



St. John the Baptist

Comprehensive Land Use Plan

One Parish, One Future

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Acknowledgments	
I. Executive Summary	1
II. Introduction	13
III. Planning Framework and Vision	21
IV. Land Use Element	36
V. Resilience Element	57
VI. Housing Element	83
VII. Transportation Report	114
VIII. Hazard Mitigation Element	130
IX. Natural Environment	160
X. Parks and Recreation Element	184
XI. Historic Preservation Element	203
XII. Implementation	233
XIII. Appendices	
A. Land Use Survey Methodology	
B. Population Projection Methodology	
C. Housing Data Report	
XIV. Supporting Documents and Studies	
A. FEMA NDRF Recovery Plan for St. John Parish	
B. USDA Soils Survey of St. John Parish	

I Executive Summary

Recent impacts from hurricanes highlighted the potential dangers to development from wind and wind driven water, as well as flooding in St. John Parish. The need to effectively plan for parish development to coexist with these dangers led the Parish to develop a comprehensive plan and to update the associated zoning and subdivision regulations to provide both a development policy guide and development management regulations that promote the principals and practice of disaster resilience.

Resilience is the ability to anticipate, withstand, and then recover from unanticipated events and disasters. These can be natural – hurricanes, earthquakes, tornado's, floods, etc. – or man-made events such as petrochemical or nuclear accidents – both of which could impact St. John Parish.

The St. John Parish One Parish One Future Comprehensive Resilience Plan provides the Parish the policy guidelines to promote quality of life and resilience through the comprehensive land development planning process. The Comprehensive Plan touches on a range of specific elements important to the Parish's physical development including:

- Land use
- Resilience
- Housing
- Economic Development
- Hazard Mitigation
- Natural Environment
- Parks and Recreation
- Historic Preservation
- Implementation

The idea of planning for community resilience is woven throughout the One Parish One Future Comprehensive Resilience Plan, and each element identifies specific issues related to resilience as well as incorporates resilience into the overall goals and policies.

The One Parish One Future Comprehensive Resilience plan was developed with input from a diverse set of interests including citizens, Parish government officials, and key stakeholders; as well as incorporating the input and recommendations generated through the Federal Emergency Management Agency's post-Isaac Disaster Recovery Plan. In addition to the public input, planners evaluated existing land uses for each element as they relate to several key Smart Growth principals the Parish should follow

when making development decisions. These include:

- Promoting resilience in St. John Parish
- Directing development toward areas already served by infrastructure
- Encouraging a range of housing choices for all residents
- Encouraging more walkable neighborhoods and communities
- Creating a sense of place within St. John Parish and its communities
- Preserving and enhancing the Parish's historic resources, natural environment, and open spaces
- Encouraging a variety of transportation options
- Ensuring community input and support throughout the planning and plan implementation process.

Main Issues Facing St. John Parish

Based on analysis of demographic data; future population projections; existing development; impacts from and to the natural environment; and input from citizens pre and post-Isaac, among other analyses, the Parish faces several key issues that will impact the future viability of St. John Parish as well as the quality of life for existing residents. These issues are described briefly below.

Flooding Vulnerabilities to Existing Development

The impacts from Hurricanes Ike and Gustav as well as the recent devastation from Hurricane Isaac clearly demonstrated that significant percentages of existing Parish development are susceptible to wind damage and storm surge flooding from Lake Pontchartrain – particularly in LaPlace.

Lack of Federal Hurricane Protection

In St. John Parish flooding from Hurricane Isaac damaged about 50% of the total parish housing stock, with LaPlace the hardest hit. Virtually all of the severe impacts from flooding during Hurricane Isaac would have been prevented if the proposed West Shore of Lake Pontchartrain Hurricane Protection Levee had been in place.

In addition to St. John Parish, the flooding from Hurricane Isaac also inundated several major transportation routes into and out of the parish and region including I-10, I-55, and Hwy 51. These routes are critical to both evacuation as well as recovery. The West Shore of Lake Pontchartrain Hurricane Protection Levee would protect these assets so that they can function before, during, and after emergency situations.

Lack of approved hurricane levee protection also exacerbates the impact from the

recently passed federal Biggert Waters Act, which phases out premium subsidies under the National Flood Insurance Program (NFIP) in AE and V zones without levee protection. Previously the NFIP subsidized flood insurance rates in these areas; however without those subsidized rates homeowners are expected in some cases to see premiums increases of tenfold or more. This makes federal levee protection critical for the future of St. John Parish.

Vulnerabilities to Water Supply and Water Quality for LaPlace

Hurricane Isaac also exposed long-standing issues with the source and quality of LaPlace's water supply. The source of LaPlace's water is a well located in Ruddock, just north of Laplace along the west shore of Lake Pontchartain. The impacts of Hurricane Isaac forced the Parish to shut down the water to LaPlace within a few hours of the initial storm impacts. Prior to Isaac, consistent issues with water quality from the Ruddock well resulted in numerous boil water orders. Moving the source of LaPlace's water to the Mississippi would alleviate the current issues.

Limited Transportation Options

There are limited transportation options in St. John Parish outside of motor vehicles or a limited demand response public transit operated by River Parish Transit. As in most major urban suburbs St. John grew because it offered an easy commute to regional job centers. Recent trends, however, indicate more and more people are looking for multi-modal environments to live in that include local or regional transit options as well as biking opportunities. This will need to be an important part of future planning in the Parish.

Limited Internal Evacuation Process

While the Parish participates in the regional evacuation plan through the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) by having a Parish pick up point at LaPlace Elementary School, there is no coordinated plan to move at risk or carless populations from outlying parish communities to the main regional pick up center. Citizens with non-medical based issues needing transportation to the Parish's centralized evacuation point must rely on their own means to get there.

Population Decline-Low Projected Growth-Shifting Demographics

Since 2008 St. John Parish's population steadily declined from 47,684 following Hurricane Katrina in August 2005 down to 44,758 according to the most recent U.S. Census estimate. This decline followed after very little dynamic growth during the preceding 15 years.

Future population projections for St. John indicate very little real population growth over

the next 20 years with the 2030 population only projected to reach somewhere around 50,000 residents. This is only an increase of about 5,300 residents over the next 20 years. It is likely that due to impacts of Hurricane Isaac the population could decline by even more once updated U.S. Census estimates come out for 2013.

St. John Parish is aging and becoming more ethnically and racially diverse. During the last 10 years the Parish lost over 6% of the under 44 population, while the over 45 population increased by over 40%. Additionally, families with children have declined since 2000 – a key demographic that drives future growth.

Lack of Housing Options

There are limited housing options available in St. John Parish. Traditional single-family residential dominates housing stock found in the parish. There are few multi-family options available. There is a need to diversify the housing stock as well as offer a different model of development centered on a more mixed-use environment with amenities located within walking or biking distance to residences. Options such as allowing residential living in commercial areas offer an opportunity to invigorate the housing dynamic and attract new residents to the Parish.

Proliferation of Mobile Home Sites

Another big housing issue is the proliferation of mobile homes. Parish regulations do not allow mobile homes in single-family residential zones, however over the years they have been allowed in these districts. Mobile homes in fact are the second most common housing type in St. John Parish behind single-family units and have become the de facto low-income housing option for many residents on both the East and Westbanks of St. John Parish.

Need for Increasing Economic Development Activities

St. John Parish's economy has slowed recently as population declines reduce the demand for commercial activities that support residential populations. Increasing the residential population will improve commercial activities. Recovery activities have ameliorated some of this but long term the Parish must find ways to increase economic development around major manufacturing and port activities.

Expansion of the petrochemical industry should continue given the Parish's location to major multi-modal corridors. Additionally, a major economic resource within St. John Parish is the Port of South Louisiana (POSL). The Mississippi River offers unparalleled opportunity to expand port activities in St. John Parish. It is imperative the Parish takes advantage of opportunities to grow river based activities in St. John parish.

Currently, POSL is the largest bulk cargo port in the Western Hemisphere, and locally

the only truly intermodal port facility in Southeast Louisiana now that they have taken over operation of the St. John Parish airport facility. There is tremendous opportunity for the Port to expand their operations on both the East and Westbanks in St. John Parish. Expansion will require additional land around their current facilities as well as identifying new industrial sites along the River. The future land use map accounts for this by recommending additional acreage for expanding airport activities as well as lands along the River suitable for port activities.

Addressing the Issues and Building Resilience in St. John Parish

All of these issues – and others identified within the plan - taken together suggest that St. John Parish has significant issues related to future growth, development, and

One Parish One Future Vision Statement

St. John the Baptist Parish will be a modern, well-planned, and resilient community that respects its rural and cultural heritage while providing a high quality of life for all residents by protecting existing neighborhoods and planning for high quality new ones; promoting economic development opportunities; protecting its historic properties and resources; and protecting and conserving the natural environment and natural resources of St. John the Baptist Parish.

resilience. To address these and other issues the One Parish One Future Comprehensive Resilience Plan includes two key components of long-range planning.

First, the Land Use Element includes the Parish's Future Land Use Map (FLUM). The FLUM is key because it identifies the physical layout of land uses in the Parish, as well as how these uses relate to potential hazards such as the 100-year floodplain. The FLUM is the main policy description of the physical location of development as well as forms the basis for developing the zoning and subdivision regulations required to implement the plan.

Second, as the Parish's FLUM identifies appropriate areas for physical development, those development decisions should also be guided by the overall Vision of the comprehensive plan along with the specific goals and policies for each of the elements within the plan. The Vision Statement is an overarching ideal for the Parish's desired future developed from input on what citizen's value in their parish and what issues are most important in maintaining a high quality of life. The individual element goals and policies are the guidelines for the Parish's policy makers when making decisions about the impact of new development quality of life and if that use fits into the Parish's overall vision.

Future Land Use

Several key changes were made to the future land use map adopted in Parish's 2008 Future Land Use Plan. These include identifying specific locations for mobile home development; increasing the amount of land recommended for high-density and multi-family development; incorporating more opportunities for mixed-use development throughout the Parish; and identifying areas that are vulnerable from impacts of future hazards including specifically residential areas located within the 100-year flood plain. Until the Parish receives federal hurricane protection these areas will continue to be the most vulnerable to storm surge or flooding impacts.

The map also identifies key opportunity areas for the Parish to expand the economic development opportunities presented by the LaPlace Airport and the Port of South Louisiana. These opportunities also lead to the recommendation of a mid-Parish Mississippi River Bridge Crossing to create economic development and new residential opportunities on the Westbank.

Element Goals

The specific goals within each element that support the Comprehensive Resilience Plan vision and future land use recommendations are outlined below to give a general idea of the key policy recommendations within the St. John Parish Comprehensive Resilience Plan.

LAND USE ELEMENT GOALS

Land Use Goal 1: Maintain St. John Parish's High Quality of Life

LU Objective 1.1: Encourage smart and sustainable growth and development in St. John the Baptist Parish on the East and Westbanks that does not diminish the quality and character of the natural environment, promotes resilience, and that can be readily supported or served by public resources and services.

Land Use Goal 2: Promote Quality Neighborhoods in St. John Parish

LU Objective 2.1: Protect the viability of existing neighborhoods and residential areas.

LU Objective 2.2: Provide appropriate locations for residential development.

LU Objective 3: Promote subdivision design that creates desirable living areas and that encourages cost efficient housing construction.

Land Use Goal 3: Encourage Commercial Land Uses That Contribute to the Job Base in St. John Parish While Protecting the Character of the Parish.

LU Objective 3.1: Promote the development of well designed commercial and office uses that will assure a wide range of goods and services for the resident population and that are compatible with the natural environment and adjacent land uses.

LU Objective 2: Ensure sufficient locations for well-designed office uses that are compatible with surrounding development and the natural environment.

Land Use Goal 4: Provide industrial areas that create opportunity for economic development and job creation and that are compatible with the natural environment.

LU Objective 1: Provide for well-designed locations for industrial uses that are served by appropriate infrastructure.

Land Use Goal 5: Provide for a diverse and high quality system of parks, recreation facilities and public open spaces that will meet the recreation and leisure needs of the resident and that will protect and enhance the environmental character of St. John Parish.

LU Objective 1: Foster intergovernmental cooperation in providing for shared use recreational facilities.

LU Objective 2: Promote the provision of usable open space and trails development through the land development process.

RESILIENCE ELEMENT GOALS**Resilience Goal 1: Build resilience by reducing physical vulnerability to disasters.**

R Objective: Incorporate structural mitigation techniques to create resilience in St. John parish.

Resilience Goal 2: Continue advance planning by Parish Administration for disaster preparedness.

R Objective: Maintain coordination with relevant state and regional preparedness organizations.

R Objective: Improve St. John Parish's transportation system both to aid in emergency evacuation and to improve the Parish's economy.

Resilience Goal 3: Improve community resilience by getting and keeping citizens involved in the disaster preparedness and recovery process.

R Objective: Identify methods St. John Parish can utilize to manage the preparation and recovery from disasters.

Resilience Goal 4: Revise the Parish's development regulations (zoning and subdivision regulations.) to include resilience policies and requirements and to provide predictability to residents, businesses and investors.

R Objective: Incorporate resilience into the Zoning and Subdivision Regulations in St. John Parish.

Resilience Goal 5: Develop and adopt a "Water Management Strategy" with specific actions for the Parish government and to encourage these actions by citizens and businesses.

Resilience Goal 6: Implement the recommended projects the St. John the Baptist Parish, Louisiana Community Recovery Strategy (National Disaster Recovery Framework)

HOUSING ELEMENT GOALS

Housing Goal 1: Ensure an adequate supply of affordable and resilient housing to meet the needs of all St. John Parish residents.

H Objective: Facilitate the provision of affordable housing in St. John Parish by regulatory and incentive- based opportunities.

H Objective: Expand affordable rental opportunities through new construction and preservation of existing rental units.

H Objective: Increase rental assistance (vouchers) to very low income and special needs persons.

H Objective: Support the St. John Parish Housing Authority's efforts to create mixed income rental and homeownership communities that promote self-sufficiency and improve resident access to transportation, education, recreation, and employment opportunities.

Housing Goal 2: Encourage the development of special needs housing for underserved populations, particularly permanent and transitional housing.

H Objective: Ensure that special needs populations have access to affordable, safe and sanitary housing that is appropriate to their special needs.

Housing Goal 3: Support thriving, safe, resilient, and attractive neighborhoods that provide rental and homeownership opportunities for all income and age groups in St. John Parish

H Objective: Create or update revitalization plans for targeted neighborhoods and communities in St. John Parish

H Objective: Encourage non-discriminatory housing practices in St. John Parish

H Objective: Develop Housing Resilience in St. John Parish

ECONOMIC DEVELOPMENT GOALS

GOAL 1: Enhance the Overall Economic Development Climate in St. John Parish.

GOAL 2: Continue to identify targeted industries to guide public policy, infrastructure development, workforce training, and other economic development initiatives.

GOAL 3: Assure an adequate supply of prime industrial sites to meet market demands for industrial development over the planning horizon to create an environment conducive for the startup, growth, expansion and retention of “targeted” industries.

GOAL 4: Provide commercial sites adequate to meet a diversity of needs for retail, service, and institutional development in St. John Parish.

GOAL 5: Provide a continuum of educational opportunities responsive to the changing needs of the work place locally and regionally to help.

GOAL 6: Encourage infrastructure development and services necessary to serve new industrial development.

GOAL 7: Maintain and enhance opportunities for resource-based industries located on rural lands in St. John Parish.

GOAL 8: Provide incentives for “targeted” industries to guide public policy, infrastructure development, work force training, and other economic development initiatives. Incentives for targeted industries should focus on identified clusters for which the region has a strategic advantage and those supported by existing infrastructure and workforce base.

HAZARD MITIGATION ELEMENT GOALS

Hazard Mitigation Goal 1: Facilitate Sound Development in the Parish so as to Reduce or Eliminate the Potential Impact of a Disaster.

HM Objective: Map out all hazard prone areas in St. John Parish on the future land use map.

HM Objective: Development in areas subject to hazards including but not limited to storm surge flooding will follow all applicable guidelines for managing development in hazard prone areas in St. John Parish.

HM Objective: Reduce the impact of tidal, surge, and riverine flooding to property in St. John Parish.

Hazard Mitigation Goal 2: Reduce the risk of existing man-made hazards and implement measures to prevent risk to future man-made hazards.

HM Objective: Reduce Repetitive Flood Losses in the Parish.

HM Objective: Prior to development of vacant land Identify risk reduction strategies for land in hazard prone areas.

Hazard Mitigation Goal 3: Enhance Public Awareness and Understanding of Disaster Preparedness.

HM Objective: Promote hazard mitigation actions to residents in St. John Parish.

NATURAL ENVIRONMENT ELEMENT GOALS

Natural Environment Goal 1: Ensure that land use and development patterns safeguard against natural ecosystems and resources while providing for the long-term health and resilience of the community and its economy and people in St. John Parish.

NE Objectives: Protect and preserve lands that are sensitive to disturbance or that provide unique economic, ecological, resilience, cultural, or aesthetic features.

NE Objective: Implement infrastructure and development patterns that are compact and contiguous to existing developed areas to minimize impact on natural areas and to maximize resilience capacity.

NE Objective: Reclaim, restore and/or redevelop land that is degraded by erosion, contamination and pollution, improper filling or dumping.

Natural Environment Goal 2: Create and conserve open space as integrated, connected green infrastructure throughout the community to help foster improved resilience and quality of life in St. John Parish.

Natural Environment Goal 3: Preserve, protect, and restore natural communities, ecosystems and their processes and habitat throughout St. John Parish.

NE Objective: Promote land use patterns integrated with conservation of natural habitats and natural aquatic systems to provide corridors for wildlife movement and protect the sustainability and resilience functions of the natural environment.

Natural Environment Goal 4: Use native and non-invasive plants in St. John Parish to ensure the health of the Parish's plant community; improve resilience; and to improve the value of the urban landscape for wildlife.

NE Objective: Use native and non-invasive plants in landscaping to create a distinctive image and sense of place for St. John Parish.

NE Objective: Reduce storm water runoff and improve water quality by using native and non-invasive landscaping throughout the Parish.

NE Objective: Strategically use ecosystem restoration/enhancement projects, urban forestry, and landscaping to offset the Parish's Greenhouse Gas Emissions:

Natural Environment Goal 5: Preserve and restore natural hydrologic features and their functions to provide resilience and opportunities for people to experience and connect with natural water features.

NE Objective: Prevent damage to aquatic ecosystems (rivers, streams, lakes, wetlands, and aquifers) resulting from development practices or from changes in hydrology as a result of development.

NE Objective: Base storm water management plans on the characteristics of each watershed.

NE Objective: Optimize the on-site retention and re-use of storm water generated from building sites.

PARKS AND RECREATION GOALS

Parks and Recreation Goal 1: To enhance the quality of life for all citizens of the Parish by providing adequate parks and recreation facilities.

Parks and Recreation Goal 2: To provide parkland and recreational facilities that are convenient to all neighborhoods and meet the needs of a diverse population.

Parks and Recreation Goal 3: To enhance current recreational facilities and programs offered by the St. John the Baptist Parish Department of Parks and Recreation.

Parks and Recreation Goal 4: To find innovative ways to fund operations, maintenance and improvements at Parish recreational facilities.

Parks and Recreation Goal 5: Provide a diversity of recreation programs and facilities to meet the needs of all citizens.

HISTORIC PRESERVATION ELEMENT GOALS

Historic Preservation Goal 1: Identify historic resources significant to St. John Parish's history, archeology, architecture, and culture.

Historic Preservation Goal 2: Promote awareness and appreciation of the parish's historic resources as assets that make the parish distinctive.

Historic Preservation Goal 3: Safeguard the parish's historic assets.

Historic Preservation Goal 4: Promote investment in historic buildings and districts

II Introduction

St. John Parish lies on the western outskirts of the New Orleans Metropolitan Area. Geographically, St. John Parish sits to the west of St. Charles Parish, and stretches from the marshes of south Louisiana to the western shores of Lake Pontchartrain. The Mississippi River bisects the Parish into East and Westbank sections, which are connected by the Luling-Destrehan Bridge, the Veteran's Memorial Bridge, as well as the Edgard-Reserve ferry.

Several major federal and state roads connect St. John Parish to major population centers to the North, West, and East. Interstate 10 connects the Parish to the major regional centers of Orleans and Jefferson Parish to the East, and continues through Mississippi, and Alabama, terminating at Jacksonville, Florida. Heading West, I-10 runs through Baton Rouge, the Louisiana state capital, and continues on through the Southwestern United States all the way through to the West Coast at San Diego, California. Interstate 55 links St. John Parish to the North and reaches major Mid-western population centers terminating in Chicago, Illinois. The Louis Armstrong International Airport sits just minutes to the East of St. John and provides international travel and freight connections. Finally, several major rail corridors link the Parish to all parts of the U.S. and to the Ports of New Orleans and Louisiana.

Despite a sporadic regional economy, St. John's population growth consistently outpaced other Parishes on the South-shore of Lake Pontchartrain through the mid-2000s. Since 1960, St. John Parish has seen sustained population growth and more recently, between 2000 and 2005, St. John's population growth equaled that of the decade between 1990 and 2000. This growth accelerated following the devastation of Hurricane Katrina in Southeast Louisiana and in 2008 reached its highest level with a population approaching 48,000. However, since that height the population in St. John has declined, and now sits at 44,758, and likely could dip further as a result of the impacts of Hurricane Isaac.

St. John, historically, has been a rural parish with an agrarian based economy, supplemented with many heavy commercial, industrial, petrochemical, and light manufacturing based jobs. Current land use patterns are similar to those seen historically, with residential uses dominated by single-family, high numbers of mobile homes, and very limited amounts of multi-family units. Non residential uses are centered along the major corridors – Airline Dr., Belle Terre Blvd., Hwy 51 – and River Road on both the East and West Banks. There are large amounts of undeveloped land on both banks of the river in St. John with significant portions used for agricultural purposes.

More recently, Hurricane Isaac demonstrated that significant percentages of Parish development are susceptible to flooding during even relatively weak hurricanes. The extent of the flooding in the Parish damaged nearly 50% of the properties in LaPlace, and significantly large numbers in other areas such as Reserve and Garyville. In addition to the flooding from Isaac, new tougher requirements for the National Flood Insurance Program are creating serious concerns for residents who live in areas without approved federal flood protection structures. Rates in unprotected areas are skyrocketing to upwards of 20 times the current rates in some areas.

Ultimately, a multitude of factors will influence how much new development the Parish will see in the next 20 years. With the still uncertain impacts from Isaac; the pre-Isaac declining population; and yet unavailable federal flood protection the Parish must identify new and innovative ways to attract new residents while holding on to existing ones.

The competition for capturing that future growth, both economic and residential will be fierce as local governments try to provide the highest quality of life combined with the best climate for economic growth. To that end, several Parish's and major cities in the surrounding region have developed or are on the verge of completing comprehensive plans or master land use and transportation plans (Jefferson Parish, Kenner, La., St. Tammany Parish, St. Bernard Parish, St. James Parish, and St. Charles Parish).

Long-term comprehensive planning can provide a framework for St. John Parish to establish policies and programs that allow the Parish to channel new development in a smart and sustainable pattern. The planning process identified several broad Smart Growth themes that the One Parish One Future Comprehensive Resilience Plan will encourage throughout all elements including:

- Creating community resilience
- Directing development toward areas already served by infrastructure
- Encouraging a range of housing choices for all residents
- Encouraging more walkable neighborhoods and communities
- Creating a sense of place within St. John Parish and its communities
- Enhancing and preserving the Parish's natural environmental areas and open spaces
- Encouraging a variety of transportation options
- Ensuring community input and support throughout the planning and plan implementation process.

Following these principals will provide the Parish with an economic and residential development base that will provide a stable tax environment for the Parish to provide the necessary infrastructure and public services needed to maintain a high quality of life, promote disaster resilience, and attract families back to the Parish. This will be key to survive in the competitive environment for new growth in Southeast Louisiana

The One Parish One Future Comprehensive Resilience Plan is the culmination of a nearly ten year process St. John's leaders have taken to develop the planning framework for the long-term development of the Parish. The One Parish One Future Comprehensive Resilience Plan provides a vision and policy framework to evaluate future land use and development, an accounting of the expected amount of land needed to accommodate the future development in St. John Parish, utilize best practices and techniques to foster community and disaster resilience, and provides a map where – in general- new land uses should go along with supporting goals and policies to help Parish leaders evaluate new development.

Information related to resident's attitudes about land use and development, historical population trends, existing economic conditions, and future population growth were used to inform development of land use goals, objectives and policies that will guide the Parish's decisions regarding physical development. The specific Elements each address a key component of the overall physical development of the Parish and support the overall future land use framework of the comprehensive plan. The Elements included within this plan are:

- Land Use
- Resilience
- Housing
- Historic Preservation
- Hazard Mitigation
- Natural Environment
- Economic Development
- Parks and Recreation
- Implementation

Additionally, the plan contains a section titled Planning Framework which outlines the existing population and demographics of the Parish; existing land uses and a description of their spatial placement in the Parish; a review of the citizen input during the process; and finally the Vision Statement that reflects where the citizen's want for St. John Parish over the next 20 years.

Why Planning in St. John Parish

What is Planning?

Planning is an ongoing activity since the beginning of civilization. Quite simply, the planning process builds a consensus on a desired future and puts policies in place to achieve that future. Most communities conduct some type of planning. Where the issues are simple and the outcomes are clear, the plans can be simple. More complex issues and problems require plans to be more complex and detailed. It is relatively easy to propose plans for events that can reasonably be anticipated; but much more difficult to prepare plans for events which are not anticipated. The most effective plans are those that are accurate enough to prepare for anticipated events, and flexible enough to provide guidance for events that are not anticipated.

Why Engage in Land Use Planning?

There are several reasons St. John Parish engaged in the One Parish One Future Comprehensive Resilience Plan process, including

- To give the Parish a comprehensive development based approach to planning for resilience;
- To protect and promote the public's health, safety and welfare;
- To ensure a high quality of life – protect and enhance property values;
- To encourage and sustain economic development;
- To develop and uphold the community's vision and goals;
- To make St. John Parish a resilient community;
- To facilitate decision making on land use and other development issues; and
- To comply with Louisiana State law (R.S. 33:103) which mandates that communities who have planning commissions prepare a comprehensive plan.

Within the planning process paradigm, a multi-faceted citizen participation process encouraged citizens to talk about land use issues along with their vision for the future of St. John Parish. From this, the overarching Vision Statement was developed, along with goals, objectives, and policies to provide a policy guide for future development decisions regarding the physical development of the Parish.

Why Comprehensive Planning for St. John Parish?

Shifting demographic and development realities, impacts from natural disaster, and a desire to see the Parish become a destination for new development, underscored a strong need to evaluate the past physical development of the Parish and prepare a plan for future growth and redevelopment. The last St. John Parish land use plan was completed nearly 40 years ago, and does not address the modern realities of

development in Southeast Louisiana, particularly as it relates to community resilience to hurricane impacts and flooding, among other important quality of life issues.

Following the impacts in 2008 from Hurricanes Ike and Gustav parish leaders understood that St. John Parish had reached a critical point in its development, and a process was needed to bring together the entire community to develop a long-range comprehensive plan for St. John Parish. While the existing Parish land use plan – adopted in 2007 - contained a vision for the Parish based on extensive citizen input along with the land use goals and policy tools to implement that vision, it wasn't a truly comprehensive plan. Inherent in their thinking was the desire to make the Parish resilient within its development management process.

Now in the post-Isaac environment, there are more uncertainties in the minds of many residents. The One Parish One Future Comprehensive Resilience Plan can ease some of those uncertainties by laying out an organized plan to encourage development and redevelopment that will maintain the quality of life St. John Parish residents have come to expect. Additionally, ensuring that development and redevelopment is done in a way that is resilient – anticipating, withstanding, and recovering from the impacts of disasters – is critical to preventing the kinds of impacts seen as a result of hurricanes Ike, Gustav, and most importantly Isaac.

What Process Has Been Followed?

Prior to Hurricane Katrina impacting Southeast Louisiana St. John Parish, leaders understood the Parish was changing and they needed to begin planning for St. John's future. The *One Parish One Future Comprehensive Resilience Plan* process began back in 2003 with a robust citizen participation process leading to an adopted Parish Land Use Plan in 2007. Subsequent phases added additional elements - Economic Development, Parks and Recreation, and Implementation – to the land use plan. However, following the impacts of Ike and Gustav the Parish initiated a more comprehensive resilience based plan and received funding to update the existing Land Use Element and add additional elements including Housing, Environmental, Hazard Mitigation, and Historic Preservation elements. Additionally, a review of key transportation issues facing St. John Parish is included in anticipation of a Transportation Element being added in an upcoming phase.

During this most recent comprehensive planning process impacts from Hurricane Isaac caused extensive flooding in parts of St. John Parish, devastating many neighborhoods in LaPlace and Reserve leading to a declaration of Disaster from the federal government. This disaster declaration triggered the the Federal Emergency Management Agency 's National Disaster Recovery Framework to develop a post-Isaac

Recovery Plan. Like the comprehensive plan, this process included intensive citizen input to develop the projects to assist with the recovery both short and long-term.

The results from the FEMA Recovery plan are included in the *One Parish One Future Comprehensive Resilience* plan. Together, these documents will help make St. John Parish more resilient to disaster as well as put in place policies that will bring about quality new development.

How Will the Comprehensive Plan Affect Development

The *One Parish One Future Comprehensive Resilience Plan* will impact development and redevelopment by providing citizens, elected official, key Parish administrators, and developers a guide to how and what policies the Parish will use to make development decisions. The One Parish One Future Comprehensive Resilience Plan has the following characteristics:

- It is primarily a **physical plan**. Although social and economic conditions are considered, the plan primarily addresses the physical development and redevelopment of St. John Parish.
- It provides a **long-range viewpoint**. The Plan addresses development and redevelopment over a 20-year time frame.
- It is the official **statement of policy** regarding such issues as land use and the physical character of the community. As a policy guide, it must be sufficiently flexible to provide guidance for changing conditions and unanticipated events.

How Has The Community Been Involved?

The One Parish One Future planning process has relied on the involvement of and input from various stakeholders including neighborhood groups, citizens-at-large, non-residential property and business owners, outside planning consultants, and Parish officials and staff. Public input was obtained through a series of planning workshops conducted throughout the Parish, followed by plan review workshops – both pre and post-Isaac - to allow citizens to review the proposed vision statement, goals and objectives, and the future land use plan map. The public input process is described more fully in the Planning Framework chapter section entitled "Visioning and Public Participation."

How Is The Comprehensive Resilience Plan Different From Zoning?

The One Parish One Future Comprehensive Resilience Plan is not a Zoning Ordinance. The plan is the long-range policy guide for the physical arrangement and appearance of

the Parish. The Zoning Ordinance is only one of a number of tools that the Parish will use to implement the comprehensive plan. Zoning laws regulate the manner in which individuals may use their property. Other tools, such as subdivision, landscape, or sign regulations also regulate use of property. All of these tools have a sounder legal basis if enacted in support of a long-range plan. Formulating a land use plan, therefore, is the first step in providing a sound and legal basis for enacting or revising a zoning ordinance and other regulatory ordinances, investing in public capital improvements, and guiding public and private land use decisions.

Who Wrote The One Parish One Future Land Use Plan?

The One Parish One Future Comprehensive Resilience Plan reflects the combined effort of the citizens of St. John Parish, the St. John Parish Planning Department, elected officials, and a professional planning team that translated the information into the One Parish One Future Comprehensive Resilience Plan document. The citizens of St. John Parish, however, deserve the credit. Throughout the planning process, citizens worked with professional planners and identified the issues and vision that drove development of the overall plan.

III Planning Framework

An important function of the Planning Framework Chapter is to identify and understand the key issues that form the basis for development of the One Parish One Future Comprehensive Resilience Plan vision statement and the individual element goals, objectives, and policies that form the core of the plan. The Framework chapter provides an overview of this context by describing the key trends and issues that undergird the Plan's overall vision, and the goals, objectives, and policies that form the key land use policy recommendations across all the plan elements. These include population, housing, and demographic trends impacting St. John Parish; land use dynamics; resilience issues related to disaster and community resilience; and a summary of the future population projections for the City. Additionally, the Framework chapter identifies those issues identified during the citizen input meetings held in support of plan development as well as incorporates issues raised during the meeting held to support the development of the Citizen's Advisory Committee's Post Isaac Recovery Plan¹.

Planning Context and Key Issues

A critical part of developing the Parish's Comprehensive Resilience Plan was an analysis of the past and present state of the Parish, as well as an overview of some factors that will drive future development and redevelopment opportunities in St. John Parish. To accomplish this, demographic, housing, land use, and economic data was compiled from various sources including the U.S. Census and from other supporting planning and economic development studies that provide the factual and analytical foundation for developing the plan elements. Citizen input was also critical to developing this overview.

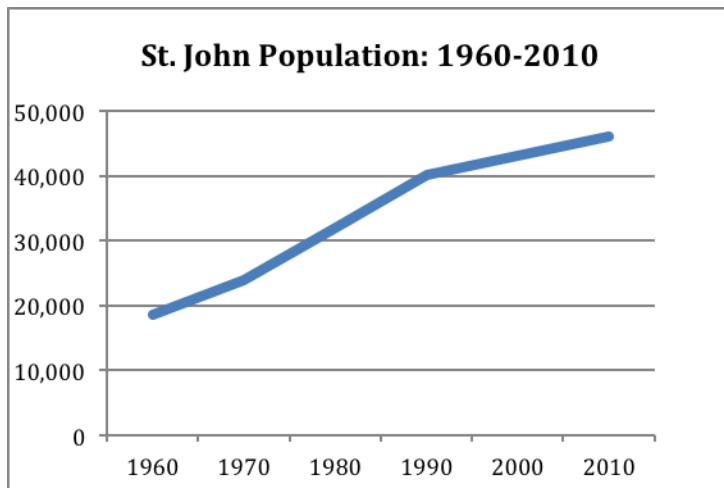
Each topical section in the Planning Framework Chapter presents an analysis of existing conditions and trends and identifies key issues and challenges facing St. John Parish over the next 20 years. To make the plan as reader-friendly as possible, detailed findings have not been included in the text and narrative of the Comprehensive Resilience Plan. The reader seeking more background information is encouraged to refer to the resource materials, and/or appendices, which are referenced within the Comprehensive Resilience Plan. The key findings on issues and trends are summarized and presented below.

¹ The Federal Emergency Management Agency Coordinated the Post Isaac Recovery Plan through the local Citizen Advisory Committee as part of the federal National Disaster Recovery Framework.

Population and Demographic Trends

Beginning in the 1960's St. John Parish's population began a period of steady growth averaging nearly 3% growth per year through 1990. This was a period in Southeast Louisiana that saw the rapid suburbanization of several parishes surrounding New Orleans. The growing oil and gas industry along with the petrochemical industry fueled growth in several Southeast Louisiana parishes including St. John.

Graph 2:1: Historic and Future Population

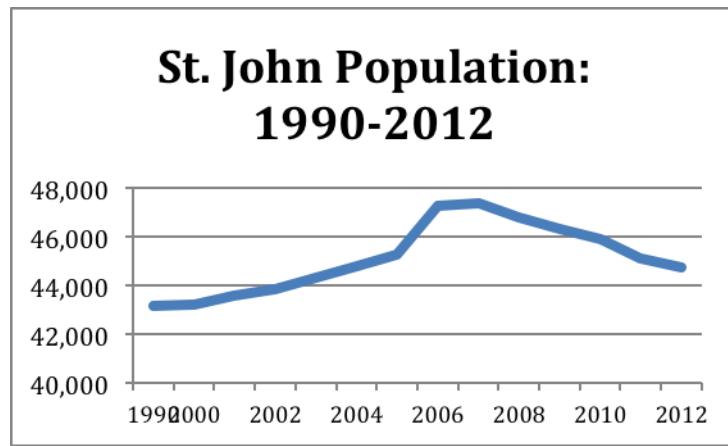


However, during the 1990's and 2000's several factors contributed to stagnant population growth throughout several communities in Southeast Louisiana – with St. John being one of them. In the 20 years following 1990 population growth in St. John Parish plummeted to only about 0.75% per year.

Following the devastating impacts of Hurricane Katrina on Southeast Louisiana, St. John saw a surge in population in 2006 and 2007 to 47,386; but 2012 Census estimates put the population down to 44,758. This could go lower as several thousand homes were flooded or received damage in August 2012 from Hurricane Isaac.

Over the last ten years St. John Parish experienced a shift in internal demographics among a number of key categories. The racial make up of the Parish is changing, as racial and ethnic minorities make up larger percentages of the population. As Table 2 shows, white population declined by nearly 14% from 2000 to 2010 while other racial and ethnic minorities – particularly Hispanic-Latino Americans - showed significant increases.

Graph 2:2: Future Population Projections



Census data also shows that the Under 18 demographic has declined by almost 8% while the number of residents over 18 has increased. Females in St. John continue to outnumber males with the gap widening slightly through 2010.

Summary of General Household Characteristics

In 2010, St. John Parish had 15,965 households, an increase of 1,682 households since 2000. About 50% of the household growth was 1 and 2 person households. The

remaining categories all grew by less than 10% each. These three categories actually increased by almost 3,500 households eclipsing the total number of new households added. Losses among larger households offset the gains. This likely resulted in the household size decrease for all households in St. John Parish.

As noted earlier, St. John's population is becoming older, and this increase in smaller households could be the result of 'empty nesters' as well as new households who have not begun having children.

Household Size and Married Families with Children

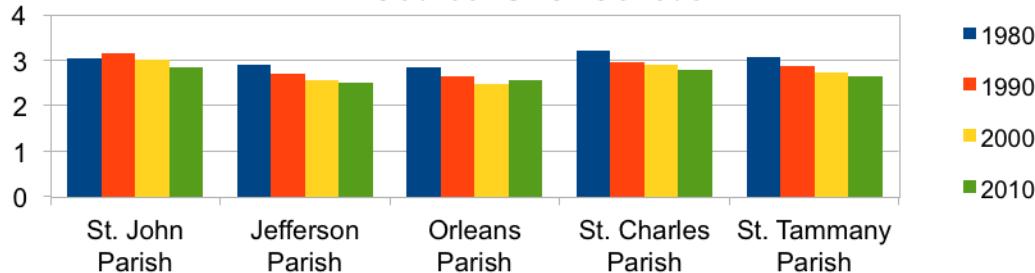
Along with the drop in numbers of households with more than 3 children, average household size decreased as well from 2000. As expected, household size in St. John Parish also declined, dropping from 3.15 to 2.85 persons per household.

As Graph 1 below shows, the trends in household size in St. John Parish are different than surrounding Parishes. From 1980 to 2010 parishes in the Metro New Orleans area, with the exception of St. John Parish, all showed decreasing household sizes over that period. Household size in St. John Parish actually increased from 1980 to 1990, and generally remains larger than the surrounding parishes.

Graph 2.3: Regional Comparison of Household Size

**Graph: Regional Comparison of Household Size
1980-2010**

Source: U. S. Census



Household size has steadily decreased in St. John Parish going from 3.13 in 1990 to

2.85 in 2010. This is a larger national trend that affects many communities as the Baby Boomer generation ages through. However, combined with the other trends suggests that St. John lacks growth among young families.

Table 3.2: Household Size St. John Parish

St. John the Baptist	1990	2000	2010
All Occupied Units	3.13	2.98	2.85
Owner Occupied	3.18	3.03	2.88
Renter Occupied	2.97	2.79	2.74

Source: U. S. Census

In addition to the decline in household size,

there has been a decline in the number of married-couple families with children under age 18, as Table 5 illustrates. The number of households identified as married-couple families with children under age 18 declined by nearly 26% since 2000. Married couples with no children under age 18 increased by 8% over the same period.

These numbers seem to suggest that not only are childless married couples increasing, but that married couples with children may be leaving the Parish, or not moving in, or even divorcing. It could also

indicate a burgeoning population of young married couples who haven't yet decided to start families. However, should this overall trend continue, along with continued increasing percentages of older residents, it is likely that overall household size will continue to decline in the coming years.

Table 3.3: Married Couple Families with Children

Married-Couple Families with Children	2000	2010	%Change
Married-couple family:	8,035	7,760	-3.42%
With own children under 18 years	4,218	3,122	-25.98%
No own children under 18 years	3,817	4,124	8.04%
With related children under 18 years	N.A.	514	N.A.

Source: U.S. Census

Household Income

The median household income in St. John Parish was estimated as \$50,736 in 2009-2011 American Community Survey. The 1999 median household income in St. John Parish as reported by the 2000 U.S. Census was inflation adjusted to \$53,272. After adjusting for inflation, the 1999 median income of St. John residents was over \$2,500 more than the 2011 median income. Declining incomes poses both short and long-term issues for the Parish's economic stability. Loss of tax base can make it difficult to maintain, improve, and/or expand needed public infrastructure and facilities. This can hurt overall quality of life and deter future economic and population growth.

Housing Characteristics

St. John Parish is predominately a single-family community based on the most recent land use survey (2011), with 88.4% of all acreage.

Additionally, another 8.7% of land is used for trailers or mobile homes. That brings the total single-family usage to 97.1% of all developed residential land.

This is a significant portion devoted to single-family and generally not indicative of standard residential mixes, even in suburban communities. There is definite need to expand the amount of multi-family land uses in St. John Parish. Additionally, as the Parish population ages, the need for assisted living and/or continuing care facilities with the Parish will increase as well. There are currently only about 27.5 acres developed with these uses, so expanding those land uses will likely be critical to Parish residents.

Housing in St. John is predominately owner-occupied, as would be expected given the overwhelming single-family presence. In 2010 79.2% of housing units were owner occupied; higher than both State and National numbers, which generally sit between 60-65%.

Table 3.4: Residential Land Use in St. John Parish - 2011

Dwelling Type	Number of Lots	Acreage	Percent of Res. Acreage
Single Family Detached	14,056	3,494.8	88.4%
Single Family Attached (Townhouse)	18	1.4	0.0%
Trailer/Mobile Home	1,045	344.9	8.7%
Two Family (Double or Duplex)	166	29.4	0.7%
Three Family (Triplex)	6	1.1	0.0%
Four Family (Four-plex)	107	17.8	0.4%
Multi-Family	61	63.4	1.6%
Total	15,459	3,952.6	100.0%
<hr/>			
Other Residential			
Assisted Living	2	6.2	
Life Care or Continuing Care	8	21.3	
Hotel/Motel	11	18.2	
Source: UNO Land Use Survey			

Table 3.5: Housing Units by Tenure

	2000	2010	% Change
Total Housing Units	15,532	17,510	12.73%
Occupied Units	14,283	15,965	11.76%
Owner Occupied	11,573	12,637	9.19%
Renter Occupied	2,710	3,328	22.80%
Vacant Units	1,249	1,545	23.70%
Owner Vacancy	908	215	-76.34%
Rental Vacancy	341	393	15.16%
Other Vacancy	N.A.	937	N.A.

Source: U.S. Census

Despite minimal population growth total housing units are up over 2000 numbers.

Pending housing data post-Isaac the vacant numbers will almost assuredly go up as families have still not returned to their damaged properties; while some are relocating due to issues with flood insurance rates.

Impact of Biggert-Waters Act

The federal Biggert-Waters Act is designed to bring flood rates charged by the National Flood Insurance Program more in line with the actual risks a property faces from flooding. Previously, the federal government heavily subsidized the NFIP rates. Moving forward, rates will be tied to the actual risk of flooding after accounting for any federal or locally approved levee or other flood reduction structures. For many outside the hurricane protection levees in Southeast Louisiana this likely means substantial rate increases; often beyond what many can afford.

Congress is working on revising or delaying the impacts until communities have a chance to deal with the issues enforcement places. Some communities are working on local levees and want the federal government to account for those in determining FEMA base flood elevations, which ultimately determine the level of risk for any given property.

Impact Of Hurricane Isaac on Housing in St. John Parish

Hurricane Isaac hit Louisiana's coast at Plaquemines Parish, southwest of the Mississippi on August 28, 2012 as a Category 1 hurricane. A second landfall of Hurricane Isaac was made in Southeast Louisiana just west of Port Fourchon on August 29, 2012. Because of the extremely slow moving track, the impacts from Isaac lasted through August 30th, significantly worsening the effects of a minimal hurricane.

Flooding from Hurricane Isaac caused much of the damage to housing in St. John Parish. But damages – including wind - impacted housing of all types, including single and multi-family units, public housing units, and mobile homes; as well as impacting households across the income spectrum.

In total about 7,190 – or about 45% - of the 15,965 households in St. John Parish received damage during Isaac. St. John's rental population represents 21 percent of all households (3,328 of 15,965). Proportionally, 20 percent of damaged households in the

parish (1,473 of 7,190) were rental households. Like the single-family population, rental damage was concentrated in LaPlace as well, accounting for 76 percent (1,117 of 1,473) of total damaged rental households in St. John Parish.

Overview of Main Issues Facing St. John Parish

Based on the above as well as other analyses undertaken as part of the One Parish One Future Comprehensive Resilience Plan the Parish faces several key issues that will impact the future viability of St. John Parish as well as the quality of life for existing residents. These issues are described briefly below.

Population Decline-Low Projected Growth-Shifting Demographics

Since 2008 St. John Parish's population steadily declined from 47,684 following Hurricane Katrina in August 2005 down to 44,758 according to the most recent U.S. Census estimate. This decline followed after very little dynamic growth during the preceding 15 years.

Future population projections for St. John indicate very little real population growth over the next 20 years with the 2030 population only projected to reach somewhere around 50,000 residents. This is only an increase of about 5,300 residents over the next 20 years. It is likely that due to impacts of Hurricane Isaac the population could decline by even more once updated U.S. Census estimates come out for 2013.

St. John Parish is aging and becoming more ethnically and racially diverse. During the last 10 years the Parish lost over 6% of the under 44 population, while the over 45 population increased by over 40%. Additionally, families with children have declined since 2000 – a key demographic that drives future growth.

Lack of Housing Options

There are limited housing options available in St. John Parish. Traditional single-family residential dominates housing stock found in the parish. There are few multi-family options available. There is a need to diversify the housing stock as well as offer a different model of development centered on a more mixed-use environment with amenities located within walking or biking distance to residences. Options such as allowing residential living in commercial areas offer an opportunity to invigorate the housing dynamic and attract new residents to the Parish.

Proliferation of Mobile Home Sites

Another big housing issue is the proliferation of mobile homes. Parish regulations do not allow mobile homes in single-family residential zones, however over the years they have been allowed in these districts. Mobile homes in fact are the second most common housing type in St. John Parish behind single-family units and have become

the de facto low-income housing option for many residents on both the East and Westbanks of St. John Parish.

Flooding Vulnerabilities to Existing Development

The impacts from Hurricanes Ike and Gustav as well as the recent devastation from Hurricane Isaac clearly demonstrated that significant percentages of existing Parish development are susceptible to wind damage and storm surge flooding from Lake Pontchartrain – particularly in LaPlace.

While the flooding was widespread from Isaac, there is strong belief among Parish officials that going forward the Parish faces serious risk from storm surge flooding. The need to protect population is paramount, however in addition the Parish is home to the intersection of two main Interstate highways – I-55 and I-10 – both of which are critical for evacuation and recovery efforts; and both of which were shut down due to flooding from Hurricane Isaac.

Lack of Federal Hurricane Protection

In St. John Parish flooding from Hurricane Isaac damaged about 50% of the total parish housing stock, with LaPlace the hardest hit. Virtually all of the severe impacts from flooding during Hurricane Isaac would have been prevented if the proposed West Shore of Lake Pontchartrain Hurricane Protection Levee had been in place.

In addition to St. John Parish, the flooding from Hurricane Isaac also inundated several major transportation routes into and out of the parish and region including I-10, I-55, and Hwy 51. These routes are critical to both evacuation as well as recovery. The West Shore of Lake Pontchartrain Hurricane Protection Levee would protect these assets so that they can function before, during, and after emergency situations.

Lack of approved hurricane levee protection also exacerbates the impact from the recently passed federal Biggert Waters Act, which phases out premium subsidies under the National Flood Insurance Program (NFIP) in AE and V zones without levee protection. Previously the NFIP subsidized flood insurance rates in these areas; however without those subsidized rates homeowners are expected in some cases to see premiums increases of tenfold or more. This makes federal levee protection critical for the future of St. John Parish.

Vulnerabilities to Water Supply and Water Quality for LaPlace

Hurricane Isaac also exposed long-standing issues with the source and quality of LaPlace's water supply. The source of LaPlace's water is a well located in Ruddock, just north of Laplace along the west shore of Lake Pontchartain. The impacts of

Hurricane Isaac forced the Parish to shut down the water to LaPlace within a few hours of the initial storm impacts. Prior to Isaac, consistent issues with water quality from the Ruddock well resulted in numerous boil water orders. Moving the source of LaPlace's water to the Mississippi would alleviate the current issues.

Limited Transportation Options

Outside of motor vehicles or the limited demand response public transit system operated by River Parish Transit, there are limited transportation options in St. John Parish. As in most major urban suburbs St. John grew because it offered an easy commute to regional job centers. Recent trends, however, indicate more and more people are looking for multi-modal environments to live in that include local or regional transit options as well as biking opportunities. This will need to be an important part of future planning in the Parish.

Limited Internal Evacuation Process

While the Parish participates in the regional evacuation plan through the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) by having a Parish pick up point at LaPlace Elementary School, there is no coordinated plan to move at risk or carless populations from outlying parish communities to the main regional pick up center. Citizens with non-medical based issues needing transportation to the Parish's centralized evacuation point must rely on their own means to get there.

Need for Increasing Economic Development Activities

St. John Parish's economy has slowed recently as population declines reduce the demand for commercial activities that support residential populations. Increasing the residential population will improve commercial activities. Recovery activities have ameliorated some of this but long term the Parish must find ways to increase economic development around major manufacturing and port activities.

Expansion of the petrochemical industry should continue given the Parish's location to major multi-modal corridors. Additionally, a major economic resource within St. John Parish is the Port of South Louisiana (POSL). The Mississippi River offers unparalleled opportunity to expand port activities in St. John Parish. It is imperative the Parish takes advantage of opportunities to grow river based activities in St. John parish.

Currently, POSL is the largest bulk cargo port in the Western Hemisphere, and locally the only truly intermodal port facility in Southeast Louisiana now that they have taken over operation of the St. John Parish airport facility. There is tremendous opportunity for the Port to expand their operations on both the East and Westbanks in St. John Parish. Expansion will require additional land around their current facilities as well as identifying new industrial sites along the River. The future land use map accounts for

this by recommending additional acreage for expanding airport activities as well as lands along the River suitable for port activities.

Overview of Citizen Input To the Comprehensive Plan

During the citizen participation phase of the plan development, 100 people attended four public meetings to help shape the future of their community. During these workshops, citizens had an opportunity to identify and prioritize issues related to historic preservation, housing, land use, transportation, the environment and hazard mitigation. They also took a multi-slide community image survey design to better understand how citizens want their community to look. The results of these community workshops are discussed below.

Community Issues and Priorities

The issue identification session began with citizens identifying at least three, but possibly more, individual issues in each category mentioned above that citizen's thought were important for their neighborhoods. The public meeting was divided into three discussion sections, each covering two distinct but related topics. In the first section, participants identified and discussed issues pertaining to historic preservation and housing. The second section focused on land use and transportation and the third on the environment and hazard mitigation. The results from each session were then organized into sub-categories to help clarify community issues and priorities.

Historic Preservation & Housing

Availability of Housing Options

The current housing stock in St. John the Baptist Parish consists of mostly single-family homes. Many participants spoke of the need for greater variety in housing options – apartments, condos, multi-family housing – to attract and retain people in the parish, particularly young people not ready to purchase their own home. Beyond the types of housing that are available, many participants stated that there simply isn't enough housing in the parish to begin with.

Affordability of Housing

The prevalence of single-family housing that makes for an almost homogenous housing stock also affects the affordability of housing the parish. The lack of rental options like apartments and multi-family homes make it more difficult for young and lower income people to find quality housing in St. John.

Code Enforcement and Blight Management

A lack of housing code enforcement was a major issue for workshop participants. Many said homes in disrepair detracted from the quality of neighborhoods and lowered the value of neighboring properties. Trailer parks were of particular concern, with participants saying that they need to be better managed. That it is true for blighted housing, something the participants considered to be a major issue in the parish.

Management and Maintenance of Historic Buildings and Areas

St. John the Baptist Parish has a strong historic past, something participants were quick to note. Many, however, were upset with the way historic structures and areas have been ignored. Participants would like the creation of local historic districts to help protect and maintain older parts of the parish. They would also like more parish programs to help protect and maintain individual historic structures.

Land Use & Transportation

Maintenance of Transportation Infrastructure

A common lament among participants was the lack of infrastructure maintenance, particularly roadways, throughout the parish. Potholes are a common sight and they make driving dangerous in many areas.

Pedestrian and Cycling Access

Participants want more and better walking paths and sidewalks in St. John parish. The need for more bicycle paths was also a common theme. Some people wanted better walking and bicycling facilities for recreational purposes, some for transportation reasons. In both cases the sentiment was the same: much of the parish is simply not safe for pedestrians and cyclists and that needs to be addressed.

Roadway Safety

Participants not only said that roads are unsafe for pedestrians and cyclists, but for drivers as well. Airline Highway in particular was cited as a corridor that has serious safety issues for all users. Improved roadways and better designed intersections were considered a high priority for many people.

Corridor Beautification

Roadway corridors serve as more than just conduits for traveling people, they are also areas of public space that we all interact with. For this reason, participants said that many corridors need beautification to provide a better environment for residents instead of being just a transportation corridor. Airline Highway, River Road and Belle Terre

Boulevard were the three corridors most often mentioned for beautification.

Railroad Crossings

There are two major railroad lines that pass through the parish. Both lines run parallel to the Mississippi River and many people live between the two lines. For these neighborhoods, there are only a few places to cross the railroad track, which creates a serious problem of access when trains are stopped on the tracks, blocking people's ability to cross the tracks. Many participants spoke about being stuck in their neighborhoods because a train on each railroad line was stopped, blocking all access points in and out of the area. Better management of these crossings and the stoppage of trains need to be addressed by the parish.

Lack of Public Transit

St. John parish simply has no reliable public transit, said many participants. This was cited as a problem because it means that people who cannot drive have very little ability to access jobs, stores, services, etc.

Parks and Open Spaces

Participants said simply that they want more parks and open spaces. And they want the parks that exist to be better maintained.

Environmental & Hazard Mitigation

Flooding and Drainage

Flooding is obviously a major concern in southeast Louisiana. Participants noted that localized flooding occurs in some neighborhoods after almost every heavy rainstorm. This is the end; better drainage is needed for many areas of the parish.

Hurricane Evacuation

St. John does not currently have any large-scale parish-assisted evacuation. If an evacuation order is made, residents are required to find their own way out of the parish. Evacuating is also a very expensive endeavor, especially for lower income residents. Participants also brought up the idea of having parish provided hurricane shelters so people can wait out a storm without going through the expense of having to leave the parish entirely.

Pollution and Hazardous Waste

Along the Mississippi River are a number of major industrial sites. These sites create a great deal of pollution that affects the quality of life for adjacent and needs to be addressed.

Community Image Survey

The Community Image Survey (CIS) was designed to introduce participants to visual land use plan concepts and to help determine visually what sort of community citizens of St. John want to live in. The CIS was administered at the four public meetings to 100 community members. Participants viewed 40 slides depicting various types of land uses and/or urban design examples. Participants rated each image on a sliding scale, with positive ten (+10) representing a strong favorable reaction and negative ten (-10) representing a strong unfavorable reaction.

Four images (slides 12, 16, 17, 18) received scores of +5 or greater, indicating a moderate to strong preference for the depicted land use. Each slide, however, depicted a differing land use and design aesthetic. Slide 12 showed a group of people canoeing on a lake in a natural setting; slide 16 showed a local farmers market; slide 17 showed large, single family residential housing on a wide street without sidewalks; and slide 18 showed a pedestrian friendly, urban corridor.



These images were the highest rated with scores above +5.

Half the slides (20) received scores between 1 and 5, meaning participants viewed them favorably but not strongly so. These slides depicted a wide range of land use types and urban design characteristics but the most common trait among the images was pedestrian friendliness with ten of the twenty slides showing a walking friendly environment.

Ten of the 40 slides received a score between -1 and +1, which shows that participants did not have any strong feelings for or against the images shown. These slides also varied greatly, but a common theme between them was their lack of pedestrian friendliness.

The last six slides (slides 14, 19, 20, 27, 35, 38) all received scores between -1 and -5, indicating a moderate disapproval for the images but not a strong one. Slide 14 shows an industrial plant with smoke stacks and chemical storage tanks. Slide 19 shows a major arterial road with three travel lanes full of traffic. Slide 20 shows a mobile home that is in partial disrepair. Slide 27 and 38 both show residential streets with little landscape. Slide 35 shows a series of two-story office buildings abutting a major arterial with parking in the front and little to no landscaping.



Slides with the lowest average scores.

Conclusion

None of the slides shown during the survey had a score lower than -5. This means that most people who took the survey didn't have a strong unfavorable reaction to any of the slides. Since the image on each slide shows multiple things, it is difficult to draw any conclusions from the score of any one slide. However, when all 40 slides are taken together, a clear pattern emerges. Slides that showed areas that were pedestrian friendly scored higher than areas that were not pedestrian friendly. This is in part because the pedestrian friendly areas also have well designed and maintained landscaping and street design while other areas did not. When looking at images of buildings and lots, the aesthetic quality of the property serves as a strong indicator of participant opinion. Areas that appeared well maintained were scored higher than areas that looked poorly maintained, even if both areas had similar land uses or densities.



-1.8



+5

Slides showing similar land use and density but differing design.

IV Land Use Element

The Land Use Element provides an overview of the existing land use patterns in St. John Parish; an analysis of the spatial distribution of land uses; recommended future land uses and map; and goals and policies to guide Parish land use decisions. Land use data was collected and organized using the American Planning Association's Land Based Classification Standards².

Existing Land Use

St. John Parish covers a total of 225,576 acres of land. Excluding the Mississippi River, the total acreage of land is about 212,910 acres. Much of this land is in its natural state – lakes, marshes, swamps, and forests. Human development is primarily restricted to the area south of Interstate 10 and north of Louisiana Highway 3127, along the banks of

Table 4.1: Existing Land Use in St. John Parish, 2012

LBCS Land Use Category	Acres	Percent of Total	Change in Acreage, 2003-2012
Residential	3998.35	8.2%	382.48
General Sales or Service	489.78	1.0%	60.94
Manufacturing and Wholesale Trade	3107.42	6.3%	527.49
Transportation, Communication, Information, and Utilities	1385.87	2.8%	178.13
Arts, Entertainment, and Recreation	664.73	1.4%	143.72
Education, Public Admin., Health Care, and Other Institutional	541.11	1.1%	12.02
Construction-Related Businesses	92.79	0.2%	44.80
Mining and Extraction	0.00	0.0%	0.00
Fishing, Hunting, Forestry, and Agriculture	16463.92	33.6%	-1055.70
Land in Natural State	22223.98	45.4%	-355.31
Total	48967.95	100.0%	-61.43

Note: Total change in acreage is negative because of land removed from the parcel layer for new roadway right-of-way in areas of new development.

the Mississippi River. This is a historical development pattern based on the higher elevation along the riverbanks. The current development also benefits from a buffer from hurricanes and high water provided by the surrounding wetlands.

² An explanation of the land use data methodology and a further explanation of APA's LBCS are included in Appendix A.

The land use survey area – between I-10 and LA-3127 – is comprised of 48,968 acres, of which 45.4% is still in a natural state. The largest area of human development is devoted to agricultural uses. Residential, commercial, industrial, and other built-up land uses cover 10,280 acres of S. John Parish. Table 1.1 shows the land use breakdown by LBCS category and the changes in acreage since 2003, when the last survey was conducted.

Residential land uses are the largest developed acreage; older neighborhoods and newly developed subdivisions combine to form almost 4,000 acres throughout the Parish. Manufacturing and wholesale trade is the other major land use, with several large industrial sites contributing much of the acreage. Several categories of public use all feature large acreages, as the airport, parks, and school campuses are large size contributors. Commercial uses account for only 490 acres of developed land, and are primarily grouped around major transportation corridors.

All of the developed land uses have had modest increases in acreage, with agricultural land accounting for most of the decrease. This pattern is also shown in the level of site development identified during the land use survey (Table 1.2). Developed sites with buildings account for only 15.9% of the survey area, but have shown the greatest increase in acreage.

Table 4.2: Existing Site Development in St. John Parish, 2012

LBCS Land Use Site Category	Acres	Percent of Total	Change in Acreage, 2003-2012
Site In Natural State	19969.24	40.8%	395.82
Developing Site	2199.71	4.5%	-573.51
Developed Site--Crops, Grazing, Forestry	16380.84	33.5%	-1268.47
Developed Site--No Buildings And No Structures	45.91	0.1%	-8.78
Developed Site--Non Building Structures	2047.80	4.2%	22.63
Developed Site--With Buildings	7804.56	15.9%	1456.28
Developed Site--With Parks	514.73	1.1%	23.34
Unclassifiable Site Development Character	5.17	0.0%	-109.11
Total	48967.95	100.0%	-61.81

Note: Total change in acreage is negative because of land removed from the property parcels for new roadway right-of-way in areas of new development.

Spatial Analysis of Existing Land Use

It is important to develop an understanding of the spatial patterns of the existing land use in order to provide the basis for evaluating the type and location future

development. Avoiding Inconsistent and/or incompatible land use patterns can improve quality of life and encourage strong economic development.

St. John's patterns of land use distribution are clearly defined or influenced by the geography of the Parish, most notably the Mississippi River and the marshes and swamps to the north and south. All of the major urban development is located on the East Bank between I-10 and the Mississippi River, and on the West Bank between the river and LA-3127. This is a historical development pattern based on the higher elevation of the land built up by the river. The major transportation corridors typically run parallel to the river. Opportunities for crossing the river for Parish residents include the Edgard-Reserve Ferry, the LA-3213 Bridge in St. James Parish, and the Interstate 310 bridge in St. Charles Parish.

East Bank Development

In the last 40 years, St. John Parish has seen significant increases in suburban development. The majority of this development occurred on the East Bank. Newer development also stretches further from the river, having easy access to Interstate 10. While mostly contiguous development stretches from the river northward, the remaining land is agricultural and natural in character. The location of future possible hurricane protection levees would have a major impact on these development patterns. Figure XX depicts land use on the East Bank of St. John Parish.

LaPlace, Reserve, and Garyville are the major areas of residential development on the East Bank. LaPlace features historic neighborhoods in the areas south of Airline Highway, with more modern suburban subdivisions to the north. Reserve and Garyville are more rural in character, clustered around historic small commercial centers. These neighborhoods have many older homes, but are often interspersed with mobile homes. Figure XX highlights the locations of mobile homes and trailers.

Commercial development has occurred along major transportation corridors and intersections. Airline Highway in LaPlace is the location of most major retailers for the entire Parish, including every large supermarket. The most recent commercial development has grown along Belle Terre Boulevard and US-51, attracted to easy access from exits along I-10. Commercial development is present sporadically along Airline Highway through Reserve and Garyville. Smaller stores and restaurants are dotted along LA-44 and West 5th Street in LaPlace, representing the historic commercial uses present in the Parish.

Industrial development represents the largest single-site land uses in St. John parish, stretching for several miles along the edge of the Mississippi River. Oil refining, chemicals, and agricultural processing all occur at massive scales at these sites. There

are other small-scale industrial uses in traditional commercial areas throughout the parish.

The historic development patterns in St. John Parish are representative of traditional rural Louisiana communities. These patterns still exist, but are less of a focus for the community, whether in new investment, new businesses, or maintenance and preservation. The visual character of new residential and commercial development patterns along the primary roadways exhibits a more suburban pattern with uniform low-density development. This suburbanization, along with other problems associated with automobile-oriented development, associates the Parish with the image of rapid urban sprawl.

West Bank Development

The West Bank of St. John Parish has the same characteristics as the rural parts of the East Bank, yet has not experienced the recent commercial and subdivision development. Wallace and Lucy join Edgard - the Parish seat - as the small communities that dot the banks of the river. At their center, these towns are only a few blocks long.

Residential development has occurred in small clusters along the river, sometimes stretching down single roads along historical farming tracts. There are also many historic rural farmhouses and plantations along LA-18. Commercial development is located in the same locations as the residential clusters, but is limited to a few small retail establishments. There are no major groceries, and no large retail stores, on the West Bank of St. John Parish.

Industrial uses are not present on the West Bank. Agriculture makes up the majority of the land area, and has almost filled the space between the river and LA-3127.

Looking regionally, West Bank residents have some access to commercial development and work at industrial sites in neighboring Parishes, but still at a distance. Access to these amenities is still more convenient on the East Bank of St. John Parish, by crossing the Grammercy Bridge or taking the Edgard-Reserve Ferry.

Changes in Land Use, 2003-2011

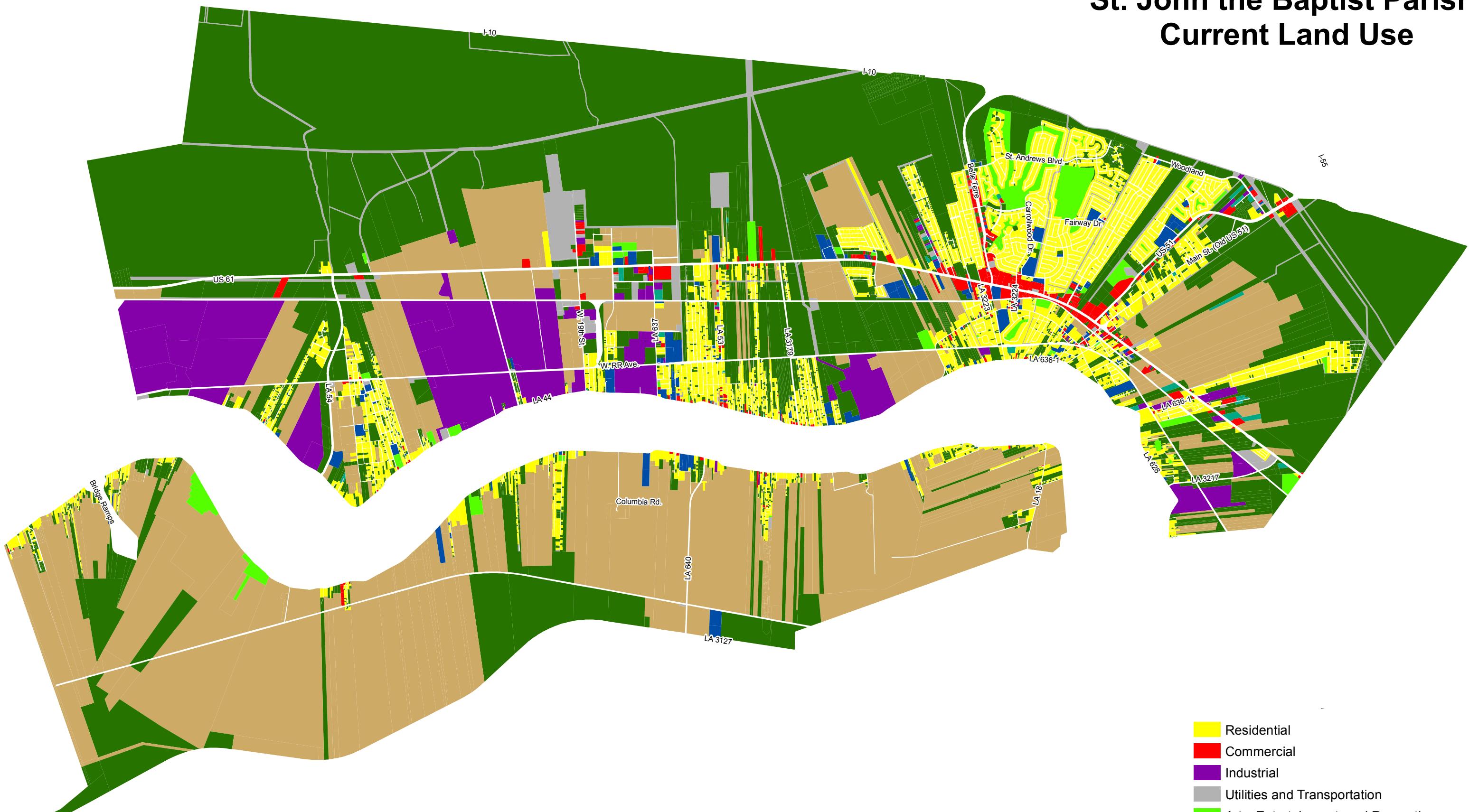
Between the last two land use surveys, St. John Parish saw an increase in the footprint of developed land with buildings. This increase was predominantly due to new subdivisions and large-scale expansion of several industrial sites.

Much of the residential growth occurred in LaPlace, filling in gaps in existing subdivisions. In some cases, the lots had been graded, and houses were built in the 8 years in between. This pattern of filling in gaps also occurred in other communities on both sides of the Mississippi; new houses and trailers were present on lots previously surveyed as vacant. New subdivisions were built predominantly in LaPlace, close to Interstate 10.

New commercial development occurred in a few locations along Airline Highway, including a cluster near the airport, and along Belle Terre Boulevard. The major industrial growth in the Parish occurred with the expansion of the Marathon refinery and a Valero assembly yard on the eastern boundary.

Despite the growth recorded in between the surveys, a great deal of undeveloped land is available for future growth. There are 2200 acres located throughout the Parish that was surveyed as a graded lot without any buildings. Considering that non-agricultural developed sites account for just over 10,000 acres, growth exceeding the available land is unexpected.

St. John the Baptist Parish Current Land Use



0 0.5 1 2 3 4 Miles

Future Land Use Issues

Hurricane Levee Alignment

The Army Corps of Engineers has proposed several alternatives for the alignment of a hurricane protection levee on the East Bank of St. John Parish. These alternatives range from a levee bordering current development, to a straight levee along Interstate 10. There is also discussion about how far north of the Interstate the levee should be built in LaPlace. If built, this levee would have a profound impact on land use and growth in St. John Parish.

Land inside of the hurricane protection levee will be available for development with reduced flood risk and therefore reduced costs of construction and insurance. The current development footprint skews towards the banks of the river, on the naturally high ground, but has stretched into lower lying areas, particularly in LaPlace. Some of these newer subdivisions have significant drainage issues, while others are built with elevated streets and houses. Both levee alignments would protect these areas, and undeveloped areas in between, from flooding due to strong winds or storm surge from Lake Pontchartrain.

The levee alignment along Interstate 10 opens up a large area of wetlands and natural areas to the pressures of development. This area, north of Airline Highway, currently has very few developed sites, other than the Airport and some surrounding businesses. This levee alignment will also shield the natural areas from water and sediment needed to keep them healthy. These wetlands currently act as a buffer for storm surge between Lake Pontchartrain and the communities along the river.

Fenceline Communities

There are several large industrial sites in St. John Parish that pose a threat to close proximity residential development due to air and water contamination. Many of these sites relocated residents when they were first built or have since expanded. New residential development should be restricted at unsafe distances, and new industrial development should meet strict standards when attempting to locate near existing communities.

Infill Development

Vacant lots, underdeveloped properties, and inappropriate uses are common throughout St. John Parish. This patchwork development pattern weakens communities, lowers property values, and increases travel distances. Redevelopment efforts should be focused in existing areas before seeking to expand into natural areas and agricultural land. Infill development also has the potential to create a sense of place.

Adding new buildings to a struggling town center can draw people in, creating new opportunities for development.

Commercial Corridors

Some major commercial corridors in St. John Parish feature unattractive buildings, landscaping, and signage that has a negative impact on attracting businesses. These development patterns in some cases have created nuisances for neighboring residents and unsafe pedestrian environments. Special considerations should be given to commercial areas in future land use regulations to create functional and attractive commercial areas.

Accessibility on the West Bank

The West Bank of St. John Parish is much less populated and more rural than the East Bank. Residents have greater distances and travel times to reach basic amenities, such as jobs, groceries, retail, and recreation. Many of these amenities only exist in neighboring Parishes or on the East Bank. Access can be costly or onerous, leading to hard decisions or sacrifices. In addition to keeping transportation available to West Bank residents, changes in land use can bring these amenities closer. New commercial uses, workplaces, and educational centers should be encouraged in locations accessible to West Bank residents.

Preserving Rural Character and Beautification

St. John Parish takes pride in rural character and connection to history. Communities and historical sites along the river are integral to the preservation of these elements. Land use development that is incongruous with these small towns and historic structures is unpleasant to residents. For development that has already occurred, beautification efforts should be encouraged to diminish their negative impacts. Additionally, the beautification of important corridors and along the river can help promote the charm of St. John Parish and increase quality of life for residents.

Future Land Use in St. John Parish

Based on an analysis of where the Parish stands related to existing and future development conditions; likely future population and the land required to accommodate that population; input from citizens, business leaders, elected officials and key parish departments; and areas within St. John Parish subject to adverse conditions from hazards; among other data, a future land use map was prepared.

This map lays out the future spatial relationship of land use for St. John Parish through the 2030-planning horizon.

Several key changes were made to the future land use map adopted in 2008. These include identifying specific locations for mobile home development; increasing the amount of land recommended for high-density development;

Table 4.3: Future Land Use in St. John Parish

Future Land Use	Acres	Percent of Total	Percent of Developed Land
Residential	7,362.58	13.0%	47.4%
High-Density Residential	75.15	0.2%	0.5%
Commercial Corridors	1,545.41	3.2%	10.0%
Neighborhood Commercial	128.36	0.3%	0.8%
Historic Downtown Mixed-Use	62.48	0.1%	0.4%
Mixed-Use Residential Commercial	279.36	0.6%	1.8%
Industrial	3,259.33	6.7%	21.0%
Mixed-Use Commercial Light Industrial	429.65	0.9%	2.8%
Parks and Recreation	657.84	1.3%	4.2%
Public, Educ., Rel., and Other Institutions	541.72	1.1%	3.5%
Utilities and Transportation	1,180.43	2.4%	7.6%
Undeveloped or Agriculture	33,445.64	68.3%	
Total	48,967.95	100.0%	
Source: UNO LBCS Survey			

incorporating more opportunities for mixed-use development throughout the Parish; and identifying areas that are vulnerable from impacts of future hazards including specifically residential areas located within the 100-year flood plain. Until the Parish receives federal hurricane protection these areas will continue to be the most vulnerable to storm surge or flooding impacts.

Several key recommendations for future land use also include increasing the footprint of the St. John Parish Airport; making additional land along the river available for use by the Port of South Louisiana; and recommending a mid-Parish Mississippi River Bridge Crossing.

Additionally, Table 4.3 above identifies the acreages and percent of development associated with the future land use in St. John Parish.

Future Land Use Categories for St. John Parish

The future land use categories outlined below are spatially represented on the Future Land Use Map. This map outlines both the future land uses, as well as any areas subject to special hazards such as flooding, storm surge, or impacts from non-natural disasters such as a petrochemical hazard.

Residential

Residential development in St. John Parish is predominantly single-family homes. That pattern is unlikely to change, and the future land use map shows many locations where additional land is allocated for new development. Additionally, St. John Parish also has a number of partially vacant subdivisions, and siting houses on each lot will be important in developing strong communities. The future land use nearly doubles the amount of residential land use in the Parish, which at current densities would more than handle the projected population growth.

High-Density Residential

Locations of existing multi-family housing continue to be designated as high-density. These include four public housing complexes, as well as several apartment and condominium developments in LaPlace. Future development of multi-family residential may occur in the mixed-use areas described below.

Commercial Corridors

The three main commercial corridors in St. John Parish are Airline Highway (US-61), Highway 51, and Belle Terre Blvd (LA-3188). These are areas where local and regional commercial development will continue to be focused. Of the three corridors, Airline Highway features the largest development sites and will likely attract the highest intensity commercial uses.

Neighborhood Commercial

Neighborhood commercial land uses are businesses that would not seem out of place next to a residence, either in size or impact. These exist as corner stores, restaurants, offices, and auto shops throughout the Parish. The most prominent neighborhood commercial corridors are the river roads on both banks, which are strengthened in the future land use.

Historic Downtown Mixed-Use

There are four communities in St. John Parish with significant historical main streets: LaPlace, Reserve, Edgard, and Garyville. These downtowns feature a mix of uses, including residential. New development in the area could be any number of uses, but must fit the character and design that already exists.

Mixed-Use Residential/Commercial

Citizen input identified the need for attractive multifamily development, primarily in the LaPlace area. Mixed-use new “town centers” have been a desirable development style in other places, where commercial uses are also included in a walkable planned community. Three possible locations were identified on the future land use map and are sited along major commercial corridors.

Industrial

There are several large industrial sites in St. John Parish reflecting a range of uses including petrochemical, port activities, and other light manufacturing uses among others. They are typically sited to be contiguous and far from residential development. These properties should include undeveloped buffers where feasible on the future land use map.

Mixed-Use Commercial/Light Industrial

Beyond the large site industrial land uses, there are several other locations where lighter industrial uses, warehousing, and other commercial activities are common. These are mostly clustered in the Reserve area and near the airport. These uses are to be kept separate from residential uses, but don’t require the same kinds of buffers as heavy industrial.

Parks and Recreation

Public, Educational, Religious, and Other Institutions

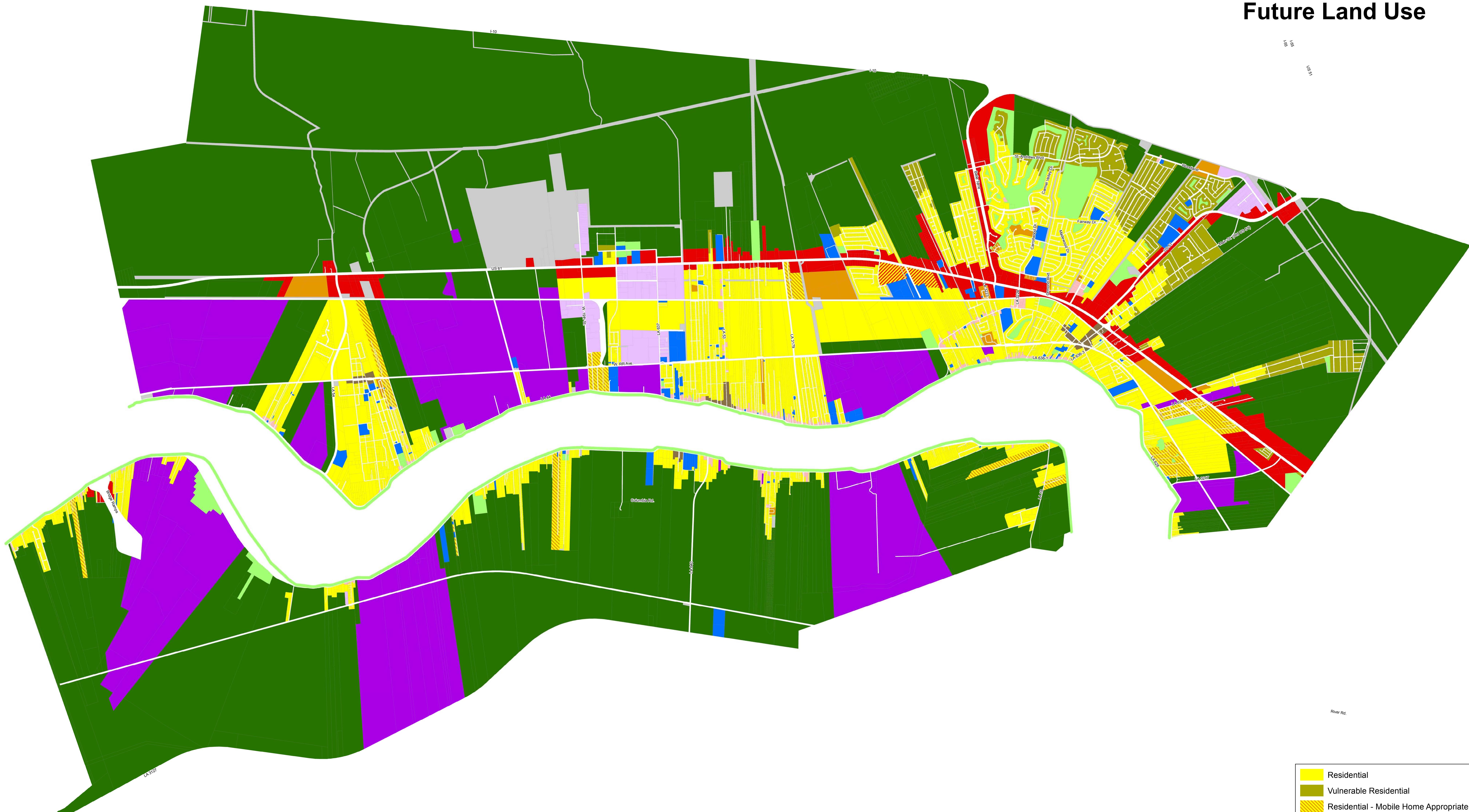
Utilities and Transportation

These three categories are based on the existing land use categories and development.

Undeveloped or Agriculture

No distinction was made because agriculture and undeveloped land are interspersed in the rural areas of the parish. This designation was used in most of the 100-year flood plain.

St. John the Baptist Parish Future Land Use



- Residential
- Vulnerable Residential
- Residential - Mobile Home Appropriate
- High-Density Residential
- Mixed-Use Residential Commercial
- Commercial Corridors
- Neighborhood Commercial
- Historic Downtown Mixed-Use
- Mixed-Use Commercial Light Industrial
- Industrial
- Public, Educ., Rel., and Other Institutions
- Parks and Recreation
- Utilities and Transportation
- Undeveloped or Agriculture



0 0.275 0.55

1.1 1.65

2.2

Land Use Vision, Goals, and Policies

St. John the Baptist Vision Statement

The vision statement for St. John the Baptist Parish encompasses the resident's vision of the ideal St. John Parish in 20 years. This vision statement is based on input generated from public meetings held throughout the Parish and is the framework that will guide the development of the larger St. John Parish Comprehensive Plan. The vision statement for St. John the Baptist Parish is:

St. John the Baptist Parish will be a modern, well-planned and resilient community, that respects its rural and cultural heritage while providing a high quality of life for all residents by protecting existing neighborhoods and planning for high quality new ones; promoting economic development opportunities; protecting its historic properties and resources; and protecting and conserving the natural environment and natural resources of St. John the Baptist Parish.

Land Use Goals, Objectives and Policy Framework

The land use and growth management policy framework presented below is supportive of achieving the vision of the residents and is based on the underlying philosophy of encouraging land development patterns that are compatible with existing development, that are supportive of cost efficient extension and delivery of public infrastructure and services, that protect the natural environment, and that provide for both urban and rural lifestyles. In some cases, explanation is provided to further clarify the intent of the policy.

Goal 1: Maintain St. John Parish's High Quality of Life

Objective: Encourage smart and sustainable growth and development in St. John the Baptist Parish on the East and Westbanks that does not diminish the quality and character of the natural environment, promotes resilience, and that can be readily supported or served by public resources and services.

Policy: Future growth patterns should be compatible with the available level of infrastructure and other public services.

Policy: Future development must protect the natural environment and preserve the rural landscape.

Policy: All development should be designed to minimize negative impacts on the quality of the natural environment.

Policy: Discourage development and growth in environmentally sensitive and environmentally significant areas of the Parish.

Policy: Protect and preserve rural areas from incompatible urban development.

Policy: Promote intergovernmental cooperation and coordination in decision-making on regional land development and growth issues.

Policy: Begin development of additional elements of the St. John the Baptist Comprehensive Plan including Housing, Economic Development, Community Facilities and Services, Transportation, and Parks and Recreation.

Policy: Consider developing sub area plans for the communities of Laplace, Garyville, and Reserve in St. John Parish.

GOAL2: Promote Quality Neighborhoods in St. John Parish

Objective: Protect the viability of existing neighborhoods and residential areas.

The Parish's existing housing stock and neighborhoods represent a substantial investment of both public and private sector resources. Maintaining the integrity of existing residential areas is important to ensuring the availability of an adequate supply of housing for residents of St. John Parish and to promoting continued private sector economic investment in the Parish.

Policy: Ensure that incompatible non-residential uses are not located in or adjacent to residential areas in order to maintain the viability of existing residential neighborhoods.

Policy: Where land use conflicts between residential development and non-residential uses are unavoidable, minimize conflicts through buffering/screening techniques and appropriate traffic controls that limit non-residential traffic movement through residential areas.

Use buffering techniques to minimize potential negative impacts of incompatible land uses. Buffering techniques include fencing or other physical barriers, natural vegetation, or a gradual change in land use intensity. For example, duplex or lower density multi-family development can serve as a land use buffer between commercial development and lower density single-family residential development. Using natural elements, such as trees, berms, open space, and /or landscaping in combination with structural screening, is an increasingly popular method of buffering. Advantages of natural buffers include:

- Reduction of noise intensity
- Reduction of air pollution and dust
- Reduction of buffer maintenance and replacement costs
- Creation of a more aesthetically pleasing environment
- Shielding from view nuisances or differing land uses

The degree or type of buffering most suitable is dependent on the degree of incompatibility between adjacent land uses, the size of the proposed development, and the intensity of the proposed development.

Policy: Identify appropriate areas for location for new mobile home sites.

Clearly, in the past the siting of mobile homes has been allowed in areas not zoned for such uses. Many sites permeate single-family areas. Where appropriate, additional mobile home sites may be permitted, but future mobile home sites should not be allowed to encroach into single-family areas where there is no previous precedent of mobile home sites.

Objective: Provide appropriate locations for residential development.

Policy: Residential development should not be encouraged in areas with severe environmental constraints.

In order to protect both the natural environment and residential property, residential development should be discouraged from locating in flood prone areas or other areas susceptible to environmental hazards. Development in the flood zone should be elevated above the 100-year flood level or otherwise designed to protect permanent structures from flood damage.

Policy: Encourage new residential subdivision development to locate in areas already served by public infrastructure or in areas where infrastructure can readily be extended.

If large scale residential development is proposed in areas which cannot be readily served by existing or programmed water, sanitary sewer and road infrastructure, the development should either not be permitted or the development should be required to bear a portion of the cost of extension or construction of such services.

Policy: The location of residential development should bear a reasonable relationship to the capacity of the existing and planned road network.

To ensure that residential development is compatible with the existing and planned major street network and to minimize potential traffic congestion, residential developments should be located and designed to take access from streets that have adequate capacity to handle the traffic that will be generated by the development.

Multi-family residential uses should be located adjacent to collector or arterial streets. Moderate density residential development, such as duplex housing, may be located on local residential streets. However, any large-scale development that generates substantial traffic flow should take access from either collector or arterial streets.

Policy: New residential infill Housing should be encouraged in existing residential areas.

As growth continues one of the central challenges to the Parish and developers alike is the cost-efficient extension of public water and sewer services to new developments. The Parish should promote the efficient use of existing public facilities and orderly, cost-efficient extension of infrastructure and public services by encouraging housing infill development in areas that are already served or that can readily be served by public infrastructure.

Objective 3: Promote subdivision design that creates desirable living areas and that encourages cost efficient housing construction.

Policy: Promote the construction of cost-efficient housing by encouraging developers to use subdivision design techniques (lot layout) that minimize street, water, sewer and other utility development costs.

Policy: Encourage subdivision design that enhances a sense of neighborhood identity and that enables pedestrian access through the neighborhood and to public gathering areas where possible.

Where possible, encourage subdivision development that incorporates design elements for pedestrian movement and shared usable open space areas. For example, a subdivision layout based on interconnected streets and sidewalks or other walkways allows for easier pedestrian movement and communication with nearby neighbors.

Goal 3: Encourage Commercial Land Uses That Contribute to the Job Base in St. John Parish While Protecting the Character of the Parish.

Objective: Promote the development of well designed commercial and office uses that will assure a wide range of goods and services for the resident population and that are compatible with the natural environment and adjacent land uses.

Policy: Provide suitable locations for various intensities of commercial development.

Commercial uses should be located in areas that are well served by the transportation network and should be designed to have minimal negative impact on adjacent, lower intensity land uses. Commercial areas should also have minimal negative impact on the natural environment.

Policy: Intensive commercial development should be adequately designed and buffered from adjacent residential areas to minimize negative impacts of lights, traffic, and noise on residential properties.

Policy: Ensure adequate levels of utilities and public infrastructure/services serve commercial activities in St. John Parish.

To promote the cost efficient delivery of infrastructure, commercial development should be encouraged to locate in areas where infrastructure is already available or can readily be extended. Accessibility to other public services, such as fire protection and law enforcement services, should also be considered in locating commercial development.

Policy: Commercial development should be designed to ensure adequate off-street parking and loading facilities and storm water management.

Policy: Encourage commercial development as an integrated use in a planned unit or mixed-use development.

Such planned developments should be encouraged to enable the development to be served by public water and sewer service. Including neighborhood commercial activities as an integral element of a planned residential development will help to reduce the length and number of vehicle trips for convenience purchases.

Objective 2: Ensure sufficient locations for well-designed office uses that are compatible with surrounding development and the natural environment.

Policy: Office use areas should take access from major roads (arterials and collectors) that have adequate capacity.

Policy: Office uses should be located so as not to contribute to congestion at major road intersections and to minimize the flow of traffic through adjacent residential areas.

Policy: Office uses should be encouraged to locate in planned office parks or in cluster developments that utilize shared parking and access points.

Policy: Office uses should be encouraged to use effective design and landscaping to buffer adjoining neighborhoods from lights, signs, noise or other activities that may conflict with adjoining residential areas.

GOAL 4: Provide industrial areas that create opportunity for economic development and job creation and that are compatible with the natural environment.

Objective: Provide for well-designed locations for industrial uses that are served by appropriate infrastructure.

Policy: Industrial uses should locate in areas with adequate transportation access.

Industrial activity should be directly accessible to one or more transportation facilities, such as arterial roads, highways, airports, or railroads. One or more major roads that have adequate capacity to carry freight traffic should serve industrial sites.

Policy: Encourage industrial uses to locate in areas where water and sewer infrastructure are available or in areas where necessary infrastructure can be provided by the developer.

All industrial land uses should be served by adequate water and sewer infrastructure. Industrial uses should be encouraged to locate in appropriate locations where such services are readily available and there will be no or minimal impact on surrounding uses.

Policy: Encourage industrial uses to locate in industrial parks or in clustered locations with similar type uses. The location of industrial activity at sites that function as business parks or research parks should also be encouraged.

Most modern day industry can best be served by locating in industrial or business parks that are designed to accommodate the specific needs of industrial production and the transportation of materials and finished products. Industrial parks typically provide appropriate utilities infrastructure and an internal

traffic circulation system that can meet the needs of larger vehicles. Industrial parks also provide siting opportunities for the location of office, commercial, and service activities that support industrial operations.

Policy: Industrial development locations should be compatible with the natural environment.

Industrial activity should not locate in flood prone areas or in other environmentally sensitive areas. Industries that are polluting or that pose a threat to the quality of the natural environment should not be permitted. Industries that handle materials such as corrosives, gases, flammable liquids and toxins, and those that create dust, smoke, odor or noise should not locate near residential areas.

Policy: Screen or buffer industrial uses from nearby residential areas. The intensity of buffering required should be dependent on the type and intensity of industrial activity.

Policy: Update the Economic Development Element to the St. John Parish Comprehensive Land Use Plan to account for Post Isaac impacts and resilience.

GOAL5: Provide for a diverse and high quality system of parks, recreation facilities and public open spaces that will meet the recreation and leisure needs of the resident and that will protect and enhance the environmental character of St. John Parish.

Objective: Foster intergovernmental cooperation in providing for shared use recreational facilities.

Policy: Update the Parks, Recreation and Open Space element to the St. John Parish Comprehensive Plan post-Isaac.

Policy: Encourage school district to cooperatively develop and share recreation facilities.

Policy: Encourage the development of multi-use recreation facilities that will provide recreation and leisure opportunities for various segments of the population.

As the population continues to grow, the Parish should encourage the development of facilities that can be used for a variety of recreation and leisure activities by different age groups. A recreation facility designed for multi-generational use would enable the development, scheduling and use of the facility by different age groups and different time periods. The use of such a

facility could be further expanded to include delivery of certain social or health services at scheduled times (ie. blood pressure checks) for different age groups. A multi-use, multi-generational facility located in a more rural area of the Parish would be an asset to the rural population where recreation opportunities are limited and where access to certain public services is not readily available.

Objective: Promote the provision of usable open space and trails development through the land development process.

Policy: Encourage developers to incorporate open space and trails within new residential developments.

Cluster development can serve as a financial incentive option to encourage developers to provide for walking trails or other recreation amenities within their developments. For example, by allowing the clustering of an approved number of houses on smaller lots, the developer can realize savings in the costs of infrastructure development. In exchange for cluster development allowed on a portion of the land tract, the balance of the land tract would be preserved in some form of permanent open space or usable recreation facility that can be used by the residents. This development option can help to increase the desirability of the neighborhood, as a place to live while helping to meet the recreation needs of the residents.

Policy: If subdivision developments are approved based on the cluster development concept with reduced lot sizes, require that a portion of the land preserved or set aside for open space be "usable" space.

The intent of encouraging the use of the cluster development concept is to provide a benefit to both the development community and the larger community as well. Land that is proposed to be permanent open space or some form of recreation facility in a cluster development should be land that could otherwise be used. Land that would not otherwise be developable because of severe environmental hazards or other conditions should not be credited as usable, permanent open space in exchange for clustered housing on reduced lot sizes.

Policy: Use flood prone areas for open space and passive recreation activities in order to minimize flood damage to permanent structures.

For example, flood prone areas can serve as trail ways or other minimal impact open space uses. However, permanent recreation facilities that would be damaged in a flood event should not be located in flood plains. Sinkholes or

other natural features that pose environmental hazards should not be considered "usable" for recreation as part of a cluster housing development.

Policy: Support development of a Parish wide multi use recreational corridor.

Activities such as walking, hiking and bicycling have become increasingly popular forms of recreation for all age groups in St. John Parish. The preservation of open space corridors and development of a trails system is a long-range activity that requires both public and private sector involvement in the planning and the land development process.

Policy: Through the land subdivision process, encourage subdivision design and open space preservation that creates continuous open space linkages or corridors within the subdivision.

Creating a more continuous open space corridor that may include trails can enhance recreation opportunities can also contribute to an increase in overall public health. The feasibility of a trails system in appropriate areas of St. John Parish can be further enhanced if trails developed as part of a subdivision development are linked to a larger system of trails or walkways that may be developed through public resources.

V Resilience Element

Community Resilience:

The ability of communities to anticipate, withstand, recover, adapt, and flourish in the face of major change from natural or man-made disasters.

sewer treatment, drainage and power, before and after a disaster. Less tangible aspects of resilience lie within the capacity of a community's willingness and ability to recover from a disaster. This includes restoring utilities and services but can also include health care, restoring the economy and providing jobs, and other community and quality of life functions.

BUILDING RESILIENCE IN ST. JOHN PARISH - A Comprehensive Approach

The many forms of disaster – from hurricanes to global economic chaos, pandemic disease, terrorist acts and industrial accidents -- make the chance of its occurrence less a potential than a certainty. A resilient community is proactive rather than reactive in dealing with the likelihood of disasters.

Resilient communities are those that have reduced their vulnerability to disaster through such mechanisms as better building codes to limit damage from hurricanes, earthquakes or fires and the thoughtful use of functional levees and pumps to reduce flooding. Resilient communities understand the importance of education on disaster preparedness. Resilient communities understand how to minimize the impacts of natural disasters by taking strategic advantage of the available built-in environmental defenses within their community and how to create new ones. A

The St. John the Baptist One Parish One Future Comprehensive Resilience Plan is about community “resilience.” Community resilience is a multi-faceted concept. It is first about being prepared and aware of potential hazards in the community. It is also about ensuring the availability of appropriate infrastructure, including adequate water,

A “comprehensive” view of resilience:

“During recent open houses and community meetings, as well as completion of an online survey, hundreds of people cast ballots to help St. John’s volunteer Citizens Advisory Committee (CAC) prioritize projects for the rebuilding effort.

“Among the top projects identified by voters are improving mental health services, initiating “safe neighborhood” programs, developing programs for parish youth, and supporting efforts to build permanent levees. Other priorities are improving the parish’s drainage capacity, attracting an outlet mall to the parish and developing a Lake Pontchartrain park. In all, voters chose 25 priority projects from a total of 51 potential projects.”

*From the St. John Parish website:
<http://www.sjbparish.com/recovery-residents-general.php?id=1045>*

TOOLS FOR DISASTER RESILIENCE

- *Comprehensive Planning*
- *Zoning & Subdivision Regulations*
- *Building Codes*
- *Hardening of infrastructure.*
- *Limiting Development in Hazardous Areas*
- *Public Awareness*
- *Mitigation*
- *Economic Development*

resilient community is also one in which social and community networks are strong and built with contingencies for disaster in mind.

Communities around the world are increasingly realizing the importance of hazard mitigation and preparedness. But being prepared for the aftermath of disaster is equally as essential. *One Parish, One Future* Comprehensive Resilience Plan incorporates resilience across all aspects of the planning process.

According to the University of New Orleans Center for Hazards Assessment, Response & Technology (CHART): “Resilience requires a multi-pronged approach that includes a mix of structural and non-structural mitigation measures. Reliance on a single line of defense is unwise. Land use and development decisions can exacerbate the consequences over time and therefore increase risk.” CHART also offers two basic mitigation / resilience strategies – structural and non-structural.

This implies that there is a de facto ‘resilience’ component to the preparation of comprehensive

plans. Up till now it has been common for communities to assign the preparation of hazard mitigation plans to emergency managers with at best a modicum of involvement by planners. The One Parish One Future Comprehensive Resilience Plan changes that by incorporating best practices for developing resilient communities directly into the major policy document guiding development in St. John Parish.

Embedding resilience and hazard mitigation goals and policies within the comprehensive plan for physical development is the most effective way to guarantee both visibility for those goals and the results desired. In addition, the Resilience element should reference other elements of the comprehensive plan that are clearly implicated in specific resilience goals, and those should link back to the hazards element. Land Use, Housing, Parks, Recreation, and Open Space, Economic Development, Historic Preservation, and Environment are all elements of the plan with potential linkages to hazard mitigation and resilience goals and policies that guide the Parish’s physical development.

The Planning Process

The planning process for the Resilience element was extensive and included the following: many public and stakeholder meetings both before and after Hurricane Isaac.

- Review of public input
- A discussion of the relationship of the Resilience Element to the other elements in the Comprehensive Resilience Plan.
- A “Safe Growth Audit” of existing plans and relevant development management regulations in St. John Parish.
- A discussion of the *National Disaster Recovery Framework* planning process, which began after Hurricane Isaac (August 2012).
- Development of Goals and Policies that support resilience within the comprehensive plan.
- Revision of the Parish’s Zoning and Subdivision regulations to ensure they support resilient physical development as outlined in the One Parish One Future Comprehensive Resilience Plan for St. John Parish³

Resilience Element - Relationship to Other Elements of the Comprehensive Plan

The *One Parish, One Future Comprehensive Resilience Plan* incorporates the resilience theme by identifying issues and opportunities throughout the other elements of the plan. These elements include an updated Future Land Use Element, Housing, Hazard Mitigation, Environmental, and Historic Preservation Previous elements adopted by the Parish include the current Future Land Use Plan, a Parks, Recreation and Open Space Element, an Economic Development Element, and an Implementation Element. Each of the new elements in the Plan discusses resilience and how it relates to the issues, goals, and policies within that element.

St. John Parish Safe Growth Audit

One means of determining where St. John Parish stands with regard to identifying and mitigating against potential hazards was through the use of a “safe growth audit.” Safe growth is a simple and almost self-explanatory concept. Safe Growth Audits should identify those issues related to resilience within a community’s development management regulations.

In general, a community who promotes resilience through safe growth will⁴:

³ Funding for revising the Parish’s Zoning and Subdivision Regulations was provided through a separate grant from the Louisiana OCD-DRU Comprehensive Resilience Program. The code revisions will be completed following acceptance of a draft of the comprehensive plan.

⁴ American Planning Association, Zoning Practice: Practice Safe Growth Audits - issue number 10, October 2009

- Create a safe growth vision
- Guide growth away from high-risk locations.
- Locate critical facilities outside high-risk zones.
- Preserve protective ecosystems.
- Retrofit buildings and facilities at risk in redeveloping areas
- Develop knowledgeable community leaders and networks.
- Monitor and update safe growth programs and plans

The Planning team and Parish officials reviewed existing documents, plans, policies and other resources to determine a baseline for future safe growth decision making.

Existing Conditions

Even if the term “resilience” has not historically been widely used by Parish officials, the concepts underlying the term have long been important to the citizens and officials of St. John Parish. This is due in large part to the Parish’s familiarity with hurricanes, flooding, tornadoes and other natural hazards and its proximity to industrial and petro-chemical plants and the nuclear power plant in adjoining St. Charles Parish.

In 1990, St. John Parish opened its Emergency Operations Center (EOC), which houses the parish's Department of Public Safety, Office of Homeland Security and Emergency Preparedness, Office of Fire and Rescue Service, and E 9-1-1 Communications Center. The EOC is staffed with three full-time employees and numerous trained and active volunteers. All emergency preparedness, response, recovery, and mitigation activities are coordinated through this facility. State of the art technological systems are used. Computers, equipment, emergency plans are constantly being reviewed and upgraded.

A comprehensive, all-hazard emergency operations plan has been developed by St. John Parish and is continually reviewed and updated. The Plan was developed in accordance with FEMA, National Response Team, DOT, Nuclear Regulatory Commission, LA Emergency Assistance and Disaster Act 2003, and local ordinances. The Parish works in conjunction with each industrial facility located in the Parish to assure that site-specific plans are coordinated with the Parish’s overall plan. (Source: http://sjbparish.com/emergency_index.php)

1. Existing Plans and Programs

- a. Future Land Use Plan – “One Parish, One Future” is St. John Parish’s first comprehensive plan. In 2008, the Parish adopted the precursor to this

comprehensive plan / future land use plan. The 2008 plan had several elements.

- i. Land Use - The Future Land Use map did not identify natural hazard areas or flood plains. This lack of spatial identification makes the delineation of “flood prone areas” more difficult. Instead, the plan depends on the future alignment of hurricane protection levees whose construction is not guaranteed to determine boundaries for urban growth.

Development within natural hazard areas is explicitly discouraged in policy 5.2.3 of the 2008 “Land Use Policy Framework.” This “One Parish, One Future - St. John the Baptist Parish Comprehensive Plan” expands on those recommendations.

- ii. Parks, Recreation and Open Space Element – Though resilience issues are not addressed directly by this element, recreation and open space facilities offer numerous benefits to a resilient community. Recreation facilities and programs add to the community’s quality of life, provide drainage and hydrological benefits to the area, and play a big role in the economic base of the Parish.
- iii. Economic Development Element - Hazard areas are mentioned in three places in this document. The first is in regards to the designation of sites for industrial use. The recommendation is made to designate sites for industrial use that are “free of major environmental constraints such as... floodplains... and wetlands” (*Econ Dev Plan*, p. 50). Secondly, the plan encourages business interests to engage in infill and “redevelopment of underutilized commercial sites” (*Econ Dev Plan*, p. 51). This is important because it allows for development on already developed land and can help ease development pressures in hazard areas.

The final and most important recommendation is to “create and fund a publically owned and operated wetland mitigation bank to provide a convenient and efficient mechanism to convert low-value wetlands that impinge upon the development of industrial and commercial properties” (*Econ Dev Plan*, p. 55).

- b. Hazard Mitigation Plan (HMP) - The Parish’s original HMP was funded by a FEMA planning grant from in early 2002. The plan was finalized in 2006. Subsequently, St. John the Baptist Parish was made aware of a Planning Grant

to update the existing HMP using FEMA funds from the Hazard Mitigation Grant Program (HMGP) fund created after hurricanes Katrina and Rita. The Parish applied for a Planning Grant and was awarded the grant in November 2009. With the assistance of a consulting firm, the Hazard Mitigation Plan was completed in December 2010.

The *HMP Update – 2010* closely follows the format of FEMA’s “DMA 2000 Local Mitigation Plan Criteria.” These criteria are required to be met in order for FEMA to approve the plan, which it did in 2010. This format is essentially as follows:

- Parish Profile Prerequisites
- Planning Process
- Risk Assessment
- Mitigation Strategy
- Plan Maintenance Procedures
- Action Plan

That “Hazard Mitigation Plan Update” is an important source for “*One Parish, One Future* - The St. John the Baptist Comprehensive Plan.” It clearly identifies the potential natural hazards in St. John the Baptist Parish and has a clear “action plan” that Parish officials are obliged to follow, having approved the *HMP Update* is 2010. “*One Parish, One Future*” builds on that HMP in several ways that are critical for a truly resilient community:

- Manmade or industrial hazards are not addressed in the HMP Update. With the many industrial and petro-chemical sites dotting the Mississippi River in the River Parishes, and the close proximity of Waterford 3 nuclear power plant in Taft (approximately 5 miles from LaPlace), it is logical that these sites must be considered as potential hazards as well.
 - As with most Hazard Mitigation Plans, its focus is primarily identification of hazards and general mitigation strategies. “*One Parish, One Future*” is more specific in ways to mitigate hazards for a post-event recovery.
- c. Community Rating System – St. John Parish is an active participant in FEMA’s Community Rating System (CRS) program. The CRS is a voluntary incentive program under the National Flood Insurance Program (NFIP) that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS:

- i. Reduce flood damage to insurable property;
- ii. Strengthen and support the insurance aspects of the NFIP, and
- iii. Encourage a comprehensive approach to floodplain management.

St. John Parish's Planning Department has been administering this program for several years and has been documenting the many activities required in this program. Not least among these activities is community outreach. Educating the public is a vital task at all levels of community resilience and the many events, programs, and activities in which the Parish participates helps make St. John more resilient

2. *Existing Regulations* – The “Safe Growth Audit” identified strong points and challenges within the parish’s existing regulatory framework. The most obvious deficiency has been the lack of a master or comprehensive plan guiding development
 - a. Zoning – The existing *St. John the Baptist Parish Zoning Ordinance* was adopted in 1986. In the absence of a comprehensive plan and very little policy guidance otherwise, zoning in St. John has not been a very effective implementation tool. The adoption of *One Parish, One Future* will provide much-needed guidance to incorporate resilience into parish development regulations.
 - b. Subdivision Regulations – the Parish “Sub Regs” have a little more substance than the zoning regulations where resilience is concerned. Section 111-225 of the subdivision regulations prevents development in areas deemed to be unsuitable because of potential flooding. The subdivision regulations also mandate that design of structures and properties take into account the natural features of the land in order to reduce requirements for infrastructure and to maintain flow within natural waterways. These are important resilience factors that can be built upon as the Sub Regs are revised.
 - c. Floodplain Regulations - Subpart B, Land Development Regulations of the parish code of ordinances contains Chapter 107, Floodplain Regulations, which establishes many of the rules and regulations not defined in other sections of the code.

The ordinance defines special flood hazards areas as areas “identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, ‘The Flood Insurance Study for St. John the Baptist Parish,’ dated November 4, 2010, with accompanying flood insurance rate maps

(FIRM) dated November 4, 2010 and any revisions ... hereby adopted by reference and declared to be a part of this chapter." (Sec. 107-7)

Section 107-5, "Methods of Reducing Flood Losses" of the Floodplain Regulations is the only place within the Code of Ordinances in which such measures are explicitly mentioned. The section lays out the ability of the Parish, through the Flood Plain Administrator – the Department of Planning and Zoning, to:

- Prohibit uses dangerous to health, safety or property or that cause excessive increases in flood heights;
- Require uses vulnerable to floods to be protected against flood damage;
- Control the alteration of natural floodplains, stream channels and natural protective barriers which are "involved in the accommodation of floodwaters;"
- Control filling, grading and dredging and other development that may increase flood damage;
- Prevent and regulate the construction of flood barriers that unnaturally divert floodwaters or which may increase flood hazards on other lands.

All of these methods are impressive, and can lead to effective safe growth measures. However, due to a lack of definitions for many issues stated above, they are often left to the interpretation of Parish officials. For example, in part one, the statement that uses that "cause excessive increases in flood heights" is rather open-ended. What constitutes an "excessive increase" and who determines it?

It is only with regard to flood ways that the regulation is clearly defined. These are areas of extreme hazard in which development is prohibited unless "it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge." (Sec. 107-59) This provides the clearest set of regulations for development and allows an analysis to be challenged on its scientific merit instead of simply the interpretation of a Parish official.

3. Public Facilities and Infrastructure

- a. *Storm Surge Risk Reduction* – “Levee” is possibly the most uttered word in St. John Parish since Hurricane Isaac hit in August 2012. It was far and away the top vote getter of all of the issues discussed during the National Disaster Recovery Framework meetings and Open Houses. Parish officials have been discussing the need for a hurricane protection levee with the U.S. Army Corps of Engineers (USACE) for decades with little headway. Hurricane Isaac has now pushed that discussion to the forefront but as of the date of this Plan, no final decision has been made.
- b. *Drinking Water* – No community can be considered resilient – cannot survive; much less thrive, without safe and dependable drinking water. With or without a disaster or hurricane, the LaPlace area has historically been highly vulnerable to failures of the water delivery system from the well at Ruddock. The rest of St. John Parish receives its drinking water from the Mississippi River. Though treatment is required, the river is a reliable source of almost limitless water.
- c. *Sewer Treatment* – Likewise, reliable sewer service is a necessity for any community. Within sanitary conditions in place, a community becomes vulnerable to disease and unlivable conditions in a very short period of time.

Community Resilience Assets

- St. John the Baptist Parish has an adopted *Hazard Mitigation Plan*, updated and adopted in December 2010.
- Administration framework in place for resilience in Parish government
 - St. John Parish Department of Public Safety
 - St. John Parish Emergency Operations
 - Department of Planning and Zoning
 - Law Enforcement / Sheriff's Office
 - Fire Departments (volunteer)
 - Economic Development Department
- Transportation – located on two Interstate Highways, Highway 61 (Airline Hwy.), and railroads, Mississippi River.

- Parish community outreach activities, including those done as part of the Community Rating System program, help educate and inform the public on emergency preparedness and hazard mitigation activities and programs.
- Public Access Television
- Intergovernmental communications with neighboring parishes and municipalities and the State of Louisiana appear open.
- Medical Services – There is one hospital in the Parish with a total of 106 beds, with nearly 200 affiliated physicians. A nursing home with a total of 148 beds also serves the community. Acadian Ambulance Service is available in the Parish.

Comprehensive Planning

“The comprehensive plan is the one document in which a community makes clear its overall priorities and goals for the future. It is entirely natural to focus on the positive in such a document, but it is also clear that the community needs to face its challenges squarely to make its goals realistic. It is not realistic to ignore natural hazards and the need to mitigate their potential impact. Natural disasters can torpedo otherwise viable community goals faster than almost any other event.”

Source:

<http://www.planning.org/nationalcenters/hazards/comprehensiveplans.htm>

Community Resilience Deficiencies

- Vulnerability to storm surge from Lake Pontchartrain, as demonstrated by Hurricane Isaac and from wind damage as evidenced by damages from numerous storms and tornados.
- Potable water supply in LaPlace is vulnerable.
- Neither the Parish’s *Hazard Mitigation Plan* nor its 2010 Update addresses other types of hazards, such as chemical and radiation emergencies, or other man-made emergencies⁵.
- Existing Parish development regulations need updating and revision to address resilience and hazard mitigation. Some of those revisions are within the scope of work for the next phase of the St. John Resilience Project.



⁵ While facilities are required to have their own evacuation plans, it is desirable that these plans be incorporated into the overall Parish Hazard Mitigation Plan.

- The Parish has a significant at-risk population with minimal transportation or evacuation services available within the Parish if a mandatory evacuation is warranted in an emergency or hurricane.
- The St. John Parish Department of Public Safety and the Parish's Hazard Mitigation Plan cite the need for an emergency early warning (siren) system
- Housing Issues related to development within the 100-year flood plain
- Transportation
 - Roadways – evacuation routes limited
 - Lack of Public Transit
 - Lack of capacity to transport at risk populations to the single pick up point in St. John Parish. Currently those needing evacuation must find their own transportation from both East and Westbank communities to the pick up point.



Hurricane Isaac – August 2012

The importance of resilience became all too apparent in August 2012, when Hurricane Isaac lumbered into the state as a Category 1 storm. For more than two days, the slow-moving storm hammered southeast Louisiana. Its unrelenting east winds produced a surge from Lake Pontchartrain that caused unprecedented flooding in LaPlace and other parts of St. John Parish.

Laplace was especially hard hit but parts of Reserve were flooded as well. More than 7,000 homes were flooded and many more received wind damage. The parish's worst hit sectors include housing (48% of homes affected), businesses (more than 400 sustaining physical or financial losses), many historic sites, and community infrastructure such as municipal water and sanitary systems

(Source: FEMA - *St. John the Baptist Parish, Louisiana Community Recovery Strategy*, May 2013)

National Disaster Recovery Framework - FEMA

Following Hurricane Isaac, St. John the Baptist Parish became the first community in the nation to utilize FEMA's new "National Disaster Recovery Framework."

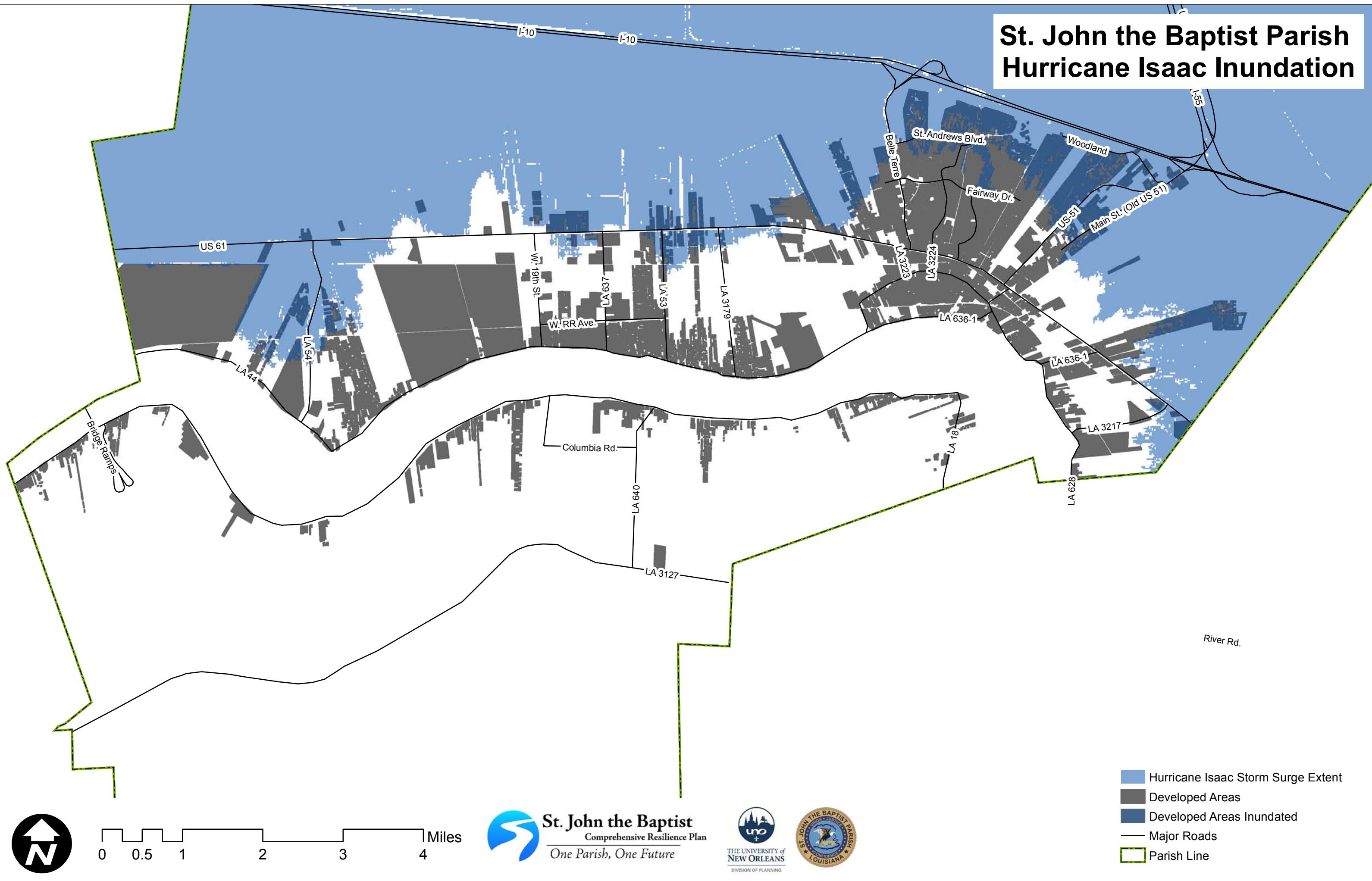
At the request of Parish administrators, the state Office of Community Development Disaster Recovery Unit, and FEMA officials, the Comprehensive Resilience planning team participated in the National Disaster Recovery Framework planning process. As part of the NDRF process the team was embedded in the Citizen's Advisory Committee as well as housing and infrastructure sub-committees. They assisted and informed the process as well as attending CAC and sub committee meetings as well as all public meetings held during this important recovery process.

"The National Disaster Recovery Framework (NDRF) provides guidance that enables effective recovery support to disaster-impacted States, Tribes and local jurisdictions. It provides a flexible structure that enables disaster recovery managers to operate in a unified and collaborative manner. It also focuses on how best to restore, redevelop and revitalize the health, social, economic, natural and environmental fabric of the community and build a more resilient Nation.

"The NDRF captures resources, capabilities and best practices for recovering from a disaster. It recognizes that significant challenges that confront all recovery efforts, from a relatively localized incident to a large-scale disaster that demands substantial resources.

Source: FEMA Brochure - National Disaster Recovery Framework- Recovery Support Functions

St. John the Baptist Parish Hurricane Isaac Inundation



0 0.5 1 2 3 4 Miles

FEMA staff members arrived shortly after the storm to begin this new process. The key component is that it was to be a citizen driven process from the beginning. The goal of this new program is to assist “local governments by facilitating problem solving, improving access to resources and by fostering coordination among State and Federal agencies, non-governmental partners and stakeholders.”

There are six Recovery Support Functions (RSFs) that comprise the NDRF’s coordinating structure for key functional area assistance in St. John Parish. They are:

- Community Planning and Capacity Building (CPCB);
- Economic;
- Health and Social Services;
- Housing;
- Infrastructure Systems; and
- Natural and Cultural Resources.

These RSF's became the St. John Citizens Advisory Committee (the CAC – CPCB) with the other five RSF's becoming sub-committees. Members selected a citizen chair for the CAC and each sub-committee with FEMA and St. John Parish staff serving as support.

Mitigation = sustained action that reduces or eliminates long-term risk to people and property from environmental hazards

- **Structural mitigation** = hard infrastructure solutions (typically large scale)
- **Non-structural mitigation** = soft policy solutions

The CAC met almost weekly throughout much of the period from October 2012 through May 2013. Those meetings and that committee will continue its work for the immediate future. During this same period, several “Town Hall” meetings were held around the Parish and the sub-committees held numerous meetings. The result has been a community and citizen driven process guiding recovery projects in the Parish. The final report was released in May 2013

Resilience Element - Relationship to the NDRF Process

Though the *One Parish, One Future: Comprehensive Resilience Plan* and the *St. John the Baptist Parish, Louisiana Community Recovery Strategy* (National Disaster Recovery Framework) are closely related and intertwined, there are a few distinguishing features of each process.

The *Community Recovery Strategy* is an action-oriented outline of key projects intended to be used for making critical decisions about next steps, funding sources and resource

allocation during the implementation phase of the rebuilding process⁶. The One Parish, One Future: St. John the Baptist Parish Comprehensive Plan is a more general set of guidelines and policies for the Parish that may or may not have a direct tie to Hurricane Isaac recovery but still are focused on moving the Parish forward toward a more resilient future.

Mitigation And Resilience Goals And Policies For St. John Parish

Hurricane Isaac demonstrated that St. John the Baptist Parish is arguably both vulnerable and not very resilient. The question must be – how to change this? Several tools – both structural and non-structural should be utilized within the development management-planning framework in St. John Parish.

“Structural” Mitigation of Floods and Surge

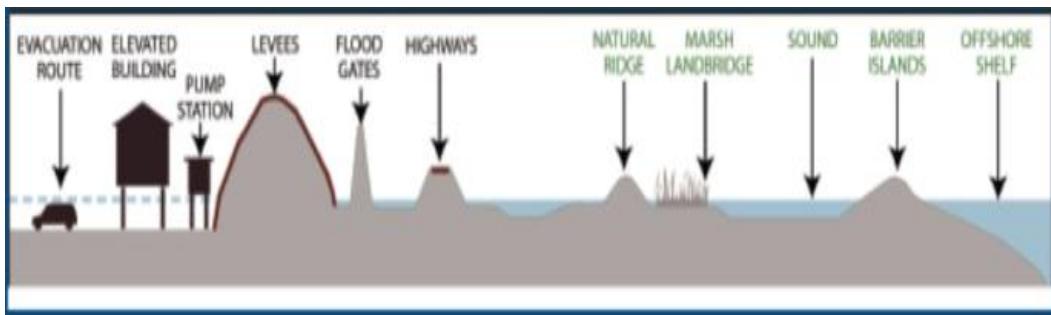
- Affects the hazard directly
 - Levees
 - Surge barriers, flood gates, etc.
 - Pumps, Canals and other drainage structures

Levees have been at the top of everyone’s wish list in St. John since Hurricane Isaac. But they are only a part of the solution. Many experts are recommending a “multiple lines of defense” strategy. Below is an illustration from the Lake Pontchartrain Basin Foundation. It combines infrastructure with environmental and policy issues to work toward a less vulnerable, more resilient community.

Multiple Lines of Defense Strategy

Multiple lines of defense involve utilizing a series of structural methods to prevent storm surge flooding or other flood actions from impacting development. They include both coastal and inland natural and man-made flood control features, as well as building structural features. The graphic below identifies how these might work in within a multiple line of defense strategy.

⁶ St. John the Baptist Parish, Louisiana Community Recovery Strategy, May 2013



(Image from the Lake Pontchartrain Basin Foundation)

Water Management Strategy

Another structural capacity available to the Parish involves the drainage system in St. John. Water management strategies are becoming increasingly necessary for long-term resilience planning.

In recent years, there has been a growing awareness and concern about some of the implications of the existing water management strategies of many communities. It is a regional issue and, recognizing that fact, a Water Management Strategy (WMS) project for parts of the metro New Orleans area is nearing completion. The project study area does not include St. John Parish but its findings and lessons can be applied here.

The WMS project is funded by a \$3 million community development block grant (CDBG) given by the US Department of Housing and Urban Development (HUD) to the Louisiana Office of Community Development—Disaster Recovery Unit – the same program funding this St. John the Baptist Parish Resilience Program – *One Parish-One Future* plan and development regulation project. The lead consultant of the WMS team is *Waggoner and Ball Architects*, based in New Orleans

The WMS team is developing demonstration projects for the study area that will show the efficacy of a more ecologically and financially sustainable way of managing water. The strategy addresses the issues of not just flooding, but also subsidence, which has been shown to be closely related to flooding issues and solutions. The strategy's goal is to decrease reliance on pumping, which is a cost and resource-intensive process that

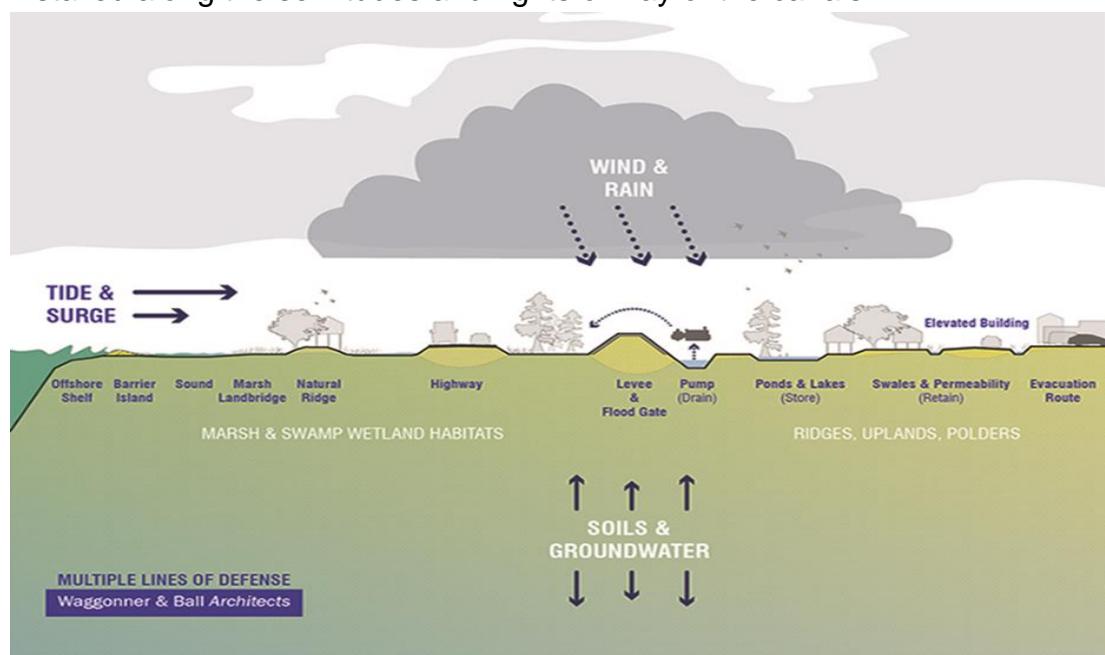
"Safety and reduced flood risk are paramount. But when spaces are created for safely storing the rain that falls away from our streets and properties, our storm water can be a beautiful thing... Instead of spending millions each year pumping water away, let's learn to use it to our benefit."

-Greater New Orleans Water Management Strategy

exacerbates the subsidence problem and is susceptible to outages in storms. The approach consists of three overarching goals:

1. Retain, store and use water and drain only when necessary.
2. Manage water for resilience.
3. Create better public spaces and higher quality of life with water.

This strategy, applied to St. John Parish, would focus on strengthening the existing network of canals and “daylighting” canals where possible, increasing the retaining capacity of these storage systems and turning them into attractive public amenities through the introduction of trees and other aesthetically-appealing additions. St. John Parish has been following this practice to some extent along some of the drainage canals in the Laplace area where bike and walking paths and landscaping have been installed along the servitudes and rights of way of the canals.



Reducing vulnerability and increasing resilience requires “multiple lines of defense” as illustrated in the graphic above, again from the *Waggoner and Ball* team. This is very similar, but more comprehensive, view of the “Multiple Lines of Defense” illustration in an earlier part of this element.

“Non-Structural” Mitigation Strategies: Resilience Goals and Policies

Within the comprehensive planning framework, non-structural mitigation strategies center on the goals and policies within the Resilience element that drive disaster preparation and development decisions made by the relevant Parish officials. For Resilience, goals and policies should address those issues that:

- Identify goals and policies needed to assist Parish officials, residents and property owners in anticipating and preparing for risks;
- Identify those policies to help people and property withstand those risks; and finally
- To allow for policies that aid in post-disaster recovery planning for both people and property.

As stated earlier in the Resilience element goals and policies in the Comprehensive Resilience Plan's specific elements focus on those strategies that address resilience for the physical development of the Parish, and that help drive development away from hazard areas while encouraging policies that improve physical resilience where necessary.

The goals and policies in the Resilience Element should be seen as supportive to other goals and policies within the comprehensive plan.

Resilience Goal 1: Build resilience by reducing physical vulnerability to disasters.

Resilience Objective: Incorporate structural mitigation techniques to create resilience in St. John parish.

Policy: Continue to support efforts to build the Westshore Lake Pontchartrain levee to protect I-10 and St. John Parish.

This was by far the top goal recommended by the FEMA Recovery Plan (Goal #1) in its project list, but it bears repeating. Hurricane Isaac painfully exposed the vulnerability of St. John Parish to storm surge.

Even though St. John Parish has discussed a hurricane protection levee with the U.S. Army Corps of Engineers, prior to Isaac, flooding from storm surge was not very likely to many citizens. That has changed and a levee has become the top priority of local officials and citizens alike.

The issues of a hurricane protection levee are complex and involve policies and funding at the federal government level. Nevertheless, the Parish Administration and Council have publicly agreed with the citizens and with the CAC recommendations – St. John Parish will remain vulnerable to storm surge from Lake Pontchartrain until a levee of some kind is built.

However, the construction of a hurricane protection levee could create other flooding issues. A levee separating Lake Pontchartrain from developed areas of Laplace will also block the natural drainage flow from the built areas to the wetlands and the lake to the north and east. So in addition to the levee, pump stations would be necessary to pump rain water out of the “bowl”, even for routine rain events.

Policy: Work with relevant Federal, State, and local government and citizen stakeholders to initiate development of a Water Management Plan for St. John Parish.

While the flooding observed during Isaac could have been prevented with a strategically placed levee, other flooding and water management and retention issue identified in this element and throughout the Comprehensive Resilience Plan could potentially be ameliorated pursuant to a Parish wide Water Management Plan.

Policy: Stabilize the potable water source and delivery system in St. John Parish, particularly for LaPlace.

The potable water system in St. John Parish is fraught with problems. The Parish should implement one of three options being considered for water supply improvements:

- a. New water intake and treatment facility on the Mississippi River in Laplace
- b. Improvements to the Ruddock wells and supply lines
- c. Add capacity to the Lyons water plant with new supply line for Laplace.

Policy: Improve the sewerage capacity in St. John Parish to accommodate existing and new development

Policy: Improve the drainage capacity at critical points throughout the parish.
Cost: to be determined

Policy: Ensure all structures in St. John Parish are built to the most stringent building codes recommended in areas susceptible to wind and water hazards.

Resilience Goal 2: Continue advance planning by Parish Administration for disaster preparedness.

Policy: Continue to work with the Governors Office of Homeland Security to

coordinate all activities leading up to, during, and after a disaster event.

Policy: Continue to work with Regional Emergency Operations Personnel to coordinate emergency preparedness activities leading up to, during, and after a disaster event.

Policy: Ensure all relevant Parish assets and citizens are involved in all emergency preparedness activities.

Policy: Enhance communication with St. John Parish residents through multiple available media during emergency events.

Timely communications before and during emergencies are critical components of disaster resilience. Citizens often look toward their local government for key pieces of information to augment the information coming from state and regional authorities.

Policy: Strengthen the Parish's existing emergency response warning system for events such as tornados or non-natural hazard events to reach all residents.

While large events such as hurricanes and seasonal flooding can often be predicted days in advance, smaller hazards such as tornados, flash flooding, or man-made events such as petrochemical accidents often happen in minutes or hours. Having a strong Parish wide warning system can save lives and property.

Policy: Identify vulnerable or high-risk groups within St. John parish that require special attention during emergency events.

Policy: Investigate the requirements for designation by the World Health Organization as a Safe Community

Much like Clean Cities designation the Safe Community designation can be a positive promotional opportunity for St. John Parish. This program is focused on five areas:

1. An infrastructure based on partnership and collaborations, governed by a cross-sectional group that is responsible for safety promotion in their community;
2. Long-term sustainable programs covering both genders and all ages, environments and situations;
3. Evaluation measures to assess their programs, processes and the effects of change; and
4. Programs that target high-risk groups and environments and

- programs that promote safety to vulnerable groups; and
5. Ongoing participation in national and international Safe Communities networks.

Objective: *Improve St. John Parish's transportation system both to aid in emergency evacuation and to improve the Parish's economy.*

Policy: Develop an internal evacuation plan to move at risk (disabled, carless, etc.) from communities within St. John Parish to the central regional evacuation pick-up point at LaPlace Elementary.

Currently St. John Parish's proposed internal evacuation plan does not provide for generalized transportation within the Parish for non-medical related evacuations. All residents needing evacuation out of St. John Parish must find their own transportation to the central regional pick-up location at LaPlace Elementary School.

Policy: Work with River Parishes Transit Authority and other agencies to establish a fixed public transit bus route serving the commercial areas of St. John, to River Parishes Hospital, and linking to St. Charles Parish and the New Orleans International Airport (and ultimately, providing a connection to Jefferson Parish transit and the Regional Transit Authority [RTA] lines into New Orleans).

Policy: Enhance access to I-10 by constructing a road between I-10 and Airline Highway in Reserve.

This project is being studied and preliminary Environmental Impact Statements prepared have been prepared for several alternatives of this project. Any of the alternatives would improve evacuation efforts in case of an emergency

Policy: Expand medical transportation options for at home residents with medical conditions who need evacuation during an emergency.

Resilience Goal No. 3: Improve community resilience by getting and keeping citizens involved in the disaster preparedness and recovery process.

Objective: *Identify methods St. John Parish can utilize to manage the preparation and recovery from disasters.*

Policy: Create an "Office of Disaster Recovery and Resilience Management" to manage the post-Isaac recovery as well as to coordinate resilience activities throughout the Parish.

Policy: Continue Parish participation in the National Flood Insurance Community Rating System (CRS), part of the National Flood Insurance Program (NFIP).

Maintaining the Parish's participation will help reduce flood insurance premiums for policyholders and provide additional outreach to the public on important issues related to protecting property from flooding.

Policy: Maintain the Citizens Advisory Committee and incorporate them into emergency preparedness operations in order to both ensure continued implementation of the FEMA post-Isaac Recovery Plan as well as to be prepared in case of another disaster requiring a recovery process.

The Citizens Advisory Committee has been instrumental in the recovery

process following Hurricane Isaac. The Parish should maintain this committee to continue shepherding the recovery projects identified in the FEMA Recovery Plan in coordination with the Disaster Recovery and Resilience Manager. Additionally, the Parish should maintain the committee long term (possibly holding quarterly meetings, etc.) as part of their overall resilience efforts so that the Parish can jumpstart any recovery process for future disasters.

FLOOD ZONES

The Federal Emergency Management Agency (FEMA) determines flood risk for the United States, and then creates maps to clearly show the geographic areas prone to flood.

St. John the Baptist Parish adopted the Federal Emergency Management Agency Flood Insurance RateMaps that became effective Nov. 4, 2010. Land in St. John Parish falls mostly within the AE or the Xflood zone with some areas along Lake Pontchartrain in the VE zone:

VE - Areas subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action. Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply

AE - indicates areas at high risk for flooding and provides the base flood elevations (BFEs) for them.

X - Area of minimal flood hazard, usually depicted on FIRMAs as above the 500-year flood level.

<https://msc.fema.gov/webann/wcs/stores/servlet/i>

Policy: Incorporate the key individuals and organizations from the Post Isaac Long Term Recovery Committee into emergency preparedness operations.

Recovery from disaster is as important as preparation, so to ensure that the key assets are in place for recovery the Parish should maintain contact with key individuals and organizations from the Long Term Recovery

Committee and include them in disaster preparedness operations.

Policy: Encourage St. John Parish resident participation in FEMA's "Community Emergency Response Team (CERT) Program".

The CERT Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

Resilience Goal No. 4: Revise the Parish's development regulations (zoning and subdivision regulations.) to include resilience policies and requirements and to provide predictability to residents, businesses and investors.

Objective: Incorporate resilience into the Zoning and Subdivision Regulations in St. John Parish

Policy: Ensure Zoning and Subdivision Regulations identify specific areas vulnerable to hazards.

Policy: Encourage adoption of the FEMA DFIRM maps for St. John Parish.

Policy: Maintain participation in the Community Rating System and hire a certified floodplain manager to manage the day-to-day administration of the Parish's CRS requirements.

Policy: Ensure development regulations include the most stringent building codes in the Parish and particularly for construction in hazard prone areas.

Policy: Incorporate best practices for floodplain management within the Zoning and Subdivision Ordinances.

This process is underway and will include:

Restrict building in flood hazard areas

Require elevation above BFE in certain areas.

Goal No. 5: Develop and adopt a “Water Management Strategy” with specific actions for the Parish government and to encourage these actions by citizens and businesses.

Policy: Work with relevant Parish officials and regional partners to further study the benefits of a “Water Management Strategy” similar to the program recently developed for Metro New Orleans and Jefferson Parish. The basic tenets of that program are:

- Retain, store and use water and drain only when necessary.
- Manage water for resilience.

- Create better public spaces and higher quality of life with water.

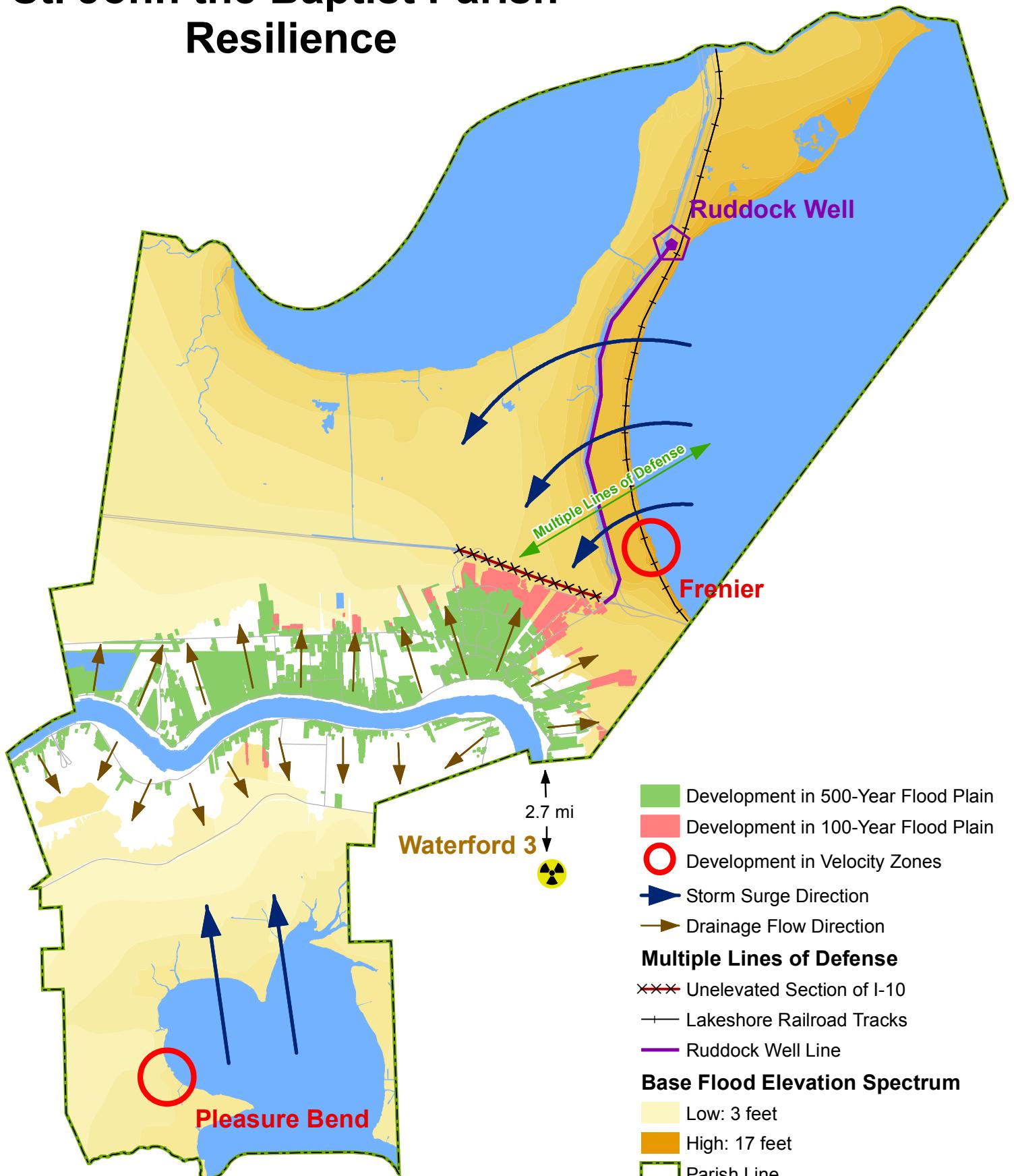
Resilience Goal No. 5: Implement the recommended projects from the NDRF St. John the Baptist Parish, Louisiana Community Recovery Strategy

Policy: Include all relevant projects from the FEMA Recovery Strategy in the Comprehensive Resilience Plan's Implementation Table.

The FEMA National Disaster Recovery Framework process was successfully utilized in St. John and brought together many community leaders and collected many comments from the general public. This project list, developed by the Citizens Advisory Committee, can be found in "Appendix B" of this *Resilience Element*, and in the full report - *The Community Recovery Strategy*. This list should be the top priority of the Parish. Where relevant, some of the proposed project recommendations are repeated in this element and in other elements of One Parish One Future Comprehensive Resilience Plan.



St. John the Baptist Parish Resilience



Miles
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St. John the Baptist
Comprehensive Resilience Plan
One Parish, One Future

THE UNIVERSITY OF
NEW ORLEANS
DIVISION OF PLANNING



Sources

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- *Hazard Mitigation: Integrating Best Practices into Planning*, Power Point Presentation Presented to UNO-CHART Executive Program Baton Rouge, LA June 24, 2011. James Schwab, American Planning Association, Hazards Planning Research Center.
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VI Housing Element

Overview and Introduction

Housing is one of the most important assets in any community. Without quality housing for all residents communities cannot sustain long-term development. The St. John The Baptist One Parish One Future Comprehensive Plan Housing Element represents the goals and policies the Parish will follow to ensure that all residents have access to quality neighborhoods and housing as part of planning for a high quality of life in St. John Parish. A key part of sustaining quality of life includes incorporating a number of resilience policies into the Parish's housing goal and **Policy** matrix to ensure that the Parish's housing stock can withstand the likely impact from disasters common to the Parish – including hurricanes and flooding, among others.

Housing Vision for St. John Parish

- *High Residential Quality of Life for All Residents*
- *Affordable Housing Opportunities for All Residents*
- *Disaster Resilient Housing*

Residential growth cannot be considered without touching on other planning issues, including transportation and other public infrastructure, urban design and character, and preservation of open space. Therefore, many of the policies included within the Housing Element deal with how housing affects, and is affected by these other planning issues.

Planning for and maintaining housing resilience is key given the Parish's location in Southeast Louisiana where hurricanes, flooding, and wind driven impacts are constant threats to housing development. This was never more evident than the impact of Hurricane Isaac in August 2012. This storm brought home the sober reality that history is not a reliable indicator of future storm impacts, as Isaac inundated areas of St. John Parish that never flooded in previous hurricanes.

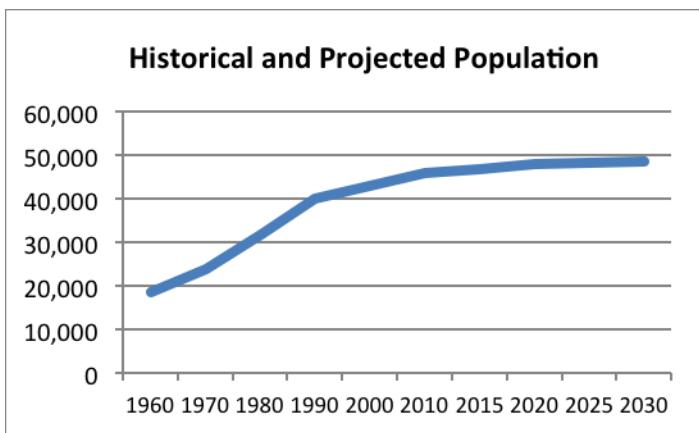
As part of the recovery process, the Federal Emergency Management Agency (FEMA) and the Department of Housing and Urban Development (HUD) conducted assessments of the physical damage as well as the characteristics of the households most affected by Isaac's impact. The results of those analyses are included within the discussion of current housing in St. John Parish.

As the Parish recovers from Isaac, it is imperative that the comprehensive plan promotes resilience within the development decision Paradigm related to future land use – and housing is a major part of that process. The Housing Element is based on analysis of current housing and population trends and issues, citizen input during public

meetings, and the need to re-envision housing and how it is developed in St. John Parish following the damage from Isaac.

Current Population and Demographic Trends in St. John Parish

One of the key factors that fuels housing demand is population growth. Like many Parishes in South Louisiana St. John grew quickly during the 70's, 80's, and early 90's, however that growth has slowed significantly. Since reaching a peak of 47,684



following Hurricane Katrina in August 2005, the Parish's population has declined by 6.1% down to 44,758 according to the most recent U.S. Census estimate. It is likely that this decline will accelerate as a result of the flooding from Isaac. The full extent won't be known until Census estimates are released in July of 2014. Projections indicate that the Parish's population will see

sluggish growth out to 2020; followed by very slow growth through 2030.

Along with population, demographic shifts are also taking place within St. John's population. Perhaps the most significant is the loss of population in the under 44 age cohorts, which declined by over 6% from 2000 to 2010. Simultaneously, the over 45 cohorts increased by almost 39%. The only age cohorts under 45 that increased were the 20-24 and 25-29 groups. While this offers some good news, it is not a strong long-term trend to have a population growing in the over 45 demographic while the population is declining among those under 45. Increases were not enough to change the trend of declining family-aged population in St. John Parish.

As reflected in the numbers regarding age cohorts, another significant factor affecting future population growth and thus housing needs is the loss of families with children under 18. While the number of married couple families declined by about 3.5%, the number of married couple families with children declined by 13.8%.

The impact of this shifting age demographics is also born out when comparing the results of projecting future population using the Age Cohort model, which based on Census figures through 2000, projected future Parish populations reaching over 57,000 by 2020. Current projections utilizing 2010 Census data significantly lower than that figure

and by 2020 projects the Parish's population to be around 47,800; and by 2030 only about 48,500.

Current Housing Trends in St. John Parish

Residential Land use occupies 38.9% of the developed land area of the Parish according to the most recent land use survey⁷. This includes 17,510 total housing units according to the 2010 U.S. Census. Of that number about 8.8% are identified as vacant units.

The Parish is predominately made up of single-family residential units, which represent slightly more than 79% of all housing units. That is up from just under 72% in 2000. The next largest number of residential uses is mobile homes representing 11.3% of total housing units. Clearly, with so little of the remaining residential units split among the various multi-family uses it appears that St. John Parish should seek to develop additional multi-family units.

Within the Residential land use category, nearly 88% of all residential land uses are single-family sites; while trailer/mobile homes account for 8.7%. Only one other residential category – multi-family (1.6%) – accounts for more than 1% of total residential land use in St. John Parish.

The age of the Parish's housing stock will also be an issue moving forward. Nearly 25% of the Parish's housing stock was built prior to 1970; and over 47% built before 1980. This puts nearly half the Parish's housing stock over 30 years old. This is a mixed bag as on the one hand it indicates that a substantial portion of the housing stock is less than 30 years old, it also indicates that almost as many units are approaching the end of functional life. Going further, another 23.3% were built during the 1980's meaning a robust 70% of the Parish's housing stock is nearly 25 years old or older. Recent

⁷ The Parish wide land use survey was originally done in 2003 and updated as part of the One Parish One Future comprehensive planning effort. The survey utilizes the American Planning Association's Land Based Classification System. A review of the survey methodology is found in Appendix A.

building trends indicate that permitting for new units is slowing down, which would tie into the declining population.

Table 6.2: Year Structure Built		
Year Built	Units	%
	15,600	100%
Built 2008 or later	503	3.22%
Built 2000 to 2007	2,111	13.53%
Built 1990 to 1999	2,008	12.87%
Built 1980 to 1989	3,632	23.28%
Built 1970 to 1979	3,553	22.78%
Built 1960 to 1969	1,849	11.85%
Built 1950 to 1959	870	5.58%
Built 1940 to 1949	617	3.96%
Built 1939 or earlier	457	2.93%

Source: American Community Survey

In October 2012, the U.S. Department of Housing and Urban Development (HUD) conducted a pre-damage assessment of the areas most affected by Hurricane Isaac, including St. John the Baptist Parish. Per its assessment, HUD determined the parish had sustained a 2 percent annual decline in population since the 2010 Census, estimating 44,600 residents and 15,600 households as of August 2012. Furthermore, HUD characterized housing market conditions as “soft,” estimating single-family home vacancy at 1.5 percent. Additionally, HUD reported a 9 percent decline in home sales in the 12-month period prior to Isaac in comparison to the year prior. In the

same period, new housing starts declined 21 percent while the proportion of distressed mortgages increased from 11 to 12 percent.

Concurrently, HUD reported rental vacancy rates had declined from 12 percent to 10 percent between April 2010 and August 2012, representing a real increase in rental demand, as no new multifamily units were permitted in a 24-month period ending July 2012

Mobile Homes sites in St. John Parish

An important component of the housing picture in St. John Parish is the proliferation of mobile homes throughout the Eastbank and Westbank of the Parish. According to Census figures mobile homes represent over 11% of total housing units. In fact, the land use survey further drives this home by reporting that mobile home sites account for nearly 9% of the total land used for housing in St. John Parish. The next closest residential use is multi-family housing at about 1.6%. Clearly mobile homes are an important issue in St. John Parish, and this issue appears prominently in citizen comments from public input meetings.

A big issue with mobile home siting involves allowing this use in single-family districts – where they are not a permitted use. A significant number of mobile home sites are in the single-family zoning district. This has been controversial in St. John Parish because

in many cases it appears mobile homes have been the de facto affordable housing option for many. Increasing the amount of land set aside for mobile homes is an option moving forward.

Most mobile home sites are located in areas of St. John outside of LaPlace in areas of the Westbank, Garyville, Reserve, Edgard, among other areas. The general housing type found in LaPlace is single-family.

Another important issue related to mobile homes is their safety. Mobile homes have proven less safe in tornadoes and hurricanes, and often are located in areas prone to flooding. St. John the Baptist experienced comparatively low rates of damage to mobile homes and other dwelling types. However, as a result of such a proportionally large number of mobile homes in St. John Parish and their increased susceptibility to damage, they accounted for large percentages of damages outside of LaPlace. Specifically, 50 percent of damaged housing units in Edgard, 35 percent of units in Mount Airy and 33 percent of units in Garyville were of the mobile home variety. Across the parish, damaged mobile home units had an average full verified loss (FVL) of \$2,415⁸.

Public Housing in St. John Parish

The St. John the Baptist Housing Authority (SJBHA) manages four site built public housing units as well as the Parish's housing assistance voucher program. Over recent years the SJBHA suffered from mismanagement and other issues that resulted in the Department of Housing and Urban Development identifying this housing authority as a "Troubled Housing Authority".

Table 6.3: Damaged Public Housing Units by Location

Location	Units	Isaac Damaged	Non-Isaac Damaged	Total Damaged	%
Laplace	116	34	30	64	55.17%
Reserve	92	44	26	70	76.09%
Edgard	34	16	8	24	70.59%
Garyville	54	32	18	50	92.59%
	296	126	82	208	70.27%

Source: St. John Parish Housing Authority

St. John Parish falls within the State of Louisiana's Consolidated Plan for housing. As a result of the problems that led to being labeled as 'Troubled', a new director was appointed in 2012. While many issues remain the SJBHA has regained its footing and become better organized and operated.

SJBHA manages four public housing developments throughout the Parish with a total of 296 units. These units have experienced significant deterioration, which was exacerbated by the impacts of Isaac. Table 6.3 identifies the number of pre and post-

⁸ Information Provided by FEMA National Disaster Recovery Framework report for St. John Parish.

Isaac damaged units. Clearly these developments are in need of significant makeovers given that over 70% of all units have damage and have now become – in many instances – severely distressed. Parish housing policy needs to address the need to rehabilitate these units as well as allow for flexibility in planning for these sites.

Additionally there is clearly a need for the SJBHA to increase the amount of assistance vouchers available as a result of both changing demographics and the results of Hurricane Isaac's impacts on low to moderate income households. Prior to Isaac, the Parish had a lengthy waiting list for housing assistance vouchers. The impacts from Isaac only lengthened that list. Both in the short and long terms St. John Parish Housing Authority needs to increase the number of available vouchers.

Hurricane Isaac's Impacts on Housing in St. John Parish⁹

Hurricane Isaac hit Louisiana's coast at Plaquemines Parish, southwest of the Mississippi on August 28, 2012 as a Category 1 hurricane. A second landfall of Hurricane Isaac was made in Southeast Louisiana just west of Port Fourchon on August 29, 2012. Because of the extremely slow moving track, the impacts from Isaac lasted through August 30th, significantly worsening the effects of a minimal hurricane.

Flooding from Hurricane Isaac caused much of the damage to housing in St. John Parish. But damages – including wind - impacted housing of all types, including single and multi-family units, public housing units, and mobile homes; as well as impacting households across the income spectrum.

St. John's rental population represents 21 percent of all households (3,328 of 15,965). Proportionally, 20 percent of damaged households in the parish (1,473 of 7,190) were rental households. Like the single-family population, rental damage was concentrated in LaPlace as well, accounting for 76 percent (1,117 of 1,473) of total damaged rental households in St. John Parish.

Additionally, of this total in LaPlace, 1,049 of the damaged rental households (85%) were classified as low to moderate income. Parish wide, 1,235 of 1,473 – or 84 percent – of damaged rental households were low to moderate income.

Citizen Input on Current and Future Housing Issues

An important component to developing the One Parish One Future Comprehensive Plan – as well as the Housing Element – is public input. There have been two major

⁹ Information provided by FEMA National Disaster Recovery Framework report for St. John Parish.

citizen engagements related to both long term comprehensive planning and Hurricane Isaac Recovery planning.

First, UNO organized a series of workshops around St. John Parish to gather input for input to the comprehensive plan and specifically the Housing Element. As part of these meetings citizens completed a Community Image Survey designed to help planner identify some of the key design and aesthetic issues related to future planning – including housing – in St. John Parish.

Second, following the severe impacts of Hurricane Isaac FEMA organized a series of input and review workshops to identify issues and projects the citizens wanted to assist both the recovery from Isaac as well as improving conditions long-term in St. John Parish. The results from both processes are included as the basis for developing goals and policies, along with specific housing related actions to implement the Parish Housing Element and the FEMA Recovery Plan.

UNO Citizen Input Meetings

UNO conducted four meetings throughout St. John Parish in support of the development of the One Parish One Future Comprehensive Plan. Citizens were given an opportunity to identify key issues they felt faced the Parish as well as what things they wanted to see in St. John. The issues centered around housing, historic preservation, environmental and hazard mitigation, and land use. The following housing related issues were identified during the UNO meetings:

Availability of Housing Options

The current housing stock in St. John the Baptist Parish consists of mostly single-family homes. Many participants spoke of the need for greater variety in housing options – apartments, condos, multi-family housing – to attract and retain people in the parish, particularly young people not ready to purchase their own home. Beyond the types of housing that are available, many participants stated that there simply isn't enough housing in the parish to begin with.

Housing Affordability

The prevalence of single-family housing that makes for an almost homogenous housing stock also affects the affordability of housing the parish. The lack of rental options like apartments and multi-family homes make it more difficult for young and lower income people to find quality housing in St. John.

Code Enforcement and Blight Management

A lack of housing code enforcement was a major issue for workshop participants. Many said homes in disrepair detracted from the quality of neighborhoods and lowered the value of neighboring properties. Trailer parks were of particular concern, with participants saying that they need to be better managed. The same is true for blighted housing, as participants considered this as a major issue in St. John Parish.

Management and Maintenance of Historic Buildings and Areas

St. John the Baptist Parish has a strong historic past, something participants were quick to note. Many, however, were upset with the way historic structures and areas have been ignored. Participants would like the creation of local historic districts to help protect and maintain older parts of the parish. They would also like more parish programs to help protect and maintain individual historic structures.

As stated above citizens were given a Community Image Survey in which they were shown a series of slides depicting a range of development options related to housing, historic preservation, transportation, recreation, environment, among others. Attendees were given about 10 seconds to rate the slide on a scale of -10 to 10, with -10 equating to something you feel is bad or shouldn't be allowed in the Parish and 10 being something highly desired or favored. Zero would indicate a neutral or ambivalent feeling.

Based on the results it appears citizens are interested in improving the quality and spectrum of housing available in St. John Parish. Below are slides that received the highest scores:



These images were the highest rated with scores above +5.

They depict a nice suburban style single-family environment and the other a mixed-use walkable neighborhood. Both scored above a 5 among attendees at all meetings.

Among some of the slides scoring the lowest among attendees were these:



Slides with the lowest average scores.

Slides depicting rather unattractive multi-family units, mobile homes, public housing, and a neighborhood that appears to be developed in a very haphazard fashion, did not receive very favorable scores. This suggests residents are looking for alternatives not just with choice, but also with quality and good neighborhood design.

FEMA National Disaster Recovery Framework Meetings

Following a disaster declaration for St. John by the President, FEMA initiated its long-term recovery planning assistance – National Disaster Recovery Framework. As part of this assistance, FEMA organized a series of meetings where residents could first identify key issues needed for recovery and long-term planning in St. John, as well as the opportunity to vote on prioritizing the recovery projects developed their input at the initial meetings.

The common themes identified during the FEMA meetings are included below:

Flood Mitigation and Elevation

The most commonly mentioned issue was the need for better flood mitigation for homes. Most residents said they would like the parish to provide assistance for the elevation of houses to reduce the risk of future flooding. Furthermore, some

residents mentioned the need for better education for homeowners of different techniques that can be used to help flood proof a home.

Affordable and Low Income Housing

St. John Parish is lacking in affordable housing units for low income families and this is an important issue for residents. This includes a desire to see more multi-family and rental housing options.

Homeowner Assistance and Financing

Elevating and retrofitting homes to improve flood protections is expensive and many residents want the parish government to take an active role in assisting homeowners with the financing of such improvements.

Better Code Enforcement and Management of Blighted Properties

According to residents, many of the homes in the parish are in poor condition and may even be considered unlivable. Add to this the number of blighted properties and it amounts to a problem of quality housing throughout the parish. Many residents wanted to the parish tear down blighted properties and to improve their code enforcement efforts to prevent the creation of newly blighted properties.

Assisted Living for Elderly and Disabled Residents

The parish has a large number of residents that need some sort of daily assistance, whether elderly or disabled, but few housing options that provide needed assistance.

Based on the above citizen input and subsequent list of projects a series of 16 housing recovery projects were developed and then ranked by citizens based on their importance. Below is a list of these projects and their priority based on citizen voting totals.

Table 6.4: NDRF Identified Housing Projects
High-Priority Projects
#1 Initiate “Safe Neighborhood” programs within the parish
#2 Establish an Office of Disaster Recovery Management
#3 Establish a process to identify and remediate blighted properties
#4 Establish a homeowner grant or forgivable loan program to provide rebuilding assistance
#5 Assess the need and resources for senior rental housing

Medium-Priority Projects

#6 Establish a first-time homebuyer program
#7 Repair facilities serving special needs populations
#8 Offer voluntary and/or targeted buyouts to homeowners not rebuilding
#9 Provide rental assistance to homeless and at-risk people
#10 Establish quality standards for multi-family developments

Low-Priority Projects

#11 Allow multi-family housing in commercially zoned areas
#12 Provide financial incentives to owners of small rental properties
#13 Increase permanent supportive housing through grants/subsidies
#14 Rebuild the entire stock of public housing to include mixed-income
#15 Develop incentives to promote multi-family rental housing
#16 Establish a local land trust to acquire and hold land for affordable development

Source: FEMA National Disaster Recovery Framework

Future Housing Needs in St. John Parish

It is always difficult to predict what the future holds; much less attempt to predict the number of housing units required moving forward. But it is possible to gauge the general number needed based on the projected population and household size in St. John Parish.

Based on the recommended future population projection methodology and current household size data, table outlines the number of new households likely added for each five-year window out to 2030. Current projections and household size dynamics identify the need for an additional 935 households through 2030. Given the population dynamics, the bulk of population growth and required units – about 75% - come within the first ten-year window. These numbers could be high given the likely displacement

of households following Isaac, as well as the lack of any federal hurricane protection levee for St. John, which could have a negative impact on the desirability of new households to locate in St. John.

Additionally, the table identifies the likely net residential acreage needed to accommodate the projected number of new households. The required acreage is based on the existing residential density of about 4 units per net developed acre for all unit types. Based on that density a total of only about 234 acres would be required if the projections hold true. This is not a significant amount of land given the tremendous amount of undeveloped land within the 500-year floodplain in St. John Parish.

Another issue that the Parish should address through this planning process is the need for additional land allocated for some form of multi-family housing. Currently the Parish only has about 1.6% of the residentially developed land used as multi-family.

Throughout the public participation process citizens identified the need for more multi-family housing choice.

Multi-family housing can be developed as part of mixed-use development or as stand-alone projects. With the desire for more mixed-use activities, along with the implications for resilience in St. John Parish that mixed-use developments offer, it is important that the goals and policies of the housing element as well as the future land use map identify both additional lands for multi-family projects as well as proposed mixed-use areas.

One Parish One Future Housing Element Goals, Objectives, and Policies

The following goals, objectives and policies provide the basic framework for housing decisions made by Parish policy makers and elected officials. These, along with the future land use map and the specific housing related development management regulations (residential zoning, subdivision regulations, etc.) in St. John Parish direct decisions that will be made that affect residential development.

The goals, objectives and policies reflect previously adopted plans and policy documents – such as the FEMA National Disaster Recovery Plan - as well as the ideas, comments, and concerns expressed by numerous groups and individuals at community meetings and open houses, and through a community image survey.

The Parish's One Parish One Future Comprehensive Housing Element further seeks to provide the framework to implement the overall vision statement of the comprehensive plan, which outlines where Parish residents want to see the Parish in the future. This vision drives the entire comprehensive planning process in St. John Parish. Plan Vision Statement outlines a vision of a modern and well-planned Parish that protects existing and new high quality neighborhoods.

Goal 1: Ensure an adequate supply of affordable and resilient housing to meet the needs of all St. John Parish residents.

Objective: Facilitate the provision of affordable housing in St. John Parish by regulatory and incentive- based opportunities.

Policy: Encourage participation of the private sector (lenders, developers and builders) in government funded or operated housing programs that increase affordable housing production.

Policy: Provide assistance for the acquisition, rehabilitation and new construction of housing for very low- and low- income first- time homebuyers through the HOME Investments Partnership and CDBG Programs.

Policy: Provide down payment and closing cost assistance through the First- Time Homebuyers Assistance Program.

Policy: Provide rehabilitation and redevelopment assistance for vacant, substandard housing and provide financial assistance to nonprofit organizations and other developers who purchase, rehabilitate and resell existing homes

and/or redevelop vacant property to low to moderate income persons and families.

Policy: support housing education and counseling programs that provide both pre- and post- purchase education and counseling services.

Policy: Encourage innovative personal financial options that will create wealth and assets for Parish residents.

Policy: Encourage asset and wealth building programs for residents through the Earned Income Tax Credit (EITC), Individual Development Accounts (IDA), Foreclosure Intervention and prevention, and other housing-related programs.

Objective: Expand affordable rental opportunities through new construction and preservation of existing rental units.

Policy: continue to provide direct loans to nonprofit and for- profit developers to rehabilitate smaller rental developments that are affordable to low- income renters.

Policy: The Parish should support the use of resources such as Federal or State low- income housing tax credits, historic tax credits, and other State and Federal resources to increase the leveraging of funds for the provision of affordable housing.

Policy: Increase and maintain the amount of land appropriate for affordable rental housing and in proximity to employment opportunities, service centers, recreation areas, and transit corridors.

Objective: Increase rental assistance (vouchers) to very low income and special needs persons.

Policy: The St. John Parish Housing Authority shall provide rental assistance to very low- income and special needs persons including those with disabilities through the voucher system.

Policy: The St. John Parish Housing Authority should maintain a current waiting list of potential households or individuals needing rental assistance.

Policy: The SJHA should maintain a database of prospective properties that are eligible for the housing assistance program.

Objective: Support the St. John Parish Housing Authority's efforts to create mixed income rental and homeownership communities that promote self-sufficiency and improve resident access to transportation, education, recreation, and employment opportunities.

Policy: Discourage further concentrations of very low-income families by promoting and facilitating mixed income communities developed under financing options such as the Low Income Housing Tax Credit (LIHTC) program.

Policy: Support efforts to bring a Choice Neighborhoods Grant to St. John Parish to support the transition from isolated public housing developments to a mixed-income environment.

Policy: The St. John Parish Housing Authority should maintain an evacuation plan for all public housing residents along with an updated contact list in the event of an emergency.

Goal: Encourage the development of special needs housing for underserved populations, particularly permanent and transitional housing.

Objective: Ensure that special needs populations have access to affordable, safe and sanitary housing that is appropriate to their special needs.

Policy: Encourage the development of additional supportive or service-enriched housing for specific special needs populations using Federal, State, and local housing programs, including:

- i. Supportive services for persons with a disability (Section 811);
- ii. The HUD "Supportive Housing Program (SHP) for Homeless Persons with a Disability";

Goal: Thriving, safe, resilient, and attractive neighborhoods in St. John Parish providing rental and homeownership opportunities for all income and age groups.

Objective: Create or update revitalization plans for targeted neighborhoods and communities in St. John Parish

Policy: Identify priority Parish neighborhoods for revitalization efforts.

Policy: Where appropriate develop neighborhood plans to support development or redevelopment. The Plans should establish goals, objectives and policies to address identified issues. Cost estimates for actions shall be provided where appropriate and recommended priorities and phasing shall be identified.

Policy: Ensure that revitalization plans in targeted areas incorporate best practices in design and development principles.

Policy: Encourage the design of neighborhoods and housing to promote a variety of lifestyle choices, while still contributing to livable and sustainable environments, which are comfortable and safe for a variety of household types.

Policy: Guide the development of revitalization plans to ensure that they provide for a broad range of rental and homeownership opportunities for all age and income groups.

Policy: Encourage revitalization plans that provide for commercial uses as appropriate to encourage pedestrian activity, reduce automobile dependence and provide opportunities for St. John Parish residents to live in close proximity to their work.

Policy: Ensure that, where appropriate, new development or redevelopment provides for appropriate densities to maximize utilization of existing infrastructure and the utilization and efficiency of existing or proposed transit systems.

Objective: Ensure non-discriminatory housing practices in St. John Parish

Policy: Promote information about open and equitable rental and sales practices about a range of housing choices that help individuals make informed decisions

Policy: Work to reduce the discriminatory barriers to the rental, purchase, or development of housing units.

Policy: Continue to educate citizens on their rights and responsibilities with regard to equal opportunities and fair housing.

Objective: Housing Resiliency in St. John Parish

Policy: Direct growth of new residential toward areas that are already planned or served by infrastructure services as a way of minimizing environmental or hazard impacts.

Policy: Require residential development meet the Base Flood Elevation standards outlined in the DFIRM for that area.

Policy: Encourage residential development meets the Base Flood Elevation +1 foot (Free Boarding) when developing inside the 100-year flood plain.

Policy: Require the Parish to maintain a database of all repetitive loss properties in St. John Parish.

Policy: Adopt the most recent recommended building codes to insure wind resistant housing structures in St. John Parish

Policy: Encourage the Parish to hire a certified flood plain manager to coordinate the Parish's compliance with the National Flood Insurance Program so the Parish can take advantage of FFIP rate discounts where applicable.

Policy: Require minimum energy efficiency standards in all newly constructed housing developed with assistance from the Parish, and promote energy efficiency improvements to the existing housing stock.

VII Transportation Report (Placeholder for Future Transportation Element)

Introduction

Transportation is a key asset for St. John Parish. Located along the most important waterway in the U.S.- the Mississippi River; access to all regions of the country via two major interstate highways; access to three major rail lines; and with an airport poised for expansion, St. John Parish is a true multi-modal transportation hub in the Southeast United States. Properly planning for and managing these assets can have a tremendous positive impact on economic activity in St. John Parish.

A unique circumstance in St. John Parish is that the major transportation corridors through the Parish are not owned by the Parish, but are either federal or state roads. This can create delays for maintenance and traffic improvements, as significant hurdles must be overcome to perform any maintenance or make any improvements to these roads.

This report is intended to lay the foundation for a formal One Parish One Future Comprehensive Resiliency Plan Transportation Element, and identifies the key transportation infrastructure in St. John Parish along with a review of any existing capacity issues; identifies current transportation issues facing the Parish; and suggests an outline of future goals and policies to manage the Parish's transportation infrastructure. Additionally, this report outlines the Parish's role in emergency evacuation from a transportation perspective. An outline of the Parish's existing internal evacuation plan is included along with any recommendations to improve that process.

Existing Transportation System



Figure 1.2: Railroad tracks in Garyville.



Figure 1.1: Traffic on Airline Highway (US-61).



Figure 1.1: Interstate 10.

Roadway

For personal transportation, the automobile is the most popular choice; accounting for over 90% of all work commutes among St. John residents. The rural and suburban character of the Parish necessitates this mode choice. A network of federal and state roads, as well as a local street network, makes up the roadway infrastructure in the Parish.

On the East Bank, Interstate's 10 and 55 are national and regional connections, providing freeway linkages most immediately to New Orleans, Baton Rouge, and the Northshore of Lake Pontchartrain. Airline Highway (US-61) serves the same corridor as I-10, but provides access to businesses and communities. La-44 and LA-636 - also known as "River Road" - is a historical linkage through St. John following the banks of the river. In LaPlace, major connections and interstate access exist at Main Street (US-51) and Belle Terre Boulevard (LA-3188). Other numerous connections are made between Airline Highway and the river throughout LaPlace, Reserve, and Garyville.

On the West Bank, LA-18 is River Road, and connects most of the developed areas. LA-3127 is a regional highway over a mile from the river, running behind most of the agricultural fields, while serving as a connection to the high school. Bridges in each neighboring Parish allow roadway connections across the Mississippi River (I-310 and LA-3213), while automobiles can cross using the Edgard-Reserve Ferry.



Figure 1.3: River Parishes Transit Authority vehicle.

Rail

Three principal freight rail corridors exist in St. John Parish. On the West Bank, the Union Pacific cuts across farmland. On the East Bank, the Canadian National and Kansas City Southern tracks travel between Airline Highway and River Road, including numerous road crossings in developed areas. The Canadian National tracks also follow the shoreline of Lake Pontchartrain in the Parish.

Transit

The only public transit service in St. John Parish is provided by the *River Parishes Transit Authority (RPTA)*, which serves St. James and St. Charles Parishes as well. The service is demand response, where riders must call one day in advance to request a ride. An ADA accessible minibus is dispatched to provide door-to-door service to multiple passengers at a time. The RPTA suggests budgeting a minimum of one hour for a trip. Because of the regional scope of the RPTA, service is offered to the New Orleans International Airport in Kenner, providing connections to other transit options.



Figure 1.4: LA Swift stop on Highway 51.

Intercity bus service between New Orleans and Baton Rouge, the LA Swift, makes one stop in LaPlace. The stop is located right off the Interstate on US-51 (see Figure 1.4). There are ten buses that stop on weekdays, and six on weekends, counting both directions. Some LA Swift buses do not stop in LaPlace.



Figure 1.5: The Port of South Louisiana.

Maritime

St. John the Baptist Parish sits at the center of the Port of South Louisiana, an inland barge system serving global shipping and the entire Mississippi River markets. This port serves as the origin for the industries in the Parish, such as chemicals and sugar cane, and has attracted other new business. However, it is important on an international scale as a crucial transfer point, located where container ships, barges, pipelines, railroads, and highways all converge.

Aviation

The St. John the Baptist Parish Airport operates a single runway 4000 feet in length. It is publicly owned, serving primarily small planes in local operations.



Figure 1.5: The St. John the Baptist Airport

Pedestrian and Bicycle

Most pedestrian and bicycle facilities in St. John Parish are associated with roadways. Residential



Figure 1.6: Bike path.

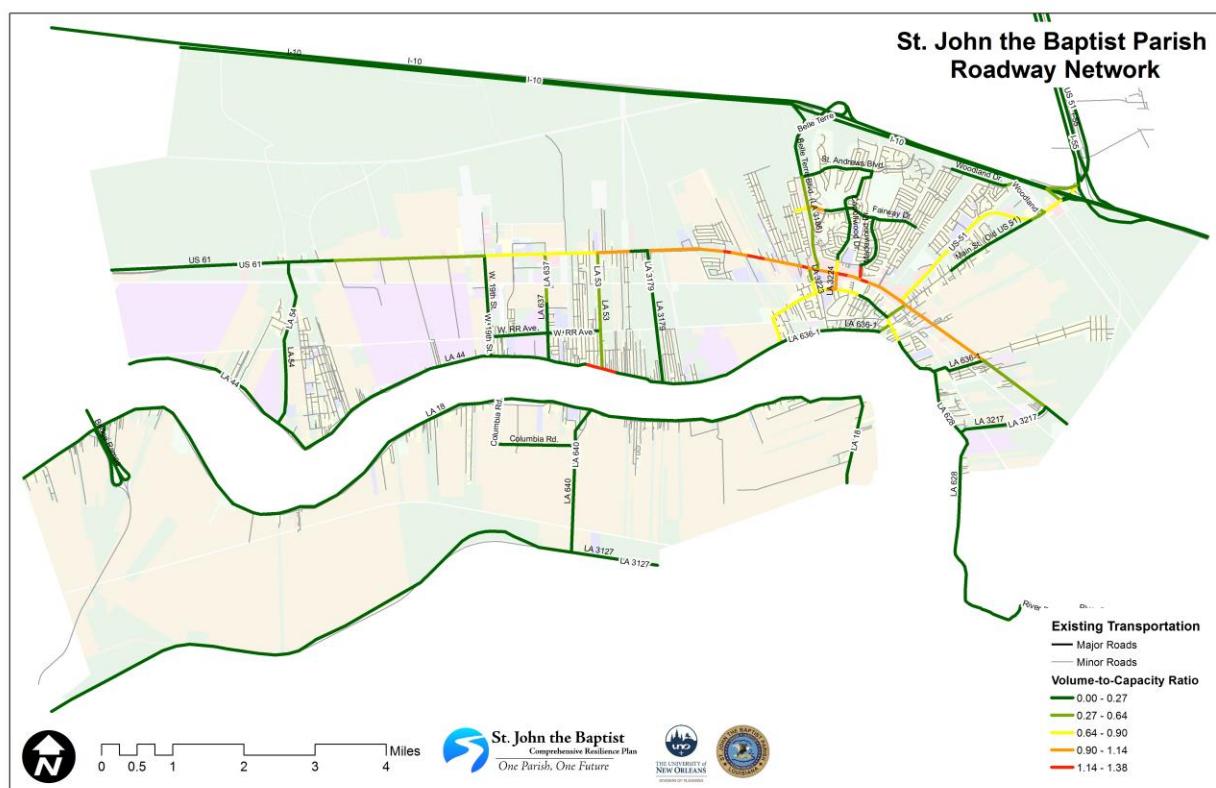
streets are equipped with sidewalks, or are low enough volume to easily accommodate pedestrian travel in the street. However, sidewalks are lacking in other locations, and most importantly, on many major thoroughfares. Pedestrian crosswalks and crossing signals are missing at most high-volume, multi-lane intersections. There are a few walking loop paths for recreation in parks across the Parish.

There is a bike lane on Cambridge Drive in LaPlace, and a bike path underneath Interstate 10 behind the gas stations along US-51. This path was built as a link in a proposed bike route circling Lake Pontchartrain. The Mississippi River Trail on the east bank is the most prominent bicycle facility in the parish.

Current Infrastructure and Travel Behavior

Congestion and Travel Time

Based on traffic data from the NORPC, DOTD and South Central Planning, the only roadway in St. John the Baptist Parish that experiences significant congestion and delay is Airline Highway (US-61). Most of this delay is experienced between Central Avenue (LA 53) and Walnut Street (LA 636-1). During morning peak hours, this stretch experiences traffic approximately 10% above capacity. During evening hours the traffic jumps to about 20% above capacity¹⁰.



There are, however, two intersections not along Airline Hwy that experience serious congestions: the intersections of Central Avenue & LA 640 and Hemlock Street (LA 3224) & West 5th Street (LA 44).

Emergency Evacuation

Hurricane Isaac, in 2012, resulted in heavy flooding in St. John Parish. In recent years, this event was the only storm that necessitated any large-scale evacuation and delayed reentry. In the post-disaster planning efforts, the Parish's existing evacuation plans were

¹⁰ Calculations based on DOTD traffic counts divided by NORPC prescribed roadway capacity.

reviewed and updated. This is a summary of the Parish's existing evacuation plan, as well as those procedures directed at moving carless and vulnerable populations out of harms way.

Existing Parish Evacuation Plans and Procedures

In the parish, the role of overseeing evacuation planning is tasked to the Office of Emergency Preparedness (OEP). Until recently, the parish did not offer assisted evacuation. The Parish is currently developing an internal evacuation plan.

Hospitals & Nursing Homes

Until recently, the parish did not offer assisted evacuation services for its residents. However, despite this addition the parish still requires hospitals, nursing homes and similar facilities to manage their own evacuation. In the event of a mandatory evacuation due to a hurricane, for example, a hospital in the parish would be required to provide their own transportation and to evacuate their own patients. The parish does require that such facilities submit an evacuation plan. This plan is reviewed by the OEP in accordance with the standard operating procedures and rules & regulations of the Federal Emergency Management Administration (FEMA) and the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP). These plans are reviewed on an annual basis.

Industrial Sites

The most likely cause for evacuation in the parish is a hurricane. However, the presence of a number of major petro-chemical facilities means that in the event of an industrial accident, the facility itself and the surrounding community may need to be evacuated. Companies that operate industrial sites in the parish are required to submit to the OEP a plan for evacuation of their facility in the event of an accident. Like the

Regional Hurricane Evacuation Protocol

- *Phase I* – Occurs 50 hours before the onset of tropical storm winds. This phase includes areas south of the Intracoastal Waterway and areas with no levee protection. There are no route restrictions for this phase of the evacuation.
- *Phase II* – Begins 40 hours before the onset of tropical storm winds. This phase includes areas south of the Mississippi River, which are levee protected but remain vulnerable to Category 1 and 2 hurricanes. There are no route restrictions for evacuation.
- *Phase III* – Evacuation begins 30 hours before the onset of tropical winds. Areas included are those on the east bank of the Mississippi River – such as the east bank of New Orleans and Jefferson Parish - and are vulnerable to a slow moving Category 3 or any Category 4 or 5 storms. During this phase certain routes will be directed and the Contraflow Plan will be implemented.

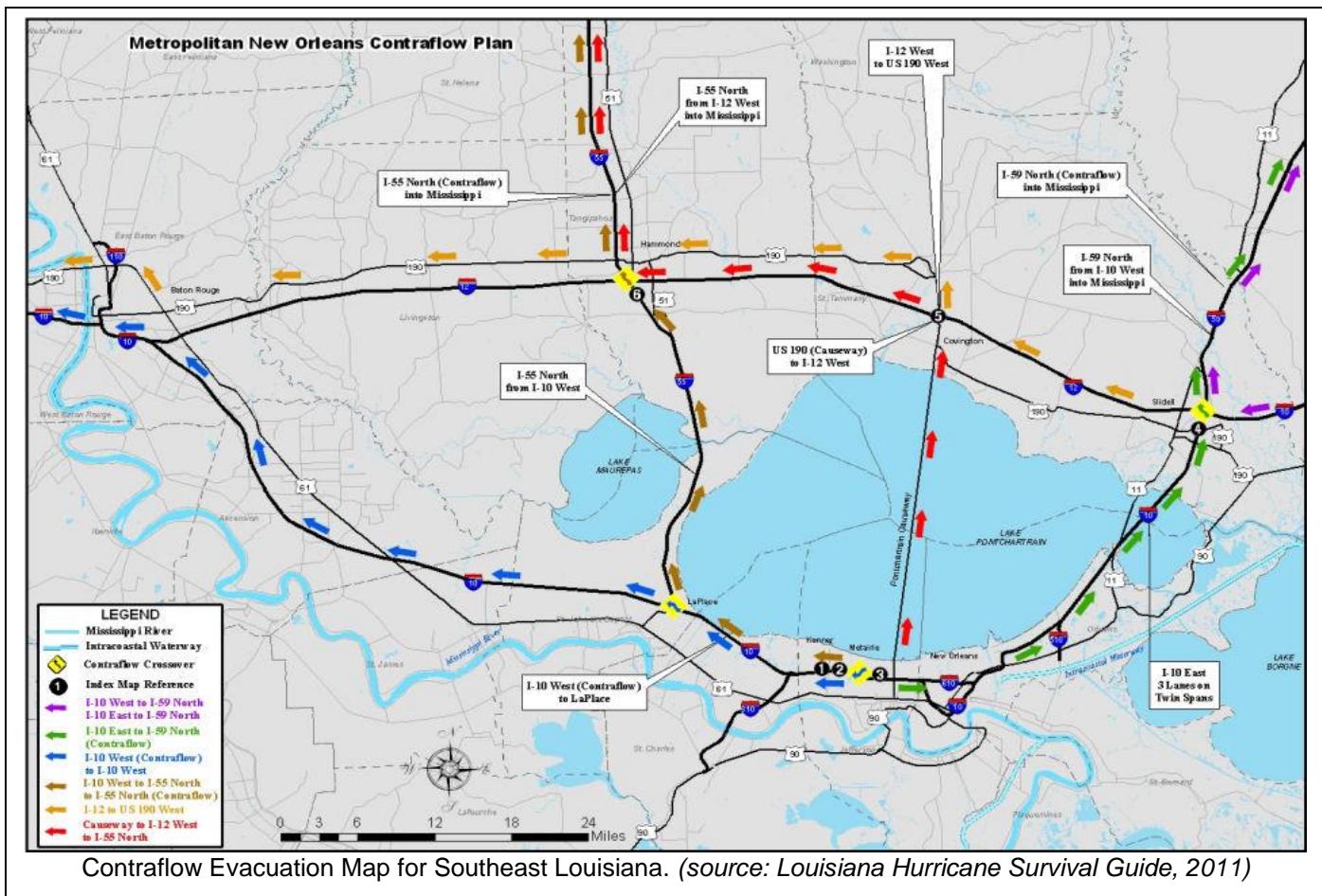
evacuation plans for hospitals and nursing homes, this plan is reviewed by the OEP on an annual basis in accordance with state and federal rules and regulations.

Evacuation Procedures

Parish residents who are not in need of any medically assisted evacuation and have a vehicle and means to evacuate will be subject to the statewide plan outlined below.

Statewide

The Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) oversees all state evacuation procedures. Because of various characteristics, they divide the state into two areas for the purpose of evacuation: southwest Louisiana and



Southeast Louisiana. Since St. John the Baptist Parish is in the Southeast that is where this plan will focus.

In the event of a hurricane, a phased evacuation will occur based on the geographic location and time in which tropical storm winds are expected to reach affected areas¹¹. Phase I of the state evacuation occurs for areas in south Louisiana that are vulnerable

¹¹ Governor's Office of Homeland Security and Emergency Preparedness. *Louisiana Hurricane Survival Guide*,

to Category 1 hurricanes and does not include SJBP. The west bank of SJBP is part of Phase II of the state evacuation plan while the east bank is part of Phase III.

It is during Phase II that the state's Contraflow Plan is enacted. In an effort to speed the evacuation, the Contraflow Plan allows for the reversal of travel lanes on limited access highways leaving the New Orleans metro region. This means that a section of Interstate 10 that normally has 8 lanes, with 4 traveling in each direction, will instead have all 8 lanes used for evacuation.

When contraflow is enacted, I-10 from Metairie near Causeway Blvd to La Place and the interchange with I-55 operates with all lanes allowing traffic to travel west. At the interchange with I-10 and I-55 in La Place half of the traffic is diverted north onto I-55 while the other half continues west on I-10.

Downriver Parishes:

New Orleans and the immediate suburbs of Metairie and Kenner comprise some of the most densely populated regions in Louisiana. This high population means that if a mandatory evacuation is called in both or either of these parishes, tens of thousands of people will be passing through St. John parish via I-10, Airline Hwy (US-61) and River Road. The sheer volume of people and traffic that would leave these parishes means that officials and residents in St. John Parish need be aware of events downriver before considering an evacuation order for St. John Parish.

Residents Needing Non-Medical Based Evacuation

Until recently the parish did not have a plan to provide any form of evacuation assistance for residents. Instead, residents were expected to use their own vehicles for evacuation. Residents who do not own a vehicle or are incapable to operating one must evacuate with friends and/or family capable of assisting them.

East St. John Elementary has been designated as the only pick up point for an assisted evacuation program in the Parish. Residents needing a ride from anywhere within St. John Parish – including the Westbank - must find their own way to that location, where buses will take them to shelters out of harm's way. At the school, evacuees are registered and pets are also accepted. The Parish medical officer is on hand to dispatch ambulances and RPTA vehicles to pick up homebound residents on an ad hoc basis, but this is not a guaranteed ride to safety.

Transportation Deficiencies

Interstate 10 – US-51 Interchange

The intersection of Interstate 10 and US-51 can flood during a typical heavy rain event, not just a tropical storm. The roadway surface of I-10 has only flooded recently during

Hurricane Isaac. When closed, alternate routes to avoid this intersection are lengthy, congested, or impossible. Significant truck traffic and most residents rely heavily on this intersection.

Street Connectivity

The street network in the parish is one that relies on a handful of thoroughfares for almost all traffic. The ability for people to use small, side streets to access their homes, jobs, shopping, etc. is limited. For many years, the parish has allowed the proliferation of cul-de-sac style subdivisions, many of which have only one point of access. As the parish grows in population, it is important to consider improving the connectivity of the street network. In many cases, a simple small street that connects the back of a subdivision to another roadway, allowing through and local traffic, is all that is needed.

As connectivity improves, congestions on major roadways may actually decrease because residents would have numerous route options, thus dispersing traffic throughout the street network instead of funneling it onto major roadways. The increased connectivity will greatly improve the ability for emergency services – police, fire, EMT, etc. – to respond to calls by providing more direct route options. It can also help to make walking and cycling more viable modes of transportation by providing more route options that can serve as alternatives to major thoroughfares.

Railroad Crossings in Residential Areas

Due to the presence of two freight railroads that travel east-west across the parish, some neighborhoods in Garyville, Reserve, and LaPlace have accessibility issues. One or more train can close streets for long times, in the worst cases on both ends of a street. Additionally, some neighborhoods contain numerous crossings in a short distance, often without safety devices.

Public Transportation

A demand response transit system is unreliable except for very low ridership levels, and is extremely expensive to operate. Without a fixed route system, parish residents have no access to transit, or have to use another mode. Additionally, a regional transit system, bus or rail, which connects to New Orleans, would offer an alternative to driving for commuters.

Edgard-Reserve Ferry

Without a ferry crossing between Edgard and Reserve, St. John Parish has no river crossing entirely within its boundaries. For an automobile, the ferry eliminates the need for a 21-mile trip across the Gramercy Bridge for the same journey. Without the ferry,

bicycles and pedestrians are left with no ability to cross the river. The ferry's funding and operations have been in significant jeopardy.

The Louisiana State Department of Transportation and Development (LADOTD) has operated the ferry. However funds for continued service were cut in early 2013. In May 2013, the State Department of Transportation announced they were temporarily extending operations by using recaptured revenues from the Parish's acceptance of ownership for several state roads in St. John Parish. This funding is only temporary, however St. John Parish government has committed to operating the ferry on a limited bases until a private operator can be found to take on the long-term management of the ferry.

Lack of Internal Parish Evacuation Transportation System

As mentioned previously the Parish participates in the GOHSEP regional evacuation process with the pick-up point located at the East St. John Elementary School. Parish residents needing evacuation without a vehicle and/or the means to evacuate must make their own way to that location to board busses that take them out of harms way.

Currently the Parish does not have a plan to bring people from various points within the Parish – including the Westbank - to this location. Serious consideration should be given to developing a Parish wide pick-up plan for evacuees.

Planned Transportation Projects

In 2008, the South Central Planning and Development Commission (SCPDC) completed a Master Transportation plan for the three river parishes, St. James, St. John the Baptist, and St. Charles. Using a financially constrained plan, they identified future roadway widening projects. In St. John Parish, there were four projects identified:

1. Interstate 55 from I-10 to Tangipahoa Parish line.
2. Interstate 10 from the St. Charles Parish line to I-55.
3. Airline Highway (US-61) from the St. Charles Parish line to LA 3179.
4. Belle Terre entrance ramp to I-10.

The New Orleans Regional Planning Commission has also included a number of projects into the Transportation Improvement Program (TIP) for fiscal years 2011-2014. These range from minor repairs to new construction. The NORPC will continue to oversee the TIP for St. John Parish, which is the primary conduit for federal funding of transportation projects.

One of the largest changes to the road network in St. John Parish is a plan to add additional access to Interstate 10 to areas west of LaPlace. Specifically, the Port of South Louisiana is interested in improved access for freight shipping. Currently, traffic

from the port travels east on US-61 and north on Belle Terre Blvd. to reach the interstate. This creates a bottleneck at the intersection of these roads. An Environmental Assessment and Environmental Impact Statement have been completed for this project. The proposed alignments fall into two categories: those that connect to Belle Terre Blvd. with a road north of Airline, and those that build a new interchange along the interstate (see map). The Port's preferred alternative connects W. 10th St. (LA 617) directly north to the interstate.



Future Transportation Concepts

Airline Highway Beautification

Most commercial activity in LaPlace is centered around Airline Highway, making it a highly visible corridor for residents and visitors alike. Additionally, it serves as the entrance to the Parish from St. Charles and St. James parishes. In public meetings, this road was often criticized for its appearance, litter, and unsafe center turn lane. Stricter sign regulations and enforcement would also help improve the commercial strip image of Airline Highway.

New Mississippi River Bridge

A bridge crossing of the Mississippi in St. John Parish has been discussed. Currently, there is a bridge to either side, or the Edgard-Reserve Ferry, which lacks long-term funding. The Port of South Louisiana is interested in this crossing to provide access to future industrial development sites on the west bank. The port's preferred location is along the extension planned from the I-10 down to W10th St.

Mississippi River Trails

St. John Parish already has some sections of its river levee paved as a multi-use path. These trails are both recreational amenities and can attract outside visitors. Access

points should be built in populated areas and to other trails. Both east and west bank levees are suitable for trail development, and would connect to a larger system already in place along the Mississippi River.

Open Canal Greenways

Open canals drain several communities that stretch away from the natural levees on the river. A greenway treatment for these canals would involve landscaping of the grassy banks, trees and furniture, bike trails, and walking paths. Because of their proximity to populated residential neighborhoods, safe and direct transportation for non-motorized modes could be achieved.

NO-BR Passenger Rail Station

A 2009 feasibility study for passenger rail from New Orleans to Baton Rouge identified one stop location in LaPlace. Approximately at the corner of the Kansas City Southern Tracks and Main Street, this station would be well located near the majority of the parish population. There would also be significant opportunities for new development within a walking distance of the station.

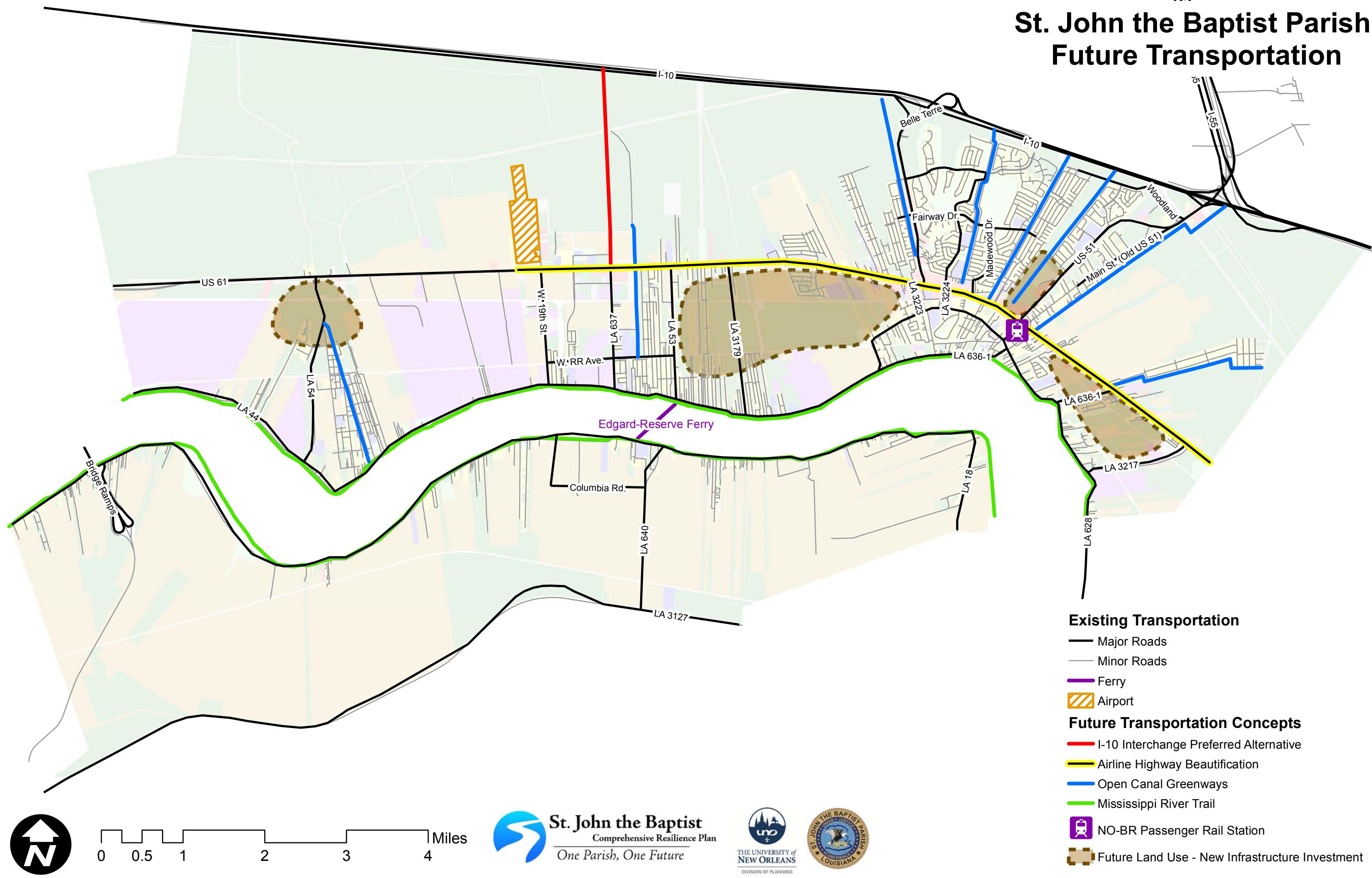
Future Land Use New Infrastructure

Based on the Future Land Use map, there are several areas where future development is possible, but a street network has not yet been built. New neighborhoods in these locations will require new minor streets and sidewalks. This is a normal function of the development process, but the general locations of the new infrastructure are shown.

Airport Expansion

The Port of South Louisiana has expressed interest in expanding the St. John the Baptist Parish Airport to handle freight cargo. This expansion would most likely occur along Airline Highway to the west of the existing airport in order to create a 10,000-foot east-west runway capable of handling cargo planes.

St. John the Baptist Parish Future Transportation



Suggested Transportation Goals and Policies

Goal: Maintain the flow of traffic on the road network throughout St. John Parish.

Policy: Use SCPDC and NORPC recommendations for future improvements to the road network.

Policy: Improve turning movements and signal timing on Airline Highway, and consider eliminating the center two-way turn lane.

Policy: Work with freight railroads to reduce lengthy blockages.

Goal: Protect critical transportation facilities from flooding.

Policy: In the short term, build temporary structures to prevent flooding of I-10 and US-51, and respond quickly to drain the area.

Policy: Ensure that future levee plans protect non-elevated sections of I- 10.

Goal: Study and implement transportation investments that help industry operate and grow.

Policy: New Interstate access for freight traffic from areas west of Belle Terre.

Policy: A possible bridge to ease access to the west bank industrial areas.

Policy: Airport expansion.

Goal: Create walkable neighborhoods and improve difficult crossings.

Policy: Require sidewalks and crosswalks in all new development.

Policy: Create complete pedestrian networks around schools.

Policy: Install pedestrian signals, crosswalks, and refuge islands across major thoroughfares.

Goal: Build bicycle and pedestrian transportation infrastructure.

Policy: Complete the Mississippi River Trail on both banks.

Policy: Build greenways along drainage canals.

Policy: Use low traffic neighborhood streets to complete a network for cyclists.

Goal: Improve public transit options for St. John residents.

Policy: Offer fixed route service on an east-west corridor across the parish.

Policy: Offer transit options to New Orleans and Baton Rouge for work commuters.

Policy: Support intercity rail projects that would place a station in St. John parish.

Goal: Implement an evacuation plan that helps all residents reach safety.

Policy: Set up multiple pick-up points, including west bank options.

Policy: Contract with transportation services to reach homebound residents.

Policy: Have committed and compensated drivers to ensure reliable bus operators in the case of evacuation.

VII Economic Development

Introduction

In 2007, St. John Parish adopted a 20-Year Land Use Plan as the blueprint for the subsequent development of a Parish wide Comprehensive Plan. The Plan included goals, objectives, and policies that identified, among other things, an economic development element as an important factor in helping the Parish promote and sustain business and industry Parish-wide.

Among other things, the economic development element establishes an economic vision for the community and expressed support for the core goal of growing the local economy. Implementation of the Economic Development Element is essential to the preservation and enhancement of the quality of life in St. John Parish. Economic development provides the community with the means to shape its destiny by ensuring that adequate levels of public services will be provided in the future.

The Parish's 2007 Plan establishes a 20-year path for how future development should be encouraged and evaluated. The Economic Development Element sets forth policies, which if successfully implemented, will maintain a healthy jobs-housing balance and provide for a diversity of quality businesses and jobs. Attracting and retaining quality jobs and development, preserving and enhancing the local economy, including agriculture, and maintaining the viability of the petrochemical industry are key aspects to furthering the quality of life for Parish residents. However, these plans should be updated periodically, through a "periodic review process", or as new elements are added these elements should focus on including any updated information.

St. John Parish government, representative business organizations, and other stakeholders contributed significantly towards development of the Economic Development element to the 2007 Plan. Cyclical economic conditions underscore the need to continuously evaluate local economic development opportunities.

The following statement reflects the general course set by the 2007 Plan and Economic Development element and summarizes the perspectives of the Parish and citizens on economic development:

St. John Parish's community and its economic future will take advantage of opportunities created by dynamic markets and competitive forces. The Parish will benefit from leveraging existing strengths into new economic power by providing the environment for strong workforce development. The focus of St. John Parish's Economic Development strategy is to grow

a strong, diverse, high-wage, economy that creates jobs at a rate in excess of population growth while maintaining and enhancing community identity and our quality of life.

Industrial recruitment and other economic development activities will support existing and emerging industrial clusters that have a significant knowledge-based component. Clusters targeted to drive the future economy are petrochemical, telecommunications, knowledge-based service industries, life sciences, healthcare, and expansion of locally owned businesses. There will also be an emphasis on the retention and expansion of existing businesses as the baseline for additional job creation.

To grow targeted industries and support the desired pattern of growth, St. John Parish must increase the inventory of prime commercial and industrial lands. The inventory should include an increase in the number of larger parcels that individually and collectively accommodate knowledge-based campus development and the clustering of targeted industries.

Economic development should be increasingly supported by master-planned and mixed-use developments in select areas that incorporate both traditionally defined manufacturing uses as well as office or commercial uses, and in some cases residential. The focus on a knowledge-based economy will increase the demand for campus-style development.

The development and marketing of a designated area containing high-technology and knowledge-based industries (conceptually referred to as the “Discovery Corridor”) will support the continued growth of existing high-technology firms and encourage more knowledge-based industries. To be competitive for economic growth and investment, the development process must be redesigned to support shorter timelines, more predictability, and cost effectiveness.

Local and state governments must focus infrastructure investments in areas designated as nodes of growth to support economic development. These investments can be supported by new public sector finance mechanisms sufficient to allow for infrastructure investment in advance of development and to direct growth to identified nodes.

The future economy of St. John Parish will be characterized by an increasing percentage of individuals who both live and work in the Parish. Expanded

opportunities and partnerships between education and business will provide an opportunity to engage citizenry and an educated workforce for existing and start-up companies. Our community will continue to recognize the expanding importance of our region and the significant economic benefit to be gained through regional cooperation and diversity.

Relationship To Other Elements Of The Comprehensive Plan

Economic development planning cannot be conducted in isolation. The economy plays a vitally influential role in determining whether or not the broad array of objectives and the strategic vision for the overall Parish Plan will be realized.

Economic development programs may not be successful without supporting land use, transportation, and capital facility initiatives. Therefore, the intent is to formulate a broad network of interdependent policies within the St. John Parish Comprehensive Plan that are mutually supportive. The Economic Development Element has been designed as an integral part of the Parish's 20-Year Plan. Recognizing the reciprocal benefits derived from strategies based on well coordinated policies, St. John Parish has ensured that its economic development initiatives are part of a complementary network of Comprehensive Plan policies (e.g., Land Use, Transportation, Parks, Recreation and Open space, Implementation, along with future Elements). They also support other goals expressed in the plan and the long-range vision for the Parish.

St. John Parish and the other regional jurisdictions should work to promote economic development as a way to stabilize the tax base. The emphasis is to create wealth for individuals and the community through aggressive job creation and diversified tax base opportunities.

Background And Existing Conditions

The purpose of the Economic Development Element is to set forth the framework and guidelines by which a balanced and stable economic base will be pursued. In formulating future plans, the Parish recognizes that a dynamic and diversified local economy is important for a community's identity, quality of life, and its tax base. This section summarizes the existing information on historical and existing employment patterns, evaluation of current and projected socioeconomic trends, and characterization of these issues as a basis for the policies contained in the next section. In 2008, the St. John the Baptist Parish Economic Develop department commissioned a detailed economic study and forecast for the Parish titled Economic Growth Outlook 2009 - 2017. This report was compiled by Bob Folse of Economic and Business

Research Services and was completed in February of 2008. The report is a detailed analysis of the existing and projected future economic activity in St. John Parish. This report forms the information base for the Economic Development Element.

Summary of Findings from Economic Growth Outlook 2009 – 2017

This report focused on the principle forces shaping population and economic growth in St. John Parish. The report identified several key findings that will help shape growth in St. John over the next 10 years. The Executive Summary provided a thorough overview of the report. The entire report is included as Appendix A to the Economic Development Element and is inclusive of all charts, graphs, and tables. Below is a broad summary of findings from the Executive Summary of this economic outlook report.

- The local economy is shaped by three main industrial sectors in addition to a broad range of expanding service, manufacturing industries, and retailing, as listed below
 - Petroleum/petrochemicals Processing
 - Maritime related transportation and warehousing
 - Construction Industries
 - Primary and Fabricated Metals
 - Food processing, retail trade
 - Health care and social assistance
 - Accommodation and food service, other service industries

These industrial sectors account for approximately 85% of employment, 92% of all earnings, and represent a broadening and more diversified range of industries impacting St. John's economy.

- Post-Katrina (2005-2007), employment increases from business expansion were most evident in the following sectors:
 - Manufacturing sector – 136 jobs
 - Retailing sector – 235 jobs
 - Accommodation and Food Service sector – 193 jobs
 - Wholesale trade sector – 160 jobs
 - Information sector – 179 jobs
 - Professional and technical service sector – 129 jobs
- Nearly \$4 billion from the private sector has been invested in new capital investments in St. John since 2000 including new or expanded manufacturing plant and equipment, terminal/storage facilities, laboratories, and other capital assets. This has lead to almost 1,200 permanent jobs and about 8,700 temporary construction jobs
- Estimates put the Parish's post-Katrina population in 2007 at 50,000, up from an estimate of 46,150 in 2005. This growth appears to have slowed as a result of

the tightening mortgage money markets. Overall, this population growth exceeds that of all Southeast Louisiana Parishes except one – St. Tammany.

- St. John Parish has attracted an above average proportion of middle to upper middle-income households since 2000. Slightly more than 56% of all households in St. John have incomes ranging from \$35,000 to \$125,000 as compared to 51% of households for the New Orleans Metropolitan area and 54% of households nationwide.
- The median age of St. John Parish's population is 32 years, significantly lower than both the median age of the New Orleans Metropolitan area and national population, which average 35 years. This indicates an overall parish profile of a generally younger population.
- St. John is experiencing a demographic trend toward the development of an adult labor force with a higher educational achievement consistent with the requirements of an expanding and more diversified industrial base.
- St. John Parish's ability to retain and attract skilled blue and white collar workers to fill the requirements of its growing and more diversified industrial base is obviously one of its strengths that will foster continued economic development
- Overall employment growth in St. John Parish is projected to average slightly more than 6% annually over the five year period 2007 – 2012, reaching a total of about 20,000 jobs. This represents an increase of about 4,800 jobs during that period.
- Industries expected to produce most of the employment growth in the Parish over the next 5 years (2008 – 2012) are:
 - Retail industries – 690 jobs
 - Manufacturing Industries (primarily petroleum/petrochemical and food processing industries) – 450 jobs
 - Administrative and Waste Services (primarily contract employment for construction, petroleum/petrochemical, and waste remediation industries) – 440 jobs
 - Accommodation and food service – 400
 - Construction industries – 380 jobs
 - Transportation and warehousing industries – 350 jobs
- Continuing the diversified employment growth pattern of 2007 – 2012, the projection for the following 5 years (2012 – 2107) indicate continuing employment increases among the leading growth industries:
 - Retail industries – 700 jobs
 - Accommodation and food services – 500 jobs
 - Transportation and warehousing – 450 jobs
 - Construction industries – 400 jobs
 - Health care and social assistance – 400 jobs

- Manufacturing industries – 350 jobs
- Other service industries – 250 jobs

Industrial and Commercial Land Analysis

The industrial and commercial land demand and supply has a direct impact on employment. Estimates are that St. John Parish's population and jobs base will continue to increase over the next ten years. Improving the present jobs/population ratios will require a proportionate amount of usable industrial and commercial property to maintain a strong tax base. If present economic and population forecasts are accurate, there will be significant additional land required for economic and residential development over the next 10 years

Table 7.1: Existing Land Use in St. John Parish		
LBCS Land Use Category	Acres	% of Total
Residential	3,615.87	7.37%
General Sales or Service	428.84	0.87%
Manufacturing and Wholesale Trade	2,579.93	5.26%
Transportation, Communication, Information, and Utilities	1,207.74	2.46%
Arts, Entertainment, and Recreation	521.01	1.06%
Education, Public Admin., Health Care, and Other Institutional	529.09	1.08%
Construction-Related Businesses	47.99	0.10%
Mining and Extraction	0	0.00%
Fishing, Hunting, Forestry, and Agriculture	17,519.62	35.73%
Not In Use	22,579.29	46.05%
Total	49,029.37	100.00%

According to the land use survey there are currently about 3,000 acres of land devoted to commercial and industrial/manufacturing activities in St. John Parish. Of that total, about 2,580 acres are being used for industrial/manufacturing purposes, or about 85% of total economic land use. This seems normal given the data included in the Parish's economic outlook.

If population growth meets the expectations outlined in the Parish's economic growth report, there will need to be significant additional commercial land developed to meet the future demand for retail and service activities. This will be key to the Parish maintaining a strong tax base.

A review of the current zoning in St. John indicates that there is ample zoned land available for future commercial or industrial development. Table 2 provides a breakdown of zoned land in St. John Parish. There are over 3,000 acres zoned commercial, or about 6.45% of total land. This represents nearly ten times the amount of land currently used for commercial purposes in St. John Parish.

Zoning	Total Acres	% of Total
C-1	793.97	1.62%
C-2	93.18	0.19%
C-3	2,278.05	4.64%
I-1	1,192.85	2.43%
I-2	962.46	1.96%
I-3	8,830.06	17.99%
MHD	2.26	0.00%
MHP	52.50	0.11%
PUD	32.87	0.07%
R-1	23,715.15	48.32%
R-2	58.51	0.12%
R-3	113.19	0.23%
R-4	350.87	0.71%
Rural	10,603.60	21.60%
	49,079.51	100.00%

The 2002 industrial land inventory revealed that the Parish's total industrial land base is approximately 10,985 acres, or about 22.4% of total available land. This indicates an excess supply of zoned industrial land of about 8,300 acres.

Focused Public Investment Planning

One thing that will be important for future commercial and industrial development is the status of infrastructure for the land currently zoned commercial and industrial. While having land appropriately zoned for new commercial or industrial development is important, perhaps more important is the status of the infrastructure capacity for that land. If the Parish is going to encourage new commercial and industrial development, it is imperative that the Parish immediately begin planning the development of infrastructure for this land.

Since St. John developed their land use plan in 2007, parish leaders have made a commitment to focus on economic development and balancing jobs and housing in the

parish. Parish leadership is committed to encouraging economic development and particularly the creation of high-wage jobs.

It is clear that existing revenue streams might not be sufficient to keep up with demands for public services and facilities. Transportation policy, or a lack thereof, has led to the myriad of traffic problems in some corridors. Park acquisition and improvements are not keeping up with population and employment growth. In the past, St. John dispersed its capital improvements expenditure throughout the parish providing partial solutions to many areas, but not complete solutions to problem areas. Given the limited resources available for infrastructure, the parish needs a more strategic approach to investment of public funds, focused on capital improvements in some select areas rather than spreading capital improvements throughout the parish.

A particular geographical area will produce acceptable levels of service for development in that area. Such areas can be said to contain “fully-served” land because all public facilities meet or exceed future development standards. If these areas are planned for employment development, then the parish will also be achieving one of its economic development goals.

St. John parish should develop a Focused Public Investment Plan (FPIP) that would allow the parish to target infrastructure improvements in areas that require the least cost to provide fully served land that is ready for industrial or commercial development by businesses providing good paying jobs. The FPIP does not dilute public investment by spreading it thinly in every part of the parish at the same time. The FPIP should also avoid public investments in areas that promote undesirable development.

St. John Parish has identified several Public Investment Areas (PIAs) through previous zoning that will be the industrial land geographical targets of the FPIP. PIAs are areas that concentrate the location of public facility capacity in order to produce fully served land suitable for economic development.

Economic Development Goals And Policies

St. John Parish Economic Development Vision Statement:

"St. John Parish will grow as a high-wage economy that creates jobs at a rate in excess of population growth, and an increasing percentage of the population will both live and work in St. John Parish. There will be an emphasis on emerging industrial clusters that have a significant knowledge-based component, while continuing an emphasis on retention and expansion of existing businesses.

Economic growth will be supported by master-planned and mixed-use developments in areas with adequate infrastructure, which will also be the primary focus for infrastructure investments that support economic development."

The St. John Parish Land Use Plan contained a series of policies for economic development. The intent of this Economic Development Element is to build on the policies already in place, provide more specific direction for implementation of economic development goals, and coordinate with other elements of the comprehensive plan.

Parish-Wide Planning Goals and Policies

GOAL 1: Enhance the Overall Economic Development Climate in St. John Parish.

Policy 1.1 The Parish will demonstrate its commitment to long-term economic growth by promoting a diverse economic base, providing opportunity for all residents, including unemployed and disadvantaged persons. Growth which helps to measurably raise the average annual wage rate of community residents and preserves the environmental quality and livability of our community, is viable growth and will improve the lifestyle of St. John Parish residents.

Policy 1.2 The Parish will demonstrate their commitment to the retention of those enterprises, which have created the economic base of the Parish, and promote their continued growth in a predictable environment, which encourages investment and job growth.

Policy 1.3 The Parish will encourage long-term growth of businesses of all sizes, because economic diversification and stratification are important factors in overall job growth for the Parish.

Policy 1.4 The Parish will promote productivity and quality among its businesses to meet world and market standards for their products and services.

Policy 1.5 The Parish will encourage higher educational levels for residents, and improvements in the measurable performance of high school graduates compared with other counties in the state.

Policy 1.6 The Parish may give priority assistance to employers who will increase the standard of living in the community.

Policy 1.7 The Parish will plan for long-term economic growth, which enhances the capacity of existing air shed for job-generating activities.

Policy 1.8 The Parish will provide for orderly long-term commercial and industrial growth and an adequate supply of land suitable for compatible commercial and industrial development.

Policy 1.9 The Parish will encourage the recruitment of new business employers to absorb the increasing labor force, and to supply long-term employment opportunities for Parish's residents who are currently employed outside of the Parish and for new residents.

Policy 1.10 The Parish will work with other regional partners to establish specific common benchmarks that will measure the region's overall economic viability. These benchmarks will be included in the Parish's Comprehensive Plan and are encouraged to be included in each jurisdictions comprehensive plan.

Policy 1.11 Encourage use of a multi-modal transportation system that facilitates the reduction of travel times and reduces the need for additional road construction within the region.

Policy 1.12 Following consultation with interested local governments, the Parish may designate, consistent with state requirements, major industrial developments and /or master planned developments across jurisdictions to foster economic development for St. John Parish and the region. Appropriate or required Intergovernmental Agreements consistent with the provisions of the state law shall accompany such designation.

GOAL 2: Continue to identify targeted industries to guide public policy, infrastructure development, workforce training, and other economic development initiatives.

Policy 2.1 Encourage long-term business investments that generate net fiscal benefits to the region, protect environmental quality, and are consistent with the objective of higher wage jobs for St. John Parish residents.

Policy 2.2 Encourage public and not-for-profit partnerships with private business interests in generating economic development projects that would not otherwise occur without the cooperation of all sectors.

Policy 2.3 Promote a diverse economic base, providing economic opportunity for all residents, including unemployed, under-employed, and special needs populations.

Policy 2.4 Provide priority assistance to employers who pay a family wage and thereby improve the region's standard of living.

GOAL 3: Assure an adequate supply of prime industrial sites to meet market demands for industrial development over the planning horizon to create an environment conducive for the startup, growth, expansion and retention of “targeted” industries.

Policy 3.1 In cooperation with the Parish's Economic Development Department, maintain a minimum ten-year supply of prime industrial land based on average absorption rates over the last five years.

- Designate the necessary acreage of vacant prime industrial land for the 20-year planning period.
- Discourage removal of land from the inventory that results in a less than 10-year supply of prime industrial sites.
- Update inventories of industrial lands at least every ten years to reestablish the 20- year supply of industrial lands.
- Encourage industrial land banking of large sites and “future urban reserve areas” to preserve large parcels at key locations for future industrial sites.
- New industrial sites that are part of a major industrial land bank shall be required to have a minimum of 75 acres.

Policy 3.2 Designate sites for industrial use at locations that will be accessible from major multimodal transportation sources (rail and marine facilities) and roadways of arterial classification or higher, potentially served with utilities, and free of major environmental constraints such as unsuitable soils, floodplains, archaeological sites, and wetlands. Coordinate public investment capital facilities planning expenditures to assure development of these lands.

Policy 3.3 Maintain an adequate inventory of properties designated for industrial use and that are suitable for a mix of business and industrial park, light and heavy industrial uses; include properties developed by both private and public entities; and provide access to multimodal transportation services including motor freight, rail, and marine facilities.

Policy 3.4 Restrict rezoning of primary, secondary, and tertiary industrial parcels for non-industrial use by preserving industrial land exclusively for those permitted uses in the industrial zone classification.

Policy 3.5 Consider amending the Comprehensive Plan Map and rezoning of prime, secondary and tertiary industrial or employment center lands to non-industrial or non-employment center uses, only after the Parish determines that (1) such lands cannot feasibly be improved to prime

industrial status due to physical conditions (such as topography, critical lands, street patterns, public services, existing lot arrangement, etc.), (2) a non-industrial or non-employment center designation and zoning is more appropriate in light of new circumstances and applicable planning policies, or (3) after other replacement sites within the Parish of equal or greater industrial potential have been designated industrial on the Comprehensive Plan Map and zoned to achieve no net loss of business park, office campus, and industrial lands.

GOAL 4: Provide commercial sites adequate to meet a diversity of needs for retail, service, and institutional development in St. John Parish.

Policy 4.1 In cooperation with local officials, maintain an adequate supply of commercial lands on the East and Westbanks of St. John Parish, based on average absorption rates of the last five years plus an appropriate market factor.

- Designate sufficient commercial land for the 20-year planning period within St. John Parish.
- Discourage removal of commercial land from the inventory that results in a less than 10-year supply of commercial sites.
- Update inventories of commercial lands at least every ten years.
- Encourage infill and redevelopment of underutilized commercial sites.

Policy 4.2 Locate convenience-oriented retail and service developments adjacent to residential neighborhoods.

Policy 4.3 Encourage commercial and mixed-use developments to locate on current or planned transit corridors; encourage transit-oriented site planning and design.

Policy 4.4 Develop and maintain design guidelines to ensure that commercial projects are developed with minimal impact on surrounding land uses, are consistent with related community appearance/design guidelines, and assure pedestrian as well as vehicular access.

Policy 4.5 Permit home occupations that are consistent with the character of adjoining residential properties and neighborhoods.

Policy 4.6 Encourage responsible waterfront development for commercial uses where environmentally and economically feasible.

GOAL 5: Provide a continuum of educational opportunities responsive to the changing needs of the work place locally and regionally to help.

Policy 5.1 Encourage continuing education, skills upgrading, mentoring, and lifelong learning programs suitable for large and small employers.

Policy 5.2 Consider incentives to link proposed industrial development projects with job training, education, and housing programs.

Policy 5.3 Encourage improvement of the region's educational network, including K-12 and higher education.

Policy 5.4 Support development of a Community College in St. John Parish that will focus on education and training for employment opportunities in St. John Parish.

GOAL 6: Encourage infrastructure development and services necessary to serve new industrial development.

Policy 6.1 Coordinate the Capital Facilities Elements of local jurisdiction's plans so that infrastructure funding and construction is consistent with parish-wide policies for industrial development.

Policy 6.2 Prioritize infrastructure development in advance of need to areas that are suitable for industrial development:

- When siting a regional/corporate office development, land use compatibility, effectiveness, and family-wage jobs created shall be considered; and,
- Emphasis on infrastructure for development should be placed to serve major industrial areas with proximity to the I-10 corridor.

Policy 6.3 Encourage port infrastructure improvements along the Mississippi River in order to expand support for deep-water vessels and industries dependent upon regional import-export trade.

GOAL 7: Maintain and enhance opportunities for resource-based industries located on rural lands in St. John Parish.

Policy 7.1 Encourage resource-based industries, including agricultural, forestry, and aggregate materials, which are consistent with maintaining rural lands in the parish as consistent with the Comprehensive Plan Vision Statement.

Policy 7.2 Implement programs to encourage agricultural and forestry management of rural tracts consistent with sound environmental practices.

GOAL 8: Provide incentives for “targeted” industries to guide public policy, infrastructure development, work force training, and other economic development initiatives. Incentives for targeted industries should focus on identified clusters for which the region has a strategic advantage and those supported by existing infrastructure and workforce base.

Policy 8.1 Undertake parish sponsored planning efforts in targeted areas to address industrial development and related commercial, open space, recreation, and critical land issues.

Policy 8.2 Conduct pertinent wetland delineation studies and master plans to identify areas for industrial, commercial, open space, recreation, and environmental uses, to include wetland banking.

Economic Development Strategies For St. John Parish

The following is a recommended set of strategies needed to implement the identified economic development goals and policies. The strategies are not in any particular order, but are rather designed to give Parish officials a wide array of strategies to choose from. As always, funding and priorities change, so the strategies should be viewed as flexible since it is likely that changing conditions will result in the need to shift strategies in the future.

- Expand the St. John Parish Economic Development Department to include at least one person focused on business and industrial retention and recruitment; and add additional staff as necessary
- Focus on existing clusters where the region has a strategic advantage, are supported by existing infrastructure, and for which the parish can provide a ready labor force
- Identify existing new and emerging industrial clusters that offer the potential for growth within the local and regional economy. Refine the locational and supportive requirements for each cluster and recommend programs and public sector actions necessary to support growth in that sector.
- Fund regional targeted industry recruitment programs to attract new business investments in St. John Parish.
- The Parish’s Economic Development Office should partner with local University Business Development Centers on the creation of Parishwide strategies and programs to support targeted industries.
- Support the expansion of technical and professional training capabilities in St. John Parish by developing partnerships with regional educational institutions to support workforce development for targeted industries. In cooperation with

Delgado Community College, support establishment of a regional training center that offers career progression for those seeking advanced training in high-technology fields. Continue to support vocational skills training through the St. John Parish public education system.

- Support creation of a Parish-wide Workforce Development Council to spearhead creation of a workforce development plan for the next 20 years.
- Increase the industrial land base to allow for large-acreage sites (greater than 75 acres) and support aggregation of land for large master-planned, mixed-use development on industrial lands.
- Support retail commercial development and residential development in order to create employment centers.
- Allow for the development of a broader scope of non-retail office commercial uses on designated industrial lands to allow for the location of targeted industries. Routinely update the zoning ordinance to reflect the emerging market and economic demand for industrial development.
- Designate additional industrial land inventory in areas designated as nodes of growth sufficient to accommodate industrial clusters, particularly on the east and west ends on the Westbank of St. John Parish.
- Make targeted infrastructure investment in advance of business growth to guide development and to facilitate the development process.
- Create larger sites (greater than 75 acres) for industrial and corporate park development by using public sector mechanisms (e.g., ports and public development authorities) to aggregate smaller parcels.
- Establish industrial land banks in areas that have the capability and potential to support the development of targeted industrial clusters.
- Create and designate an area to be called the "Discovery Corridor" to further the growth of high technology and knowledge-based industries. Create a sub-area and infrastructure development plan in cooperation with the private sector to promote desired development and business within the corridor.
- Support the development of new broad-based funding mechanisms to finance infrastructure investments in support of focused industrial development and recoup investments as development occurs.
- Encourage inter-jurisdictional revenue sharing to support targeted investment in certain industrial clusters.
- Support the improvement of the efficiency of the permit review process and a 60- to 90-day permit review for all priority projects
- Regularly benchmark local development review processes against competitor Parishes with similar targeted industries with the intent to match or beat benchmarks for Parishes competing for like investments.

- Update Parish development regulations to allow designation of those commercial and industrial development proposals that result in significant economic benefits (including job creation, high-wage jobs, investment, and public revenue generation) as 'Projects of Parish-wide Significance. For such projects:
 - Develop expedited permitting processes and coordination mechanisms to facilitate economic development
 - Create project advocates or permit teams within municipal permit authorities that provide individualized support and coordination
 - Establish a 60- to 90-day development review process benchmark
 - Conduct training sessions for public officials and staff on economic development to educate individuals regarding private sector perspectives of land development.
- Encourage and support public efforts that empower efficient development:
 - Create and fund a publicly owned and operated wetland mitigation bank to provide a convenient and efficient mechanism to convert low-value wetlands that impinge upon the development of industrial and commercial properties
 - Create sub-area plans for each node of growth to the level that developmental and environmental permits are available in a timely and efficient manner.
 - Create processes that allow pre-qualification of individual sites so development and environmental permits are available in a timely manner.
- Support transportation improvements and expansion of the interstate corridors to increase freight mobility and movement of the regional labor pool including any initiatives to develop regional high-speed rail service to St. John Parish.
- Support continued cooperation between regional port authorities to increase investment that improves the transportation of goods and services to export markets.
- Encourage the recruitment and location of compatible targeted industries, especially knowledge-based, high-wage businesses to St. John Parish.

IX Hazard Mitigation Element

Introduction

When considering hazards in Southeast Louisiana, the kind of hazards that often comes to mind are hurricane related. However, there are many other hazards that pose a threat to St. John the Baptist Parish. They include natural hazards such as tornadoes, and man-made hazards like chemical or industrial accidents. This chapter is designed to both provide guidelines for development and redevelopment in sensitive areas prone to hazards and to help the residents and the Parish to be better equipped for disasters before they occur.

Scope and Authority

St. John the Baptist Parish has a Hazard Mitigation Plan in place that was adopted in December of 2010. The Robert T. Stafford Act of 1988 (P.L. 93-288) that was amended with the Disaster Mitigation Act of 2000 (P.L. 106-390) mandates that states and local governing bodies must compile and formally adopt a Hazard Mitigation Plan as a prerequisite for receiving federal assistance (funds) after a disaster. Those plans must also be updated every five years. St. John met those requirements with the December 2010 edition of its Hazard Mitigation Plan.

The One Parish One Future Comprehensive Plan Hazard Mitigation Element uses the Parish's adopted Hazard Mitigation Plan as a guide for this section of St. John the Baptist's Comprehensive Plan; and will detail the hazards being faced by the residents of the Parish. It is, in part, a repetition of the information found in the Hazard Mitigation Plan, but unlike that information this section seeks to connect the planning process to the hazard preparedness and recovery process as a tool to assist the Parish in evaluating the impacts of hazards on future development and redevelopment proposals.

Planning Process

Hazard mitigation planning identifies the processes of reducing the disruption and loss of life, along with the property damage that results from both natural and man-made disasters. This element is derived from a number of sources including:

- Evaluation of existing development patterns related to hazard prone areas
- Identification of areas previously affected by disasters or hazards
- Identification of areas potential at risk from disasters or hazards
- Citizen input during comprehensive plan public meetings as well as during the FEMA recovery planning process following Hurricane Isaac

All of these went into developing the goals and policies for hazard mitigation that the Parish should follow when reviewing and planning new development or for redevelopment within St. John Parish.

Risk Assessment

Risk assessment is the process by which potential loss to a community – loss of life, personal injury, economic injury, and property damage – resulting from a specific disaster is measured. The process involves the following five steps:

- 1) Identify Hazards
- 2) Hazards Profile

Risk assessment provides the foundation for mitigation planning. It involves focusing on areas of greatest need by evaluating which populations and facilities are most vulnerable to a specific type of hazard and to what extent injuries and damages may occur.

This section on risk assessment profiles all natural and manmade hazards that pose a threat to St. John Parish. The list of hazards profiled was developed based on information from a variety of sources including recent events, historical records, existing emergency management plans and the knowledge of local residents and experts.

1. Identifying Hazards

The first step to risk assessment is the identification of hazards that pose a threat to the community. A hazard is and source of potential danger or adverse conditions that exist within an area. These can be natural, such as hurricanes and tornadoes, or man-made like chemical storage facilities or nuclear power plant failures.

The following hazards were identified for St. John the Baptist Parish:

Natural Hazards:

- Flooding
 - FIRMs
 - Repetitive Flooding
 - St. John the Baptist Parish flooding: storm events/drainage issues
- Severe Storms
 - Hurricanes/Tropical Storms
 - Winter Storms
 - Hail Storms

- Thunderstorms
- Tornadoes
- Drought
- Extreme Heat
- Expansive Soils

Man-Made Hazards:

- Levee Failures
- Industrial Accidents
- Nuclear Accidents
- Drinking Water Contamination
- Issues from Neighboring Parishes
- Development in hazardous areas

Because of the topography of the parish, landslides and land subsidence do not pose significant threats¹². Similarly, there are no dams within the parish so there is no risk of dam failure. The second step is to develop hazard profiles. Each profile lays out the characteristics and potential consequences of each hazard.

2. Hazards Profile

Natural Hazards are the single largest contributor to catastrophic or repetitive damage to communities nationwide. They are atmospheric, geologic, hydrologic and seismic events that adversely affect human life, property or activity.

Flooding: This hazard can occur during any time of the year, and can come on quite quickly given the relatively low elevation in the region. Most of the flooding in the parish comes from heavy rain – both from hurricanes or tropical storms as well as regular rain systems – as well as Lakes Pontchartrain and Maurepas.

Flooding is defined as the accumulation of water within a water body and the overflow of excess water onto adjacent floodplain lands. Flooding can occur during any time of the year, and can come on quite quickly given the relatively low elevation in the parish. Most of the flooding in the parish comes from heavy rain – both from hurricanes or tropical storms as well as regular rain systems – as well as over/back flow from Lakes Pontchartrain and Maurepas, and Lac Des Allemandes and the associated wetlands in the area. The land in the parish is low-lying like much of the rest of the state.

¹² St. John the Baptist Parish Final Hazard Mitigation Plan, December 2010.

Floodwaters collect in the low lands, saturate the grounds, and overload the drainage systems causing flooding.

For purposes of the National Flood Insurance Program (NFIP), “flood zones,” or “Special Flood Hazard Areas (SFHA), have been determined through hydrological and hydraulic analysis. These flood zones are mapped on what is called the Flood Insurance Rate Map (FIRM). Each community that enters into the NFIP is mapped and given a FIRM that details their community’s flood risks.

Each zone or SFHA represents a differing degree of risk from being inundated (flooded) by the 1% annual chance flood. The 1% annual flood event is the most commonly referred to as the base flood, from which the term “Base Flood Elevation (BFE)” is derived. The 1% annual flood event is often mis-categorized as the “100-year storm” which gives people the false impression that it only happens once every 100 years. This is not accurate. The 1% annual flood event has a 1% chance of occurring every year¹³.

For more information on FIRMs, or to find out what flood zone your property is located in, go to FEMA’s website¹⁴ or call the St. John the Baptist Parish Planning and Zoning Department. There will be more discussion of St. John the Baptist Parish flood zones in the section entitled “Levee Failures” on page XX of this document.

The overbank flooding of rivers and streams is the most common type of flood event in St. John. This type of flooding is called riverine flooding. Despite the proximity to the Mississippi River and the fact that the entirety of the parish exists within the river floodplain, most of the flooding in the parish is due to heavy rains that overload the drainage system. During May of 2011, there was remarkably high water in the Mississippi, and the threat of riverine flooding was high for most of southern Louisiana. Luckily for the parish, there was no reported flooding from the high water levels in the Mississippi reported in residential areas.

Repetitive Flooding: The NFIP is continually faced with the task of paying claims while trying to keep the price of flood insurance at an affordable level. It has a particular problem with repetitive flood loss properties, which are estimated to cost roughly \$200 million per year in flood insurance claim payments. Repetitive flood loss properties represent only 1.4% of all flood insurance policies, yet historically they have accounted for nearly one-third of the claim payments (over \$9 billion to date). Mitigating these repeatedly flooded properties will reduce the overall costs to the NFIP, the communities

¹³ *Ibid*; also: http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/flood_zones.shtm. Last updated August 11,

¹⁴ <http://www.fema.gov/hazard/map/firm.shtm>

in which they are located, and the individual property owners. Ultimately, mitigating repeatedly flooded properties benefits **everyone**.

A *Repetitive Loss property (RL)* is a NFIP-insured property where two or more claim payments of more than \$1,000 have been paid within any rolling 10-year period since 1978. A *Severe Repetitive Loss Property (SRL)* is a single or multiple family residences that has had four or more claims of more than \$5,000, or two claims that cumulatively exceed the reported building's value. See the map on page XX for the location of repetitive loss areas in St. John Parish.

Severe Storms: The parish is also at threat from severe storms such as winter storms, hail storms, and thunderstorms. As previously mentioned, heavy rain systems can overload the drainage system and cause extensive flooding in the parish. Not being able to rely on gravity drainage due to the flat and subsiding land only exacerbates the problem of heavy rain systems. The following severe storm events were federally declared disasters:

Table 9.1: Federal Disaster Declarations: Severe Storms

Type	Date Disaster was Declared	Disaster Declaration number
Severe storm, flood	04-27-1973	374
Severe storm, flood	05-09-1978	556
Severe storm, flood	05-10-1995	1049

Source: Federal Emergency Management Agency (FEMA)

Although they are more common in other parts of the country, winter storms can happen in the South. Due to the lack of common occurrence, winter storms in the South may be more impactful because the populace makes less preparation. There have been no federally declared disasters for winter storms in St. John the Baptist Parish.

Hail damage causes up to \$1 billion dollars a year to property and crops across the United States¹⁵. Hail generates inside a thunderstorm system that has intense updrafts of warm, moist air and downdrafts of cold air. When rain becomes trapped in the up and down drafts of thunderstorms, in the right conditions the rain droplets freeze and fall to the earth as hail. The size of hail is related to the intensity and size of the storm

¹⁵ <http://www.erh.noaa.gov/er/cae/srvwx/hail.htm>; last updated May 5, 2010

system. Hail can range in size; from $\frac{1}{4}$ of an inch up to the largest recorded hail measuring in at 7.0 inches in diameter¹⁶.

There have been no federally declared disasters for hailstorms in St. John the Baptist Parish.

Table 9.2: Recorded Hailstorm Events in St. John Parish

Date of Hail occurrence	Reported size of Hail
February 11, 1993	One inch
October 27, 1995	1 $\frac{3}{4}$ inch
April 14, 1996	$\frac{3}{4}$ to one inch
May 11, 1999	$\frac{3}{4}$ to one inch
March 18, 2000	One inch
March 6, 2003	1 $\frac{3}{4}$ inch

Table X: Recorded hailstorm events in St. John the Baptist Parish as reported by the NOAA NCDC

Hurricanes and Tropical Storms: The history shows that residents of Louisiana have a 1-in-10 chance of being affected by a hurricane¹⁷. This means you have a far better chance of experiencing a hurricane than winning the Louisiana Lottery. The following tropical storms and hurricanes were federally declared disasters that affected St. John the Baptist Parish:

Table 9.3: Federally Declared Distasters in St. John the Baptist Parish

DR #	Declaration Type	Declaration Date
208	Hurricane Betsy	9/10/65
315	Hurricane Edith	10/13/71
374	Severe Storm, Flood	4/27/73
556	Severe Storm, Flood	5/9/78
752	Hurricane Juan	11/1/85
956	Hurricane Andrew	8/26/92
1049	Severe Storm, Flood	5/10/95
1246	Tropical Storm Frances & Hurricane George	9/23/98
1380	Flood, Tropical Storm Allison	6/5/01

¹⁶ *Ibid*; Largest recorded hail size in Aurora, Nebraska on June 23rd, 2003

¹⁷ *Louisiana Coastal Hazard Mitigation Guidebook*, May 2008.

1435	Tropical Storm Isidore	9/26/02
1437	Hurricane Lili	10/3/02
1548	Hurricane Ivan	10/18/04
1603	Hurricane Katrina	8/29/05
1607	Hurricane Rita	9/24/05
1786	Hurricane Gustav	9/2/08
1792	Hurricane Ike	9/13/08
4080	Hurricane Isaac	8/29/13

Source: Federal Emergency Management Agency (FEMA)

Tornadoes: There are, on average, 1,200 tornadoes that touch ground in the United States annually¹⁸. According to the Federal Emergency Management Agency's (FEMA) all-disaster preparedness website¹⁹, a tornado is defined as:

“...a rotating, funnel-shaped cloud that extends from a thunderstorm to the ground with whirling winds that can reach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long.”

There have been thirteen (13) recorded events by the National Oceanic and Atmospheric Administration's (NOAA) National Climatic Data Center (NCDC).²⁰ Tornadoes in this region are often, but not always, results of tropical storm/hurricane systems moving through. Tornadoes that form as a result of a tropical storm or hurricane system typically form in the right-front quadrant of the storm; they are also found randomly in the rain bands surrounding the system, and rarely have the hail and excessive lightning that typically accompanies tornadoes elsewhere in the country.²¹ As shown on NOAA's Storm Prediction Center's Tornado Maps, St. John the Baptist Parish has had between one and ten tornadoes from 1952-2010.²²

Table 9.4: Significant Tornado events in St. John the Baptist Parish.

Date	Fujita-Scale Category	Damage	Injuries	Fatalities
November 22, 1961	F2	\$25,000	0	0
December 16, 1983	F4	\$25 Million	25	0

¹⁸ <http://www.spc.noaa.gov/efscale/>; last updated August 4, 2011

¹⁹ www.ready.gov

²⁰ St. John the Baptist Parish Hazard Mitigation Plan, December 2010

²¹ From the National Oceanic and Atmospheric Administration's National Hurricane Center: <http://www.nhc.noaa.gov/HAW2/english/tornadoes.shtml>

²² <http://www.spc.noaa.gov/wcm/>

August 25, 1992	F5	\$25 million	32	2
June 30, 2003	F0	Unknown	4	0
May 15, 2010	F0	\$10,000	0	0

Source: St. John the Baptist Parish Hazard Mitigation Plan

Drought: Defined by FEMA as “a water shortage caused by a deficiency of rainfall,” droughts are able to happen in any region and climate. The impact and duration of a drought are dependent upon things such as the typical meteorological conditions of the region and the soil types in the area²³. There have been no federally declared disasters for droughts in St. John the Baptist Parish.

There are four types of droughts as defined by FEMA: meteorological drought (deviation from the average), hydrologic drought (lack of rains), agricultural drought (soil moisture deficiencies), and socioeconomic drought (supply does not meet demands). The National Climate Data Center has a record of the driest months throughout 1895-present day. The table below shows the top 10 driest months for Climate Division 9, which includes St. John the Baptist Parish. They are ranked by their deviation from the 20th century average.

Table 9.5: 10 Driest Months for Climate Division 9

Period	Amount of Rain in Inches	20 th Century Average	Deviation from 20 th Century Average
January 2003	.31"	4.89"	-4.58"
September 2012	1.79"	6.34"	-4.55"
July 2000	2.66"	7.18"	-4.52"
March 2006	.56"	5.07"	-4.51"
May 2000	.44"	4.77"	-4.33"
August 2011	2.25"	6.45"	-4.20"
May 2011	.60"	4.77"	-4.17"
April 1999	.19"	4.28"	-4.09"
December 2011	1.39"	4.01"	-3.52"
April 2011	.44"	4.28"	-3.84"

²³ FEMA: *Multi Hazard Identification and Risk Assessment*, 1997

Extreme Heat: FEMA defines extreme heat and a heat wave as “an extended period of extreme heat...often accompanied by high humidity²⁴.” Extreme heat/heat waves are hazardous in that they can push the capabilities of average human bodies beyond their limits. The combination of high heat and high humidity make the body work overtime to maintain a healthy internal temperature.

Expansive Soils: Certain types of soils are able to expand and/or shrink based on the amount of water present in them. These types of soils are referred to as “expansive soils” that pose a particular problem to structures built on them. St. John the Baptist Parish has experienced issues with expansive soils given the heavy rains and dry periods associated with this region, as well as the soil types in the parish²⁵. The Southeast region of Louisiana – which includes St. John the Baptist Parish – is considered to be in an area is characteristically “underlain by soils with abundant clays of high swelling potential²⁶.”

Man-made Hazards:

Man-made hazards are hazards caused by human action - a hazard that would not have occurred in the absence of human activity. They include everything from accidents like chemical spills to structural failures like the collapse of a bridge or levee. But man-made hazards also include disasters that result from development in areas prone to serious and/or frequent hazards, causing communities to be more vulnerable to natural hazards as they grow and develop.

Development in areas prone to a natural hazard: A significant cause of man-made hazards is our failure to appreciate the risk involved with building in hazard prone areas. It should not shock anyone when homes built in a flood plain flood. In truth, almost every place in the United States is subject to some natural hazard or the other. In St. John Parish, flooding presents the primary risk – whether caused by a hurricane, heavy rainstorm or levee breach. Fortunately for the parish, majority of the current development is located in the 500-year flood plain – meaning that in any given year, there is a 1 in 500 or 0.002% chance of serious flooding.

However, development pressures have forced construction in the 100 year flood plain where the risk of serious flooding is considerably higher (1 in 100 or 0.01% chance). This only increases the community’s risk to flood hazards. In order for residents in these areas to qualify for flood insurance through the National Flood Insurance Program

²⁴ <http://www.ready.gov/heat>

²⁵ St. John the Baptist Parish Hazard Mitigation Plan, December 2010, pp 78-82

²⁶ "Swelling Clays Map of the Conterminous United States" by W. Olive, A. Chleborad, C. Frahme, J. Shlocker, R. Schneider and R. Schuster; 1989

(NFIP), their houses must be elevated to the Base Flood Elevation (BFE) as prescribed by the FEMA's Flood Insurance Rate Map (FIRM).

While new construction is required to build to the area's BFE, the construction of higher houses does not eliminate the risk of flooding. A simple increase in development, and thereby an increase in impermeable surfaces, would result in an increase in rainfall runoff.²⁷

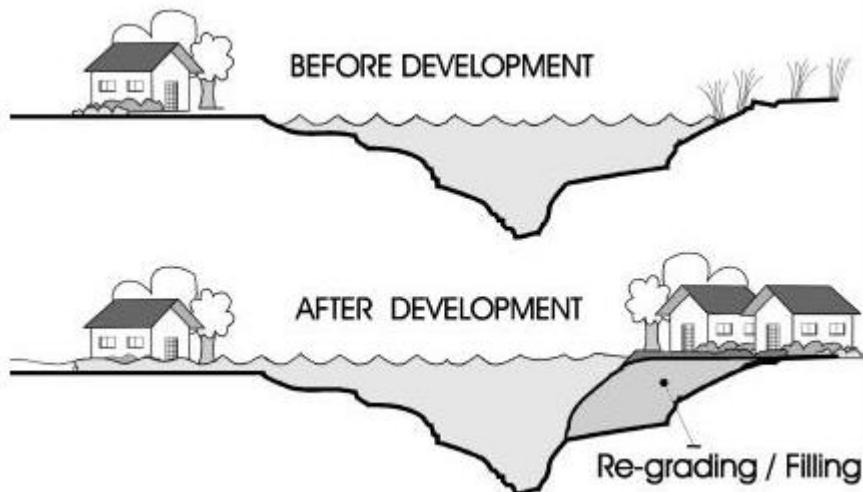
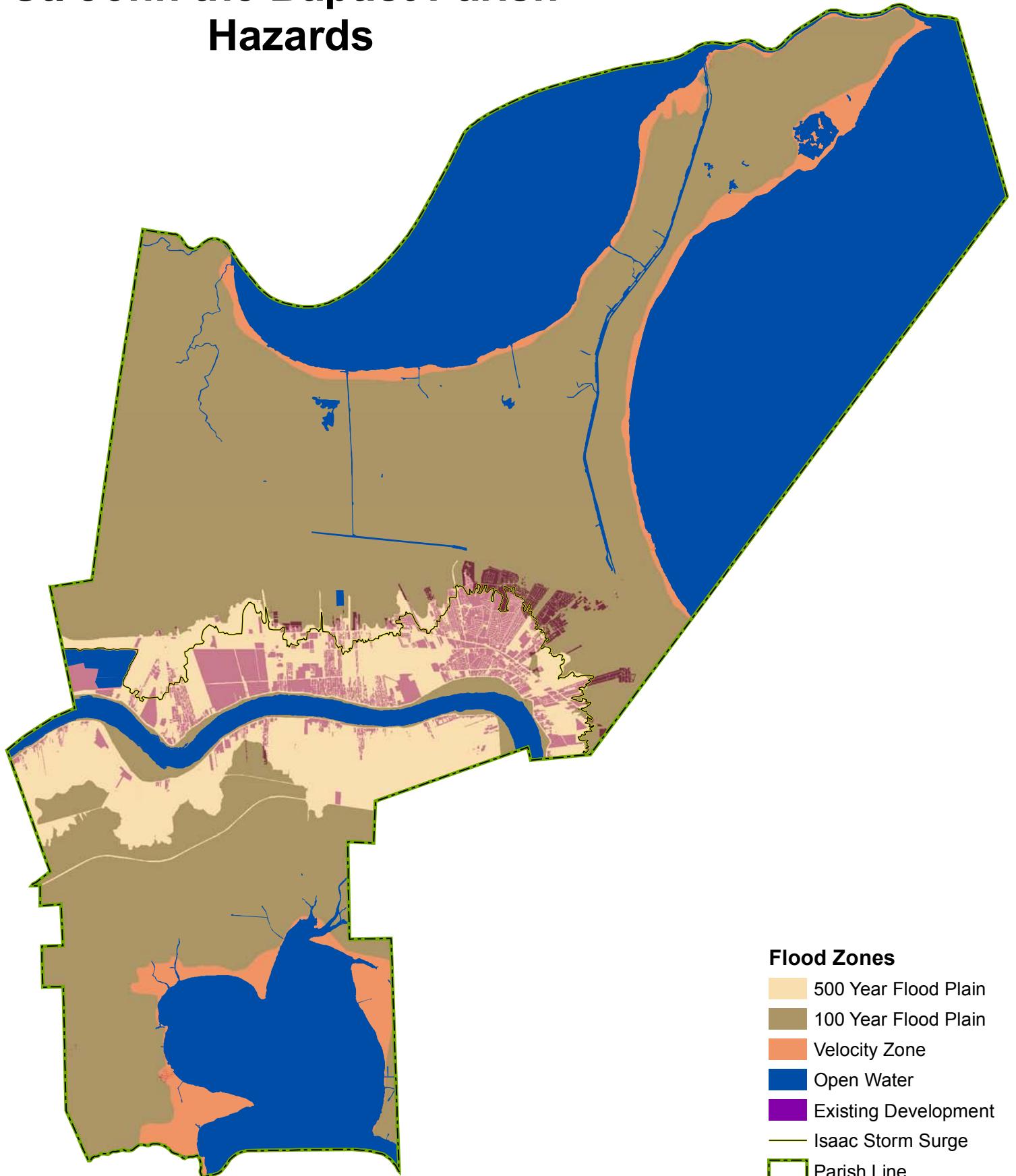


Figure 1: Effect of re-grading & filling on flood waters²⁸

²⁷ Rowan, Peter. *St. John the Baptist Parish Reconnaissance Report*. US Army Corp of Engineers. February 4, 2003.

²⁸ French & Associates. *Managing Floodplain Development Through the National Flood Insurance Program*. Federal Emergency Management Agency. March 1998.

St. John the Baptist Parish Hazards



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Levee Failures

Levees are dirt or clay embankments built to keep water within a channel, designed to protect agricultural and urban areas from flooding²⁹. The only levee in St. John the Baptist Parish is the Mississippi River Levee, which is part of the Hurricane and Storm Damage Risk Reduction System (HSDRRS) managed by the US Army Corp of Engineers (the Corps). The HSDRRS includes the levees on both the East and West Banks of St. John Parish.

Levee failures are rare events and usually coincide with other events that may cause them. In SJBP a major storm like a hurricane or tropical storm is the most likely reason for levee failure. The most common types of levee failure are³⁰:

Overtopping: Overtopping is when the waters on the outboard side of the levee rises above the levee structure and spills into the inboard side. In the case of an earthen levee with a floodwall on top, the overtopping water may cause erosion of the levee structure as it falls over the floodwall onto the inboard side. The resulting scour trench can compromise the integrity of the floodwall, the potential failure of which would lead to significant flooding on the inboard side of the levee.

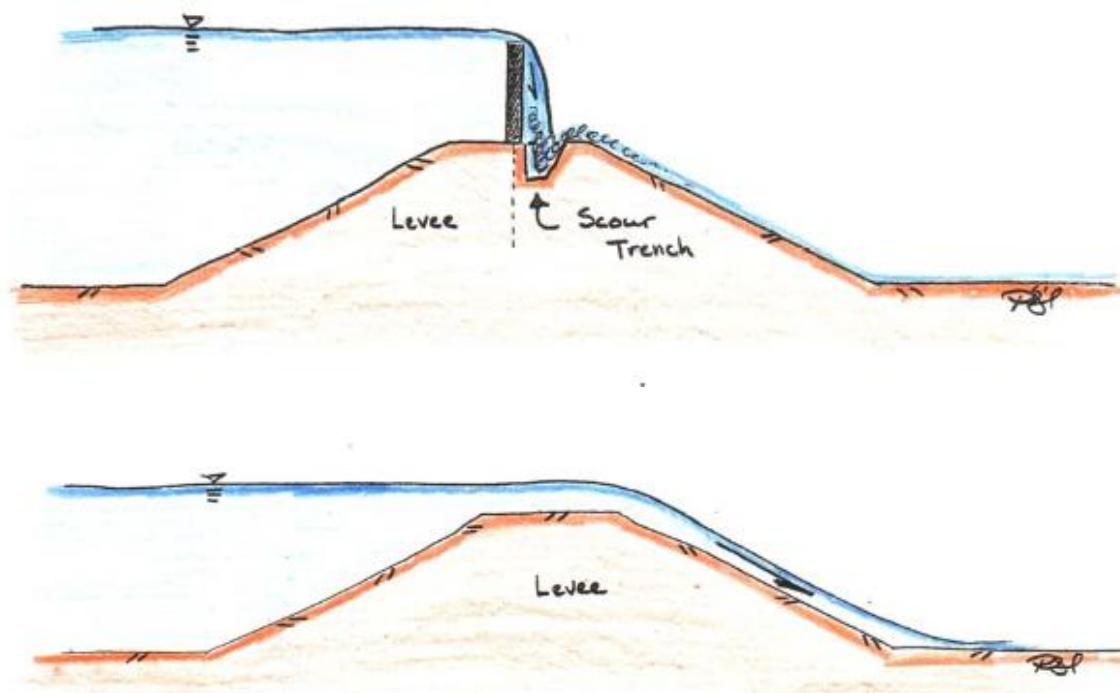
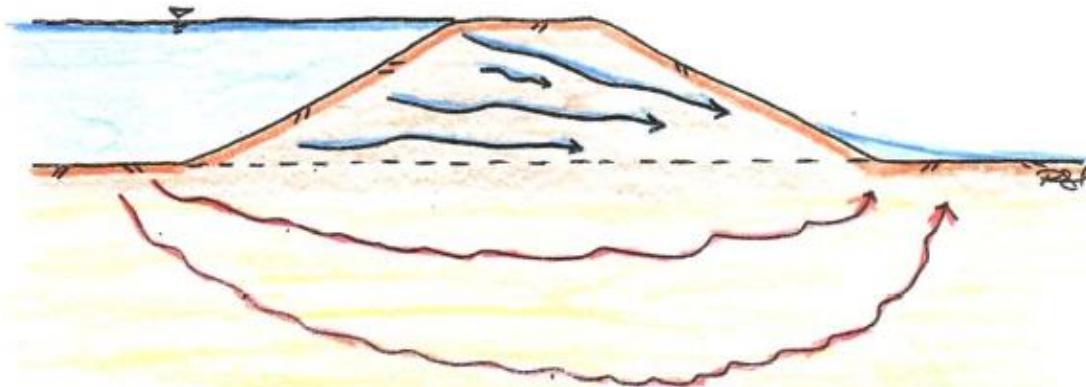


Figure 2: Overtopping of Levee³¹

²⁹ US Army Corp of Engineers

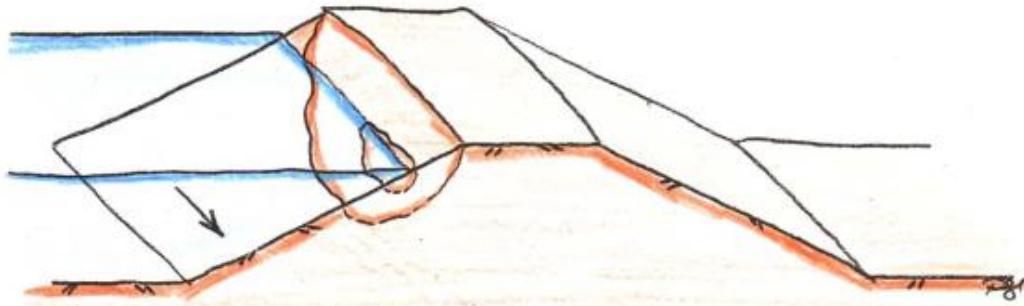
³⁰ Independent Levee Investigation Team. "New Orleans Systems: Hurricane Katrina." UC Berkeley, May, 2006

Underflow & Seepage: This is when water permeates loose sediment, such as sand, underneath the levee and water rises up on the other side. Water may also permeate through the levee structure itself, compromising its integrity.



Slumping: The weight of the contained water pushes over a levee's sides causing a break in the structure.

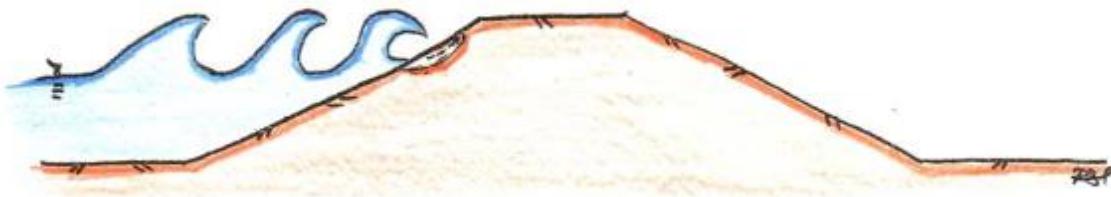
Erosion: The movement of water along the levee causes the gradual removal of material until the integrity of the levee is compromised. Surface erosion generally occurs on the outboard side of the levee and is the result of water flowing past the levee.



Alternatively, erosion can also occur from wave impacts directed at the outboard face of the levee. Wave-induced erosion consists of the sloshing up and down of water due to staggered wave arrival and “mini-jetting” when the crest of the wave breaks on the levee face.³²

³¹ Independent Levee Investigation Team

³² Independent Levee Investigation Team



The geographic area effected and the damage expected from a levee failure is dependent on a number of factors. The height of the Mississippi River and the flow rate of the river at the time of failure, the type of failure and the location of the failure all play an important role in determining the extent and nature of damage that would occur. Fortunately, SJBP has not experienced a failure of the Mississippi River Levee, but levee failures have occurred in neighboring parishes.

Industrial Accidents: Industrial sites – oil refineries, chemical plants, hazardous waste storage facilities, etc – are governed by a various pieces of regulation at the federal and state level. These regulations provide strict requirements for the handling of hazardous materials and require companies engaged in such activities to have in place the ability to contain accidents that may occur. The primary responsibility for enforcement of these regulations falls on the Louisiana Department of Environmental Quality (DEQ) for state regulations and the Federal Environmental Protection Agency (EPA) for federal regulations.

State Regulations: At the state level, DEQ engages in various programs to monitor and control potentially hazardous materials produced by private industrial activities. There are two major pieces of state legislation that govern industrial sites in SJBP. They are Title 33 of the Louisiana Administrative Code (LAC) and the Environmental Quality Act.

Title 33 of the LAC is also known as the Environmental Regulatory Code (ERC)³³. The ERC outlines state regulations regarding:

- Reporting and public notification requirements.
- Air and water quality.
- Hazardous wastes.
- Solid wastes.
- Radiation.
- Underground storage tanks.
- Emergency response requirements and procedures.

³³ Louisiana Administrative Code – Title 33: Environmental Quality

The Environmental Quality Act (EQA) was passed in 1984. The purpose of the act is the “maintenance of a healthful and safe environment” in Louisiana³⁴. The act lays forth policies and procedures regarding the maintenance of clean air, water and soil and goes so far as to establish industry specific guidelines to prevent the contamination of the physical environment.

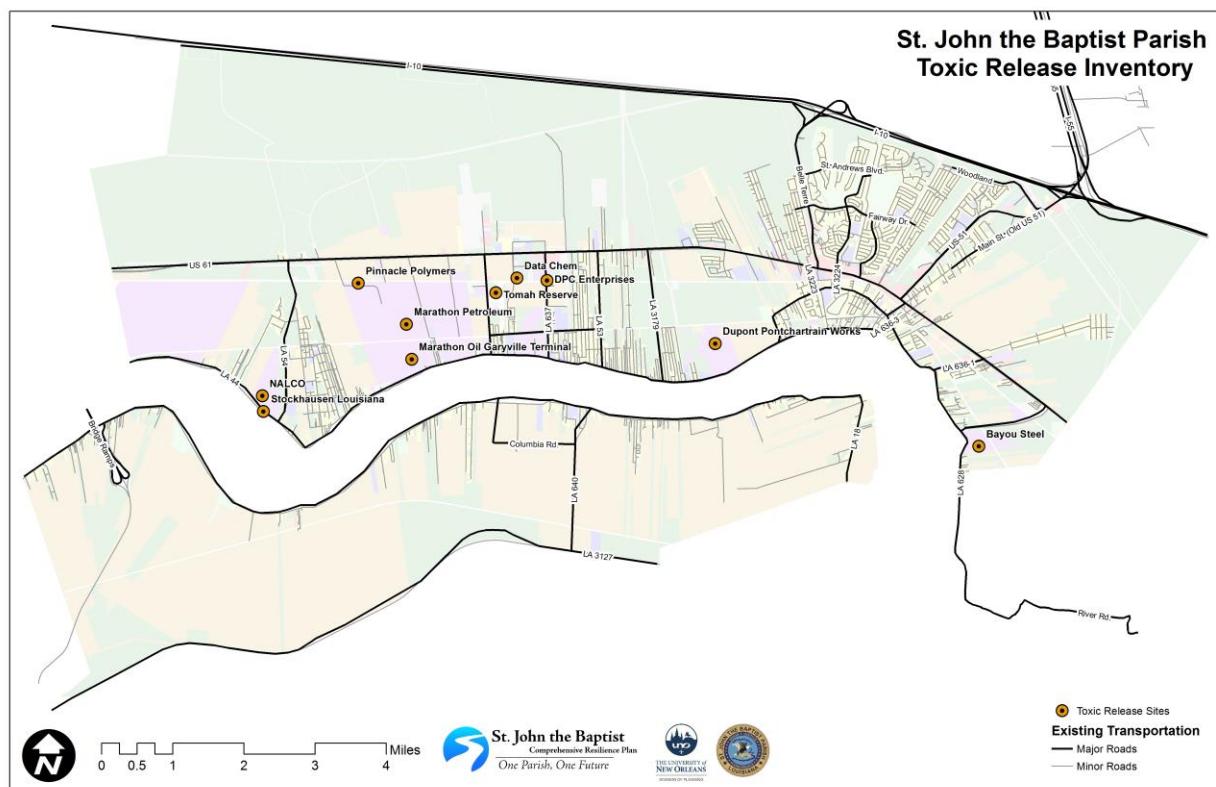
Federal Regulations:

Federal regulations governing industrial sites nationwide come from a number of pieces of legislation. The first piece of legislation con

Toxic Release Inventory

The Toxic Release Inventory or TRI is a public database created in 1986 by the Emergency Planning and Community Right-to-Know Act. The TRI database catalogues annually gathered data regarding the releases and transfers of certain toxic chemicals from industrial facilities. In 1990 the Pollution Prevention Act expanded the reporting requirements of the TRI system.

In the parish there are 12 industrial sites required to report toxic releases to the EPA.



³⁴ LA Environmental Quality Act, page 1

Nuclear Accidents

In Killona in St. Charles Parish sits Entergy's Waterford 3 Steam Electric Station. This nuclear power plant generates electricity for much of southeast Louisiana. While the plant itself does not generate significant emissions, there is always a danger of nuclear accident, especially considering the risk of serious hurricanes and severe storms that the region faces. Nuclear facilities are strictly regulated by the US Nuclear Regulatory Commission (NRC) to ensure their compliance with safety regulations. Beyond simply monitoring the day-to-day operations of the plant, the NRC's Office of Nuclear Security and Incidence Response works with local governments to ensure they are capable of responding quickly and effectively to a nuclear accident.

Critical Areas & Facilities

3 Mitigation Strategies

There were four broad mitigation goals identified by the Hazard Mitigation Steering Committee during the 2010 Hazard Mitigation plan update process. Those four goals are:

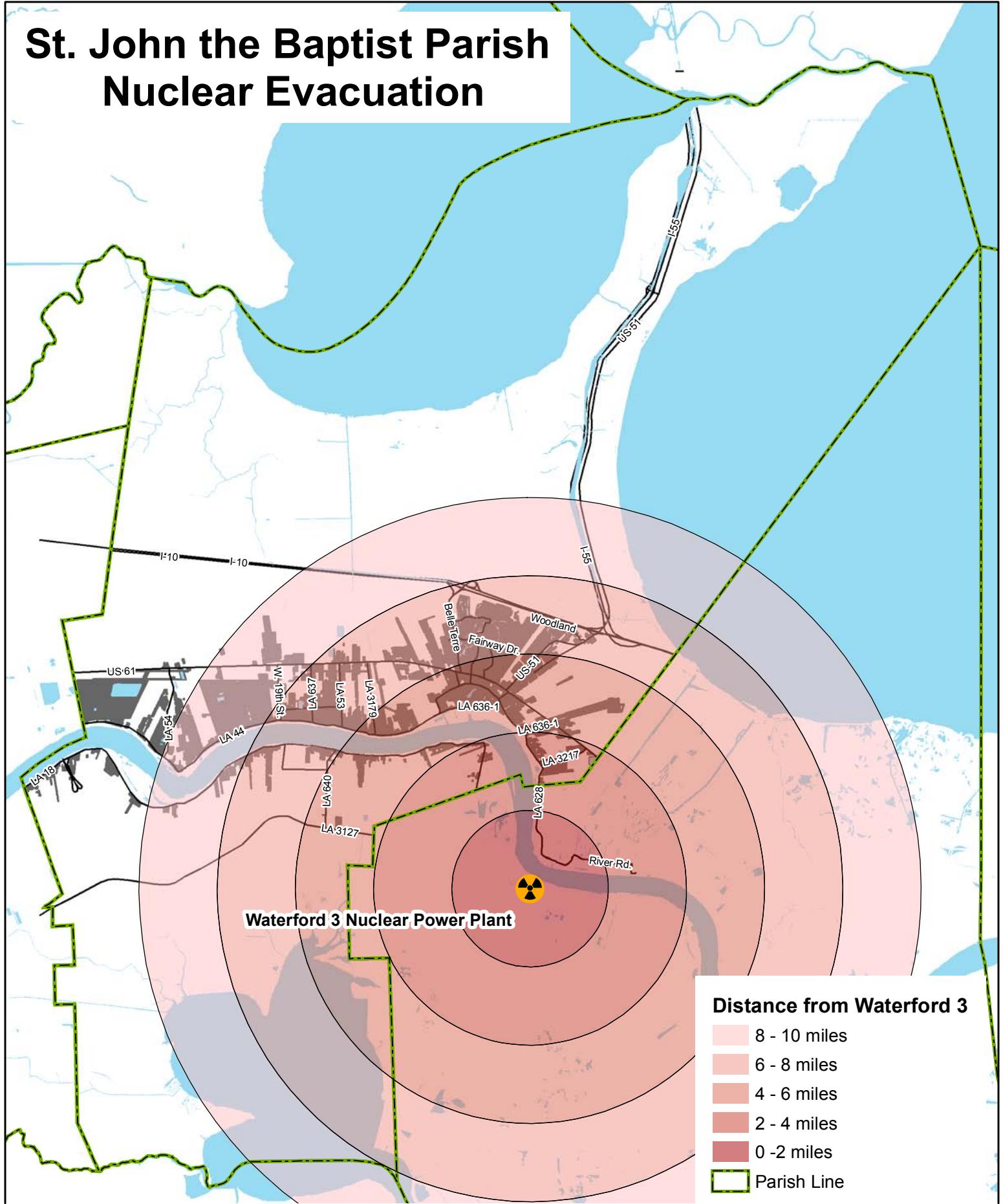
1. Identify and pursue preventative measures that will reduce future damages from hazards
2. Enhance public awareness and understanding of disaster preparedness
3. Reduce repetitive flood losses in the Parish
4. Facilitate sound development in the Parish so as to reduce or eliminate the potential impact of hazards

Each of these goals had specific action items that were developed in order to accomplish the parish's mitigation vision. The table on page/in appendix X is taken from the 2010 Hazard Mitigation Plan details the action items. The "project status" column to the right of the table details the progress on each item.

One of the biggest threats to the parish comes from flooding due to tropical weather and heavy rain systems. There are various mitigation measures that homeowners in St. John the Baptist Parish can take on themselves to protect their property and belongings from flood damages.

Elevation: Raising the structure above the flood level is generally viewed as the best flood protection measure, short of removing the building from the floodplain. All damageable portions of the building and its contents are high and dry during a flood, which flows under the building instead of into the house. Houses can be elevated on fill, posts/piles, or a crawlspace. A house elevated on fill requires adding a specific type of dirt to a lot and building the house on top of the added dirt. A house elevated on

St. John the Baptist Parish Nuclear Evacuation



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posts/piles is either built or raised on a foundation of piers that are driven into the earth and rise high enough above the ground to elevate the house above the flow of floodwater.

A house elevated on a crawlspace is built or raised on a continuous wall-like foundation that elevates the house above the flood level. If a crawlspace is used, it is important to include vents or openings in the crawlspace that are appropriately sized: one square inch for each square foot of the building's footprint.

Most of the cost to elevate a building is in the preparation and foundation construction. The cost to elevate six feet is little more than the cost to go up two feet. Elevation is usually cost-effective for wood frame buildings on posts/piles or crawlspace because it is easiest to get lifting equipment under the floor and disruption to the habitable part of the house is minimal. Elevating a slab house is much more costly and disruptive. The actual cost of elevating a particular building depends on factors such as its condition, whether it is masonry or brick faced, and if additions have been added on over time.

While the cost of elevating a home can be high, there are funding programs that can help. The usual arrangement is for a FEMA grant to pay 75% of the cost while the owner pays the other 25%. In the case of elevating a slab foundation, the homeowner's portion could be as high as \$25,000 or more. In some cases, assistance can be provided by Increased Cost of Compliance (ICC) funds, available through FEMA and local governments.

Barriers to floodwaters: Small floodwalls, levees, or berms could be constructed around one or more properties if flood depths are less than three feet. Homes that typically receive three feet of floodwater or less, or where the water does not stay up for a considerable amount of time, can benefit from small floodwalls, levees or berms. Levees and berms are more suitable for larger lots, and small floodwalls that are located close to the house are appropriate for suburban style neighborhoods with front and side yard space. Residents who experience floodwaters that remain for several hours or days should not consider barriers to floodwaters, as seepage can occur and water will end up inside the barrier. The more permeable the soil, the more floodwaters seep under the barrier.

Homeowners who are interested in constructing a barrier to protect their house should consider the following requirements:

- A method to close openings, such as the door in the photo in Figure 11 on page 24. Generally, this requires "human intervention," meaning someone needs to be available and have enough time to take action.

- Relatively impervious soils to minimize seepage under the floodwall.
- A system to prevent sanitary sewer backup from flowing into the building.
- A system of drain tile (perforated pipes) that collects water that falls or seeps into the protected area and sends it to a collecting basin or “sump.”
- A sump pump to send the collected water outside the barrier.
- Power to operate the sump pump around the clock during a storm.

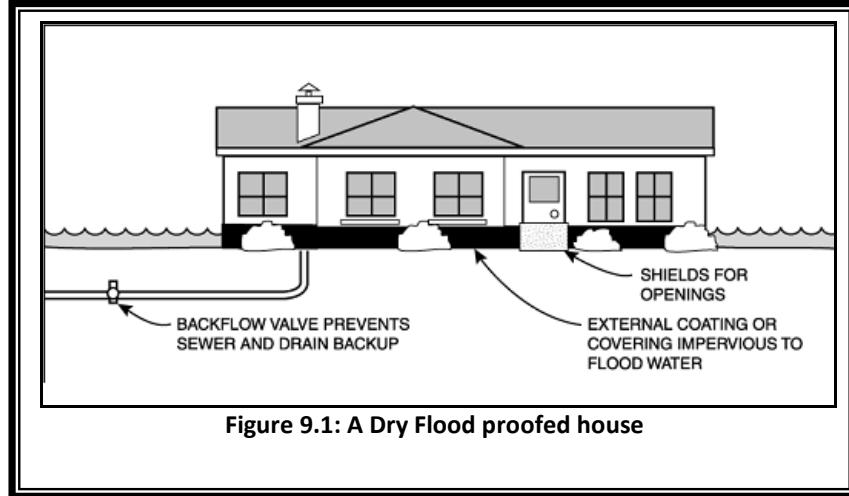


Figure 9.1: A Dry Flood proofed house

Dry Flood Proofing: This measure keeps floodwaters out of a building by modifying the structure. Walls are coated with waterproofing compounds or plastic sheeting. Openings (doors, windows, and vents) are closed either permanently, or temporarily with removable shields or sandbags. A flood-proofing project has three components:

- Make the walls watertight. This is easiest to do for masonry or brick faced walls. The brick or stucco walls can be covered with a waterproof sealant and bricked or stuccoed over with a veneer to camouflage the sealant. Houses with wood, vinyl, or metal siding need to be wrapped with plastic sheeting to make walls watertight, and then covered with a veneer to camouflage and protect the plastic sheeting.
- Provide closures, such as removable shields or sandbags, for the openings; including doors, windows, dryer vents and weep holes;
- Account for sewer backup and other sources of water entering the building. For shallow flood levels, this can be done with a floor drain plug or standpipe; although a valve system is more secure.

As seen in Figure 9.1, dry flood proofing employs the building itself as part of the barrier to the passage of floodwaters, and therefore this technique is only recommended for buildings with slab foundations that are not cracked. The solid slab foundation prevents floodwaters from entering a building from below.

Also, even if the building is in sound condition, tests by the Corps of Engineers have shown that dry flood proofing should not be used for depths **greater than 3 feet** over

the floor, because water pressure on the structure can collapse the walls and/or buckle the floor



Figure 9.3: Drainage pipes that move water from the rear of the home to the street

Not all parts of the building need to be flood proofed. It is difficult to flood proof a garage door, for example, so some owners let the garage flood and flood proof the walls between the garage and the rest of the house. Appliances, electrical outlets, and other damage-prone materials located in the garage should be elevated above the expected flood levels. Examples of flood-proofed houses can be seen in Figures 9.4 – 9.7 below.

Dry flood proofing has the following shortcomings as a flood protection measure:

- It usually requires human intervention, i.e., someone must be home to close the openings.
- Its success depends on the building's condition, which may not be readily evident. It is very difficult to tell if there are cracks in the slab under the floor covering.
- Periodic maintenance is required to check for cracks in the walls and to ensure that the waterproofing compounds do not decompose.
- There are no government financial assistance programs available for dry flood proofing; therefore the homeowner must pay the entire cost of the project.
- The NFIP will not offer a lower insurance rate for dry flood proofed residences.



Figure 9.2: yard drainage pipes added by a homeowner in the study area

Yard Drainage Improvements: For those homes at or below street level, living next to an elevated home can mean more water on the lower property. Improvements to yard drainage can assist those homeowners with homes at or below street level living next to an elevated home. Inlets and underground pipes can be added by the homeowners to move the excess water from their yards and into the street before their homes are flooded.

Maintaining Flood Insurance: Although not a mitigation measure that reduces property damage from a flood, a National Flood Insurance Program policy has the following advantages for the homeowner or renter:

- A flood insurance policy covers surface flooding from the overflow of inland or tidal waters or from storm water runoff.
- Flood insurance may be the only source of assistance to help owners of damaged property pay for cleanup and repairs.
- Once in effect there is no need for human intervention³⁵.
- Coverage is available for the contents of a home as well as for the structure
- Renters can buy contents coverage, even if the building owner does not buy coverage for the structure itself.

Flood insurance rates are based on several factors including what flood zone the building falls in and the age of the structure. Generally, homes in the X Zone have lower flood insurance rates than those in the Special Flood Hazard Area (SFHA), because the X Zone indicates a lower risk from flooding. The homes in the study area fall in the X-500 Zone. Homes in the X-500 Zone are considered to be in moderate to low risk areas and are eligible for a preferred risk policy

There are some



Figure 9.4: This Baton Rouge home has a steel door with gaskets that seal when closed



Figure 9.5: The same Baton Rouge home has thin facing brick placed over the waterproofing materials



Figure 9.6: This home in Jefferson Parish, LA has permanent shields sealing the space under the windows.



Figure 9.7: Dry flood proofed commercial building in Mandeville, LA had the walls waterproofed and removable shields placed in the windows.

³⁵ There is a 30-day waiting period for a new flood insurance policy before it goes into effect.

eligibility restrictions that homeowners should be aware of for Preferred Risk Policy (PRP)³⁶. If any of the following circumstances applies to the residence in question, then the structure is not eligible for a preferred risk policy. If in any 10-year period the building has:

- Had **2** or more insurance claim payments, each more than **\$1,000** (if the building is a repetitive loss structure)
- Had **3** or more flood insurance claim payments ***regardless of amount***³⁷
- Received **2** Federal flood disaster relief payments (including loans and grants) each more than **\$1,000**
- Received **3** Federal flood disaster relief payments (including loans or grants) ***regardless of the amount***
- Received **1** flood insurance claim payment and **1** Federal flood disaster relief payment (including loans and grants) ***each more than \$1,000***³⁸

Homeowners interested in a PRP should review the criteria above to see if they may qualify and contact their insurance agent. For a list of insurance agents handling NFIP policies, visit www.floodsmart.gov.

Community Rating System (CRS): The Community Rating System is a “voluntary incentive program that recognizes and encourages community floodplain activities that exceed the minimum National Flood Insurance Program (NFIP) requirements” (www.FEMA.gov). Participating communities are rewarded with reduced insurance premiums. Communities that join the CRS complete floodplain management activities that are worth a certain amount of credit. The more credit earned, the better the class ranking of that community. The CRS has 10 classes; a Class ranking of 10 carries the lowest flood insurance premium reduction, whereas a Class 1 carries the maximum discount. St. John the Baptist Parish is currently a Class 8, saving their residents approximately \$286,757 annually on flood insurance premiums.

Possible Funding Sources: There are several possible sources of funding for mitigation projects.

- A. FEMA grants: HMGP, SRL, FMA, & PDM
- B. Flood Insurance
- C. Rebates

³⁶ Detailed information can be found online in the *Flood Insurance Manual*; October 1, 2010 at: http://www.fema.gov/pdf/nfip/manual201010/change_pkg_main.pdf

³⁷ Federal flood disaster relief payments are considered **only** if the building sustained flood damage.

³⁸ A flood insurance claim payment (on building and/or contents) and a Federal flood disaster relief payment (including loans and grants) **for the same loss** are considered a **single payment**.

D. Small Business Administration Mitigation Loans

A. FEMA grants: Most of the FEMA programs provide 75% of the cost of a project. In most communities, the benefitting property owner pays the 25% non-FEMA share. Each program has different Congressional authorization and slightly different rules.

1. The Hazard Mitigation Grant Program (HMGP)³⁹: The HMGP provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. Projects must provide a long-term solution to a problem (e.g., elevation of a home to reduce the risk of flood damage as opposed to buying sandbags and pumps to fight the flood). Examples of eligible projects include acquisition and elevation, as well as local drainage projects.

2. The Severe Repetitive Loss Program (SRL)⁴⁰: The Severe Repetitive Loss (SRL) grant program funds mitigation projects for properties on the severe repetitive loss list. Eligible flood mitigation projects include:

- Acquisition and demolition or relocation of structures that are listed on FEMA's severe repetitive loss list and conversion of the property to open space.
- Elevation of existing SRL structures to at least the Base Flood Elevation (BFE).

There is a new SRL ICC Program that can be used to cover the non-FEMA share of the cost. That program is discussed under Flood Insurance on page 29 of this report.

3. The Flood Mitigation Assistance Program (FMA)⁴¹: FMA funds assist States and communities in implementing measures that reduce or eliminate the long-term risk of flood damage to structures insured under the NFIP.

- **Project Grants** to implement measures to reduce flood losses, such as elevation, acquisition, or relocation of NFIP-insured structures. States are encouraged to prioritize FMA funds for applications that include repetitive loss properties; these include structures with 2 or more losses each with a claim of at least \$1,000 within any ten-year period since 1978.

4. Pre-Disaster Mitigation Program (PDM): The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, Indian tribal governments, communities,

³⁹ For more information please visit <http://www.fema.gov/government/grant/hmgp/index.shtm>

⁴⁰ For more information please visit <http://www.fema.gov/government/grant/srl/index.shtm>

⁴¹ For more information please visit: <http://www.fema.gov/government/grant/fma/index.shtm>

and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. There are several requirements that must be met in order to receive PDM funding. For more information please visit

<http://www.fema.gov/government/grant/pdm/index.shtm> .

These FEMA grants and the mitigation projects that they cover are summarized below.

B. Flood insurance/Increased Cost of Compliance: There is a special funding provision in the National Flood Insurance Program (NFIP) for insured buildings that have been substantially damaged by a flood, “Increased Cost of Compliance.” ICC coverage pays for the cost to comply with floodplain management regulations after a flood if the building has been declared substantially damaged. ICC will pay up to \$30,000 to help cover elevation, relocation, demolition, and (for nonresidential buildings) flood proofing. It can also be used to help pay the 25% owner’s share of a FEMA funded mitigation project.

The building’s flood insurance policy must have been in effect during the flood. This payment is in addition to the damage claim payment that would be made under the regular policy coverage, as long as the total claim does not exceed \$250,000. Claims must be accompanied by a **substantial or repetitive damage determination** made by the local floodplain administrator.

For more information, contact the insurance agent who wrote your flood insurance policy or visit www.fema.gov/plan/prevent/floodplain/ICC.shtm. Coverage under the ICC does have limitations:

- It covers only damage caused by a flood, as opposed to wind or fire damage
- The building’s flood insurance policy **must have been in effect** during the flood
- A substantial or repetitive damage determination must have been made by the local floodplain administrator
- ICC payments are limited to \$30,000 per structure
- Claims must be accompanied by a substantial or repetitive damage determination made by the local floodplain administrator
- The Structure must be located in an Special Flood Hazard Area (SFHA) Zone, such as A, AE, V, and VE Zones.

Severe Repetitive Loss ICC Pilot Program: While the conventional ICC only covers buildings that are located in the Special Flood Hazard Areas (SFHA), there is a new pilot program that is aiming to target buildings **not** in the SFHA. Focusing specifically on Severe Repetitive Loss (SRL) buildings, this pilot program will offer ICC benefits to those SRL properties that are located in X zones and will include those SRL buildings

St. John the Baptist Parish Repetitive Loss



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that have grandfathered X zone rates. Under this new pilot program, the ICC benefits could be used to cover the homeowner's match in a SRL grant. This could be helpful to the one SRL property in the Oak Forest study area.

Hazards Preparedness

Knowing the risks that each hazard poses is the first step to becoming a more resilient community. Being prepared for the risks is the next. SJBP faces several hazards, but there are ways that residents can practice hazard preparedness before the next event happens. There are two very informative websites that each resident should become familiar with:

- www.ready.gov a FEMA sponsored website that walks readers through the information they need on various hazards our country faces; how to plan for each hazard; how to build a preparedness kit; and how to get involved with community preparedness in your neighborhood as well as the national network.
- www.getagameplan.org the official website of the Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP). Similar to the FEMA website, GOHSEP's website is focused specifically on Louisiana and the various hazards this region faces. It also assists visitors with constructing hazard preparedness plans for their families, businesses, and kid-focused and friendly plans.

Proposed West Shore Lake Pontchartrain Levee

The West Shore-Lake Pontchartrain Hurricane and Storm Damage Risk Reduction Project (WSLP) have been under consideration for many years. In 1971, the Committee on Public Works of the US House of Representatives authorized the Army Corp of Engineers to study options for the WSLP in St. Charles and St. John the Baptist Parish. In 1974, the scope of the study was expanded to include St. James Parish as well. The project moved forward slowly due to a lack of consistent funding. Finally, in June of 1997 the Army Corp publishes a Recon Report recommending that the project move from the study to the feasibility phase. In 2003 the project stalled because of impasse on the selected alignment. Following Hurricane Katrina in 2005, the Pontchartrain Levee District (PLD) takes up sponsorship of the project and studies resume.

It was not until Hurricane Isaac caused significant damage in St. Charles and St. John the Baptist Parishes in 2012 that consistent funding was allotted for the WSLP. In 2013, the Army Corp allocated funding to finish a feasibility study for the WSLP.

Proposed Alignments

The Army Corp is evaluating the feasibility of three proposed levee alignments. Numerous non-structural measures such as elevating and flood proofing are also being investigated. All three alignments involve the construction of a levee from the Bonne Carrie Spillway in St. Charles Parish to the I-10 and LA-51 interchange. It is after the interchange that the alignments differ.

Alignment A: This is the environmentally preferred alignment because it would hug existing development to the south of I-10 and not disrupt the wetlands and marshes connected to Lake Pontchartrain and Lake Maurepas.

Alignment D: This is the largest of the three alignments and follows I-10 throughout the entire parish, ending in St. James Parish near Sorrento. This alignment would effectively wall off all the wetland and marsh areas south of I-10 from the lakes, wetlands and marshes to the north.

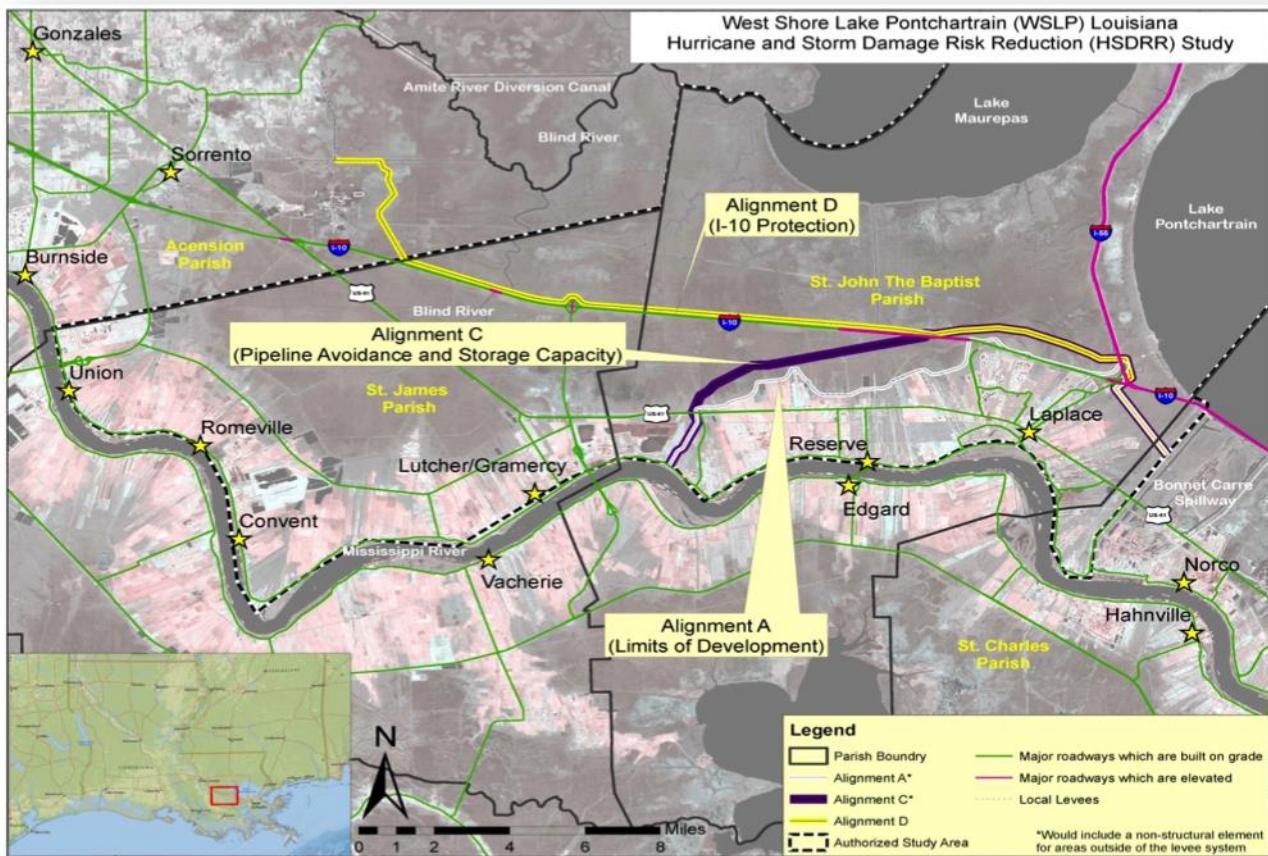
Alignment C: This alignment provides a middle option between alignments A and D. It follows I-10 to a point shortly past La Place and then turns south, following a path roughly half way between alignments A and D.

Army Corp – West-Shore Lake Pontchartrain Hurricane Protection Feasibility Study

- All proposed alignments include LA-51 and I-10 interchange.
 - Alignment A: hugs existing development
 - Alignment B: follows I-10 till shortly before St. John/St. James border then turns south to river
 - Alignment C: hybrid of A and B.
 - Alignment D: like B but continues along I-10 through St. James and into Ascension

- Feasibility study only looking at various levee alignments. Other, non-levee alternatives being considered.

In August 2013, the Corp of Engineers announced preliminary recommendation of Alignment C, which provides the maximum protection to the East Bank of St. John



Parish. The Corps picked this alignment because it provides the maximum benefit for the least cost, as well as limiting the overall impact on wetlands. This alignment is expected to costs just under \$900 million, of which the local match is 30%.

At this time the Corps is awaiting final public comments on their initial selection, with a final decision expected by the local commander in November 2013.

Hazard Mitigation Goals and Policies

Hazard Mitigation Goal 1: Facilitate Sound Development in the Parish so as to reduce or eliminate the potential impact to development from hazards and/or disasters.

HM Objective: Map out all hazard prone areas in St. John Parish on the future land use map.

Policy: Identify the 100-year flood plain on the Comprehensive Resiliency Plan Future Land Use Map,

Policy: Maintain a database of land uses by acreages within the 100-year flood plain.

HM Objective 2: Development in areas subject to hazards including but not limited to storm surge flooding will follow all applicable guidelines for managing development in hazard prone areas in St. John Parish.

Policy: Establish strict development requirements – elevation, storm water retention, etc. – for each area of the parish based on their respective risk to hazards, particularly flooding and storm surge.

Policy: require that no development permits be approved for any projects until the requirements of the Parish's flood hazard area ordinance have been met or until a copy of any permit is provided from any other regional, state, or federal agency having jurisdiction over development in the Parish.

Policy: Update building codes to improve the ability for structures to survive storm events.

Policy: Require that new construction or substantial improvements will be constructed by methods and practices that minimize damages from flooding, wind, or subsidence.

Policy: Develop a voluntary and/or targeted buyouts and relocation program for homes in high-risk areas.

Policy: Consider prohibiting septic tanks and flood proof existing water and wastewater facilities in the 100-year flood plain and any designated natural hazard areas.

HM Objective: Reduce the impact of tidal, surge, and riverine flooding to property in St. John Parish.

Policy: Improve drainage ways including, but not limited to, enlarging any inferior culverts, upgrading pumps and flapper valves, and installing retention ponds.

Policy: Update the master drainage plan, which will evaluate drainage projects at major drainage laterals to determine best method of increasing drainage capacity in the Parish. Implement recommended projects resulting from drainage plan.

Policy: Expand the drainage districts to cover the entire parish. Currently, the parish has 3 drainage districts that cover select areas on the east bank.

Policy: Provide tools and incentives for property owners to manage storm water on-site in order to reduce overall load on parish drainage system during a storm event.

Policy: Require that the Parish' Floodplain Management and Storm water regulations comply with the minimum building elevations of the FEMA Flood Insurance Rate Maps and the building requirements of the National Flood Insurance Program.

Policy: Improve the connectivity of the street network to increase the speed and efficiency of disaster response and recover operations through increased access to communities and neighborhoods.

Hazard Mitigation Goal 2: Reduce the risk of existing man-made hazards and implement measures to prevent risk to future man-made hazards.

HM Objective: Reduce Repetitive Flood Losses in the Parish.

Policy: Investigate and implement localized interior drainage projects, including, but not limited to, culvert upgrades, berms, and retention ponds, in order to reduce flood potential where necessary.

Policy: Pursue elevation, acquisition, flood proofing and reconstruction projects and structural solutions to flooding using available grant funding for repetitive loss structures and severe repetitive loss structures.

Policy: Provide financial assistance to homeowners for flood mitigation measures such as elevation and flood proofing.

HM Objective: Prior to development of vacant land Identify risk reduction strategies for land in hazard prone areas.

Policy: Encourage innovative methods to limit development within wetlands through storm water management, transfer of development rights in wetlands, and other measures to reduce the risk from flood.

Hazard Mitigation Goal 3: Enhance Public Awareness and Understanding of Disaster Preparedness.

HM Objective: Promote hazard mitigation actions to residents in St. John Parish

Policy: Continue to promote the purchase of flood insurance. Advertise the availability, cost, and coverage of flood insurance through the National Flood Insurance Program (NFIP).

Policy: Incorporate disaster awareness and preparedness education into the curriculum of parish schools, both public and private.

Policy: Provide regular workshops for community members to help residents develop personal or family plans for disaster situations.

Policy: Make disaster preparedness and response information available at all parish buildings, schools and libraries.

Policy: Improve coverage of the public notification system by upgrading the technology including, but not limited to, sirens and a call down system with a backup communication.

X Natural Environment Element

Introduction

Natural environmental features exist in interconnected systems—such as the water, air, and nutrient cycles--that collectively support life. Our built environment and the community as a whole are integrated into these natural systems. The long-term functions and sustainability of the community are dependent on the design of the built components being influenced by the natural system. As such a key aspect of the link between the environment and quality of life is how the community interacts with both the natural and built environments; and uses both to foster active and sustainable development opportunities.

St. John Parish is fortunate to have an abundance of natural environmental attributes in both the amount and type of available resource lands. Proper stewardship of these lands can both create a high quality of life, and provide a sustainable development environment within the Parish.

Natural Environment and Sustainability

Sustainability ensures that the Parish's development decisions allow the economy and community members to continue to thrive without destroying the Parish's natural environment upon which everyone depends. A healthy environment is integral to the Parish's long-term resilience, economic stability, and citizen interests. Natural features contribute to the image and quality of life of the Parish; those factors in turn contribute to the community's economic health and the desirability of that community as a place to live.

Additionally, planning for a healthy ecosystem provides substantial environmental services such as water purification and recharge, nutrient recycling, oxygen production, climate moderation, and assimilation of waste and pollutants throughout the community. Conserving and restoring natural areas helps to ensure that the essential ecosystem services are continued in St. John Parish into the future.

The Environment and Human Health

The quality of the natural environment has a direct impact on the health and quality of life of the citizens of St. John Parish. Clean air, water, and land are necessary for human health and wellbeing. Both the presence of nature, and access to nature for residents in the community, are closely linked to community health. Additionally, a clean environment offers the community a major asset that can improve the Parish's economy while simultaneously achieving the goals stated above for community health.

Environmental Management and Hazard Mitigation

While proximity to natural features such as rivers, lakes, coastal areas, wetlands, among other natural areas greatly enhances St. John Parish as a community, these areas also can exacerbate St. John's susceptibility to their negative impacts due to natural or man-made events.

Natural hazards—floods and storm surges, hurricanes, tornados and damaging wind, and other severe weather conditions—can be damaging to property and life threatening. Planning and mitigation is needed to reduce or eliminate the vulnerability of people and property from natural hazards and their effects. Additionally, the same can be said for man-made hazards, such as nuclear power plants and petrochemical plants, both of which can impact St. John Parish. Planning for mitigating the impacts of these on the natural environment is just as important as planning for natural hazards.

Natural Environment and the Economy

A careful balance should be kept between a community's desire to preserve and protect the natural environment and the need to allow new development in response to the increasing demands of population and economic growth. The key is to ensure that the Parish's comprehensive plan policy structure ensures that the Parish evaluates the impact of new development and redevelopment on these resources to prevent any negative impacts on the environment and to the development.

In addition to the natural environments impact on new development, there are abundant economic uses for the natural environment. Southeast Louisiana has one of the richest and diverse ecosystems in the world – this includes St. John Parish. Hunting, fishing, harvesting, etc. provide a tremendous economic impact to St. John Parish. To that end, preserving and enhancing the Parish's natural environment makes sense.

The Environmental Element Planning Process

The process used to develop the One Parish One Future Environmental Element for the St. John Comprehensive Plan involved identifying those natural assets that both create the Parish's natural environment as well as offer positive impacts on land use and the economy, resilience, and quality of life. The discussion and goals and policies of the Environmental element derived from a number of sources including:

- Identification of St. John's natural environmental areas;
- Citizen input during comprehensive plan public meetings as well as during the FEMA recovery planning process following Hurricane Isaac; and
- Evaluation of existing development patterns impact from Natural Environment in St. John Parish

All of these components went into developing the Environmental Element goals and policies that the Parish should follow when reviewing and planning new development or planning for redevelopment within St. John Parish. All of these goals and policies should focus the Parish land development process on preserving, enhancing, and protecting those natural resources that help protect St. John Parish.

Natural Areas in St. John Parish

Table 10.1? Identifies the total amount of land in St. John Parish between I-10 and LA Highway 3127⁴². Within these boundaries the amount of natural and undeveloped land represents nearly 89% of the total land mass

between I-10 and LA Highway 3127 – excluding the Mississippi River. This offers St. John both a tremendous opportunity to both protect and to utilize these lands to improve the quality of life in St. John Parish.

Table 10.1: Natural Land in St. John Parish Planning Area

LBCS Land Use Category	Acres	Percent of Total
All Developed Land	10,281.05	20.98%
Fishing, Hunting, Forestry, and Agriculture	16,462.92	33.62%
Land in Natural State	22,223.98	45.40%
Total	48,967.95	100.00%

Source: LBCS St. John Parish Land Use Survey

In addition to these lands, there are another 180,000 or so acres on both the East and Westbanks of the Parish outside of the planning boundaries. These areas and their make up are discussed further in this element.

Water Resources

The idea of St. John Parish having water quality and delivery issues may not seem immediately evident given the Parish's access to seemingly abundant natural water resources such as the Mississippi River. However, while most areas of the Parish do obtain water from the Mississippi River, the current water system for the Parish's largest community – LaPlace - relies on a well located in Ruddock. This location – very close to the western shore of Lake Pontchartrain – is susceptible to the impacts from storm surge flooding – as seen during Hurricane Isaac when the water had to be cut off within hours of Isaac's initial impacts. Additionally, the water quality of this water source is highly variable, and it is not uncommon for LaPlace residents to be issued a boil water notice. Unless a stable water supply from the Mississippi River is developed, these issues can be expected to occur again.

⁴² This area is designated as the main comprehensive planning area in St. John Parish due to environmental constraints and realities that make it highly unlikely land outside these boundaries will be developed.

The Parish is not without some fresh water resources. A soils study completed by the U.S. Department of Agriculture identified four key fresh water aquifers in St. John Parish. These are described below from that report.

Fresh Water Aquifers⁴³

There are four major freshwater-bearing aquifer systems in the Reserve-LaPlace area that impact St. John Parish. These are, in descending order, the shallow aquifers that include point bars, the Gramercy aquifer, the Norco aquifer, and the Gonzales- New Orleans aquifer.

Shallow aquifers of limited and irregular extent are in the parish generally at a depth less than 150 feet. Sand extensive enough to produce substantial amounts of water occurs as abandoned channel deposits of the Mississippi River and its distributaries and as point-bar deposits of the Mississippi River. The restricted occurrence of these aquifers limits their availability to local areas. Water from these shallow aquifers is characteristically very hard and high in iron content. The chloride content is low, but may be high locally where a small aquifer is hydraulically connected to shallow aquifers that are mainly used as a source of supply for small livestock wells.

The Gramercy aquifer, the “200-foot” sand, is the least continuous of the major aquifers in the Reserve area. This aquifer is important in that it acts as a hydraulic link between the overlying aquifers. The quality of water is and may continue to be a limiting factor in development of the aquifer. The chloride level continues to decrease in many of the areas now containing salty water. However, the displacing water, although low in chloride, is extremely hard.

The Norco aquifer, the “400-foot” sand, is the most important aquifer in the parish. This aquifer ranges in thickness from 100 to 500 feet. The regional dip of the aquifer is to the south about 10 feet per mile. In the vicinity of LaPlace, this aquifer is about 300 feet deep, and it is more than 400 feet deep in the southern part of St. Charles Parish. A layer of clay, 200- to 300-feet thick, separates the Norco aquifer from the underlying Gonzales-New Orleans aquifer.

The Gonzales-New Orleans aquifer, the “700 foot” sand, underlies the

⁴³ The bulk of information about fresh water aquifers is taken from a USDA Natural Resources Conservation Service Report titled: Soil Survey of St. John the Baptist Parish, Louisiana completed in 2003.

entire parish and is the thickest of the three aquifers. It has a regional dip of 25 to 50 feet per mile to the south and an average thickness of about 200 to 250 feet. Depth to the top of the aquifer ranges from 450 feet in the vicinity of Lake Pontchartrain to about 800 feet near Lake Cataouatche. Water quality is the most restrictive factor governing development of the Gonzales-New Orleans aquifer. Water levels are still high, and the aquifer is capable of yielding large quantities of water. However, any pumping from parts of the aquifer above or near the surface will be accompanied by increased salinity of the pumped water.

Additionally, there is clearly a lack of resilience in the Parish's current water access and delivery system for LaPlace, creating a dangerous inability to withstand and recover from some hazard events, as evidenced during Hurricane Isaac's impacts. Generating a stable water supply and delivery system for LaPlace will significantly improve the Parish's overall resilience.

In addition to the Mississippi River and the underground fresh water aquifers, St. John Parish is dominated by its contiguous location to three major lakes – Pontchartrain and Maurepas on the Eastbank and Des Allemands on the Westbank. All three provide recreational opportunities to local residents as well as visitors from around the country and the world. However, despite their tremendous benefits to St. John Parish, they are also a potential source of danger from flooding and storm surges.

It is imperative that St. John both manages these resources and protects residents and property from their potential harmful impacts. Studies indicate that Parish water bodies that feed into these lakes show signs of high nutrient loads that could potentially threaten these sensitive areas. St. John Parish must ensure that existing and future development does not adversely impact these fragile ecosystems.

Concurrently, the Parish must also insure existing and future development is resilient to the hazard impacts posed by these water bodies. Development policies should encourage adherence to best practices for development so close to these types of hazards.

Wetlands

Wetlands serve numerous beneficial functions in communities besides their contribution to the aesthetic appearance. These include:

- Water Quality Improvement
- Floodwater Storage and Storm Surge Protection

- Fish and Wildlife Habitat
- Aesthetics
- Biological Productivity

All of these functions can have both tangible economic and environmental benefits as well as help St. John maintain a high quality of life for its residents.

Of the nearly 224,000 total acres in St. John Parish, nearly 48% are classified as some type of wetland. Map on the next page shows the extent of the wetlands by type throughout St. John Parish. The map indicates that significant amounts of land where the Parish would like to see new development occur are classified as wetlands. The future development of any of these lands will likely rest on the final alignment of the West Shore Hurricane Protection Levee.

Table 10.2: Wetlands in St. John Parish		
Wetland Type	Acres	Percent of Total Acres
Estuarine and Marine Deepwater	40,640	18.1%
Estuarine and Marine Wetland	7,761	3.5%
Lake	39,239	17.5%
Freshwater Emergent Wetland	10,064	4.5%
Freshwater Forested/Shrub Wetland	86,932	38.8%
Freshwater Pond	1,215	0.5%
Riverine	5,477	2.4%
Human Activity		
Developed	8,890	4.0%
Agriculture	15,849	7.1%
Other and Undeveloped Non-Wetlands	7,862	3.5%
Total Parish Acreage	223,931	100.0%

The Parish has strongly encouraged the alignment north of I-10, which would affect the likelihood that the Army Corps of Engineers would support 404 permit requests for development in wetlands inside of the protection levee. The Corps, however, has identified an alignment that generally skirts the existing development as their preferred alignment⁴⁴.

Inherent in the functions outlined above are the opportunities wetlands and their preservation present for maintaining and improving a community's resilience and capacity for sustainable development. The U.S. Environmental Protection Agency identifies the following function of wetlands as it relates to resilience:

⁴⁴ At the time of this plan no final decision has been made, although the West Shore Levee has received a positive cost-benefit rating from the corps, which strongly suggests that if funding is available the levee will be built along one of the proposed alignments.

"Although a small wetland might not store much water, a network of many small wetlands can store an enormous amount of water. The ability of wetlands to store floodwaters reduces the risk of costly property damage and loss of life—benefits that have economic value to us. For example, the U.S. Army Corps of Engineers found that protecting wetlands along the Charles River in Boston, Massachusetts, saved \$17 million in potential flood damage⁴⁵."

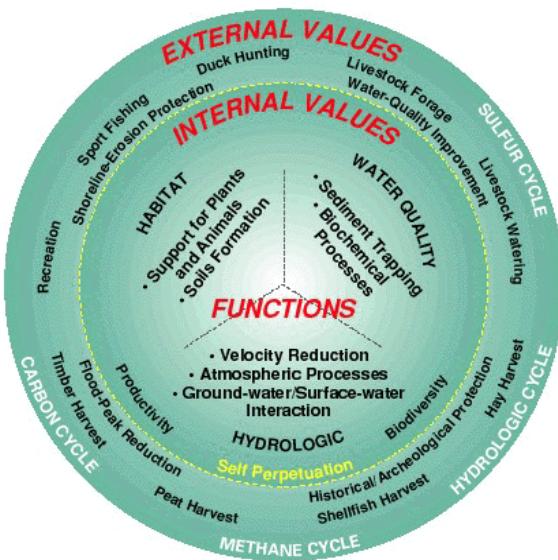


Figure 51. Wetland functions and internal and external values.
Source: [Http://Water.USGS.gov](http://Water.USGS.gov)

Additionally, wetlands provide an opportunity to have a strong positive impact on water quality in St. John Parish. One function provided by wetlands involves their use as secondary effluent discharge areas. This process lets communities discharge secondarily treated waste into wetlands, which then through natural processes help reduce the amount of harmful nutrients that are discharged into area water bodies.

A recent report by Comite Resources⁴⁶, Inc. outlined the need for the Parish generally to consider using available wetlands for treating secondarily treated municipal waste. This report

specifically looked at the feasibility of discharging treated waste into the Reserve Relief Canal Wetlands and found that doing so would both improve water quality in Parish water bodies as well as help rebuild the wetlands by introducing increased nutrients⁴⁷.

This report also cited a general problem of high nutrient levels in Parish water bodies, with the future likelihood of the Louisiana Department of Environmental Quality lowering acceptable levels⁴⁸. Discharging treated municipal waste into the wetlands before it reaches those water bodies could help the Parish meet these potentially new requirements.

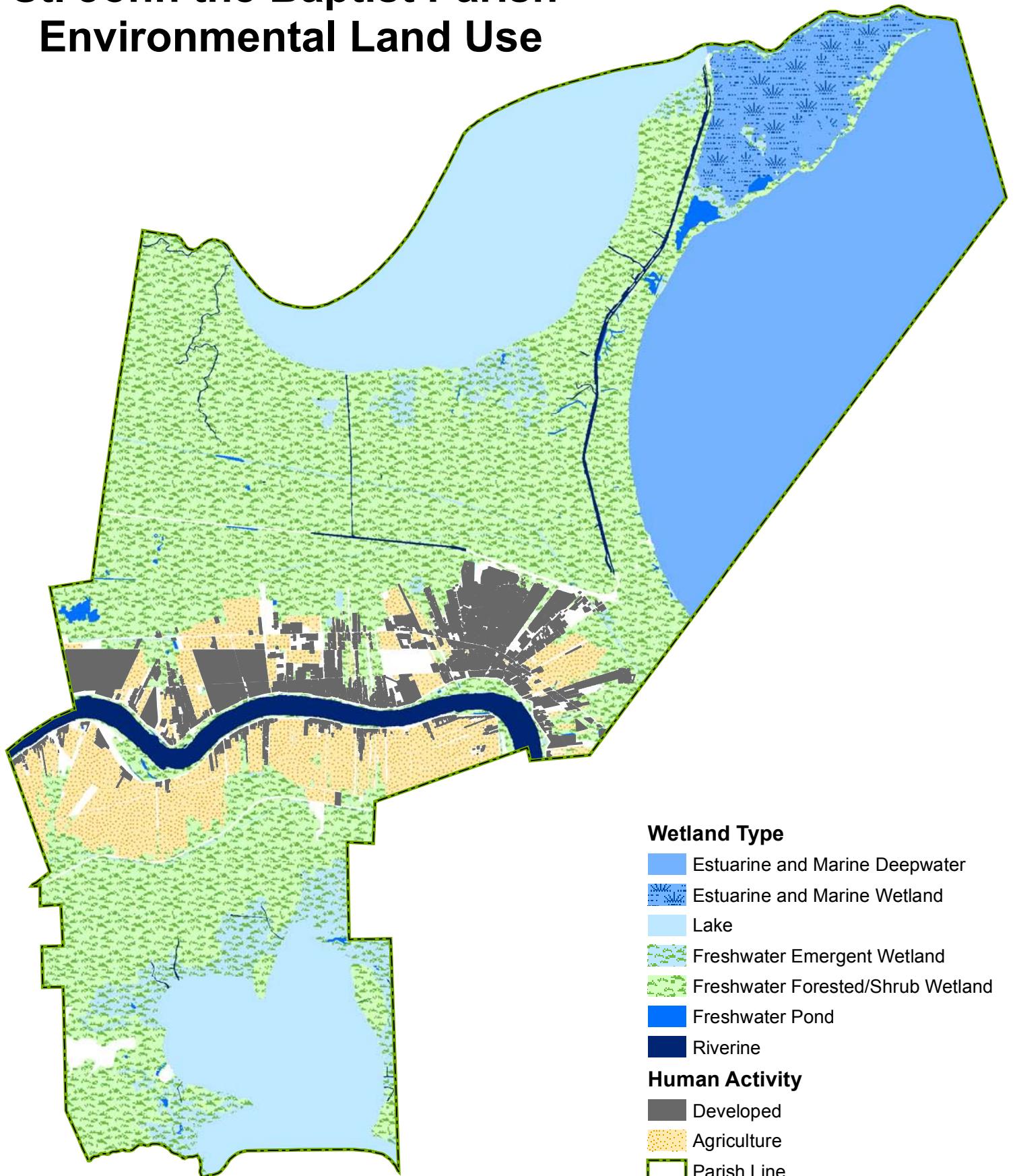
⁴⁵ U.S. Environmental Protection Agency: Function and Value of Wetlands

⁴⁶ Day Jr., Dr. John W, et al. Reserve Relief Canal Wetlands: Municipal Effluent Wetland Assimilation Feasibility Analysis, Comite Resources, Inc., 2006

⁴⁷ Ibid.

⁴⁸ Ibid.

St. John the Baptist Parish Environmental Land Use



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St. John the Baptist
Comprehensive Resilience Plan
One Parish, One Future



St. John Parish Soils

Soils are important to development in St. John Parish, as they form the underlying foundation for all development. Developing in areas with poor soil conditions impacts the physical structure as well as overall resilience.

The United States Department of Agriculture along with the Natural Resources Conservation Service conducted a detailed survey and analysis of soil conditions within St. John Parish. The results were published in "Soil Survey of St. John the Baptist Parish, Louisiana". This report identified in detail the specific soils; their location in map form; the various ecosystems, floral, fauna, and wildlife habitats they support; and the various limitations that each of the soil categories and sub categories have for a range of development types.

The report can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

The report identified seven major soil types found in St. John Parish. These are grouped into four main categories:

1. Soils on Natural Levees
 - a. Cancienne-Carville
 - b. Grammercy-Schreiver
2. Soils on Flood Plains
 - a. Cancienne-Carville
 - b. Schreiver
3. Soils in Swamps
 - a. Barbary
 - b. Maurepas
4. Soils in Marshes
 - a. Kenner-Allemands-Carlin

Below is a general summary of each soil type, which gives a general description, as well as an indication of the level of receptiveness of each to urban development.

Soils on Natural Levees – Cancienne-Carville/Grammercy-Schriever

This group consists mainly of level, somewhat poorly drained, loamy and clayey soils that are on natural levees along the Mississippi River and in the vicinity of Lower Vacherie.

These soils make up about 15 percent of the total land area in St. John Parish. Most of the acreage is used as cropland or urban land. A few areas are used as pastureland, woodland, wildlife habitat, and for recreation.

Wetness, low strength, and shrink-swell potential in the subsoil are the main limitations for urban uses.

Soils on Flood Plains: Cancienne-Carville/Schreiver

The soils in this group consist mainly of level, somewhat poorly and very poorly drained, loamy soils that are on natural levees along the Mississippi River and northeast of LaPlace.

These soils make up about 5 percent of the total land area in St. John Parish. Most areas of these soils that are occasionally or frequently flooded are used as woodland and wildlife habitat with a few small areas used as pastureland. The soils that are rarely flooded are used as cropland and urban land.

Wetness, low strength, and flooding are the main limitations for urban uses.

Soils in Swamps: Barbary/Maurepas

These soils consist of level, very poorly drained, mucky and clayey soils that are in swamps and flooded or ponded most of the time.

These soils make up about 35.6 percent of the total land in St. John Parish. Most areas of these soils are in native vegetation and are used as woodland, habitat for wetland wildlife, and for recreation.

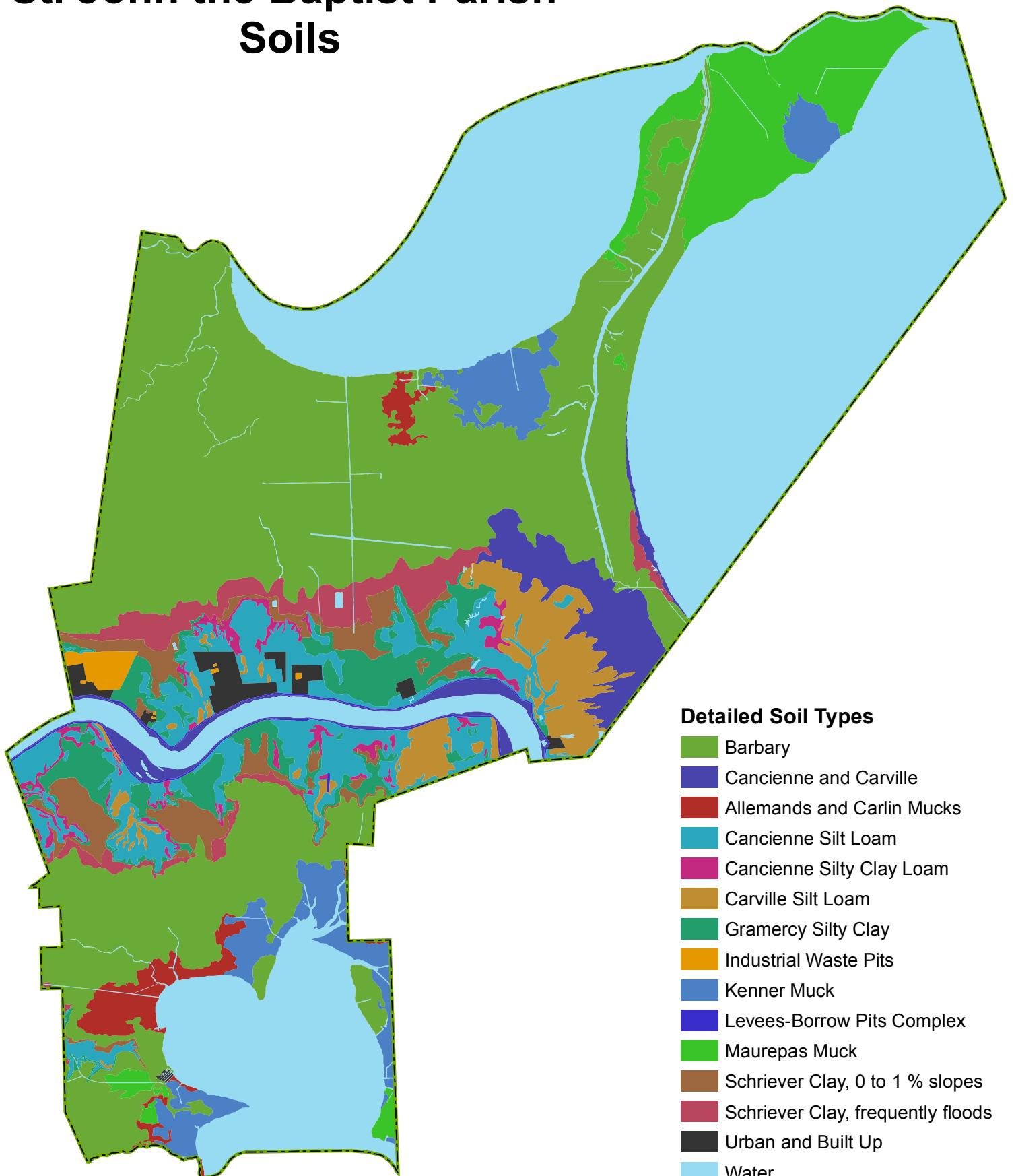
Soils in Marshes: Kenner-Allemands-Maurepas

The soils in this level consist of very poorly drained, mucky and clayey soils that are in marshes and flooded or ponded most of the time.

These soils make up about 5 percent of the total land in St. John Parish. Most areas of these soils are in native vegetation and are used for recreation and as habitat for wetland wildlife.

Included in this element is a copy of the soils map for St. John Parish, which identifies the general locations of the soils listed above. Because of the tremendous volume and technical nature of the Soils Survey report, it is included as a technical Appendix to the Environmental Element of the One Parish One Future Comprehensive Plan.

St. John the Baptist Parish Soils



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St. John the Baptist
Comprehensive Resilience Plan
One Parish, One Future



Natural Habitat Areas⁴⁹

Close proximity to the Gulf of Mexico allows a diversified arrangement of ecosystems throughout the Parish. As a result of this blending zone between land and sea a plethora of unique and diverse natural habitat areas supporting an abundance of both fish and wildlife and plant species are found throughout the Parish. The main habitat types include the coastal marsh; woodland, including cypress-tupelo swamp and hardwood bottomland; and open land, such as cropland and pastureland.

Due to its location on the Mississippi Flyway a large proportion of migratory waterfowl utilize St. John Parish marsh areas as their migratory target or as a stopover for food and rest during their. The vast ecosystems and habitats also allow for economic impact to the Parish through harvesting alligators or fur bearing animals, as well as sport fishing and hunting.

Freshwater fisheries include such species as catfish, largemouth bass, bluegill, and black crappie. Species of birds commonly found in the freshwater marsh include egrets, herons, and ibises.

Forestland covers approximately 90,795 acres, or about 66 percent, of the land area in St. John the Baptist Parish. The two major types of forestland occurring in the Parish are cypress-tupelo swamps and bottomland hardwoods. They provide habitat for a range of wildlife including white-tailed deer, rabbits, mink, otters, wood ducks, and migratory birds, among many others. In these areas that are frequently flooded American alligators, crawfish, and fish are usually plentiful.

Open land habitat is found mainly along the higher ridges in St. John the Baptist Parish and comprises about 15 percent, or 33,181 acres, of the total land area of the parish. The elevation is generally at or above 5 feet mean sea level. A large percentage of the area is used to produce agricultural crops, mainly sugarcane.

Citizen Input on Environmental Issues

Issues related to the environment were identified as part of two key recent public input processes related to the long-term planning of St. John Parish and for the recovery from the impacts of Hurricane Isaac. First, in support of the One Parish One Plan Comprehensive Plan several public meetings were held throughout St. John to get citizen input on the Environment and Hazard. Residents attending these meetings were

⁴⁹ The bulk of information about natural habitats is taken from a USDA Natural Resources Conservation Service Report titled: Soil Survey of St. John the Baptist Parish, Louisiana completed in 2003.

asked to discuss and write down the major issues facing the Parish related to these topics, as well as engage in a small group discussion related to each.

Second, following Hurricane Isaac FEMA instituted a recovery planning process – the National Disaster Recovery Framework. St. John Parish is the first community to use this new integrated disaster recovery planning process. Several areas in St. John Parish were targeted for recovery planning. The process relied heavily on citizen input at several open houses throughout the Parish where FEMA planners and local representatives working as part of the Citizen's Advisory Committee encouraged fellow Parish citizens to identify key issues related to the recovery from Hurricane Isaac.

Following is a summary of the main issues and comments from both meeting processes related to issues affecting the natural environment:

Drainage

Residents present during both processes were concerned with the current drainage in several areas of St. John, and think that this issue should be addressed. Many said that drainage on their street was inadequate and that flooding during rainstorms was a common event. Some cited the clogging of storm drains and ditches with trash as a primary reason for flooding and said they want the parish to take a more active role in keeping drainage infrastructure clean.

Pollution threatens the health of residents. Industrial waste, hazardous waste treatment, chemical plants, and communities outside of St. John are major polluters.

Wetlands

Residents recognized the value that wetlands play in buffering communities from hazards such as flooding and storm surge. Many wanted the Parish to curb wetland loss to keep St. John Parish buffered from storm surge and high water levels.

Natural Areas and Recreation

St. John the Baptist Parish is full of natural landscapes and many residents would like these areas preserved in their natural state, but also opened up for low-impact recreational use. Nature trails, swamp walks and bike paths are recommended for many of these natural areas. Such high quality natural spaces would only enhance the quality of life in the parish. Residents would also like more land devoted to youth activities and youth activity centers.

Drinking Water

Residents feel that the quality of drinking water is subpar and the ability for the drinking water system to weather a major storm even worse. They say that water service is

“spotty” due to frequent breaks in water lines and that the West Bank of the parish is particular is woefully underserved. Furthermore, residents suggested that the parish elevate critical potable water infrastructure to best ensure continued operation during major storm events.

Evaluation of Existing Development Patterns

Key to understanding the impact of development on natural ecosystems – and vice versa - is to identify those sensitive areas in relation to existing development. As stated previously St. John Parish is home to numerous diverse ecosystems, soils, and habitats. These offer tremendous opportunity to St. John Parish to both preserve these areas as well as to wisely use them to promote sustainability, resilience, economic development, and quality of life.

Parish residents have identified protection of the Parish’s natural environment as important to the long-term viability of St. John Parish. These sentiments have been expressed as far back as the public meetings held in 2003 to support development of the original One Parish One Future Land Use Plan. Recent meetings in support of the Comprehensive Plan and the FEMA Recovery plan further buttressed those sentiments.

The major development pattern in St. John on both the East and Westbanks has generally followed the traditional French Long-lot or arpenter system. This land use pattern generally flows north and south away from the Mississippi River and can be found all throughout the Mississippi River corridor in Southeast Louisiana. As the geography of the Parish indicates, this land is usually the least susceptible to flooding, with the risk increasing the further away from the River. This resulted from the historic repeated flooding and meandering of the Mississippi River for thousands of years, which created natural levees and ridges, as well as fertile farmland.

Recent flooding as a result of Hurricane Isaac further makes this point. The inundation line closely follows the demarcation line between the 100 and 500-year flood plains. As the land gets further away from the Mississippi River and closer to Lakes Pontchartrain and Maurepas on the Eastbank and Lake Des Allemands on the Westbank it becomes designated as wetlands and soils become less hospitable to urban development. Specifically, the future planning for St. John has focused on the area between I-10 on the Eastbank and LA Highway 3127 on the Westbank, as land outside of this area is for the most part undevelopable due to the risk from hazards – mostly flooding and storm surges – and the likely prohibitive costs of making the land developable due to elevation and soil conditions.

Several existing developed areas in St. John are particularly susceptible to impacts from hazards, particularly flooding and storm-surges as evidenced by the impact of Hurricane Isaac. The inundation map identifies the developed area that flooded during Hurricane Isaac and includes major areas of North LaPlace between I-10, Highway 51, and Belle Terre Boulevard, as well as areas of Reserve on both sides of Airline Highway. Flooding in these areas impacted nearly half of all housing structures in St. John Parish.

More isolated areas susceptible to impact are the Ruddock area; Frenier Landing/Pevine area on Lake Pontchartrain; and the Pleasure Bend area located on Lake Des Allemands on the Westbank of the Parish.

The Ruddock area located on the west side of I-55 sits between Lake Pontchartain and Lake Maurepas. This is the site of the main LaPlace water supply well and is historically susceptible to problems. Due to the very initial impacts from Isaac this well was shut down which severely limited LaPlace's residents access to fresh water.

The Frenier Landing/Pevine area experienced significant flooding form Hurricane Isaac storm surge. This area is home to several restaurants that attract residents from around Southeast Louisiana; and is s source of economic activity for St. John Parish. Significant issues related to resilience should be addressed for this area.

Pleasure bend is a fishing community of about 250 residents on the Westbank of St. John Parish adjacent to Lake Des Allemands. Currently it is impossible to access Pleasure Bend from within St. John Parish, and residents and visitors must travel through adjacent St. James Parish to reach the area. This location is highly susceptible to the impacts of storm surge from Lake Des Allemands. Recent improvements to the area include armoring about 11,000 feet of shoreline between Pleasure Bend and Point Aux Herbes as part of the Coastal Assistance Impact Program.

Natural Environment Element Goals and Policies

To address the range of natural environment issues outlined above, specific goals and policies are recommended to protect and preserve the natural areas of St. John Parish and to promote conservation, resilience, and quality of life for the Parish's residents.

While some topics covered in this element are covered in other elements in the Comprehensive Plan, they are dealt with here from an environmental rather than strictly development perspective. Any goals and policies outlined in this element are not mutually exclusive to other goals and policies throughout the Comprehensive Plan, but rather should be seen as complimentary and supportive. What is important is that all Elements within the St. John One Parish One Future Comprehensive Resiliency Plan work together to support the overall community's vision of the future physical development of St. John Parish.

Natural Environment and Land Use

Natural Environment Goal 1: Ensure that land use and development patterns safeguard against natural ecosystems and resources while providing for the long-term health and resilience of the community and its economy and people in St. John Parish.

NE Objective: *Protect and preserve lands that are sensitive to disturbance or that provide unique economic, ecological, resilience, cultural, or aesthetic features.*

Policy: Establish an ongoing inventory process to identify and evaluate sensitive areas to enhance the economic, resilience, cultural, and aesthetic features of the natural environment. (Natural Habitat Inventory)

- Use the best available information regarding the location and characteristics of existing natural ecosystems for the St. John Parish area.
- Develop GIS maps with a database of information about the mapped features.

Policy: Establish development guidelines that shape development patterns in areas within floodplains, highly erodible and unstable types of soil, and other sensitive habitats to ensure that those areas are protected.

Policy: Encourage appropriate conservation development principles to protect those sensitive natural areas by maintaining them as open space.

Policy: Establish a local Land Trust to own land, accept donations and conservation easements, and/or manage natural areas and open spaces that are important to the community.

- Create partnerships and combine resources to maximize the effectiveness of the Land Trust. Form partnerships with federal, state, and local agencies and non-profits to increase the effectiveness of land conservation, site restoration and land management in St. John Parish.

Policy: Develop an Environmental Assessment Handbook/Checklist for developers and planners to use as a guide for designing and reviewing development. The guide should address:

- The protection of natural features
- Incorporating the services of natural systems
- Implementation of appropriate conservation design practices that have been developed with input from a professional ecologist.

Policy: Develop appropriate regulations within the Parish Development Management Codes to protect and preserve sensitive areas and unique ecological, cultural or aesthetic features.

- Expand the use of conservation easements where necessary and appropriate.

Monitor and evaluate the effectiveness of protection mechanisms that are utilized.

- Review, update, and/or create environmental overlay districts for areas of special natural environmental significance or sensitivity, such as flood plains or important wetlands.

NE Objective: Implement infrastructure and development patterns that are compact and contiguous to existing developed areas to minimize impact on natural areas and to maximize resilience capacity.

Policy: Adopt Parish development guidelines and incentives to promote development patterns that will minimize the overall amount of land consumed for new development.

Policy: Increase infill development and higher density redevelopment in strategic areas, using open space as a common neighborhood amenity for resilience and recreation.

Policy: Continue and strengthen incentives to support infill and redevelopment.

Policy: Promote and support community-oriented uses of vacant and unused land in developed areas that enhance the surrounding neighborhood, such as community renewable energy systems and infill development.

NE Objective: Reclaim, restore and/or redevelop land that is degraded by erosion, contamination and pollution, improper filling or dumping.

Policy: Coordinate with appropriate organizations, agencies and others to secure and utilize resources for reclaiming and restoring damaged land.

Policy: Create and maintain an inventory of Brownfield properties St. John Parish.

Natural Environment Goal 2: Create and conserve open space as integrated, connected green infrastructure throughout the community to help foster improved resilience and quality of life in St. John Parish.

Policy: Develop a green infrastructure plan for St. John Parish to create interconnected, multi-functional open space corridors throughout the community.

Policy: Encourage new development and redevelopment projects to set aside land for neighborhood parks, community gardens, and green play spaces.

1. Incorporate natural streams and waterways and connect with trails and green streets
2. Identify partnerships with neighborhood groups, non-profits, and private entities for management and maintenance of open space.
3. Provide for active transportation, storm water treatment and management, and wildlife corridors and habitat to sustain resident's quality of life.

Policy: Encourage developments that support sustainable development tools such as community gardens, rain gardens, bio swales, and local food production among others.

- **Revise Parish Codes** Ensure that Parish codes do not contain roadblocks that discourage community gardens and local food production and work with relevant Parish offices to eliminate obstacles.

NATURAL HABITATS

Natural Environment Goal 3: Preserve, protect, and restore natural communities, ecosystems and their processes and habitat throughout St. John Parish.

NE Objective: Promote land use patterns integrated with conservation of natural habitats and natural aquatic systems to provide corridors for wildlife movement and protect the sustainability and resilience functions of the natural environment.

Policy: Ensure that land use decisions that affect important plant and wildlife ecosystems and communities consider both the amount of area needed and the necessary habitat characteristics for protecting those communities.

Policy: Design recreation corridors to be sufficiently large to also function as corridors for wildlife movement.

- Incorporate a hierarchy and variety of open space.
- Establish minimum standards for walking distance to open space in neighborhoods (based on Smart Growth recommendations).
- Coordinate with school districts and other partnerships for educational opportunities and for habitat enhancement.
- Include ways in which residents and property owners can extend and connect to the greenway network by appropriate native landscaping and other actions that support native wildlife.
- Identify partnerships to implement the plan.

Policy: Give priority to preserving unique ecological and landscape features in planning for public improvements and in the design of private development.

- If a natural feature would be negatively affected by a proposed development or public infrastructure, design alternatives should be evaluated. Value should be assigned to the educational, aesthetic, and "natural systems" functions of natural features when alternatives are considered.
- Construction specifications for public and private projects should specify the source of soil to avoid impacting environmentally sensitive areas.

Policy: Ensure that mitigation requirements exceed state and federal requirements and are at a level that is more than that which was destroyed when preservation of a protected natural feature is not possible.

Policy: Create and maintain an inventory of Brownfield properties for St. John Parish.

Policy: Require that the restoration and mitigation of natural features and ecological systems be science-based in order to restore the function of destroyed or damaged features.

- Require that restoration and mitigation plans include both a time limit and a monitoring and maintenance schedule.

Policy: Encourage adequate buffers around natural or restored ecosystem conservation areas and natural features in order to minimize potential harm to and degradation from urban development.

Policy: Include professional ecologists on planning teams whenever natural ecosystems are a component of a planning study and when proposed actions may potentially affect sensitive and critical areas.

NATURAL PLANTS

Natural Environment Goal 4: Use native and non-invasive plants in St. John Parish to ensure the health of the Parish's plant community; improve resilience; and to improve the value of the urban landscape for wildlife.

NE Objective: Use native and non-invasive plants in landscaping to create a distinctive image and sense of place for St. John Parish.

Policy: Encourage development of a Parish wide Landscaping Ordinance.

Policy: Investigate hiring a Parish Landscape Architect to coordinate all activities related to the managing the Parish's landscaping regulations,

Policy: Coordinate various Parish landscape and design standards to ensure that they are consistent.

- Update the landscaping and urban design components of the Parish's zoning code and subdivision regulations to ensure consistency with the Comprehensive Plan and Natural Environment Element.
- Collaborate with the community, professional ecologists, wildlife biologists, botanists, landscape architects, landscape designers, horticulturists and urban foresters in this effort, and include the use of new propagation techniques that provide for healthy plant material.

Policy: Work with the Louisiana State University Ag Center for St. John Parish to develop a palette of native and non-invasive plant species recommended in St. John Parish landscapes and develop design guidelines for property owners.

Policy: Encourage local landscape architects, landscape designers, botanists, horticulturists and nurseries/plant suppliers to offer and use native and non-invasive plants in St. John Parish.

Policy: Use native and non-invasive landscaping along greenway corridors when they are developed.

Policy: Promote the principles of conservation landscaping in public/private spaces. Continue to work with other entities in developing demonstration projects that promote the use of native and non-invasive plants.

Policy: Educate and promote a community appreciation of the benefits of using suitable native and non-invasive plant species.

Policy: Landscape non-active areas in parks and public open space with native and non-invasive plants and incorporate restoration of ecosystems where feasible.

Policy: Work through partnerships to create activities, programs and promotional events promoting the use of native and non-invasive landscaping:

- Plan and coordinate through public and private resources;
- Pair with education and landscaping information, and
- Include activities such as workshops, demonstration projects, and other events to encourage people to use NEWANIP.

NE Objective: Reduce storm water runoff and improve water quality by using native and non-invasive landscaping throughout the Parish.

Policy: Promote the utilization of native and non-invasive plants in post-construction, storm water best management practices to reduce storm water runoff in urban landscapes.

Policy: Promote the principles of conservation landscaping in public/private spaces.

Policy: Use landscape stream buffers designed to provide plant and wildlife habitat, bank stabilization, and improve water quality.

Policy: Compile information and guidance toward reducing the maintenance costs of fertilizing, mowing, etc. and for best management practices for natural areas and native landscaping.

Coordinate with entities such as the LSU Agricultural Extension Service to promote the information to the public and to property owners.

Policy: Encourage use of integrated pest management (IPM), organic practices, phosphorus restrictions, and other environmentally responsible practices for use on public right-of-way and property. Monitor the results of those practices and adopt those that prove environmentally safe and effective.

Policy: Develop a maintenance manual for native landscapes and provide training for Parish park and right-of-way maintenance workers and contractors.

NE Objective: Strategically use ecosystem restoration/enhancement projects, urban forestry, and landscaping to offset the Parish's Greenhouse Gas Emissions:

Policy: Work with the South Central Planning Organization to coordinate activities to obtain certification as an 'Attainment' area for air quality.

Policy: Evaluate the effectiveness of large-scale planting of trees and other ecosystem restoration/enhancement projects to offset the Parish's greenhouse gas emissions.

Policy: Manage the urban forest and plant community for long-term health of the ecosystem, air quality, and the aesthetic value to the community. Policy: Identify opportunities to reduce the Parish's carbon footprint.

Policy: Promote the protection of existing trees for their shade and heat island reduction effects.

Policy: Minimize land development practices that result in conditions that make plant survival difficult.

WATER MANAGEMENT

Natural Environment Goal 5: Preserve and restore natural hydrologic features and their functions to provide resilience and opportunities for people to experience and connect with natural water features.

NE Objective: Prevent damage to aquatic ecosystems (rivers, streams, lakes, wetlands, and aquifers) resulting from development practices or from changes in hydrology as a result of development.

Policy: Identify potential aquatic ecosystem restoration projects and implement them through a variety of funding sources.

Policy: Require conservation, restoration and/or mitigation of aquatic ecosystems as part of development and redevelopment projects that will drain into these aquatic ecosystems.

Policy: Work with the Corps of Engineers to develop preferred techniques that may be used to streamline 404 Dredge and Fill permit process.

Policy: Encourage utilization of “Low Impact Development” techniques in storm water management for infrastructure and building projects. Continue to seek funds to implement low impact development demonstration projects and monitor the effectiveness of those projects.

NE Objective: Base storm water management plans on the characteristics of each watershed.

Policy: Conduct or support studies to evaluate the characteristics of watersheds and sub-watersheds as a basis for storm water plans in St. John Parish’s that are not addressed in the Parish’s current storm water and drainage infrastructure plans.

Policy: Ensure that the Parish’s storm water management programs follow regional guidelines for best management practices.

Policy: St. John Parish should work through partnerships with other communities and entities for the purpose of managing storm water.

NE Objective: Optimize the on-site retention and re-use of storm water generated from building sites.

Policy: Encourage the use of narrower streets and driveways and the use of permeable paving surfaces for drive, parking and sidewalk areas.

Policy: Encourage the use of “re-usable” permeable paving systems such as brick or granite pavers when possible.

Policy: Utilize techniques such as rain gardens and open drainage systems to reduce the volume and speed of runoff entering the storm drainage system and to improve water quality.

Policy: Encourage the use of green infrastructure to reduce storm water volumes and assist in meeting federal and state mandates and develop incentives for their use.

Policy: Provide for rainwater “harvesting” in the Parish’s landscaping code and encourage the retention and reuse of storm water on site.

Policy: Ensure that storm water and erosion controls are installed and maintained according to the Parish’s guidelines during construction, as well as following all Federal and State environmental protection guidelines during construction.

Policy: Ensure that Parish staff levels are adequate so that storm water site plan reviews and on-site inspections occur in a timely manner.

XI Parks and Recreation

Introduction

St. John the Baptist Parish is a fast growing community that has seen significant development in recent years. Many new residential subdivisions have been built over the last twenty years, primarily in the LaPlace area, but growth can be seen in other parts of the Parish as well. In the "St. John Parish Future Land Use Plan" by the University of New Orleans, College of Urban and Public Affairs, projections for future residential population in the Parish expect an increase from the 2000 level of 43,044 to as much as 57,804. This increase in population is creating new demands on Parish services and infrastructure, including recreational infrastructure.

The goal of this Parks, Recreation, and Open Space Plan is to enhance the quality of life of the citizens of St. John the Baptist Parish by improving the level of recreational facilities and services. This report inventories existing facilities and services, addresses the future needs of the Parish and outlines several options for reaching those goals.

The guidelines presented here are park and recreation space standards that are applicable nationwide for planning, acquisition, and development of park, recreation, and open space lands, primarily at the community level. These standards should be viewed as a guide. They address minimum, not maximum, goals to be achieved. The standards are interpreted according to the particular situation to which they are applied and specific local needs.

A variety of standards have been developed by professional and trade associations that are used throughout the country. The standard derived from early studies of park acreages located within metropolitan areas was the expression of acres of parkland per unit of population. Over time, the figure of 10 acres per 1,000 people came to be the commonly accepted standard used by a majority of communities. Other standards adopted include the "percent of area" approach, needs determined by user characteristics and participation projections, and area use based on the carrying capacity of the land.

The fact that some of the standards have changed substantially is not an indication of their obsolescence. Changes are a measure of the growing awareness and understanding of both participant and resource (land, water, etc.) limitations. Parks are for people. Park, recreation, and planning professionals must integrate the art and science of park management in order to balance such park and open space resource values as water supply and air quality.

The Importance of Parks, Recreation and Open Space

Local communities reap many benefits from their parks, recreation and open space infrastructure. Not only do these sites provide an aesthetically pleasing place for citizens to spend their leisure time, there are more tangible benefits as well.

Research by the American Planning Association and other organizations has shown that communities with well-planned recreational opportunities, including parks and playgrounds, reap economic development benefits:

- Real property values are positively affected.
- Local tax revenues are increased.
- Affluent retirees are attracted and retained.
- Knowledge workers are attracted to the community and retained.
- Home buyers are attracted to buy homes.

In addition, parks and green space:

- Create safer neighborhoods.
- Can help revitalize residential and commercial areas.
- Help build a sense of community.
- Help children learn.
- Contribute to the overall health of citizens by providing safe opportunities for physical activity.

Methodology

In order to determine the specific recreation needs of St. John the Baptist Parish, the consultants utilized several sources of information. These included demographic information from the U.S. Census Bureau; previous population projections for the Parish; interviews with the Parish Administration and Council; interviews with various Parish Department heads, in particular the Recreation Department Director; interviews with the Parish Recreation Board; citizen input at public meetings; and a cataloging of existing recreation sites in the Parish and the facilities and condition of those facilities and equipment at each site.

A. Public Forums

On November 19, 2008, two focus group meetings were held to discuss housing issues. The groups consisted of residents, builders, developers, real estate brokers, non-profit service agencies and others. Because housing issues are intertwined with other quality of life issues,

there was considerable discussion of recreation in the Parish by these community leaders.

Four public forums were also held to gather additional public comment on recreation and housing issues. These forums were held at the Parish Percy Hebert Building on December 1, two at the Edgard Courthouse on December 2 and February 9, 2009, and at the Garyville-Mt. Airy Magnet School on December 4, 2008.

B. Questionnaires

For additional public input, a Recreation Questionnaire was developed and distributed to various groups and individuals. A copy of the questionnaire is found in the appendix section of this report. Approximately two dozen people responded to the questionnaire and their opinions shed additional light on the recreation issue.

C. Previous Studies and Reports

In addition to public input, several previous reports and studies were reviewed to provide background information on recreation in general and specific projects. There is no previous "Recreation Master Plan" for St. John Parish. However, several "master plans" for specific facilities and sites have been done in recent years. The studies below are the most recent:

1. "St. John the Baptist Community Center Complex – Design Program", Sizeler Architects, 2000. This study focused specifically on the then proposed (now open) community center at Highway 59 Park. Though focused on this building in particular and recreation in general, there was good research and a number of applicable goals included in the program.
2. "Regala Park Master Plan", Meyer Engineers, Ltd., February 2007. This plan evaluated the existing facilities at Regala and proposed a number of improvements and some new facilities, including a new gymnasium. The total cost of these recommended improvements was \$5,306,000 with the gymnasium, and \$829,000 without the new gymnasium.
3. "Program and Master Plan – West Bank Recreational Complex", by Greg Cantrell, Inc., and Meyer Engineers, Ltd., Feb. 2007. Like the Regala plan, this master plan laid out the program for improvements at the west bank facility. Unlike the Regala site, this

site was vacant and all improvements started from scratch. The plan called for a number of facilities for various sports, including baseball, soccer, a skate park, a playground and more, to service the residents of the west bank of St. John Parish. As of the publication of this Recreation Plan, the only improvements at this site have been three baseball fields, built in part with funds from a Baseball America grant.

4. Recreation and Open Space Standards by the National Recreation and Park Association (Lancaster, 1990) - The standards most widely accepted by local governments for recreation and open space facilities are from the National Recreation and Park Association (NRPA). The NRPA has a hierarchical classification system of parks based on size, service area and other features. It also recommends standards for nineteen specific recreational activities, such as tennis and baseball.

All of this information – previous reports and studies, public input, focus groups, questionnaires, interviews - all helped determine the goals, objectives and specific recommendations of this report.

Demographic Profile

A demographic profile can give important information regarding the potential market of users of the current and potential recreational facilities, the type of facilities and services that may be needed. The information on the following tables was obtained from the U.S. Census Bureau and the University of New Orleans.

Population – St. John the Baptist Parish

1990 Census	40,584
2000 Census	43,044
2007 Estimate	47,684

2000 Population by Age

	<u>St. John Parish</u>	<u>U.S.</u>	<u>Percentage</u>
Under 5 years	8.0	6.8%	
18 years and over	68.8	74.3%	
65 years and over	7.8	12.4%	

Median Age of Total Population (2000)	<u>St. John Parish</u>	<u>U.S.</u>
	31.7	35.3

Households

2005 Household Estimate	15,079
2000 Households	14,283
1990 Households	12,916
% Annual Household Growth 1990-2000	9.6%
1990 Households	
With 1 Person	16.2
With 2 Persons	23.7
With 3 Persons	20.3
With 4 Persons	22.0
With 5 Persons	10.9
With 6 Persons	4.1
With 7 + Persons	2.7
2000 Average Household Size	2.98
Average Age of Total Population	32.6
Median Age of Total Population	31.7

Playgrounds and Parks – Existing

St. John the Baptist Parish has a number of parks and playgrounds that are being used, depending on the facility, at varying levels by the public. It is important that an inventory of existing facilities be made as a baseline before any recommendations as to where the Parish need to go can be made. Below is a list of existing parks and playgrounds owned by the Parish and operated by the St. John Parish Recreation Department.

D. East Bank Recreational Facilities

1. Cambridge Park – Cambridge Park is one of several smaller yet very important recreational facilities in St. John Parish. Important because, due primarily to its location, it reaches its “market” easily. Located in a residential area of LaPlace on a local street, it is easily accessible to families and children on bicycles
 - Walking / Jogging Path
 - Lighting
 - Playground Equipment
 - Basketball Court (uncovered)
 - Putting Green
2. Greenwood Playground – Greenwood, like Cambridge, is a small to moderate sized facility located in a residential neighborhood near several schools. As a result, it is well used by the community. Below are the amenities and attractions at Greenwood:
 - Walking / Jogging Path
 - Lighting
 - Playground Equipment
 - Tennis Courts (2)
 - Shelters (2)
 - Water Fountain
 - Paved Parking lot
3. Highway 51 Park - Located on U.S. Highway 51 in LaPlace, Highway 51 Park is one of the parish's newest parks. It is very popular with walkers and joggers due to its location and its amenities, especially the walking / jogging path. It is also highly visible and adjacent to the Community Center and the St. John Parish Public Library. Existing amenities include the following:

- Walking / Jogging Path
 - Lighting
 - Playground Equipment
 - Soccer Fields (4)
 - Shelters (2)
 - Water Fountain
 - Rest Rooms
 - Paved Parking lot
4. Regala Park – Regala Park is intended to be the Parish's flagship recreational site. It is a large facility, approximately 30 acres, off of Airline Highway in Reserve, not easily accessible by pedestrians and bicyclists, it is nonetheless well used because of its wide-ranging amenities, listed below. In addition, it is adjacent to the Frank Lapeyrolerie Senior Center and the Southeast Louisiana War Veterans facility.
- Walking / Jogging Path
 - Lighting
 - Playground Equipment
 - Baseball Fields (4)
 - Soccer Field (1)
 - Basketball Courts (2) - uncovered
 - Outdoor Swimming Pool
 - Shelters (2)
 - Water Fountain
 - Concession Stand
 - Rest Rooms
 - Racquetball Courts (2)
 - Paved Parking lot
5. Belle Pointe Playground – Belle Pointe is located on the western edge of LaPlace, on Jackson Street near Airline Highway. It was the first Parish playground or park with a walking / jogging path. The path proved to be so popular and such a draw for the park, the Parish began installing walking / jogging paths at other parks.

- Walking / Jogging Path
 - Lighting
 - Playground Equipment
 - Restrooms
 - Water Fountain
 - Basketball Court (covered)
6. Ezekial Jackson Playground - Located in the heart of Garyville, Ezekial Jackson is popular and well-used by area residents.
- Walking / Jogging Path
 - Lighting
 - Shelter
 - Concession Stand / Restroom
 - Baseball Fields (2)
 - Playground Equipment
 - Paved Parking Lot
 - Basketball Court (uncovered)
7. Stephanie Wilkins Playground – the Parish's newest facility, it serves a neighborhood in LaPlace that was previously underserved. Because of its limited size, it cannot add very many amenities but it serves a specific niche in the community.
- Playground Equipment
8. Emily C. Watkins (formerly Woodland) Playground – An older park in an older part of LaPlace, near the Mississippi River, it serves its immediate neighborhood. Its amenities are:
- Walking / Jogging Path
 - Shelter
 - Basketball Court (uncovered)
 - Playground Equipment

E. West Bank Facilities

1. West Bank (Second Ward) Sports Complex
- Baseball Fields (3)

2. Harold Scott Roussel (Castle Drive)

- Walking / Jogging Path
- Restrooms
- Swimming Pool
- Shelter
- Basketball Court (uncovered)
- Playground Equipment

3. Wallace Bridge Park

- Walking / Jogging Path
- Playground Equipment

In addition to facilities owned and operated by St. John the Baptist Parish, there are a number of privately-owned and operated recreational sites as well as some by other governmental agencies. Private and parochial schools, as well as private recreational clubs, with sports fields, gymnasiums, and other recreational facilities have been an important component of the Parish's recreation infrastructure. Riverlands Country Club and Belle Terre Country Club have the only golf courses in the Parish. They are both membership driven.

Natural Recreational Resources

One of Louisiana's nicknames is the "Sportsman's Paradise" and this applies to St. John Parish as well. The Parish has large areas on both sides of the river that are wetlands and undevelopable but otherwise afford many outdoor and natural recreational opportunities to residents and visitors. The Parish has miles of shoreline along both Lake Pontchartrain and Lake Maurepas with a Parish-owned boat launch at each and a small un-named rest area at Lake Maurepas. The Manchac Swamp is a beautiful natural area that is also an economic development resource where swamp tours attract visitors to the Parish. These lakes and natural areas offer unlimited opportunities for outdoor recreation – hunting, fishing, and water sports.

St. John Parish manages two natural recreation areas – Peninsula Park and Sunset Park. To provide access to these natural and beautiful areas, and to Lakes Pontchartrain and Maurepaus, for hunters, fishermen or other outdoor sporting activities, the Parish prides several boat launches:

- Reserve Boat Launch
- Peavine Boat Launch
- Ruddock Boat launch

- Pleasure Bend Boat Launch.

For outdoor enthusiasts who are landlubbers, St. John Parish has committed resources to the multi-jurisdictional Pontchartrain Trace, or the “Ring Around the Lake”. The Parish, in cooperation with LA DOTD and the Regional Planning Commission, will begin construction of the first phase of the Levee Path on the Mississippi River from the St. Charles Parish line to LaPlace, with future phases not only continuing upriver on the levee but also branching north toward Manchac and providing the link to future phase in Tangipahoa and St. Tammany Parishes to eventually provide a continuous multi-purpose bicycle and pedestrian path around Lake Pontchartrain, in accordance with the RPC’s Pontchartrain Trace Master Plan. Comments from the citizens at the public forums and meeting indicated the residents of the Parish favor this kind of recreational and transportation opportunity.

Strengths and Needs

St. John Parish is fortunate in that it has approximately eleven established parks and playgrounds relatively evenly distributed geographically and demographically throughout the Parish. Three of the eleven parks are relatively large in area – Regala, Highway 51, and the Westbank Recreational Complex. The other eight smaller community parks are distributed throughout the Parish and are generally centrally located within the communities they serve.

The Parish has also over the years, especially since 2002, spent considerable public funds making improvements to many of those facilities. Much of that came through a 2001 bond election where \$18 million was approved, primarily for streets, drainage and recreation projects. Approximately \$2.0 million was spent on recreation projects throughout the Parish with these funds. As a result, many of the parks and playgrounds have new equipment, amenities and facilities.

Using the Recreation and Open Space Standards recommended by the National Recreation and Park Association (NRPA), St. John should have approximately 480 acres of “close-to-home” recreation, park and open space. The recommendation by NRPA is between 6.25 and 10.5 acres per 1,000 population. With 521 acres for “Arts, Entertainment and Recreation” (based on UNO’s Land Use Survey of the Parish in 2002), the Parish slightly exceeds this recommendation, at least with current population estimates. However, it should be pointed out that approximately 295 of these acres are used by two private golf courses in LaPlace – Belle Terre Country Club and Riverlands Country Club. Actual land owned and operated as public recreation now comes to approximately 226 acres. Using the minimum recommendations of the NRPA, the

Parish needs a total of 298 acres (6.25 acres per 1,000 population for 47,684 estimate 2007 population). This is approximately 75% of what is recommended by the NRPA standards for the existing population meaning the Parish is not far off of these recommendations and with the population expected to increase over the next decade, the Parish should develop a long-term strategy for acquiring additional property for recreation.

Though the Parish has done a good job with its recreation facilities, there are a number of needs that the Parish must address to continue providing quality recreational facilities and programs. Many of these needs were identified or confirmed through the public input elements of this plan.

1. Despite recent improvements, a number of parks and playgrounds have older equipment and buildings that need repair or replacement. The Parish Department of Parks and Recreation recently added additional staff members to help in this area. More help may be necessary to maintain all of the Parish facilities.
2. Though St. John organized youth sports teams have a history of success in regional and national venues, numerous comments at the public meetings and on the questionnaires indicate there is a need and desire by the public for the expansion of organized youth sports leagues and teams in all sports – more sports, more teams, more leagues.
3. More Adult Recreation programs - Approximately 60% of the Parish's population is between the ages of 18 and 65. Public input heard during this planning process stated that the residents of the Parish, east and west banks feel more activities and programs are needed for this age group.
4. One of the opportunities the Parish should take advantage of, identified by the housing focus groups and confirmed by other data, is the growing baby-boomer retiree market. One way to help capture that market is to provide quality of life assets targeted to that group, including recreation programs and facilities.
5. Additional recreational land and facilities - The Division of Planning at UNO projects the population of the Parish to increase by as much as 10,000 people in the next 10-15 years. To accommodate this growth, and to address existing deficiencies, an additional **+130 acres** will be needed for arts, entertainment and recreation by 2025 to comply with the minimum NRPA recommendations of 6.25 acres per 1,000 population. The Parish should be looking for additional property now to meet these future needs, primarily in the most likely areas for population growth – primarily the LaPlace area but also Reserve/Garyville and the west bank of the Parish.

Goals and Priorities

In order to make the most efficient use of revenue sources, it is important for the Parish to establish goals and priorities. Gathering input from citizens through focus groups and public meetings, as well as meetings and discussions with Parish officials, the Parish Recreation Board and the Parks and Recreation Department, the following general goals have been established:

Parks and Recreation Goal 1: To enhance the quality of life for all citizens of the Parish by providing adequate parks and recreation facilities.

Parks and Recreation Goal 2: To provide parkland and recreational facilities that are convenient to all neighborhoods and meet the needs of a diverse population.

Parks and Recreation Goal 3: To enhance current recreational facilities and programs offered by the St. John the Baptist Parish Department of Parks and Recreation.

Parks and Recreation Goal 4: To find innovative ways to fund operations, maintenance and improvements at Parish recreational facilities.

Parks and Recreation Goal 5: Provide a diversity of recreation programs and facilities to meet the needs of all citizens.

RECOMMENDATIONS:

The following recommendations will help the Parish meet the general goals stated above.

1. The Parish should continue development of the three large facilities:
 - a. West Bank Recreation Complex – the baseball fields are in operation. The Parish should begin development to diversify the recreation opportunities on the west bank – park lighting, basketball, playground and tot lot facilities should be the next priorities.
 - b. Highway 51 Park - This park, located in the middle of the most populated part of the Parish – LaPlace – should be the marquis facility in the Parish. It has the space and the access necessary to make it a successful and popular destination. Located next to the Community Center further adds to its importance.

- c. Regala Park – Regala serves most of the western part of the east bank. It has diversity in current facilities, though some maintenance or replacement is necessary on the rest rooms and concession building. There has been a small but steady call for a new gymnasium at Regala, as called for in the 2007 Regala Park Master Plan by Meyer Engineers. Regala is also adjacent to the Frank Lapeyrolerie Senior Center and the War Veterans Center. Patrons of these two facilities would be greatly served by adding senior and handicapped-appropriate facilities at Regala such as additional walking paths and stretch stations.
- 2. Renovate and rehabilitate existing parks and facilities to address the issues of aging and outdated recreational infrastructure: These parks and playgrounds, such as Belle Pointe in LaPlace, Ezekial Jackson in Garyville and Harold Scott Roussel in Edgard, serve a majority of the citizens of the Parish. They are convenient, accessible and are well-used by the citizens in their vicinity. It is therefore critical to maintain these parks as well as add new or replace equipment, facilities and landscaping.
- 3. Utilize the Mississippi River levee on both banks as a transportation link and a recreational resource. This idea was expressed in several public forums and on the questionnaires. Studies of other communities with similar facilities show a definite positive effect on quality of life issues and economic development opportunities.
 - a. Proceed with the Mississippi River Levee Path for bicyclists, pedestrians, skaters and other users. That project is in the design stage with construction funds in place.
 - b. Extend the levee path through the Parish on both sides of the river as funds become available.
 - c. Implement the RPC's "Ring Around the Lake Master Plan" by linking the levee path with the multi-Parish network described in the master plan, as funds become available.
- 4. Identify additional potential park / playground sites to prepare for future growth and the corresponding recreational needs of these future citizens of the Parish. The Future Land Use Plan by UNO suggests as much as 439 additional acres may be necessary by 2020 to meet the demand of increased population. Parts of LaPlace appear underserved by existing facilities. One site in the Belle Terre area (as suggested in one of the public forums) with other sites scattered in areas of future residential growth, primarily on the east bank of the Parish.

Though less populated than the east bank, the west bank of the Parish has a much-dispersed population. Two additional neighborhood type parks should be considered for the west bank.

5. Transportation and access are important to recreation in any community. Part of enhancing existing facilities and creating new parks is to make them easily accessible to local citizens.
 - a. Sidewalks and bike paths linking schools, parks and playgrounds to neighborhoods are critical. A example of this is the path behind Glade subdivision providing access to Highway 51 Park.
 - b. Adequate parking facilities at existing and new facilities must be provided.
 - c. Implement a sidewalk enhancement program to repair and replace existing sidewalks in neighborhoods.
 - d. Enact or enforce regulations that require new developments, commercial and residential, to provide pedestrian access linked to adjacent developments.
6. The St. John Parish Department of Parks and Recreation should increase its organized youth sports program to include more sports, such as soccer and tennis, and more teams and leagues for all youth sports.
7. Increase sports and recreation programs for adult leagues and programs. Besides team sports such as softball and basketball, many communities also offer arts and cultural programs through the recreation department. There is a growing need for this in St. John Parish and public input was loud and clear that it is a priority in many neighborhoods.
8. Enhance the Parish's outdoor recreation facilities by improvements at the boat launches on Lake Pontchartrain and Lake Maurepas, expanding the rest areas and facilities there, provide more boat trailer parking and other improvements to attract outdoor recreation enthusiasts.,
9. Increase programs and facilities for elderly citizens and retirees.
10. Establish appropriate funding levels for the Parish's Parks and Recreation system.
 - a. Predictable and adequate funding levels to meet capital and operating needs.

- b. Leverage public funding with outside sources (grants, industry sponsorship of facilities, etc.), such as Marathon's sponsorship of Ezekial Jackson Park.

Policies:

1. Expand the budget and staff of the Department of Parks and Recreation in order to expand programs and facilities for all age groups.
2. Forge relationships between the Parish and other entities, such as the School Board, the YMCA, private recreational facilities and clubs, to share facilities in order to make more efficient use of limited funds and facilities by all parties.
3. Enforce SECTION 27:168. REQUIRED RESERVATION AND DEDICATION OF PUBLIC SITES of the St. John the Baptist Parish Subdivision Regulations. This section reads "All subdividers requesting approval for subdivisions containing five (5) lots or more shall dedicate land or pay fees in lieu of dedication for the purpose of providing green space or parks to the residents of St. John the Baptist Parish." In the past, this has been enforced to varying degrees. In some cases, one lot out of a subdivision is reserved for a neighborhood pocket park. On other occasions developers were allowed to use the 5% for additional green space that beautified the development but provided no recreation amenities. There have been a few cases where the fee in lieu of dedication was collected but it is unknown if these funds were used for recreation improvements. The Parish should set up a fund specifically for this purpose and encourage or require the fee in lieu of dedication for developments in the LaPlace area to provide needed funds for park improvements. These improvements, besides possible property acquisition for new or expanded parks, could also be used for public green space, new trees, park benches and gazebos. For future subdivision developments in areas that are now vacant and where there are currently no parks, the land dedication requirement may be more appropriate than the fee option.
4. Utilize all available and appropriate public property for additional recreation and open space/green space. For instance, there are many drainage canals and ditches in the Parish whose banks could be landscaped and beautified, and in some instances have walking/jogging/bicycle paths installed.
5. Utilize the recommended standards of the National Recreation and Park Association when planning specific new facilities or expanding existing ones.

Potential Funding Sources

Funding for recreation projects has always been difficult for many local governments. With the current global economic crisis, funding becomes an even larger challenge. Recreation projects in St. John have been funded through a number of sources over the years, including Parish-wide bond money, grants from the LA Department of Community Projects, Rural Development Office and others. Funding for the Parks and Recreation Department comes from dedicated video-poker funds. However, the economic turndown has affected this revenue stream as well. Some of the other funding sources have dried up and other avenues of funding must be found.

1. Special Taxing Districts

This method works like other taxing districts such as water or utility districts, school districts, development districts, etc., which are creations of the State of Louisiana. A designated area likely to reap the benefits of a park or other recreational facility or facilities would be taxed in some way, i.e., a sales tax or property tax millage, with those funds only to be used for capital projects, operations and maintenance of recreational facilities within the district. Pelican Park near Mandeville is operated by such a district, Recreation District #1. A similar district and park are being planned in eastern St. Tammany Parish near Slidell and a special district is being discussed by St. Tammany Parish and the municipalities along the Tammany Trace to help fund the operation and maintenance of the Tammany Trace.

2. Community Wide Sales or Property Tax (Bond Issues)

Some communities have a sales tax or property tax millage dedicated to specific recreational and/or bike facilities and programs. Many of the recent recreational projects built in the last few years in St. John Parish were funded by a 2002 bond election. Such a tax requires a vote of the public but would demonstrate the willingness, or unwillingness, of the community to pay for its amenities. However, a recent 2008 bond initiative that included \$2.5 million in funds for recreation and a new gymnasium was recently passed by voters.

3. Recreational Impact Fees

Impact fees are becoming more popular around the country to finance infrastructure improvements. Impact fees are one-time fees paid as the proportionate share of the capital costs of providing major facilities and services for new residents, not existing ones. Impact fees are not widely used in Louisiana, for a number of reasons, but in high growth states such as Florida, parks and recreational facilities are some of the more popular uses for impact

fees. With so much new development in St. John Parish, a strong case can be made that new recreational facilities are needed to accommodate future residents.

4. The Governor's Office of Community Projects

Many recreational projects in St. John Parish were funded by various grant programs administered by the LA Governor's Office of Community Projects, formerly run as the Governor's Office of Rural Development. A grant program allocating funds to each Parish, the Rural Development Grant Program was discontinued a few years ago.

5. Recreational Trails Program – As its name implies this program is for trails, paths and other strictly recreational projects, as opposed to the Enhancement Program which is primarily transportation related. The program is administered by the Office of State Parks in the Lieutenant Governor's Office Department of Culture, Recreation and Tourism. Funding from this program is part of the funding mix for Phase 1 of the Mississippi River Levee Path, soon to be constructed.

6. Enhancement Program

Federal Transportation funds have been a part of the funding matrix in some St. John Parish recreation projects, particularly the Mississippi River Levee Path. The **Intermodal Surface Transportation Efficiency Act of 1991** (Public Law 102-240; **ISTEA**, pronounced *Ice-Tea*) is a United States federal law that posed a major change to transportation planning and policy, as the first U.S. federal legislation on the subject in the post-Interstate Highway System era. It presented an overall intermodal approach to highway and transit funding with collaborative planning requirements, giving significant additional powers to metropolitan planning organizations. Signed into law on December 18, 1991 by President George H. W. Bush, it expired in 1997. It was preceded by the Surface Transportation and Uniform Relocation Assistance Act of 1987 and followed by the Transportation Equity Act for the 21st Century (TEA-21) and most recently in 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The “Enhancement” program of ISTEAs and its subsequent reauthorizations sets aside a pocket of funds specifically to pay for alternative transportation projects, including bike and pedestrian paths whose primary purpose is transportation but which can also be used recreationally.

Enhancement program funded the very successful “Tammany Trace” rails to trails program in St. Tammany Parish which greatly contributed to the Parish’s

economic development and quality of life. It is hoped that this model will be duplicated in some way with the Mississippi River Levee Path, soon to begin construction in St. John Parish. The recently passed “Economic Stimulus Package” by President Obama’s administration and Congress seems to have included SAFETEA-LU and its programs in its funding.

7. Other Grant Programs

There are numerous grant programs administered by a multitude of groups, some non-profits and foundations. The “Baseball America” program, a division of Major League Baseball, financed some baseball field improvements at the West Bank Sports Complex in Edgard. The U.S. Soccer Foundation also has a grant program to assist local soccer programs, with specific assistance to help build facilities. One program, funded jointly with NikeGO, awards a total of ten \$100,000 grants each year by the Foundation to support the creation of 50 soccer fields under a five-year program. Detailed information on these financial assistance programs and other programs can be found on their website at www.ussoccerfoundation.org.

There are other state and federal programs that can help finance infrastructure and facilities but generally have specific parameters for eligibility. Most grant programs have a local match requirement, usually a 25-50% split.

8. Corporate or Community Sponsors

Many corporations like to contribute to the communities they serve by contributing to local causes. Even national and multi-national corporations, such as Wal-Mart, have programs for local support. An example in St. John Parish is Marathon Oil’s support of improvements at Ezekiel Jackson Playground in Garyville. Other local businesses could be offered the chance to participate in sponsoring a specific project at Regala, for instance, such as refurbishing the swimming pool area or funding the tennis court replacement.

9. Land Use Regulations

Most communities, including St. John Parish, have zoning regulations and subdivision regulations. These can be amended to require developers to provide property or other performance standards related to recreational facilities. If current regulations address these issues, they should be enforced fully in order to provide the required and desired facilities.

As discussed earlier in this report, St. John’s Subdivision Regulations currently require all developments over a certain size to dedicate 5% of the total

development to green space. The Parish could amend these regulations to provide incentives for the developer to contribute to a dedicated recreational fund for that area in lieu of the dedicated green space. Those dedicated funds could then be used to finance improvements at whatever recreation facility is closest and likely to be used by the new residents, or to acquire additional property if necessary.

10. Public Property Leases

St. John Parish could lease small pieces of the various park sites and other Parish property to cellular and PCS providers to locate their towers and other equipment. The lease agreements provide the Parish with a predictable, and fairly substantial, funding source for the life of the lease, usually 10-15 years. The funds are then used to finance operations and maintenance of adjacent or nearby Parish recreational facilities. The Parish could solicit these by sending letters to or contacting all providers offering tower sites at Parish parks.

XII: Historic Preservation Element



St. John the Baptist Parish is a repository of historic and cultural assets that help to make this a place that is distinctive and worth caring about. Along both sides of the Mississippi River, grand and modest structures, landscapes and districts of architectural, archeological and cultural significance set the parish apart in a nation dominated by tract homes, strip malls and big-box retailers.

Neglect and outright demolition have diminished the parish's supply of historic resources, but an impressive array of structures, sites and streetscapes remains. Yet with no historic protections in place and existing regulations that in some cases promote the destruction of historic sites and places, these assets are threatened.

Residents frequently cited the need for better recognition, promotion and preservation of the parish's historic elements in attendance at master plan meetings conducted at the outset of this project. Some noted the painful legacy associated with some of the region's most famous historic structures – the plantations that are the vestiges of slave-based agriculture – but many also pointed to the importance of preserving these and other historic and cultural resources and to the substantial untapped opportunities available by doing so.

"It has been said that, at its best, preservation engages the past in a conversation with the present over a mutual concern for the future."

-William J. Murtaugh

Purpose

Communities can reap substantial benefits from the thoughtful application of historic controls. Historic preservation can have positive effects on property values, quality-of-life, tourism and local economies. A 2011 study by Rutgers University found that investment in rehabilitating historic buildings produces greater economic benefits in terms of jobs, wages and federal, state, and local taxes than comparable investment on new construction.

Historic preservation additionally carries important environmental and resilience benefits. By encouraging reinvestment in historic areas and through the re-use of old buildings, communities can prioritize investment on higher ground and minimize the need for new construction and sprawling expansion into undeveloped areas. Investing in historic areas can help to reduce flood risk and protect wetlands and other ecologically sensitive areas.

The devastating flooding wrought by Hurricane Isaac in sections of St. John, for example, mostly affected areas developed in recent decades while leaving much of the parish's historic developments untouched. Directing investment to older sections of the parish can also reduce consumption of natural resources and maintain open space while reducing the need for new roads, sewer lines and other public infrastructure.

Historic areas, especially those that developed before automobiles became commonplace, additionally tend to be characterized by more walkable and bikeable landscapes than are newer areas. Promoting the preservation of these districts and

RESILIENCE BENEFITS IN HISTORIC PRESERVATION

Promoting investment in and the preservation of historic districts, structures and streetscapes can help to minimize the need for new construction and expansion into undeveloped areas.

- *Older communities generally were settled in higher-ground areas that were less prone to flooding. Today, many of these older neighborhoods are in less vulnerable flood zones.*
- *Infill and redevelopment here can reduce consumption of natural resources, maintain open space, reduce flood risk and protect wetlands and other ecologically sensitive areas.*
- *Directing investment to older districts can also reduce the need for new roads, sewer and water lines and other public infrastructure.*

encouraging compatible new development within them can help reduce automobile



dependency and harmful emissions, encourage physical activity, and improve access to daily needs among people who don't own cars or who are too young or old to drive. These constituencies will be increasingly important as gas prices rise, as Baby Boomers age and as people consider qualities such as walkability, bike ability and suitability for all ages in determining where to live.

This historic preservation element lays out goals and policies that:

- Identify historic assets
- Promote community resilience
- Encourage investment in and preservation of historic properties and areas
- Discourage the demolition and relocation of historic resources
- Foster civic pride and interest in the parish's historic landscape and cultural heritage
- Contribute to the parish's quality of life and sense of place
- Encourage beautification, environmental stewardship and resilience
- Reduce blight
- Promote distinctive neighborhoods and parish character
- Promote tourism, education and economic development

METHODOLOGY

Input from a diversity of resources and individuals helped shape and refine this historic preservation element. Sources included:

- Conversations with residents at numerous town hall plan meetings held across the parish

NATIONAL DISASTER RECOVERY FRAMEWORK (NDRF) and Historic Preservation Element

After Hurricane Isaac (August 2012) the NDRF process in St. John included a "Cultural and Natural Resources" sub-committee. That committee's scope overlaps with the subject of this *Historic Preservation Element* and some of that committee's recommendations are included here:

*Airline Highway Scenic Route Project

* St. John Cultural History Project

- The recommendations of the Citizens Advisory Committee, part of the Post-Hurricane Isaac *National Disaster Recovery Framework* (discussed in the *Resilience* element of this plan)
- Interviews with parish and state officials
- Historic preservation plans from across the country
- A 2010 parish beautification plan created by Greg Cantrell Inc.
- The 2000 U.S. Census, for information on residential housing units 50 years or older
- The Louisiana State Library archives for information on a historic structures survey performed in the 1980s
- The National Historic Register, for information on register-listed structures and districts in the parish

Identifying St. John's Historic Assets

More than a dozen Parish structures, districts and sites are currently listed on the National Register of Historic Places. Historic Garyville, one of two parish historic districts included on the registry, is considered one of the best-preserved examples in Louisiana of a former timber mill town (Cantrell, 2010). Whitney Plantation in Wallace is the centerpiece of the parish's other nationally recognized historic district. Its raised main house, built around 1790, is considered one of Louisiana's most important examples of Creole architecture (*U.S. Department of the Interior*).

Importantly, while inclusion on the National Register is a formal recognition of a property's historic, architectural or archeological significance, it does not carry any express protections for a property or restrictions on its use. Owners of properties listed on the register are free to remodel as they wish and even to demolish the structures, though some federal protections may apply if federal funding has been used for rehabilitation.

Properties accepted to the register are added to a searchable database maintained by the U.S. Department of the Interior. They are also eligible for specific tax credit and grant programs and other incentives that can assist with historic property restoration and preservation.



St. John's *Haydel-Jones House*, above, was added to the National Historic Register in 2010. The privately owned, raised French Creole plantation house is one of the few structures of its type remaining in Louisiana, and its construction is thought to date back to around 1815. (*Image and information courtesy National Park Service*)

Many more properties and places of historic and cultural value, ranging from small Creole cottages and agrarian view sheds to grand antebellum plantations, have not received any official recognition. These resources are important not only for their individual characteristics but also for their contribution to the broader cultural and architectural fabric of the parish and for the insight they provide into the history and development of this region. Some of the less-elaborate structures and sites whose importance might be most readily overlooked are arguably in even greater need of protection than the more opulent ones whose significance is more widely appreciated.

National Historic Register Criteria

Sites and properties deemed eligible for inclusion on the National Register are determined to carry significance in American history, architecture, archeology, engineering and culture. In addition, they:

- Are associated with events that have made a significant contribution to the broad patterns of American history; or
 - Are associated with the lives of significant historic figures; or
 - Are representative of distinctive characteristics of a type, period or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
 - Have yielded, or are likely to yield, information important to prehistory or history
- Typically, cemeteries, birthplaces or graves of historic figures, properties owned by religious institutions or for religious purposes, structures moved from their original locations, reconstructed or primarily commemorative in nature, or that have achieved significance within the past 50 years are not eligible for the National Register, though there are exceptions. For more information, visit <http://www.nps.gov/nr/>. Source: National Park Service

Table 12.1: National Historic Register Listings In St. John

Site	Location	Year Added
Bacas House	LA 18, Edgard	1990
Bayou Jasmine Archeological Site	Address restricted, LaPlace	1976
E.J. Caire & Co. stores	LA 18, Edgard	2001
Dugas House	LA 18, Edgard	1989
Emilie Plantation House	LA 44, Garyville	1989
Evergreen Plantation	LA 18, Edgard	1991
Garyville Historic District	Roughly bounded by Main, Bluebird, West, Azalea, Cypress, St. Francis and N. Railroad streets, Garyville	1990
Godchaux-Reserve Plantation House	LA 44, Reserve	1994
Graugnard House	LA 44, Reserve	1994
Haydel-Jones House	LA 18, Edgard	2010
Hope (Esperance) Plantation House	South Church Street, Garyville	2005
Montegut Plantation House	East Fifth Street, LaPlace	1988
Our Lady of Grace Church	Reserve	2005
San Francisco Plantation House	LA 44, Garyville	1974
Sorapuru House	LA 18, Edgard	1999
Whitney Plantation Historic District	LA 18, east of Wallace	1992

Source: National Park Service, U.S. Department of the Interior



There exists no comprehensive database of the historic properties and sites in St. John the Baptist Parish. The most recent known attempt at conducting an exhaustive audit occurred in the 1980s, when state officials attempted to document all structures 50 years of age or older. The yields of this effort are archived at the State Library of Louisiana in Baton Rouge. As of the writing of this report, the survey findings were available only by visiting the library and combing through reams of documents, though the library was in the process of digitizing the records. Documentation for surveyed properties includes photographs of structures, along with their approximate age and historic use, National Registry status and condition.

Even in the 1980s, many of these structures were in disrepair. Some were in the process of being torn down. Since the time the survey was performed, many more structures have undoubtedly been demolished by bulldozer or neglect or moved out of the parish.

St. John has no local historic protection provisions in place to guard against the destruction of historic assets. Local historic districts tend to have more rigorous standards and review processes than national historic designations. In New Orleans, much of the regulatory protections imposed on private property come from locally enacted historic protections overseen by the Historic District Landmarks Commission and the Vieux Carré Commission, even though much of the city is covered by one of dozens of federally designated historic districts that blanket the city.

Voisin Plantation in Reserve (left) was considered significant historically and culturally. It was an important example of Creole architecture and was owned and occupied by the Voisin family, free people of color when the plantation was constructed around 1785. The house was damaged by Hurricane Betsy in 1965 and demolished in the 1970s. It was eventually replaced with Section 8 housing (Cantrell, 2010).

Image courtesy National Park Service



A plan completed in 2010 by Greg Cantrell Inc. shines a more contemporary light on the quantity, types and locations of historically significant properties and elements in St. John. Cantrell's report is intended as a beautification plan and is not exclusively focused on historic preservation, nor is it intended to provide a comprehensive overview on the topic. Even so, it pinpoints a number of specific sites of historic interest and stresses the need for better protections and incentives to promote the preservation of historic resources.

Other Historic Sites And Structures Noted In The Gci Report

WEST BANK

- The Hymelia Crevasse, Lucy: The result of a breach in the natural levee in 1909 and again in 1912
- St. John the Baptist Catholic Church and cemetery, Edgard
- The Woodville Baptist Church, Wallace.
- Grand plantations along River Road and their ancillary structures, including barns, garconnieres, pigeonnieres and Creole fences.
- More modest River Road cottages and plantations and sugarhouses, stores and other commercial structures that offer reminders of the agrarian roots of the West Bank
- Vast open spaces and view sheds, including sugar cane fields, ancient alleys of live oaks and tree stands marking property lines
- Columbia and Glendale plantations

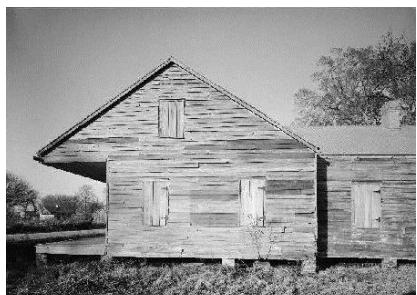


EAST BANK

- Remnants of the Godchaux Sugar Company
- St. Peter Church, LA 44, Reserve
- Modest, but significant early Creole cottages along River Road
- The Leon C. Godchaux School. This structure, built around 1908, caught fire in 1978 and is currently boarded up and vacant. It is owned by the parish school system and school administrators have expressed interest in having it restored for use as an administrative office space.
- The St. John Theater, Reserve. This building was constructed in 1931. Today it serves as a theater, cinema and fine arts show place.
- The LeBrun House, circa 1884.
- Auto-centric structures that sprung up in response to the construction of Airline Highway, such as early motels, fast food drive-ins, automobile dealerships and other structures built from mid 30s through 50s.
- Creole cottages on 5th Street in LaPlace.
- Woodland Plantation general store, circa 1890, on West 5th Street near Main in LaPlace



- St. Joan of Arc Catholic Church, circa 1927
- The brick shell of the former Alexander Store in LaPlace.
- Elements found along the mixed-use corridor of Main Street and 5th Street in LaPlace.
- Extremely modest and often neglected Creole-style saddlebag side-gable cottages
- Amelie/Montegut Plantation House; 5th Street in LaPlace. This is the oldest structure in the area, built in 1815.
- The Woodland Plantation House, LaPlace, circa 1832. This was the first plantation in the area and the center of an 1811 slave rebellion.
- Joseph Jules Rein House, LaPlace
- Henry Maurin House, circa 1911
- Other unnamed Creole cottages on 5th Street in LaPlace.
- Woodland Plantation general store, circa 1890, on West 5th Street near Main in LaPlace
- St. Joan of Arc Catholic Church, circa 1927

**HISTORIC GARYVILLE**

The Lyon Cypress Lumber Company founded Garyville in 1903. The town was planned around distinct residential, commercial and industrial districts and retains the foundation for a walkable community (*Cantrell, 2010*). In 1990, a significant portion of the town was designated a historic district on the National Register of Historic Places. About 65 percent of the original structures in the historic district are still in-tact. These include a collection of residential dwellings, the main office of the lumber mill, some ruins of the mill that survived a 1931 fire that permanently shut down operations at the facility, and the mill pond, once used to float timbered logs and now silted-up and overrun with invasive vegetation. In the absence of any historic protections associated with Garyville's historic designation, several important structures in the historic district have been lost in the decades since historic status was granted (*Cantrell, 2010*).

Beyond concerns about demolition and neglect of individual buildings, another worry of preservationists is that newer structures being built in Garyville's historic district are negatively affecting the historic fabric of the community. Cantrell points in particular to the public library and firehouse. These relatively new buildings are designed to be

architecturally compatible with their surroundings, but their site plans don't fit the historic context of the area. They lack street-side entrances for pedestrians and include large parking lots that are out-of-sync with their surroundings and serve as barriers to non-motorized access.

Garyville Timbermill Museum

Among the most important commercial structures remaining is the **Garyville Timbermill Museum**, which once served as the Lyon Cypress Lumber Company's main office. Apart from the mill pond and mill ruins, it is the only mill-related structure left in the town, though it has long been vacant and is in need of repair. The Secretary of State's Museum Division took over control of the building in 1999. Facing mounting budget challenges, in 2013 the agency returned responsibility for the Timbermill Museum building to the *Garyville Timbermill Museum Association* (GTMA)



The second most significant building in Garyville's commercial district is the former **Garyville Bank** (Cantrell, 2010). As of the writing of this plan, owner Carl Monica was in the process of renovating the vacant structure with plans to put it back into use. Other historic buildings of note in the commercial hub include two former stores, and a former saloon and barbershop, now functioning as a restaurant. Cantrell also identified a number of other less-appreciated

and deteriorating elements of Garyville's historic district, including livery stables, sheds, privies and cisterns.

In the residential district, a number of modest, early folk-form houses remain. However, on Historic East Street, one of the original residential streets of Garyville, all historic buildings have been lost, most of them replaced with 1960s-era barracks-style housing projects, apartment buildings and mobile homes (Cantrell, 2010).

Although interest in rehabilitating and promoting historic structures and districts was expressed by residents in attendance at Master Plan meetings held across the parish in conjunction with this project, no where were these concerns more pronounced than in Garyville, where residents were especially vocal about the need to protect the area's historic building stock.

WHITNEY PLANTATION HISTORIC DISTRICT

The Whitney Plantation Historic District, located off Highway 18 in Wallace, was added to the National Historic Register in 1992. This privately-owned property is advertised as one of the most complete plantations remaining in the south (Stodghill, 2008). The centerpiece of the district is the raised Creole main house, originally constructed around



1790, which stands as one of the most important examples of Creole architecture in Louisiana. Other structures found in the district include: a house once occupied by the plantation overseer; a plantation store; a two-story pigeonnier (a structure used for housing pigeons); a blacksmith shop; a French Creole barn that is the last known example of its kind in the state; the circa 1884 Creole and Greek Revival style Mialaret

House; and one of the oldest kitchens in Louisiana (Stodghill, 2008). Walls of the house are lined in murals thought to have been painted by Italian artist Domenico Canova (Stodghill, 2008).



Whitney Plantation is believed to have been founded by Ambrose Haydel, a German immigrant who came to Louisiana in 1721. Haydel and his wife may have lived on the property as early as 1750, and it appears to have been Haydel's son, Jean Jacques,

who built Whitney's main house around 1790 and expanded it around 1803. The property was sold to a northerner named Bradish Johnson following the Civil War. Johnson named the property Whitney in honor of his grandson. (*Preceding information not otherwise cited courtesy of U.S. Department of the Interior [USDOI]a.*)

In 2008 New Orleans attorney John Cummings purchased The Whitney Plantation and is in the process of restoring the buildings and site as a folk history site.

HISTORIC TRANSPORTATION ELEMENTS: RIVER ROAD

Louisiana's River Road stretches roughly 70 miles on either side of the Mississippi River between Baton Rouge and New Orleans. The corridor has existed in some form for centuries. Spanish explorers in the mid-16th century relied on trails along the Mississippi River charted by indigenous people. By the late 17th century, the French had established a permanent route there (Cantrell, 2010). River Road is now most often associated with the state's famous plantation homes, built by wealthy sugar planters in the Greek Revival style in the 30 years leading up to the Civil War (USDOIb). The route is also home to less elaborate but historically significant structures, including Creole cottages and slave quarters, and archeological sites of historic interest. The grand architecture of River Road remained mostly intact until the 1920s, when disease ravaged the state's sugar industry and the monumental homes built around agriculture were abandoned in droves (USDOIb). The 20th century also marked the start of dredging of the Mississippi River bottom to accommodate ocean-going vessels. This development catalyzed industrial development and

The St. Charles Avenue streetcar in New Orleans is the only historic transportation element in the state that has been protected through historic preservation controls. It is worth exploring the possibility of using these controls to preserve and protect St. John transportation fixtures such as the threatened Edgard-Reserve ferry.

Image courtesy akronrrclub.wordpress.com.



dramatically changed the character of much of the River Road.

RESILIENCE BENEFITS

Investing in public transit infrastructure helps promote access for all residents of the parish to everyday needs, facilitates evacuations and reduces the need for automobile use. The ferry is also considered important to the economies of the small

The arrival of chemical plant-based industry, combined with owner disinvestment and other factors resulted in the loss of many historic properties along the corridor (USDOIb). In 1992, the National Trust for Historic Preservation declared Louisiana's Historic River Road one of the "11 Most Endangered Historic Places" in the country, citing unchecked development and neglect along the corridor. As the state Division of Historic Preservation puts it, "Today's River Road is a study in contrasts, with broad cane fields, antebellum mansions, petrochemical plants and suburban strip development all jumbled together in a chaotic mixture" (USDOIb). Despite its early role in destroying much of the historic landscape, industry has more recently become a partner in preserving some of the corridor's historic features. The state Department of Historic Preservation notes as an example Marathon Oil Company's efforts to restore the **San Francisco Plantation** three miles upriver from Reserve (USDOIb).



Airline Highway (U.S. Highway 61) is another historic thoroughfare through St. John Parish. Although not as heavily traveled since the construction of Interstate Highway 10 through the Parish, it is still a major arterial through St. John and in close proximity to many of the Parish's cultural and historic resources. For this reason, the "Natural and Cultural Resources" sub-committee of the NDRF identified Airline Highway as an important project for not just the post disaster recovery of St. John but also to promote tourism activities and increasing economic opportunities in the communities of Garyville, Reserve and LaPlace.



THE EDGARD-RESERVE FERRY

The ferry has played an important role in the development of the parish (Cantrell, 2010). For many years, the ferry between Edgard and Reserve was the only means of transportation for residents moving between the east and west banks of St. John the Baptist.

The state Department of Transportation and

Development has operated the ferry since 1968. Prior to that time, it was operated by the St. Charles-St. John the Baptist Bridge and Ferry Authority.

The opening in 1995 (verify dates) of the Veterans Memorial Bridge in Gramercy and the Hale Boggs Bridge in Luling in 1983 altered transportation patterns, yet for drivers the ferry remains the only means of crossing the river without detours of 35-to-45 minutes. The ferry also provides the only reasonable option for crossing the river for residents without cars, many of whom live on the west bank of the parish, and is an important economic lifeline for the small parish jurisdictions on either side of the river (Cantrell, 2010). Residents of the West Bank of St. John are especially reliant on the ferry to get to jobs, medical centers and other amenities concentrated on the East Bank.

The ferry transports 161,000 vehicles annually, or more than 400 vehicles daily, a tally that does not include pedestrians, and costs \$1.2 million to operate (Scallan, 2012). Riders pay \$1 per car to depart from Reserve. No fare is charged in the opposite direction.. The ferry carries important resilience benefits in that it reduces the need for driving, facilitates evacuations and improves access throughout the parish for everyday purposes.

After an almost-four-year hiatus starting in 2005, ferry service returned in May 2011. As of the writing of this report, it was again threatened, this time by state budget cuts.

Housing Units 50 Years Of Age Or Older

An analysis of U.S. Census data offers another mechanism for taking stock of historic structures in the parish. As compared with the 2000 census, data from the U.S. Census Bureau's 2006-2010 American Community Survey estimates show that there are more housing units available in the parish than there were in 2000, and that the age of the parish's housing stock has declined. Whereas the 2000 census determined that 29.5 percent of housing units were built in 1960 or earlier, the 2006-2010 ACS found that 18.5 percent of all housing units were built in the same period. Growth in housing units accounts for some, but not all, of the decline in housing age. The number of units constructed in 1960 or earlier fell by 33 percent between the 2000 Census and the 2006-2010 ACS, a result that may be related to the demolition of historic structures (See table 12.2 below).

Table 12.2: Disappearing Historic Housing Stock in St. John			
	2000 Census	2006-2010 ACS	
Year Built	Number Units	Number Units	Percent Change
1960 To 1969	2,213	1,863	(-15.8 Percent)
1940 To 1959	1,694	555	(-67.2 Percent)
1939 Or Earlier	684	654	(-4.4 Percent)

Source: U.S. Census Bureau, 2000 Census, SF3, 2006-2010 American Community Survey, Table B25034

HISTORIC PRESERVATION CONTROLS

Historic preservation ordinance

State law (R.S. 25:736) allows governing bodies to create a historic preservation ordinance requiring a review process for any exterior structural changes made to buildings falling within designated historic districts. Should the Parish Council adopt a law creating such a district, the parish president would appoint a volunteer-based historic preservation district commission to oversee this review process. Rules, regulations, policies, procedures and standards of the commission would be set and adopted by the Parish Council following a public hearing.

Powers of the local historic district commission

The Parish Council may empower a historic district commission to:

- Make regular reports to the Parish Council and provide information to property owners and others related to the preservation of historic districts;
- Initiate planning and zoning proposals;
- Suggest legislation relevant to historic preservation;
- Review applications for zoning variances and conditional uses that affect the historic districts;
- Cooperate with other regulatory agencies and civic organizations and groups interested in historic preservation;

The **National Trust for Historic Preservation** names among the benefits of local historic districts:

- Protection of the investments of property owners and residents. The NTHP notes that real estate agents in many cities use historic districts as marketing tools.
- The encouragement of better design
- Environmental protection
- Educational implications
- Positive economic impacts from tourism
- Higher quality of life that can help with

- Render advice with reference to sidewalk construction and repair, tree planting, street improvements, and the renovation, restoration or construction of public buildings;
- Furnish information and assistance in connection with any capital improvement program involving the historic districts;
- Consult with the National Trust for Historic Preservation and other expert groups;
- Administer such financial mechanisms as the local governing body may establish for the welfare of the governmental unit within a historic district.

The powers of the historic district commission would apply to all private property in the designated historic district insofar as it constitutes part of the “tout ensemble” of the historic section. The Parish Council can additionally empower the historic preservation district commission to name or designate sites, locations, structures and monuments as worthy of preservation, whether these are located within or outside the confines of the historic district.

Under state law (R.S. 25:737), exteriors of private buildings, structures and edifices protected by historic district controls generally cannot be altered, moved or demolished until after an application for a certificate of appropriateness is approved by the historic preservation district commission, unless the governing body provides otherwise in the ordinance establishing the commission or the rules and regulations adopted by the commission state otherwise. Historic district commissions do not have regulatory authority over interiors of structures.

New construction in the historic district is similarly subject to review by the historic district commission. Exterior architectural features regulated by the commission might include color, architectural style, general design and arrangement of the exterior of a structure, type and style of roofs, windows, doors, light fixtures, and other elements. The style, scale, material, size and location of outdoor advertising signs within the historic district would also fall under the commission’s regulatory authority. Regulations would not apply to any work permitted prior to the establishment of the historic preservation district.

Incentives And Funding

Although St. John the Baptist is home to two federally-designated historic districts and a variety of individual properties listed on the National Historic Registry, the parish presently has no historic protections in place. Enactment of a historic preservation ordinance would make the parish eligible for certain state-administered incentive

programs that could aid in the preservation and upkeep of historic sites and structures. These include:

- Federal grants for preservation planning and rehabilitation;
- Federal investment tax credits;
- Preservation easements to nonprofit organizations;
- International building code fire and safety code alternatives; and
- State tax benefit and grant opportunities.

Other Preservation Tools

Preservation easements

Preservation easements are legal rights granted by a property owner to an organization or governmental body. The agreement protects against undesirable development or demolition by neglect. The terms of the easement are generally laid out in a preservation easement deed. They may include prohibitions on altering the structure's significant features, changes in the usage of the structure and land, or subdivision and topographic changes to the property. The property continues on the tax rolls at its current use designation rather than its re-development value, in some cases giving the owner a tax advantage.

Historic overlay zoning

An overlay zone is an added layer of regulations for a specific area that is laid over the underlying zoning regulations. The base zoning regulations continue to apply, with the overlay adding another layer of standards. Historic Overlay Zoning applies when historic district design review is established through a zoning ordinance rather than an independent process, such as establishing a local historic district. The historic overlay tier is applied to an area worthy of preservation because of its architectural, cultural or historic significance.

Neighborhood conservation districts

These are residential or commercial districts that are considered to contribute significantly to the overall character and identity of a community and that are worthy of protection but that may lack sufficient historic, architectural or cultural significance to be designated as historic. Neighborhood Conservation Districts can take a variety of forms but are often established as overlays to the regular zoning districts and include design standards for new construction.

National heritage areas

Louisiana is home to two of the nation's 49 National Heritage Areas. These are often multi-parish or multi-county jurisdictions designated by Congress and determined to

contain a cohesive array of natural, cultural and historic resources that tell a story of national significance.

NHAs operate on public-private partnerships, their basic premise being to “support historic preservation, natural resource conservation, recreation, heritage tourism and educational programs,” according to the National Park Service, which provides technical, planning and limited financial support to NHA entities, but does not otherwise administer NHA programs or impose any sort of land use controls on affected areas. Each NHA is required to create its own management plan. There is a two-step process entailed in achieving NHA certification: completion of a feasibility study and introduction and adoption of authorizing legislation.

Case Study: The Cane River National Heritage Area

The Cane River National Heritage Area is a largely rural, 116,000-acre section of northwest Louisiana known for its historic plantations, distinctive architecture and culture influenced by African, French, Spanish, Creole and American Indian traditions. It was designated a National Heritage Area in 1994.

The central corridor of the heritage area begins just south of Natchitoches, the oldest



Cane River National Heritage Area
National Park Service Photo

permanent settlement in the Louisiana Purchase, and stretches south along the Cane River for 35 miles, encompassing the river, agricultural fields, pecan groves, plantation homes, and other historic architecture. The heritage area includes Cane River Creole National Historical Park, along with several national historic landmarks and many other historic sites. Many of the properties located within the district are privately owned, though a number of them are open to the public.

- Cane River National Heritage Area guidelines aim to promote:
- Protecting views
 - Site planning and design elements that preserve distinctive characteristics of the area
 - Using existing structures and reusing materials from historic buildings
 - Specific materials, such as locally-crafted and recycled materials; and recycled brick, wood beams, doors and beaded board
 - The use of native plants in landscape designs
 - New architecture that does not attempt to duplicate the old but reflects historic styles, elements and materials that have some connection to traditional structures.
 - Consideration of scale, including that of streets, lot setbacks and structures and the open space between them.

The NHA designation doesn't come with any regulatory authority. Instead, owners of property within the district are encouraged to plan new construction carefully to ensure it complements and preserves the area's distinctive character.

The Cane River National Heritage Area Commission is the management entity that guides the heritage area's activities. The 19-member commission has authority to hire employees, administer grant programs, develop loan programs, and set priorities, but lacks any zoning and land-use powers and the power of eminent domain. Its activities are primarily funded through federal sources.

CASE STUDY: THE ATCHAFALAYA NATIONAL HERITAGE AREA

Louisiana's newest National Heritage Area, designated by Congress in 2006, encompasses 14 parishes in the south-central portion of the state. The territory, which stretches for 10,400 square miles across parishes including Avoyelles, Pointe Coupee, Assumption, Terrebonne, Concordia, East Baton Rouge and Ascension, is home to the Atchafalaya Basin, and numerous museums, historic sites, districts, and Main Street programs, wildlife refuges and parks.



The Atchafalaya NHA, managed by the Atchafalaya Trace Commission, is the successor to a state-designated heritage area established in 1997. The goals of the NHA include building local, regional and national identity, improving economic opportunity and environmental and ecosystem health, and fostering collaboration and a sense of community among member parishes. State tourism officials market the territory as "America's foreign country," a place rife with wildlife-watching and outdoor recreation opportunities, music, food and other cultural offerings that reflect the region's diverse population of African, European, Caribbean and Native American descent.

The National Heritage Area designation has helped attract national attention to the region. In 2011, for example, NBC's Today Show ran a four-minute feature highlighting some of the attributes of the Atchafalaya NHA. In 2012, promotional efforts were boosted by the installation of more than 200 signs erected along highways that bisect the area, designed to pique travelers' awareness about their surroundings. This \$165,000 marker project was financed with federal money. Recently, the administrators of the NHA have taken to promoting the ecotourism opportunities available in the area, to promising result.

“Although the area is known for its plantation homes, research revealed an interest in outdoor activities among younger visitors, so the National Heritage Area expanded its promotions to focus on ecotourism,” the National Trust for Historic Preservation explains on its website. “The National Heritage Area created an outdoor-recreation section on its website which includes information on birding, paddling, cycling and golfing. This promotional expansion has also given the National Heritage Area the opportunity to reach out to local bicycle and paddling clubs.”

Public Input And Visioning - Historic and Cultural Preservation

Those in attendance at master plan visioning sessions frequently stressed the need for better protection of historic properties as a means of remediating blight, creating more affordable and varied housing stock, and for encouraging more walkable, bikeable neighborhoods. All of these are goals historic preservation controls can help to achieve. Below is an overview of comments related to housing and historic preservation that helped drive development of the Historic Preservation element.

Availability of Housing Options

The current housing stock in St. John the Baptist Parish consists of mostly single-family homes. Many participants spoke of the need for greater variety in housing options – apartments, condos, multi-family housing – to attract and retain people in the parish, particularly young people not ready to purchase their own home. Beyond the types of housing that are available, many participants stated that there simply isn’t enough housing in the parish to begin with.

Affordability of Housing

The prevalence of single-family housing that makes for an almost homogenous housing stock also affects the affordability of housing the parish. The lack of rental options like

RECOMMENDATION from the NATURAL AND CULTURAL RESOURCES subcommittee – St. John NDRF

“Identify historical structures in the parish to be moved to a central location, restored and converted into a full blown historical museum cluster based on all cultures of St. John the Baptist Parish. This facility could serve as not only a new attraction for St. John Parish, but also an office /meeting space for a re-invigorated historical society, which could work with schools to further preserve the history of the parish through education of students as well as work with seniors to conduct oral history projects. This historical society could also work with property owners who own historic homes / commercial structures around the parish to assist them in getting some of these homes and properties on the National Register, obtain historic tax credits for restoration projects, and obtain historic restoration grants, etc.”

apartments and multi-family homes make it more difficult for young and lower income people to find quality housing in St. John.

Code Enforcement and Blight Management

A lack of housing code enforcement was a major issue for workshop participants. Many said homes in disrepair detracted from the quality of neighborhoods and lowered the value of neighboring properties. Trailer parks were of particular concern, with participants saying that they need to be better managed. The same is true for blighted housing, something the participants considered to be a major issue in the parish.

Management and Maintenance of Historic Buildings and Areas

St. John the Baptist Parish has a strong historic past, something participants were quick to note. Many, however, were upset with the way historic structures and areas have been ignored. Participants would like the creation of local historic districts to help protect and maintain older parts of the parish. They would also like more parish programs to help protect and maintain individual historic structures.

Goals And Policies For Historic Preservation

The goals and policies for Historic Preservation Element for St. John Parish proscribes the policy direction the Parish should take in identifying, protecting, and preserving the Parish's significant historic resources.

Goal 1: Identify and protect resources significant to St. John Parish's history, archeology, architecture, and culture.

Policy: Conduct and continually update a survey of historically significant resources.

Areas experiencing the most development pressure should be prioritized for surveying in a process led by professionals with expertise in historic resource surveying, though public participation should also be encouraged. Those with knowledge about historic sites and resources should be urged to submit information and offer insight, both to cut down on project costs and to promote public buy-in. Sites and resources identified through this process should be submitted to the state Division of Historic Preservation for possible listing on the National Register of Historic Places.

Policy: Develop and maintain a computerized register of historic places in the parish that accounts for those resources that may not be included on the National Register or eligible for national designation but that are nevertheless deemed significant to St. John's history and culture.

Policy: Ensure interdepartmental coordination within St. John Government when dealing with Historic resources, neighborhoods and structures to ensure that these resources are not adversely impacted by Parish Government actions, such as demolition permitting or repair and maintenance to Parish infrastructure.



Policy: Ensure the Parish's development review process takes into account the impact of development or redevelopment on significant historic resources where appropriate.

Goal 2: Promote awareness and appreciation of the parish's historic resources as assets that make the parish distinctive.

Policy: Develop an ongoing “Historic St. John” campaign to educate and encourage the public to take an interest in Parish preservation efforts.

Municipalities, businesses, individuals, schools and other entities should be encouraged to submit nomination forms for historic resources that may be eligible for historic designation and otherwise participate in a campaign to strengthen community pride, promote tourism and aid in the preservation of historic assets. Community institutions, organizations, property owners and business interests should be enlisted to develop and promote historic areas and heritage tourism opportunities, in part as an economic development tool. This effort might include:

- A local historic landmark program with a historic marker component to call attention to the significant historic resources in the parish.
- Preparing and disseminating maps identifying historic assets.
- Developing walking, bicycling and driving tours of the parish or hosting regular sponsored runs, walks and bicycle rides, potentially in conjunction with events such as the Andouille Festival.
- Farmers’ markets, block parties, and arts and cultural festivals held in some of the older districts of the parish, such as in historic Garyville, Edgard and Reserve or along the Main and 5th street corridor in LaPlace.
- Providing information on heritage tourism opportunities and historic rehabilitation incentives through the parish Website.

Goal 3: Safeguard the parish's historic assets.

Policy: Work toward the adoption of a preservation ordinance as provided by state law to establish legal protections for significant historic resources.

The ordinance should provide for protection of resources identified through surveys, those already listed on the National Register of Historic Places and those identified in the future. It would outline standards for identification and evaluation of historic resources and the establishment of a historic district commission to review and evaluate development proposals for their impact on historic resources. The ordinance should also establish commission authorities and review procedures.

Policy: Apply for federal recognition of historic significance for transportation elements including the Edgard-Reserve ferry and the WPA-era sidewalk that runs alongside River Road. Investigate the feasibility of applying local historic protections to these important pieces of infrastructure.

Policy: Pursue Certified Local Government status, a program jointly administered by the National Park Service and state historic preservation office. Certification provides a number of benefits to localities participating in the program, including access to expert technical advice and federal funding.

Policy: *Employ the U.S. Secretary of the Interior's Standards for Rehabilitation for all historic rehabilitation projects subsidized by public funds. Encourage the use of these standards in private rehabilitation efforts through investment tax credits and other incentives.*

Policy: Craft design guidelines and incentives for adaptive reuse, redevelopment and infill development in historic areas.



Downtown Thibodaux, Louisiana has experienced reinvestment in recent years spurred in part by a matching grant program that aids in the rehabilitation of building facades within the city's Main Street district. Image courtesy downtownthibodaux.org



Marilyn Yank (above) planted her Little Sparrows flower and vegetable garden in a long-abandoned lot in New Orleans' Mid City neighborhood. The garden has been a source of produce and beauty and a catalyst for reinvestment in the neighborhood.
Image courtesy bestofneworleans.com

These might include guidelines for scale, floor plans, setbacks, parking, pedestrian orientation, materials and overall form. New construction in historic districts should not aim to replicate historic structures, but should be compatible with its surroundings and not detract from the historic fabric of the area.

Goal 4: Promote investment in historic buildings and districts.

Policy: Increase funding available for historic preservation by tapping public and private sector sources and by considering innovative new funding sources.

- Consider all federal and state grants and incentives available for historic preservation programs
- Investigate partnerships with industry and individuals that may aid in the protection and rehabilitation of historic sites.
-
- Solicit contributions from civic organizations, foundations, businesses and individuals to aid in historic preservation efforts.
- Consider enacting parish-specific economic incentives for historic preservation, such as the creation of a property tax freeze, waiver or deferment of city permit fees for projects involving cultural, historic, archeological and architectural resources.
- Investigate the viability of historic preservation revolving fund and loan programs that provide money for the acquisition and rehabilitation of historic properties or loans to property owners for rehabilitation. The fund would be replenished through the preservation and resale of properties or through loan repayment.
- Consider establishing a façade program to encourage property owners to rehabilitate their properties and to do so in historically sensitive ways.
- Work with community stakeholders to encourage the innovative reuse of vacant properties in historic areas, such as urban agriculture and community gardens that can help make these areas more desirable while serving as amenities to those already living and working there.

Policy: Provide technical support and design assistance to promote the use of historic tax credits, state and federal historic preservation incentives and other programs available for historic-property restoration.



The American Can Company building near Bayou St. John in New Orleans (left) is the former site of a manufacturing facility that closed in the 1980s. The building was abandoned and moldering for years. Today, it is a mixed-use apartment and commercial complex that houses a coffee shop, wine store, personal training center, architecture firm, salon and café.
Image courtesy apartmenthomeliving.com

- Periodically host workshops led by historic preservation experts to educate participants about incentives available toward rehabilitating historic properties and about appropriate preservation techniques.
- Offer assistance with applications for the various tax credits, abatements and programs related to historic preservation.
- Prepare a “how to” guide for restoring historic and architecturally significant structures and make it available to the public.

Policy: Encourage adaptive re-use of historic buildings.

- Reconfigure zoning and other regulations to eliminate barriers to the use and restoration of historic buildings. Among the existing regulatory obstacles are incompatible parking standards, density restrictions, setback requirements and prohibitions on mixed uses that are unrealistic and undesirable in denser historic areas and that can create disincentives to investment.
- Consider ways in which the parish’s historic building stock could be used to fulfill unmet housing needs. At public meetings held as part of the Master Plan process, concerns were raised about a lack of affordable and rental housing in the parish. Older buildings could be used to help meet housing needs. Many older structures could also be ideal sites for mixed-use developments that combine residential and commercial activities.



Montegut Plantation (above, circa 1815) is an important example of an early raised Creole house. It is one of several significant historic structures found along the Main and 5th streets corridor in LaPlace. Image courtesy of waymarking.com

Policy: Explore the possibility of Main Street programs for historic commercial corridors.

In 2010 the Cantrell study identified LaPlace’s Main and 5th streets corridor as a viable candidate for a Main Street program. There has also been interest in establishing a Main Street program in Garyville as well and this could fit in with current efforts to renovate the Garyville Timbermill Museum building and the revitalized Museum Board.

Implementation - Possible Funding Sources:

There are a variety of federal tax benefits available for properties located in locally designated historic districts. These include:

- A 20 percent income-tax credit available for the rehabilitation of historic, income-producing properties. These must be determined by the National Park Service to be “certified historic structures.” Owner-occupied residential structures do not qualify.
- A 10 percent tax credit for the rehabilitation of “non-historic” buildings placed into service before 1936. These must be rehabbed for non-residential use. Additionally, there are federal tax benefits that apply where historic preservation easements are used. Easements are voluntary legal agreements, typically in the form of deeds that permanently protect a historic property. Through an easement, a property owner places restrictions on the development of or changes to the historic property then transfers those restrictions to a preservation or conservation organization. A historic property owner who donates an easement may be eligible for tax benefits, such as a federal income-tax deduction.

Louisiana Division of Historic Preservation Programs

There are a variety of other historic preservation programs administered by the Louisiana Division of Historic Preservation that may be worth exploring. These include:

Program	Description
Louisiana Main Street	<p>A community-driven program that aims to promote historic preservation and economic redevelopment in traditional commercial districts. The Louisiana Main Street Redevelopment Incentive Grant is intended to function as a catalyst for the revitalization of exteriors and interiors of historic commercial buildings located within the downtown areas of designated Louisiana Main Street cities. The grant is awarded on an annual basis and requires that a matching amount be provided by the property owner or tenant. Applying communities must be Certified Local Governments to be eligible. Thanks to state funding and staffing shortages, no new communities have been accepted to this program for several years.</p>
Certified Local Governments	<p>An initiative of the National Park Service developed to assist local municipalities in protecting their historic resources. A community that has established a historic district commission can apply to the state Division of Historic Preservation for CLG status. The state forwards the application on to the National Park Service. CLG communities are eligible for grant money to be used for planning and educational grants. The state also offers ongoing training for local historic district commissioners.</p>
State residential tax credit	<p>Homeowners may qualify for a 25 percent tax credit (50 percent for vacant and blighted properties) against individual state</p>

	income taxes when they rehabilitate their historic home. The property must be the owner's primary residence. There is a \$25,000 credit cap per building through this program. Rehabilitation costs must exceed \$10,000.
Restoration tax abatement	Under this program, assessed value and property assessment can be frozen at their pre-investment value for five years. This tax abatement must be granted by the local taxing authority and the Louisiana Board of Commerce and Industry. It is available to buildings listed on the National Historic Register or buildings considered components of register-listed districts. It is also available to existing buildings in downtown or economic development districts. Improvement projects for historic buildings must be approved by the state Division of Historic Preservation.

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Xii Implementation Element

Introduction

This implementation element is one of the Elements of the St. John the Baptist Comprehensive Plan. This element includes a compilation of programs tied to recommendations from the other elements to implement the goals, objectives and policies developed so far in the preceding elements.

The Implementation Element establishes actions that should be undertaken to implement the comprehensive plan such as:

- Identify proposed changes to applicable zoning ordinances, subdivision ordinances, and official maps.
- Describe how each of the other elements of the comprehensive plan will be integrated and made consistent with other elements of the plan.
- Include a mechanism to measure St. John Parish's progress towards achieving the recommendations of the plan. Include a process for amending and updating the plan. The comprehensive plan should be updated no less than once every 5 years.
- Sets forth the required procedure for adoption or amending the comprehensive plan, which includes:
 - Adoption of a written public participation plan designed to foster public participation in the development of a comprehensive plan or a plan amendment.
 - Approval of a recommended plan by a resolution approved by a majority of the full membership of the St. John Planning Commission and Parish Council
 - Distribution of the draft plan and elements for review and comment to citizens, business interests, elected officials, and anyone else with an interest in St. John Parish. The Comprehensive Plan should be posted on the Internet and in public libraries serving the Parish
 - Adoption of the plan by an ordinance adopted by a majority of the full membership of the St. John Planning Commission and Council

Plan Interpretation

The St. John Parish Comprehensive Plan provides a guide and regulatory framework for the physical development of St. John Parish that reflects the community's vision for a desirable community. Number at the end of each chapter identifies plan policies.

Because of the general nature of the Comprehensive Plan policies, conflict between and among these policies is possible. The following general rules of construction are intended to be used in interpreting the overall components of the Comprehensive Plan:

- Policies are intended to be read as mutually supportive, and all are intended to be read together so that each has meaning.
- When conflicts arise between policies, the policy that is more specific shall prevail.
- The 20-Year Plan Map, or future proposals to amend the 20-Year Plan Map, should reflect and be based upon the 20-Year Plan policies in the text.
- When conflicts arise between the 20-Year Plan policies and the 20-Year Plan Map, the Map shall prevail.
- The 20-Year Plan is consistent with the statewide goals and carries out in more detail the Community Framework Plan. The 20-Year Plan also contains strategies that, in contrast to policies, are not intended to be directive but are suggested as a means to carry out the Plan. Other strategies to carry out the plan may also be available, and in some cases preferred.

Plan Review And Adoption

For any planning process, it is good practice to hold public informational meetings and hearings on recommended plans before their adoption. Such actions provide an additional opportunity to acquaint residents and landowners with the recommended plan and to solicit public reactions to the plan recommendations. The plan should then be modified to reflect any pertinent new information and to incorporate any sound and desirable new ideas advanced at these meetings. Accordingly, a public hearing will be held before the Planning Commission and Parish Council prior to adoption. The Parish will provide a public notice of the hearing in accordance with the requirements of the ordinance adoption process, and will distribute the draft plan report to all members of the Planning Commission and Council, plus any other pertinent parties in St. John Parish Government.

An important step in plan implementation is the formal adoption of the recommended plan by the Planning Commission and Council. Upon such adoption, the plan becomes the official guide to be used by Parish officials and staff in making development or redevelopment decisions. The plan should serve as the basis on which all development proposals, such as rezoning requests, subdivision plats, and certified survey maps, are reviewed.

Only those zoning actions or land divisions that are consistent with the plan should be approved. A public participation plan for development of this comprehensive plan was prepared in 2002.

Plan Amendment Procedure

Changes to long-range planning documents are inevitable. Although the Future Land Use Map is often the focal point of comprehensive plans, plan amendments may include changes to the text or any of the maps included in the comprehensive plan. Text amendments may include:

- Changing, adding, or modifying a goal, objective, policy, or program in any of the element chapters in response to changing conditions or new information.
- Adding or changing the land use plan categories in the *Land Use Element* to provide for a category of development that is not incorporated into the current set of categories.
- Updating inventory information such as land use or zoning information. (land use updates should continue to utilize the Land Based Classification System – LBCS)
- In addition to text amendments, the land use plan map may be amended to change the designation, and therefore the allowable uses, on a parcel or parcels of land.
- Other maps in the plan may be amended or updated to reflect updated information, such as updated floodplain mapping or inventories of natural resources or community facilities.

Rationale and Justification for Plan Amendment

Adjustments to this plan should be made as required by changing conditions. Consequently, one of the important tasks of plan implementation is a periodic reevaluation to ensure the plan continues to properly reflect current conditions. It is recommended that a general plan reevaluation take place on an annual basis by the St.

John Parish Planning Department because the Parish will continue to evolve and change over the comprehensive plan design period. Periodic monitoring and updating of the plan will be an integral part of the plan because the Parish is a dynamic rather than static community.

A more comprehensive review of the plan is recommended every five years. It is recommended that the five-year comprehensive review utilize, to the extent practicable, an up-to-date database. St. John Parish should consider an extension of the plan for an additional five years with every five-year update to continually accommodate 20 years of growth.

Factors contributing to the possible need to amend this plan are due to the long-range nature of this type of document. These factors are set forth in this chapter to provide the necessary guidance in conducting a plan amendment. The important aspect of plan amendment, however, is that it should not be taken lightly. A plan amendment should be undertaken after careful study and by reason of one of the following factors:

1. ***Projections and Forecasts:*** Plans are based on projections or forecasts because plans deal with future situations. If projections or forecasts are in error, or require modification due to the emergence of new data, then this plan may need to be adjusted. The plan should be monitored based on the preparation of new projections or forecasts. Comparisons should then be made between what was projected or forecast and what is actually happening. If warranted and deemed necessary by the Parish Council upon recommendation of the Planning Commission, this plan should be amended to accommodate the new projections or forecasts.
2. ***Assumptions:*** A number of assumptions have been made upon which this plan and its various elements are based. Assumptions may have to do with demographics, capital investment, or national policy. For example, during the late 1960s and early 1970s a dramatic shift in birth rates occurred. Any planning based on the assumption that the birth rate of the 1950s would continue were dramatically affected by the change in birth rates that actually occurred. As stated earlier, the plan should be reviewed on an annual basis, which will afford an opportunity to reexamine the accuracy of any assumptions upon which this plan was based.
3. ***Data Error:*** An error in planning data differs from an assumption in that the faulty information is quantifiable. A new arterial street may be under construction and designed to meet certain specifications. A construction

error, new Federal standards, or other factors may result in the street not being placed or functioning as planned. This, too, requires a plan reassessment and, perhaps, a plan amendment.

4. **New Issues:** Issues may evolve that were not critical or foreseen when this plan was initially developed. For example, community character is an issue that tends to stay in the background until it is almost too late to save it. New issues may require modification of plan goals, objectives, policies, or programs --or the creation of new plan goals, objectives, policies, or programs --to effectively deal with new issues. New factors affecting current issues can also present situations where this plan may have to be amended.
5. **Comprehensiveness:** The various elements of this plan are designed to guide future City actions and specific growth decisions. This plan recognizes, however, that some elements may benefit from more detailed study and analysis. For major issues that require greater analysis than offered by this plan, a plan amendment may be justified. The Planning Commission may authorize the amendment at any time.
6. **Data Updates/Emergence of New Data:** The maps, tables, and statistics upon which this plan is based are factual in nature but may change through time (for example, when new decennial Census data is released). Thus, a general annual review of this plan is necessary and, where deemed appropriate by the Planning Department, amendments to this plan should be proposed to keep data current.

Plan Amendment Process

It is critical to have and to follow guidelines when determining if an amendment to the plan is appropriate. All projections and assumptions should be reviewed in detail at meetings where City officials and citizens are provided information on new factors which might affect this plan. Officials and citizens should be asked to submit any additional concerns of their own. This plan should be revised in a manner similar to its original development, with citizen participation prior to any change.

Amendments to this plan should generally follow the same procedure as that followed for the adoption of this plan, including adoption of a public participation plan, a public hearing, approval of the plan amendment by the Planning Commission, adoption of the amendment by an ordinance of the Parish Council, and distribution of the plan amendment to interested parties, including citizens, business leaders, and government

officials. It is recommended that the Parish use this recommended process and prepare and adopt a public participation plan to be used for all plan amendments.

Amendments to the St. John Parish Future Land Use Map

The Parish Council, upon recommendation of the Plan Commission, may consider (but is not obligated to approve) amendments to the Future Land Use Map. The Planning Commission and Parish Council in their review and consideration of proposed Plan amendments may examine the following questions and issues (in addition to the six factors: projections, assumptions, data error, new issues, comprehensiveness, and data updates/emergence of new data) for approving a land use plan amendment:

1. Is the proposed amendment consistent with the vision, goals, objectives, policies, and programs of this plan?
2. Will the proposed amendment benefit the Parish as a whole?
3. Is the proposed amendment compatible with surrounding land uses?
4. Do existing Parish facilities and services - including transportation facilities - adequately to serve the type of development associated with the amendment?
5. If applicable, will the proposed amendment enhance economic development within the Parish?

Recommended Programs

As previously noted, the comprehensive plan Implementation Element includes a compilation of recommended actions to implement the recommendations set forth in the other completed plan elements. Recommended actions for St. John Parish to undertake for implementing the comprehensive plan are presented in Table XIV-1. It is intended that these be addressed in the early years of the planning program. After five years, the recommended actions should again be reviewed and re-prioritized based on changing conditions.

Consistency Between St. John Parish's Comprehensive Plan And Development Ordinances

In order for St. John Parish elected and appointed officials engaged in the development management process to have the optimum capacity to manage development, it is important that all existing and future development management regulations be consistent with the St. John Parish Comprehensive Plan. This includes but is not limited to the following:

- Parish zoning ordinance and maps
- Parish subdivision regulations
- Parish sign, landscaping, or design regulations
- Future Parish development regulations

Once the St. John Parish Comprehensive Plan is adopted, it can be used as a guide to be sure that implementation of local zoning, subdivision, and official mapping ordinances do not conflict with the recommendations of the comprehensive plan. If a conflict is found or would result from a proposed action, the Parish has the option of amending comprehensive plan; however, plan amendments should follow the guidelines presented in this chapter and not be made arbitrarily.

Zoning Ordinance And Zoning Map Amendments

It is the Parish's intent that the Zoning Ordinance be one of the primary implementing tools of this Plan. As such, it should substantially reflect and promote the achievement of plan goals, objectives, policies, and programs. A zoning ordinance is the legal means for both guiding and controlling development within the Parish, so that an orderly and desirable pattern of land use can be achieved which conforms to the plan and balances individual property rights with community interests and goals. The Zoning Ordinance contains provisions for regulating the use of property, the size of lots, the intensity of development, site planning, the provision of open space, and the protection of natural resources.

Following adoption of this plan by the Parish Council, the Planning Department should begin to initiate appropriate amendments to the zoning map to bring the map into conformance with the concepts and proposals included in this plan, particularly the land use plan map (Map VIII-8 in Chapter VIII).

Although one option would be to amend the zoning map to bring the map into strict conformance with the land use plan map, this approach has disadvantages. Those disadvantages include zoning that could potentially accommodate "leapfrog" urban development (enclaves of urban development separated by agricultural or other rural uses), and/or development in areas that have not yet been provided with sanitary sewer, water, streets, or other necessary services.

Another disadvantage might be the creation of nonconforming uses in areas that are already developed, where the plan proposes redevelopment for another use.

Conversely, the zoning map should not permit the establishment of new uses that are not consistent with the land use plan map or other recommendations of the comprehensive plan, such as allowing residential development to occur in areas planned for industrial use.

To avoid the potential pitfalls outlined in the preceding paragraph, the Parish will use the following approach to update its zoning map:

- Areas of existing development (other than agricultural uses) will be placed in a zoning district that is consistent with the land use designation shown on the Future Land Use map
- Areas that are currently in agricultural use, and zoned for such use, but shown on the land use plan map for future urban development will remain in agricultural zoning. Rezoning that would accommodate residential, commercial, industrial, or other urban use will be undertaken when a property owner submits a request for rezoning that specifies the proposed use of the property and, where required by the zoning ordinance, a proposed site plan; and where Parish officials determine that utilities and other governmental services needed to serve the proposed development are in place and the proposed use is consistent with this comprehensive plan and other local ordinance requirements.
- Areas that are currently in agricultural use and designated for agricultural use on the land use plan map will be zoned agricultural.
- Primary environmental corridors and other natural hazard or resource areas shown on the land use plan map will be placed in a conservancy or other appropriate zoning district (such as a park or rural residential zoning district).

Subdivision Ordinance

The St. John Parish Subdivision Ordinance is intended to be another implementing tool of this plan. It, too, should substantially reflect and promote the achievement of plan goals, objectives, polices, and programs. The Subdivision Ordinance is a legal means to regulate the division of land into smaller parcels. It provides for Parish oversight of the creation of new parcels and helps to ensure that new development is appropriately located; lot size requirements specified in the Zoning Ordinance are observed; street rights-of-way are appropriately dedicated or reserved; access to arterial streets and highways is limited in order to preserve traffic-carrying capacity and safety; adequate land for parks, drainage ways, and other open spaces is appropriately located and preserved; street, block, and lot layouts are appropriate; and adequate public improvements are provided.

Consistency Among Plan Elements

The comprehensive plan currently includes Land Use, Economic Development, and Parks, Recreation, and Open space elements. These and any future elements should be consistent with the comprehensive plan vision and goals as well as with each other. Any new elements should be reviewed to insure that any goals or policies are consistent with the overall plan goals and each of the plan elements.

Progress In Implementing The Plan

Annual Report on Plan Implementation

It is recommended that St. John Parish undertake a general plan reevaluation on an annual basis, as described in Part 2 of this Element. The annual reevaluation should include a report on plan implementation and progress in implementing the plan during the previous year. The report should summarize how the comprehensive plan was used to direct policy decisions made by Parish officials and staff and whether circumstances have changed that have necessitated amendments to the comprehensive plan. The annual report should also include a list of all plan amendments approved by the Parish Council during the year.

Comprehensive Update of the Plan and Maintenance of Inventory Data

St. John Parish should conduct a formal review of the plan at least once every five years, as recommended under Part 2 of this Element. Based on this review, changes or updates should be made to sections of the plan that are found to be out of date and goals, objectives, policies, or programs that are not serving their intended purpose. Any changes or updates should follow the formal process for plan amendments. The Parish should also work with the various Parish Departments and Agencies to maintain and update applicable inventory data compiled as part of the comprehensive planning process.

Plan Implementation Table

Successful implementation of the St. John Comprehensive Plan will result from many individual actions by the Parish, other public jurisdictions, and private decision-makers over the course of many years. The Plan Implementation Program (Exhibit 7-1) identifies the tasks that are most likely to achieve the goals and objectives of this Plan and included elements.

When preparing the annual budget, the Plan Implementation Table may be reviewed and updated to reflect community accomplishments, new approaches to community issues, changing conditions, shifting priorities, and new demands. The task order in the exhibit does not represent an order of priority, nor is the list intended to be exhaustive or all inclusive – the Parish and other public and private entities will take numerous actions throughout the life of this Plan to achieve the community goals. The Plan Implementation Table is intended to identify those tasks that are most critical to the implementation of the Plan over the next several years.

The tasks outlined in the table do not reflect the many consultations, meetings, hearings, reports and correspondences that will, depending on the task, need to be undertaken to achieve each item. However, as a general rule, the Plan encourages the

Parish to seek input and comment from all stakeholders during the work on any task outlined in the Implementation Table.

St. John Parish Comprehensive Plan Implementation Table		
Policy	Action	Who is Responsible
Modify Parish Development Regulations to Make Them Resilient and Consistent with the Comprehensive Plan	<p>Review and revise the zoning, and subdivision regulations to implement the Comprehensive Resiliency Plan including but not limited to following items listed (a to z), in addition to resolving existing deficiencies in organization, procedures, standards and definitions:</p> <ul style="list-style-type: none"> a. expanded standards for buffers between incompatible land uses b. minimum level of service standards for streets, sidewalks, streetlights, utilities and storm water c. procedures and standards to ensure that public improvements are completed or guaranteed prior to recording a plat d. neighborhood commercial development standards that address scale, design and parking and enhances compatibility with neighborhoods e. a planned development district that provides incentives for community amenities, mixed-use development and the other criteria established in policy 1.4.8 f. landscaping standards addressing multi-family and non-residential development g. sign standards that reduce clutter and improve business visibility h. commercial center development standards that provide convenience for pedestrians, automobile-based users and users of other modes of transportation 	<p>Parish Presidents Office, Parish Council, Planning Dept., Parish Attorney, Planning/Zoning Commission.</p> <p>Also involve Public Works, Code Enforcement, and other Parish Departments or Consultants as appropriate.</p>

St. John Parish Comprehensive Plan Implementation Table		
Strategy	Action	Who is Responsible
	i. Zoning that allows a mix of commercial and residential uses in a single development, by right j. conditions for the continuation of existing non-conforming uses that are compatible with existing neighborhoods	
Maintain Land Use Database	Establish baseline land use data, coordinate with other geographic data sources, and establish a process by which changes in land use are monitored and recorded, on an ongoing basis, and used for analysis, reports and public information.	Planning Dept. and Code Enforcement
Develop a Housing Element for the Comprehensive Plan	Prepare a housing element for the Comprehensive Plan, which is integrated with the existing Plan policies, coordinated with local public and private sector housing organizations that identifies the likely amount and types of housing required to support residential development in St. John Parish.	Parish President, Parish Council, Planning Dept., consultants as necessary
Develop an Urban/Community Design Element	Develop an Urban/Community Design element as a component of the Comprehensive Plan that focuses on design aesthetics.	Parish President, Parish Council, Planning Dept., consultants as necessary
Maintain the 5-Year Capital Budget	Incorporate Comprehensive Plan policies and priorities into the 5-year Capital Budget that includes detailed project descriptions, funding sources and project timelines.	Parish President, Parish Council Planning, Public Utilities, Public Works, any department with budgetary authority
Prepare Sub-Area Plans for Targeted Areas of St. John Parish	Develop Sub-Area or Neighborhood Plans through a citizen-based land use, design and facilities planning process, for the following subareas: a. Airline Hwy. Design Study b. Garyville c. Reserve d. Edgard/Westbank	
	a. Airline Hwy. Design Study	
	b. Garyville	
	c. Reserve	
	d. Edgard/Westbank	

St. John Parish Comprehensive Plan Implementation Table		
Strategy	Action	Who is Responsible
Prepare a Community Design Element	Develop a Community Design element as a component of the Comprehensive Plan.	Planning Department, Planning Commission, Parish President, Parish Council
Adopt Level of Service Standards	Develop and adopt level of service standards for community facilities and services, including but not limited to, water, sewer, drainage, libraries, parks, public safety, and Parish roads, to be used in capital planning, budgeting and growth management.	Public Works, Planning, Library, Fire, Parks and other affected service providers, Planning Commission, Parish Council
Conduct Long Range Facilities Planning	Establish a long-range capital planning program that is based on the build-out of the Land Use Map, supports resilience in Parish infrastructure, reflects adopted level of service standards, and guides the Capital Budget and the long-range Capital Improvements Plan.	Public Works, Planning, Library, Fire, Parks and other affected service providers, Planning Advisory Board, Parish Council
Evaluate Infrastructure Funding	Evaluate the Parish's infrastructure funding strategies and adjust as necessary	Finance, Public Works, Parish Council, Parish President
Coordinate Capital Budget Review Process	Establish evaluation and amendment procedures to coordinate the Capital Budget with the facilities improvement plans of private utilities and other providers, Comprehensive Plan elements and adopted sub-area plans.	Public Works, Planning Department, Parish President, Parish Council
Prepare a Transportation Element to the St. John Parish Comprehensive Plan	Utilize the Comprehensive Resiliency Plan Transportation Report as a baseline to prepare a multi-modal Transportation Element to the Comprehensive Resiliency Plan.	Public Works, Planning Department, Regional Planning Commission New Orleans, Planning Commission, Parish President, Parish Council
Adopt a Minimum Housing Code	Adopt a Housing Code to address minimum conditions for the safety of residents and property.	Planning Department, Inspection and Codes Enforcement, Parish Council, Parish President

St. John Parish Comprehensive Plan Implementation Table: Parks, Recreation, and Open Space Element		
Strategy	Action	Who is Responsible
Establish appropriate funding levels for the Parish's Parks and Recreation System to Meet Capital and Operating Needs.	Develop a plan for stabilizing and creating adequate funding for the Parks and Recreation Department using traditional and innovative funding techniques.	Parish President, Parish Council, Parks and Recreation, Consultants as Necessary
Renovate and Repair Existing Recreation Facilities in St. John Parish To Address Issues of Aging and Outdated Infrastructure	Where necessary repair and renovate the existing park and recreation sites in St. John Parish:	Park and Recreation Dept., Parish President, Parish Council, Public Works
Complete Planning and Construction for Westbank Recreation Complex	Complete the design and construction of the Westbank Recreation Complex	Park and Recreation Dept., Parish President, Parish Council, Public Works, Consultants as Necessary
Proceed with the Mississippi River Levee Path for bicyclists, pedestrians, skaters and other users.	Complete the design of the Mississippi River Levee Path and proceed with construction since funds are in place.	Parks and Recreation, Public Works, Parish President, Consultants as Necessary
Implement the RPC's "Ring Around the Lake Master Plan" by linking the levee path with the multi-Parish network described in the master plan.	Identify and seek funds to extend and link the Mississippi River Levee Path with the multi-Parish network outlined in the "Ring Around the Lake Master Plan"	Parish President, Parish Council, Parks and Recreation, Planning, Consultants as Necessary
Department of Parks and Recreation should increase its organized youth sports program	Develop a plan and funding strategy to increase youth sport opportunities and to increase the number of leagues and teams	Parish President, Parish Council, Parks and Recreation, Consultants as Necessary
Increase programs for elderly citizens and retirees	Develop a plan and funding strategy to increase public recreational facilities and opportunities for adult and elderly citizens in St. John Parish	Parish President, Parish Council, Parks and Recreation, Consultants as Necessary
Plan for New Recreation Facilities Based on Increased Population	Develop a strategy to address the need for new recreation facilities as outlined in the Parks and Recreation Element to the St. John Parish Comprehensive Plan	Parish President, Parish Council, Parks and Recreation, Consultants as Necessary

St. John Parish Comprehensive Plan Implementation Table: Economic Development Element		
Strategy	Action	Who is Responsible
Improve The overall economy and job base of St. John Parish	Focus on existing industrial and business clusters where the Parish has a strategic advantage are supported by existing infrastructure, and for which the parish can provide a ready labor force.	Economic Development, Parish President, Parish Council, Consultants as Necessary
	Fund Parish and regional targeted industry recruitment programs to attract new business investments and locations in St. John Parish.	Economic Development, Parish President, Parish Council, Consultants as Necessary
	Identify existing, new and emerging industrial sectors that offer the potential for growth within the local and regional economy. Refine the locational and supportive requirements for each industry cluster and recommend programs and public sector actions necessary to support growth in that sector.	
	Facilitate continued cooperation between regional port authorities to increase investment that improves the transportation of goods and services to export markets.	
	Partner with local University Business Development Centers on the creation of Parish wide strategies and programs to support targeted industries.	
	Support transportation improvements and expansion of the interstate, road, and rail corridors to increase freight mobility and movement of the regional labor pool.	

St. John Parish Comprehensive Plan Implementation Table		
Strategy	Action	Who is Responsible
Improve The overall economy and job base of St. John Parish	Expand the Parish's Economic Development Department to assist in retention and recruitment.	Parish President, Economic Development, Consultants as Necessary
	Develop a strategy for the recruitment and location of compatible targeted Industries, especially knowledge-based, high-wage businesses to St. John Parish.	
	Encourage retail commercial development and residential development in order to create employment centers that link jobs and housing.	
	Support the development of new broad-based funding mechanisms to finance infrastructure investments in support of focused industrial development and recoup investments as development occurs.	
	Create and designate a sub-area to further the growth of high technology and knowledge-based industries. Create a sub-area and infrastructure development plan in cooperation with the private sector to promote desired development and business within the corridor.	
	Allow for the development of a broader scope of non-retail office commercial uses on designated industrial lands to allow for the location of targeted industries.	

St. John Parish Comprehensive Plan Implementation Table		
Strategy	Action	Who is Responsible
Create More Flexible Zoning Regulations and Permitting Procedures for Commercial and Industrial Uses	Update Parish development regulations to allow designation of those development proposals that result in significant economic benefits (including job creation, high-wage jobs, investment, and public revenue generation) as 'Projects of Parish-wide Significance. For such projects:	Economic Development, Planning, Parish President, Consultants as Necessary
	a. Develop expedited permitting processes and coordination mechanisms to facilitate economic development.	Economic Development, Parish President, Planning
	b. Improve the efficiency of the permit review process and develop a 60- to 90-day permit review for all priority projects.	Economic Development, Parish President, Planning
Increase the numbers and skills of the St. John Parish Workforce	c. Create processes that allow pre-qualification of individual sites so development and environmental permits are available in a timely manner.	Economic Development, Parish President, Planning
	Support the expansion of technical and professional training capabilities in St. John Parish by developing partnerships with regional educational institutions to support workforce development for targeted industries.	Parish President, Economic Development, Parish Council, Educational Partners, Consultants as Necessary
Increase the numbers and skills of the St. John Parish Workforce	Create a Parish-wide Workforce Alliance Board to spearhead creation of a 20 – year workforce development plan.	Parish President, Economic Development, Parish Council, Educational Partners, Consultants as Necessary
	In cooperation with Delgado Community College or other educational partners, support establishment of a regional training center in St. John Parish that offers career progression for those seeking advanced training in high-technology fields.	Parish President, Economic Development, Parish Council, Educational Partners, Consultants as Necessary
Encourage And Support Public Efforts That Empower Efficient and Environmentally Supportive Development:	Support continued vocational skills training through the St. John Parish public education system.	Parish President, Economic Development, Parish Council, Educational Partners, Consultants as Necessary
	Create and fund a publicly owned and operated wetland mitigation bank to provide a convenient and efficient mechanism to convert low-value wetlands that impinge upon development.	Update the zoning ordinance to reflect the emerging market and economic demand for industrial development.

Appendix A

Land Use Survey Methodology

Land Use Survey Methodology

Introduction

In 2003 GTC inc., with the assistance of Graduate Assistants from the College of Urban and Public Affairs, completed a comprehensive land use survey of St. John Parish using the American Planning Association's (APA) Land Based Classification Standards (LBCS). The land use data input into St. John Parish's GIS system allowed for storage, retrieval, analysis, and mapping of the land use data.

As part of Phase IV of the St. John Parish Comprehensive Resilience Plan the UNO Division of Planning completed a thorough update of the land use survey using the APA LBCS model. A combination of remote sensing and ground truth protocols were used to first verify existing land use patterns and then update where necessary.

The methodology and format used to review and update the data was similar to the 2003 survey. The team recorded any changes to land use using the four of the five dimensions from the APA's LBCS:

1. Development Site Dimension
2. Structure Dimension
3. Activity Dimension
4. Function Dimension

1. Site Dimension

The development site dimension refers to a lot or group of lots, including all buildings, which make up a unified development. Once identified by the field survey team, the development site is outlined on the map and coded with a unique identification number written both on the map and on the survey sheet. Then, a site dimension code is identified and recorded in the proper location on the survey data sheet.

2. Structure Dimension

Structure dimension codes refer to the original intended construction use of each building or buildings on a development site. The field survey team identifies each building on a development site with a unique code, usually an integer starting at 1, and then determines the appropriate structure dimension and records both onto the survey data sheet.

3. Activity Dimension

Activity dimension codes refer to the general type of economic activity occurring in each building, or on the development site if the use requires no building. Each individual land use gets an activity code.

4. Function Dimension

Function dimension codes refer to the specific economic activity occurring in each building, or on the development site if the use requires no building. The activity

dimension is more specific than the function dimension in that it identifies the specific economic activity for each use.

Survey/GIS/Data Entry

St. John uses ESRI's ArcView product line as their base GIS, which is compatible with the LBCS data being collected in St. John Parish. ArcView, all maps required for the LBCS survey can be printed. Where there are missing lots in the parcel layer, survey teams will use the building footprints in that area to best delineate development sites on the field maps. Temporary polygons will be created during data entry to house the data until the missing lots can be added. Once official lots have been added to St. John's GIS, UNO may have to re-visit these areas to ensure the integrity of the temporary development sites. This should not significantly affect the LBCS coding in these areas.

CUPA recommends that any Parish data entry personnel be familiar with the field survey protocol used in collecting the data, since questions often arise during data entry, and familiarity with the survey protocol facilitates quick internal resolution of many of these problems.

What will the LBCS Survey Produce?

The completed LBCS survey provides St. John Parish a complete snapshot of existing land use parish wide. This includes the capacity to map land use in more detail than most jurisdictions around the U.S. Additionally, the survey will identify nearly every individual land use across the Parish.

Any and all of this information can be analyzed and mapped within the Parish's existing GIS database, providing the accurate land use coverage's and maps essential to begin the Comprehensive Planning process. Additionally, other geographic layers can be added to facilitate the land use analysis and modeling required during the land-planning phase of the Comprehensive Planning process.

Benefits of an LBCS Dataset

As stated above, and LBCS survey is the first step in the Comprehensive Planning process. Several other benefits flow from having this type of detailed land use inventory. First, the land use management infrastructure within the Parish will have an improved capacity to analyze the impacts of development proposals, thus allowing for more informed land use decisions. Second, having this data will help administration personnel better serve the public by having quickly accessible land use and zoning information. Third, all Parish departments can use the data for their own departmental planning purposes, thus making it easier to coordinate Parish activities that either directly or indirectly affect land use.

LBCS Data Maintenance

Maintaining the LBCS data, once collected, is essential to keep the data a long-term asset to the Parish's land use management infrastructure. To accomplish these two main items need to be addressed. First, the Parish's zoning codes and their accompanying list of permitted uses need to be linked to the LBCS's Function and Activity codes. This will

allow the LBCS data to tie into the zoning ordinance so that each permitted use in each zoning district corresponds to a land use function and activity code from the LBCS. Second, a protocol for updating the land uses, as new permits are issued must be developed and implemented. Any permit type (building, occupancy, etc.) that has the potential to change an existing land use or allow a new use must be captured, linked to an LBCS function or activity code, and then identified in the GIS so that the land use codes can be updated. This is best accomplished by linking the various entities responsible for these types of permits into a main system that feeds into the land use GIS.

Appendix B

Population Projection Methodology

Population Projection Methodology and Overview

One of the keys to successful future land planning is a realistic expectation of future population in St. John Parish. However, population forecasting is, at best, an inexact science due to a multitude of social, economic, environmental, and regulatory factors acting separately and in concert to ultimately determine an area's future population. Population projection techniques range from the exercise of judgment to the use of complex mathematical models. Regardless of the method used, projections tend to be, at best, statistical guesses, and the more distant the planning horizon, the more uncertain the forecast.

To deal with these concerns we evaluated several population projection methodologies to determine the best method to project the likely future population for St. John Parish. It is always important to remember that these projections are only careful estimations of what is likely to be the future population, and that external factors, such as the economy and migration, can and likely will impact actual population growth.

Population Projection Methodology Evaluation

Several methodologies are available to project future population, as well as several public sources of future population¹. Generally, most are delineated by the types of data required to establish a baseline population from which to project the future population. Several methods were evaluated for use in this project. These included trend extrapolation methods, cohort survival, official State Population Data Center Forecasts, and a build-out population analysis. A brief review of each is provided below.

Trend Extrapolation

Trend extrapolation is commonly used to make projections based on historical population data. Two of the most widely employed methods for extending past population data are: 1) Uniform progressive growth rate (arithmetic), 2) Constant percentage growth rate (geometric). Because small populations seldom grow at fixed rates, these two methods are generally used to develop short-term (1-10 year) population estimates, but can be used for longer periods if previous real growth has been along consistent patterns.

¹ The United States Census Bureau provides regular population updates and projections for most major counties and Metropolitan Statistical Areas. Additionally, the Louisiana Population Data Center provides official population projections for all Parishes in Louisiana.

Age Cohort Analysis²

This methodology predicts future population utilizing detailed age group cohort survival rates over a ten-year period. This requires specific data on individual age cohorts only available from the U.S. Census. Standardized birth and death rates are applied in conjunction with imputed migration rates, which are computed by analyzing growth and decline among the various cohorts.

One difficulty with the Age Cohort method is that only computes migration by analyzing shifts over time between individual cohorts. Uncommon shifts in migration cannot be accounted for, which can have a dramatic impact on future population. Generally, future migration rates are the most difficult aspect of population forecasting and can be significantly influenced by shifts in economic activity or as a result of disaster. Clearly disasters have had a significant impact on the regions population dynamics post-Katrina; and in St. John the impacts of Isaac are just now being understood.

State Population Data Center

The Louisiana State Population Data Center tabulates the official population projections for Louisiana's 64 Parishes. The most recent projections were updated to reflect post-Katrina impacts on South Louisiana. Policy makers and professional planners regularly use these projections throughout the state as the basis for policy decisions. The State only projects population for St. John Parish as a whole, and does not make projections for the East or Westbanks of the Parish.

Suggested Population Forecasting Methodology

Several factors influence the likely population dynamics for St. John moving forward. The population in St. John Parish declined from a U.S. Census post-Katrina estimate of 47,684 to the current estimate of 44,758. Additionally, indications are that significant displacement – both temporary and permanent – occurred as a result of Isaac's impacts on St. John Parish in August 2012, further exacerbating this trend.

Table 1: U.S. Census Population Estimates

	2009*	2010	2011	2012
St. John Parish	45,924	45,679	45,122	44,758

*Decennial Census Data is Collected in 2009

External factors such as no existing federal levee protection and uncertainty over the likelihood of future

² The Age Cohort Model used in this analysis was obtained from "Spreadsheet Models of Urban and Regional Analysis", by Richard E. Klosterman, Richard K. Brail, and Earl G. Bossard. The model utilized a Microsoft Excel Spreadsheet provided by the authors.

federal levee protection suggest weak household and population growth in the short-term. Based on these aforementioned reasons a conservative approach to future population growth is recommended.

Table 2 suggests the Cohort Model has been the most accurate in projecting growth, and it is recommended that those projections serve as the baseline for the next five to ten years. Table 19 below summarizes the population projections for St. John Parish in five-year increments to 2030 using the methods outlined above. The Cohort Survival method projects slightly lower growth through 2030 based on the biological progression of the population; while the State Population Data Center projects growth rates not seen in St. John in the last 25 years. The Arithmetic and Geometric models project a consistent growth pattern based on the growth seen from 2000-2010, however recent declines suggest that projections based on previous numerical growth will likely not be accurate.

After testing the projections of the various models against previously known population points and against U.S. Census population estimates it became apparent that both the trend extrapolation methods and the projections made by the State Population

Data Center all provided projections above the current population estimates through 2012, while the Cohort Analysis method projected a population higher but closer to those estimates. For planning

purposes the Cohort Survival method is the suggested methodology for projecting the likely future population for St. John Parish to 2030.

Table 2: Summary of Population Projections 2015-2030

	2010	2015	2020	2025	2030
Cohort	45,924	46,829	47,897	48,193	48,590
Arithmetic	45,924	47,364	48,804	50,244	51,684
Geometric	45,924	47,435	48,997	50,609	52,275
SPDC	49,800	53,540	57,410	61,260	65,110

Source: U.S. Census; State Population Data Center

It is possible that given the additional population pressures resulting from displacement of residents affected by Hurricane Katrina, population might not reach even the modest projections of the Cohort Survival Model. However, should long-range planning policies encourage land use patterns that reflect changing demand among younger families and individuals, St. John could see growth beyond current projections.

Appendix C

Housing Data Report

St. John the Baptist Parish Housing Data Report¹

This housing data report provides a snapshot of some key aspects of current housing in St. John Parish, including a review of U.S. Census population and housing data, current real estate prices, and the impact of future population on need for housing.

The Housing Data Report is divided into three sections. Section I looks at an overview of U.S. Census data dealing with population and housing demographic data for St. John Parish. Section II delves deeper into housing specific statistics for St. John Parish, and Section III reviews the population projections for St. John as well as discussing some of the economic factors that will impact the need for housing in St. John over the twenty years.

This report is intended to provide the statistical basis for development of a formal Housing Element to the St. John the Baptist Comprehensive Plan. The St. John Comprehensive Plan currently encompasses the following elements:

- Citizen Participation
- Land Use
- Economic Development
- Parks, Recreation and Open Space
- Implementation

¹Because there is so little development on the Westbank of St. John Parish, this report focuses on data for the Parish as a whole. While it is important to understand housing dynamics on both the East and Westbanks, the data has not been disaggregated for this report. It is recommended that should the Parish decide to undertake a formal Housing Element data summaries and housing projections should be disaggregated for the East and Westbank of St John.

I. U.S Census Data Review

Future demand for housing will directly relate to several population variables. Below is a review and discussion of several demographic factors that will impact both the demand for both the number and the type of housing the Parish will likely need to plan for in order to accommodate future population.

Summary of Population Data for St. John Parish

The United States Census reports that the St. John Parish population grew by nearly 30,000 residents for the period 1950 to 1990. The 60-year population number and yearly percentage growth patterns for St. John Parish are outlined in Table 1. This data shows that, between 1950 and 1990, St. John Parish's population grew generally by about 27% per year during that span. However, between 1990 and 2000 population growth dropped off precipitously to only 7.6%. The population growth rate has accelerated since between 2000 and 2007 with an increase of nearly 11%. However, recent Census estimates indicate the Parish's population has declined slightly (-2.28% through 2010).

<u>Historical Population Summary 1950-2010</u>			
Year	Population	Population Change	% Change 1950-2010
1950	14,861	-	N/A
1960	18,439	3,578	24.08%
1970	23,813	5,374	29.14%
1980	31,924	8,111	34.06%
1990	39,996	8,072	25.29%
2000	43,044	3,048	7.62%
2007	47,684	4,640	10.78%
2008	46,994	-690	-1.45%
2010	45,924	-1070	-2.28%

Source: U.S. Census Bureau

Racial/Ethnic Composition

Over the last ten years St. John Parish experienced a shift in internal demographics among a number of key categories. The racial make up of the Parish is changing, as racial and ethnic minorities make up larger percentages of the population. As Table 2 shows, white population declined by nearly 14% from 2000 to 2010 while other racial and ethnic minorities – particularly Hispanic-Latino Americans - showed significant increases.

Census data also shows that the Under 18 demographic has declined by almost 8% while the number of residents over 18 has increased. Females in St. John continue to outnumber males with the gap widening slightly through 2010.

Summary of General Household Characteristics

In 2010, St. John Parish had 15,965 households, an increase of 1,682 households since 2000. About 50% of the household growth was 1 and 2 person households. The remaining categories all grew by less than 10% each. These three categories actually

increased by almost 3,500 households eclipsing the total number of new households added. Losses among larger households offset the gains. This likely resulted in the household size decrease for all households in St. John Parish.

Summary Race, Ethnicity, and Age 1990-2010			
Characteristics	2000	2010	% Change
Total Population	43,044	45,924	6.69%
RACE/ETHNICITY			
White	22,633	19,501	-13.84%
Black	19,268	24,576	27.55%
Amer. Ind./Alaskan	112	144	28.57%
Asian/Pacific Island	229	344	50.22%
Other	371	698	88.14%
2 or More Races	420	661	57.38%
Hispanic/Latino	1,230	2,175	76.83%
AGE			
Under 18 Years	13,427	12,356	-7.98%
18 to 64 Years	26,261	28,832	9.79%
65 years and Over	3,356	4,736	41.12%
SEX			
Male	20,893	22,341	6.93%
Female	22,151	23,583	6.46%

Source: U.S. Census Bureau

As noted earlier, St. John's population is becoming older, and this increase in smaller households could be the result of 'empty nesters' as well as new households who have not begun having children.

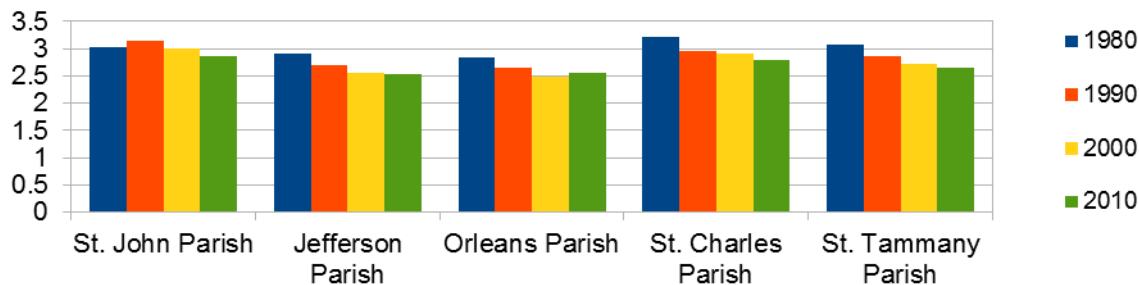
Household Size and Married Families with Children

Along with the drop in numbers of households with more than 3 children, average household size decreased as well from 2000. As expected, household size in St. John Parish also declined, dropping from 3.15 to 2.85 persons per household.

As Graph 1 below shows, the trends in household size in St. John Parish are different than surrounding

Parishes. From 1980 to 2010 parishes in the Metro New Orleans area, with the exception of St. John Parish, all showed decreasing household sizes over that period. Household size in St. John Parish actually increased from 1980 to 1990, and generally remains larger than the surrounding parishes.

Graph: Regional Comparison of Household Size 1980-2010
 Source: U. S. Census



Both St. John and St. Charles Parishes have the highest per household averages

Table 4: Household Size St. John Parish

St. John the Baptist	1990	2000	2010
All Occupied Units	3.13	2.98	2.85
Owner Occupied	3.18	3.03	2.88
Renter Occupied	2.97	2.79	2.74

Source: U. S. Census

among major southeast Louisiana Parishes, likely due to the attractiveness of those areas to young families with children. While both St. John and St. Charles saw declines in household size from 1990, overall they both have household size averages that approach 3 persons per household.

Breaking down household size by occupancy status in St. John Parish shows that owner occupied households are generally larger than renter households – 2.88 as compared to 2.74 (see Table 4). Since owner occupancy in St. John approaches 75%, this brings the average household size close to 3 persons per household, highest in the area.

In addition to the decline in household size, there has been a decline in the number of married-couple families with children under age 18, as Table 5 illustrates. The number of households

identified as married-couple families with children under age 18 declined by nearly 26% since 2000.

Married couples with no children under age 18 increased by 8% over the same period.

Table 5: Married Couple Families with Children

Married-Couple Families with Children	2000	2010	% Change
Married-couple family:	8,035	7,760	-3.42%
With own children under 18 years	4,218	3,122	-25.98%
No own children under 18 years	3,817	4,124	8.04%
With related children under 18 years	N.A.	514	N.A.

Source: U.S. Census

These numbers seem to suggest that not only are childless married couples increasing, but that married couples with children may be leaving the Parish, or not moving in, or even divorcing. It could also indicate a burgeoning population of young married couples who haven't yet decided to start families. However, should this overall trend continue, along with continued increasing percentages of older residents, it is likely that overall household size will continue to decline in the coming years.

Household Income

The median household income in St. John Parish was estimated as \$48,393 in 2008-2010 American Community Survey. The 1999 median household income in St. John Parish as reported by the 2000 U.S. Census was \$38,435. In 1989 the parish wide median household income was \$27,916. After adjusting for inflation, 1989 median income was only \$931 less than the 1999 median income.

Table 6: Change in Median Household Income of St. John the Baptist Parish, LA

	1989**	1999	Change \$	1989-1999 %
St. John the Baptist Parish	\$38,907	\$39,456	\$549	1.40%
South Region	\$35,955	\$38,790	\$2,835	7.90%
United States	\$40,275	\$41,994	\$1,719	4.30%

*CPI for 1999/CPI for 1989=1.34 per URBN 6020 data

**Adjusted to 1999 dollars

Source: US Census Bureau

In fact, comparing the 2000 median income of \$39,456 to the inflation adjusted 1980 median income of \$46,098, shows that in fact, incomes in St. John Parish slightly increased by 1.4%. Conversely, incomes in the South region rose by nearly 8% over the same ten-year period. There are other indicators worth mentioning. Table 7 presents the percentage of household income by race in 2000 and 2010. White households still have a higher household income than other race.

Table 7: Percentage of Household Income By Race 2000-2010

Household Income Range	white			African American			Other Including Hispanic		
	2000	2010	Change	2000	2010	Change	2000	2010	Change
Less than \$10,000	28.1%	32.0%	3.9%	69.5%	65.4%	-4.1%	2.4%	2.6%	0.2%
\$10,000 to \$14,999	31.3%	35.8%	4.5%	68.7%	63.2%	-5.5%	0.0%	1.0%	1.0%
\$15,000 to \$19,999	40.0%	42.9%	2.9%	60.0%	57.1%	-2.9%	0.0%	0.0%	0.0%
\$20,000 to \$24,999	39.2%	38.5%	-0.7%	60.0%	59.5%	-0.5%	0.8%	2.0%	1.2%
\$25,000 to \$29,999	42.3%	42.1%	-0.2%	57.7%	57.4%	-0.3%	0.0%	0.5%	0.5%
\$30,000 to \$34,999	54.3%	46.1%	-8.2%	45.7%	53.9%	8.2%	0.0%	0.0%	0.0%
\$35,000 to \$39,999	24.1%	25.6%	1.5%	74.9%	72.3%	-2.6%	0.9%	2.1%	1.2%
\$40,000 to \$44,999	50.0%	55.1%	5.1%	36.1%	36.1%	0.0%	13.9%	8.8%	-5.1%
\$45,000 to \$49,999	72.5%	61.9%	-10.6%	27.5%	38.1%	10.6%	0.0%	0.0%	0.0%
\$50,000 to \$59,999	59.2%	59.4%	0.2%	40.8%	40.6%	-0.2%	0.0%	0.0%	0.0%
\$60,000 to \$74,999	49.5%	57.1%	7.6%	47.8%	40.6%	-7.2%	2.6%	2.3%	-0.3%
\$75,000 to \$99,999	55.6%	54.2%	-1.4%	41.1%	42.0%	0.9%	3.3%	3.8%	0.5%
\$100,000 to \$124,999	68.0%	65.8%	-2.2%	31.1%	33.7%	2.6%	0.9%	0.5%	-0.4%
\$125,000 to \$149,999	68.0%	73.8%	5.8%	29.2%	23.1%	-6.1%	2.8%	3.1%	0.3%
\$150,000 to \$199,999	44.5%	54.4%	9.9%	52.1%	40.9%	-11.2%	3.4%	4.6%	1.2%
\$200,000 or more	100.0%	91.4%	-8.6%	0.0%	8.6%	8.6%	0.0%	0.0%	0.0%

II. Summary of Housing Data for St. John Parish

Housing Units

This section focuses on housing statistics for St. John Parish. The types of housing found in St. John Parish include: single-family, mostly in the form of detached houses in subdivisions; two-, three-, and four-family, that is, doubles or duplexes, triplexes, and quadplexes; and multifamily, commonly called apartment complexes, which contain five or more units.

Table 8 below presents a breakdown of housing units in St. John Parish by tenure and vacancy.

Table 8: Housing Units by Tenure

	2000	2010	% Change
Total Housing Units	15,532	17,510	12.73%
<i>Occupied Units</i>	14,283	15,965	11.76%
Owner Occupied	11,573	12,637	9.19%
Renter Occupied	2,710	3,328	22.80%
<i>Vacant Units</i>	1,249	1,545	23.70%
Owner Vacancy	908	215	-76.34%
Rental Vacancy	341	393	15.16%
Other Vacancy	N.A.	937	N.A.
Source: U.S. Census			

In 2010, St. John Parish had 17,510 housing units of which 15,965 were occupied. This represents an increase of nearly 26% or 3,252 in the number of occupied housing units during the twenty-year period beginning in 1990.

About 72% of all housing units were owner-occupied in 2010. This is the highest rate among South Shore Metro New Orleans parishes; while renter-occupied units accounted for about 19% of total units. Between 1990 and 2000, the percentage of owner-occupied units increased in St. John, but it dropped a little bit around 2010.

Table 8 also identifies overall vacancy rates for St. John and for owner and renter housing units. Overall, vacancy rates dropped by over 19% between 1990 and 2000, but the rates went up around 2010 to the same amount of 1990.

Post-Katrina, there was a rush by many to find available housing. With relatively little damage to the housing stock from Katrina, local real estate experts generally report there are few available vacant property units parish wide. However, Katrina influenced the housing conditions and drove an increase in vacant units.

Table 9 below identifies the breakdown of housing units by type for St. John Parish between 1990 and 2010. Single detached units make up the largest percentage of units in St. John – over 79%, which increased stably. Surprisingly, the next largest percentage of units is that classified as mobile homes at 11.34%. Given the rural nature of St. John, it is not too surprising to see above average numbers of mobile homes. Mobile homes have been controversial in St. John due to the feeling of many residents that they are being permitted in areas where they don't belong and will detract from the quality of life in the neighborhood.

Table 9: Housing Units by Type in St. John Parish 1990-2010

All Units	2000	%	2010	%	Unit Change 1990-2010	% Change 1990-2010
1 Unit	12,076	71.96%	13,851	79.10%	2763	24.92%
2 Unit	420	2.50%	447	2.55%	-17	-3.66%
3 or 4 Units	576	3.43%	637	3.64%	3	0.47%
5 + (Multi-Family)	411	2.45%	441	2.52%	-14	-3.08%
Mobile home	1,957	11.66%	1,986	11.34%	156	8.52%
Boat, RV, van, etc.	92	0.55%	21	0.12%	-140	-86.96%
Vacant	1,249	7.44%	1,545	8.82%	0	0%
Total Units						

Housing Values and Rents

Often housing values can be very fluid in communities due to rapid changes in national, state, or local economic factors. While U.S. Census data can often provide insight to changes in values over time, pinpointing when those shifts occur is difficult given the decennial nature of the U.S. Census.

Table 10 presents the U. S. Census reported value for owner-occupied housing units. The data indicate that nearly 72% of owner-occupied housing units were valued under \$100,000 in 2000, but in 2010 only 25.26% of units were valued under \$100,000. This likely results from the inflationary factor over the last 10 years. Combining this data with

Table 10: Owner Occupied Housing Unit Value 2000-2010

	2000	%	2010	%
Total:	11,569		12,294	
Less than \$50,000	2,347	20.29%	1,361	11.07%
\$50,000 to \$99,999	5,906	51.05%	1,744	14.19%
\$100,000 to \$149,999	2,260	19.53%	3,323	27.03%
\$150,000 to \$199,999	619	5.35%	3,158	25.69%
\$200,000 to \$299,999	377	3.26%	2,013	16.37%
\$300,000 to \$499,999	47	0.41%	647	5.26%
\$500,000 to \$999,999	6	0.05%	32	0.26%
\$1,000,000 or more	7	0.06%	16	0.13%

Source: 2006-2010 American Community Survey

previous analysis indicates that much of the lower value housing is in the form of mobile homes. Many of the mobile homes function as de facto low income housing in St. John.

Table 11 identifies the rents reported for 2010 and the changes from reported 2000 and 1990 rents. Again, while this data is helpful in tracking longitudinal changes, local sources are better for

identifying current trends. The data does suggest that in the early part of the decade, the distribution of rents remained similar to the 1990 numbers. Obviously, inflation led to some increases in the number of units in some ranges, but in general there were no

large shifts in the numbers of units in a given price range in 1990 and 2000. There was, however, an increase of around 550 units that reported rent over \$1,000 per.

Current Trends in Real Estate Prices

As stated previously, the U.S. Census data is somewhat dated, given the fluid nature of real estate prices as evidenced by what happened in Southeast Louisiana post-Katrina. The best method to identify current real estate prices and trends is to consult the

Multiple Listing Service (MLS) dataset. The MLS is used by professional realtors to market and track properties that are offered for sale in St. John Parish. MLS data give the best real-time view of real estate prices.

Table 11: 2000 to 2010 Reported Rents in St. John Parish

	2000	%	2010	%	% Change
Total	2,714		3,576		31.76%
With cash rent:	2,373	87.40%	2,802	78.36%	18.08%
Less than \$100	253	9.30%	109	3.05%	-56.92%
\$100 to \$149	120	4.40%	0	0.00%	-100.00%
\$150 to \$199	142	5.20%	39	1.09%	-72.54%
\$200 to \$249	141	5.20%	0	0.00%	-100.00%
\$250 to \$299	154	5.70%	170	4.75%	10.39%
\$300 to \$349	280	10.30%	53	1.48%	-81.07%
\$350 to \$399	318	11.70%	102	2.85%	-67.92%
\$400 to \$449	297	10.90%	94	2.63%	-68.35%
\$450 to \$499	217	8.00%	213	5.96%	-1.84%
\$500 to \$549	123	4.50%	167	4.67%	35.77%
\$550 to \$599	78	2.90%	167	4.67%	114.10%
\$600 to \$649	109	4.00%	166	4.64%	52.29%
\$650 to \$699	24	0.90%	238	6.66%	891.67%
\$700 to \$749	20	0.70%	59	1.65%	195.00%
\$750 to \$999	64	2.40%	657	18.37%	926.56%
\$1,000 +	33	1.20%	568	15.88%	1,621.21%
No cash rent	341	12.60%	774	21.64%	126.98%

Source: 2000 Census and 2008-2010 American Community Survey

Additionally, the UNO Real Estate Market Data Center (REMDC) tracks real estate trends in Southeast Louisiana and along the Mississippi Gulf Coast. The REMDC provides detailed information on rents for various unit types.

This data was used as the basis to identify current trends in sales for St. John Parish. Although the population of St. John Parish did not increase tremendously between 1990 and 2000, statistics reveal that the value of

housing has increased significantly.

As stated earlier, housing values for owner-occupied housing units have risen sharply over the last few years, as have rents. However, incomes have not kept pace with the increase in housing costs.

Table 12 presents data from the most recent American Community Survey on owner and renter housing costs as a percentage of their gross income. Generally housing affordability

Table 12: Housing Costs as a Percentage of Income

Rent as a Percentage of Household Income		%	Owners with a Mortgage		%
Total	2,735	100.00%		8,241	100.00%
Less than 20%	783	28.63%	Less than 20%	3,420	41.50%
20 to 24.9%	229	8.40%	20.0 to 24.9%	1,175	14.30%
25 to 29.9 %	332	12.10%	25.0 to 29.9%	667	8.10%
30 to 34.9%	153	5.60%	30.0 to 34.9%	726	8.80%
35% or more	1,238	45.30%	35% or more	2,253	27.30%
Not computed	743	N.A.	Not computed	45	N.A.

Source: 2006-2010 American Community Survey

becomes an issue when housing costs exceed 30% of monthly household income. The data indicates that a significant number of both renter and owner are paying over 30% of their income towards housing costs. In 2010, almost 52% of renters reported paying over 30% of their income toward housing costs. In total, nearly 40% of St. John households have some housing affordability issue.

Another good indication of the stability of the housing market is real estate sales. With post Isaac issues depressing the market, it is apparent that better indication is current real estate data regarding sales price and current asking prices in the area. While this data is often not available to the general public, licensed real estate agents and brokers can obtain sales data for Metro New Orleans through the Multiple Listing Service².

Table 13 below breaks down average sale price and average price per square foot for each condition category on the Eastbank of St. John Parish³. Urban Evolution found that housing prices post-Katrina peaked in 2006 averaging \$168,472 and declined to \$157,425 in 2008. Data from MLS showed that average single-family home in St. John Parish was \$157,875 or about \$93 per square foot from January to July in 2009. From August to December in 2011, the average sale price was \$126,730 or about \$66 per square foot; while from January to August in 2012, it was \$118,308, or about \$71 per square foot.

Table 13a: Average Sale Price for Single-Family Homes in 2009 (Through July 2009)

Condition	Units	Avg. Price	Avg. Per/Sq.Ft.
New	10	\$171,882.0	\$119.3
Excellent	80	\$174,207.0	\$102.8
Very Good	45	\$146,033.0	\$84.5
Average	12	\$132,056.0	\$70.1

² Real Estate Brokerage Firm Urban Evolution provided detailed analysis of real estate data for this project.³ There are only 3 MLS recorded sales through July 2009 on the Westbank of St. John Parish.

One Parish One Future Comprehensive Resilience Plan



Fair	8	\$92,125.0	\$58.5
Poor	1	\$80,000.0	\$61.9
Parish Total	156	\$157,875.0	\$93.2

Source: Urban Evolution, LLC

Table 13b: Average Sale Price for Single-Family Homes (August 2011 to December 2012)

Condition	Units	Avg. Price	Avg. Per Sq.Ft.
New	3	\$194,833.3	\$116.4
Excellent	45	\$171,794.8	\$91.7
Very Good	24	\$133,138.8	\$74.2
Average	24	\$84,940.8	\$51.1
Fair	19	\$68,209.0	\$40.3
Poor	3	\$36,333.3	\$25.7
Parish Total	118	\$126,730.1	\$66.4

Source: Ross Liner, Realtor

Table 13c: Average Sale Price for Single-Family Homes in 2012 (Through August)

Condition	Units	Avg. Price	Avg. Per Sq.Ft.
New	5	\$151,246.0	\$101.1
Excellent	65	\$182,378.1	\$90.3
Very Good	43	\$128,510.2	\$76.3
Average	48	\$83,496.8	\$52.8
Fair	38	\$50,790.1	\$33.2
Poor	7	\$42,411.4	\$32.3
Parish Total	206	\$118,308.2	\$70.6

Source: Urban Evolution, LLC

III. Review of Population and Housing Projections in St. John Parish

Review of Population Projections for St. John Parish

As part of the Phase II Task II St. John Parish comprehensive planning process, the Parish engaged the UNO Division of Planning to prepare a series of population projections looking out to 2020 to assist in determining the likely amount of new land required to accommodate the anticipated development. The key basis for that determination is the forecast of the likely 2020 population for St. John Parish. For planning purposes most communities rely on the official population projections that are provided by the State of Louisiana Population Data Center (SPDC).

In preparing the recommended 20-year population projection, UNO supplemented the official SPDC projections with an independent analysis using the following methodologies: a.) cohort survival, b.) arithmetic, and c.) geometric. The projections from each of these were matched against those developed by the State Population Data Center (official State population forecast provider) to determine the likely future population in five year increments for St. John Parish. The results from that analysis are provided in Table 14 below.

Table 14: Summary of Population Projections to 2020

	Census Population	Cohort Survival Analysis	State Data Center	Arithmetic	Geometric
2010	45,924*	45,924*	45,924*	45,924*	45,924*
2015	n/a	46,829	53,540	47,364	47,435
2020	n/a	47,897	57,410	48,808	48,997
2025	n/a	48,193	61,260	50,244	50,609
2030		48,590	65,110	51,684	52,275

* 2010 U.S Census Count

The summary of population projections was compared to the 2005 U.S. Census population estimate for 2005 to identify the most accurate method for projecting future population. This comparison identified the Cohort Survival projections as the most accurate basis for projecting the population to 2030.

UNO projects that by 2030, St. John Parish's population is forecast to reach 48,590 residents, an increase of only 2,666 people over the 2000 population, or only about a 5.8% increase during the 20-year planning period. This represents a significant stagnation of population growth compared to the previous 30 year pattern.

Factors Affecting Future Population Growth

Shifting Age and Household Demographics

Despite the sustained population growth in St. John Parish over the last eight years, there are some factors that could impact whether the Parish can sustain that growth. These factors are part demographic; part planning related; and part economic. One of those variables is the shifting age demographics in St. John Parish.

Table 15 below identifies the twenty-year shifts among all age cohort populations in St. John Parish, both on a comparative and cohort survival basis. A couple of interesting notes is that the biggest losses came among the 0-9 and 25-34 cohorts, suggesting smaller numbers of young children and those who are college age or just out of college. While significant percentage gains occurred among older cohort groups, a large increase also occurred in the 20-24 and 45-64 age group. The overall trend seems to be toward a slightly older population, however the aging is not occurring as quickly as some local and national trends suggest.

Table 15: Age Cohort Analysis 2000-2010

Age Cohort	2000	2010	Change	% Change
0-4	3,463	3,368	-95	-2.74%
5-9	3,692	3,304	-388	-10.51%
10-14	3,874	3,449	-425	-10.97%
15-19	3,837	3,534	-303	-7.90%
20-24	2,721	3,030	309	11.36%
25-29	2,699	3,053	354	13.12%
30-34	3,118	2,932	-186	-5.97%
35-39	3,612	2,850	-762	-21.10%
40-44	3,588	3,153	-435	-12.12%
45-49	3,240	3,598	358	11.05%
50-54	2,503	3,518	1,015	40.55%
55-59	1,907	3,041	1,134	59.47%
60-64	1,434	2,359	925	64.50%
65-69	1,006	1,652	646	64.21%
70-74	925	1,228	303	32.76%
	1,425	1,856	431	30.25%
	43,044	45,924	2,881	6.69%

Source: U.S. Census

Another way to measure shifting age demographics is by examining household retention rates for specific age groups. The retention factor measures the survival rate of households over a ten year period. It is calculated by dividing the number of households in a specific age group in 2000 by the number of households in that same age group in 1990, i.e. households in the 35 to 44 age group in 2000 would be divided by the number of households in the 25 to 34 age group in 1990. A retention factor greater than one indicates growth within that age group while a factor less than one indicates household loss over the ten year period. Additionally, since it is impossible to calculate a retention factor among households 15 to 24, the retention factor is expressed as the percentage change in that age group from 1990 to 2000.

Table 10 presents the retention factors for households by age groups for St. John Parish as well as surrounding Parishes for comparison purposes. All but three age groups in St. John Parish have retention factors less than one, indicating that fewer

households remain in that age group cohort than in 1990. The data also show that St. John and St. Tammany Parish's are the only two Parishes to see an increase in households over 45. This suggests that St. John Parish is doing a much better job of holding on to residents as they age.

While St. Tammany Parish outpaces every other Parish in both overall household retention and growth in every age category breakdown, St. John Parish has the second highest retention factor among those Parishes surveyed with an overall factor of 1.12. Additionally, St. John has the third highest retention and growth among most key growth household age groups including the 25-34, 35-44, and 45-54 household cohorts. For older households statistics place St. John about par with retention rates for the other south shore parishes surveyed.

Table 16: Retention Factors for Selected Metro Parishes

	St. John	Jefferson	Orleans	St. Tammany	St. Charles
*15 to 24 years	-18.57%	-17.59%	21.64%	0.09%	-19.26%
25 to 34 years	4.38	3.11	2.24	5.13	4.8
35 to 44 years	1.22	0.93	0.68	1.55	1.36
45 to 54 years	1.02	0.91	0.72	1.15	1.02
55 to 64 years	0.99	0.88	0.69	1.07	0.94
65 to 74 years	0.92	0.81	0.59	1.06	0.9
75 and over	0.92	0.96	0.41	1.18	0.94
Growth Factor	1.12	0.96	0.76	1.26	1.13

Data Source: U.S.
Census

Overall, the data underscores the broader picture that St. Tammany on the north shore is experiencing rapid growth in almost all age groups, while south shore Metro Parishes are experiencing slow or stagnant growth except St Charles which is growing

from 2000. St John is still among the highest growth in 2010.

The recommended St. John Parish population projections are based on what is known about current demographic trends. Since population and housing are not completely independent of each other, the above discussion portends some important housing realities which will need to be addressed. For example, as the population generally ages, household sizes will continue to decline, resulting in the need for more housing units. These units will likely need to serve a population that will either not be able or desire to handle the upkeep on a traditional lot-based home, but rather will be looking for alternatives such as town homes and condominiums. Also, elderly and/or assisted living facilities will be in much greater demand. Where to put these types of facilities will be an important issue in the near future.

Internal population dynamics are just one of many factors which could impact the future need and demand for housing in St. John Parish.

Economic Development and the New Mississippi River Bridge

Key to the growth in St. John Parish is the continued expansion of an economic base that provides solid employment opportunities and commercial and retail opportunities that meet the needs of all parish residents. The economic development element to the comprehensive plan has more detailed information regarding job creation statistics and other economic development related items.

There is ample land for economic development in St. John Parish, including land on both the East and Westbanks of the Parish. The current major employers in the Parish are industrial based, and growth in the petroleum refining and petro-chemical industries are important to establishing a solid job base in St. John Parish. Other sectors are also expected to show job creation over the next 10 years, including the retail/service sector, trade sector, information sector, and the manufacturing sector.

One of the long-term keys to economic development in St. John Parish is access to the Westbank. During discussions with the public, significant frustration was voiced regarding the lack of economic activity on the Westbank of St. John Parish. Residents feel neglected by parish leaders because very few retail or service outlets are available to residents. Access has always been a major issue, with basically only one small ferry in St. John to carry cars and people to the Eastbank.

Until recently, the closest Mississippi River crossing available was the Luling bridge. However, a new Mississippi River bridge crossing has opened on the western edge of St. John Parish connecting State Hwy. 3127 to the Eastbank and 1-10. This could have long-term growth impacts by linking land on the Westbank of St. John to the growing suburban areas East of Baton Rouge.

National and Regional Economic Development

There are also broader economic issues which affect the conditions that drive population growth and thus new housing development. On a national scale, there continues to be significant unrest regarding the overall health of the U.S. economy. Key government statistics place the overall economy in recession; unemployment nationally is the highest in almost 30 years; credit markets are nearly frozen; access to credit is severely limited and when available is usually only available to those with high credit scores; the stock markets – while showing recent rebounds – are still trading at levels about 30-40% lower than their highs; real estate prices have plummeted nationally triggering a foreclosure crisis exacerbated by the overall economic malaise; among other concerns.

In terms of housing those able to obtain credit are finding interest rates at historic lows. But credit terms are keeping many out of the buying market thus severely weakening demand in the overall market.

Appendix D

Toxic Release Sites and Discharges

In St. John Parish

Table: Petrochemical/Refinery Facilities in St. John Parish

Facility	Address
AIR PRODUCTS & CHEMICALS INC - GARYVILLE SMR	4663 W AIRLINE HWY (WITHIN MARATHON PETROLEUM CO LLC), GARYVILLE LOUISIANA 70051
AIR PRODUCTS PERFORMANCE MANUFACTURING INC.	474 W 19TH ST, RESERVE LOUISIANA 70084
ARCELORMITTAL LAPLACE LLC.	138 HWY 3217, LA PLACE LOUISIANA 70068
CLARIANT CORP.	334 ROSENWALD ST, RESERVE LOUISIANA 70084
DPC ENTERPRISES LP	620 W 10TH AVE, RESERVE LOUISIANA 70084
DUPONT PERFORMANCE ELASTOMERS LLC PONTCHARTRAIN SITE	560 HWY 44, LA PLACE LOUISIANA 70068
DUPONT PONTCHARTRAIN WORKS	586 HWY 44, LA PLACE LOUISIANA 70068
EVONIK STOCKHAUSEN LLC.	3606 HWY 44, GARYVILLE LOUISIANA 70051
LAFARGE RESERVE PLANT.	452 TERRE HAUTE RD, RESERVE LOUISIANA 70084
MARATHON PETROLEUM CO LLC.	4663 W AIRLINE HWY, GARYVILLE LOUISIANA 70051
NALCO CO.	3628 HWY 44, GARYVILLE LOUISIANA 70051
PINNACLE POLYMERS.	ONE PINNACLE AVE, GARYVILLE LOUISIANA 70051

Source: EPA Toxic Release Inventory Database, 2011

Facility	Toxin Released (Toxin Type)	Air Emissions (in pounds)		Surface Water
		Fugitive	Point Source	
AIR PRODUCTS & CHEMICALS INC	METHANOL (325 - Chemicals)	-	51.00	
	SITE TOTAL	-	51.00	
AIR PRODUCTS PERFORMANCE MANUFACTURING INC	CERTAIN GLYCOL ETHERS (325 - Chemicals)	-	0.00	
	ETHYLENE OXIDE (325 - Chemicals)	0.32	1,649.00	
	METHYL ISOBUTYL KETONE (325 - Chemicals)	-	7,207.00	
	PROPYLENE OXIDE (325 - Chemicals)	0.18	38.00	
	SITE TOTAL	0.50	8,894.00	
ARCELORMITTAL LAPLACE LLC	CHROMIUM COMPOUNDS(331 - Primary Metals)	52.00	139.00	
	COPPER COMPOUNDS (331 - Primary Metals)	60.00	152.00	
	LEAD COMPOUNDS (331 - Primary Metals)	461.00	1,223.00	
	MANGANESE COMPOUNDS (331 - Primary Metals)	458.00	1,381.00	
	MERCURY COMPOUNDS (331 - Primary Metals)	20.00	51.00	
	NICKEL COMPOUNDS (331 - Primary Metals)	52.00	139.00	
	POLYCHLORINATED BIPHENYLS (331 - Primary Metals)	-	-	
	ZINC COMPOUNDS (331 - Primary Metals)	5,070.00	13,448.00	
	SITE TOTAL	6,173.00	16,533.00	
CLARIANT CORP.	1,2,4-TRIMETHYLBENZENE (325 - Chemicals)	.	.	
	ETHYLBENZENE (325 - Chemicals)	.	.	
	METHANOL (325 - Chemicals)	331.00	495.00	
	XYLENE (MIXED ISOMERS) (325 - Chemicals)	.	.	
	SITE TOTAL	331.00	495.00	
DPC ENTERPRISES LP	CHLORINE (4246 - Chemical Wholesalers)	580.00	30.00	
	SITE TOTAL	580.00	30.00	

Facility	Toxin Released (Toxin Type)	Air Emissions (in pounds)		Surface Water
		Fugitive	Point Source	
DUPONT PERFORMANCE ELASTOMERS LLC	1,3-BUTADIENE (325 - Chemicals)	765.00	2,733.00	-
	1,4-DICHLORO-2-BUTENE (325 - Chemicals)	26.00	263.00	19.00
	AMMONIA (325 - Chemicals)	-	7,108.00	-
	BENZYL CHLORIDE (325 - Chemicals)	10.00	-	-
	CHLORINE (325 - Chemicals)	895.00	2,510.00	-
	CHLOROPRENE (325 - Chemicals)	5,453.00	162,811.00	75.00
	HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (325 - Chemicals)	1,028.00	14,190.00	-
	N-METHYL-2-PYRROLIDONE (325 - Chemicals)	10.00	-	-
	N-NITROSODIPHENYLAMINE (325 - Chemicals)	10.00	-	-
	TETRACHLOROETHYLENE (325 - Chemicals)	11.00	11.00	-
	TOLUENE (325 - Chemicals)	328.00	20,122.00	5.00
	SITE TOTAL	8,536.00	209,748.00	99.00
DUPONT PONTCHARTRAIN WORKS.	1,2-PHENYLENEDIAMINE (325 - Chemicals)	-	404.00	
	4-AMINOAZOBENZENE (325 - Chemicals)	-	-	
	4-AMINOBIPHENYL (325 - Chemicals)	-	1.00	
	AMMONIA (325 - Chemicals)	2,460.00	11,099.00	
	ANILINE (325 - Chemicals)	2,934.00	2,295.00	
	BENZENE (325 - Chemicals)	160.00	310.00	
	BIPHENYL (325 - Chemicals)	82.00	11.00	
	CERTAIN GLYCOL ETHERS (325 - Chemicals)	10.00	-	
	CHLORINE (325 - Chemicals)	3.00	-	
	DIPHENYLAMINE (325 - Chemicals)	-	-	
	N-METHYL-2-PYRROLIDONE (325 - Chemicals)	18.00	-	
	NITRATE COMPOUNDS (325 - Chemicals)	-	-	
	NITRIC ACID (325 - Chemicals)	59.00	35.00	
	P-PHENYLENEDIAMINE (325 - Chemicals)	66.00	415.00	
	SITE TOTAL	5,792.00	14,570.00	

Facility	Toxin Released (Toxin Type)	Air Emissions (in pounds)		Surface Water
		Fugitive	Point Source	
EVONIK STOCKHAUSEN LLC.				
	ACRYLIC ACID (325 - Chemicals)	1,034.00	4,000.00	
		SITE TOTAL	1,034.00	4,000.00
LAFARGE RESERVE PLANT				
	LEAD (327 - Stone/Clay/Glass)	0.10	-	
		SITE TOTAL	0.10	-
MARATHON PETROLEUM CO LLC				
	1,2,4-TRIMETHYLBENZENE (324 - Petroleum)	5,959.00	312.00	5.00
	1,3-BUTADIENE (324 - Petroleum)	276.00	6.00	-
	AMMONIA (324 - Petroleum)	1,418.00	343.00	302.00
	BENZENE (324 - Petroleum)	14,303.00	2,317.00	5.00
	BENZO(G,H,I)PERYLENE (324 - Petroleum)	5.00	5.00	-
	CARBON DISULFIDE (324 - Petroleum)	-	43.00	-
	CARBONYL SULFIDE (324 - Petroleum)	-	-	-
	CYCLOHEXANE (324 - Petroleum)	318.00	435.00	-
	ETHYLBENZENE (324 - Petroleum)	6,113.00	691.00	5.00
	ETHYLENE (324 - Petroleum)	2,335.00	2,605.00	-
	HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (324 - Petroleum)	20.00	7,654.00	-
	HYDROGEN FLUORIDE (324 - Petroleum)	2,243.00	-	-
	LEAD COMPOUNDS (324 - Petroleum)	0.10	50.70	-
	MERCURY COMPOUNDS (324 - Petroleum)	0.10	8.80	-
	N-BUTYL ALCOHOL (324 - Petroleum)	49.00	10.00	-
	N-HEXANE (324 - Petroleum)	9,196.00	37,818.00	5.00
	NAPHTHALENE (324 - Petroleum)	2,957.00	96.00	5.00
	NITRATE COMPOUNDS (324 - Petroleum)	-	-	81,060.00
	POLYCYCLIC AROMATIC COMPOUNDS (324 - Petroleum)	5.10	255.40	5.00
	PROPYLENE (324 - Petroleum)	35,085.00	7,469.00	-
	SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY) (324 - Petroleum)	-	16,215.00	-
	TETRACHLOROETHYLENE (324 - Petroleum)	3,792.00	5.00	5.00

Facility	Toxin Released (Toxin Type)	Air Emissions (in pounds)		Surface Water
		Fugitive	Point Source	
	TOLUENE (324 - Petroleum)	23,622.00	4,072.00	5.00
	XYLENE (MIXED ISOMERS) (324 - Petroleum)	30,424.00	3,622.00	5.00
	ZINC COMPOUNDS (324 - Petroleum)	30.00	969.00	-
	SITE TOTAL	138,150.30	85,001.90	81,407.00
NALCO CO.	1,2,4-TRIMETHYLBENZENE (325 - Chemicals)	2.00	10.00	-
	ACRYLAMIDE (325 - Chemicals)	150.00	89.00	-
	ACRYLIC ACID (325 - Chemicals)	120.00	46.00	-
	ACRYLONITRILE (325 - Chemicals)	180.00	230.00	-
	ALLYL ALCOHOL (325 - Chemicals)	-	18.00	-
	ALLYL CHLORIDE (325 - Chemicals)	8.00	360.00	-
	AMMONIA (325 - Chemicals)	55.00	96.00	646.00
	BENZYL CHLORIDE (325 - Chemicals)	-	1.00	-
	COPPER COMPOUNDS (325 - Chemicals)	-	-	66.00
	DIETHANOLAMINE (325 - Chemicals)	-	1.00	22.00
	DIMETHYLAMINE (325 - Chemicals)	34.00	-	-
	EPICHLOROHYDRIN (325 - Chemicals)	9.00	50.00	-
	ETHYLENE GLYCOL (325 - Chemicals)	3.00	-	170.00
	FORMALDEHYDE (325 - Chemicals)	104.00	25.00	-
	MALEIC ANHYDRIDE (325 - Chemicals)	92.00	30.00	-
	METHANOL (325 - Chemicals)	26.00	7.00	-
	NAPHTHALENE (325 - Chemicals)	4.00	24.00	-
	NITRATE COMPOUNDS (325 - Chemicals)	-	-	4,900.00
	SODIUM NITRITE (325 - Chemicals)	-	-	-
	SITE TOTAL	787.00	987.00	5,804.00
PINNACLE POLYMERS	ETHYLENE (325 - Chemicals)	8,930.00	1,771.00	
	PROPYLENE (325 - Chemicals)	24,100.00	88,247.00	
	SITE TOTAL	33,030.00	90,018.00	
	PARISH TOTALS	194,413.90	430,327.91	#####

Source: EPA Toxic Release Inventory Database, 2011

Facility	Toxin Released	Underground Injection Class I Wells	RCRA Subtitle C	Other On-Site	Sub Total
DUPONT PERFORMANCE ELASTOMERS LLC	1,3-BUTADIENE (325 - Chemicals)	0	0	0	0
	1,4-DICHLORO-2-BUTENE (325 - Chemicals)	38,872.00	0	0	38,872.00
	AMMONIA (325 - Chemicals)	0	0	0	0
	BENZYL CHLORIDE (325 - Chemicals)	0	0	0	0
	CHLORINE (325 - Chemicals)	0	0	0	0
	CHLOROPRENE (325 - Chemicals)	10,359.00	0	0	10,359.00
	DIOXIN AND DIOXIN-LIKE COMPOUNDS (325 - Chemicals)	**	**	**	**
	HYDROCHLORIC ACID (1995 AND AFTER "ACID AEROSOLS" ONLY) (325 - Chemicals)	0	0	0	0
	N-METHYL-2-PYRROLIDONE (325 - Chemicals)	0	0	0	0
	N-NITROSODIPHENYLAMINE (325 - Chemicals)	0	0	0	0
	TETRACHLOROETHYLENE (325 - Chemicals)	0	0	0	0
	TOLUENE (325 - Chemicals)	6,696.00	0	0	6,696.00
	SITE TOTAL	55,927.00	0	0	55,927.00
DUPONT PONTCHARTRAIN WORKS.	1,2-PHENYLENEDIAMINE (325 - Chemicals)	0	0	0	0
	4-AMINOAZOBENZENE (325 - Chemicals)	635	0	0	635
	4-AMINOBIPHENYL (325 - Chemicals)	8	0	0	8
	AMMONIA (325 - Chemicals)	13,812.00	0	0	13,812.00
	ANILINE (325 - Chemicals)	9,322.00	0	0	9,322.00
	BENZENE (325 - Chemicals)	3	0	0	3
	BIPHENYL (325 - Chemicals)	0	0	0	0
	CERTAIN GLYCOL ETHERS (325 - Chemicals)	9,192.00	0	0	9,192.00
	CHLORINE (325 - Chemicals)	0	0	0	0
	DIPHENYLAMINE (325 - Chemicals)	66	0	0	66
	N-METHYL-2-PYRROLIDONE (325 - Chemicals)	17,120.00	0	0	17,120.00
	NITRATE COMPOUNDS (325 - Chemicals)	502,937.00	0	0	502,937.00
	NITRIC ACID (325 - Chemicals)				
	P-PHENYLENEDIAMINE (325 - Chemicals)				
	SITE TOTAL	553,095.00	0	0	553,095.00
	Total	609,022.00	0	0	609,022.00

Source: EPA Toxic Release Inventory Database, 2011

Table: SJBP Toxic Releases: Dioxins and Dioxin-like Compounds

Facility	Point Source Air Emissions (in grams)
DUPONT PERFORMANCE ELASTOMERS LLC	0.10638
MARATHON PETROLEUM CO LLC	0.65925
Parish Total:	0.76563

Source: EPA Toxic Release Inventory Database, 2011