

# RESILIENT HOUSING PLAN

ST. JOHN THE BAPTIST PARISH

NOVEMBER - 2023

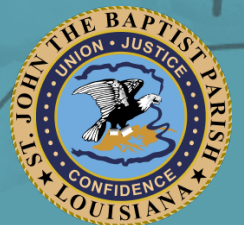


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## ACKNOWLEDGEMENTS

The St. John the Baptist Parish Planning and Zoning Department expresses gratitude to the many individuals who contributed their time and effort to the creation of this plan.

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## IMPORTANT DEFINITIONS<sup>1</sup>

**Base Flood Elevation (BFE):** Elevation of the 100-year flood. The BFE is the basis of the insurance and floodplain management requirements of the NFIP.

**Floodplain Management:** the community-based effort to prevent or reduce the risk of flooding, resulting in a more resilient community.

**Freeboard:** Additional amount of height between the ground and a building's first floor that accounts for uncertainties in the determination of flood elevations.

**National Flood Insurance Program (NFIP):** A federal program administered by FEMA that provides flood insurance to property owners, renters, and businesses. Guarantees flood insurance to anyone living in 23,000 participating NFIP communities.

**Repetitive Loss:** A residence covered by NFIP that has incurred flood-related damages on two occasions during a 10-year period, in which the cost of repairing the damage, on average, equaled or exceeded 25% of the market value.

**Special Flood Hazard Area (SFHA):** Area having special flood, mudflow, or flood-related erosion hazards. The SFHA is where the National Flood Insurance Program's (NFIP's) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies.

**Severe Repetitive Loss:** A residence covered by NFIP that has incurred flood-related damage for which four or more separate claims payments have been made, or for which at least two separate claims payments have been made that exceed the market value of the building.

<sup>1</sup> Source: FEMA. (2023). FEMA Acronyms, Abbreviations, and Terms. <https://www.fema.gov/about/glossary>

## 1. EXECUTIVE SUMMARY

Through a 2022 US EPA Gulf of Mexico Cooperative Agreement, St. John the Baptist Parish became one of three communities selected to pilot the use of a Community Resilience Housing Guide as a framework for Resilient Housing Plan development. The Guide was developed by Smart Home America and the Mississippi State University Gulf Coast Community Design Studio, with support from the Mississippi Department of Marine Resources.

In addition to piloting use of the Guide, this Resilient Housing Plan advances implementation of St. John the Baptist Parish's Louisiana's Strategic Adaptations for Future Environments (LA-SAFE) Adaptation Strategy. Specifically, the Plan comprises data and recommendations addressing two strategies outlined in St. John's LA-SAFE strategy: (1) directing growth to lower-risk areas on higher ground, and (2) providing a range of housing and development types to develop neighborhoods that promote health and help manage stormwater. This Plan covers a broad range of housing issues and can be used as a path from the current state of housing toward a more resilient future. Parish elected leadership and department staff can refer to the Damage and Loss Reduction Plan, Disaster Recovery Housing Plan, Community and Stakeholder Education Plan, and the Strategic Funding Plan to find clear implementable steps to improve equitable housing and disaster preparedness.

Although this plan includes extensive analysis and findings (see below), two of the major themes throughout this plan are (1) St. John has an opportunity to grow as a receiver Parish, providing land that is safer from flood hazards than many surrounding communities, but (2) St. John residents are struggling with acute poverty and widespread social vulnerability, and St. John the Baptist Parish must address these issues immediately to support resilient growth. A summarized list of findings is included below.

### FINDINGS

- Demographic Change:** St. John the Baptist Parish's population decreased by 7.5% between 2010 and 2020. In the same timeframe, adults above the age of 64 increased by 36% while most other age groups declined. As residents of St. John the Baptist Parish age, they will require assistance to remain in their homes



or will need a wider range of housing types, such as an increased number of one-bedroom apartments. Population decline was greater in the western half of the East Bank, where Census Tracts 706 and 707 experienced declines of more than 20% of the population between 2010 and 2020.

2. **Housing Unit Growth:** The total number of housing units in St. John the Baptist Parish increased by only 1.6% in the past decade, more slowly than recent national and regional statistics. Mobile homes comprise an increasing percentage of the housing landscape. The availability of 5+ unit buildings in St. John the Baptist Parish has dramatically decreased, and there is an evident mismatch between demand for affordable housing and the provision of units that are affordable to residents, specifically those with low- to moderate-incomes.
3. **Vulnerable Housing:** There are approximately 17,746 housing units in St. John. FEMA has designated 2,411 Repetitive Loss (RL) and Severe Repetitive Loss (SRL) homes in St. John the Baptist Parish. A total of 3,933 properties are estimated to be below the Base Flood Elevation (BFE) in the Special Flood Hazard Area (SFHA). Some of the densest residential neighborhoods in St. John the Baptist Parish are in the AE Flood Zone, or area designated by FEMA to present a 26% chance of flooding over the life of a 30-year mortgage. Although the West Shore Lake Pontchartrain levee will reduce this risk substantially, it will not eliminate flood risk completely.
4. **Poverty as a Main Driver of Environmental Risk:** St. John has a regionally unique concentration of poverty or near-poverty and social vulnerability.<sup>1</sup> This factor, combined with an aging population and a suburban/rural development pattern that is not thoroughly served by a transportation network, can foster social isolation and exacerbate social vulnerability factors. To this effect, this Plan acknowledges that pervasive poverty in St. John the Baptist Parish is a substantial factor preventing long-term resilience, and supports an approach to hazard mitigation that highly prioritizes addressing poverty, increasing access to financial and supportive services,

and community investment. This approach acknowledges that when all members of a community have the resources to adapt, change, and make difficult decisions, resilience to environmental risks increases.

5. **Strategic Opportunities for Residential Growth:** As indicated on flood hazard maps for St. John the Baptist Parish, the land least subject to flood risk lies closest to the Mississippi River on the East and West banks of St. John the Baptist Parish. This is due to the natural ridge from sediment deposition from the river, and because St. John's coastal flood risk sources are Lake Pontchartrain and Lake Maurepas (to the north) and Lac Des Allemands and the Gulf of Mexico more broadly (to the south). Opportunities to increase housing density and spur infill development closest to the riverbank exist on both the East and West Bank.

## 2. RECOMMENDATIONS

1. **Adopt the Resilient Housing Plan**, its goal-setting components, and associated Plan Elements to advance a more resilient and cohesive housing environment in St. John the Baptist Parish.
2. **De-incentivize growth in high-risk areas. As noted in the findings, a significant percentage of the existing housing stock in St. John sits in the SFHA.** While mitigation measures underway Parish-wide may reduce storm surge flooding, St. John the Baptist Parish needs to maintain wetlands and aquatic resources as a crucial flood mitigation measure. One tool St. John the Baptist Parish can use is the Coastal Use Permit process, which can enforce mitigation measures for new housing development in rural, undeveloped areas of St. John the Baptist Parish more prone to flood risk.
3. **Support, protect, and create marsh near the levee to reduce storm surge impacts, conserve land that provides a critical wetland function, protect the integrity of the levee system, and enhance St. John the Baptist Parish's CRS rating, including:** (1) implementation of marsh restoration or

<sup>1</sup> Robichaux, B. (2023). New report shows 47% of St. John households earn below cost of living. L'Observateur. <https://www.lobservateur.com/2023/05/27/new-report-shows-47-of-st-john-households-earn-below-rising-cost-of-living/>



creation projects to improve wetland health, (2) revisiting and strengthening current zoning regulations, (3) identifying existing wetlands within and north of the levee alignment as an area of special protection through the Coastal Use Permit process, and (4) coordinating and advancing the purchase of land within the levee alignment by St. John the Baptist Parish or the State.

4. **Emphasize infill in low-density areas that are less prone to flooding.** Many areas further south of the levee alignment are zoned for residential use and these lower risk areas—specifically those closer to the Mississippi River, including on the West Bank—present significant opportunities for infill development with moderate increases in density. St. John the Baptist Parish can consider increased incentives for infill development, alter zoning laws to permit additional units through Accessory Dwelling Units (ADUs), and encourage projects that build affordable housing.
5. **Mitigate existing structures through elevation and strengthened roofs.** Elevating a structure decreases its vulnerability to damage from floodwaters. St. John the Baptist Parish is already working to assist homeowners with grants for home elevation, securing \$1,544,173 through Swift Current initiative grants and \$9,850,000 in Flood Mitigation Assistance Grant Program (FMA) funding<sup>1</sup>. St. John applies for FMA and other FEMA funding annually. FEMA’s Hazard Mitigation Grant Program, Flood Mitigation Assistance Program, and Pre-Disaster Mitigation Grant Program all include property elevations as an eligible project type. The Louisiana Fortify Homes Program offers grants of up to \$10,000 for homeowners to upgrade their roofs to the FORTIFIED Roof standard set by the Insurance Institute for Business & Home Safety.<sup>2</sup>
6. **Mitigate damage to new structures through the adoption of higher standards.** Approximately 18,000 (or 88%) of the 20,400 buildings in St. John the Baptist Parish are residential units constructed in or prior to 2007. These units are at increased exposure to wind risk because they were constructed prior to the adoption of the IBC/IRC codes Parishwide in 2007. Homes with strengthened building envelopes, openings, and load path connections will better protect residents and their property during severe weather. Measures to improve the fortification of Parish housing could include replacing aging mobile homes, adopting wind standards in the local building code, and hosting workforce development programs to train and license more local contractors in FORTIFIED construction standards, a voluntary construction industry standard that includes a collection of construction upgrades designed to enhance home resilience to severe weather.<sup>3</sup>
7. **Plan for ongoing Resilient Projects Completion, including West Shore Levee completion, specifically:**
  - **West Shore Lake Pontchartrain Risk Reduction System.** This project will provide 100-year hurricane and storm surge protection to 60,000 Louisianans in St. Charles, St. James, and St. John the Baptist Parishes, including the entire East Bank of St. John. Because of the long-standing demand for housing units, land in the vicinity of the WSLP levee alignment may be viewed as “ripe for development” by residential homebuilders. Possible changes to the Flood Insurance Rate Maps (FIRMS) after completion of the levee may also encourage the construction of additional slab-on-grade homes in LaPlace that could still be subject to localized rainfall flooding not mitigated by the levee. Protecting marshland from development can build additional resilience as the levee is completed.

<sup>1</sup> L’Observateur. (2023, July 26). Funding allocated for property elevation in St. John Parish. <https://www.lobserveateur.com/2023/07/26/funding-allocated-for-property-elevation-in-st-john-parish/> and L’Observateur. (2023, September 6). St. John Parish receives \$9.85M to raise flood-prone structures.

<sup>2</sup> L’Observateur. (2023, September 6). St. John Parish receives \$9.85M to raise flood-prone structures. <https://www.lobserveateur.com/2023/09/06/st-john-parish-receives-9-85m-to-raise-flood-prone-structures/>

<sup>3</sup>Louisiana Fortify Homes. (2023). Louisiana Fortify Homes Program. <https://ldi.la.gov/fortifyhomes>



## WHY ADOPT A RESILIENT HOUSING PLAN?

Wind damage and flooding from Hurricane Ida in 2021 underscored a critical need to develop a community-wide resilient housing plan that establishes a clear framework for the development and protection of residential housing moving forward so that residents are better prepared and protected from future wind and flood events. This project seeks to undertake a planning process to address two strategies outlined in the housing goal of the Adaptation Strategy: (1) direct growth to lower-risk areas on higher ground, and (2) provide a range of housing and development types to develop neighborhoods that promote health and help manage stormwater.

- **Airline/Main and Belle Terre Streetscape and Stormwater Improvements.** Study and document the impact of these localized stormwater management improvements to achieve additional CRS points and seek additional funding for future stormwater management projects.
8. **Prepare and pilot programs that anticipate known challenges associated with housing recovery.** By developing additional programming that helps prepare residents for future disasters, St. John the Baptist Parish can mitigate the severity of housing damage. Community programming can include resources and education for homeowners on repairs, contractor fraud, home elevation, and disaster preparation. St. John the Baptist Parish can also work toward developing buyout programs for the most vulnerable properties, such as those in VE flood zones, and apply for funding for

homeowner repair and elevation programs.

9. **Prioritize poverty reduction as a foundational step in building resilient communities.** Include the provision of tangible benefits (food, shelter, immediate funds) to individual residents at or near the poverty line and work to meaningfully reduce poverty and social vulnerability through social interventions. Reductions in poverty will enable a more equitable and relevant long-term community planning process for areas in transition.

## 3. INTRODUCTION

### **ST. JOHN RESIDENTS ARE SURVIVORS.**

Following flooding and damage to over 7,000 homes during Hurricane Isaac in 2012, St. John the Baptist Parish (St. John) participated in the Louisiana's Strategic Adaptations for Future Environments (LA SAFE) planning process resulting in the St. John the Baptist Parish Adaptation Strategy. One of the primary goals of the strategy is to direct growth to low-risk areas to create safe, inclusive, and vibrant communities throughout St. John the Baptist Parish. The Strategy outlines a 50-year vision of St. John the Baptist Parish's role as a receiver community, or a community likely to grow due to anticipated inland migration from nearby coastal areas. For example, as risks associated with flooding, wind, and sea level rise increase in coastal Louisiana over time, populations from higher-risk areas are likely to migrate to St. John, especially from coastal Parishes to the south. The receiving role within the region necessitates strategic adaptation measures that prepare for rapid growth. This preparation aims to increase long-term community resilience by limiting development in high-risk areas and improving the built environment to withstand and adapt to long-term challenges.

### **GOALS OF THE RESILIENT HOUSING PLAN**

- Assess the status of existing housing stock.
- Identify high-risk areas where housing construction should be avoided.
- Propose strategies to reduce damage and loss through land use policies and improvements to construction practices.
- Review and create a more effective housing disaster recovery policy.
- More effectively apply for, receive, and use funding for housing goals.





## 4. WHAT IS RESILIENCE?

Resilience is the ability to anticipate, prepare for, and adapt to changing environmental conditions to lessen the impact of future hazards within a community. This term can apply to many characteristics of a community; for example, the building stock can be built to withstand flood and wind forces, levees can be constructed to protect homes and property from water, and local governments can ensure that vulnerable residents or residents with special needs such as children, residents with pets, residents with limited mobility, or elderly community members have an evacuation plan or an area of refuge in an emergency. Social resilience can include the implementation of programs to ensure residents are not living in impoverished or underhoused environments, and the provision of financial aid to persons or businesses to ensure that they can withstand the economic disruption that may accompany a disaster. Resilience is unique to every community and describes the geographic exposure to risk; advantages and disadvantages of a community’s structures, facilities or infrastructure; and the needs of community members sharing common risks or vulnerabilities.

Hazards can be natural or man-made. These include but are not limited to flooding events; hurricanes; effects of long-term environmental degradation;

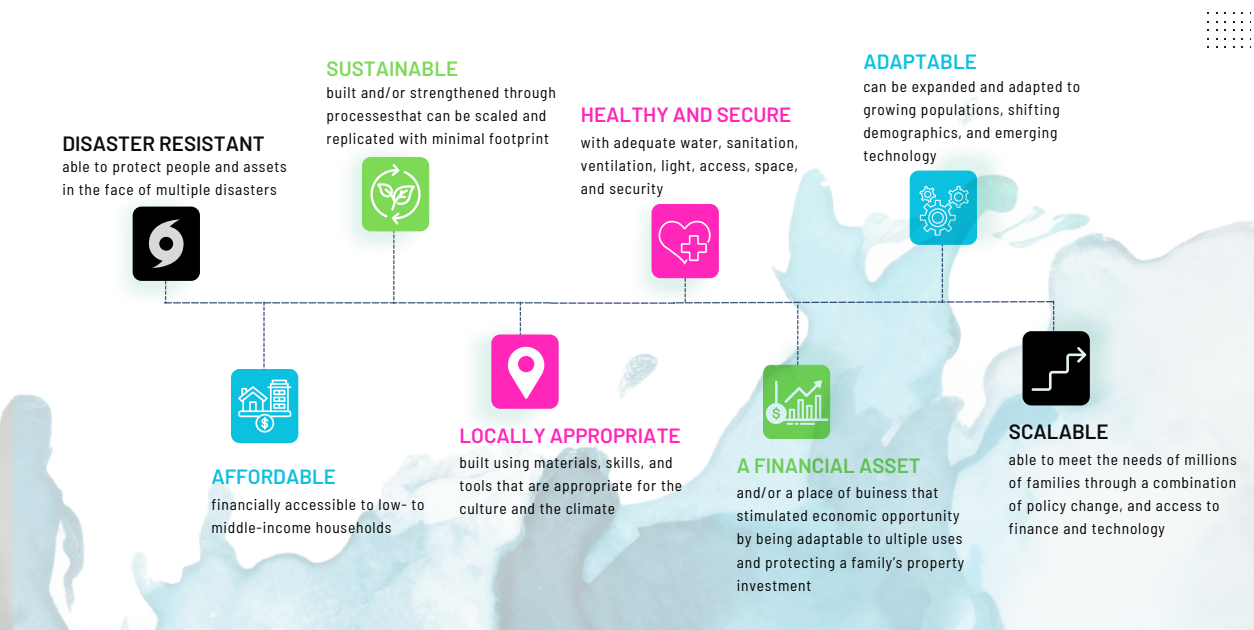
short-term/intermittent failure/under performance of infrastructure; or economic shocks. To plan for resilience and mitigate hazards, St. John can take the following actions:

**PREPARE** for future hazards to lessen their impact, including:

- Ensure that St. John the Baptist Parish has a well-functioning storm protection system, drainage system, Emergency Operation Center (EOC), and network of shelters and supplies.
- Operate and maintain up-to-date, wide-reaching communications systems.
- Undertake routine EOC drills and exercises, including operations and processes to protect critical facilities in a disaster event.
- Ensure that vulnerable residents have housing and access to food and funding resources.
- Support small businesses and a diverse local economy.

**IMPLEMENT ADAPTATION STRATEGIES** that make St. John the Baptist Parish more suitable to changing environmental and economic conditions, such as:

- Ensure new homes and apartments in St. John the Baptist Parish are built to withstand severe wind and flooding events.



Recreated from source: Build Change. (2022) Guide to Resilient Housing. <https://buildchange.org/wp-content/uploads/2022/08/>



- Provide grants for homeowners to retrofit or rebuild homes constructed in floodplains or homes that cannot withstand flood and wind forces.
- Ensure that residents can access flood insurance and can afford to maintain energy-efficient homes.
- Improve local drainage and flood risk reduction features to improve function during a flood event.
- Build infrastructure to a design standard that exceeds current flood risk and precipitation rates to better ensure continued performance as projected flood risk increases over time.

#### DEVELOP RESPONSE AND RECOVERY

**PROCEDURES** that are implemented immediately after a disaster strikes, including:

- Pre-contract emergency services to secure temporary housing units for displaced residents.
- Provide centralized food and financial aid sites.
- Provide sandbags to residents.
- Maintain dependable operations, supplies and processes to protect and maintain critical facilities after a disaster event.

#### WHAT IS RESILIENT HOUSING?

Build Change, an American nonprofit organization dedicated to retrofitting and rebuilding better housing stock internationally, defines a resilient home as one that “address[es] basic needs, protect[s] families from hazards and climate extremes, and [is] a place of growth and opportunity.”<sup>1</sup> As can be seen in the graphic on page 9, resilient homes should strike a balance between affordability and hazard resistance, and do so in a manner appropriate to local conditions.

By supporting the construction of resilient housing, St. John can reduce residents’ exposure to wind or flood hazards. St. John the Baptist Parish can work to incentivize housing developers to build new housing stock in areas that are on higher ground, as well as reward residential construction that includes stronger roofs, stronger structural supports, and raised foundations that can keep residents above flood waters.

## 5. ST. JOHN’S RISK PROFILE

### PREVIOUSLY IDENTIFIED HAZARDS: WIND AND FLOODING

St. John the Baptist Parish is exposed to a multitude of natural and man-made hazards, the most impactful of which are flooding and wind damage to the large proportion of residential housing stock in St. John the Baptist Parish.<sup>2</sup> Based on an analysis of the hazards considered in St. John the Baptist Parish Hazard Mitigation Plan, tropical cyclones (wind events) and flooding were ranked with the highest risk factor through a consideration of the hazards’ probability, impact, spatial extent, warning time, and duration (**Table 1**). The findings of this analysis align with the history of major disaster declarations in St. John the Baptist Parish (**Table 2**).

For this analysis, St. John the Baptist Parish considers its exposure to these hazards separately. St. John the Baptist Parish has significant exposure to wind hazards due to the variability of building standards and quality of wind protection across the housing stock in St. John the Baptist Parish. A significant proportion of housing stock was built prior to 2007 when building codes (including construction methods to withstand wind hazards) were implemented Parish-wide.

St. John the Baptist Parish also has significant exposure to flood hazards; however, this part of the risk profile is actively undergoing change because the West Shore Lake Pontchartrain (WSP) Levee is under construction. St. John is subject to all six types of flooding that occur in Louisiana: riverine, flash, ponding, backwater, urban, and coastal flooding.<sup>3</sup> In addition to the changing element of flood risk, this existing housing assessment examines an emerging risk factor for St. John - the potential for residential build-out within the undeveloped portion of the WSP Levee footprint. This could contribute to the loss of undeveloped area in St. John the Baptist Parish which serves a critical mitigation function as a natural floodplain and swamp that stores, retains and filters water resources.

The construction of the WSP Levee will greatly enhance flood protection for coastal and backwater flooding for the entire East Bank of St. John the

1 Build Change. (2022). Guide to Resilient Housing. <https://buildchange.org/wp-content/uploads/2022/08/The-Build-Change-Guide-to-Resilient-Housing-compressed.pdf>

2 Stephenson Disaster Management Institute of the Louisiana State University. (2021). St. John the Baptist Parish Hazard Mitigation Plan Update. <https://www.sjbParish.gov/files/content/public/v/4/departments/planning-and-zoning/hazard-mitigation-plan-update/st.-john-the-baptist-hazard-mitigation-plan.pdf>

3 Ibid.



Baptist Parish to the 100-year standard, but a significant portion of housing stock will remain subject to flash flooding, ponding, and urban flooding – flooding types that are highly dependent on the effectiveness of St. John the Baptist Parish’s drainage system.

## 6. PLANNING FOR RESILIENCE

This Resilient Housing Plan builds upon and connects previous and existing efforts to research and plan for resilient housing in St. John the Baptist Parish, as well as connects existing efforts to build resilience through coastal restoration, levee construction, and stormwater management. Previous planning efforts include:

### **2008 HOUSING DATA REPORT**

This housing data report provides a snapshot of the key housing attributes in St. John the Baptist

Parish, including a statistical basis for development of a formal Housing Element to the St. John Comprehensive Plan.

### **2014 COMPREHENSIVE LAND USE PLAN**

The St. John the Baptist Comprehensive Land Use Plan was completed in 2014. The Plan identified Parish goals to produce more affordable housing, expand rental options, increase available rental assistance vouchers, and encourage revitalization efforts after Hurricane Isaac in 2012 on lower risk land located within the 100-year floodplain.

### **2016 CAMBRIDGE SUBDIVISION ST. JOHN THE BAPTIST PARISH REPETITIVE LOSS AREA ANALYSIS**

This analysis of specific flooding threats to the Cambridge Subdivision in LaPlace is an example of a detailed repetitive loss area analysis and can serve as a template for future repetitive loss area analyses, as well as a document with

**Table 1: Risk Assessment for St. John the Baptist Parish**

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	Overall Risk
Drought	2	2	4	2	3	2.55
Expansive Soils	4	2	1	1	4	2.45
Flooding	3	4	3	4	3	3.4
Thunderstorms – Hail	3	2	3	3	1	2.45
Thunderstorms – Lightning	2	2	2	3	1	2
Thunderstorms – Wind	2	2	3	3	1	2.2
Tornadoes	3	3	2	4	3	2.95
Tropical Cyclones	4	4	4	1	4	3.55
Winter Storms	2	3	3	1	2	2.3

**Recreated from source:** Stephenson Disaster Management Institute of the Louisiana State University. (2021). St. John the Baptist Parish Hazard Mitigation Plan Update. <https://www.sjbparish.gov/files/content/public/v/4/departments/planning-and-zoning/hazard-mitigation-plan-update/st.-john-the-baptist-hazard-mitigation-plan.pdf>

**Table 2: St. John the Baptist Parish Major Disaster Declarations**

Disaster Number	Year	Declaration
374	4/27/1973	Severe Storm, Flood
556	5/9/1978	Severe Storm, Flood
752	11/1/1985	Tropical Cyclone – Hurricane Juan
956	8/26/1992	Tropical Cyclone – Hurricane Andrew
1049	5/10/1995	Severe Storm, Flood
1246	9/23/1998	Tropical Cyclone – TS Frances and Hurricane Georges
1380	6/11/2001	Tropical Cyclone – TS Allison
1435	9/27/2002	Tropical Cyclone – TS Isidore
1437	10/3/2022	Tropical Cyclone – Hurricane Lili
1548	10/18/2004	Tropical Cyclone – Hurricane Ivan
1603	8/29/2005	Tropical Cyclone – Hurricane Katrina
1786	9/2/2008	Tropical Cyclone – Hurricane Gustav
1792	9/13/2008	Tropical Cyclone – Hurricane Ike
3322	8/18/2011	Severe Storm, Flood
4080	8/29/2012	Tropical Cyclone – Hurricane Isaac
4277	8/14/2016	Severe Storm, Flood
3392	10/6/2017	Tropical Cyclone – TS Nate
4458	8/27/2019	Tropical Cyclone – Hurricane Barry
4484	3/24/2020	COVID-19 Pandemic
3527	6/7/2020	Tropical Cyclone – Tropical Storm Cristobal
3538	8/23/2020	Tropical Cyclone – Tropical Storms Laura and Marco
4559	8/28/2020	Tropical Cyclone – Hurricane Laura
4611	8/29/2021	Tropical Cyclone – Hurricane Ida

**Recreated from source:** Stephenson Disaster Management Institute of the Louisiana State University. (2021). St. John the Baptist Parish Hazard Mitigation Plan Update. <https://www.sjbparish.gov/files/content/public/v/4/departments/planning-and-zoning/hazard-mitigation-plan-update/st.-john-the-baptist-hazard-mitigation-plan.pdf>





**Figure 1:** Current Resilience Projects in St. John the Baptist Parish.

recommendations and findings applicable to several similar neighborhoods in St. John the Baptist Parish reliant on gravity drainage and experiencing significant or repetitive localized flood events.

**2018 LA SAFE ADAPTATION STRATEGY**

The Strategy is a combination of goals and objectives designed to complement the State of Louisiana’s Coastal Master Plan by providing a holistic approach to flood risk that addresses the social, economic and environmental impacts associated with flooding that will endure for generations. A core function of the Strategy is to tie local policies and projects with large-scale Louisiana coastal restoration and protection efforts.



**Figure 2:** Belle Terre Streetscape Design. Source: Reimann, N. (2019). Design work approved for 3-mile lake breakwater in St. John Parish. Nola.com.

**2019 LAPLACE MULTI-MODAL TRANSPORTATION CENTER PLAN**

Transportation improvements for St. John can potentially enable population growth, economic growth, better housing development strategies, and drainage improvements for St. John the Baptist Parish. This serves as a planning document for transportation assets that are also critical to evacuation and long-term community resilience.

**2021 HAZARD MITIGATION PLAN UPDATE**

The 2021 Update to the Hazard Mitigation Plan includes substantial data and analysis of threats faced by St. John the Baptist Parish, the assets subject to these threats, and the prioritization of projects and methods to address and mitigate threats before they occur. An invaluable resource to the community, the 2021 Update included substantial outreach efforts and established a roadmap for St. John the Baptist Parish.

**7. CURRENT RESILIENCE PROJECTS**

**WEST SHORE LAKE PONTCHARTRAIN RISK REDUCTION SYSTEM**

The project includes an 18.5-mile system that includes 17.5 miles of levees, one mile of T-wall, drainage structures, pump stations, and several non-structural protection measures to form an integrated protection system. Spanning from the Bonnet Carre Spillway to the Mississippi River Levee near Garyville, the project will provide 100-year hurricane and storm surge protection to 60,000 Louisianans in St. Charles, St. James, and St. John the Baptist Parishes, including the entire East Bank of St. John.



Recent USACE levee construction and maintenance cost estimates have increased from \$760M to \$3.7B, however levee construction continues and state officials have committed to finding the remaining funds needed while construction is underway.<sup>1</sup> Projected completion: 2026.<sup>2</sup>

**RIVER REINTRODUCTION INTO MAUREPAS SWAMP**

This project reconnects the Mississippi River to the Maurepas Swamp with a 2,000 cubic foot per second freshwater diversion and revitalizes over 45,000 acres of the swamp with freshwater, sediment, and nutrients. The swamp has been cut off from the river for over 80 years and is one of the largest and last remaining coastal freshwater swamps in Louisiana. This project represents a first-of-its kind, innovative approach and enabled the diversion to be considered a mitigation feature for the WSLP levee.<sup>3</sup> Projected completion: Tentative 2026.

**LAKE PONTCHARTRAIN SHORELINE PROTECTION PROJECT**

Since 1915, the western shore of Lake Pontchartrain (near the St. John the Baptist Parish/St. Charles Parish line extending the length of the shore to Tangipahoa Parish) has eroded at a rate of approximately 10 feet per year. The Lake Pontchartrain Shoreline Protection Project will provide improved protection in the form of breakwaters to create a more resilient shoreline. Projected completion: Fall 2024.

1 Leggate, J. Corps Updates Cost for \$3.7b Louisiana Levee System. ENRTexas & Louisiana. <https://www.enr.com/articles/56810-corps-updates-cost-for-37b-louisiana-levee-system-project>  
 2 New Orleans District of the Army Corps of Engineers. (2022). Contract awarded for levee work for the West Shore Lake Pontchartrain project. <https://www.mvn.usace.army.mil/Media/News-Releases/Article/3252735/contract-awarded-for-levee-work-for-the-west-shore-lake-pontchartrain-project/>  
 3 L'Observateur. (2023). River Reintroduction into Maurepas Swamp to Help Revitalize Wetlands. <https://www.lobserveur.com/2023/01/24/river-reintroduction-into-maurepas-swamp-to-help-revitalize-wetlands/>  
 4 LA SAFE (2018). St. John the Baptist Parish Projects Selected for 2018 Funding. <https://LA SAFE.la.gov/engagement/st-john-baptist-parish/st-jbp-introduction/>  
 5 Reimann, N. (2019). Design work approved for 3-mile lake breakwater in St. John Parish. Nola.com. [https://www.nola.com/news/environment/design-work-approved-for-3-mile-lake-breakwater-in-st-john-parish-as-parish-fights/article\\_f756a338-21c8-11ea-af57-97880310fa3f.html](https://www.nola.com/news/environment/design-work-approved-for-3-mile-lake-breakwater-in-st-john-parish-as-parish-fights/article_f756a338-21c8-11ea-af57-97880310fa3f.html)

**AIRLINE AND MAIN: COMPLETE STREETS PROJECT**

The project consists of streetscape improvements on a 1.6-mile stretch of Airline Highway between Tiffany Drive and Main Street and 0.3 miles of improvements along Main Street between Airline Highway and West 5th. Features include green infrastructure installations to hold and filter stormwater runoff, sidewalks, permeable parking, native plantings, and bike lanes. Projected completion: June 2024.<sup>4</sup>

**BELLE TERRE STREETScape AND STORMWATER ENHANCEMENTS**

The project includes design of a suite of streetscape and stormwater management enhancements<sup>5</sup> for approximately 2.25 miles along Belle Terre Boulevard between Interstate 10 and Airline Highway. Enhancements include new lighting, stormwater management features, a multiuse path, interpretive signage, and public art displays. Projected completion: TBD.

**SUNSET PARK RESTORATION**

Directly adjacent to the Manchac Wildlife Management Area, Sunset Park is a recreation area that has endured scouring and erosion in recent years. St. John is planning a restoration project that will include a plan and design effort for the park and rebuild the shoreline, with outreach to

**Table 3: Zoning Typology in St. John**

Zoning Typology	Total Square Miles	% of Total Square Miles
All Parish Land	347	100%
Residential Types	37	10.70%
Rural (Includes some Residential)	167.6	48.30%
Industrial	25.2	7.30%
Commercial	9.4	2.70%
Environmental Conservation	108	31.10%



stakeholders including the Friends of the Manchac Greenway, nearby residents and businesses, and local fishermen. The shoreline protection concept will include shoreline protection, bank stabilization, and native vegetation. Projected completion: Prior to 2028.

**MULTI-SCALE GREEN INFRASTRUCTURE STRATEGY**

Funded by the Next 100 Years Challenge, this multi-scale green infrastructure strategy and pilot project approach will provide nature-based stormwater management solutions for residents.

**The approach will include:**

1. Incentives for landowners to implement green infrastructure for lot retention;
2. additional street retention and conveyance; and,
3. additional retention at the base of the levee

**8. EXISTING HOUSING ASSESSMENT**

**WHY DO WE NEED THIS?**

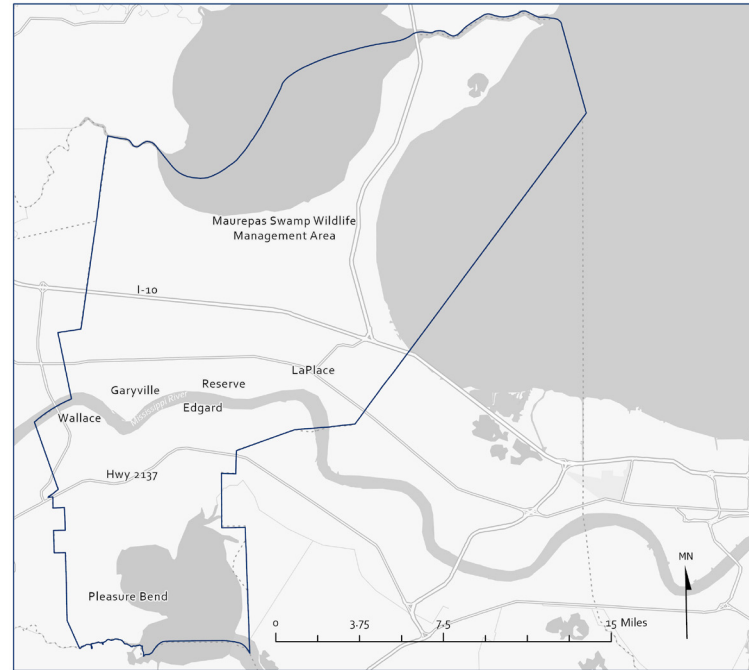
The existing housing assessment combines information about natural hazards with information about where and how houses are built in St. John the Baptist Parish. This reveals our planning challenges: where we may have demand for housing, and where houses may be at risk of flooding or wind damage.

**STUDY AREA**

St. John the Baptist Parish (**Figure 3**) is located

1 Army Corps of Engineers. (2013). West Shore Lake Pontchartrain Study. <https://www.mvn.usace.army.mil/Portals/56/docs/PD/Projects/WSLP/WSLPFINAL.pdf>

2 U.S. Bureau of the Census. (2010). Census Gazetteer Files. <https://www.census.gov/geographies/reference-files/time-series/geo/gazetteer-files.2010.html>



**Figure 3:** Geographic Boundaries of St. John the Baptist

on the Mississippi River, approximately 130 miles upriver from the Gulf of Mexico. According to the Army Corps of Engineers, St. John occupies one of the oldest delta complexes in the Mississippi River Deltaic Plain.<sup>1</sup> St. John the Baptist Parish is bifurcated by the Mississippi, creating two major geographic segments: the “West Bank” (geographically south of the river) and the “East Bank,” (geographically north of the river). St. John the Baptist Parish has a total geographic area of 348 square miles, of which 213 square miles are land and 135 square miles (39%) are water.<sup>2</sup> St. John has no incorporated areas and is

**Table 4: Population Change in St. John the Baptist Parish, 2010 – 2020**

	2010	2020	% Change
<b>Total</b>	45,924	42,477	-7.50%
<b>Population of one race:</b>	45,263	40,183	-11.20%
White alone	19,501	13,877	-28.80%
Black or African American alone	24,576	24,305	-1.10%
American Indian and Alaska Native alone	144	167	15.90%
Asian alone	322	317	-1.50%
Native Hawaiian and Other Pacific Islander alone	22	12	-45.50%
Some Other Race alone	698	1,505	115.60%
<b>Population of two or more races:</b>	661	2,294	247%

**Source:** U.S. Bureau of the Census, Decennial Census 2010-2020



home to several census-designated places and unincorporated communities on both the East and West Banks. Edgard is the Parish seat, and the largest community is LaPlace.

Most development in St. John the Baptist Parish is bounded by I-10 to the north of LaPlace and by State Highway 3127 to the south of Wallace and Edgard. The area north of I-10 largely comprises the State of Louisiana's Maurepas Swamp Wildlife Management Area (WMA).

### CURRENT ZONING

**Figure 4** displays zoning districts Parishwide. Residential zoning districts—such as the R-1 through R-4 districts, rural districts, Mobile Home Park Districts, and Planned Unit Developments (PUDs)—comprise approximately 204 square miles of zoned land in St. John the Baptist Parish, or 58% of available land. However, 167 square miles of that land, or 48% of available land in St. John the Baptist Parish, is zoned for rural use, which includes only limited residential uses subject to a minimum 5,000 – 12,000 square foot lot.<sup>1</sup> Commercial and industrial corridors flank the major roads running east-west across the Parish.

Much of the northernmost part of St. John the Baptist Parish (north of I-10 and west of I-55) is zoned Environmental Conservation District (ECD), comprising 31% of total land area. This zoning designation was first implemented in 2019 as a way to preserve land that serves a critical function of providing “multiple lines of defense” in the form of the Maurepas Swamp or land that is largely unfit for residential development due to its coastal flood risk and would be better suited to recreational or agricultural uses with a low density of buildings. Of land zoned primarily for residential use (excluding the rural zoning district), 36.1 square miles of land is zoned R-1. Permitted housing types in the R-1 District include single-family detached houses with minimum lot sizes of 6,000 square feet where central sewage is provided and 25,000 square feet where no central sewage is provided. Community homes (privately owned facilities licensed for the personal care or supervisory care of six or fewer individuals with no more than two live-in staff members) are also permitted. All other residential land uses, allowing for single-family attached

dwellings, multifamily units, and mobile homes, encompass 0.9 square miles of total land use in St. John. While R-1 districts provide low-density housing uses and dominate the housing landscape, significant infill opportunities currently exist in R-1 neighborhoods without modifying the zoning districts or character of neighborhoods.

## 9. POPULATION AND HOUSING CONDITIONS

### WHO LIVES IN ST. JOHN NOW?

Recent demographic information on St. John the Baptist Parish's population is available in the 2020 Decennial Census data and 2022 American Community Survey (ACS) estimates. Between 2000 and 2010, in the aftermath of Hurricane Katrina, St. John the Baptist Parish's population increased 6.7%. One factor in this change may be population influx into St. John from residents subject to displacement or damage to their homes in surrounding Louisiana Parishes during and after Hurricane Katrina. **Table 4** shows population change in St. John between the decennial censuses of 2010 and 2020. St. John the Baptist Parish's population decreased by 7.5% during the decade, with many residents and officials speculating that flooding and damage from Hurricane Isaac in 2012 may have motivated some residents to move.<sup>2</sup> Census Bureau population estimates between 2012 and 2021 suggest 33% of population decline occurred in 2012 and 2013, and several hundred additional residents departed each year between 2015 and 2020.<sup>3</sup>

The 2022 ACS survey estimates that St. John's population has fallen to approximately 39,864 residents, or a 6.2% decrease since 2022 and a 13.2% decrease since 2010. This significant decrease in 2022 likely reflects the aftermath of Hurricane Ida in 2021. Future data will show whether many of those residents departed permanently or left St. John the Baptist Parish in the short-term after the storm.

While population decline occurred among most racial categories documented in the census, the white population of St. John moved at a higher percentage than other groups, declining by

1 St. John Code of Ordinances, Land Development Regulations.

2 For example, see Reimann, N. (2019). After population decline, can West Shore levee spur new growth in St. John Parish? Times-Picayune. [https://www.nola.com/news/after-population-decline-can-west-shore-levee-spur-new-growth-in-st-john-parish/article\\_55c85d98-0fe1-11ea-a2bd-276df1db38d6.html](https://www.nola.com/news/after-population-decline-can-west-shore-levee-spur-new-growth-in-st-john-parish/article_55c85d98-0fe1-11ea-a2bd-276df1db38d6.html)

3 American Community Survey, 2012 – 2021.





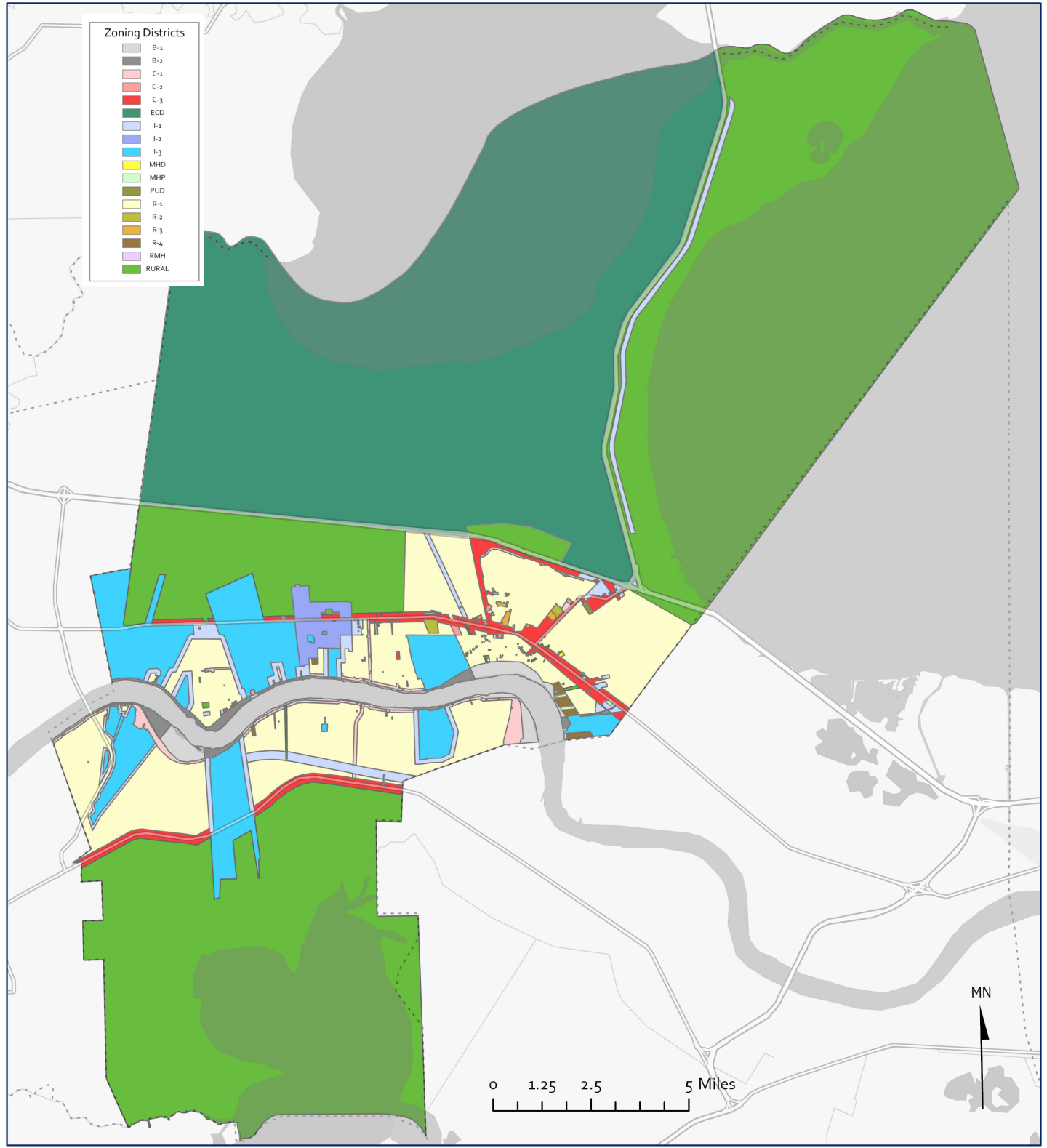


Figure 4: Zoning Districts of St. John the Baptist Parish



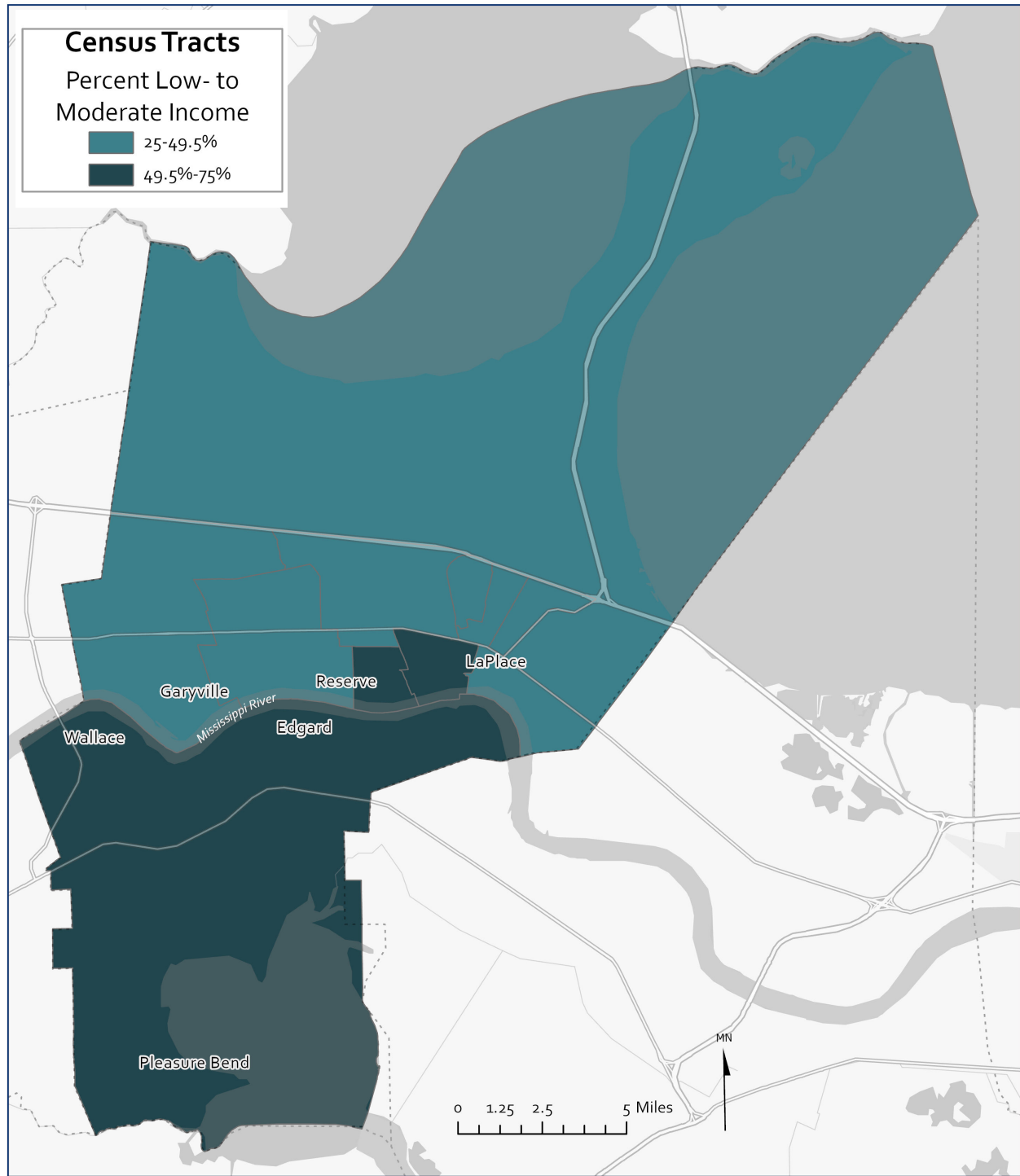


Figure 5: Low to Moderate Income (LMI) Percentage by Census Tract



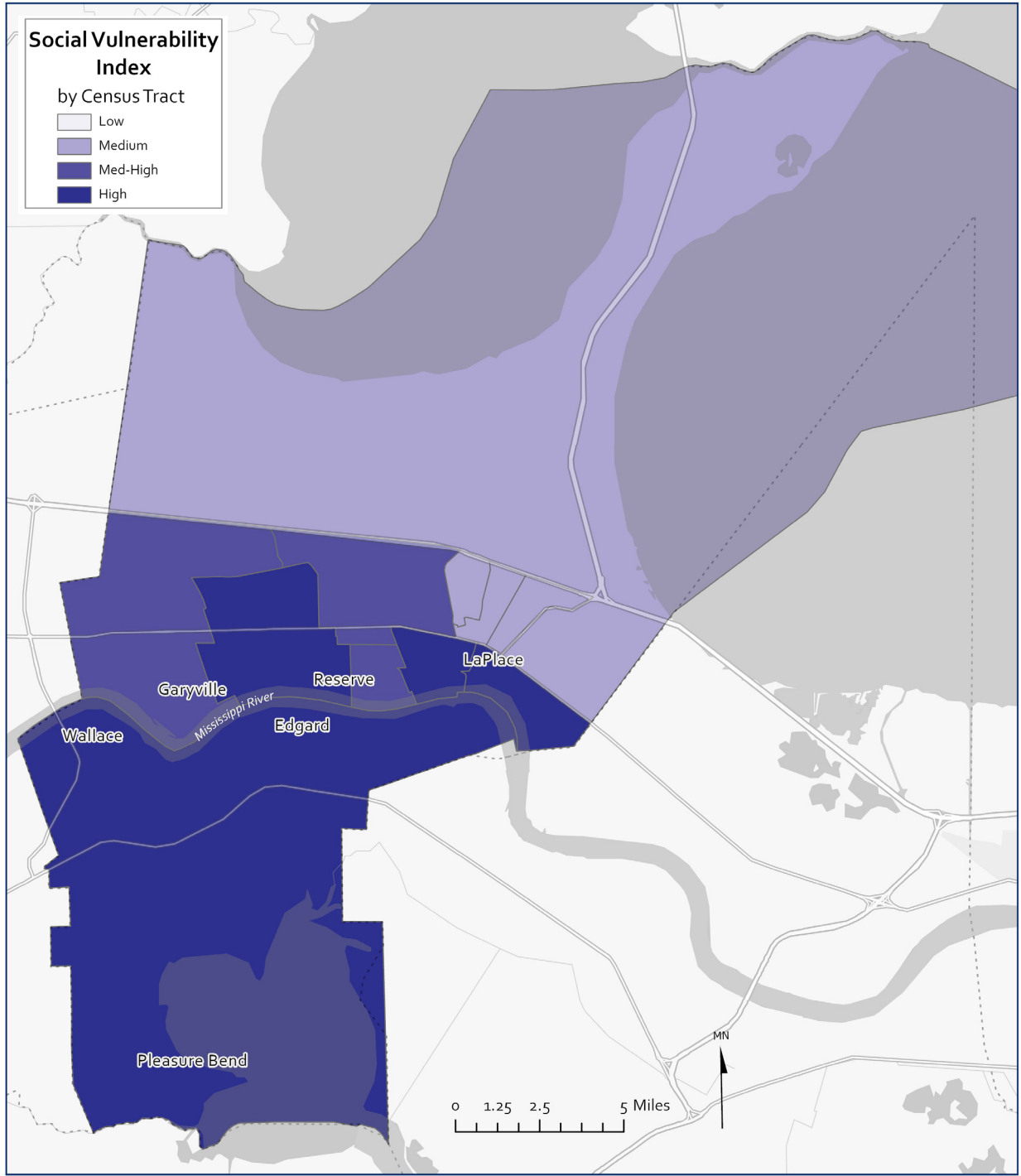
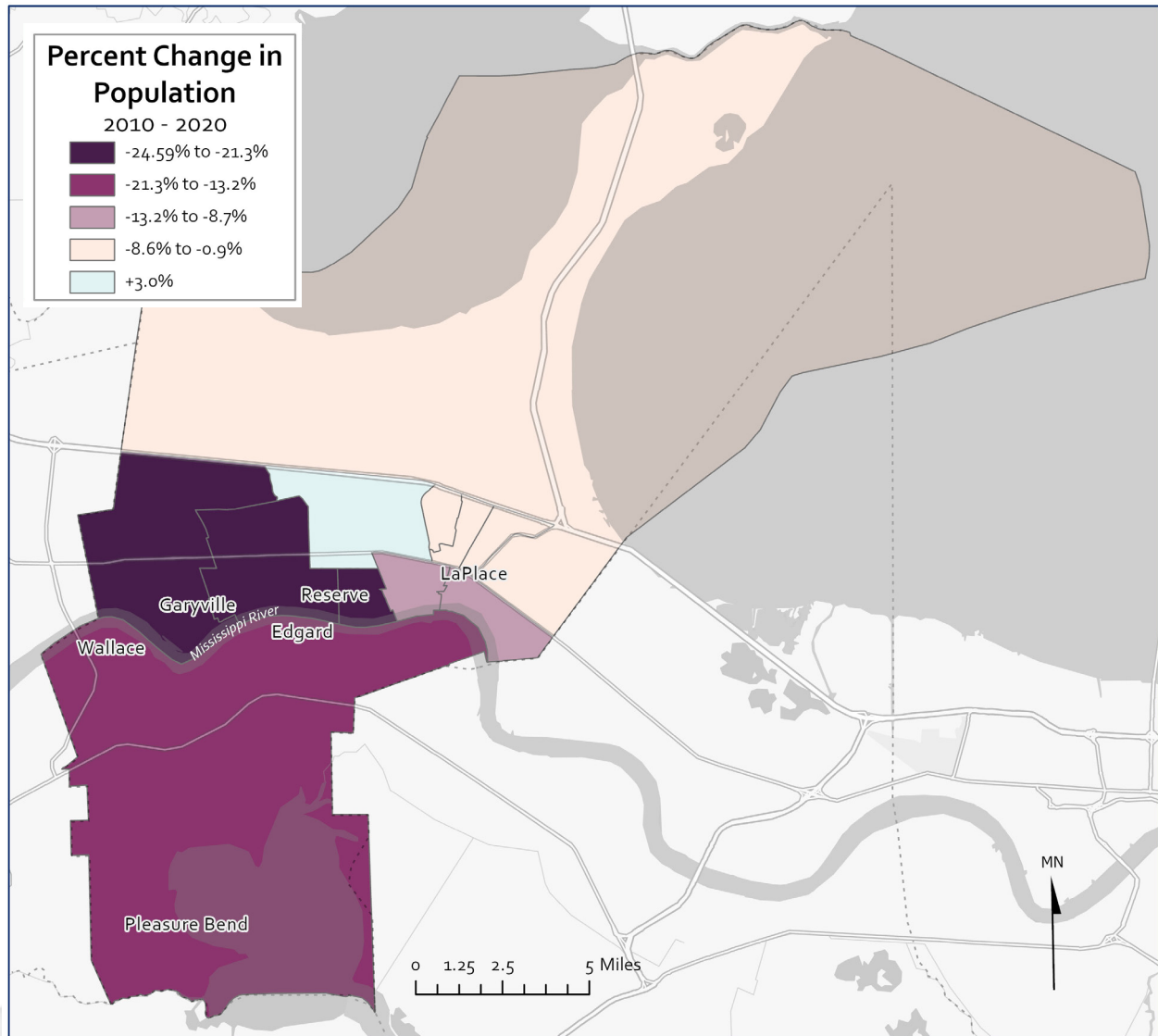


Figure 6: Social Vulnerability Index by Census Tract





**Figure 7:** Percent Population Change by Census Tract

nearly a third by decade’s end.<sup>1</sup> The poverty rate has remained consistently higher among black residents of St. John the Baptist Parish, with 18.8% of black residents in poverty in 2020 compared to 11% of white residents. It is possible that those residents with greater access to resources chose to move away in the aftermath of Hurricane Isaac.

***“[I] have been a resident for 60+ years and love the people.”***  
 – Parish Resident

As shown in **Figures 5 and 6**, all of St. John’s census

<sup>1</sup> Some of this statistic may be explained how individuals self-identified on the census; it appears that a significant increase in St. John residents self-identified as belonging to more than one race in 2020.

tracts include more than 25% low- to moderate income populations. Visualized through the Social Vulnerability Index—in which census tract variables are sorted into themes ranking socioeconomic status, household characteristics, racial and ethnic minority status, housing type and transportation—St. John’s West Bank and census tracts in Garyville and LaPlace are considered particularly at-risk during health emergencies and natural disasters.

Tract level data from the decennial censuses shows uneven population decline Parishwide. **Figure 7** demonstrates this inconsistent population decline. In the western half of the East Bank, Census Tracts 706 and 707 experienced declines of more than



**Table 5: Change in St. John Household Income, 2011 – 2021**

	2011	2016	2021	% Change 2011 - 2021
Total Households	15,775	15,363	15,109	-4.2%
Less than \$10,000	8.0%	7.4%	6.6%	-1.4%
\$10,000 to \$14,999	5.9%	5.9%	5.2%	-0.7%
\$15,000 to \$24,999	10.0%	12.1%	6.5%	-3.5%
\$25,000 to \$34,999	11.5%	9.0%	11.0%	-0.5%
\$35,000 to \$49,999	14.9%	13.7%	13.0%	-1.9%
\$50,000 to \$74,999	18.5%	21.2%	17.8%	-0.7%
\$75,000 to \$99,999	12.5%	11.3%	12.9%	0.4%
\$100,000 to \$149,999	13.2%	12.7%	15.7%	2.5%
\$150,000 to \$199,999	4.3%	4.9%	7.6%	3.3%
\$200,000 or more	1.1%	1.7%	3.8%	2.7%
Median income (dollars)				-1.01%

Source: U.S. Bureau of the Census, American Community Survey, 2011 – 2021. \*Adjusted for inflation to reflect 2021 dollars.

20% of the population between 2010 and 2020. In contrast, Census Tract 705 grew 3.0% during the same period and may be an important location to consider additional housing growth. This will be discussed later in the Plan.

Esri, the world's leading supplier of GIS software and one of the world's leading demographic data companies, produces population forecasts for U.S. populations in five-year increments. Using census data and other privately available datasets, Esri projects expected changes in population on state and county levels. Esri currently projects that St. John's population will continue to decline between 2022 and 2027 and estimates that the population will be approximately 39,761 in 2027.<sup>1</sup> If accurate, this projection suggests a 6.4% decline in population between the present and 2027.

**“[I’m] not able to find a home for me and my children due to Section 8 waiting list being too long.”**  
– Parish Resident

In addition to population, demographics pertinent to housing needs include the incomes and ages of current Parish residents. In terms of housing

need, increasing resilience will look different for Parish residents lacking the resources to purchase the most wind-resistant roofing materials or who reside in manufactured housing. For seniors, there are additional resilience needs beyond the scope of preparing for environmental conditions, as they may need to retrofit their homes to “age in place,” including the installation of accessibility equipment in bathrooms and stairwells.

As seen in **Figure 8**, St. John's population has been gradually aging between 2011 and 2021. On average, child residents of St. John (ages 0-19) have declined by approximately 19.3% between 2011 and 2021. Population decline is also occurring in mid-adult age groups, with adults between the ages of 25 and 54 decreasing by an average of 15.3% between 2011 and 2021. In the same timeframe, adults above the age of 64 increased by 36%. These aging adults, some of whom may require special assistance to age in place, are an important demographic to consider within this Resilient Housing Plan.

**Table 5** shows shifts in income in St. John between 2011 and 2021. Over the past decade, the percentage of households making less than \$35,000 per year decreased, while the percentages of residents making more than \$100,000 per year increased. When adjusted for inflation, median income in the Parish is flat or declining slightly.

<sup>1</sup> Esri. (2022). 2022 – 2027 USA Population Growth. <https://www.arcgis.com/home/item.html?id=52bc80a9d2a14e5c9a4b08b91b52f84b>  
See Esri's vendor accuracy study for methodology.

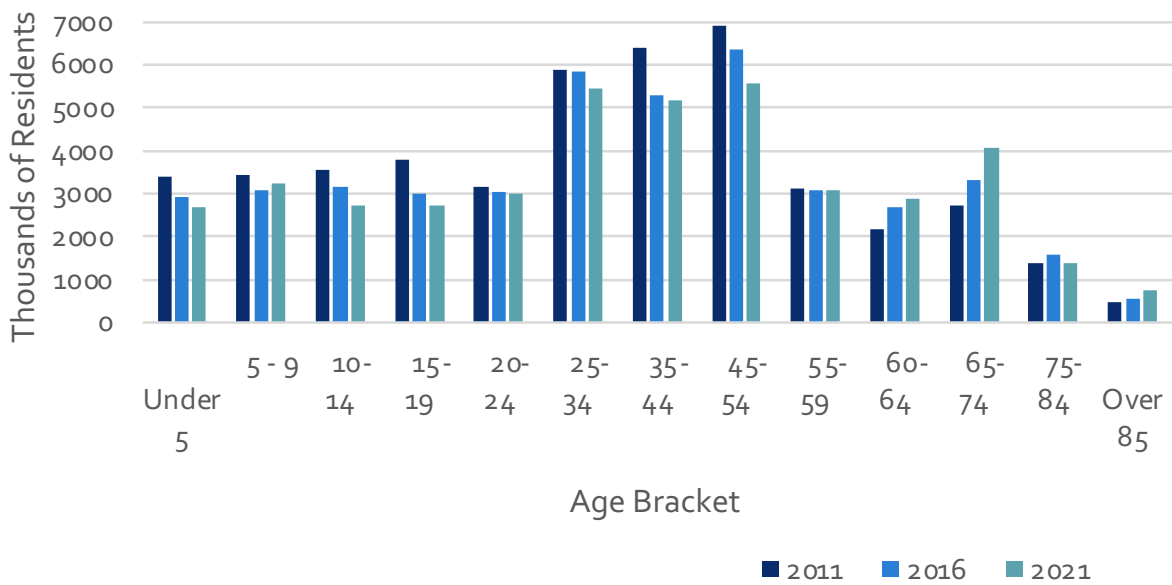


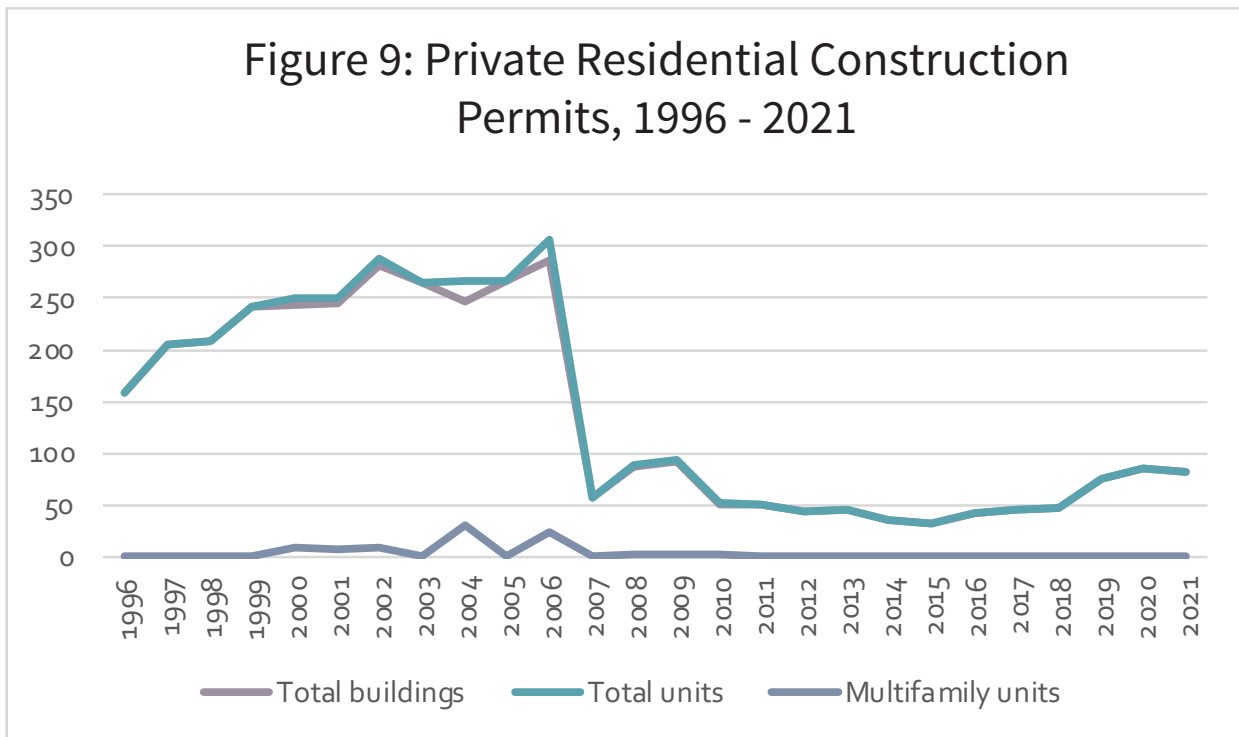
**Table 6: Housing in St. John, by Type and Occupancy, 2011 - 2021**

	2011	2021	Type by % of 2021 Units	% Change 2011 - 2021
Total housing units	17,472	17,746	100%	1.6%
1-unit, detached	13,916	14,186	79.9%	1.9%
1-unit, attached	216	151	0.9%	-30.1%
2 units	467	458	2.6%	-1.9%
3 or 4 units	585	612	3.4%	4.6%
5 to 9 units	217	74	0.4%	-65.9%
10 to 19 units	185	59	0.3%	-68.1%
20 or more units	163	225	1.3%	38.0%
Mobile home	1,706	1,981	11.2%	16.2%
Boat, RV, van, etc.	17	0	0.0%	(X)
Occupied housing units	15,775	15,109		
Vacant housing units	1,697	2,637		
Homeowner vacancy rate	3.1	1.6		
Rental vacancy rate	2.8	14.5		

Source: U.S. Bureau of the Census, American Community Survey, 2011 – 2021.

**Figure 8: Age Distribution in St. John, 2011 - 2012**





Source: U.S. Bureau of the Census, Building Permits Survey, 1996 – 2021.

According to the Census Bureau, 14.9% of St. John residents were below the poverty level in 2021, a decrease of 3.3% since 2016, when 18.2% of residents were below the poverty level.

national and regional statistics. In Jefferson, Orleans, and St. Tammany Parishes, the total number of new residential building permits rose by 20% between 2020 and 2021.<sup>1</sup> In a 2022 report by the Joint Center for Housing Studies of Harvard University, residential construction experienced a 15.3% increase in the South in 2021<sup>2</sup>. By contrast, as can be seen in **Figure 9**, new residential building permits in St. John declined from 86 in 2020 to 82 in 2021.

**THE MEDIAN AGE IN ST. JOHN INCREASED FROM 35 IN 2011 TO 38 IN 2021.**

**10. STATE OF EXISTING HOUSING**

There are approximately 17,746 housing units in St. John. Single-family detached houses are the predominant housing type in St. John the Baptist Parish. Table 6 shows housing types and occupancy in St. John between 2011 – 2021.

**The data in Table 6 illustrates several trends since Hurricane Isaac, including:**

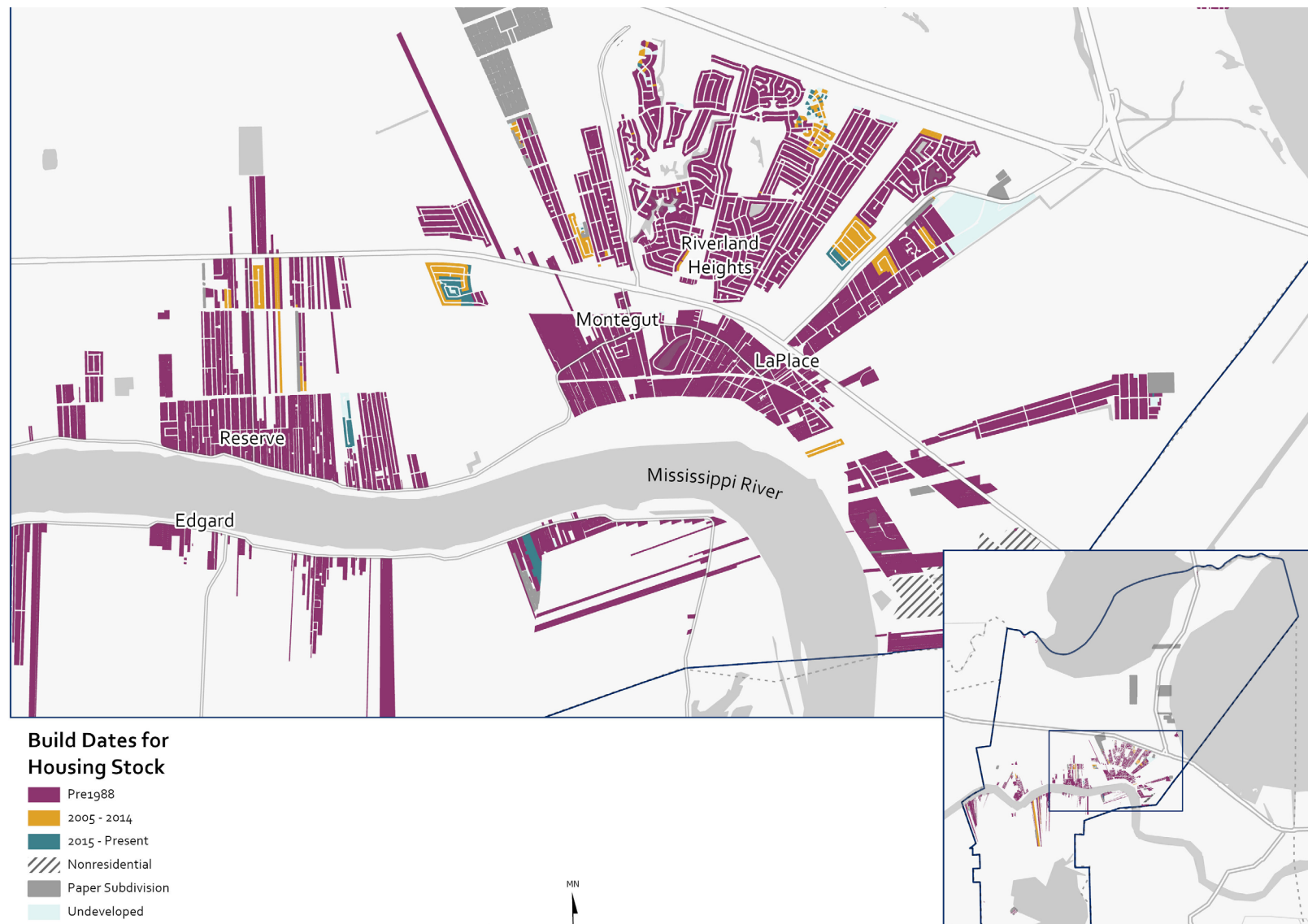
- 1. The number of new housing units is increasing slowly.** The total number of housing units in St. John the Baptist Parish has increased by 1.6% in the past decade. This figure is rising more slowly than recent

- 2. Vacancy rates decreased for homeowner properties and increased for rentals.** As shown in **Table 6**, the homeowner vacancy rate declined in St. John from 3.1% in 2011 to 1.6% in 2021. However, the rental unit vacancy rate increased 11.7%.
- 3. Mobile homes make up an increasing percentage of the housing landscape.** In 2011, mobile homes comprised only 9.8% of the housing units in St. John. They now represent 11.2% of housing units, and several hundred additional mobile homes have been added in St. John the Baptist Parish in the past 10 years. As will be discussed later, mobile homes are particularly vulnerable to wind damage from weather events.

1 U.S. Bureau of the Census, Building Permits Survey, 2020 – 2021.

2 Joint Center for Housing Studies of Harvard University, State of the Nation's Housing 2022.





**Figure 10:** Build dates for residential housing stock in the Parish – LaPlace and east Edgard.

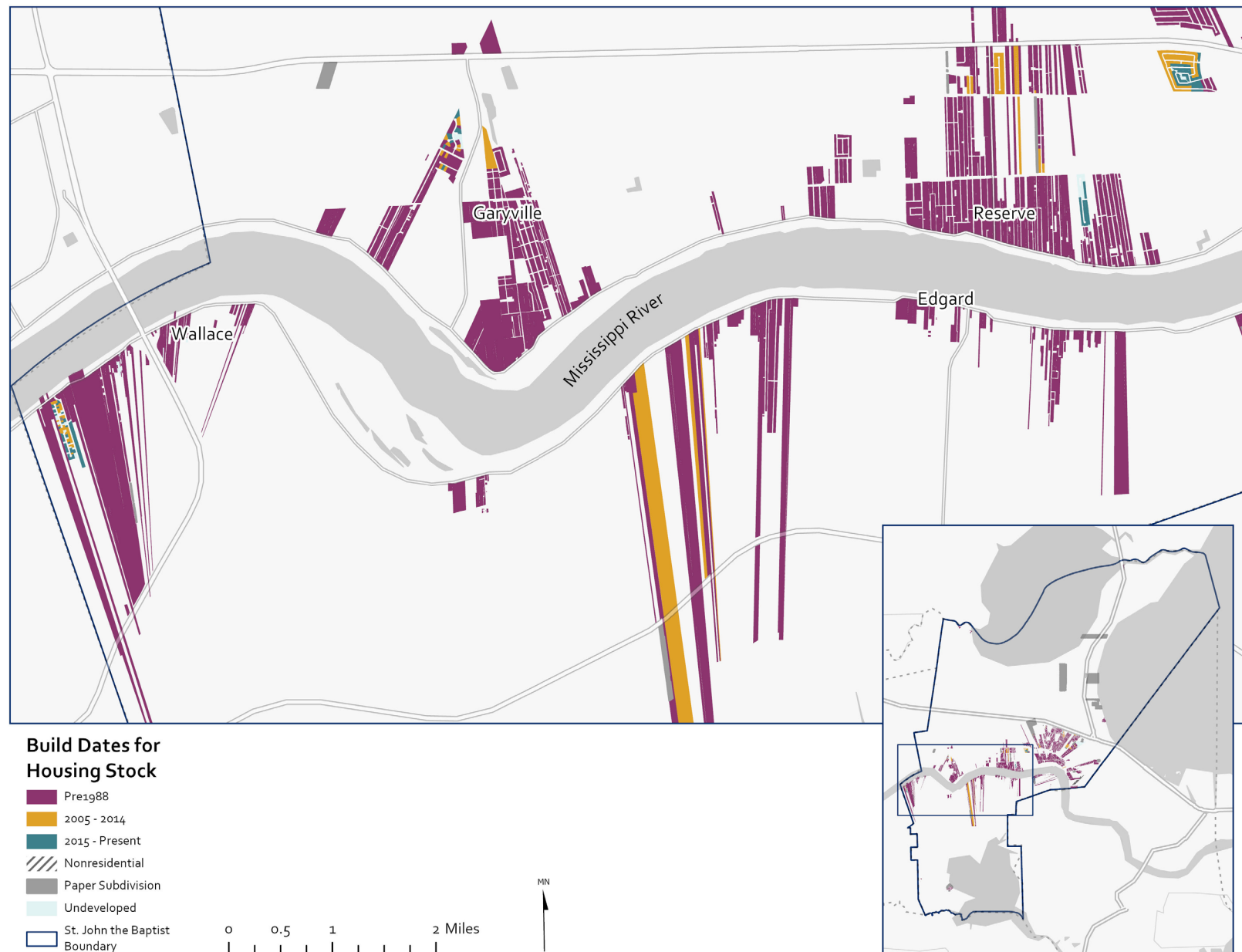
- There is a significant lack of multi-family and affordable housing options.** The availability of 5+ unit buildings in St. John the Baptist Parish has dramatically decreased, and there is an evident mismatch between demand for affordable housing and the provision of units that are affordable to residents, specifically those with low- to moderate- incomes. The construction of additional multi-family units may alleviate some of this problem, however a larger variety of affordable options such as mobile homes, small homes, and retirement communities will also be needed to support housing demands.

## 11. HOW MANY HOUSING UNITS WERE BUILT TO CURRENT LOUISIANA STANDARDS?

In 2005, in the aftermath of Hurricane Katrina, the State of Louisiana adopted its first statewide uniform residential building code. The version now in effect for single-family homes is based upon the 2021 International Residential Code (IRC). The Code includes requirements to better ensure that homes can withstand major weather events, including regulations for building design, the use and type of construction materials, window glazing, and electrical and plumbing requirements.







**Figure 11:** Build dates for residential housing stock in the Parish – Garyville, Reserve, and Wallace / Edgard

By observing privately-owned residential unit construction trends in St. John through the Census’s Annual Building Permits Survey, it is possible to analyze how many new units have been constructed to meet current Louisiana building standards. **Figure 9** shows all years of available building permit data in St. John from the Building Permits Survey. Between 1996 and 2005, a steady increase in residential building permits, almost entirely for single-family units, reached highs between 250 and 300 units per year. After permits spiked in the immediate aftermath of Hurricane Katrina, few multifamily units have been constructed in St. John the Baptist Parish and

single-family unit construction mostly declined, with recent increases in single-family unit permits during the global Covid-19 pandemic.

Since the passage of the uniform residential building code in 2005, building permits have been requested for 1,180 housing units in St. John, 30 of which are part of multifamily construction projects. In other words, while home renovations and retrofits may bring many parish homes up to current state standards, only 6.6% of St. John’s housing stock is built to meet post-Katrina statewide requirements, shown spatially in **Figures 10 and 11.**



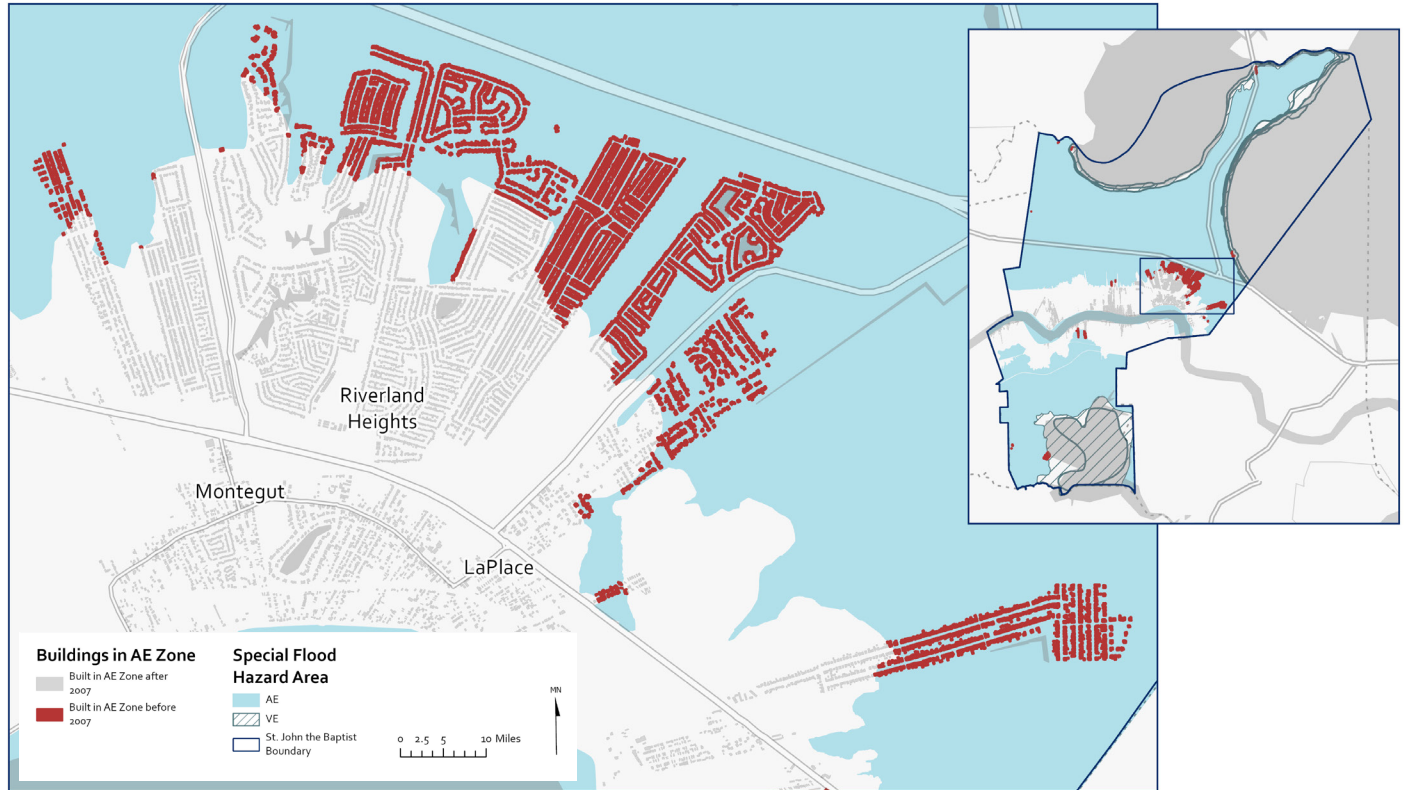


Figure 12: Buildings constructed in or prior to 2007 in the SFHA

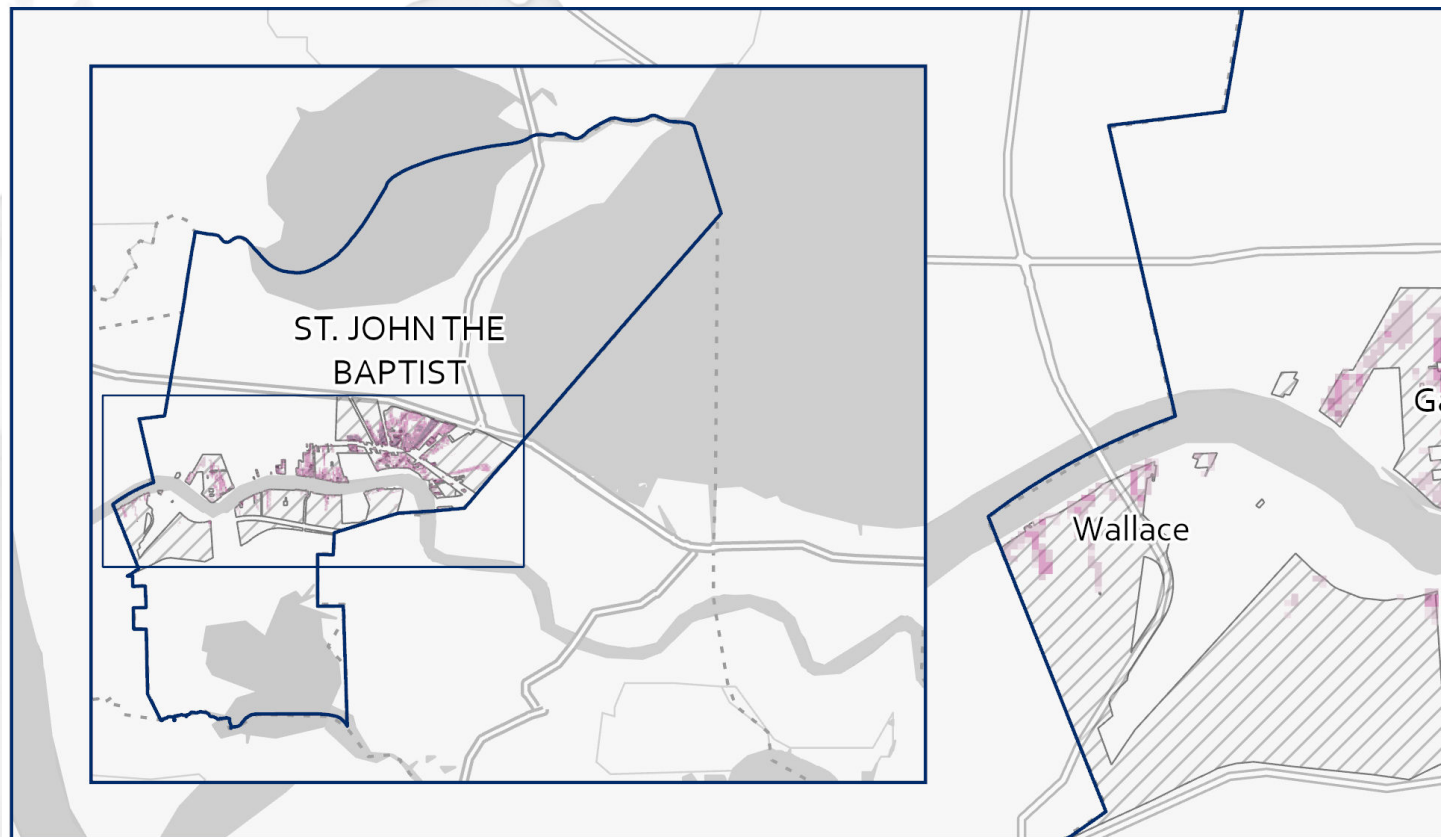


Figure 13: Approximate Housing Density.



**“There are some families and low-income people, old and young, that are suffering because they can’t afford housing after the destruction of the project homes.” – Parish Resident**

## 12. HOW MANY HOMES STILL NEED TO BE ELEVATED?

Despite the status of the WSLP Levee, a substantial number of homes in St. John may remain subject to localized rainfall ponding and drainage backup under conditions more frequent than the 100-year flood<sup>1</sup>. To address this issue, St. John the Baptist Parish must 1) ensure that new construction results in homes built above the BFE, preferably with freeboard or above the 500-year flood level, and 2) elevate existing homes that are below the BFE.

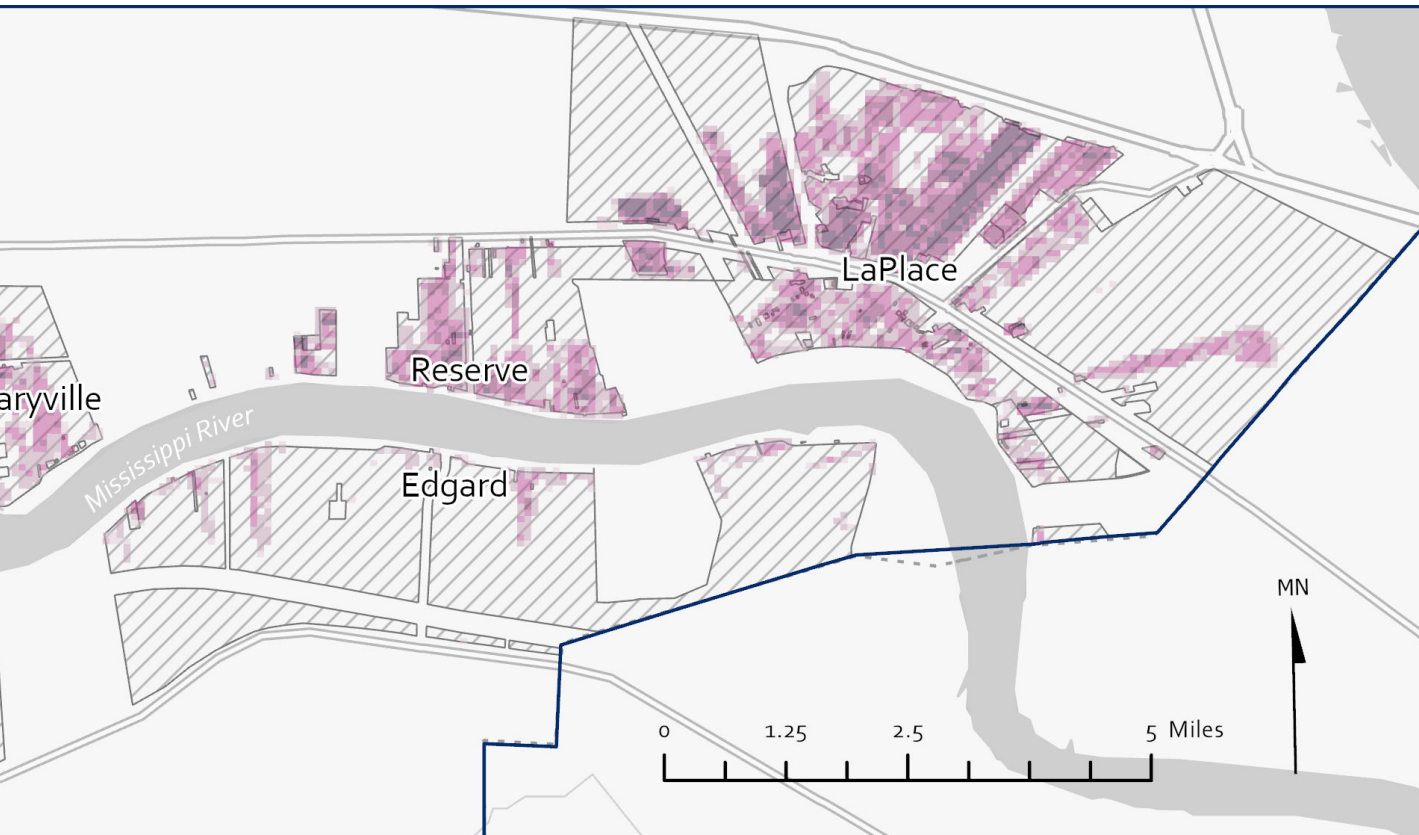
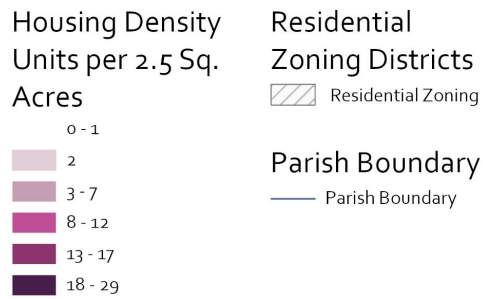
<sup>1</sup> Estimated by identifying buildings over 600 sq. ft. and constructed in or prior to 2007 and overlapping the SFHA.

The following lists support Floodplain management staff’s prioritization of elevation sites parishwide:

- Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties (2,411 buildings)
- Homes with living area below the BFE in the Special Flood Hazard Area (SFHA) (estimated 3,933 buildings)<sup>1</sup>

A portion of the RL and SRL list have received FEMA or CDBG elevation grants and are therefore mitigated. To pursue resilient housing parishwide means that all sites on these lists should be mitigated, including the elevation of existing homes with living areas located below the BFE.

The Damage and Loss Reduction Plan focuses on the implementation of programs to attain grant



funding for no-match home elevation projects, as well as the establishment of a Parish-administered revolving fund program. As part of these programs, homes could be elevated before the next flood, and St. John the Baptist Parish could bank funds for immediate home elevation steps before long-awaited federal CDBG-DR or FEMA HMGP funding becomes available.

### 13. HOUSING DENSITY AND HAZARDS

**Figure 13** displays an approximate assessment of housing density in areas surrounding the Mississippi River. To assess existing housing density, St. John the Baptist Parish was geographically divided into a grid, where each square represents 2.5 acres of land. Buildings inside of residential zoning districts were assessed and any structure smaller than 600 square feet was removed to account for sheds and other small structures that do not represent housing. While not all buildings in residential districts are housing—i.e.; many structures are churches, schools, or golf courses—the purpose of

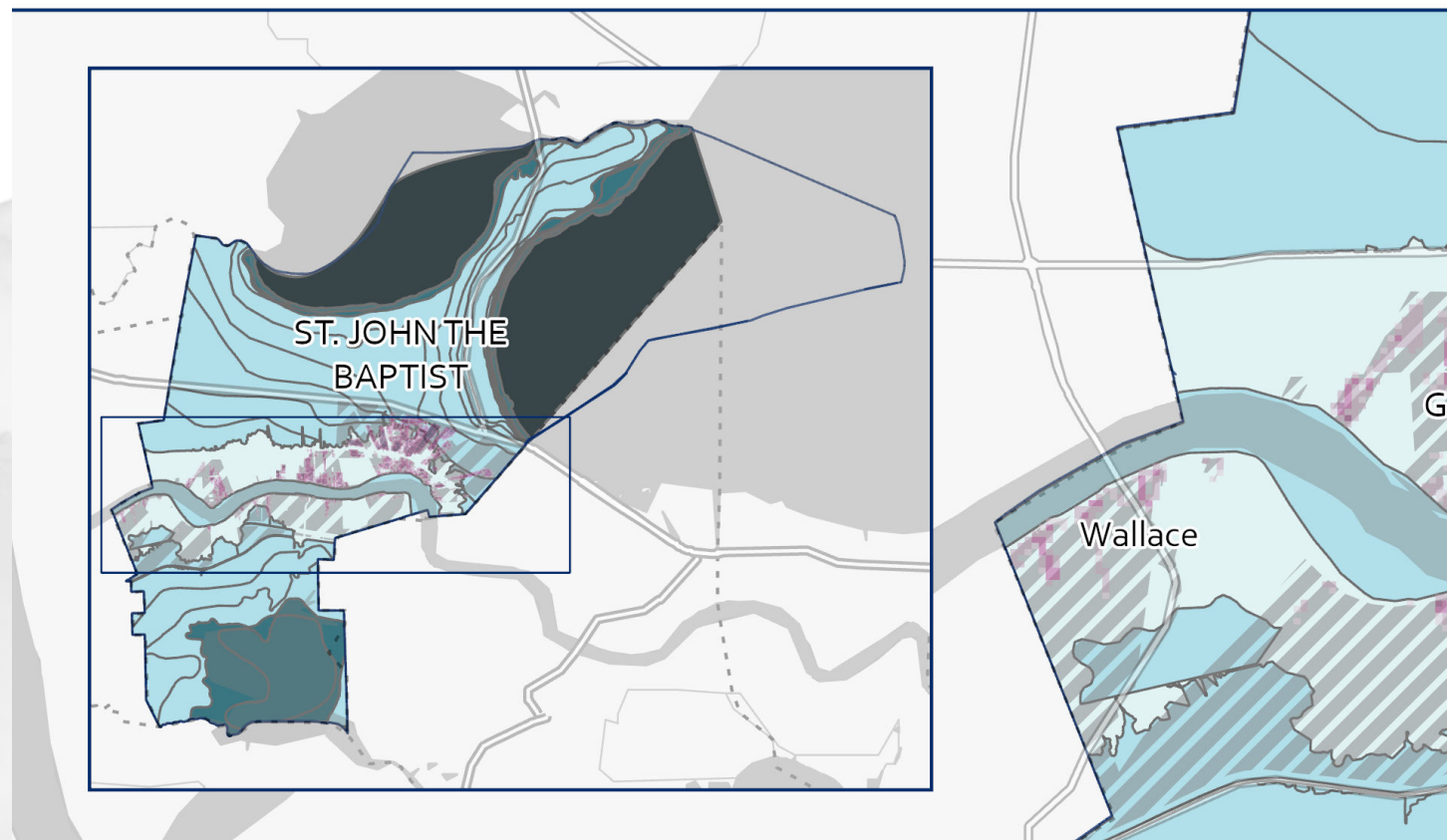
<sup>1</sup> National Ocean Economics Program, 2017.

the map is to approximate density in areas zoned for housing and provide a spatial sense of where infill may be possible.

As can be seen in **Figure 13**, housing density in St. John the Baptist Parish is low, even in the denser areas of LaPlace, Riverland Heights, and Reserve. Of the assessed 2.5 square acre units with residential structures on them, 80% have 3 buildings or more but only 6.6% contain the highest density of housing buildings, with between 18 and 29 buildings per 2.5 square acre unit. A total of 35% of 2.5 square acre units contain 3 to 7 buildings, the most common level of housing density in residentially zoned districts.

According to a study by the National Ocean Economics Program, in 2017, the overall density of housing units in the United States was 38.4 units per square mile, or 38.4 units per 640 acres.<sup>1</sup>

**Figure 14** shows housing density overlaid on FEMA flood zone and boundary maps. Flood hazard areas identified on the Flood Insurance Rate Map are identified as the Special Flood Hazard Area (SFHA). SFHAs are defined as the area that will be



**Figure 14:** Housing Density and Flood Hazard.



inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. Much of St. John’s land is identified as a SFHA Zone AE, defined by FEMA as having high flood hazard risk. Most current development in St. John the Baptist Parish is located in SFHA Zone X, defined by FEMA as an area of moderate flood hazard, or an area between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood.<sup>1</sup>

Flood Insurance Program (NFIP), and the building has had at least two paid flood losses of more than \$1,000 each in any rolling 10-year period, the building is considered a repetitive loss (or RL) property. If an NFIP-insured residential property has had either four or more separate claim payments of more than \$5,000 each or two or more separate claim payments where the total of the payments exceeds the current value of the property, that residential property is defined as a severe repetitive loss (or SRL) property.

**Figure 14** illustrates that while most residential buildings are in Zone X, housing developments were built into Zone AE in the east of St. John the Baptist Parish. Some of St. John’s densest housing developments—such as housing built surrounding the Riverland Heights Golf Course, are located on FEMA’s Zone AE.

There are more than 2,400 residential properties in St. John that have been declared repetitive or severe repetitive loss properties. Almost all RL and SRL properties are located on the East Bank of St. John the Baptist Parish, and most are located in the dense neighborhoods of Riverland Heights and eastern LaPlace. **Figure 15** shows RL and SRL properties overlaid as a heat map onto the FEMA and housing density maps.

## 14. AREAS OF REPETITIVE LOSS IN ST. JOHN

FEMA considers a residential property “substantially damaged” when the total cost of repair equals or exceeds 50% of the pre-damage market value of the structure. If a building is insured by the National IFEMA. (2022). Flood Zones. <https://www.fema.gov/glossary/flood-zones>

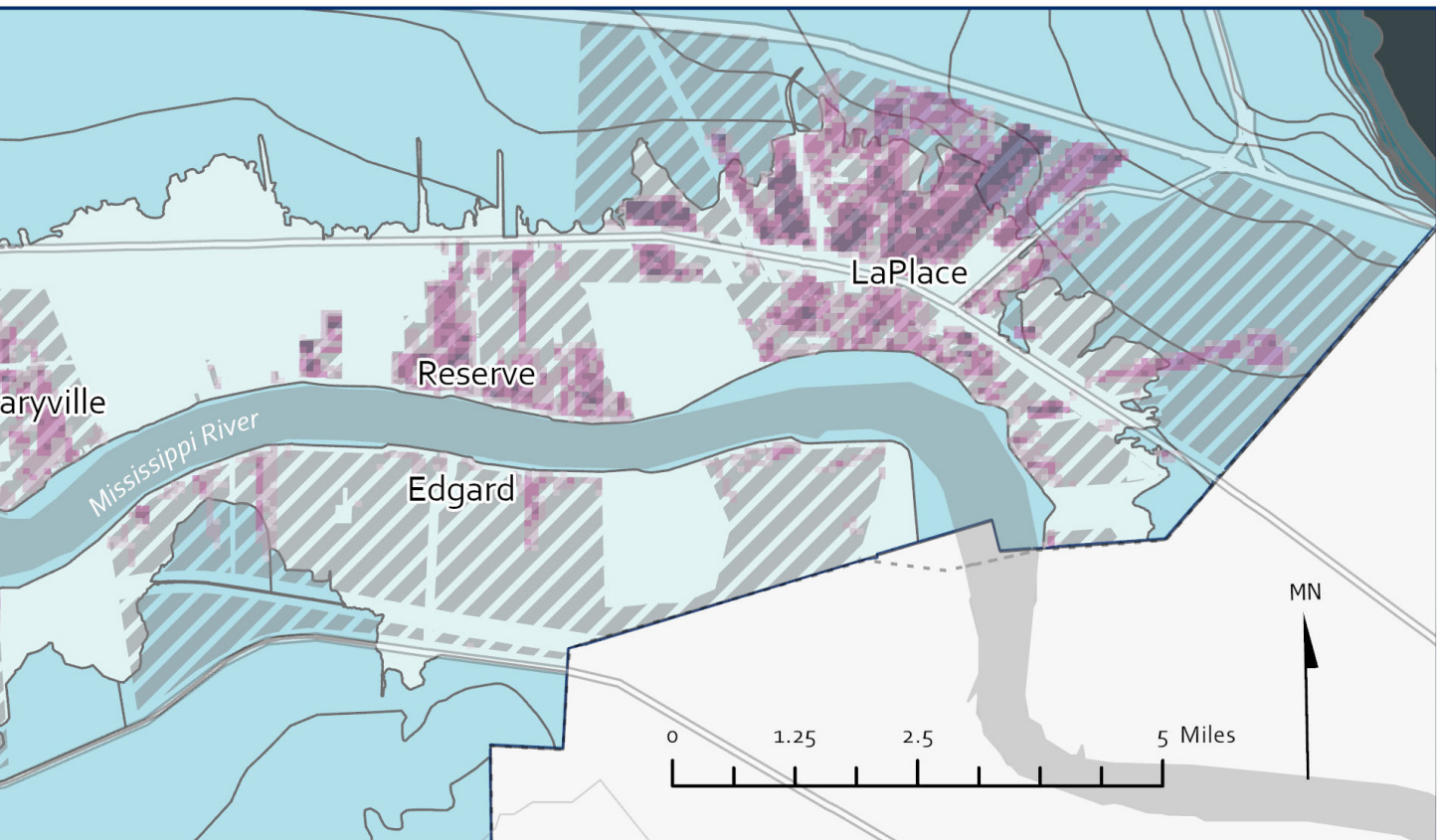
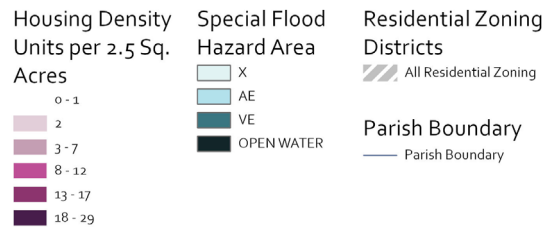




Image: Aerial Photograph of St. John the Baptist Parish - Brian M. Davis/Louisiana Trust for Historic Preservation

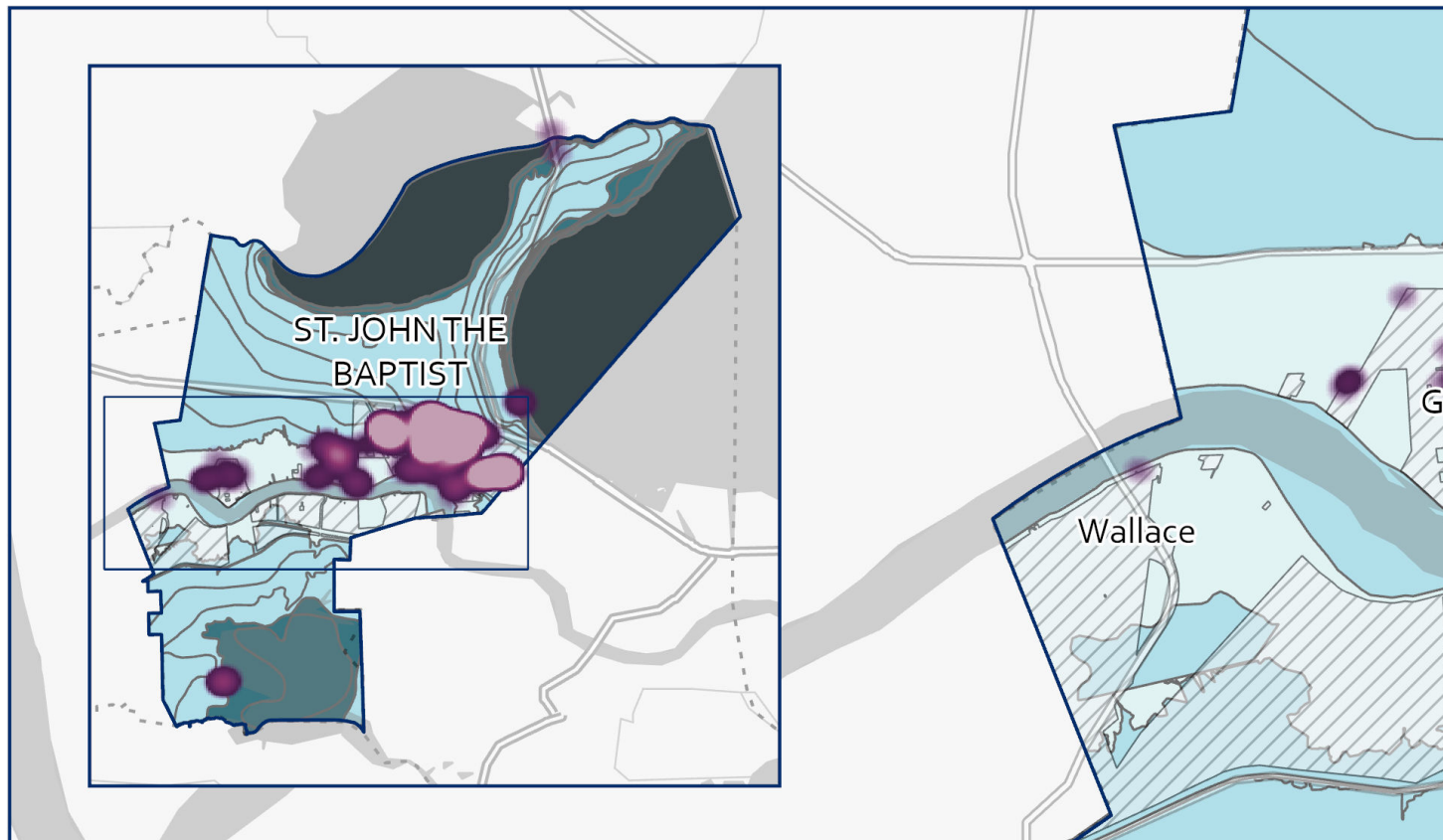


Figure 15: Repetitive and Severe Repetitive Loss Properties - Heat Map



**“PLEASE, stop issuing all new building permits north of Airline. Our natural sponge has been concreted over. Encourage people to buy commercial and residential properties already for sale.”**  
 - Parish Resident

## 15. FLOOD AND WIND RESISTANCE

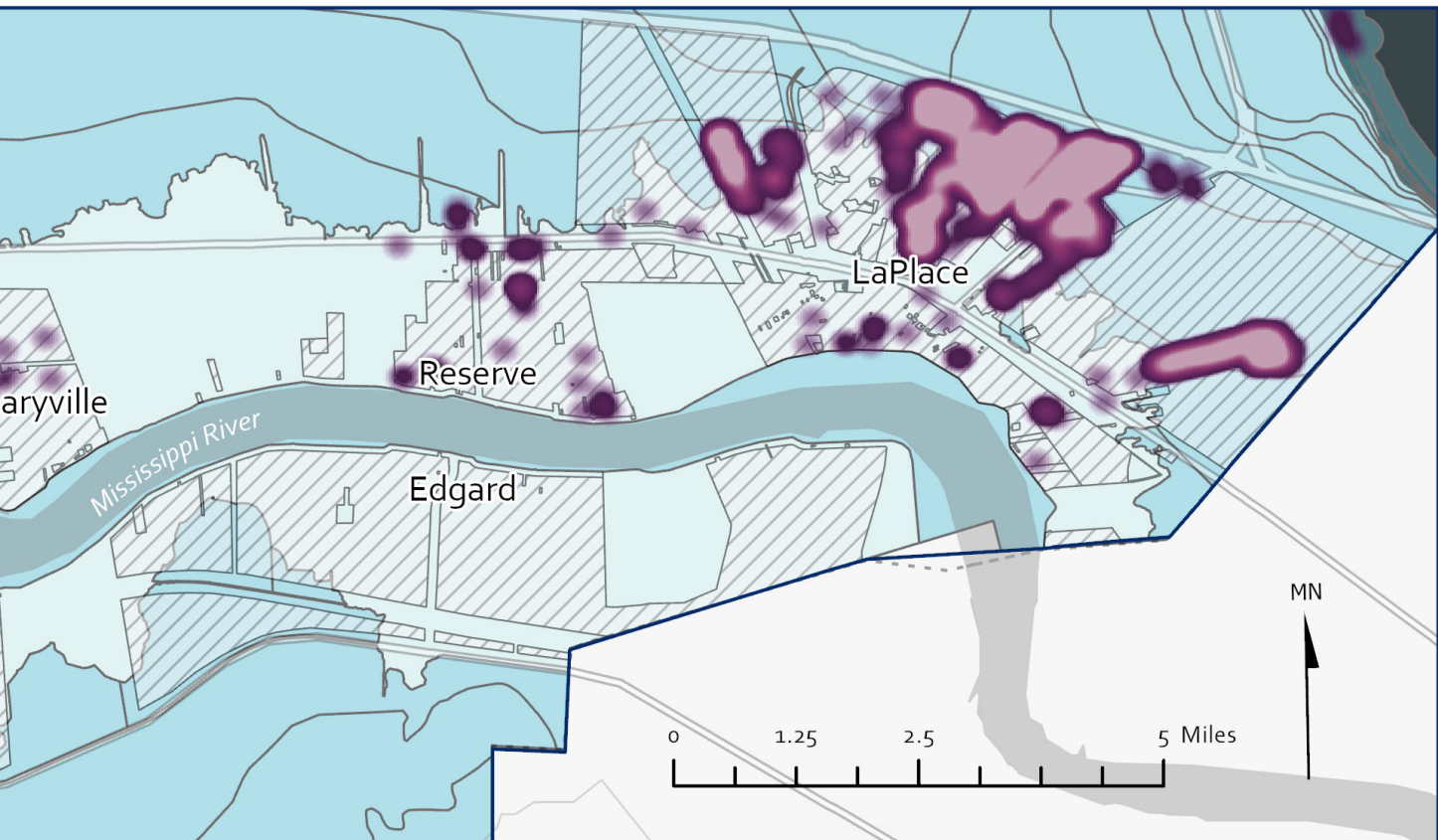
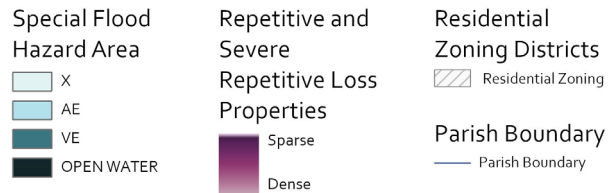
### Wind Resistance

As shown in **Figures 10 and 11**, approximately 18,000 (or 88%) of the 20,400 buildings in St. John the Baptist Parish are residential units constructed in or prior to 2007. These units are at increased exposure to wind risk because they were constructed prior to the adoption of the IBC/IRC codes Parishwide in 2007. Notably, residential

structures in the southernmost tip of St. John the Baptist Parish, such as those in Pleasure Bend, face increased risk of wind damage based on ASCE wind maps (see **Figure 16**).

In 2016, a tornado damaged approximately 300 structures with little warning for residents. Studies show that 82% of all occupied homes in St. John the Baptist Parish filed an insurance claim for wind damage (a number that undercounts individuals who did not have homeowners' insurance).<sup>1</sup> Wind hazards are an imminent risk to St. John housing stock even outside of hurricane season, supporting the implementation of higher construction requirements for housing stock to withstand wind hazards. The adoption of the 2021 building codes state-wide supported the construction of homes built to withstand wind hazards, but even higher FORTIFIED roof and FORTIFIED home construction

<sup>1</sup> Finch, M. (2022). St. John Parish, arguably hardest hit by Hurricane Ida, Struggles to Rebuild. Times Picayune. [https://www.nola.com/news/st-john-parish-arguably-the-hardest-hit-by-hurricane-ida-struggles-to-rebound/article\\_6a3b138e-b790-11ec-8467-231fa55b57c1.html](https://www.nola.com/news/st-john-parish-arguably-the-hardest-hit-by-hurricane-ida-struggles-to-rebound/article_6a3b138e-b790-11ec-8467-231fa55b57c1.html)



standards could better ensure that homes withstand future wind events.<sup>1</sup>

## 16. FLOOD RESISTANCE

In addition to wind risk, almost all housing stock in St. John the Baptist Parish has been built using slab-on-grade construction or using fill with a monolithic slab. Buildings in SFHA V Zones, defined by FEMA as subject to both coastal flooding and wave action, near Lac Des Allemands, Akers, and Frenier are exceptions because these homes were either elevated during initial construction or post-construction via FEMA or CDBG grant programs.

Due to the lack of widespread adoption of flood prevention building methods, such as the construction of homes with an open (pier or piling) foundation, a significant proportion of St. John’s housing stock is at risk of localized ponding, rainfall flooding and urban flooding even after the WSLP levee is constructed. Although St. John the Baptist Parish participates in the NFIP program

and has regulatory FIRM maps from 2010 indicating base flood elevation (BFE) requirements for all new construction and substantial improvements, the BFE requirements are within a range of approximately four or less feet from grade in most areas, leading to residential developers’ use of slab foundation styles rather than pier or piling foundations. In 2021, the State of Louisiana adopted the freeboard standard, which is a requirement to build higher than the BFE (one foot above BFE). In order to continue qualifying for NFIP, St. John must comply with the state’s current freeboard standard.

While the East Bank of St. John the Baptist Parish will experience changes to the projected flood risk as a result of the WSLP levee construction, the West Bank is more imminently exposed to coastal erosion and land loss, particularly toward the Gulf of Mexico and Lac Des Allemands. Future projections of flood risk under a scenario where the 2017 Coastal Master Plan projects are not implemented (see Figure 18) show flood risk advancing northward on the West

1 L’Observateur. (2023). What residents need to know about the Fortified roof program. <https://www.lobservateur.com/2023/08/09/what-residents-need-to-know-about-the-fortified-roof-program/>

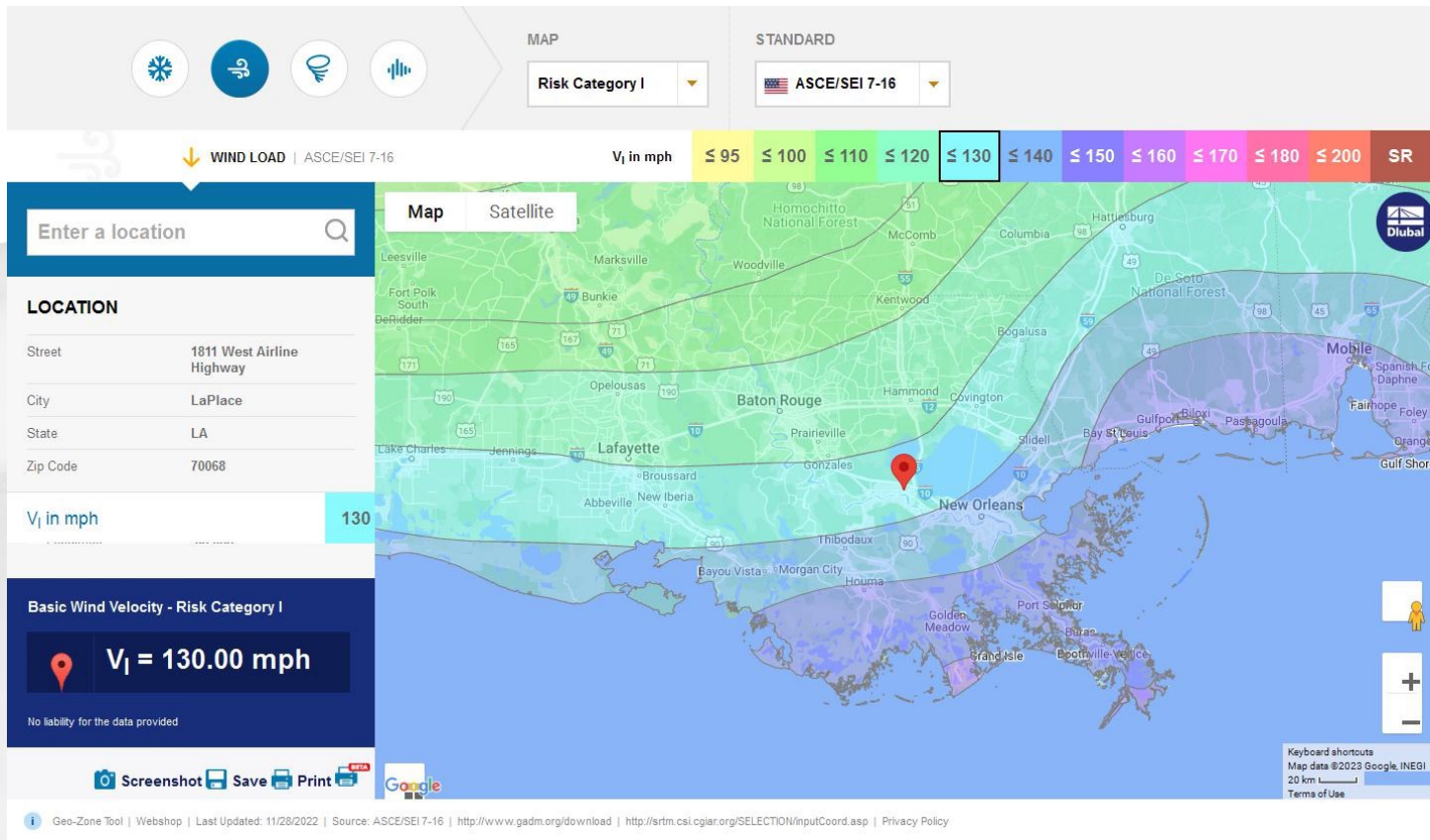
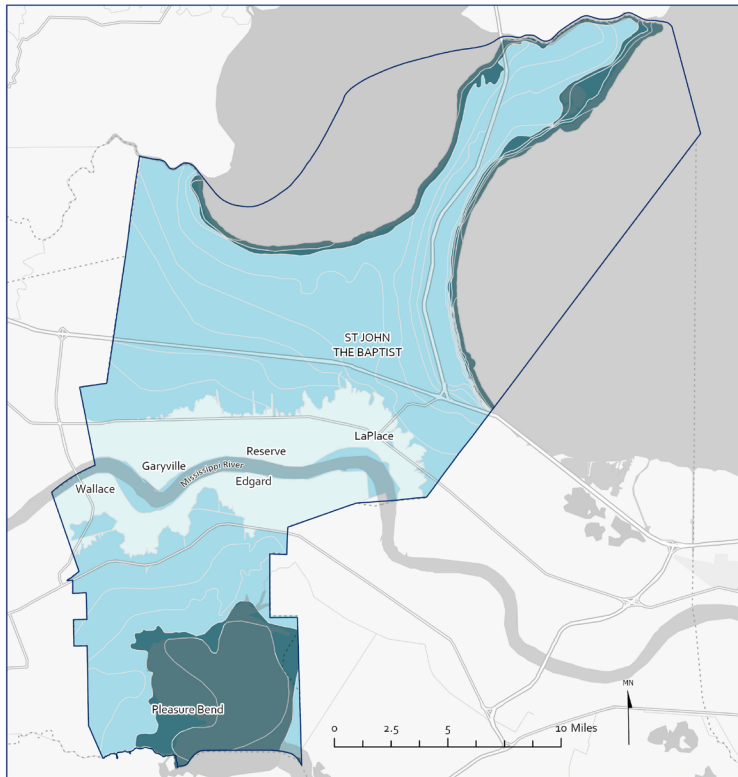


Figure 16: Wind Velocity Map







Special Flood Hazard Area  
 AE  
 VE  
 St. John the Baptist Boundary

Figure 17: Flood Zone Map (based on 2010 FIRM).

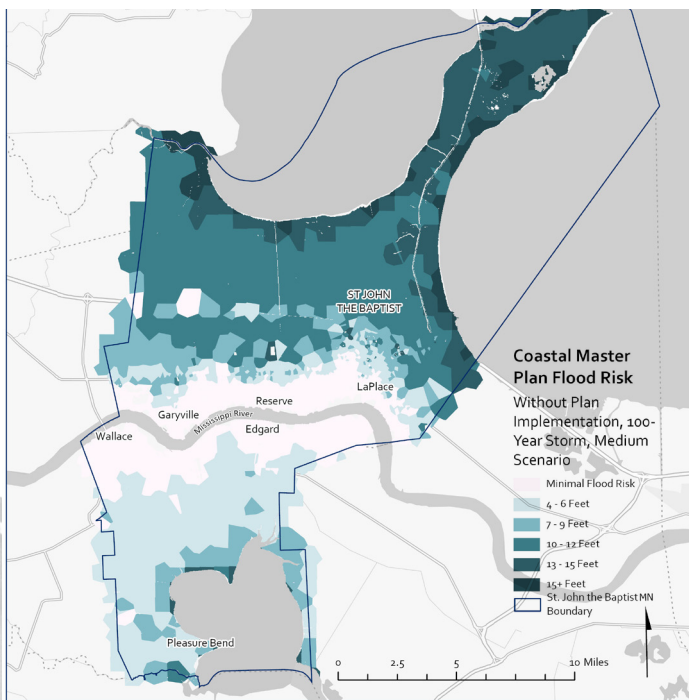


Figure 18: CPRA Flood Depth Map – Without Plan Scenario

Bank. However, as shown in **Figure 18**, elevations along the two sides of the Mississippi River are relatively equivalent. The community of Edgard on the West Bank ranges in elevation between 12 and 30 feet, like the more densely developed areas of Reserve directly across the river.

## 17. COASTAL RESILIENCE INDEX

St. John the Baptist Parish participated in a Coastal Resilience Index Community Self-Assessment exercise in June 2023. The full 2023 report from this exercise is included in Appendix B. A summary of findings from this process is provided below.

As illustrated in **Table 7**, the CRI process analyzed the resilience of Critical Infrastructure functioning in St. John after a disaster and determined it is at a Medium Resilience Index. This analysis examined past hurricane events, such as Hurricane Ida, and existing factors regarding wastewater treatment system components, locations, and functionality, the power grid, the water purification system, and transportation and evacuation routes.

*“[Our family] Evacuated for both Isaac and Ida. We had nowhere to stay safely until mold mitigation was done in our home. Once that was done and electricity was restored, we lived without a kitchen for at least 8 months waiting on insurance and an honest contractor.”*  
 – Parish Resident

The CRI found that Critical Facilities generally function well in St. John post-disaster, receiving a “High” resilience index rating (**Table 8**). The conscious location of critical facilities outside the 500-year flood zone and in flood-safe locations, communications infrastructure hardening that took place following Hurricane Ida, and strong evacuation coordination in place within the Parish EOC contribute to this high rating.

The CRI identified community plans and social systems as significant contributors to resilience, while mitigation measures and transportation





Figure 18: Topographic Map of Mississippi-River Adjacent Areas of St. John.  
 Source: Tessa DEM Elevation Data. (2023). <https://en-us.topographic-map.com/>.

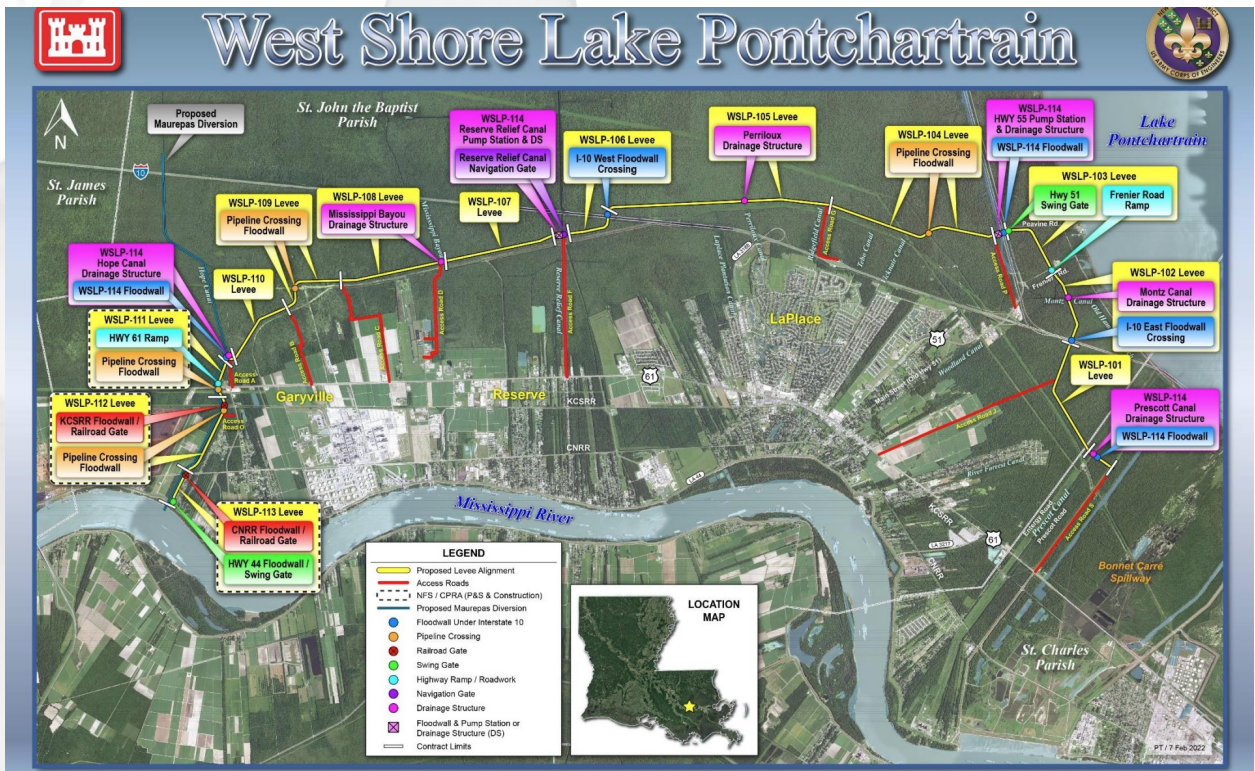


Figure 19: West Shore Lake Pontchartrain Levee Construction Map.

**Table 7: Critical Infrastructure Functioning Post-Disaster**

Number	Percentage functioning after a disaster	Resilience Index
0	0%	LOW
1	25%	LOW
2	50%	MEDIUM
3	75%	MEDIUM
4	100%	HIGH

**Table 8: Critical Facilities functioning in St. John after a disaster**

Number	Percentage functioning after a disaster	Resilience Index
1	13%	LOW
2	25%	LOW
3	38%	LOW
4	50%	MEDIUM
5	63%	MEDIUM
6	75%	MEDIUM
7	88%	HIGH
8	100%	HIGH

**Table 9: Transportation, Community Plans, Mitigation Measure, Business Plans, and Social Systems Resilience Index Score**

Sections 2-6	Number of Yes Answers	Translation to Resilience Index	Resilience Index
2. Transportation	6	4 or fewer (LOW) 5 to 6 (MEDIUM) 7 or more (HIGH)	Medium
3. Community Plans and Agreements	16	10 or fewer (LOW) 11 to 15 (MEDIUM) 16 or more (HIGH)	High
4. Mitigation Measures	11	7 or fewer (LOW) 8 to 12 (MEDIUM) 13 or more (HIGH)	Medium
5. Business Plans	0	4 or fewer (LOW) 5 to 6 (MEDIUM) 7 or more (HIGH)	Low
6. Social Systems	11	6 or fewer (LOW) 7 to 10 (MEDIUM) 11 or more (HIGH)	High



systems were shown as “medium” and business plans were shown as “low” on the resilience index (**Table 9**), mostly due to the fact that much of St. John the Baptist Parish’s main transportation routes are interstates or state highways (and not under Parish control) and the two bridges connecting the East and West banks are outside of St. John the Baptist Parish. Similarly, St. John the Baptist Parish coordinates with businesses through the EOC, but does not maintain business continuation plans. The history of planning and project implementation undertaken by St. John the Baptist Parish following Hurricane Katrina impacts this score and has demonstrated St. John the Baptist Parish’s prioritization of the operation of public services and critical facilities following a disaster.

The CRI exercise illuminates areas where St. John the Baptist Parish can focus efforts on in future years, and highlights strengths of St. John the Baptist Parish as a storm-tested community. Beyond EOC actions and coordination with business leadership, which the CRI highlighted, the Index also noted that affordable housing is one of the most pervasive issues that impacts resilience.

## 18. FUTURE HOUSING LAND-USE CONSIDERATIONS

Future land use planning must include considerations of projects that are underway, trends in the construction and housing market, and exposure to natural hazards and risk magnitude in different geographic regions of St. John the Baptist Parish. This future housing analysis covers notable projects and risks outlined further on the following pages.

### **Construction of the West Shore Lake Pontchartrain Risk Reduction System**

This 18.5 mile system, including 17.5 miles of levees, one mile of T-wall, drainage structures, pump stations, and several non-structural protection measures, will form an integrated protection system spanning from the Bonnet Carre Spillway to the Mississippi River Levee near Garyville. Construction is estimated to be completed in 2026. The system

1 Army Corps of Engineers. (2023) West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Study. <https://www.mvn.usace.army.mil/Portals/56/docs/PD/Projects/WSLP/WSLPFINAL.pdf>

2 For reference, see Army Corps of Engineers, Final Independent External Peer Review Report West Shore-Lake Pontchartrain, Louisiana, Hurricane Protection St. Charles, St. John the Baptist, and St. James Parishes, Louisiana, Integrated Draft Feasibility Report/Environmental Impact Statement, 2013.

3 Army Corps of Engineers. (2014). West Shore Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Study Final Integrated Feasibility Report and Environmental Impact Statement. [https://erdc-library.erdc.dren.mil/jspui/bitstream/11681/34997/1/West%20Shore%20Lake%20Pontchartrain%20Hurricane%20%26%20Storm%20Damage%20RRS\\_2014%20Appendix%20G.pdf](https://erdc-library.erdc.dren.mil/jspui/bitstream/11681/34997/1/West%20Shore%20Lake%20Pontchartrain%20Hurricane%20%26%20Storm%20Damage%20RRS_2014%20Appendix%20G.pdf)



Image: “For Sale” signage along I-10 in LaPlace, LA.

will provide 100-year hurricane and storm surge protection to 60,000 Louisianans in St. Charles, St. James, and St. John the Baptist Parishes. **Figure 19** is a map produced by the Army Corps of Engineers detailing the proposed levee alignment, access roads, and structures, current as of January 2023.

According to the Army Corps of Engineers, 70 hurricanes have made landfall within 65 nautical miles of LaPlace since 1855.<sup>1</sup> Ten of those storms in the last century have caused storm surge flooding in the area. Crucially, the West Shore Lake Pontchartrain Levee will reduce storm surge flooding and other hurricane risks to St. John, but assessments do not include measures of whether or how the levee will impact rainfall-induced flash flooding.<sup>2</sup>

### **Residential Expansion Inside of Levee Footprint**

Existing plans for the WSLP Levee include the use of a “leaky levee” concept design which incorporates the use of floodgates to allow inflow of water to the levee footprint<sup>3</sup> in situations where a coastal flood event is not imminent. In conjunction with the River Reintroduction to the Maurepas Swamp diversion project, the construction presents the possibility of St. John becoming one of the first communities in the nation that is levee-protected on the river and lake side with federalized levees. In this approach,



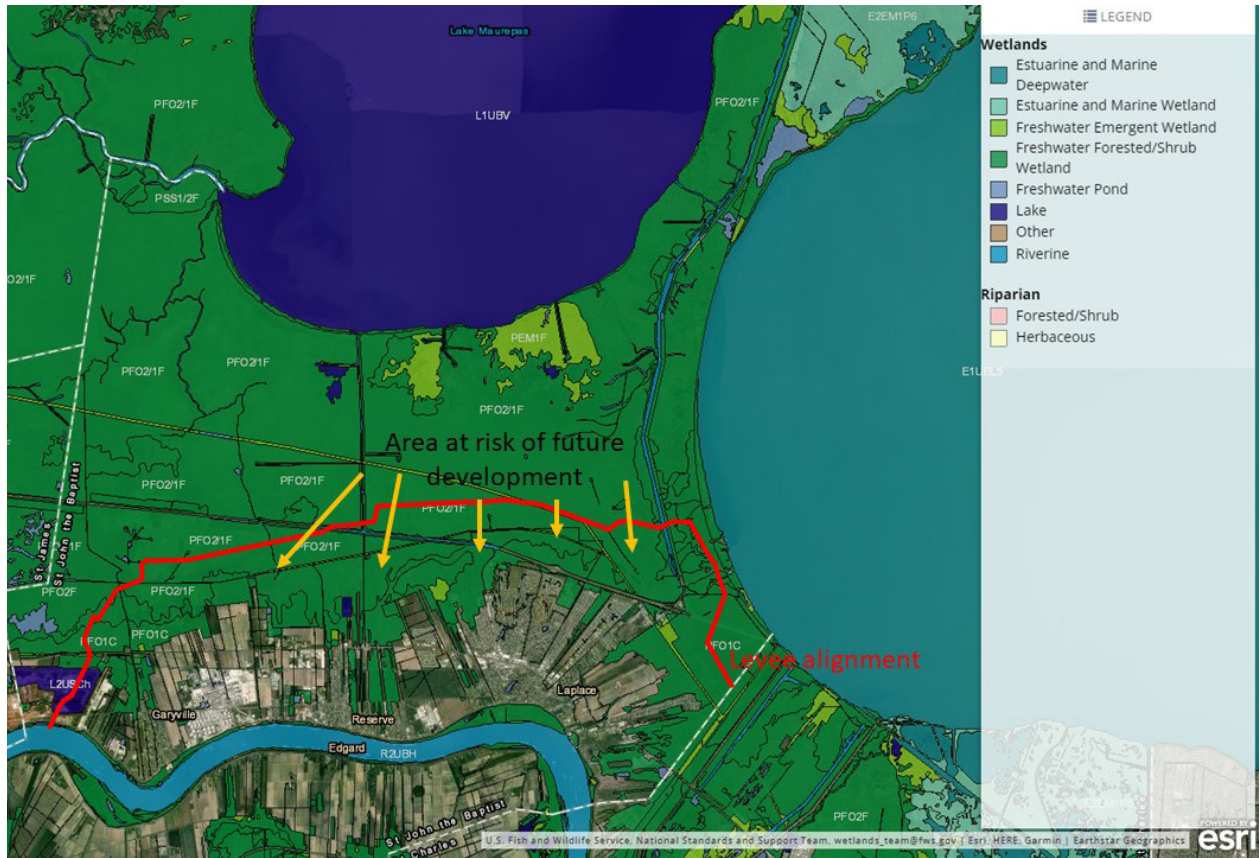
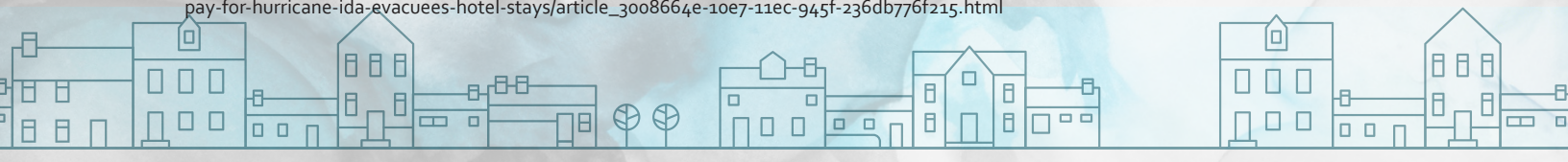


Figure 21: WSLP Alignment and Potential Future Development Areas



Image: Roofers repair a roof that was wind damaged from Hurricane Ida in Lafitte, La. Tuesday, Sept. 7, 2021. (photo by David Grunfeld, NOLA.com | The Times-Picayune | The New Orleans Advocate) - [https://www.theadvocate.com/baton\\_rouge/news/louisiana-requiring-insurers-to-pay-for-hurricane-ida-evacuees-hotel-stays/article\\_3008664e-10e7-11ec-945f-236db776f215.html](https://www.theadvocate.com/baton_rouge/news/louisiana-requiring-insurers-to-pay-for-hurricane-ida-evacuees-hotel-stays/article_3008664e-10e7-11ec-945f-236db776f215.html)



the portion of the Maurepas Swamp that is inside the levee alignment (on the south side of the levee) can play a critical role in absorbing flood and wind impact in a flood or wind event, and this area can be nourished by a controlled balance of fresh water, salinity, and nutrients from both the lake and the river.

Additionally, the protection of the Maurepas Swamp and Maurepas Landbridge outside (to the north) of the levee alignment is a critical component of the “multiple lines of defense” concept to protect St. John the Baptist Parish from flood and wind hazards. It is well documented that in levee environments where development has taken place in close proximity to the levee footprint, residents are subject to increased subsidence and reduced performance of the structural protection elements of the levee.<sup>1</sup>

This has been a painful lesson for the City of New Orleans and the Parishes along the Mississippi River. **In short, the land lying just within and just outside of the WSLP levee alignment must be preserved in a healthy swamp state for the levee and natural storm protection elements to function optimally to protect Parish housing stock.**

Because of long-standing demand for housing units and the future of full levee build-out, land in the vicinity of the WSLP levee alignment may be viewed as “ripe for development” by residential homebuilders.

The finalization of the WSLP levee will be a significant accomplishment for St. John; however, this milestone also brings imminent changes to the Flood Insurance Rate Maps (FIRMS) for St. John the Baptist Parish, which currently require homes in flood zones to be elevated to the base flood elevation plus 1ft of freeboard in a “without levee” 100-year coastal flood scenario. These changes to the FIRMS could present a benefit to residents, in potential savings on flood insurance premiums and the potential reclassification of a majority of homes currently identified as in an AE to an X Zone. **This benefit may further incentivize the construction of slab-on-grade homes in LaPlace that could be subject to localized rainfall flooding and pooling that is not mitigated through the construction of the WSLP levee.**

<sup>1</sup> Frank, T. (2019). After a \$14-Billion Upgrade, New Orleans' Levees are Sinking. Scientific American. <https://www.scientificamerican.com/article/after-a-14-billion-upgrade-new-orleans-levees-are-sinking/>

### **Potential Mitigation Measures to Investigate**

The new levee system will provide significant protection to homeowners in St. John, but this protection relies on continued structural performance of the levee. These protections can be diminished through cumulative development impacts which reduce permeable surfaces and infiltration of rainfall. Potential mitigation measures for this risk include:

- Revisit and strengthen current zoning regulations like the ECD district, which only allows limited housing and commercial development in some of the critical wetlands within and north of the levee alignment.
- Identify the existing wetlands within and north of the levee alignment as a special area with a special area management plan within the Coastal Zone Plan for St. John the Baptist Parish, including requiring special standards for any actions resulting in loss of wetlands through the Coastal Use Permit process.
- Utilize the Coastal Use Permit (CUP) process to enforce mitigation measures for new subdivisions and larger facilities in rurally zoned areas of St. John the Baptist Parish. The purpose of the Coastal Use Permit (CUP) process is to make certain that any activity affecting the Coastal Zone is performed in accordance with guidelines established in the Louisiana Coastal Resources Program (LCRP). A prime concern of the CUP Program is to regulate activities that may increase the loss of wetlands and aquatic resources, as well as to reduce conflicts between coastal resource users. While individual housing construction projects are automatically exempt, the Coastal Use Permit can be enforced against larger developments that most affect the wetlands.
- Support and create marsh near the levee. As documented in the LA-SAFE Adaptation Strategy, St. John the Baptist Parish can further reduce storm surge impacts by restoring and creating marshlands or implementing green infrastructure projects inside the new levee system. This option would involve the implementation of marsh restoration or creation projects to improve wetland health



and even create new wetlands inside and just outside the levee alignment.

- Facilitate land conservation purchases by St. John the Baptist Parish or the state. Purchase of lands within the levee alignment that serve a critical wetland function could be enabled by coordinating with the Louisiana Department of Wildlife and Fisheries to secure grant funding and maintain the land in its natural state. Limiting development in these areas could be further strengthened via deed restrictions that also enhance St. John the Baptist Parish's CRS rating.
- Encourage infill in low-density areas where housing already exists. Many areas further south of the levee alignment are currently zoned for residential use and are lower risk areas—specifically those closer to the Mississippi River, including on the West Bank. These areas present significant opportunities for infill development with moderate increases in density.

**St. John the Baptist Parish will continue to investigate these potential mitigation measures as the Resilient Housing Plan advances.**

*“We have been homeless since we lost everything in Hurricane Ida.”*

*“Thank GOD my daughter moved out of the parish otherwise, we would have nowhere to go.”*

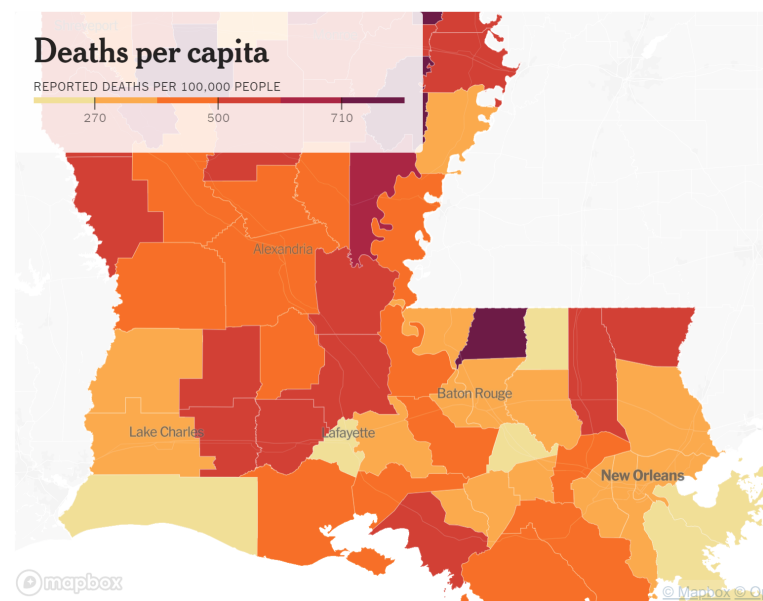
*“Still in a FEMA mobile home.”*

*“My home [is] still damaged from Hurricane Ida.”*

*– Parish Residents discussing Hurricane Ida*

## 19. HOUSING DEMAND AND AFFORDABILITY CONCLUSIONS

As detailed in this assessment, St. John has a large and growing population of vulnerable residents such as elderly residents, children, residents with a disability, residents inhabiting mobile homes, and residents who have low- to moderate incomes. As more residents aim to “age in place,” raise families, and build generational wealth, this plan asserts an urgent recommendation that St. John the Baptist Parish provide a variety of affordable housing options and implement plans that advance more equitable housing for all residents in a way that aligns with rural development and design practices. This approach reflects how many residents in St. John embrace a rural landscape and way of life that includes some degree of seclusion from neighbors and avoids an urban development pattern.



**Figure 22:** COVID-19 Deaths per Capita - Source: New York Times. (2023). Tracking Coronavirus in Louisiana. <https://www.nytimes.com/interactive/2021/us/louisiana-covid-cases.html>

St. John's relative high rate of poverty, historic disenfranchisement of black and indigenous residents, and lack of access to community resources contribute to social vulnerability as a major risk factor. High social vulnerability can impact residents' ability to withstand and recover from natural hazards or disaster events, and a community with widespread social vulnerability

may find that disasters provoke cascading damage that is compounded by residents' lack of access to resources.

## 20. POVERTY AS A MAIN DRIVER OF RISK

### Context

Poverty has a negative effect on individual health and well-being. A study by Thiede and Brown (2013) underscores that impoverished communities often face higher mortality rates, slower recovery, and long-lasting health impacts after floods, indicating that poverty reduction is a prerequisite for effective disaster recovery.<sup>1</sup> Recent tests to the resilience of St. John's population include Hurricane Ida (2021) and the COVID-19 epidemic (2019-2021).<sup>2</sup> In both instances, St. John emerged as an acutely impacted Parish. It is worth examining if factors related to poverty and social vulnerability contributed to the widespread and intense impact of both events in St. John the Baptist Parish.

### Local Conditions

St. John has a regionally unique concentration of persons in poverty or near-poverty and social vulnerability.<sup>3</sup> This factor, combined with an aging population, and a suburban/rural development pattern that is not thoroughly served by a transportation network, can foster social isolation and exacerbate social vulnerability factors. The Louisiana Association of United Ways noted that, in addition to poverty statistics in St. John the Baptist Parish, "nearly half of the population is still living in poverty or within the ALICE (Asset Limited, Income Constrained, Employed) threshold, a term that describes households earning more than the poverty level but less than the rising cost of living."<sup>4</sup> St. John is also at the forefront of **environmental pollution controversy in Louisiana;**

1 Thiede, B. C., & Brown, D. G. (2013). Urbanization and the variability of the 100-year flood in the United States. *The Professional Geographer*, 65(4), 620-634.

2 New York Times. (2023). Tracking Coronavirus in Louisiana: Latest Map and Case Count. <https://www.nytimes.com/interactive/2021/us/louisiana-covid-cases.html>

Killough, A. & Lavandera, E. (2020). This small Louisiana parish has the highest death rate per capita for coronavirus in the country. <https://www.cnn.com/2020/04/15/us/louisiana-st-john-the-baptist-coronavirus/index.html>

3 Robichaux, B. (2023). New report shows 47% of St. John households earn below rising cost of living. *L'Observateur*. <https://www.lobserveur.com/2023/05/27/new-report-shows-47-of-st-john-households-earn-below-rising-cost-of-living/>

4 Ibid.

5 Kates, R. W., Colten, C. E., Laska, S., & Leatherman, S. P. (2006). Reconstruction of New Orleans after Hurricane Katrina: A research perspective. *Proceedings of the National Academy of Sciences*, 103(40), 14653-14660.

6 Few, R., Lake, I., & Hunter, P. R. (2017). Transitions in water resource management in the face of climate change: the context of flood risk. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 365(1861), 1957-1971.

7 O'Brien, K., Eriksen, S., Nygaard, L. P., & Schjolden, A. (2006). Why different interpretations of vulnerability matter in climate change discourses. *Climate Policy*, 6(5), 537-553.

where industry, poverty, and ALICE factors more heavily impact black residents recovering from historic disenfranchisement and the plantation enslavement system.

### Impacts of Poverty

Long-term poverty and social vulnerability reduce a person's ability to adapt to societal stress. A 2006 study highlighted that low-income households often lack the resources to prepare for, respond to, and recover from flood events.<sup>5</sup> Concentrated poverty—and its associated toll on residents—strains local governments' ability to provide services and respond before, during, and after a disaster. Poverty exacerbates vulnerabilities by limiting access to adequate housing, healthcare, education, and insurance—rendering communities less resilient in the face of disasters.<sup>6</sup> Poverty can hinder community capacity to mobilize resources and engage in collective action. Widespread poverty can limit access to critical information in the disaster and resilience environment as a result of disparities in technology, education, and literacy levels. O'Brien et al. (2006) stress the importance of addressing poverty to ensure that marginalized communities have equal access to vital information, enhancing their ability to respond effectively to flood warnings.<sup>7</sup>

For these reasons, flood impacts disproportionately affect impoverished communities who are slower to become aware of, respond, and adapt to changing conditions before, during, or after an event.

### Addressing Poverty

A 2008 study of social vulnerability and environmental hazards emphasized that addressing poverty fosters social cohesion and enhances the collective capacity of communities to prepare for and respond to flood events, as poverty alleviation can empower individuals to participate actively in





disaster risk reduction efforts<sup>1</sup>. Munyehirwe et al. (2019) argue that poverty reduction can also free up resources that can be invested in infrastructure development, early warning systems, and community capacity building—integral components of long-term flood resilience strategies discussed in this Plan<sup>2</sup>.

Prioritizing poverty reduction measures as part of future mitigation activities will be key to maximizing community benefits. Such efforts acknowledge that pervasive poverty in St. John the Baptist Parish is a substantial factor preventing long-term resilience.

#### Resilience includes:

1. **More equitable resource allocation** for disaster risk reduction
2. **More extensive disaster preparation**, and
3. **Increased access to resources** in non-disaster and disaster environments.

#### Hazard Mitigation Approach

The socioeconomic impacts of natural disasters fall most heavily on impoverished communities, due to lack of resources available to prepare for storms, lack of access to information, and disproportionate health impacts in the aftermath of disasters.

#### Addressing poverty is paramount to enhancing community flood and natural disaster resilience.

To this effect, poverty reduction is a foundational step in building resilient communities, is prioritized in action items within this Plan, and—rather than being a dimension of community risk to hazards—is identified as a primary driver of risk in St. John.

This Plan includes an approach to hazard mitigation that highly prioritizes addressing poverty, increasing access to financial and supportive services, and community investment. The recommendations in this document are designed to address poverty to the same extent as flood risk reduction because both types of policy choices will result in increased community resilience to natural disasters.

#### These actions include acknowledging:

- Long-term community planning is a luxury for those residents focused on day-to-day survival.

- Planning processes in areas of concentrated poverty must adapt to reflect the real challenges of survival faced by area residents.
- From the start, planning processes should build institutional trust through the linkage and provision of tangible benefits (food, shelter, immediate funds) to individual residents at or near poverty.
- Through the provision of real benefits that reduce poverty and social vulnerability, communities become more resilient and a focus on long-term community planning becomes more relevant.

#### Mitigation Measures To Investigate

To mitigate the risk factors of social vulnerability and increase demand for housing options and affordability, St. John the Baptist Parish should:

- **Coordinate** with private or nonprofit housing developers to construct prototypes of different affordable housing options including single-family detached and multi-family options. Tax credits and incentive programs can further support this coordination.
- **Support** the Public Housing Authority's pursuit of grant funding to construct additional units and provide additional housing vouchers.
- **Designate** areas for higher density development where there is less future flood risk projected.
- **Pursue** a grant funded Housing First Approach to provide permanent housing to people experiencing homelessness, combined with services such as community low-cost healthcare, connections to social support programs such as SNAP, and workforce training programs.
- **Adopt** zoning and land use standards that allow flexibility for specific areas with low flood risk to be developed as mobile home parks or for individual mobile home sites with wind shelters in proximity.
- **Invest** in community centers, early childhood education, and workforce development programs to enhance financial mobility for Parish residents.

#### Westbank Risk Profile Conclusions

As discussed in the Existing Housing Assessment, land on the West Bank of the Mississippi River is approximately as high as land located along the East Bank. Future residential development on

1 Cutter, S. L., Boruff, B. J., & Shirley, W. L. (2008). Social vulnerability to environmental hazards. *Social Science Quarterly*, 84(2), 242-261.

2 Munyehirwe, A., Abid, M., & Nkusu, M. (2019). Poverty reduction and disaster resilience in Small Island Developing States. *World Development*, 122, 808-826.



the West Bank, however, is in contention with a potential increase in industrial development. In addition to industrial pressures, existing West Bank development is served by very limited transportation options, community resources, and commercial amenities.

Potential land management approaches to this challenge include:

- A detailed analysis of potential **future housing projections** for the West Bank under different development scenarios that include a “with industry” and “without industry” scenario.
- A series of **public meetings, community, and Parish leadership workshops** regarding the future of the West Bank including meaningful discussions of potential industrial development. This could include a community analysis of the West Bank’s current zoning and housing patterns and what changes may be appropriate.
- **Selective purchase and conservation** (by St. John the Baptist Parish, State, or nonprofit organization) of land along Highway 3127 and in the vicinity of potential industrial sites to reduce the potential for residential development in flood zones or in proximity to future industrial sites.

## 21. HOUSING LAND-USE IDEALIZATION MAP AND EXERCISE

### *Resilient Housing Survey*

The St. John Resilient Housing Plan Team issued a digital and paper survey Parishwide and promoted these materials at numerous events to gather residents’ input on housing and land use issues. These events included the use of maps to show flood risk and housing locations, and specific questions and examples of housing types to gather insight on the cost of housing, challenges in housing, and preferred neighborhood designs. A brief analysis of survey results is included below, with a full documentation of survey results shared in Appendix B.

### *Survey Results Analysis*

**Overview:** A total of 127 residents responded to the community survey. Respondents included

representation from both banks of the river, a large age range, and a variety of geographic areas.

1. **Survey respondents showed passion for St. John the Baptist Parish.** As shown in **Figure 23**, in response to the question, “Please tell us in your own words what you like most about living in St. John,” residents found respite in community cohesion, a quiet, small-town environment, and a place for family in close proximity to neighboring New Orleans, St. Charles, and Baton Rouge.
2. **Housing affordability is heavily impacted by flood insurance.** Concerns over the rising cost of flood insurance have risen as the National Flood Insurance Program’s Risk Rating 2.0 premium calculations have taken effect. In the survey question, “Are rising flood and homeowners’ insurance costs making it hard for you to afford necessities, such as car payments, food, and utilities?”, an alarming 70% of survey respondents answered “yes”. Additionally, many respondents indicated that they cannot afford flood or homeowners’ insurance, revealing a substantially widespread risk for a loss of family assets in a disaster.
3. **Residents are feeling the pinch of housing affordability.** Many respondents’ answers to the survey repeated the focus on housing affordability as a challenge, both for themselves and those they know within the community. This data is specifically troubling because St. John has maintained relatively stable housing affordability in comparison to neighboring Parishes in the Greater New Orleans region.<sup>1</sup>

One survey question, “In your opinion, who has the most trouble finding a good place to live in St. John?”, was specifically illuminating. The overwhelming response to this question was “low-income people and families,” which aligns with Plan findings and analysis, and further supports an urgent need to address household poverty and social vulnerability in St. John.

Similarly, in response to the question, “Please rank the following housing issues in St. John,” respondents ranked housing affordability, especially for those on a fixed income, young families, elderly residents, and disabled residents. These answers show that residents

<sup>1</sup> HousingNOLA, Housing Louisiana, & Greater New Orleans Housing Alliance. (2023). Greater New Orleans Housing Alliance Working Group: Fact Sheet. <https://housinglouisiana.org/wp-content/uploads/2023/03/HNO-23-01-Reg-Housing-Fact-Sheet-scott-ott-creative-jan-2023-NOLA.pdf>





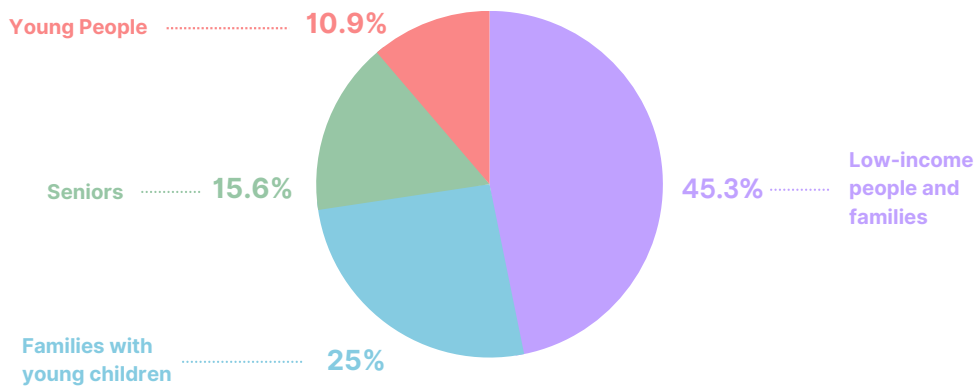


Figure 25: Survey responses to the question, "In your opinion, who has the most trouble finding a good place to live in St. John?"

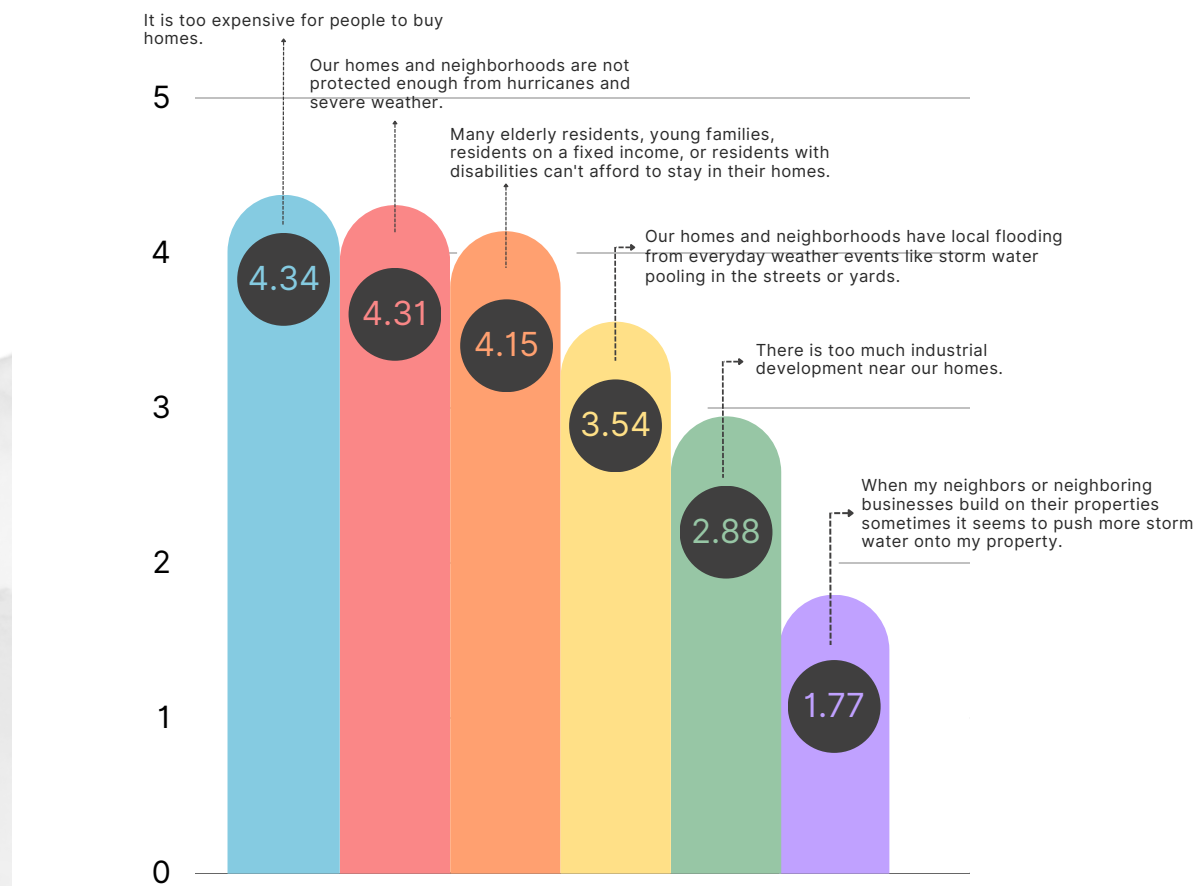


Figure 26: Survey responses to the question "Please rank the following housing issues in St. John."



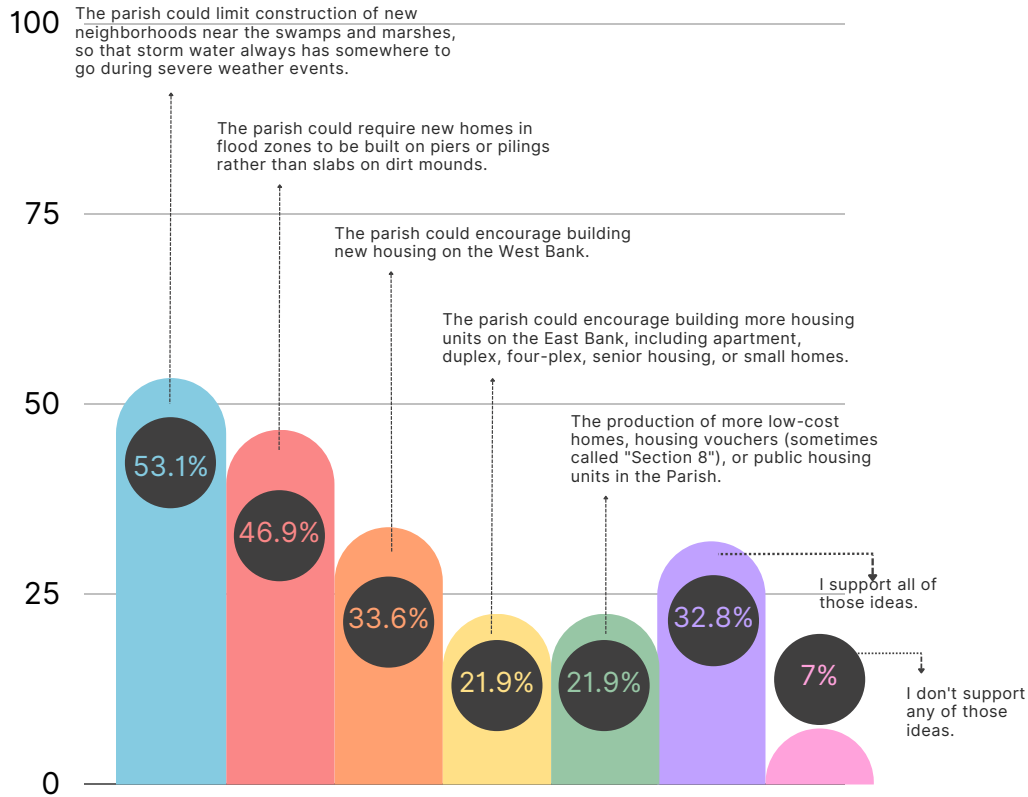


Figure 27: Survey responses to the question, "Please tell us which of the following ideas for new housing policies you would support."

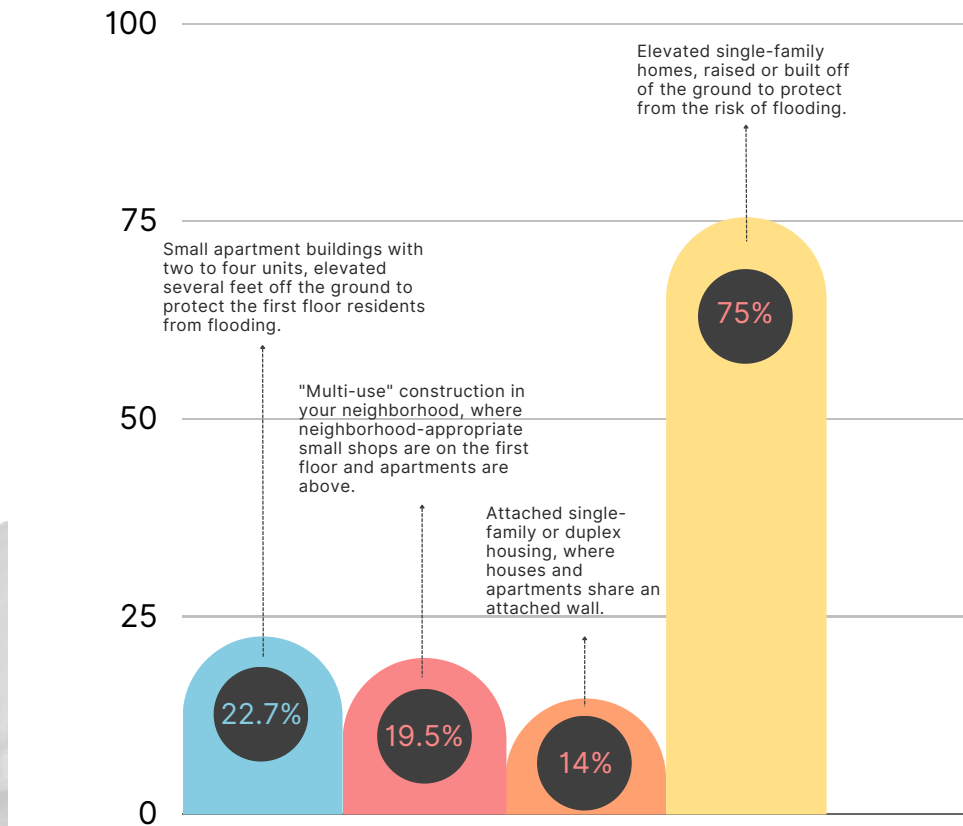
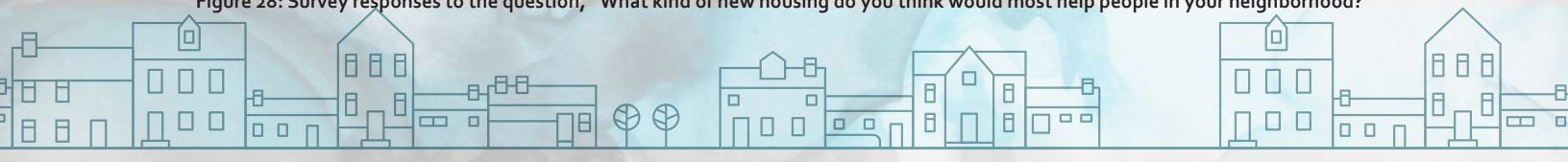


Figure 28: Survey responses to the question, "What kind of new housing do you think would most help people in your neighborhood?"



At Meeting 1, **75 residents** wrote **373 responses** to the activity prompts that LA SAFE organized into challenges, strengths, and opportunities. Resident comments were grouped and evaluated by frequency. The list below summarizes the most-discussed topics at the meeting in order of frequency of mention.

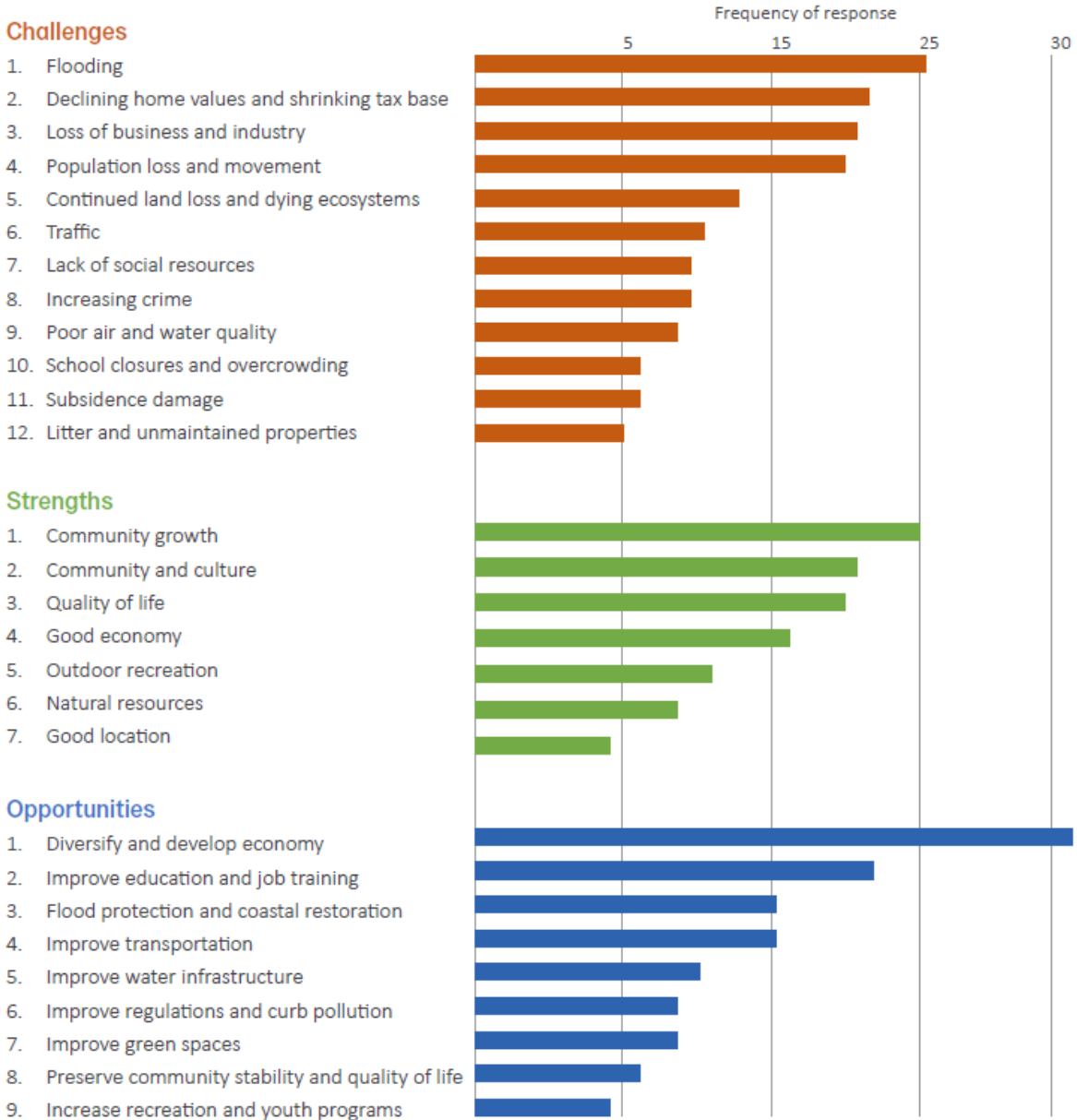


Figure 29: LA-SAFE Resident Comment Topics

identify affordability and exposure to hazards as interconnected issues.

4. **Residents are split between what is the most appropriate intervention to address resilient housing and housing demand.** Two survey questions inquired about potential policy interventions to mitigate flood risk, to provide

housing to low-income residents or residents in poverty, and to meet market demand for more units. In response to these questions, residents supported clear flood mitigation approaches such as limiting construction in sensitive areas and requiring open foundation styles. Respondents also indicated a clear preference for single-family dwelling types





Figure 30: Residents at Round 2 LA SAFE meeting series discussing one of the questions



Figure 31: LA SAFE Community Planning Process Diagram

to meet housing demand. These responses align with the rural landscape in St. John the Baptist Parish, reflect opportunities associated with existing undeveloped land, and could constitute an implementation strategy that is likely to receive broad community support.

- Comments indicated that **residents have a high level of understanding about the realities of flood risk**, their exposure via slab-on-grade housing types, and the urgent need for grant funding to mitigate this risk. One commenter noted, “Raise homes throughout the Parish. You shouldn’t have to flood three times to apply for a grant to raise your home.” This comment alludes to the fact that some FEMA home elevation grants rely on a benefit-cost analysis that hinges on Repetitive Loss status for project eligibility, which can mean that some homes are not elevated when homeowners are ready for elevation, but rather once they have flooded enough times to qualify. Additional responses called for more

housing on the West Bank and limitations on development far north of Airline, in the higher flood risk areas of LaPlace. Similarly, these comments reflect a deep understanding of the reduced flood risk on the West Bank and the need to pull housing opportunities to higher ground over time. Finally, many respondents indicated that the West Shore Lake Pontchartrain Levee will help significantly reduce flood risk, but they recognize that localized pooling and rainfall still presents a risk to homes.

- Homelessness and the threat of under-housing is a pervasive issue**, especially after Hurricane Ida. Some residents expressed frustration with the net loss of affordable housing following Hurricane Ida and the demolition of public housing units. Respondents noted that the Section 8 voucher list is excessively long and that relatives or community members they know have been forced to move into others’ homes (becoming under-housed) or lack shelter in weather events.

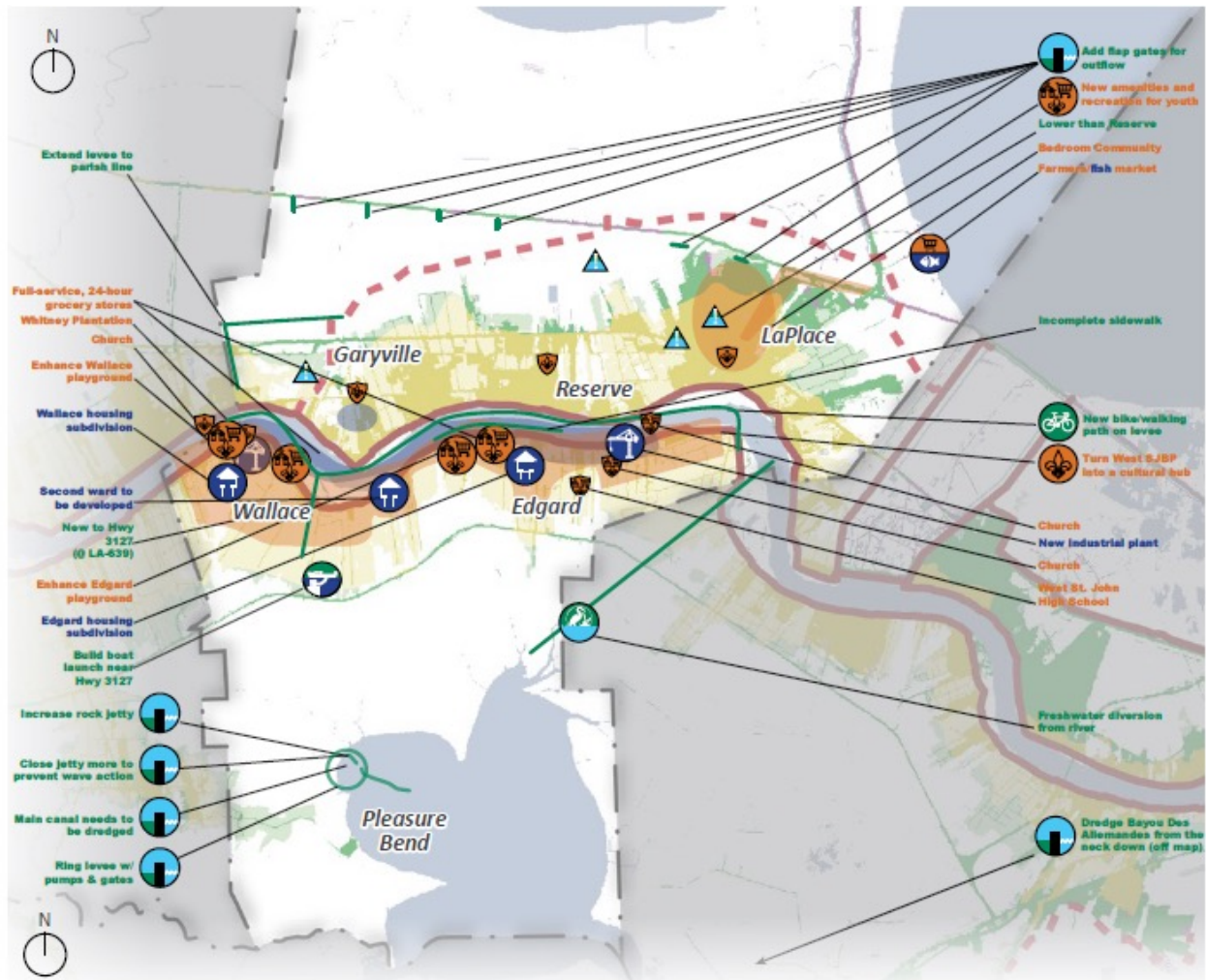
## 22. LAND USE IDEALIZATION IN THE LA SAFE PROCESS

From 2017 through 2019, St. John participated in a process organized by the Louisiana Office of Community Development called “Louisiana’s Strategic Adaptations for Future Environments” (or LA SAFE). This process was effectively a Land-Use Idealization Planning Exercise that occurred prior to the initiation of this Resilient Housing Plan, so the Parish has taken this opportunity to merge the findings from LA SAFE with this Resilient Housing Plan, as they are related, and this plan can be seen as a continuation of the planning effort in LA SAFE.

Per the LA SAFE St. John Strategy, the LA SAFE community planning process “engaged 324 residents and community leaders in St. John the Baptist Parish over the course of five rounds of meetings. Meetings were held in Reserve, Pleasure Bend, Edgard, and LaPlace.”<sup>1</sup> The basis for these meetings was an approach that included planning and projected environmental conditions and scenarios, as shown in **Figure 31**.

Initial LA SAFE meetings occurred in 2018 and included an activity prompting residents to answer, “What Does Change Mean to You?” In these

<sup>1</sup> Louisiana Office of Community Development. (2018). St. John the Baptist Parish Adaptation Strategy. <https://LA.SAFE.la.gov/>



### CROWD-SOURCED LAND-USE MAP

This map compiles all the drawings and notes that residents placed on their activity maps. This indicates the types of interventions they would like to see across the parish. The colors of the icons and text correlate to the type of intervention suggested.

Sources: For all basemap data see References

#### Legend

##### ECONOMY & JOBS

- General Economic Investment
- Industry/Economic Investment
- Housing & Development
- Job Centers
- Seafood Industry

##### ENVIRONMENT & SUSTAINABILITY

- Parks & Nature Trails
- Bike Trail
- Multimodal Transportation
- Traffic Problem

##### COMMUNITY & CULTURE

- Cultural Assets
- Schools & Educational Assets
- Groceries & Amenities
- Recreational Fishing & Ecotourism

##### FLOOD RISK REDUCTION

- Flood Protection
- Rainwater Retention Area / Nature Preserve
- Flooding Problem

##### TYPE OF ICON

- Asset/area to be protected
- Potential new/improved asset

Figure 32: LA SAFE Output from Community Meetings

Source: Louisiana Office of Community Development. (2018). St. John the Baptist Parish Adaptation Strategy. <https://LA SAFE.la.gov/>





### Low-Risk Vision

**What we expect over 50 years:**  
 Minimal flood risk  
 Economic growth  
 Population increase



**Vision:** Denser residential and commercial development, increased transportation options, improved stormwater management, and more green space.

relative sea level rise, coastal risk, and population changes. Residents then added notes, comments, and geographic insight to these maps. The final output of these LA SAFE community meetings was a map showing assets and mitigation strategies.

Following this mapping exercise, the third meeting series included expanded visions interpreted from prior meetings, and gathered more resident input on these potential directions.

### Summary of Resilient Housing Survey and LA SAFE Public Input in Response to Research Questions

#### Who are we planning for and what is our vision for a Resilient St. John?

While the LA SAFE Adaptation Strategy projected moderate increases in population throughout the East Bank of St. John and in Wallace on the West Bank, and identified St. John as a “receiver community,” more recent population projections since 2018 highlight population decline after Hurricane Isaac (2012) and Hurricane Ida (2021), and a continued gradual decline every year since (Figure 7 on pg. 27). While this Strategy continues to address the potential influx of residents associated with being a “receiver community,” it more importantly focuses on existing affordability demands and flood hazard exposure experienced by existing residents. To this effect, a resilient St. John 1) prevents the exacerbation of poverty during population shifts, 2) preserves natural assets, 3) builds the next wave of housing stock responsibility, and 4) promotes new economic opportunities, transportation network enhancements, and commercial amenities for existing and new residents.

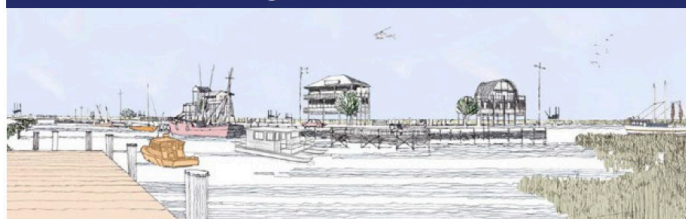
### Moderate-Risk Vision



**What we expect over 50 years:**  
 Land loss in surrounding areas | Moderate local flood risk  
 Not much change in population

**Vision:** Protected harbors, clustered elevated housing and amenities, recreational spaces, elevated evacuation routes, and increased transportation options.

### High-Risk Vision



**What we expect over 50 years:**  
 Land loss | High flood risk | Decline in population

**Vision:** Expand recreational and ecotourism industries, elevated evacuation routes, and improved infrastructure to support the seafood industry and coastal workers.

#### Where is the land with the lowest flood risk?

As indicated on parish flood hazard maps, the land least subject to flood risk lies closest to the Mississippi River on the East and West Banks of the Parish. This is due to the formation of a natural ridge from sediment deposition from the river, and the fact that St. John’s coastal flood risk sources are Lake Pontchartrain and Lake Maurepas (to the north) and Lac Des Allemands and the Gulf of Mexico more broadly (to the south).

#### What elevations are the approximate dividing lines between high, medium, and low flood risk?

Both Plan survey responses and LA SAFE comments identify north LaPlace as the boundary between low and medium flood risk on the East Bank. As previously discussed, completion of the West Shore Lake Pontchartrain Levee will reduce flood risk in this area; however, preserving natural retention areas will be key to successful, continued levee function. Highway 3127 on the West Bank is the

**Figure 33:** Visions Presented at Round 3 LA SAFE Meetings  
**Source:** Louisiana Office of Community Development. (2018). St. John the Baptist Parish Adaptation Strategy. <https://LA SAFE.la.gov/>

discussions, residents noted trends and challenges that they were seeing in the Parish. Following this meeting, LA SAFE meeting guides asked for input on “Adaptation Goals,” including values in the Parish, and residents’ vision for what a resilient future might look like. Feedback from these initial meetings is included in **Figure 29**.

During discussions on adaptation goals, attendees were presented with maps showing flood risk,



limit of developable land to the south, where coastal flood risk increases as development proceeds southward from the river.

## 23. DAMAGE AND LOSS REDUCTION PLAN

The Damage and Loss Reduction Plan section of the Resilient Housing Plan consolidates recommendations to form an Action Plan document that is an inventory of policies, plans, and interventions to enhance housing resilience in the Parish. Recommendations included in the Action Plan address issues associated with existing housing assistance, future housing land-use considerations, and housing land-use idealization exercises, and are drafted in response to resident comments and feedback regarding risks, challenges, and opportunities in the Parish.

## 24. DISASTER RECOVERY HOUSING PLAN

### *Inventory of Emergency Shelter and Recovery Housing Operations*

For the purposes of this Plan, standard operation procedures (SOPs) contained within the existing Parish Emergency Operations Plan (EOP) are not repeated or summarized, but briefly analyzed as procedures relate to emergency shelters and recovery housing. This analysis is informed by an assessment of the Parish EOP and a convening of Parish Leadership and Departments in March 2023, which resulted in the following findings:

The Parish has identified operations for the four stages of emergency shelter and recovery housing, which include:

- Stage 1:** Storm shelters
- Stage 2:** Temporary housing
- Stage 3:** Repair to existing housing
- Stage 4:** Replacement housing

#### **The EOP includes task details for:**

1. Evacuation
2. Shelter / Mass Care
3. Damage Assessment

#### **These sections of the EOP were completed with emergency stakeholders including:**

1. Health and medical services providers
2. Public works and Utilities Officials

3. Parish Officials from each department regarding re-entry and recovery

#### **STAGE 1: SHELTER INVENTORY**

***Guidance in the EOP for shelters / mass care.*** The EOP includes guidance for the provision of shelters and mass care, including providing meals, protective action, access control, and space conditions. This guidance also addresses shelter services during a non-mandatory evacuation vs. last resort refuge shelter activities. The EOP also details sheltering in place actions (in individual homes), community sheltering activities (congregate shelters), and a supplement for animal evacuation, sheltering plans, and procedures.

***Storm shelter locations.*** Storm shelters serving the Parish are located on each bank of the Parish at:

1. Lake Pontchartrain Elementary School Gymnasium
2. West St. John High School Gymnasium
3. Additional inventory of buildings with shelter capacity are listed in WebEOC

***Resources for transition from shelter stage to temporary housing.*** The Parish EOC has open lists of residents who sign up for coordination support, which focuses on connecting vulnerable populations with FEMA temporary housing funds as soon as possible.

- ← Note: Mass shelters require a longer lead time than parish shelters and require advanced transportation planning.
- ← Note: Sudden disasters can reduce the effectiveness of mass/State sponsored shelters.

#### ***Duties as listed in the EOP.***

1. The Public Safety Department is listed in the EOP as responsible for coordinating arrangements for the activation of reception centers, shelters in St. John Parish, and shelters in support parishes.
2. The Health and Human Services Department is listed in the EOP as responsible for coordinating services provided at the Parish Assisted Transportation Pickup Point and when applicable, providing liaison officers at emergency shelter locations.



3. The American Red Cross Representative is listed in the EOP to:
  - Serve as a liaison between the Parish EOC, shelters, regional and national ARC offices and representatives during an emergency.
  - Establish a Parish evacuee locator service in coordination with St. John shelters and support reception centers during an emergency.
4. Appendix 3 in the EOP includes an Emergency Function and Responsibility Chart.

#### **STAGE 2: TEMPORARY HOUSING INVENTORY**

1. FEMA temporary housing operation post-Ida was determined to be successful overall.
2. Long-term issues remain to be resolved regarding temporary housing, including:
  - Some residents have constructed roofs over temporary housing and turned it into a permanent home.
  - Complaints about “FEMA trailers” in neighborhoods.
  - FEMA has offered to sell trailers to residents in places where permanent mobile homes are not a permitted use.
  - Land ownership issues (i.e., clear title) cause development delays.
  - Temporary housing sites need to be inventoried and mapped to ascertain the extent of local issues.
  - Mismatch between need and eligibility for permanent housing, where residents may receive temporary housing assistance but do not qualify for a FEMA or RESTORE grant to rebuild their permanent housing.
  - Temporary housing unit removal is difficult, for example Hurricane Ida occurred in August 2021 and full-scale removal of units by the state/FEMA contractor teams did not commence until May 2023.
  - Procurement and manufacturing / supply chain challenges with the construction of mobile homes can be an issue, as well as storage near the disaster site in a location that is not also damaged.
3. The parish focuses efforts on temporary shelters and hardening existing buildings. The state and FEMA teams largely control temporary housing operation. This balance of duties has been effective for the Parish.
4. Past disasters have taught parish officials that residents need clear communication and links to resources for:

- FEMA temporary housing
- Short-term commercial housing; i.e., hotel capacity

#### **STAGE 3: REPAIR and REBUILDING INVENTORY**

1. The parish needs to improve information-sharing regarding:
  - Local organizations and their capacity to assist with repairs and replacement housing
  - How to verify a contractor and avoid contractor fraud
  - Resource fairs
  - What type of construction or repair activity requires a local permit
2. The Parish Department of Community Services has set up an office to assist residents with FEMA applications and provide legal resources for residents through Southeast Louisiana Legal Services.
3. Regulatory challenges needing further examination include:
  - Waive permit fees (not requirements) following a disaster.
  - Secure prepositioned emergency preparedness contract for consultant damage assessment and permit staff augmentation in anticipation of permit influx and inspection needs following a disaster. Costs are eligible for FEMA (100% reimbursable) 1206 funding.



## DAMAGE AND LOSS REDUCTION ACTION PLAN

RESILIENCE FACTOR	GOAL	POLICY / PLAN / INTERVENTION	RESPONSIBLE ENTITY
Flood retention	Preserve vital retention areas	Identify nonprofit entities to purchase retention areas	Planning and Zoning Dept.
Flood retention	Preserve vital retention areas	Facilitate transfers and purchases of retention sites	Planning and Zoning Dept. and Nonprofits
<i>Note: LWI program has funded similar projects in East Baton Rouge Parish</i>			
Flood retention	Build retention areas	Construct retention areas along the East-West Canal and pumps into the wetlands north	Public Works Dept., DOTD, CPRA, LDWF, DEQ, USACE, EPA
Structural mitigation	Elevate homes at risk of flooding	Provide funding for home elevations	Grants Dept.
Structural mitigation	Elevate homes at risk of flooding	Administer home elevation programs with no homeowner match required	Grants Dept.
	<i>Note: 1) Identify CDBG no-match funding available OR combine FEMA HMGP or BRIC application with a non-federal or CDBG source to fund the match, 2) Maintain a running list of sites where property owners have expressed interest in the program</i>		
Structural mitigation	Elevate homes at risk of flooding	Create a revolving fund to provide parish-administered home elevations to RL, SRL, and below BFE sites in the SFHA	Planning and Zoning Dept. and Grants Dept.
	<i>Note: 1) Pilot use of funds for the Parish to State and Federal partners before an active disaster, 2) Draft program policy highlights and identify program administrative duties, and coordinate such offices with State or Federal partners.</i>		
Drainage system improvements	Improve ditch and channel conveyance	Attain funding for a ditch and channel maintenance program	Public Works and USDA NRCS
Drainage system improvements	Require development to fund infrastructure improvements	Adopt an impact fee ordinance	Public Works and Planning and Zoning Depts.
Drainage system improvements	Raise revenue for drainage system improvement projects	Repeal ITEP tax exemptions	Economic Development and Finance Depts.
Drainage system improvements	Reduce impoundment in the drainage system	Coordinate directly with rail lines to clear culverts	Public Works Dept.
Drainage system improvements	Build retention areas	Build retention areas in Garyville and install pumps to retention areas	Public Works Dept., DOTD, CPRA, LDWF, DEQ, USACE, EPA
Drainage system improvements	Conduct Repetitive Loss Area Analyses and consider which RLAA areas will have remaining flood risk post-WSLP levee construction	Produce additional Repetitive Loss Area Analyses in the vicinity of Marigold St. in Mt. Airy, Homewood Place in Reserve, and Riverland Heights in LaPlace	Planning and Zoning Dept.
	<i>Note: Points will support higher Parish CRS score and improved classification</i>		
Building practices	Implement additional low impact development standards	Adopt a fill limitation	Planning and Zoning Dept. and Council
	<i>Note: Points will support higher Parish CRS score and improved Classification</i>		
Building practices	Replace aging mobile homes with resilient housing	Implement a program to replace aging mobile homes with new FORTIFIED construction homes	Grants Dept. and State OCD



RESILIENCE FACTOR	GOAL	POLICY / PLAN / INTERVENTION	RESPONSIBLE ENTITY
Building practices	Permit new housing units via ADUs	Amend ordinances to enable the construction of accessory dwelling units in appropriate residential districts	Planning and Zoning Dept.
Building practices	Promote public education on wind standards	Hold a training and education session featuring SCPDC to educate elected officials about wind standards and enforcement of the building code	Planning and Zoning Dept.
Building practices	FORTIFIED Construction Training	Coordinate with the State of Louisiana or Regional entities to host workforce development programs that result in more licensed contractors who are trained in FORTIFIED construction	Economic Development Dept. and Planning and Zoning Dept., and Home Builders Association
Building practices	Train contractors in pier and piling foundation methods	Coordinate with the State of Louisiana or Regional entities to host workforce development programs that result in more licensed contractors specialized in pier and piling home foundation methods	Economic Development Dept. and Planning and Zoning Dept.
Building practices	Train and license more contractors in home elevation	Coordinate with the State of Louisiana or Regional entities to host workforce development programs that result in more licensed contractors with specialized licensing in home elevation	Economic Development Dept. and Planning and Zoning Dept.
Development of low-risk sites	Rehabilitate aging housing in Reserve and Edgard	Direct grant funding toward rehabilitating aging housing that is outside of the SFHA in Reserve and Edgard	Grants Dept.
Development of low-risk sites	Improve the transportation to the West Bank	Pursue the reinstatement of ferry services to the West Bank of the Parish	Planning and Zoning Dept. and State DOTD
Development of low-risk sites	Promote development of new housing stock on the West Bank	Amend the zoning map to add medium and high-density residential districts on the West Bank	Planning and Zoning Dept.
Development of low-risk sites	Transportation on the West Bank	Expand connectivity between Hwy. 3127 and Hwy. 18	Capital Projects Dept + State DOTD
Development of low-risk sites	Provide Transportation Infrastructure to the West Bank	Expand bus services within areas on the West Bank	Capital Projects Depart + State DOTD
Development of low-risk sites	Encourage in-fill development in Reserve and Edgard	Conduct land use studies to consider if zoning districts in Reserve and Edgard could reduce lot width, depth, or area requirements	Planning and Zoning Dept.
Development of low-risk sites	Encourage multi-family residential development	Conduct a zoning study to consider allowing 2-family through 6-family multifamily sites or larger unit sites to be constructed “by-right” in existing commercial zoning districts.	Planning and Zoning Dept.
Development of low-risk sites	Conduct West Bank zoning and infrastructure assessment	Conduct a zoning study and infrastructure assessment of the West Bank industrial sites and undeveloped non-residential sites	Planning and Zoning Dept., Utilities Dept., Public Works Dept., and Economic Development Dept.
Development of low-risk sites	Increase commercial amenities on the West Bank	Conduct a market study to support targeting commercial sites to Highway 3127	Economic Development and Planning & Zoning Depts.



RESILIENCE FACTOR	GOAL	POLICY / PLAN / INTERVENTION	RESPONSIBLE ENTITY
Development of low-risk sites	Increase transportation connectivity across the Parish	Pursue funding for rail station improvements in LaPlace, Garyville, and Reserve	Grants, Economic Development, Public Works, and Planning Departments
Development of low-risk sites	Promote new housing stock on the West Bank by addressing existing service gaps	Conduct a study to assess and recommend improvements to road and utility development in existing rural subdivisions	Planning and Zoning, Utilities, and Public Works Depts.
Development of low-risk sites	Build out low-risk paper subdivisions	Provide coordination among property owners and developers to install infrastructure in “paper subdivisions” in low-risk areas like the Major Drive area	Planning and Zoning, Utilities, Public Works Depts., and Developers
Development of low-risk sites	New housing stock	Connect tribes with developers to build neighborhoods with a clear link to tribal traditions and identities	Planning and Zoning Dept. and State Office of Indian Affairs
Development of low-risk sites	Buyout highest risk properties	Identify funding for buyouts in VE zones	Grants and Planning and Zoning Depts.
Limit development in high-risk areas	Preserve high risk areas from development	Repeal “paper subdivisions” in high-risk areas	Parish Council, leadership, and Planning and Zoning Depts.
Limit development in high-risk areas	Preserve wetlands from development	Expand ECD zoning to areas that are functioning as wetlands	Planning and Zoning Dept.
Social Vulnerability	Retain housing affordability	Land banking or other measure of preventing speculative land transfers	Planning and Zoning Dept.
Social Vulnerability	Preserve housing values for existing residents	Ensure predictable land development patterns and uses	Planning and Zoning Dept.
Social vulnerability	Build new housing stock	Support the construction of affordable housing and subsidized housing outside of the SFHA	Parish leadership, Planning Commission, and Planning and Zoning Dept.
Social vulnerability	Build new housing stock	Coordinate with the PHA to spend HOME or other federal funding to rehabilitate old PHA units and construct new PHA units	Grants and Community Services
Social vulnerability	Build new housing stock	Conduct zoning study to identify areas for small lot subdivisions	Planning and Zoning Dept. and Parish Council
<i>Note: Consider Garyville and Reserve as pilot areas</i>			
Social vulnerability	Build new housing stock	Coordinate with lending institutions and developers to implement funding agreements and CEAs for predictable subdivision funding	Planning and Zoning Dept. and Local Developers
Social vulnerability	Support job creation and amenities on the West Bank	Pursue commercial development on the West Bank	Economic Development Dept. and State LED
Social vulnerability	Support services to reduce social vulnerability	Provide funding for free childcare on the West Bank	Community Services and Grants Depts.
<i>Note: Precedent for using CDBG funds for these programs</i>			
Social vulnerability	Support services to reduce social vulnerability	Provide funding for free elderly services on the West Bank	Community Services and Grants Depts.
Social vulnerability	Emergency response	Provide points of distribution (PODs) for long-term public aid on the West Bank	Community Services Dept.



## 25. ACTIONABLE DISASTER HOUSING PLAN ELEMENTS

In addition to the existing policies and documentation of disaster housing procedures and policies, the “Action Plan” document below is an inventory of policies, plans, and interventions that are recommendations and new “tools in the toolbox” to enhance disaster housing in the Parish.

DISASTER HOUSING FACTOR	GOAL	POLICY / PLAN / INTERVENTION	RESPONSIBLE ENTITY
Shelter stage: <i>Available beds</i>	Increase available beds for shelters outside of the parish	Execute a CEA with one or more neighboring parishes to secure an additional mass shelter facility, ensure CEA has clear event triggers and responsibilities	Parish Public Safety Department, GOHSEP
Shelter stage: <i>Estimation of demand</i>	Shelter demand estimation	Take a yearly survey of residents to inquire about desire to use a shelter and under what conditions.	Department of Community Services
Shelter stage: <i>Estimation of demand</i>	Update data on residents receiving housing assistance before a storm (ex: residents in PHA units or on Section 8 vouchers)	Hold a yearly data update process and meeting between the Parish Administration and Public Housing Authority to ensure data is correct and up to date	Department of Community Services and Public Housing Authority
Shelter stage: <i>Estimation of demand</i>	Update data on population experiencing homelessness	Coordinate with homeless shelters, food banks, and hospitals to estimate baseline number of residents experiencing homelessness	Department of Community Services
Shelter stage: <i>Estimation of demand</i>	Ensure all residents experiencing homelessness have shelter spaces	Maintain data on homelessness and build this number into yearly shelter agreements	Department of Community Services
Temporary housing stage: <i>Inventory</i>	Ensure that supply chain constraints do not delay the procurement of FEMA and GOHSEP temporary housing	Conduct a yearly (at minimum) coordination call with FEMA, GOHSEP, and relevant contractors working on temporary housing and inquire about supply chain sufficiency	Parish leadership and Public Safety Department
Temporary housing stage: <i>Initial placement</i>	Avoid permitting slowdowns with FEMA and GOHSEP trailer placement	Add ordinance language that automatically comes into effect for a declared disaster with a temporary housing provision that enables immediate permitting and placement regardless of zoning	Planning and Zoning Department
Temporary housing stage: <i>Terms of occupancy</i>	Make sure the terms for FEMA and GOHSEP long-term trailer occupancy are clear and consistent with Parish policies re: zoning	Ensure that any purchase and long-term placement of a mobile home is contingent on it being a permitted use in the subject district	Planning and Zoning Department
Temporary housing stage: <i>Mobile home removal</i>	Set clear rules for the removal of temporary housing units	Add ordinance language requiring removal of temporary housing unit mobile homes after most residents have secured permanent housing	Planning and Zoning Department



DISASTER HOUSING FACTOR	GOAL	POLICY / PLAN / INTERVENTION	RESPONSIBLE ENTITY
Temporary housing stage: <i>Hotel capacity</i>	Make sure that residents have easy access to hotel rooms for temporary housing	Enter contracts with local hotels inside and outside the parish to automatically provide free or discounted room rates for residents	Parish Administration and Economic Development Department
Temporary housing stage: <i>Vacant housing capacity</i>	Use existing vacant permanent units to provide temporary housing post-disaster	Enter contracts with landlords across the parish to offer access to vacant units following a disaster and maintain a database of vacant units for such use	Planning and Zoning Department
Temporary housing stage: <i>Site capacity</i>	Maintain an inventory of available sites for individual mobile home units and/or mass shelters, PODs, and temporary housing	Collect data and contact landowners to create a database of available sites for individual mobile home units and/or mass shelters, PODs, and temporary housing. Update data yearly	Public Safety Department
Temporary housing stage: <i>Recovery workers and volunteers</i>	Document and maintain available units and facilities for recovery workers and volunteers	Within EOP Plan, outline the procedures for housing recovery workers and volunteers, including how to document costs incurred and an inventory of units and facilities and when they become activated	Public Safety Department
Temporary housing stage: <i>Communications</i>	Ensure widespread communication for temporary housing opportunities to residents	Maintain EOC mass communications list and use this resource and text-to-weather list to distribute temporary housing opportunities	Communications Department
Temporary housing stage: <i>Communications</i>	Ensure communications about temporary housing are issued by the Parish Communications Department and community partners	Coordinate a yearly meeting of the Communications Department, the Public Housing Authority, local news outlets, faith-based institutions, schools, and other civic organizations to ensure clear procedures for distributing information about temporary housing	Communications Department
Repair and rebuilding stage: <i>Program partnerships</i>	Coordinate with GOHSEP and Louisiana Office of Community Development to agree on repair and rebuilding program terms and policies	<p>Coordinate a yearly meeting with GOHSEP and LA OCD to review potential program policies and procedures and to detail responsibilities within program steps including:</p> <ul style="list-style-type: none"> <li>• Potential selection processes for homeowner repair programs, buyout, and elevation programs;</li> <li>• Potential participant criteria, including title clearance criteria;</li> <li>• Potential elevation standards for SD/SI and new construction; and</li> <li>• Demolition program terms</li> </ul>	Planning and Zoning Department
Repair and rebuilding stage: <i>Community partnerships</i>	Coordinate with community entities that provide housing repair and rebuilding services	Identify groups like Mennonite Disaster Service, Catholic Charities, Rebuilding Together New Orleans, Habitat for Humanity, and the St. Bernard Project who may volunteer to offer repair and rebuilding services to ensure the Parish has a working list of entities and potential services and to ensure that all entities understand permitting and procedural requirements	Planning and Zoning Department





DISASTER HOUSING FACTOR	GOAL	POLICY / PLAN / INTERVENTION	RESPONSIBLE ENTITY
Repair and rebuilding stage <i>Program partnerships</i>	Coordinate with the USACE	Coordinate a yearly meeting with USACE’s Blue Roof Mission team to discuss lessons learned, specific issues encountered in St. John, and in preparation for next hurricane season.	Public Safety Department
Repair and rebuilding stage: <i>Permit issuance</i>	Expedite the permit process	Secure a pre-positioned contract with consultant support for staff augmentation to issue permits faster during recovery period.	Planning and Zoning Department



Image: Church damaged by Hurricane Ida - WDSU



## 26. COMMUNITY AND STAKEHOLDER EDUCATION PLAN

Community education is an important part of the Resilient Housing Plan's development, adoption, and long-term implementation. To support community education, the Parish completed the following tasks:

- Identified resilient housing stakeholders
- Inventoried Plan communication and education goals
- Identified critical communication crossroads to support Plan implementation
- Conducted outreach and engagement as part of Plan development to gain resident and stakeholder input
- Drafted the Plan in response to and with community input incorporated as a critical contribution to Plan recommendations

Once the plan is fully reviewed and amended by Parish staff, stakeholders, and Parish leadership, the Parish will invite further community feedback through the public hearing and adoption process and will focus on implementing the steps remaining in the stakeholder and community education plan.

EDUCATION AREA	ACTION	RESPONSIBLE ENTITY	TIMELINE
Public Input	Host a series of meetings across the Parish to collect insight from residents about challenges, opportunities, and issues that the Parish may face now and in the future.	LA SAFE (OCD) team	Completed - 2018
Flood Risk Education	Host a series of meetings inviting Parish residents to view flood risk, coastal land loss, and population projection maps to consider adaptation strategies to coastal flood risk in the next 50 years. Produce a crowd-sourced future land use map.	LA SAFE (OCD) team	Completed - 2018
Community-Led Flood Risk Planning	Host a series of meetings prioritizing flood risk mitigation strategies and envisioning ways the community should adapt to low-, moderate- and high-flood risk based on different land uses and coastal typologies.	LA SAFE (OCD) team	Completed - 2018
Flood Risk Education	Offer flood risk and community outreach education to community stakeholders in a "train the trainer" environment, including engaging residents to become coastal ambassadors and lead future flood risk and coastal adaptation meetings.	LA SAFE and LEAD the Coast teams	Completed - 2018
Community-Led Flood Risk Planning	Facilitate meetings among Parish leaders, community stakeholders, Parish staff and departments, regional Planning professionals, and partners to identify a vision and adaptation strategies to adapt to changing coastal flood risk.	LA SAFE (OCD) team	Completed 2018
Community-Led Flood Risk Planning	Host a series of public meetings where residents vote for flood control and climate adaptation projects for future implementation.	LA SAFE (OCD) team	Completed 2018
Public Input	Identify community stakeholders for targeted surveys and public events in support of a Resilient Housing Plan, including: <ul style="list-style-type: none"> <li>• Residents who are not aware of flood risk and housing issues</li> <li>• Residents who have moved to the parish after flooding elsewhere</li> <li>• Senior residents</li> <li>• Homeowners, renters, and those experiencing homelessness or at risk of homelessness</li> <li>• Civic leaders and elected officials</li> <li>• Residents on both the East and West Banks of the Parish</li> <li>• Residents holding an NFIP flood insurance policy</li> <li>• Developers and builders</li> </ul>	Planning and Zoning Department	Completed – May 2023

EDUCATION AREA	ACTION	RESPONSIBLE ENTITY	TIMELINE
Public Input	Coordinate a meeting with Parish staff to determine relevant questions for the Resilient Housing Plan public outreach survey, including review of the Resilient Housing Planning Guide, discussion of current Parish data and capacity, and the Plan vision.	Planning and Zoning Department	Completed – April 2023
Public Input	Draft a survey to collect public input into housing resilience strategies including issues surrounding flood insurance, housing affordability, types of housing, homelessness, and flood risk.	Planning and Zoning Department	Completed – April 2023
Community-Led Resilient Housing Planning	Issue and publicize digital survey via press release; as part of in-person promotion at Fourth-of-July events on the East and West Banks; publication of the survey in paper form; distribution and placement at civic sites around the Parish, including public libraries; and publication of survey at storm season preparation event.	Planning and Zoning Department	Completed – May through September 2023
Flood Risk Education	Attend CRS Outreach Event at Storm Preparation Event including visual aids of flood maps overlaid on Parish imagery.	Planning and Zoning Department	Completed – June 2023
Resilient Housing Education	Post draft Resilient Housing Plan online and request input through a digital public comment period.	Planning and Zoning Department	November 2023
Stakeholder Implementation	Form a resilient housing supply and demand working group composed of affordable housing experts, community leaders, developers, and Planning and Zoning staff.	Planning and Zoning Department	February 2024
Community Education	Produce an annual resilient housing update report for public release coinciding with a Parish festival or widely-attended event with a booth.	Planning and Zoning Department	Annual
Stakeholder Implementation	Form a poverty working group composed of representatives of the Public Housing Authority, Community Services Department, elected officials, food banks, local nonprofits, and others.	Parish President	April 2024
Language Equity	Consult HUD Language Access Plan tools to research which languages are most frequently spoken in St. John and provide translation services for all communications related to resilient housing or flood risk.	Communications Department	January 2024
Community Education	Identify existing champions for resilience or housing and enlist them to support messaging and public awareness about the Resilient Housing Plan.	Planning and Zoning Department	November 2023



## 27. STRATEGIC FUNDING PLAN

St. John takes an approach to funding elements of the Resilient Housing Plan that is similar to the Capital Projects Planning process, which is very strong in the Parish. Capital Projects Planners have been successful at attaining federal funding for the West Shore Lake Pontchartrain Levee, street and drainage improvements, a Senior Center on the West Bank, and the construction of a new Parish Government building and Council Chambers, among other notable accomplishments. With the adoption of this Plan, the Parish seeks to add some or all of the items below to the Capital Projects list maintained by Parish Administration and thereby include these projects in the overall funding goals for the Parish.

PROJECT TO FUND	GRANT PROGRAM	GOALS / CONDITIONS OF PROGRAM	APPLICATION TIMELINE
<b>Reconstruction of housing that is in disrepair, on a slab below BFE, or structurally unsound</b>	CDBG-MIT / RESTORE LA <i>Note: Prepare application documents for Local / Regional program, prepare proposal memo for State Projects / Programs</i>	<ul style="list-style-type: none"> <li>Associated with declared disasters</li> <li>Goal is mitigation of future risk</li> <li>Benefits to low- to moderate income families</li> </ul>	Ongoing
<b>Reconstruction of housing that is in disrepair, on a slab below BFE, or structurally unsound</b>	USDA Rural Housing Site Loans	<ul style="list-style-type: none"> <li>Benefits to low- to moderate income families</li> <li>Loans must be repaid</li> </ul>	Annually - September
<b>Elevation of flood prone homes</b>	FEMA FMA	Advantage to have a BCA	Annually - January
<b>Elevation of flood prone homes</b>	FEMA HMGP	BCA required	Following a declared disaster
<b>Reconstruction of flood prone homes</b>	CDBG-DR program	Tied to declared disaster	Following a declared disaster
<b>Upgrades to utilities or air conditioning systems in aging housing</b>	CDBG or FEMA competitive grants	Should benefit LMI residents or address Justice 40 goals	Recurring competitive allocations
<b>Assistance to residents to pay flood insurance premiums</b>	CDBG or FEMA competitive grants	Should benefit LMI residents or address Justice 40 goals	Recurring competitive allocations
<b>Rehabilitate or replace PHA units</b>	CDBG HOME program	Must benefit LMI residents	Allocated yearly
<b>Construct additional shelter capacity for those experiencing homelessness</b>	CDBG-ESG program	Must be in Consolidated Plan	Allocated yearly
<b>Fund transportation improvements to the West Bank</b>	Transportation Improvement Program	Justification and/or feasibility required	Yearly allocation
<b>Pilot Universal Basic Income program</b>	American Rescue Plan	Requires significant research	Ongoing



# APPENDIX A: EXAMPLE HOUSING STRATEGIES

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While St. John faces environmental challenges unique to coastal communities, its housing challenges mirror those of American communities everywhere. The State of the Nation’s Housing 2023 cites nationwide declines in single-family construction and increases in housing cost burdens.<sup>1</sup> The report also raises solutions echoed by the analysis in St. John: increasing infill development, exploring new housing typologies, and addressing the needs of an aging population. Jurisdictions and community development corporations in Louisiana and beyond are tackling housing challenges through a variety of policies intended to increase housing stock, increase the range of housing in their communities, and best take advantage of federal and state programs.

**Appendix A** includes examples from **West Monroe, LA, Cleveland, OH, Duluth, MN, Alexandria, VA, and Milwaukee, WI.**

1 Joint Center for Housing Studies of Harvard University. (2023). The State of the Nation’s Housing 2023. Harvard Graduate School of Design and Harvard Kennedy School. [https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard\\_JCHS\\_The\\_State\\_of\\_the\\_Nations\\_Housing\\_2023.pdf](https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_The_State_of_the_Nations_Housing_2023.pdf)

2 Davidson, M & Dolnick, F. (2022). A Planner’s Dictionary. American Planning Association. Planning Advisory Service Report Number 521/522.

## INCREASING INFILL DEVELOPMENT

The term “infill development” refers to development or redevelopment of land that has been bypassed, remained vacant, and/or is underused in existing urban areas.<sup>2</sup> This Resilient Housing Plan recommends increasing infill development in existing areas of St. John along the Mississippi River where the higher elevation better protects homes from flood risk. Table 1 describes strategies taken in other communities to increase infill development in existing neighborhoods.

Infill development often occurs in low-density, single-family neighborhoods such as those prevalent in St. John. Jurisdictions often encourage increased development through changes to zoning regulations or tapping

**Table 1: Community Examples of Infill Development Strategies**

Alexandria, VA	Cleveland, OH	West Monroe, LA
<p><b>Industrial Zoning Reform:</b> Analyzed potential for allowing industrially zoned land to rezone to multi-family residential use. Estimated unit yield of 3,000-4,000 housing units over 25-30 years.</p>	<p><b>Lease-Purchase Program:</b> Developers constructing LIHTC-funded single-family housing allow renters to lease-to-own the homes at the end of the 15-year LIHTC period.</p>	<p><b>Revolving Loan Fund:</b> Conducted a study on establishing a revolving loan fund as a gap financing measure to rehabilitate existing housing units.</p>
<p><b>Townhouse Zoning Analysis:</b> Revised lot, bulk, open space, and parking requirements to encourage small-scale infill development in zones that permit townhouses. Removes inconsistencies across regulations to make townhome construction less costly.</p>		<p><b>Restoration Tax Abatements:</b> Encouraged use of LED restoration tax abatements to encourage housing development on upper floors of existing downtown buildings.</p>
<p><b>Expanding Housing in Single-Family Zones:</b> Adds options to build two-unit dwellings in certain existing single-family neighborhoods.</p>		

Sources: City of Alexandria. (2023). Zoning for Housing/Housing for All. <https://www.alexandriava.gov/planning-and-zoning/zoning-for-housinghousing-for-all>

Cleveland Housing Partners. About our homeownership program. <https://chnhousingpartners.org/about/lease-purchase-flagship-program/>

Downtown West Monroe Master Plan. (2021). Priority Projects: Housing. <https://downtownwestmonroemasterplan.com/housing/>



***“The aging and growing diversity of the population, coupled with some workers’ increasingly flexible work options, will change the shape of housing demand and necessitate housing adaptations. These include additional options for older households seeking to remain in their communities and homes in a broad range of communities and at a broad range of price points for a diverse array of households of all ages, races, and income groups.”***

*- the State of the Nation’s Housing 2023*

state and federal funds. In Cleveland, housing developers provide a unique solution by using Low Income Housing Tax Credits (LIHTC) to develop single-family housing linked to a lease purchase program. Renters can enter into a lease-to-own agreement on LIHTC properties, which must remain rented through LIHTC for 15 years. In year 16, the home is sold for the outstanding debt.<sup>1</sup> By 2017, Cleveland Housing Network developed more than 2,200 properties through this model and sold more than 1,000 to eligible families.

## EXPLORING NEW HOUSING TYPOLOGIES

Jurisdictions can expand access to housing by increasing access to “Missing Middle Housing,” or a range of house-scale buildings with multiple units that fit in scale between 2+ units and large apartment complexes and that are compatible with detached, single-family units (“missing” refers to the relative lack of these housing types in many communities).

1 Affordable Housing Finance. (2017). Dream Builder. 25:4. <https://chnhousingpartners.org/wp-content/uploads/2017/07/Affordable-Housing-Finance-Story-6-2017-min.pdf>

2 AARP Livable Communities. ADUs are an American Tradition. <https://www.aarp.org/livable-communities/housing/info-2019/adus-are-an-american-tradition.html>



**Figure 1:** Myrtlewood Cottages Development, City of West Monroe, LA  
**Source:** TBA Studios. (2019). Downtown West Monroe Myrtlewood Cottages. <https://www.facebook.com/TBASTUDIO/posts/check-our-our-brand-new-downtown-west-monroe-myrtlewood-cottages/2405770532814128/>

Also common are “Accessory Dwelling Units” (ADUs), or small residences that accompany larger, primary homes. As documented by AARP, ADUs were common throughout American history and often accommodate elderly populations, but are frequently restricted by modern zoning codes.<sup>2</sup>

**Table 2** provides examples of community strategies to increase diversity of housing typologies in their neighborhoods and to promote access to “missing middle” housing.





**Figure 2:** Missing Middle Housing Types

Source: Opticos Design, Inc. (2020). Missing Middle Housing. <https://missingmiddlehousing.com/>

**Table 2: Community Strategies to Increase Diversity of Housing Typologies**

Minneapolis, MN	Duluth, MN	West Monroe, LA
<p><b>Milwaukee Avenue Historic District:</b> Neighborhood groups worked to revitalize small homes from the 1800s. Homes are built on quarter-size lots and resemble townhomes. The street was turned into a bike and pedestrian mall.</p>	<p><b>Cottage Home Park Developments:</b> Amended its zoning code to permit “cottage home park developments,” or clusters of homes grouped on one parcel of land. Cottages built by the Housing and Redevelopment Authority are under 1,000 square feet and face each other in a shared greenspace.</p>	<p><b>Myrtlewood Cottages Development:</b> Tiny home development that has diversified downtown housing options in terms of price and design. The city’s master plan cites high demand for the residences and encourages additional developments.</p>
<p><b>Regulations for ADUs:</b> ADUs must follow the 2020 Minnesota Residential Code. Detached units shall not exceed 1,300 square feet or 21 feet in height. ADUs must follow applicable design standards and plumbing and sewer requirements.</p>	<p><b>Regulations for ADUs:</b> May be constructed on lots with an existing single or two-unit dwelling. Cannot exceed 800 square feet of floor space. Must be designed and built consistent with the character and design of the primary dwelling.</p>	
	<p><b>Regulations for Tiny Homes:</b> Duluth permits fixed in place tiny homes (not on wheels) in all zoning districts. Tiny homes must meet existing setback requirements. Lots that do not meet minimum lot width requirements may be used for tiny home construction, depending on age and ownership.</p>	

Sources: Hensrud, S. Long to live on Seward’s historic Milwaukee Avenue? Homes MSP Team. <https://homesmsp.com/2017/10/long-live-sewards-historic-milwaukee-avenue.html>

Kraker, D. (2023). Duluth celebrates first ‘cottage village’ to provide mixed-income housing. MPRNews. <https://www.mprnews.org/story/2023/08/23/duluth-cottage-village-provides-mixed-income-housing>

City of Duluth. (2020). Tiny Houses and Accessory Dwelling Units. <https://duluthmn.gov/media/10003/tiny-houses-and-accessory-dwelling-unit-handout.pdf>

City of Shreveport. Unified Development Code.

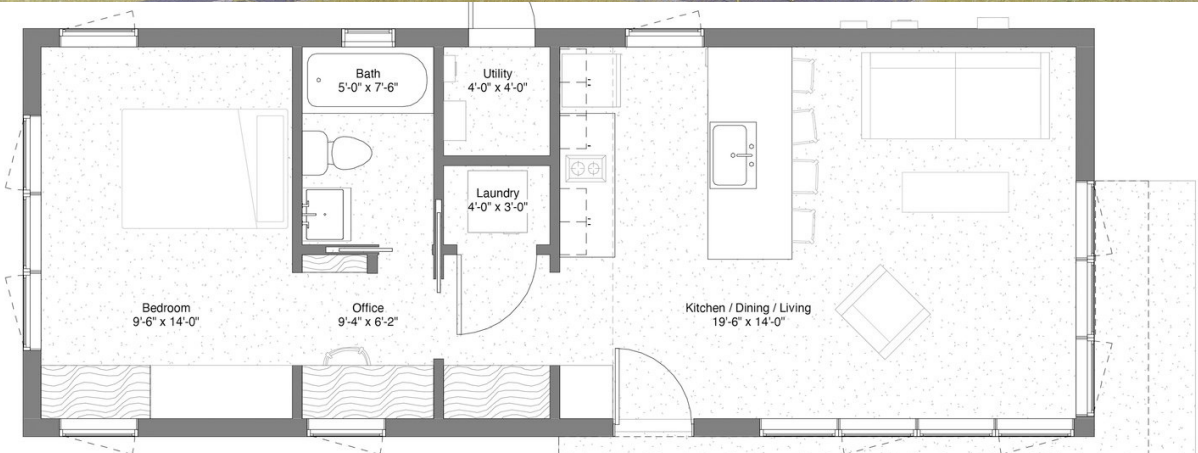






**Figure 3:** Types of Accessory Dwelling Units

**Source:** AARP Government Affairs. (2021). Accessory Dwelling Units: Model State Act and Local Ordinance. <https://www.aarp.org/livable-communities/housing/info-2021/adu-model-state-act-and-local-ordinance.html>



**Figure 4:** Example Accessory Dwelling Unit

**Source:** Evening Studios. "Millie Gray" ADU Design. <https://www.eveningstudios.com/millie-gray>

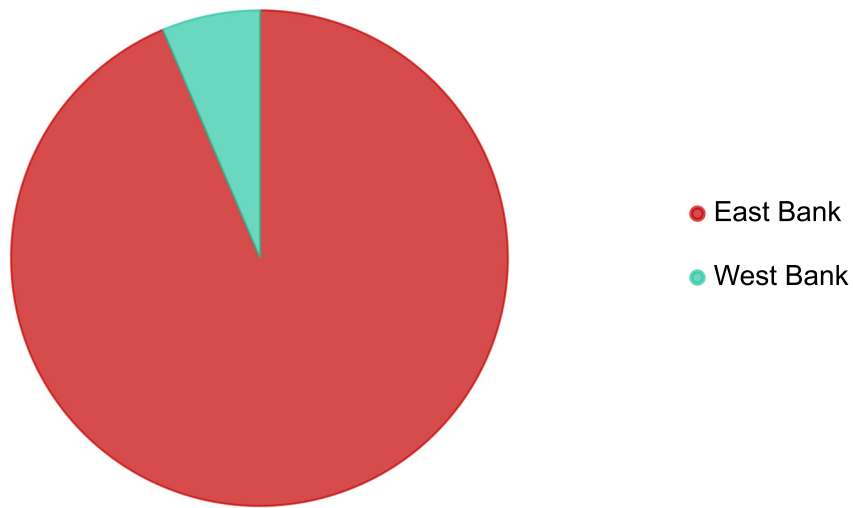


**St. John the Baptist Parish - Resilient Housing Community Survey**

St. John the Baptist Parish is creating a Resilient Housing Plan. The goals of the plan are...

There are no answers to this question yet.

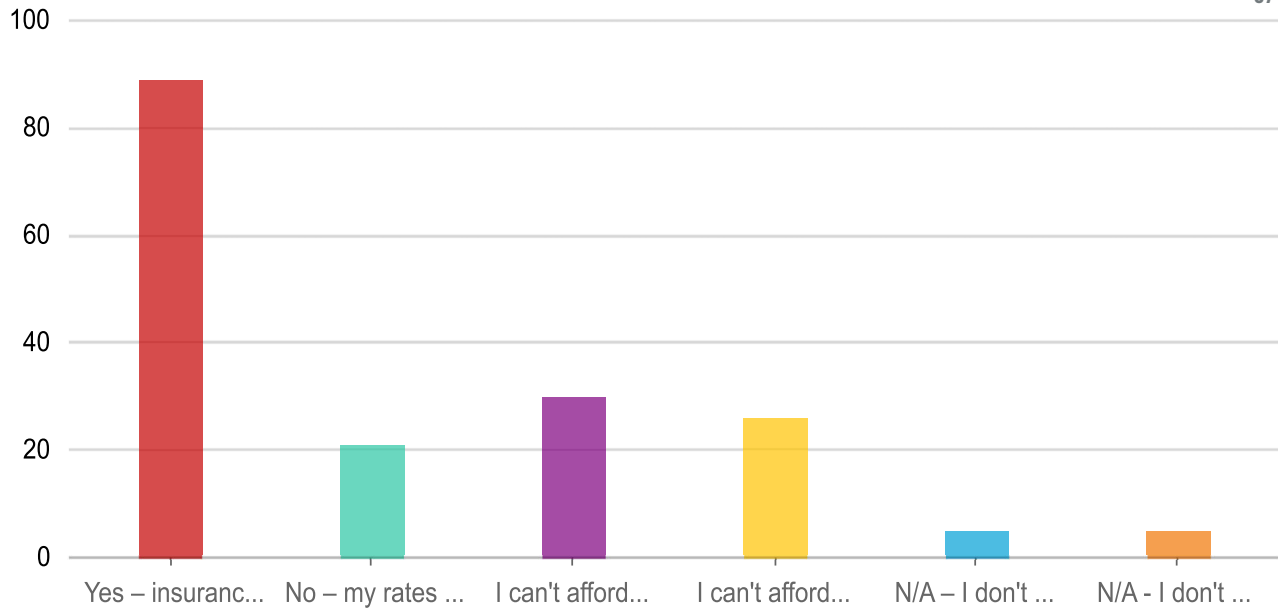
**Where do you live?**



Answers	Count	Percentage
East Bank	118	92.91%
West Bank	8	6.3%

Answered: 126 Skipped: 1

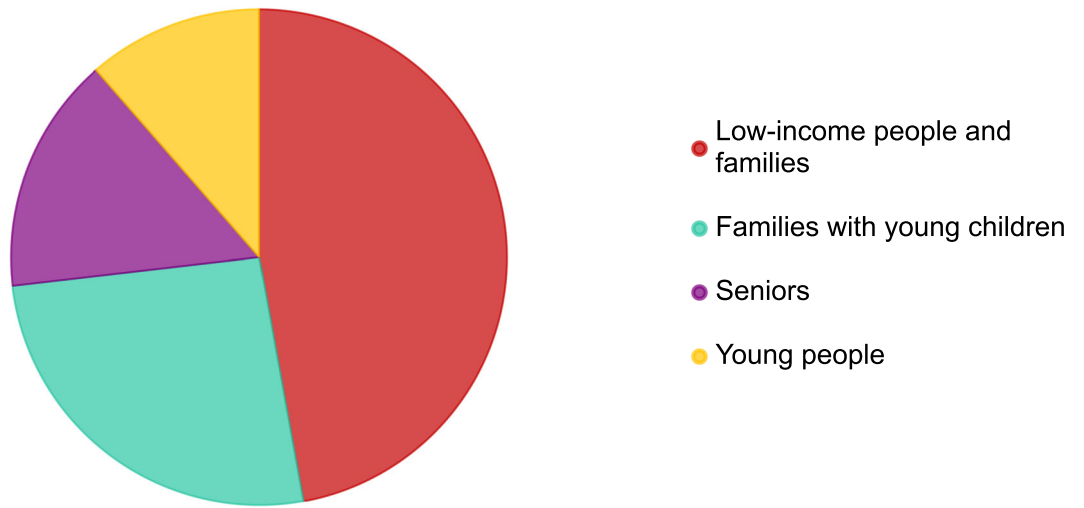
**Are rising flood and homeowners' insurance costs making it hard for you to afford...**

**Answers****Count****Percentage**

Answers	Count	Percentage
Yes - insurance rates are making my family cut back on other things we need.	89	70.08%
No - my rates are manageable right now.	21	16.54%
I can't afford flood insurance.	30	23.62%
I can't afford homeowner's insurance.	26	20.47%
N/A - I don't pay for flood insurance.	5	3.94%
N/A - I don't pay for homeowner's insurance.	5	3.94%

Answered: 127 Skipped: 0

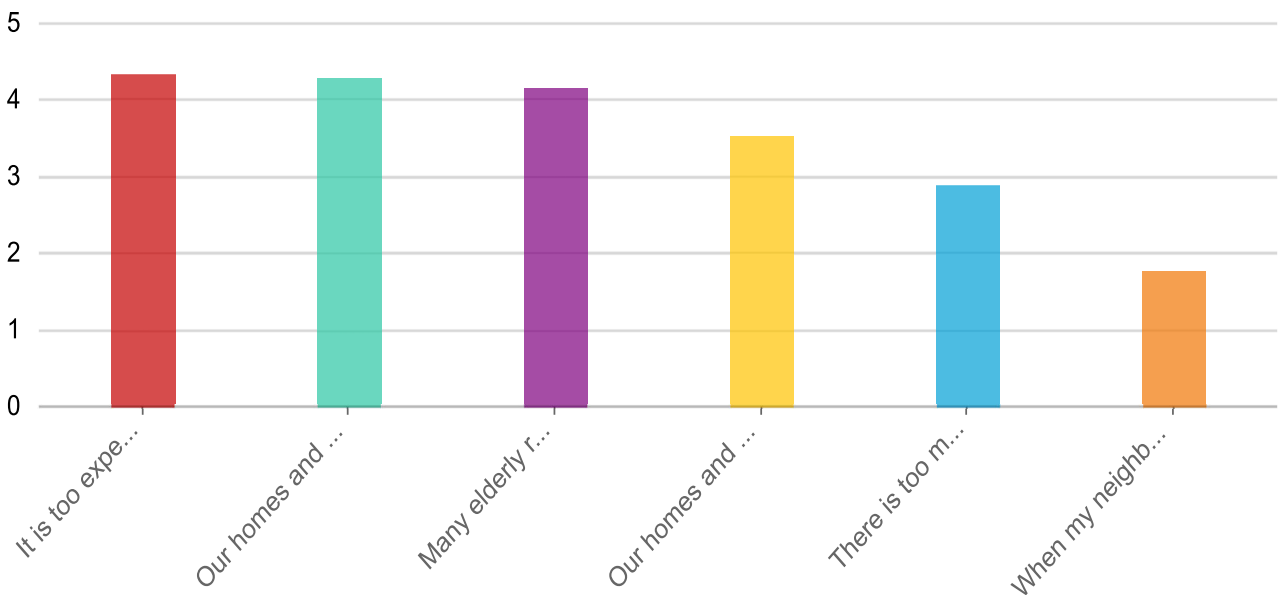
**In your opinion, who has the most trouble finding a good place to live in St....**




Answers	Count	Percentage
Low-income people and families	58	45.67%
Families with young children	32	25.2%
Seniors	19	14.96%
Young people	14	11.02%

Answered: 123 Skipped: 4

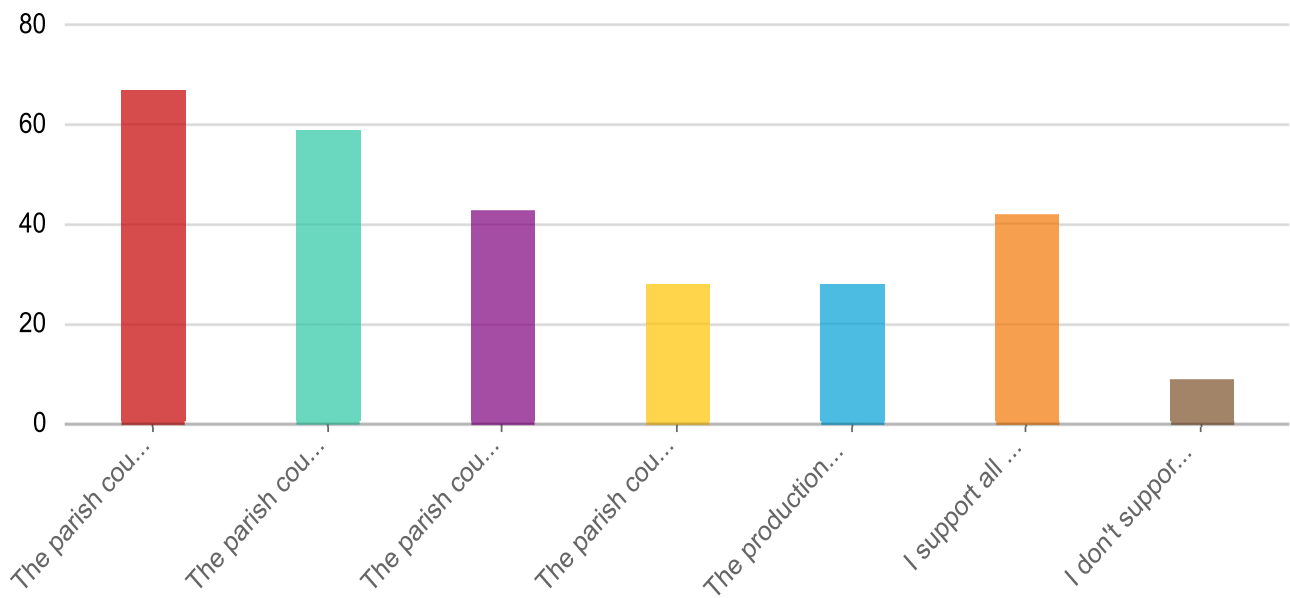
**Please rank the following housing issues in St. John.**



Rank	Answers	1	2	3	4	5	Average score
1	It is too expensive for people to buy homes.	17.21% 21	45.9% 56	9.02% 11	15.57% 19	6.56% 8	5.74% 4.34 7
2	Our homes and neighborhoods are not protected enough from hurricanes and severe weather.	35.25% 43	11.48% 14	13.11% 16	28.69% 35	10.66% 13	4.30
3	Many elderly residents, young families, residents on a fixed income, or residents with disabilities can't afford to stay in their homes.	18.03% 22	17.21% 21	40.16% 49	13.93% 17	9.02% 11	1.64% 4.16 2
	Our homes and 						

Answered: 122 Skipped: 5

**Please tell us which of the following ideas for new housing policies you would support.**





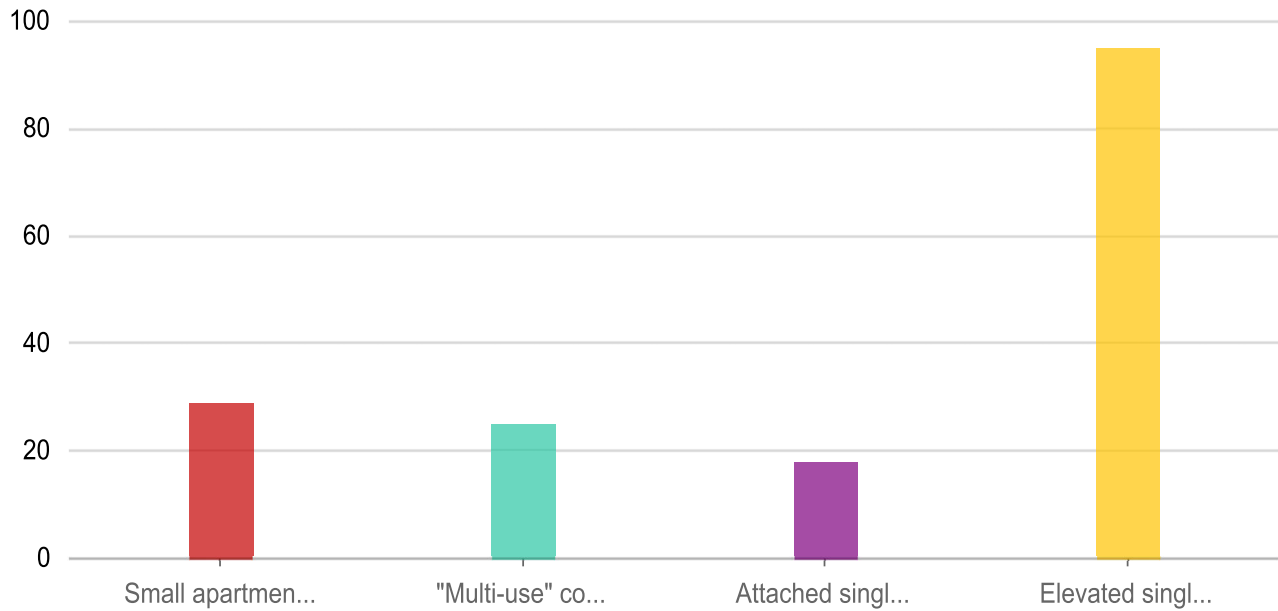
Response	Count
No	36
Yes	6
n/a	6
Not at all	2
na	2
We have not been affected.	1
We have been in the past. But still dealing with repairs because of so many sketchy contractors and may be homeless in near future due to my \$1581 yr home insurance premium about to triple on my next renewal..	1
We have been homeless since we lost everything in hurricane Ida	1
We had 25 inches of water plus partial of the roof was lost	1
Thank GOD my daughter moved out of the parish otherwise , we would have no where to go	1
Still in a Fema mobile home	1
Sometimes we they do beg for money outside the local stores	1
Relatives have has their home torn down with no where to go it would ha e been better to keep the projects for homeless people instead of tearing down	1
Pray never but I know a few	1
Only when Hurricanes hit my community, normally displaced for several months, up to a year.	1
Not yet	1
Not affected at this time.	1
Not affected	1
not able to find a home for me and my children due to Section 8 waiting list being to long	1
none yet	1

None	1
No, mostly friends/not to much family.	1
N/A.	1
My home still damaged from hurricane ida	1
My family haven't been affected but there are so many that are affected by homelessness.	1
Insurance not paying after Ida	1
I just wish they would have somewhere to go whenever weather is bad	1
I have not been homeless, but have noticed some people in the area that appear to be homeless. If the homeless population increases, this will affect everyone's quality of life.	1
I HAVE NOT BEEN AFFECTED	1
Helping family members with someplace to stay temporarily	1
Flooding from ida	1
Family member became homeless and wandered from place to place. Became despondent and began coping with beers and drugs. Another promising life wasted. life	1
evacuated for both Issac and Ida. We had no where to stay safely until mold mitigation was done in our home. Once that was done and electricity was restored we lived without a kitchen for at least 8 months waiting on insurance and an honest contractor.	1
As insurance cost rises, I may not be able to stay in my home. Donethi g needs to be done to stop these companies from running our lives.	1
After Ida I became disable and now on a fixed income with 2 small kids . I feelLike giving up but MY FAITH in GOD keeps me believing for better days	1
After hurricanes, we all are	1
2	1
0	1
No	1

Answered: 86 Skipped: 41



## What kind of new housing do you think would most help people in your neighborhood?



### Answers

### Count

### Percentage

Small apartment buildings with two to four units, elevated several feet off the ground to protect the first floor residents from flooding.

29

22.83%

"Multi-use" construction in your neighborhood, where neighborhood-appropriate small shops are on the first floor and apartments are above.

25

19.69%

Attached single-family or duplex housing, where houses and apartments share an attached wall.

18

14.17%

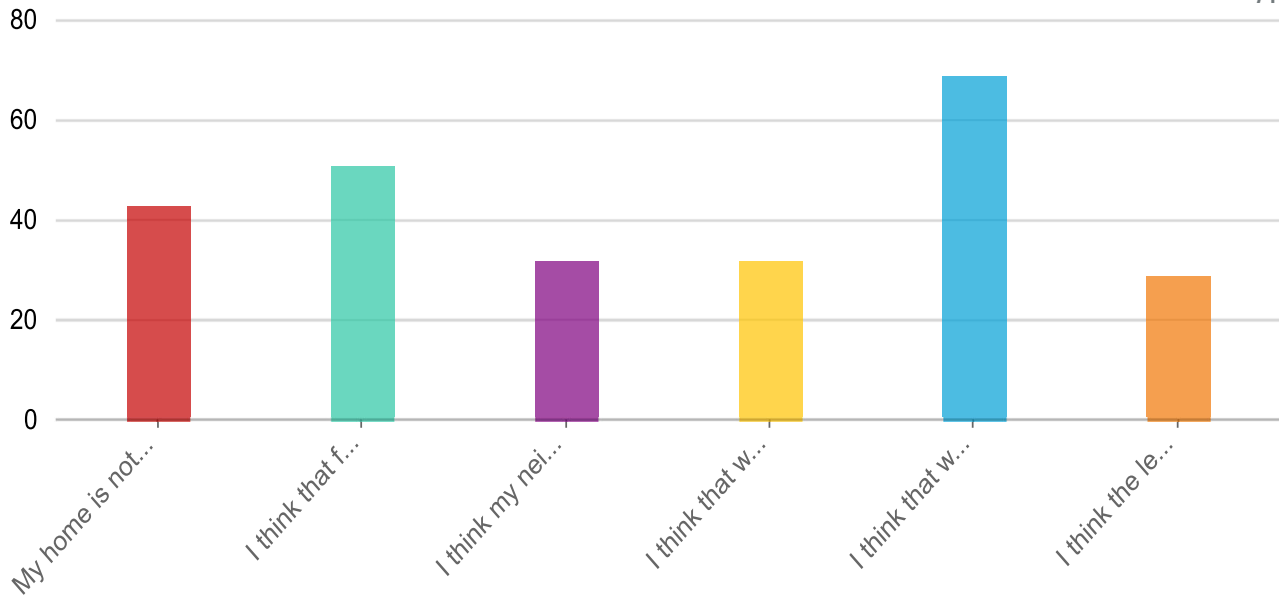
Elevated single-family homes, raised or built off of the ground to protect from the risk of flooding.

95

74.8%

Answered: 111 Skipped: 16

## How do you think the new levee will affect your home?

**Answers****Count****Percentage**

My home is not elevated, and I don't think I will have to elevate it once the levee is complete.	43	33.86%
I think that flood insurance rates will go down once the levee is complete.	51	40.16%
I think my neighborhood will no longer have any kind of flooding once the levee is complete.	32	25.2%
I think that when the levee is complete, we can build more new homes and businesses further north toward Lake Pontchartrain.	32	25.2%
I think that when the levee is complete, my house will be safer from storm surge but my neighborhood may still have other kinds of flooding.	69	54.33%
I think the levee will have no impact on my flood risk.	29	22.83%

Answered: 117 Skipped: 10

**Does your street flood after a normal rainstorm?**



Response	Count
408Camelia ave	2
Yes	1
Williamsburg Street	1
Walnut floods in Montegut	1
Stout St.	1
Somerset Street River Forest Subdivision.	1
Not bad - 99 Holly Drive, LaPlace LA	1
no	1
Medford Drive	1
Lafitte St	1
In front of my home the street does collect a good bit of water. However, it doesn't enter my home. 18 5 River Oaks Dr. LaPlace, LA 70068	1
Hope Canal from Anthony F Monica, along Garyille Northern to Railroad when canal fills the water cro sses the road onto properties. all addresses down this street are affectedr	1
Frisco Drive	1
Devon Road 300 block	1
Carrollwood Dr	1
Betsy Ross Ct. LaPlace, La. 70068	1
Ash Streetv	1
725 Fagot Loop	1
656 Magnolia Ave	1
632 Esplanade St	1
607 cherry st	1

569 welham loop	1
537 heritage cove Laplace, LA 70068	1
51 Sandpiper Dr	1
375 Fairway Dr, laPlace	1
375 fairway dr	1
349 Rosedown Dr LaPlace,La	1
332 CHAD B BAKER ST RESERVE	1
324 South Little Hope Street	1
309 Somerset rd laplace	1
3028 Essex Ave LaPlace, LA.	1
3000 English Colony Drive	1
2729 Williamsburg Dr Laplace Louisiana 70068	1
2628lived. Virginian Colony Ave laplace	1
250 South Fig Garyville, LA 7005	1
2423 south sugar ridge road since y'all cleared the drainage it does go down	1
231 Devon Road, LaPlace, LA 70068	1
2236 E Canterbury Dr	1
2125 Augusta Dr. La Place	1
2042 Colonial Drive	1
2041 Colonial Drive	1
1925 Yorktowne Drive	1
1910 Longwood Court, Laplace LA 70068	1
1801 Acadia Drive	1



Response	Count
it's home	3
Where I live is peaceful and quiet with no flooding.	1
We have a family community , neighbors help neighbors, small community life	1
Very little, property taxes too high, schools are terrible, too many planning zoning rules with permits, trash all over the parish along roads.	1
Very convenient to travel from and to places in the region	1
This is my home where I have been my whole life. I want to be here and want this parish to succeed and I hope my small input can make a big impact	1
This community is very connected and I like seeing my family that lives here.	1
There's no other place I would want to be, love my parish	1
The way we pull together	1
The residents and views and communities. Need more stores.	1
The proximity of Baton Rouge and New Orleans. The food and the new businesses coming	1
The home affordability brought me to St. John although it is still cheaper than anywhere else in the metro area prices have increased significantly. It is partially self contained we could use more shopping and dining venues hoping that increases after th	1
The distance in reference to NOLA and Baton Rouge	1
The affordability	1
Small town atmosphere.	1
small community; everyone knows everyone	1
Small community	1
Small community with a huge potential of growth with the right leadership	1
Sicilian Strip Farming history.	1
Safe, & Quality of Residential Living	1

Response to work orders	1
Quiet not over crowded	1
Quiet and near family.	1
Quiet and less crime	1
Quiet	1
Police	1
People	1
Other than central location between NO and BR...absolutely nothing. Crime getting worse. No movies or bowling or anything to do. Fast food restaurants that the owners and workers don't care about. Life sucks here.	1
Nothing !,, my I have neighbor from hell and his yard is full of junk but St. John have lazy workers with utility company	1
Nothing	1
Not sure really. Alot has changed since I first purchased my home. Honestly, I've been trying to find the means to leave St John.	1
Na	1
my support system is here	1
My neighborhood is quite peaceful. It's quiet + clean. No acts of violence is very important, as safety is the most important factor for myself + my family.	1
My family all live in this parish	1
My church, Parish does support each other in time of need	1
My area is quiet, great neighbors	1
Most of my family lives here.	1
Midway between city and country	1
Many things - too many to name	1



less expensive than Jefferson Parish	1
I've been here for several decades + I'm happy. But concerns for the folks who live on the North side of town.	1
It's small but has what I need to live. For the most part its pretty quiet also.	1
It's small and easy to get around	1
It's more relaxed than surrounding areas	1
It's a nice town	1
It's home	1
It is quiet on our side of St. John (Westbank). I would like to see our side grow more though.	1
I would like living in St John Parish if the streets didn't flood, if the electrician and construction codes were as strict as Orleans, Jeff and St Charles, and if the city water didn't make us itchy and sometime s sick.	1
I love the parish because my family is here.	1
I love the community feel. I have been here all my life and some of the same people are in my community. I want to see my community strive to do better. I would like less crime and more opportunities for our children.	1
I love my neighborhood	1
I love my housing development	1
I love how the parish isn't afraid to bring in franchised businesses. I'm from SCP, and it's filled with Mom&Pop businesses.	1
I love how relatively safe the neighborhoods are.	1
I love everything about my parish	1
I like the overall safety in comparison to surrounding areas like New Orleans. St.John is family oriented and we all come together when in need. I think it would be wonderful to have new and more resilient housing on both the east and West Bank.	1
I like the community feeling in my town of Garyville, but hate that we are always the last to receive services.	1

I like that the cost of living is lower than other communities in the New Orleans region and yet we are close enough to enjoy the New Orleans culture.	1
I like living on the West Bank of St. John the Baptist because it's very peaceful where I live. I have raised three children there and never had to worry about someone trying to break into my home or harm us.	1
I like how stores are usually pretty close and not a far drive, also the community.	1
I grew up in this parish , family and neighbors come together	1
I feel safe living in this parish.	1
I feel like housing wise you do get more for your money out then compared to New Orleans.	1
History. My family has been here for close to 100 yrs in one of the oldest parts of LaPlace. Don't want to leave my legacy.	1
HAVE BEEN A RESIDENT FOR 60+ YEARS AND LOVE THE PEOPLE	1
Flooding twice since St Charles built their levee. Do not like living here. Flood again ?? With all the money being spent on the levee, authorities should have just optioned to buy-out flooded people. Returned those areas to swamp drainage.	1
Family + Friends are all co-located	1
Everything. ESPECIALLY OUR Government and Law Enforcement	1
Economic development is increasing.	1
Crime is low and my neighborhood is quiet.	1
Country living	1
Convince of stores,churches, resources.	1
Community feel. Small town.	1
Close proximity to relatives	1
Close proximity to cities North, East, West, and international airport	1
Close enough to city without living city life	1
Both Country and City.	1



There is nothing in the form of entertainment for children to take part in constructively or otherwise making housing a prime target for unwanted activities.	1
There are some families and low income people, old and young, that are suffering because they can't afford housing after the destruction of the project homes. Also, jobs are another problem.	1
There are many buildings and homes which have fallen into disrepair due to neglect, age, or storm damage. These are becoming an eyesore and will affect everyone's property value and encourage others to be irresponsible.	1
the waiting list for Section 8 is to long. the housing areas for Section 8 is in bad neighborhoods.	1
The parish needs to enforce that rental properties are maintained to keep property values up	1
The parish needs to attract young people and more young families. Build more new single family houses. Build new and upgrade existing local shopping centers. Clean up all neighborhoods and get rid of blighted properties.	1
The levee issue needs to be escalated	1
The apartments are not updated or available	1
St. John the Baptist needs to bring back rentable housing on the West Bank for the residents and others of East 6th St.	1
St john East Bank is getting over populated with new construction houses. This will impact the flooding and make it worse on day to day rain water floods let alone when we do get a storm. Quit building in swamp land!	1
Speeding in the neighborhood	1
Raises homes throughout the parish. You shouldn't have to flood three times to apply for a grant to raise your home.	1
PLEASE, stop issuing all new building permits north of Airline. Our natural sponge has been concreted over. Encourage people to buy commercial and residential properties already for sale . We have outgrown our capacity!	1
Planning and Zoning needs to update and revise requirements	1
People need to keep property cleaned up	1
Not enough affordable housing	1

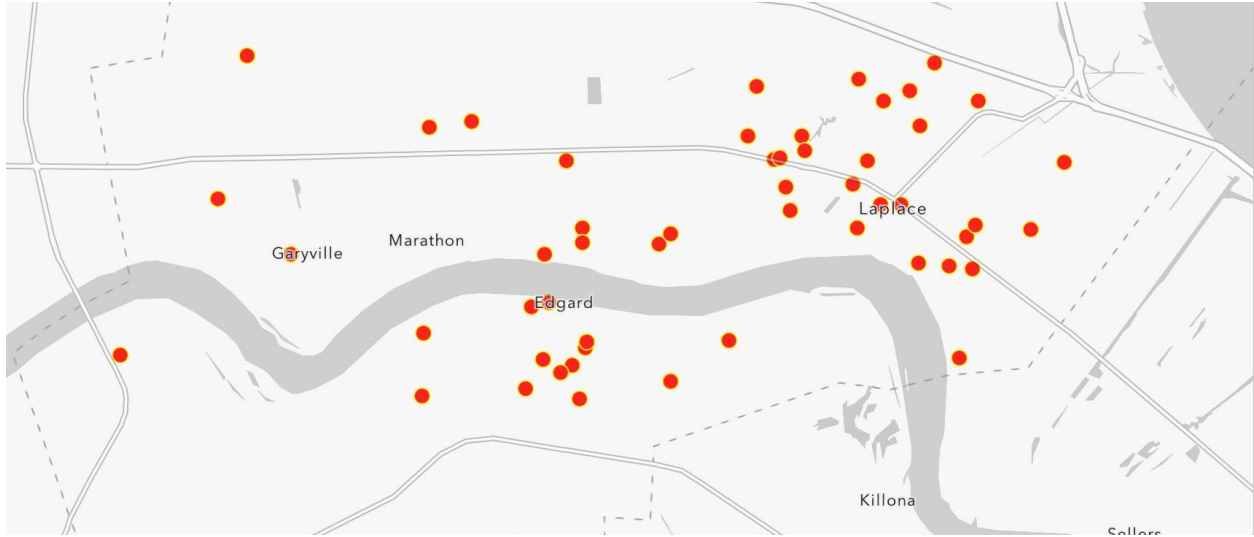
Not being affordable enough to either rent, or buy.	1
Not being able to afford to rent or buy.	1
None	1
Need to eliminate Section 8 housing or at least regulate it. The people who utilize the program (from my experience) abuse it, have poor cleaning habits and it lowers desire for people to love here. Also where section 8 is located, crime rises.	1
need hazard mitigation grants	1
Need affordable and need more privacy	1
N/A	1
My family + I aren't from this parish. Therefore, I'm unaware of any other housing issues in this parish. My only concerns are keeping my environment safe & preventing my home from flooding AGAIN!	1
more low income homes	1
More land for sale on the West Bank is needed.	1
More help for elderly and low income to keep their homes as well as help for people who continue to flood	1
More development on the Westbank	1
More apartments so we can grow. So more businesses can come as well.	1
Mainly elevating homes	1
Lowering insurance rates and capping rent. Need low rent forElderly and disabled	1
Low income	1
Looking out for people confined to wheel chairs when Hurricanes come	1
Limit building north of airline	1
Less section 8 and low income housing	1
Insurance and repairs	1

Identify flood prone areas. Builders to expand water and sewage systems to handle new demands from additional homes.	1
I think houses need to be raised that have been flooded multiple times.	1
I don't think housing is a issue but I do think we need to attract businesses to come to St John so we can keep our tax dollars in StJohn . I buy most of my groceries, clothing, furniture and ect in other parishes	1
I believe that homeless shelters need to be available for those who are need. There should be places children that are homeless for whatever reason could go just to relax charge their phone, take a bath and grab some food.	1
I am mainly concerned with the flooding. My house is in a X flood zone area. And didn't flood during the hurricane. However it floods when it rain because the drainage pipes are clogged or broken.	1
Housing for Seniors and low income families.	1
Homes being purchased by outside companies and placing anyone in them	1
Homeowners insurance is unaffordable, but the other issues are levee systems, water pumps, and more affordable housing for widows and other people who have worked hard	1
Home insurance & cost of housing too high.City water makes us itchy, causes hard water deposits in pipes, and sometimes makes us and pets feel sick and kills plants so we rely on bottled water. I was told by my neighbors it was because I have city water.	1
Helping people who has a hard time getting their high bills paid	1
Garyville residents to not have access to grocery stores if they don't have transportation.	1
Flooding is most important issue. I live in Star Terrace and at times can't drive to Airline Hwy using Rosenwald because of flooding if there has been a big storm. Flooding increased north of railroad tracks after 10th St improvement.	1
Drainage.	1
Drainage	1
Don't know	1
Development of retirement community, small family homes, Rent to own home ownership, etc.	1

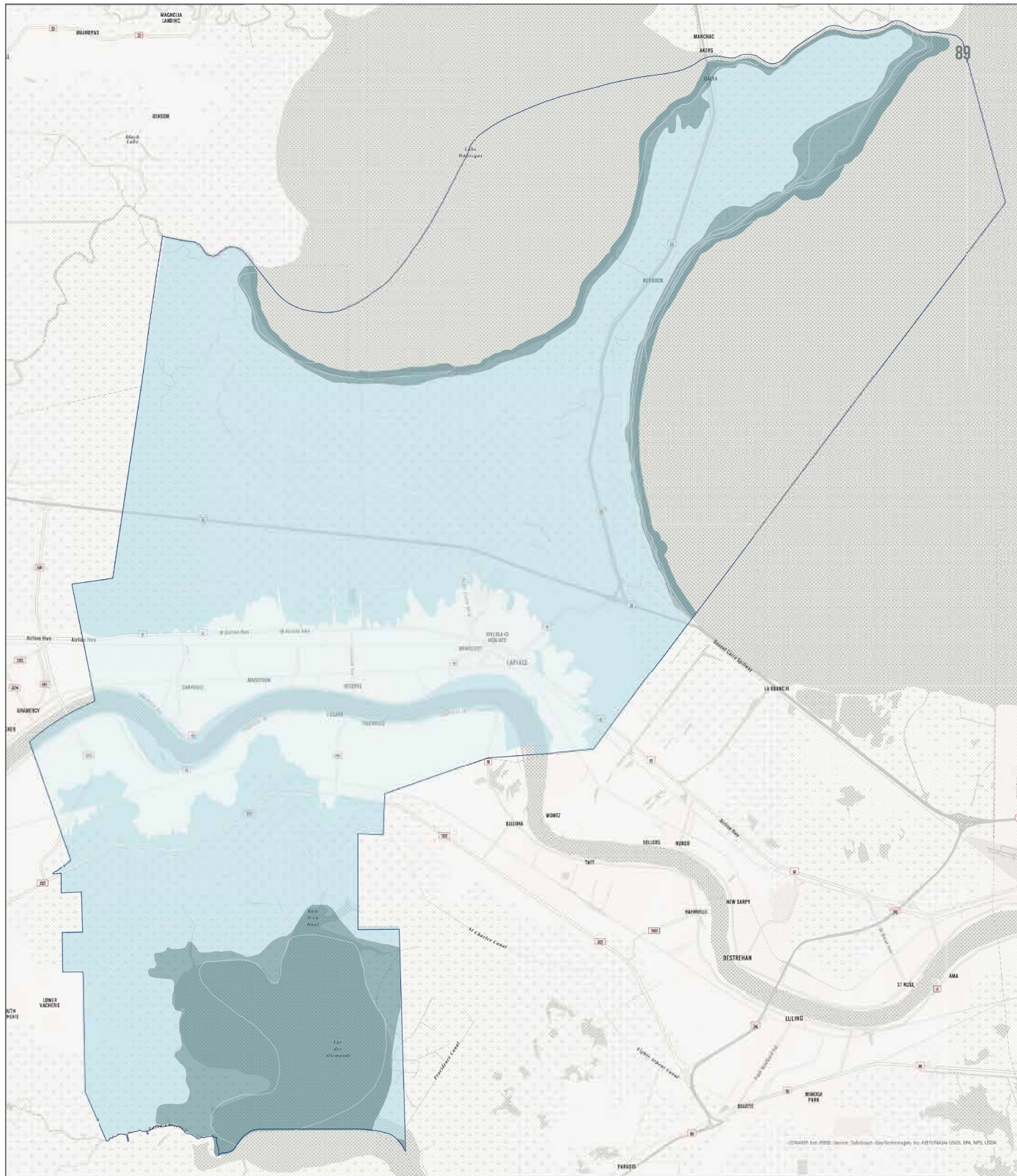
Damaged, obsolete, and low-income housing and businesses needs cleaning, beautification codes enforced, and / or demolishing if vacant and owners have no ability or plans to meet code..	1
COST TO RENT APARTMENTS ARE UNFONDED. PLACING A CAP ON RENTAL PROPERTY.	1
cost of run down places is same as newer places and that is still high	1
Completing the levee is the single most important issue to encourage growth of our community.	1
Commercial Establishments allowed to operate next to residential ie bars and lounges with loud music and customers	1
clean up the blighted and unkept properties. the subdivisions are a mess.	1
Changing lead pipes in older homes. Elevate homes (older) to protect from water damage underneath the homes.	1
Building the Levee and getting Debris out of yards asap.	1
Blith properties need cleaning. Neighbors with yards full of junk	1
Better pumps when it rains hard to move water	1
Apartment house and incentives for buying and building in older areas for locals and not investors.	1
All the trailer parks that are not keep up and looks like dumps	1
All housing issues are important	1
Affordable housing.	1
Affordable housing is really important	1
Affordable housing	1
*Over-crowded neighborhoods + lack of enforcement of code violations	1

Answered: 76 Skipped: 51

Please make a point on this map of St. John to show us where you think there should be more housing built.







**Special Flood Hazard Area**

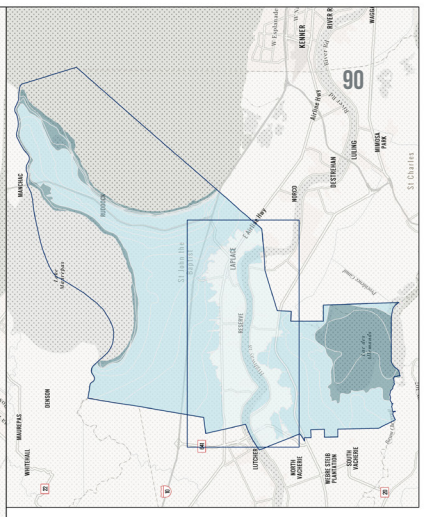
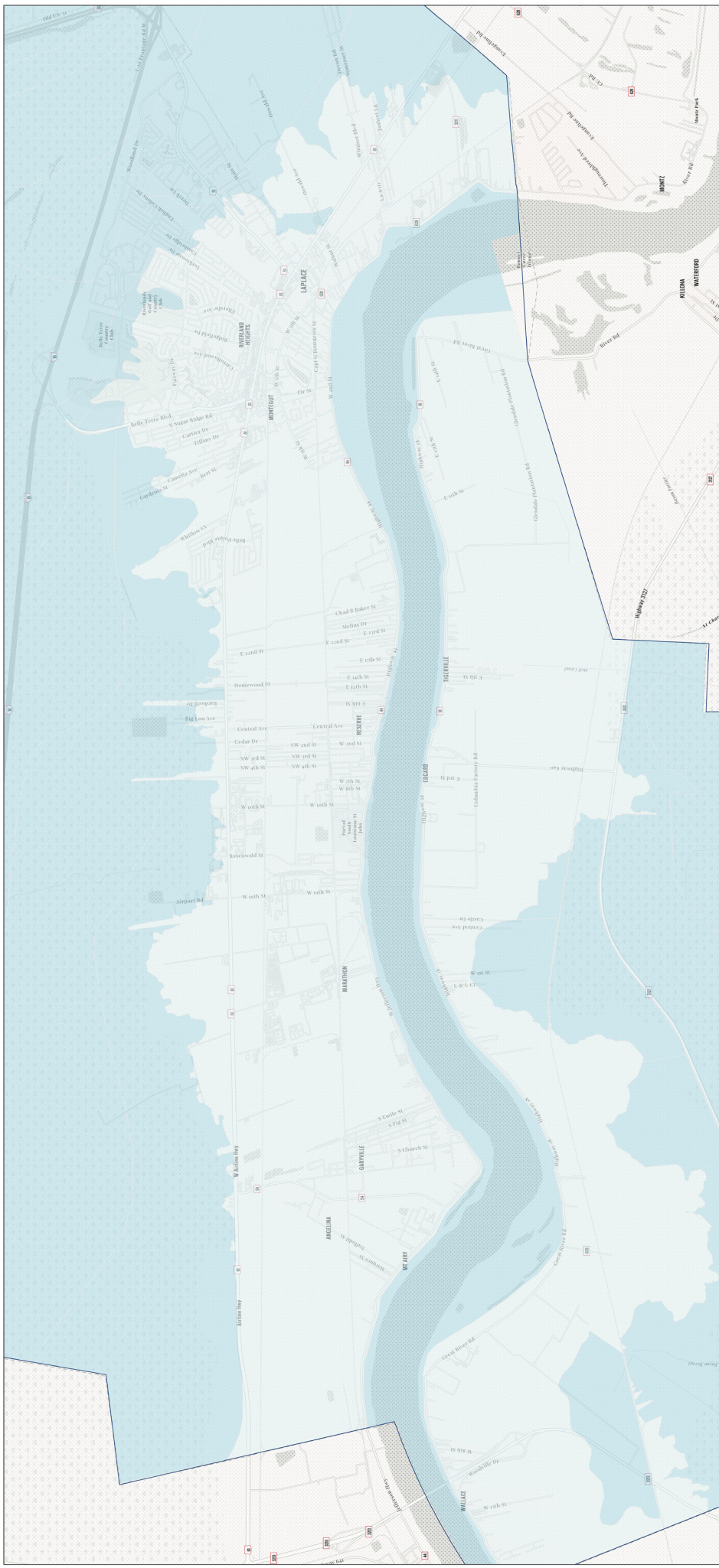
- AE
- VE
- X

St. John the Baptist Boundary



0 2.5 5 10 Miles

**APPENDIX C: CHARETTE MAPS FOR FUTURE COMMUNITY ENGAGEMENT**



### Special Flood Hazard Area

- AE
- VE
- X
- St. John the Baptist Boundary

