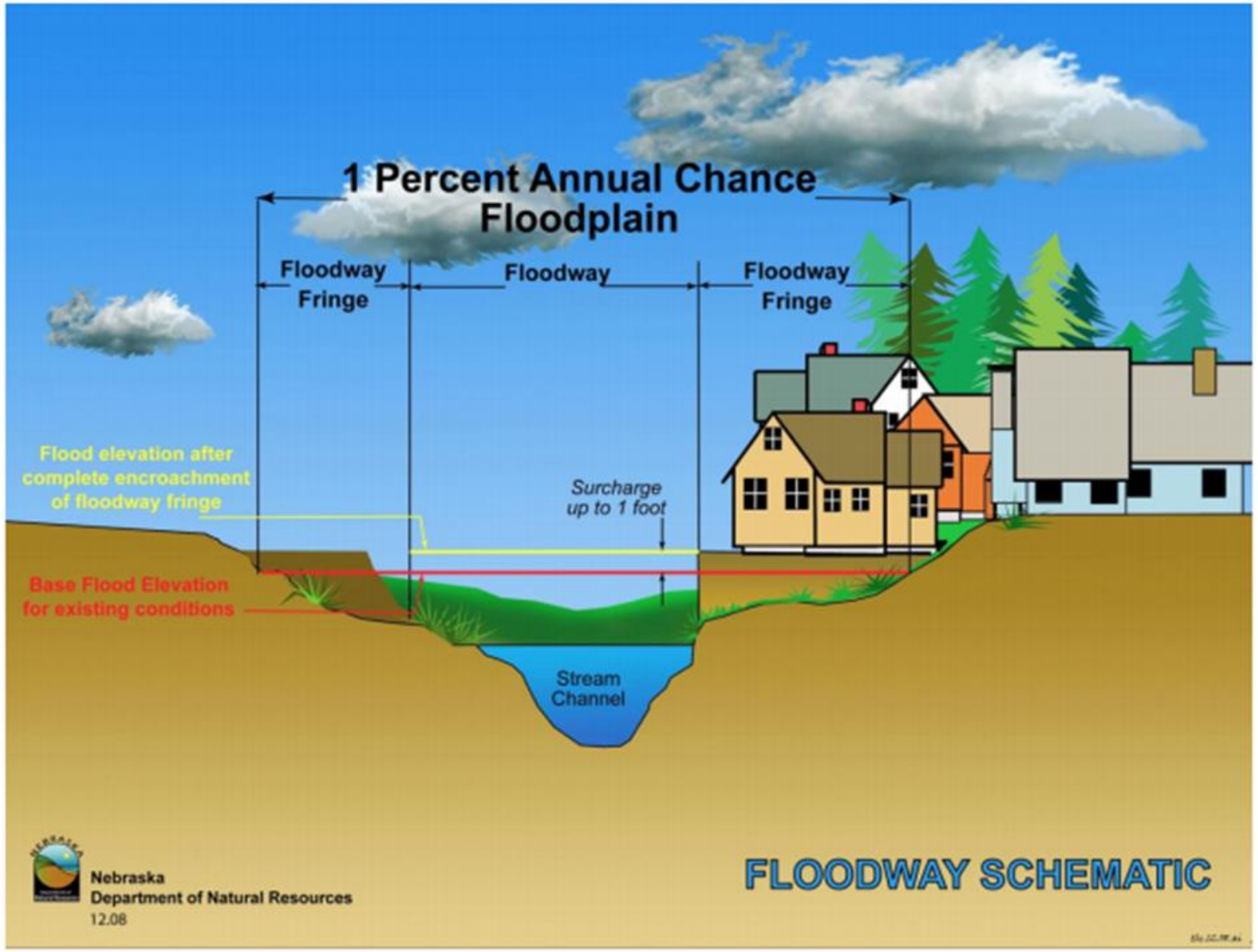
- The National Flood Insurance Program defines a flood as “a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties from overflow of inland or tidal waves, unusual and rapid accumulation or runoff of surface waters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

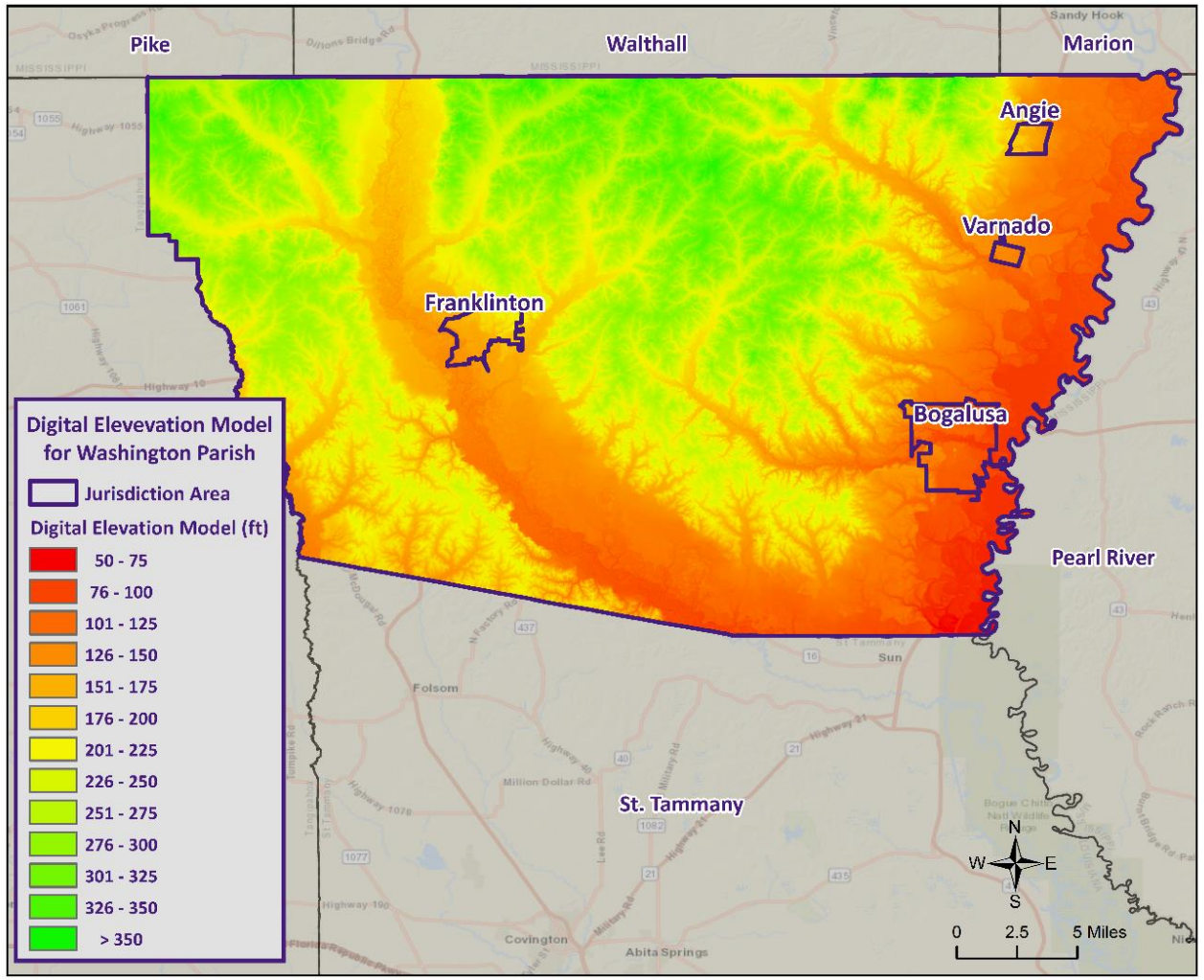
In Louisiana, six specific types of flooding are of main concern:

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

Floodway Diagram



Digital Elevation Model



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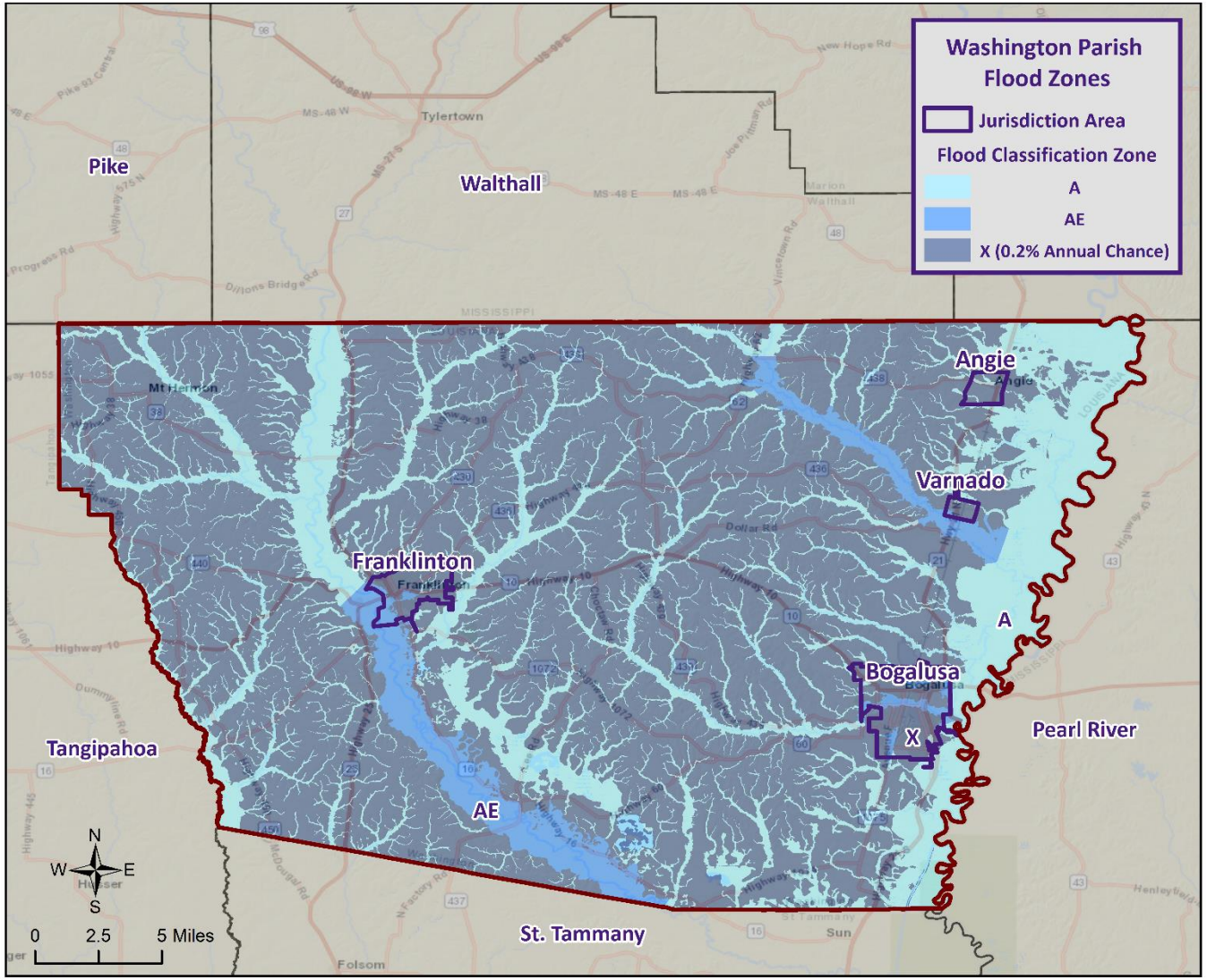
Washington Parish Flood Map



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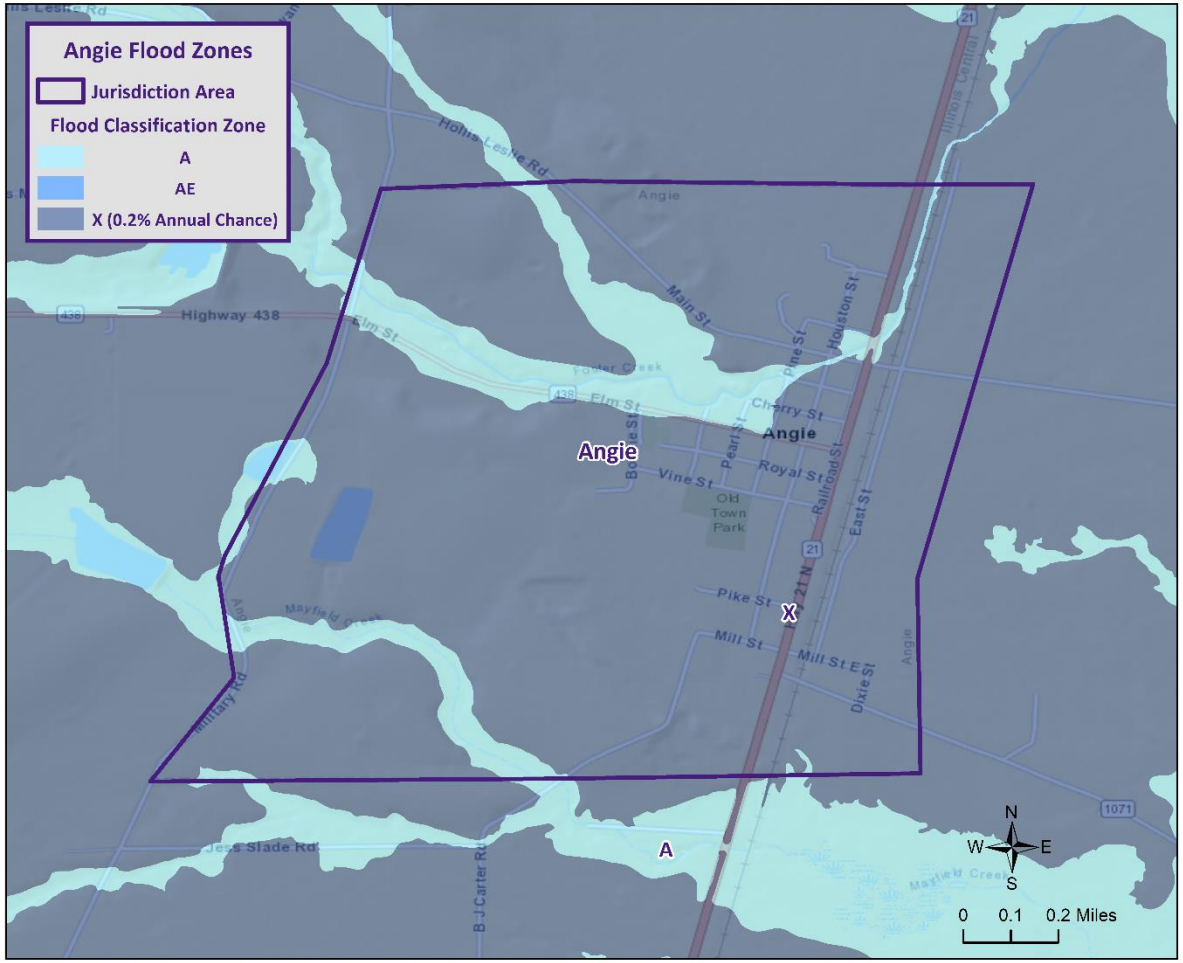
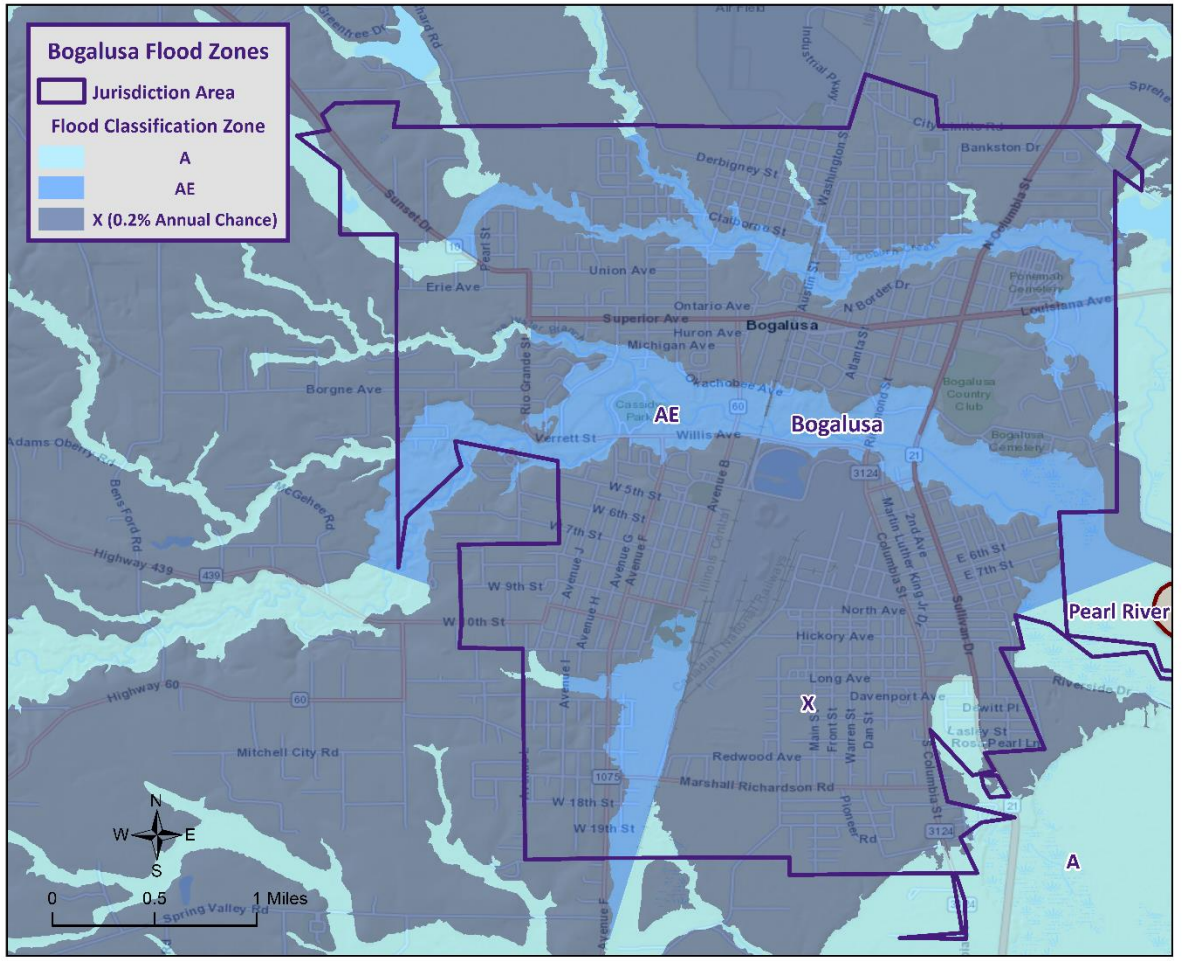
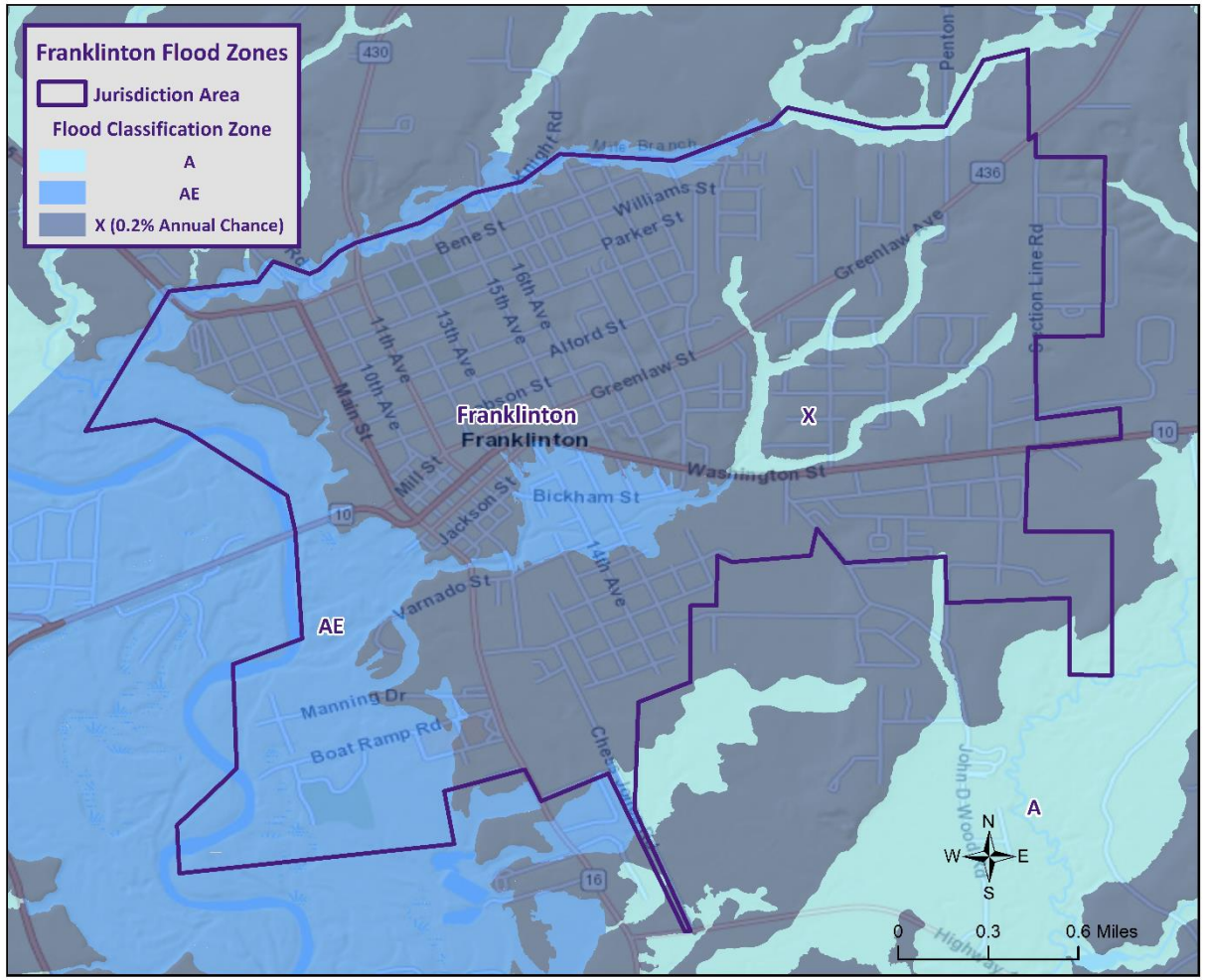
Flood Map: Angie



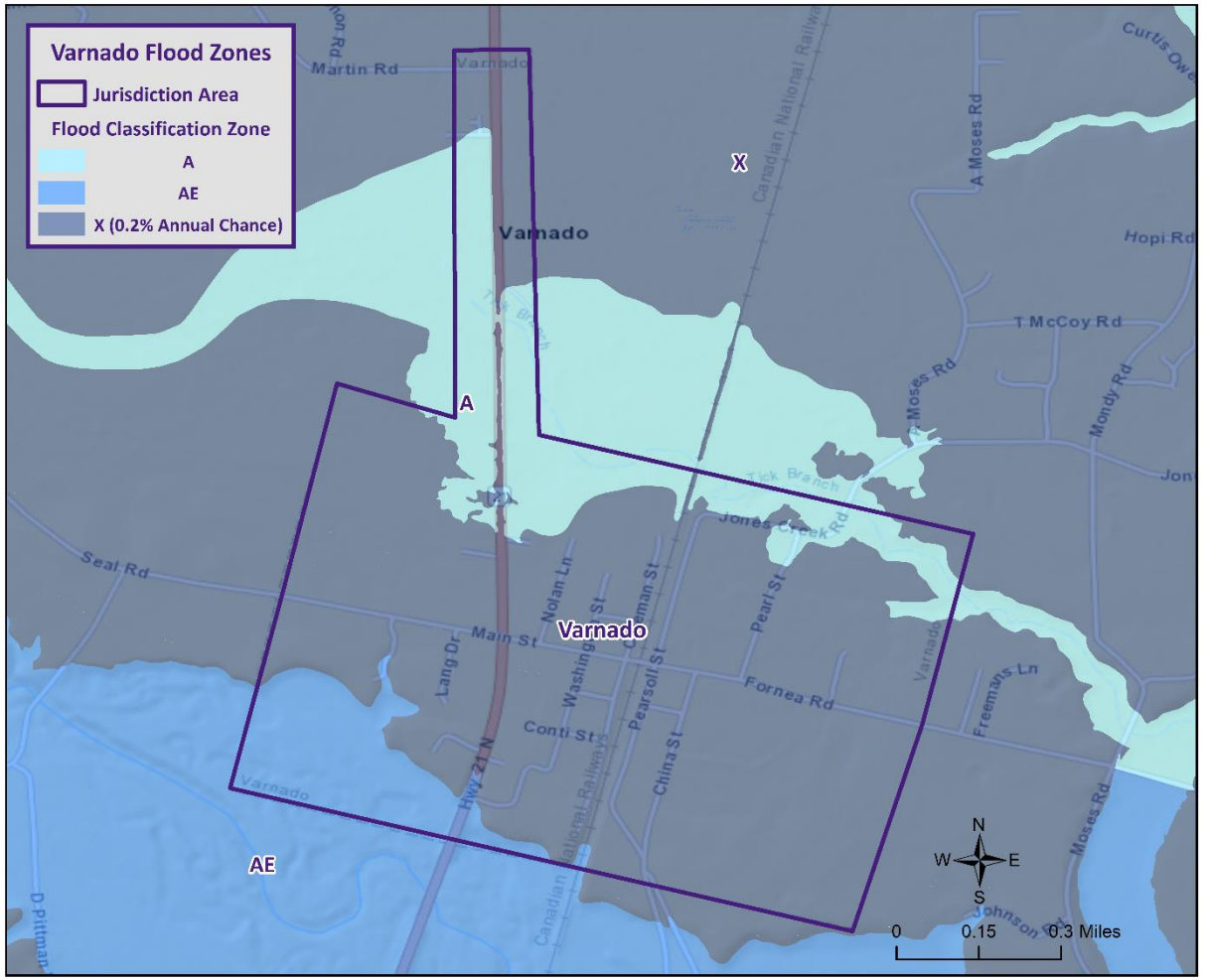
Flood Map: Bogalusa



Flood Map: Franklinton



Flood Map: Varnado



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.

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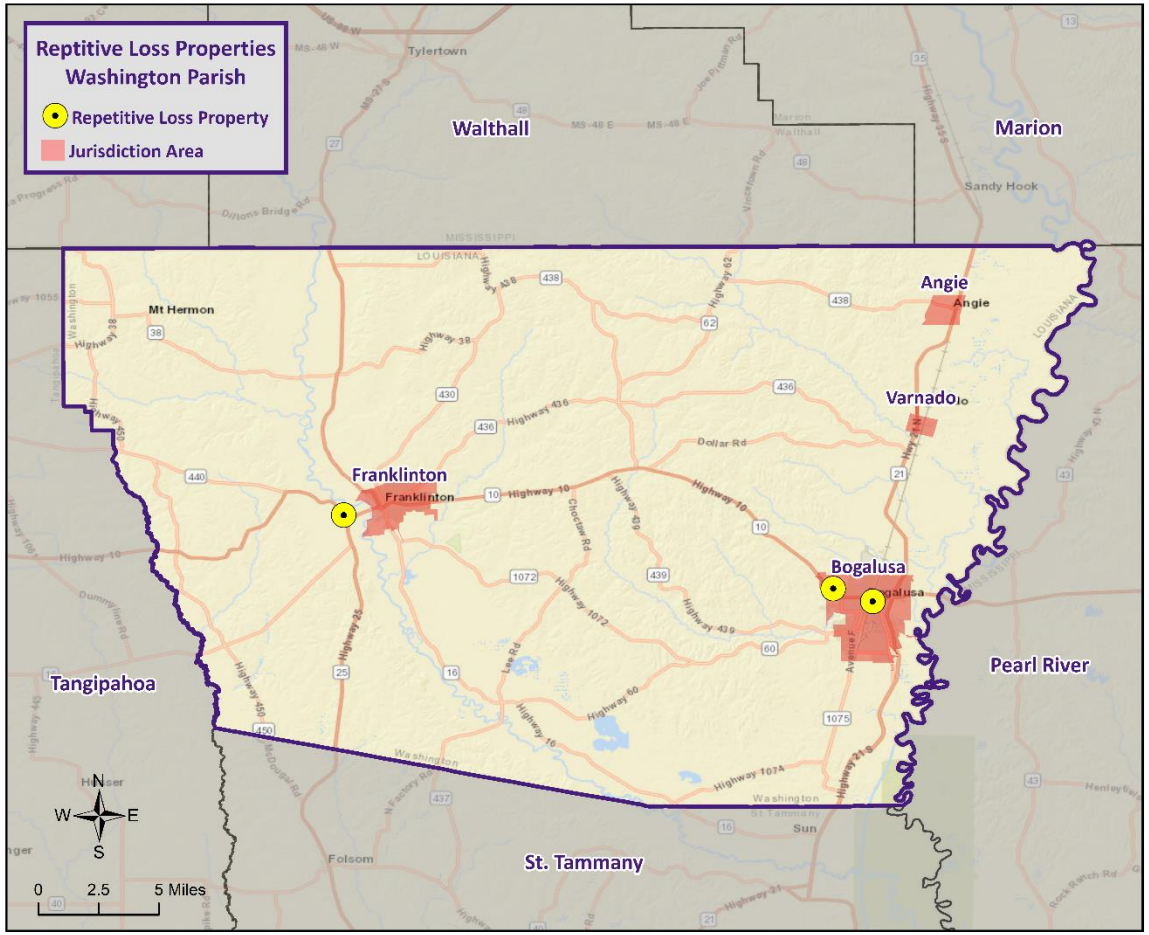
Repetitive Loss Properties



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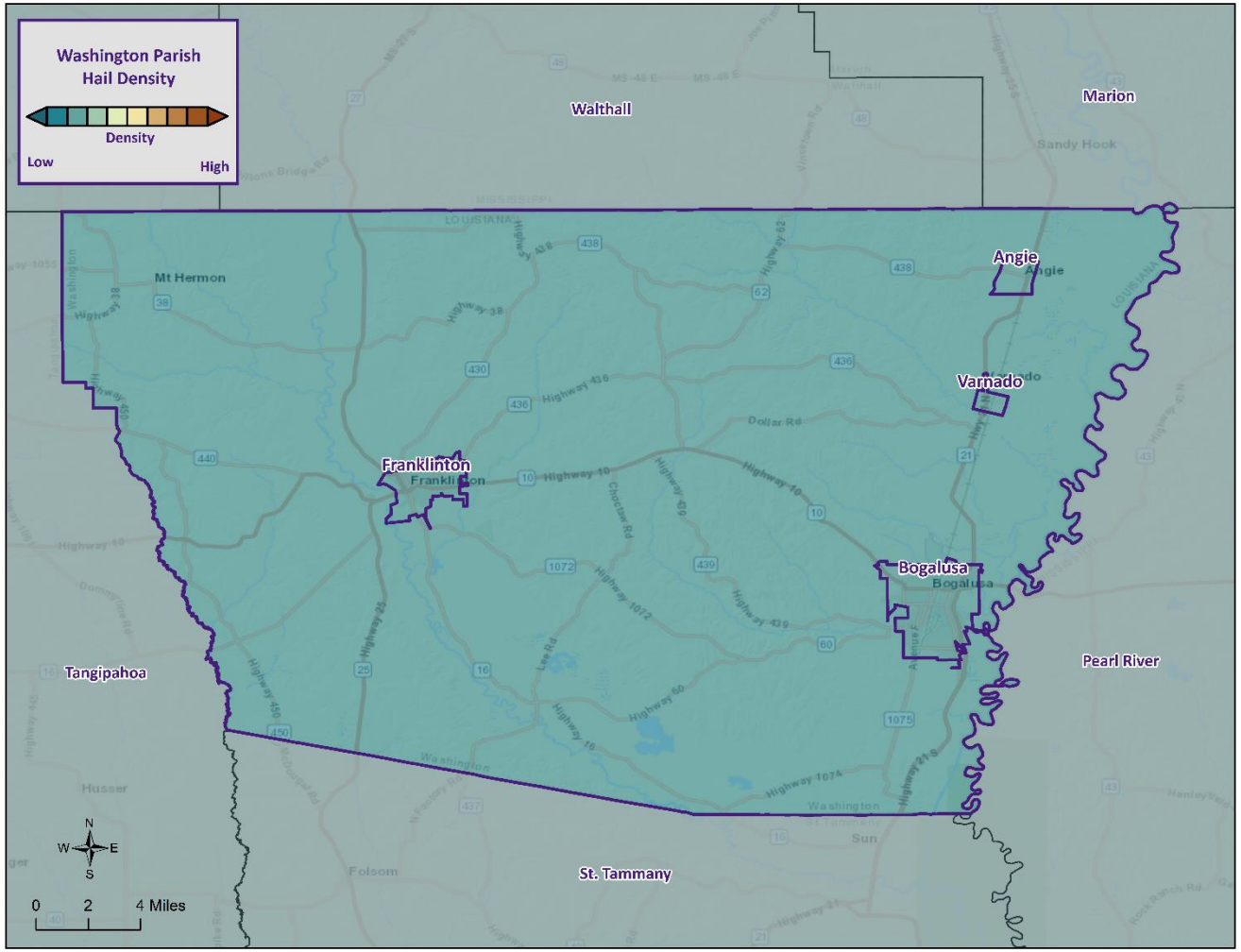
Thunderstorms

- 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.

Density of Prior Hailstorms



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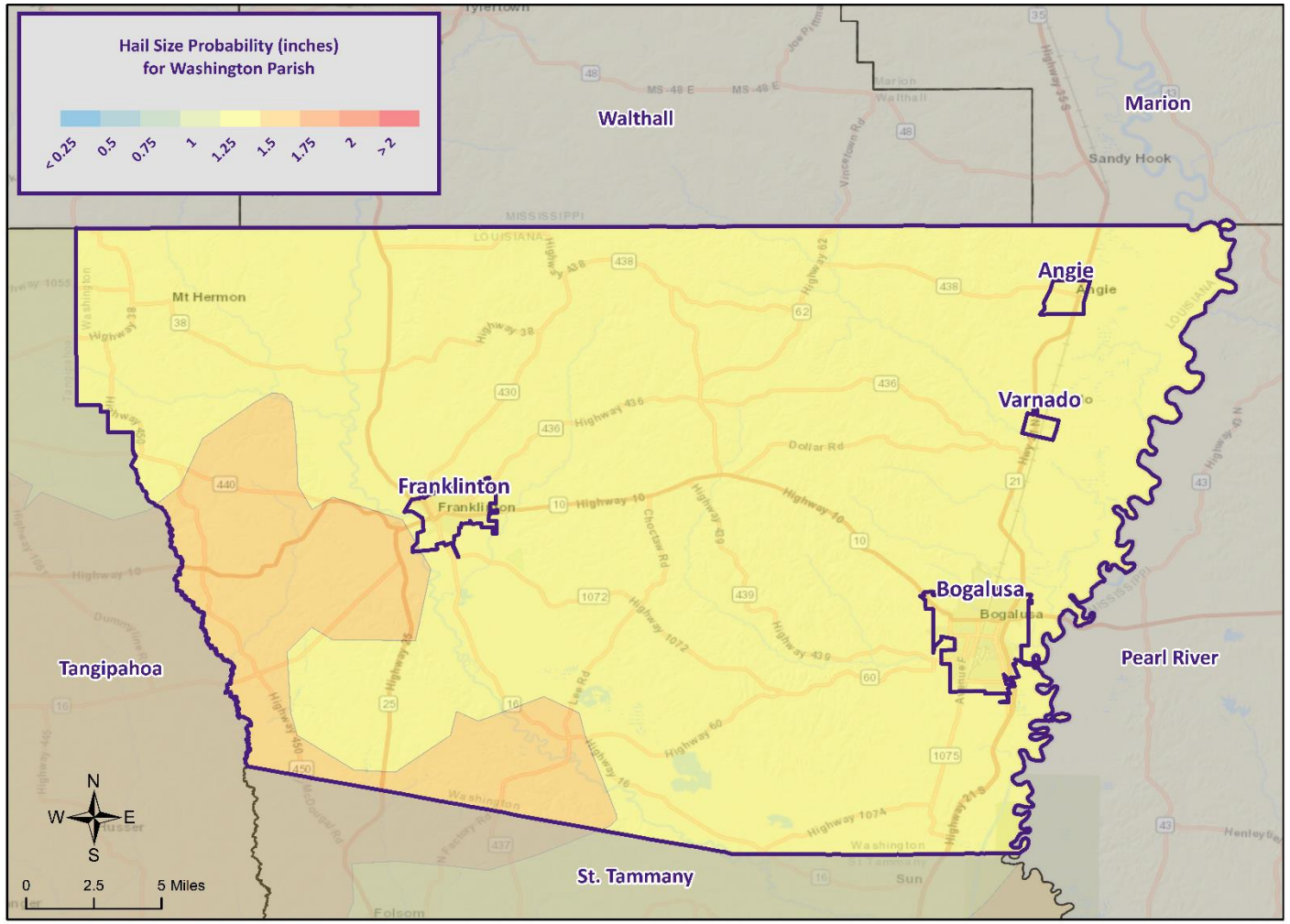
Maximum Hail Size Probability



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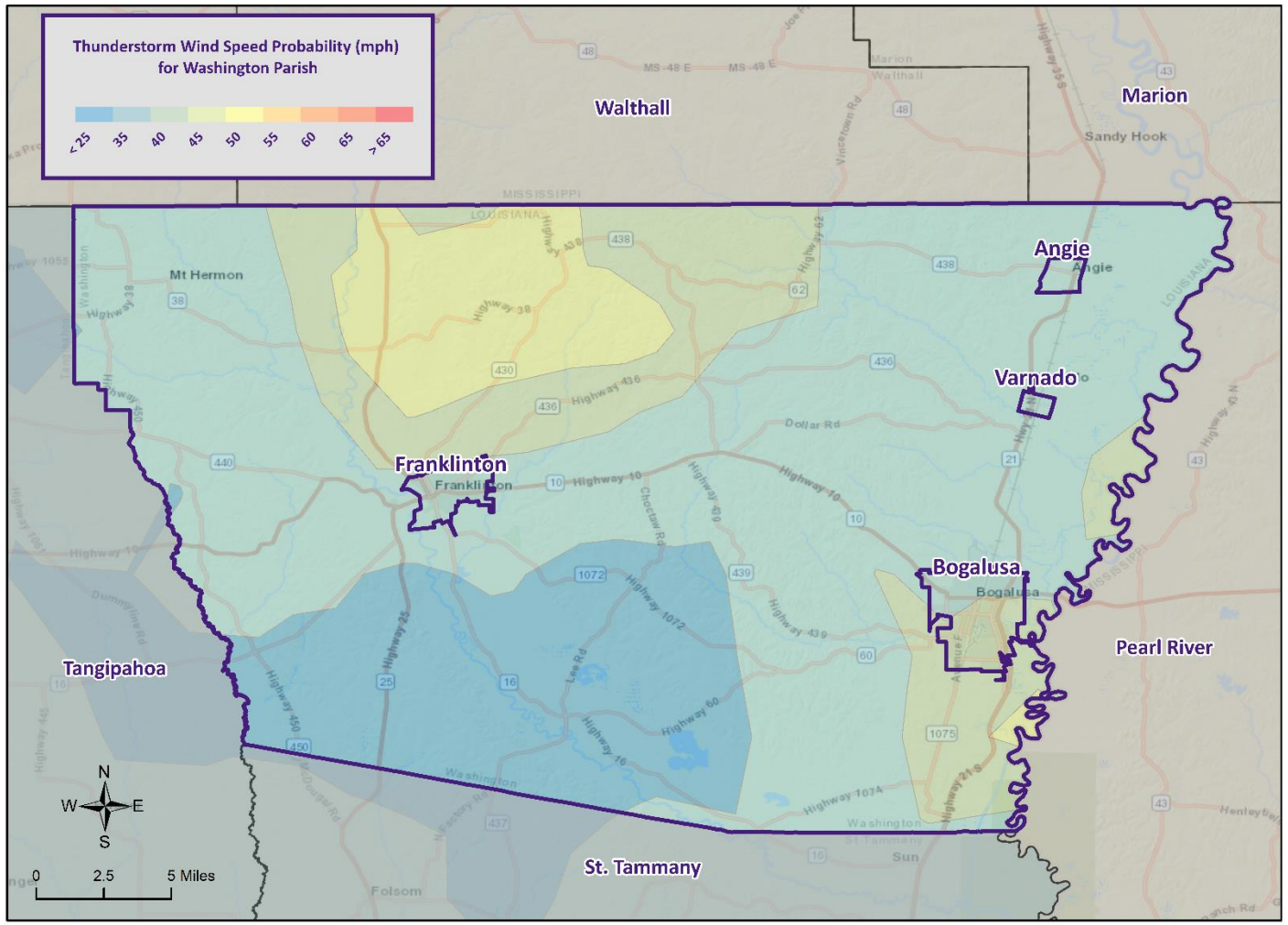
Maximum Wind Speed Probability



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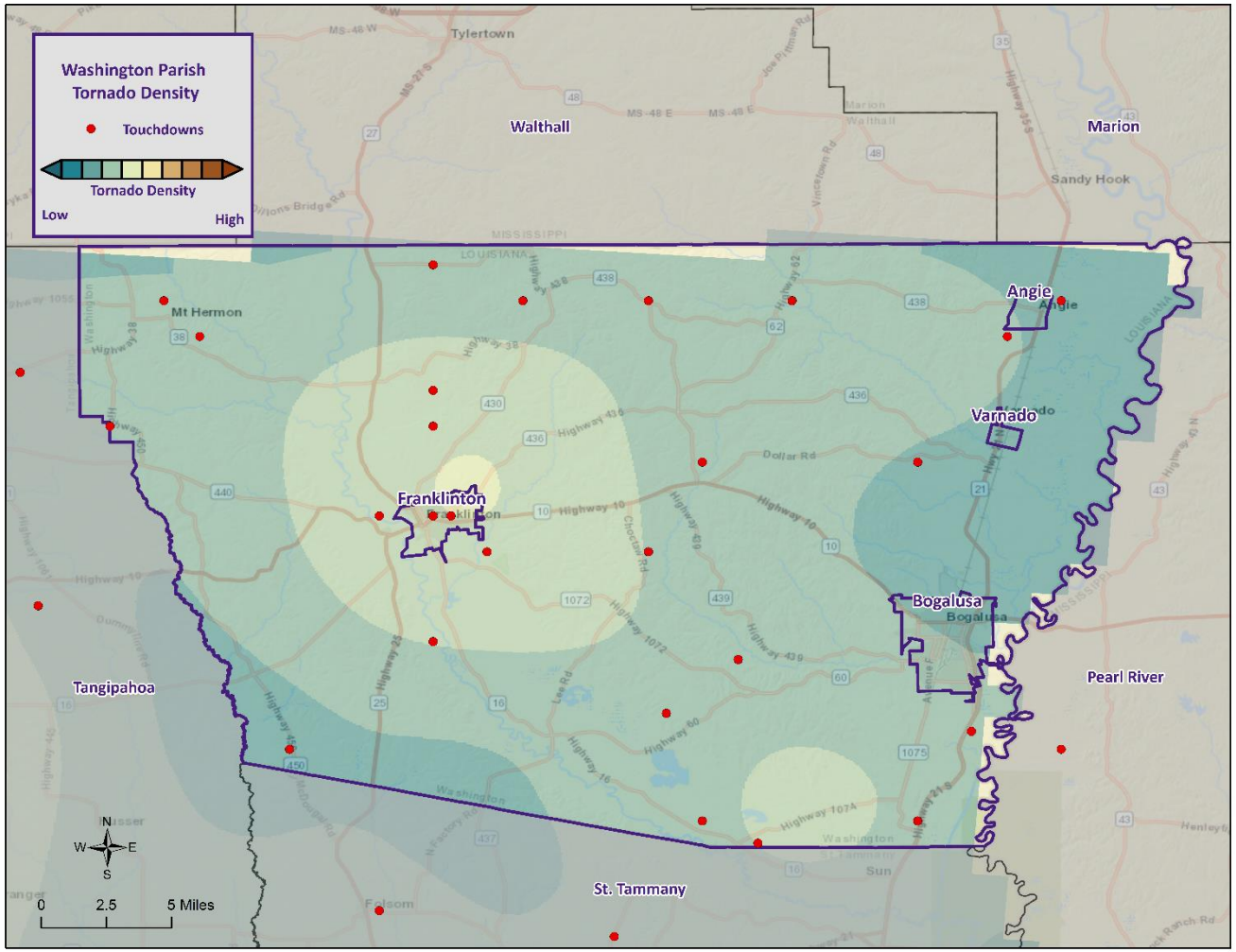
Tornadoes

- 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

Tornadoes



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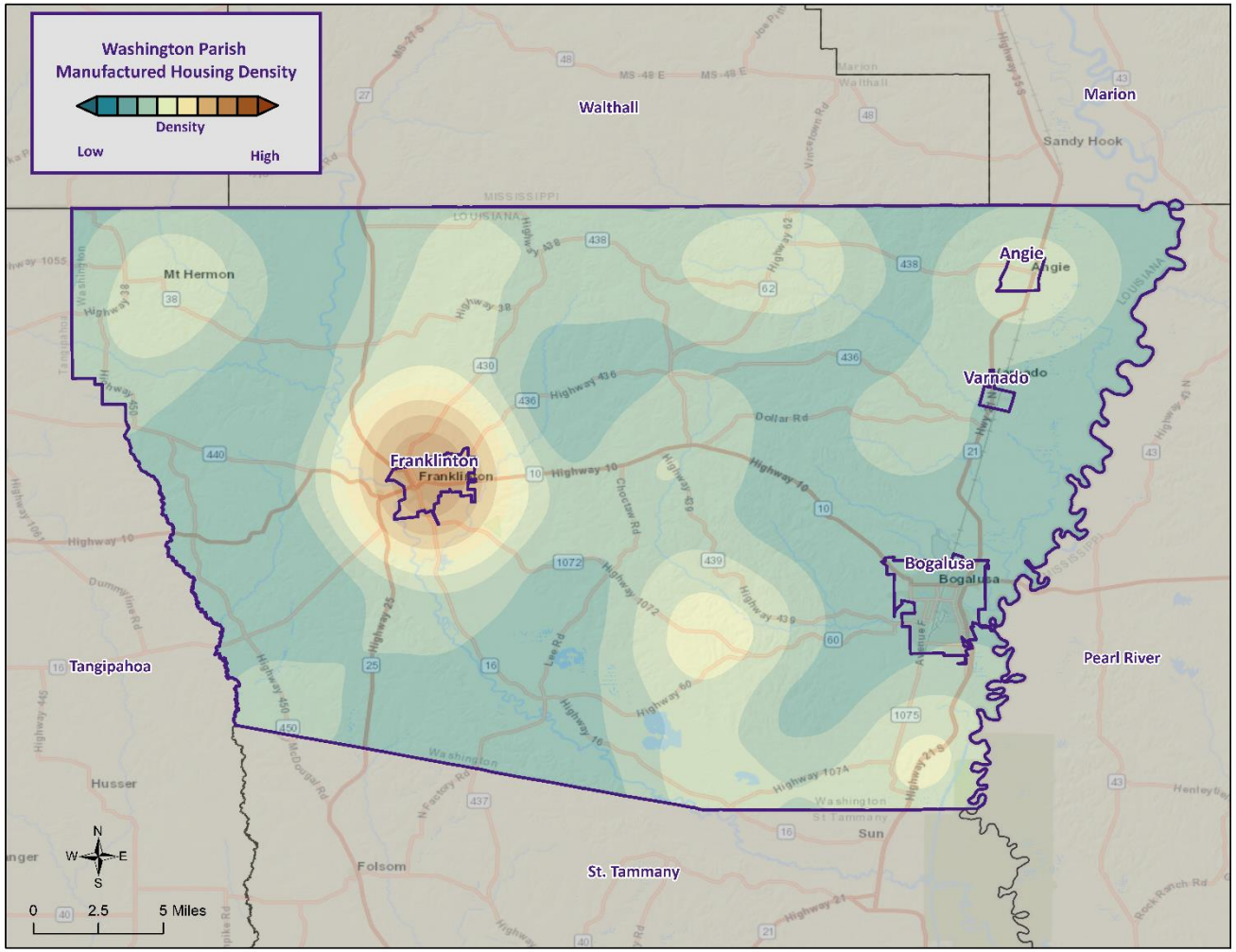
Manufactured Homes Density



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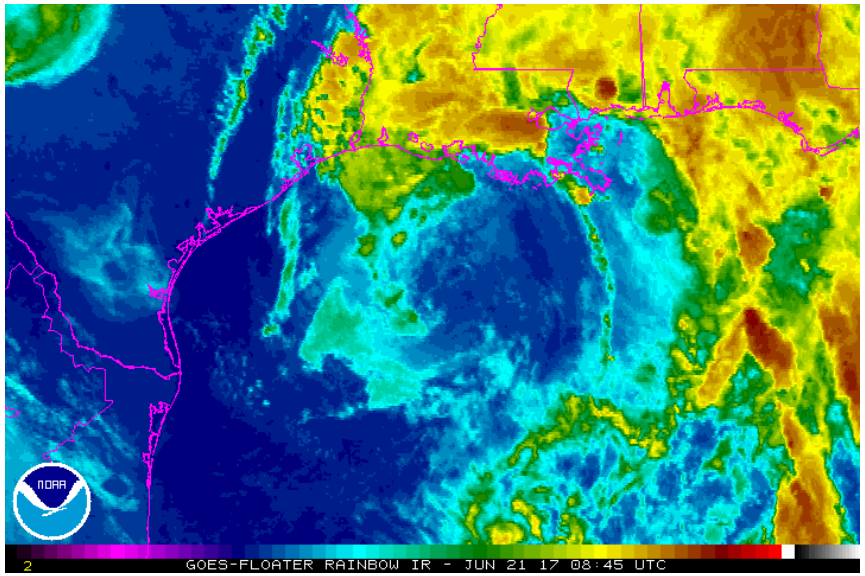
Tropical Cyclones

- 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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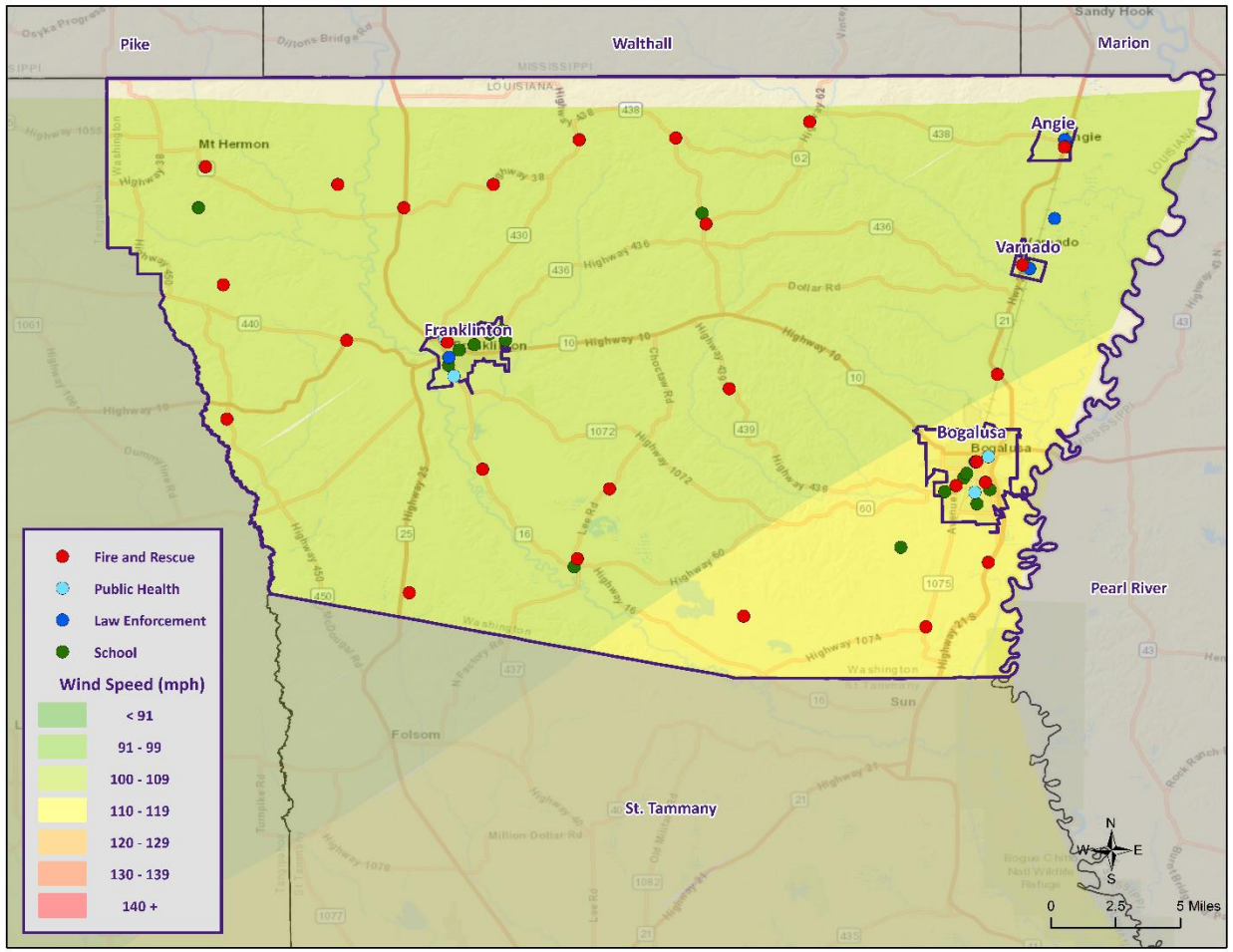
Hurricane Zeta

Wind Speed Impacts on Critical Infrastructure



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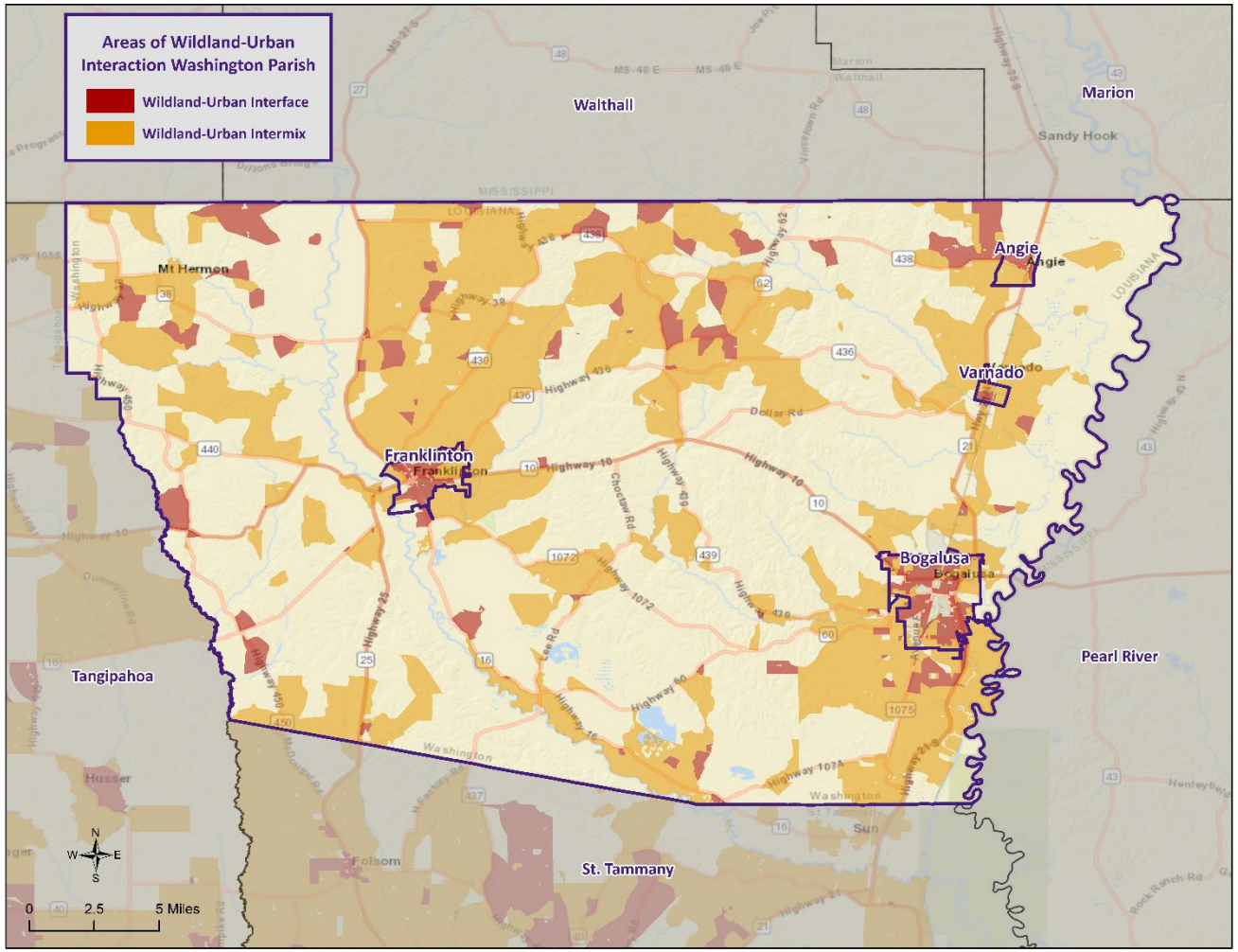
Wildfires

- 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



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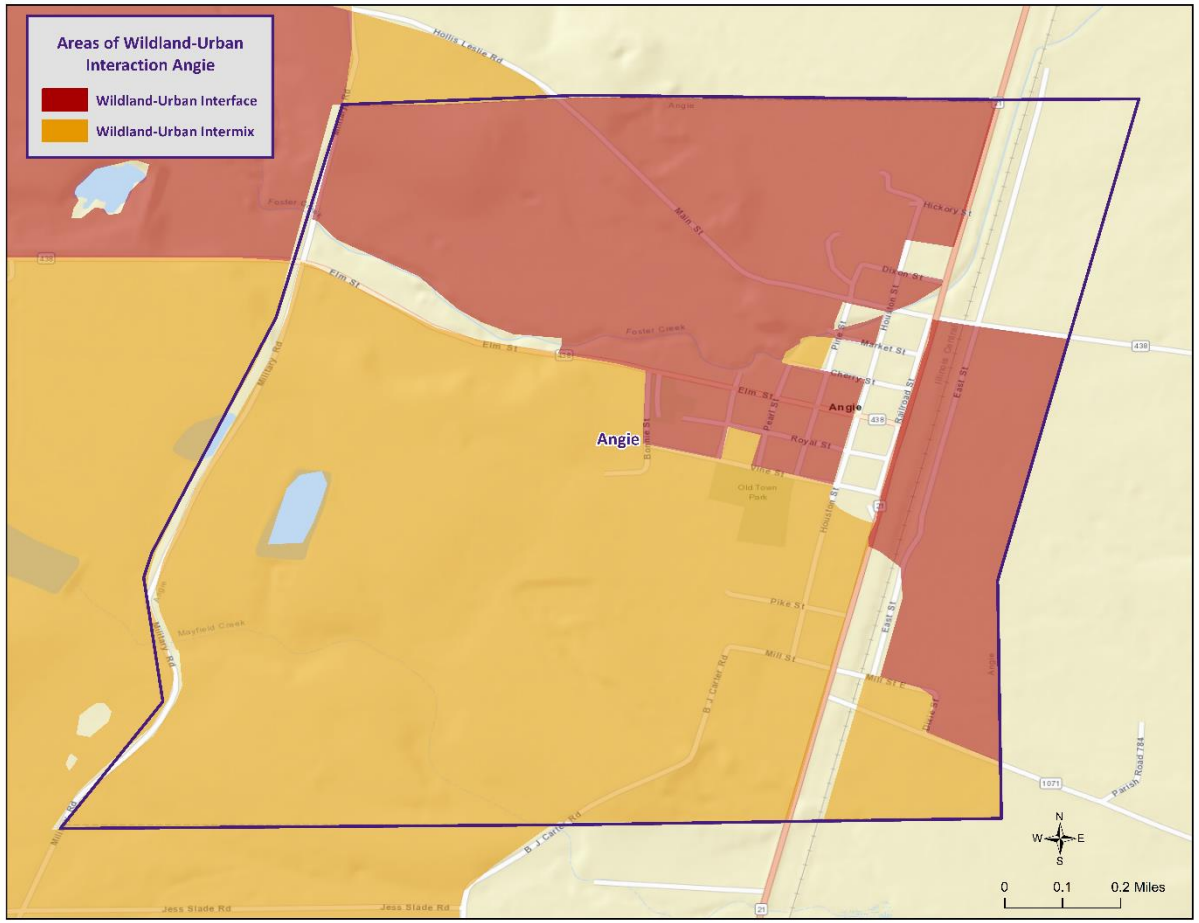
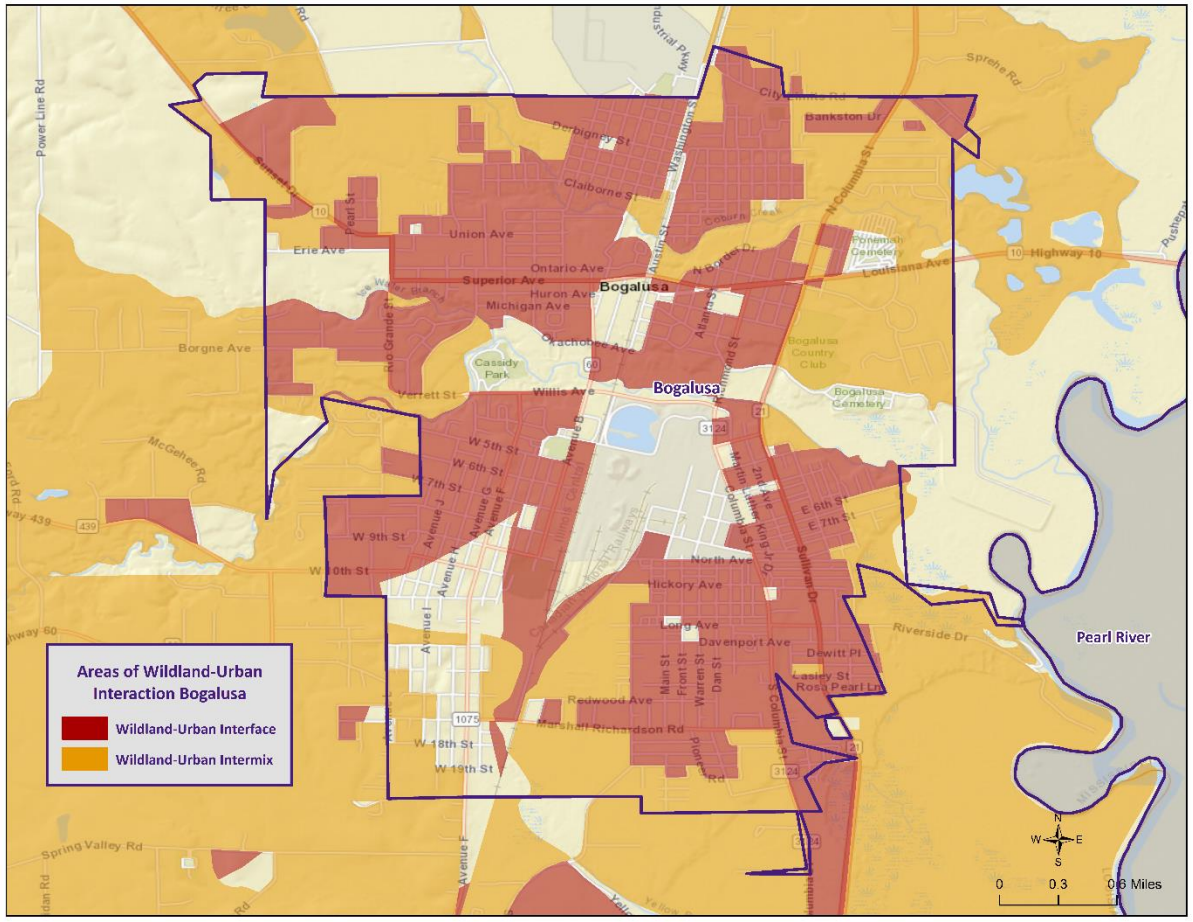
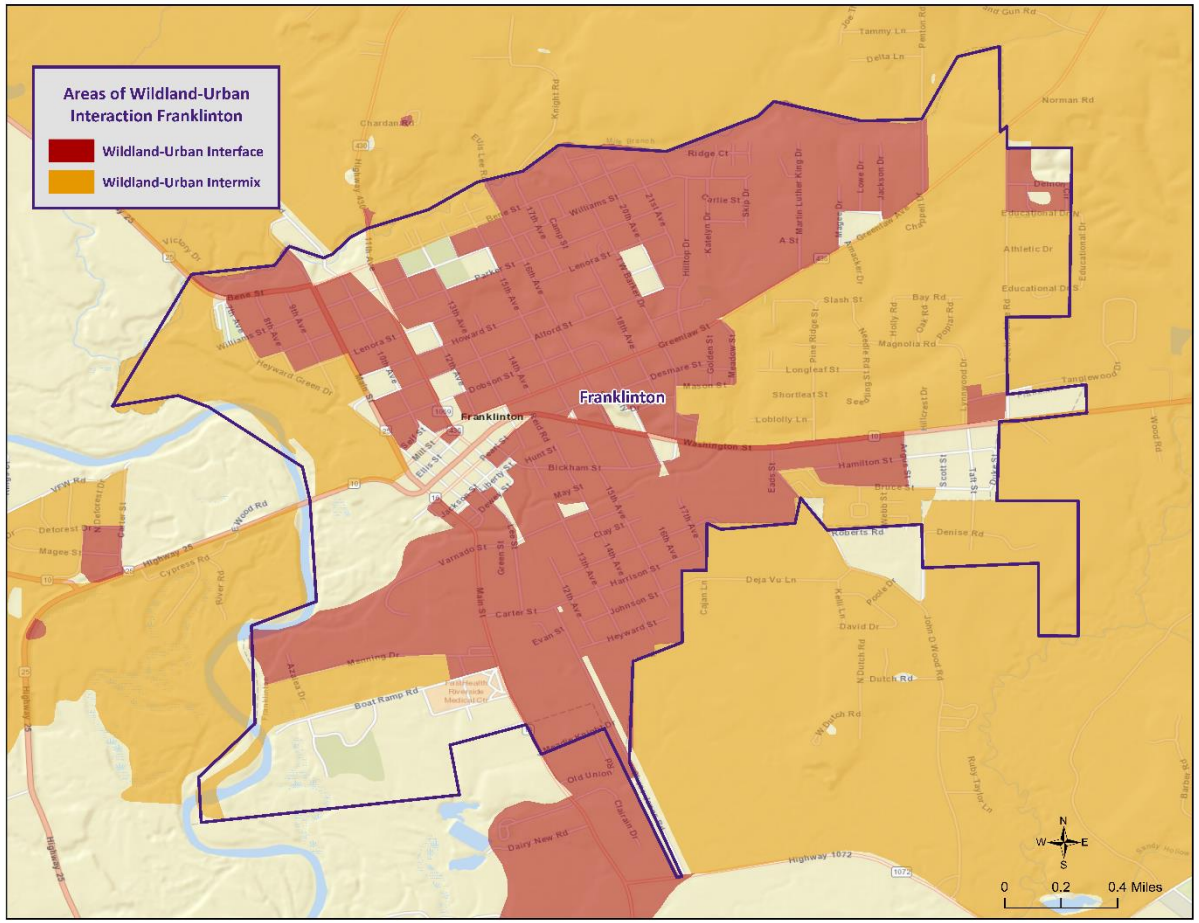
WUI: Angie



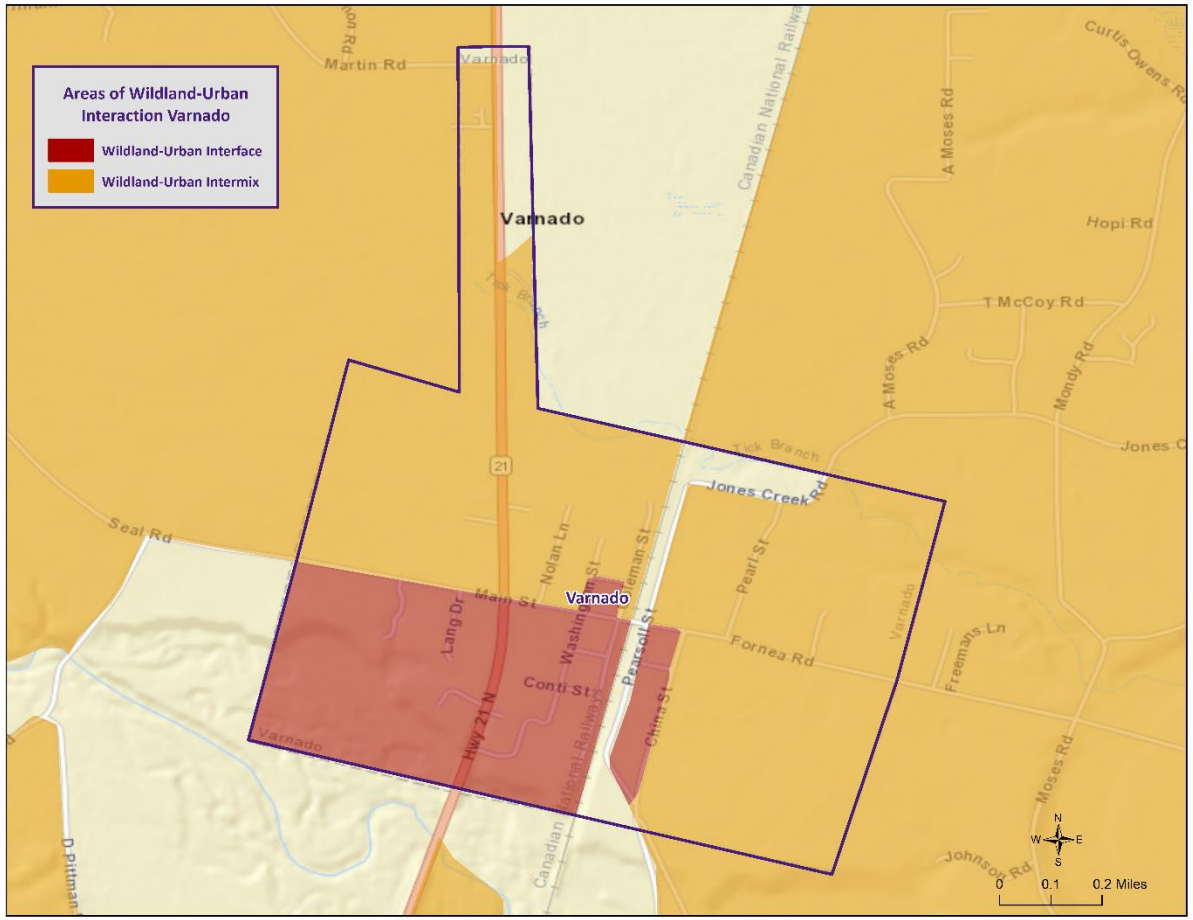
WUI: Bogalusa



WUI: Franklinton



WUI: Varnado



Winter Storms

- 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.

Parish Mitigation Goals

- Identify and pursue preventative measures that will reduce future damages from hazards.
- Enhance public awareness and understanding of disaster preparedness.
- Reduce repetitive flood losses in the parish.
- Facilitate sound development in the parish to reduce or eliminate the potential impact of hazards.

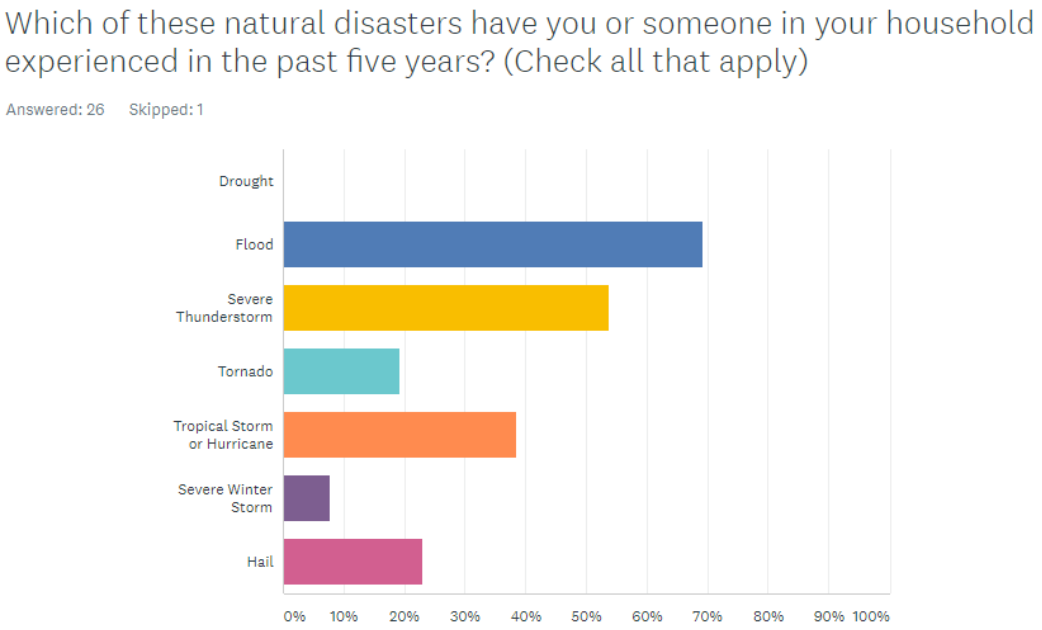
Parish Hazard Mitigation Project Update

Washington Parish OHSEP/Washington Parish Government Discussion

Public Outreach Activity #1

Hazard Mitigation Public Opinion Survey

https://www.surveymonkey.com/r/WashingtonHM2021



Public Outreach Activity #2

Please fill out an incident questionnaire!

WASHINGTON PARISH PUBLIC MEETING

PUBLIC ACTIVITY: INCIDENT/ISSUE QUESTIONNAIRE

1. HAZARD TYPE(S):

A. FLOODING
I. RIVERINE
II. STORM SURGE
III. STREET
IV. OTHER (DESCRIBE):
B. HIGH WINDS (NOT TROPICAL)
C. COASTAL
I. SALTWATER INTRUSION
II. EROSION
III. OTHER (DESCRIBE):
D. TROPICAL SYSTEMS
E. WINTER WEATHER

F. OTHER:

2. DESCRIBE INCIDENT OR ISSUE:

3. LOCATION:

A. CITY:

B. ADDRESS OR AREA:

C. LOCALIZED OR DISPERSED:

4. INTENSITY:

A. DEPTH (FLOODING) OR SIZE (HAIL, ETC):

B. WIND STRENGTH

5. RE-OCCURRING OR ONE-TIME

A. IF RE-OCCURRING, 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 PROBLEM OR IMPACT BE PREVENTED, FIXED OR ALLEVIATED?

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