

## **Focus Sheets**

1. Coastal Restoration
2. Demographics
3. Economic Development
4. Multimodal Transportation
5. Water System
6. Sewer System
7. Drainage and Levees
8. Public Facilities and Services
9. Parks and Recreation
10. Land Use
11. Government

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**Are current coastal restoration efforts and long-term plans sufficient to protect Plaquemines Parish from future storms?**

**Big Ideas**

- The Plaquemines Parish Coastal Restoration Plan focuses on the idea of constructing a forested ridge immediately outside the back levees. The forested ridge improvement can reduce the wave action on top of tidal surge to a level below levee height, achieving 100-year flood protection within the protected Parish land.
- The Parish's Plan involves a long-term lease of dredging equipment that would pump sediment from the Mississippi River through pipes across the river levee, under LA 23, and over the back levee into the adjacent marshes. The aim is to create elevated ridges of 75 to 100 feet wide leading up to the back levee, and then plant a series of marsh plants and large cypress trees along the ridge to serve as a speed bump for waves and flooding from storm surges. The Plan differs from the State's plan in the way by which sediment is transported to the outside of the back levee to create new land.

**Big Decisions & Questions**

- While previous coastal restoration projects/programs have restored wetland habitat, they have had inadequate impact on flood protection for Plaquemines residents based on USACE's Engineer Research Development Center (ERDC) modeling.
- After Katrina, people realized that flood protection against storm surge is lacking due to inadequate levee elevations.
- The USACE along with FEMA found Braithwaite to be so vulnerable that it recommended new homes and business be built 18 feet above ground. Successful coastal restoration can reduce the need for the elevation by five feet.
- The Parish is seeking to have the Forested Ridge Pilot initiative completed simultaneously with the Corps' B-2 levee improvements (December 2011).
- Securing federal grants is critical for funding the high costs of coastal restoration program implementation.

**USACE** - United States Army Corps of Engineers  
**FEMA** - Federal Emergency Management Agency

**Related Big Issues**

- ❖ In the past 50 years, Plaquemines Parish has lost over 248 square miles of land, threatening the livelihood, culture, and footprint.
- ❖ The levee system maintained by the Corps of Engineers protects less than 4 percent of the land mass in Plaquemines Parish.
- ❖ Research has indicated that the placement of a "Forested Ridge" adjacent to the outside levee berm reduces wave action, resulting in net reduction of storm surge elevation – ultimately meeting 100-year storm protection requirements.
- ❖ FEMA will begin to develop a new set of flood maps with updated Base Flood Elevations, which set building height elevations that account for improvements to the regional levee system. Plaquemines officials are concerned that without the enhanced protections around the levees prior to FEMA's update, much of the parish could be placed into a high-risk flood zone that could stymie development.
- ❖ What impact will the recovery effort from the Deepwater Horizon Disaster have on other coastal recovery efforts?

# Plaquemines Parish MASTER PLAN



President Billy Nungesser

**PURPOSE STATEMENT:** (1) The coastal restoration programs in Plaquemines Parish must achieve a balance between adequately protecting the valuable wetland habitats and offering flood protection for the residents of the Parish. (2) The program must be aligned with the Federal and State coastal protection objectives. (3) The implementation goals of the comprehensive coastal restoration program include the establishment of a safe and sustainable coast that will protect the community, the Nation's critical energy infrastructure, and fragile natural resources, and the promotion of local development interrupted by the 2005 hurricanes.

## EXISTING CONDITIONS

Unlike other parishes that need levee protection in only some areas, Plaquemines Parish is bordered by levees on all sides. The wetlands surrounding Plaquemines Parish are the natural spawning grounds and nurseries for much of the nation's desirable seafood. Wetlands provide natural flood control, hurricane protection and water filtration. For the past five decades, an average of 34 square miles of South Louisiana land, mostly marsh, has disappeared each year (USGS), and as much as 80 percent of the nation's coastal wetland loss occurred in Louisiana.

## PLANNED INVESTMENTS

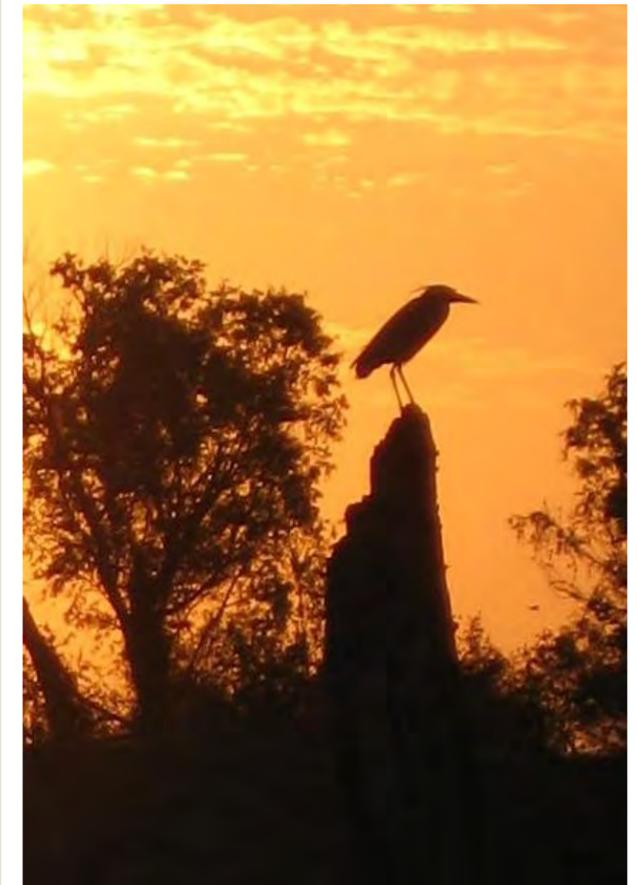
A 12-year Coastal Restoration Plan is currently underway in Plaquemines Parish and involves three phases:

- (1) Phase I is focused on coastal protection for the marsh and parish levees, which begins in 2010 and takes about 2 to 3 years to complete.
- (2) Phase II requires four more years and aims to improve wetland habitats.
- (3) Phase III takes up to 6 years and includes shoreline restoration of barrier islands.

The Parish would need up to \$250 million to install the ridges along the entire stretch of the parish on both sides of the river, and \$45 million to begin the first phase of the projects between Venice and Boothville.

The Parish has started implementation discussions for the planned project with appropriate State and Federal agencies.

(below) Coastal restoration is critical to preserving habitat for various species unique to the Louisiana coast.



### FOCUS SHEET

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# RESTORING OUR COAST & PROTECTING OUR LAND

## PLANNED INVESTMENTS

Currently, there is a budget of over \$700 million of projects in Plaquemines Parish committed to coastal restoration (at various stages):

### Construction Recently Completed

- Chaland Pass to Grant Bayou Pass Barrier
- Shoreline Restoration and Bay Hoe Wise

### Under Construction

- East Grand Terre
- Pelican Island and Pass Le Mer to Chaland Pass
- Lake Hermitage Marsh Creation

### In Design

- West Pointe a La Hache Outfall Management

- Bayou Lamoque Floodgate Removal
- Long Distance MS Sediment Pipeline
- Jump Basin Dredging and Marsh Creation
- Scofield Island Restoration
- Bayou Dupont
- Myrtle Grove Modeling Effort
- Fringe Marsh Repair
- Update to Coastal Management Plan
- West Pointe a la Hache Marsh Creation
- Venice Ponds Marsh Creation and Crevasses

### Feasibility Investigation

- Bohemia MS River Reintroduction Project
- Bertrandville Siphon
- Fort Jackson Diversion
- LCA Barataria Basin Shoreline
- LCA Diversion at White Ditch
- Mississippi River Delta Management Plan

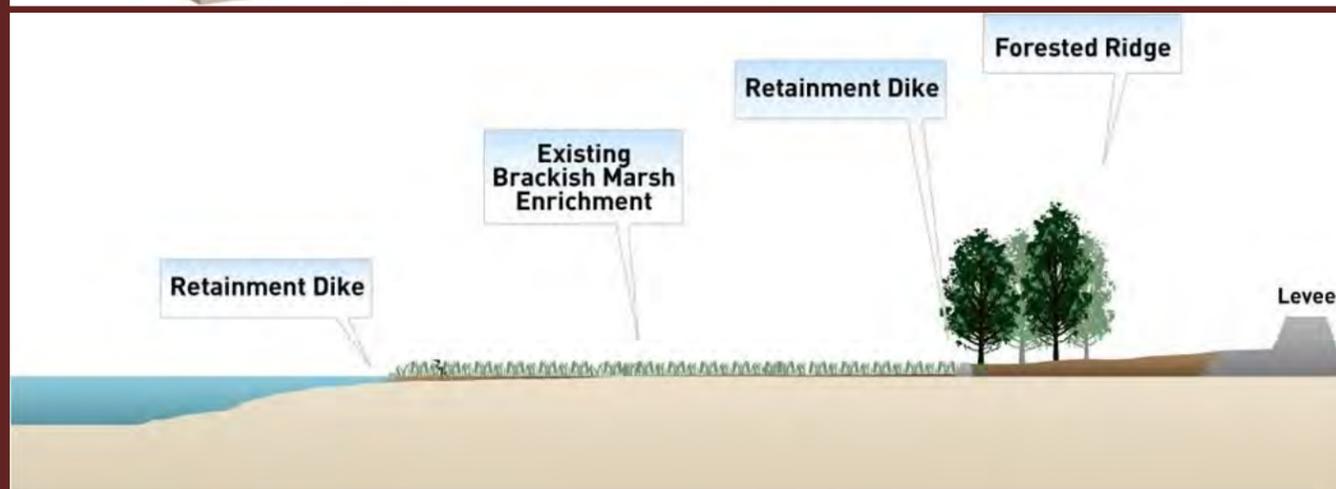
## Proposed Multi-phase Plaquemines Parish Coastal Restoration Projects



- Red:** Phase A project area, levee and marsh protection.
- Green:** Phase B project area, marsh restoration.
- Yellow:** Phase C project area, shoreline stabilization.

Source: GCR Associates, Inc.

(below) Forest ridge improvements result in the reduction of the wave action on top of tidal surge to a level below levee height, helping achieve the 100-year flood protection for the protected area in the Parish.



Source: Plaquemines Parish, "Coastal Restoration in Plaquemines Parish", a PowerPoint presentation given by Bill Nungesser, 2010.

(below) Mississippi River - Diversion of sediment from the Mississippi River to coastal areas is one tactic being used to restore the coast.



Plaquemines Parish  
MASTER PLAN





# FOCUS SHEET DEMOGRAPHICS

President Billy Nungesser

**PURPOSE STATEMENT:** *Shifts in the characteristics of the Plaquemines Parish population influence the livelihood of the parish. These shifts ultimately impact schools, water and sewer service, location of private businesses, and more. Having a thorough understanding of the characteristics and associated needs of the resident population will help Parish leadership make decisions that improve the quality of life.*

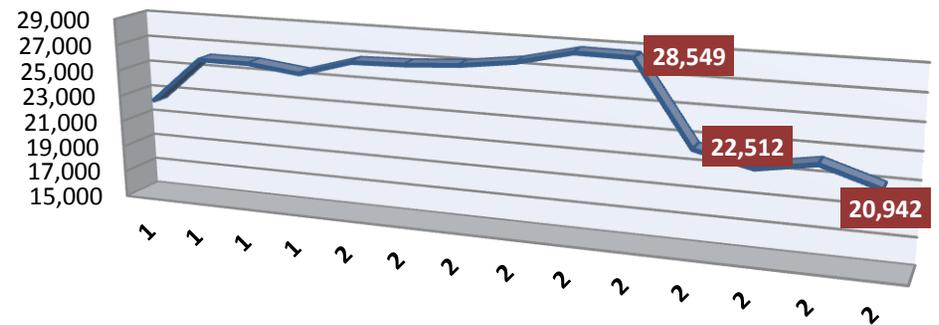
## EXISTING CONDITIONS

- The population of Plaquemines Parish is estimated to have reached an all-time high of 28,565 in July 2005, a few months prior to Hurricane Katrina. Plaquemines Parish population was estimated at 20,942 in July 2009 by the U.S. Census Bureau – continuing a downward trend in the parish’s population.
- In 2008, 12 percent of the population was either at or above the retirement age of 65. 30 percent of the Plaquemines Parish population is 19 years old or younger and another 30 percent is between 35 and 54 years old.
- Between 2000 and 2006, the percentage of Plaquemines residents with a Bachelor’s degree or higher increased from 10.8 percent to 18.5 percent.
- Between 1990 and 2000 the Plaquemines Parish population began shifting from lower portions of the parish to more northern locations, and that trend has continued.
- The American Community Survey reports that an estimated 68 percent of occupied housing units in the Parish are owner-occupied and another 32 percent are renter-occupied. The New Orleans metropolitan area has the same estimated ratio of owner to renter occupied housing from 2006-2008.

*(Continues on next page)*

KNOWING OUR POPULATION

## Plaquemines Parish Population 1960 to 2009



Source: (1960-2000) U.S. Census Counts; (2001-2005; 2009) Annual Estimates of the Resident Population for Louisiana Counties: July 2000 to July 1, 2009; (2006) 2006 Louisiana Health and Population Survey; (2007-2008) State of Louisiana Office of the State Treasurer.

*(below)* Community facilities support the diverse population of Plaquemines Parish.



- The average household size (AHS) was 2.89 people in 2000. This figure is notably larger than Jefferson, Orleans and St. Bernard Parishes – with AHS of 2.56, 2.48, and 2.64 respectively.
- School enrollment within Plaquemines Parish approached 4,700 in fall 2009, representing 79 percent of pre-Katrina enrollment levels. Roughly 850 of these students were enrolled at Belle Chasse Academy, with the remainder enrolled in the Plaquemines Parish School System.



(above) School bus drops off students after school.

## ECONOMIC SNAPSHOT

- The estimated average median household income (AMHI) for 2006-2008 was \$50,899 in Plaquemines. This compares to an AMHI of \$39,398 in Orleans Parish, \$48,227 in Jefferson Parish, \$40,342 in St. Bernard Parish, and \$48,014 for the New Orleans metropolitan area.
- Various federal anti-poverty programs, such as WIC and Medicaid, are available to those between 125 and 185 percent of the poverty level. According to 2006 poverty levels for the Parish, between 14 and 34 percent of the Parish would be eligible for these programs.

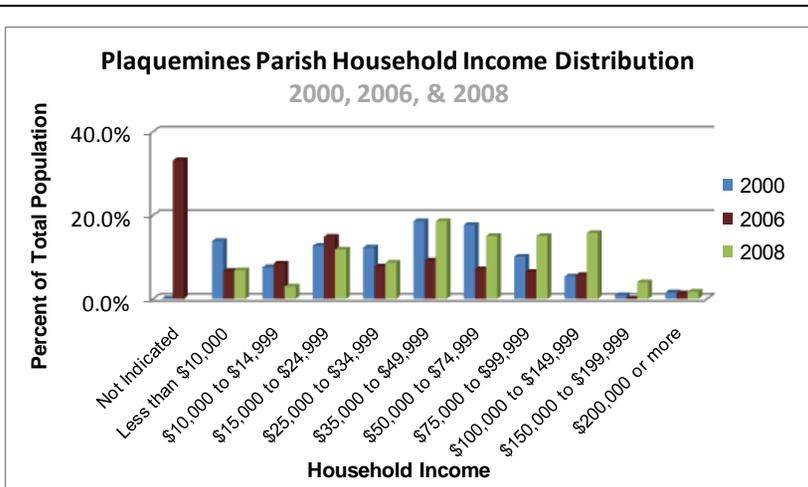
## How do population characteristics influence future growth in Plaquemines Parish, and how do related decisions impact fellow community members and me?

### Big Ideas

- Excellent schools will help retain and attract families to Plaquemines Parish.
- Community resources and facilities should be located in areas protected from major storms.

### Big Decisions & Questions

- Are services and facilities distributed appropriately to serve the population?
- What will the 2010 Census tell us about our community? How will this influence service provision?
- How do we reduce poverty in our population?
- How do we improve quality of life for existing residents? How is quality of life defined by our different communities?
- How will the population be impacted by subsidence, rising sea levels, and other environmental uncertainties?
- As our population ages in line with the country, what new or expanded services are needed? Is Plaquemines Parish an accommodating location for the aging population?



Source: U.S. Census Bureau, Census 2000 & American Community Survey 2006-2008 Estimates; 2006 Louisiana Health and Population Survey.

### Related Big Issues

- ❖ Economic development decisions will influence population growth.
- ❖ Providing safe living environments for the population should be protected by smart land use decisions and adequate storm protection. *See Coastal Restoration and Land Use Focus Sheets.*
- ❖ Provision of safe and affordable housing for full-time and part-time residents is important to offering a high quality of life. *See Land Use Focus Sheet.*

## FOCUS SHEET

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How sustainable is the Parish economy? What efforts can be taken now to ensure good jobs are available for Parish residents in the future?

# Plaquemines Parish MASTER PLAN



President Billy Nungesser

PURPOSE STATEMENT: *To understand base conditions of the local and regional economy and to identify ways to strengthen and improve the local business environment, employment opportunities, and workforce development.*

## Big Ideas

- Plaquemines' unique location in the Mississippi delta is an asset that can be utilized to attract new businesses to the parish.
- New port facilities have the potential to bring additional revenue and stature to Plaquemines Parish and the New Orleans metropolitan area.
- Development of the ecotourism industry can bring new jobs and opportunities to the parish.
- Plaquemines Parish is a prime location for renewable energy sources – including wind and hydrokinetic energy and is coordinating with potential investors on employing such technologies.

## Big Decisions & Questions

- How do we retain our population and strengthen our workforce?
- How do we rebuild our coast in a way that improves our economic capabilities?
- How do we retain our younger populations to live and work here?
- How can we strategically connect our unique assets to grow tourism in our community? What are the big steps that are needed?
- What should be the community's role, if any, in mitigating conflicts among important local industries, such as the oil industry and fishing?
- What will be the long term impact of the Deepwater Horizon Disaster be on the local economy?

## Related Big Issues

- Traffic congestion in Belle Chasse along US 23 is a deterrent to attracting new businesses.
  - Potential Transportation network improvements will help – Extension of Peters Road and improvements to the railroad network.
- The way coastal restoration occurs will have long-term impacts on several of the Parish's industries that center upon the natural resources that Plaquemines has to offer.
- Increased levee protection will provide additional security to our big economic engines – including Conoco Phillips.
- Infrastructure needs – water and sewer – to support new businesses.
- The population and labor force of Plaquemines Parish has declined since Katrina.

## MAJOR EMPLOYERS

### Education

Belle Chasse Academy

### Fisheries & Agriculture

Daybrook Fisheries

### Military

Naval Air Station Joint Reserve Base New Orleans

### Oil, Gas, and Petrochemicals

ConocoPhillips Company  
Chevron Oronite Co.

### Oil and Gas Industry Support

ART Catering  
Fab-Con Inc.  
Versatruss Americas LLC

### Shipyards & Marine Support

BJ Services Co.  
C & C Services

### Transportation, Warehousing, & Storage

Teco Bulk Terminal  
Stolthaven

### Waste Management

Environmental Operators, LLC

### Other Services

Industrial Pipe, Inc.  
Point Eight Power  
Scott Armature LLC

## EXISTING CONDITIONS

- Plaquemines Parish is part of the metropolitan New Orleans labor market with total wages of \$23.4 billion in 2008.
- The Parish's total 2008 employment was 14,500 – this reflects workers living inside and outside of the parish.
- 64 percent of the Plaquemines workforce is employed in the parish, another 36 percent travels elsewhere to work.
- Plaquemines Parish has a low unemployment rate (those parish residents looking for work but without a job): 5.5 percent in March 2010, compared to 6 percent unemployment for the New Orleans metropolitan area, 6.9 percent for Louisiana, and 10.2 percent for the United States overall. This compares to a 5.8 percent unemployment rate for Plaquemines Parish in March 2009. (Source: U.S. Bureau of Labor Statistics. Local Area Unemployment Statistics.)
- Plaquemines serves as the operational center for offshore oil and gas industry – producing 17 million barrels of oil and 105 million cubic ft. of gas and accounts for ~25 percent of the annual state severance revenues (\$100 million) and annual royalty revenues (\$140 million).
- In 2009, Plaquemines Parish produced 1/3 of the state's oysters, 1/5 of the state's shrimp, and 3/5 of the State's menhaden – with a total fisheries and wildlife gross farm value of \$57 million. Plaquemines produces 62 percent of the State's citrus, including navels, satsumas, and other citrus
- The Mississippi River connects to the Gulf of Mexico in the Plaquemines Parish, creating a unique ecotourism destination and an important commercial route.
- Plaquemines is home to Naval Air Station Joint Army Reserve located in Belle Chasse, which currently maintains a civilian and military staff of 5,000, with expected employment to increase to 7,500 by 2011. The army base contributes over \$600 million dollars to local economy.
- Since June 2004, the Plaquemines Association of Business & Industry has been representing the interests of companies in Plaquemines Parish.

## PLANNED INVESTMENTS

- Port facility expansion near Braithwaite or in central area of the parish.
- Development of a port to increase trade routes from the Panama Canal to the Gulf of Mexico.
- Ecotourism – including Wetlands Discovery Center.
- Investment in Fort Jackson, Fort St. Phillip, and other historic sites to increase tourism impact in region; application for Fort Jackson becoming a national park is under way.



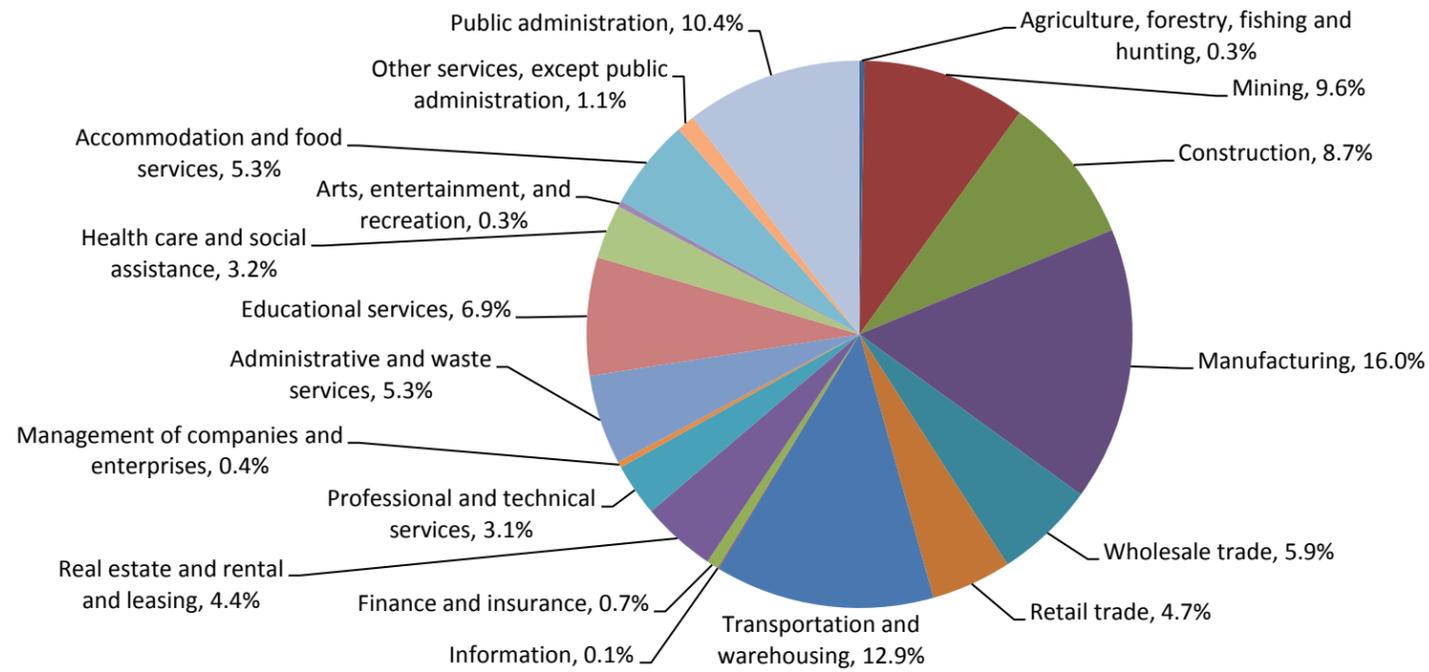
(above) The fishing industry is an important economic sector in Plaquemines Parish.

## FOCUS SHEET

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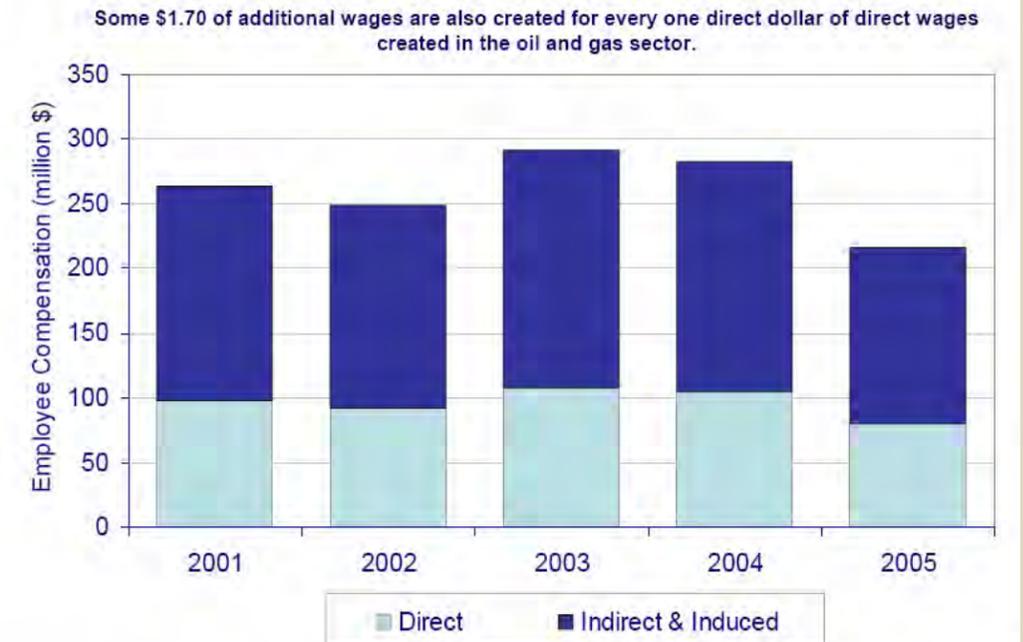
# GROWING OUR ECONOMY

**2009 Employment in Plaquemines Parish by Industry Sector**



Source: Louisiana Workforce Commission. Percentages are based on average monthly employment for the third quarter of 2009.

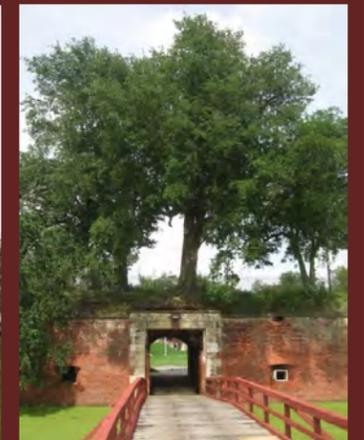
**Wages Supported by Oil and Gas in Plaquemines Parish**



Source: Center for Energy Studies, Louisiana State University. June 2006. *The Importance of Energy Production and Infrastructure in Plaquemines Parish.*



(left) Strike Fighter Squadron stationed on the Naval Air Station Joint Reserve Base; (center) Industrial site on east bank of the parish; (right) Shipping plays an important role in the Plaquemines Parish economy.



(left) Woodland Plantation is an important part of the tourism industry in Plaquemines Parish. (right) Fort Jackson has the potential to attract thousands of visitors a year.

*Plaquemines Parish*  
MASTER PLAN



How safe and efficient is the local transportation system?  
 What improvements should be made to the system to best serve the community?

# Plaquemines Parish MASTER PLAN

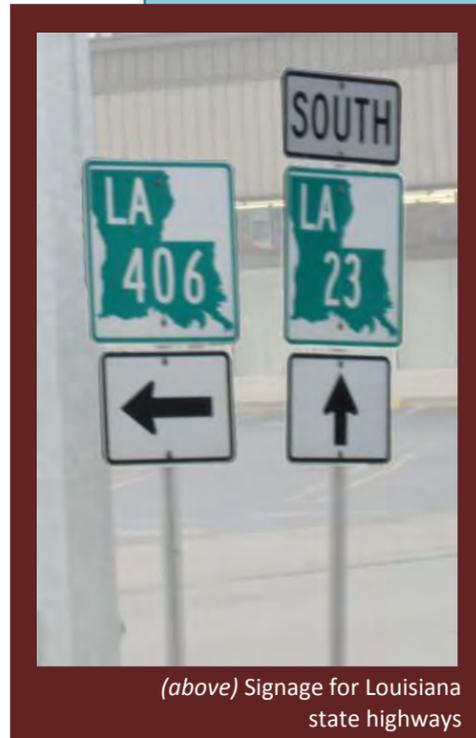


President Billy Nungesser

PURPOSE STATEMENT: *The Plaquemines Parish transportation system is diverse. It includes highways and local automobile traffic, rail, aviation, ports, and ferries. The transportation element of the Master Plan will serve to address needs related to daily commutes and hurricane evacuation, in providing dependable, reliable transportation infrastructure to promote economic needs and desirable growth patterns.*

## Big Decisions & Questions

- What do you believe are the most important transportation issues that should be included in the Plaquemines Parish Master Plan? Why are these issues important to you?
- What aspects of the roadway system do you like and dislike? Are there any improvements that are most needed? Are there any dangerous sections of roadways that need to be addressed?
- Multimodal transportation planning refers to decision making that considers various modes (walking, cycling, automobile, public transit, etc.) and connections among modes so each can fill its optimal role in the overall system. Are there any opportunities for multimodal transportation that are not being utilized? Is there any type of transit service that would be beneficial? What about bicycle and pedestrian facilities (bike trails, sidewalks, etc.)?
- School buses and freight traffic associated with local businesses could cause significant roadway delays and congestion. How well are schools and businesses served by the existing transportation network?
- Given the strong emphasis on environmental sustainability at the national level, what are some sustainable transportation solutions you would like considered? How has transportation influenced the natural environment?
- What transportation investments are necessary to improve disaster responsiveness (response, evacuation, and recovery)?



(above) Signage for Louisiana state highways

*In the next five years, more than \$60 million is planned to be invested in transportation improvements for the Parish. These projects range from major roadway improvements to new bicycle and pedestrian facilities.*

### Related Big Issues

- What will be the land use and economic impacts of planned transportation improvements, particularly programmed road and bridge improvements in the Belle Chasse area?
- How to best pay for the improvement, maintenance, and operation costs of the ferries.
- How to best accommodate and balance the conflicting transportation needs of different Parish interests (e.g., freight and commuter trips that require capacity improvements vs. tourism promotion that require improved bicycle and pedestrian access).

## EXISTING CONDITIONS

The existing transportation network in the parish offers many prospects for systemwide benefits. The parish is served by four major highways, an active freight rail line with up to three trains per day, over 20 airport/civilian aviation/heliport facilities, 20 port terminals and facilities, and two ferry crossings over the Mississippi River. As such, system maintenance, increasing capacity, and access are key considerations in the transportation plan.

- Belle Chasse Highway is the most traveled roadway in the parish with up to 32,000 vehicles per day.
- The Belle Chasse Bridge opens an average of ten times daily for seven minutes at a time for marine traffic. Often times, the bridge openings result in extensive congestion and delay for northbound travelers on Belle Chasse Highway.
- Ferry crossings provide much-needed east-west mobility for not only Plaquemines Parish residents but also commuters from St. Bernard Parish. The ferry at Belle Chasse hauls 50,000 vehicles per month, and the ferry at Pointe a la Hache, 5,000 vehicles per month. The current vessel fleet is underpowered given the strong river currents.



## FOCUS SHEET

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# LINKING OUR COMMUNITIES & RESOURCES

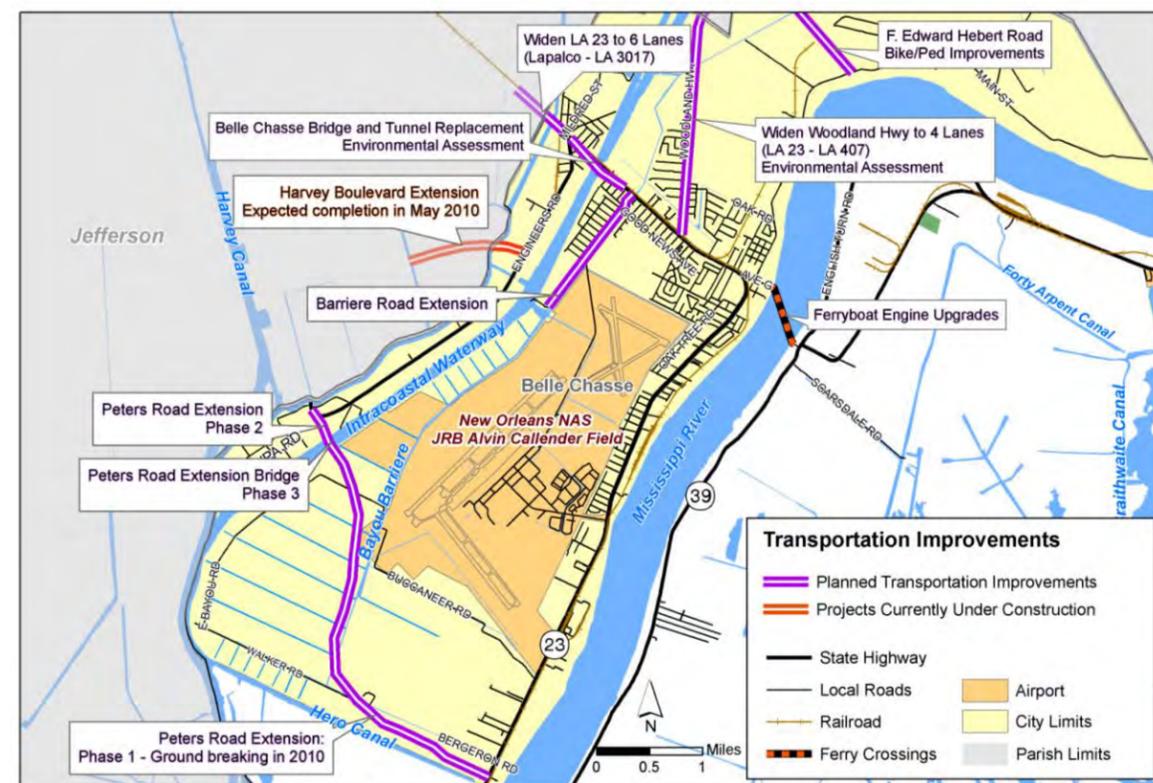
## PLANNED INVESTMENTS

More than \$60 million in transportation infrastructure investments are currently programmed for Plaquemines Parish. Top priorities include:

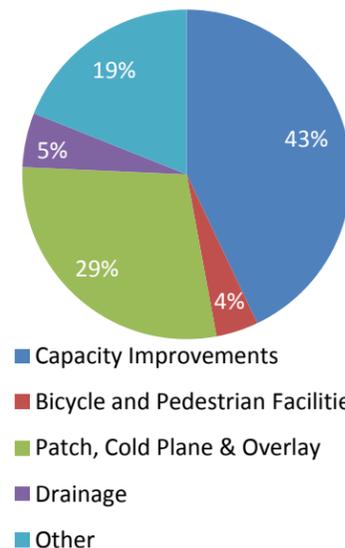
- Extend Peters Road in Jefferson Parish south to Belle Chasse Highway in Plaquemines Parish, including a bridge over the Intracoastal Waterway which will provide a bypass around the congested Belle Chasse area, improve access to the Naval Base, and provide a critical link between rail and port facilities. Groundbreaking is scheduled for 2010.
- Widen Belle Chasse Highway to four lanes between Happy Jack and Port Sulphur - A feasibility study is currently underway for this project, which would relieve congestion on this important roadway.
- Replace Belle Chasse Bridge and Tunnel - An Environmental Assessment will be conducted to evaluate the impacts associated with an upgraded bridge over the Intracoastal Waterway.
- Elevate Belle Chasse Highway near Myrtle Grove to prevent flooding during high tide and large rainfall events.
- Widen and raise Tidewater Road to help offset seasonal street flooding during high tide and other high water events. Construction of Phase 2, from Coast Guard Road to Marina Road, is expected to begin in September.



(left) The railroad is an important transportation resource for economic development.  
(above) Leaving Plaquemines Parish via the Belle Chasse Bridge



## \$ 60 Million of Transportation Improvements (FY '10 - '13) Funding Breakdown



Source: Regional Planning Commission .Transportation Improvement Projects (FY 2010 - 2013).

## Big Ideas

- The two ferry locations could be consolidated to a single, more modernized location just south of Jesuit Bend to provide a “straight shot” across the river. Long-range options include privatization and a high-speed ferry system.
- The lower Mississippi River is too narrow to accommodate two –way traffic of newer, larger vessels. As a result, the Baptiste Collette Navigation Channel is being developed to act as an alternative route. The channel will be dredged to 22 ft deep by 185 ft wide to accommodate increased marine traffic.
- Shifts in global shipping markets that will result in greater usage of the Mississippi River are expected to give Plaquemines Parish comparative advantages as an international container port in the 21<sup>st</sup> century. However, current rail and highway access could limit economic growth in the parish. Therefore it will be critical to coordinate and support intermodal connections among water, rail, and highway transportation to realize this potential. The following improvements would allow for better intermodal connections:
  - Extension of the railroad south to Venice as part of the construction of a new port
  - Relocation of the rail line as part of the Peters Bypass to allow for the much-needed widening of Belle Chasse Highway
  - Improvements to levees to protect Plaquemines new port.
- A general aviation airport at the Lake Hermitage site was recommended by a recent feasibility study. This site offers for opportunities for development, minimal airspace restrictions, and highway access.



# FOCUS SHEET WATER SYSTEM

President Billy Nungesser

**PURPOSE STATEMENT:** *The purpose of this component is to identify opportunities for improving the delivery of safe drinking water within the parish and to coordinate the expansion of programs and facilities with the community's changing needs and settlement patterns.*

## EXISTING CONDITIONS

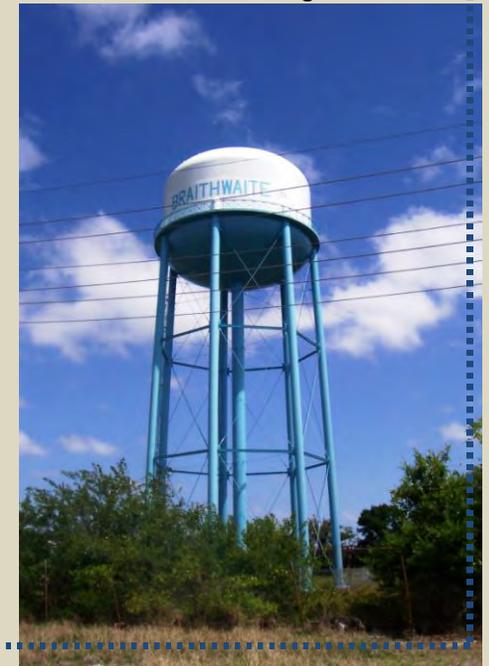
- The Plaquemines Parish water system is operated by Severn Trent Services, an environmental services company who has served the Parish since the mid-1990's.
- Potable water is provided to all of Plaquemines Parish by treatment of raw water from the Mississippi River.
- 5 Water Treatment Plants provide treated water:
  - Belle Chasse WTP (7.5 MGD)
  - Port Sulphur WTP (4.0 MGD)
  - Boothville WTP (2 MGD)
  - Dalcour WTP (Braithwaite) (1.0 MGD)
  - Pointe a la Hache WTP (0.5 MGD)
- For periods of saltwater intrusion, raw water reservoirs are maintained at Boothville, Pointe a la Hache and Davant. The Davant Reservoir is currently closed due to salt-water intrusion from recent hurricanes.
- Elevated Storage (Water Tanks) are located throughout the Parish, including:
  - Engineer's Road (Belle Chasse, 500,000 gallons)
  - Cedar Grove (500,000 gallons)
  - Home Place (500,000 gallons)
  - Buras (300,000 gallons)
  - Boothville (500,000 gallons)
  - Pointe a la Hache (100,000 gallons)
  - Braithwaite (500,000 gallons)
- Booster Stations are located at Cedar Grove, Diamond, and Empire.
- Plaquemines Parish operates a total of 8,719 water meters (7,523 residential, 1,100 commercial, and 96 other public). Through split/shared meters, the Parish serves a total of 9,682 customers.
- Many areas of the parish are still served by aging cast-iron water pipes. Water lines on the east bank were being upgraded as funds became available prior to Hurricane Katrina in 2005.
- Plaquemines Parish operates 1,989 fire hydrants.
- Two interconnects with the west bank of Jefferson Parish provide potable water to Belle Chasse in times of shortage, but this is not an adequate solution for fire protection.

KEEPING OUR WATER HEALTHY

- *The Parish Water System is operated by Severn Trent, a private company.*
- *Many areas of the parish are still served by old cast-iron water pipes.*

(below)

Braithwaite Elevated Storage Tank



## PLANNED INVESTMENTS

- Plaquemines Parish has currently planned the following investments:
  - Expansion of the Pointe à la Hache Water Treatment Plant
  - Improvements to the Dalcour Water Treatment Plant
  - Davant Raw Water Siphon System
  - Waterline Extension/Hydrants on Espy Lane
  - Waterline Replacement-Braithwaite to Phoenix
  - Port Sulphur Water Treatment Plant
  - Boothville Water Intake Structure
  - Boothville Water Treatment Plant
- Plaquemines Parish has completed the following investments:
  - Lake Hermitage Water Line
  - Water line at Naomi (Pelican Place)
  - Water line at St. Thomas
  - Buras Water Tower & Waterline
  - Boothville Water Booster Pumps
  - Fire Hydrant Assembly and Waterline Repairs
- A new prison facility in the Phoenix area will increase population and place more fire protection and potable water demands on the system.

## FOCUS SHEET

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**What water system needs exist in Plaquemines Parish, and how will related decisions impact fellow community members and me?**

### Big Ideas

- Establish or maintain hazard mitigation programs for storm and flood-proofing of Parish water facilities to keep pace with the evolving hurricane hazards facing the Parish as the coast line continues to degrade.
- Update water distribution infrastructure for adequate fire protection in all populated areas of the parish to avoid line breakages.
- Update water distribution infrastructure for downriver distribution of fresh water during periods of salt water intrusion or pollution in the Mississippi River.
- Continue replacement of aging cast-iron water pipes to reduce loss of services due to breakages.
- Provide dual feeds in areas of the parish with single feeds to reduce loss of services.
- Interconnects with St. Bernard Parish and Sewerage & Water Board of New Orleans (Woodlawn Area)
- Replace outdated variable frequency drives (VFD's) at Belle Chasse WTP and Cedar Grove Booster Station.

### Big Decisions & Questions

- How will the Parish provide adequate fire protection and potable water service to all areas of the Parish, particularly during times of salt-water migration or pollution in the Mississippi River?
- How long will aging infrastructure, such as the cast-iron pipes on the east bank, hold up?

### Related Big Issues

- ❖ What water quality impact will building another port facility on the Mississippi River have on the Parish's water supply?
- ❖ How safe is the water system from future storms and salt-water intrusion?
- ❖ Improvements to the Parish's water distribution infrastructure to enhance fire protection capabilities and lower insurance costs.

*(below) The Mississippi River at dawn*



What are the sewer system needs of Plaquemines Parish? How will related decisions impact the health and economic viability of the community?

# Plaquemines Parish MASTER PLAN



President Billy Nungesser

PURPOSE STATEMENT: *The purpose of this component is to identify opportunities for improving the delivery of sewer services within the parish and to coordinate the expansion of programs and facilities with the community's changing needs and settlement patterns.*

## Big Ideas

- Establish or maintain hazard mitigation programs for storm and flood-proofing of Parish sewerage and treatment facilities to keep pace with the evolving hurricane hazards facing the Parish as the coast line continues to degrade.
- Continue emphasis on I&I abatement program, with an increase in funding.
- Continue emphasis on lift station and force main improvements to eliminate overflows
- Continue emphasis on storm-related plant and lift station repairs.
- Explore the option of connecting the Parish Sewer System to other area systems for backup in times of emergency or high demand.

## Big Decisions & Questions

- Does the Parish continue to push for **low-pressure sewer systems** in areas without sewer service?
- Should the Parish raise its sewer rates to better cover its operating and improvement costs?

- *The Parish Sewer System is operated by Severn Trent Services, a private company.*
- *Not all areas of the Parish have access to public sewer.*

## Related Big Issues

- ❖ Lack of adequate funding for sewer expansion; the current service is underpriced and supplemented by other revenue sources.
- ❖ Some areas of the parish are still un-sewered and may pose a hindrance to business recruitment in those areas.
- ❖ Safety and resilience of the current system to future tropical storms.



## EXISTING CONDITIONS

- Sewer and wastewater collection system and plants are currently operated by Severn Trent Services (STS), an environmental services company who has served the Parish since the mid-1990s.
- Plaquemines Parish operates a combination of gravity and low-pressure sewer systems.
- Plaquemines Parish, through STS, operates five Wastewater Treatment Plants (WWTP):
  - Belle Chasse WWTP (3.0 MGD)
  - Port Sulphur WWTP (1.0 MGD)
  - Buras WWTP (2.5 MGD)
  - Boothville WWTP (0.5 MGD)
  - Davant WWTP (0.2 MGD)
- Three **package plants** are operated at Braithwaite, Woodlawn, and the Parish Health Unit.
- Privately operated sewer treatment systems exist in various areas of parish.
- By permit, the Parish Sewer System can only accept domestic wastewater. The Parish is not permitted to treat industrial wastewater.
- Plaquemines Parish Sewer System treats wastewater (by agreement) from the Joint Reserve Base Naval Air Station New Orleans.
- Plaquemines Parish operates 135 sewer lift stations. Approximately 100 were inundated and damaged by Hurricane Katrina. Those 100 are in various stages of repair. Parish lift stations are inspected regularly and repaired as needed.

- The Parish currently maintains an active **Inflow and Infiltration (I&I)** abatement program to reduce loads on treatment facilities. This program includes cured in place pipe (CIPP), capping of open services, and corrective actions related to **cross connections**.



(above) Main Control Center at Wastewater Treatment Plant, Plaquemines.

## Wastewater Treatment Terms\*

- Cross connections
- Inflow and Infiltration (I&I)
- MGD – Million Gallons per Day
- Low Pressure Sewer System
- Package Plants

*Defined terms are bolded in the document. Please see inside of focus sheet for definitions.*

## FOCUS SHEET

For more information, please contact  
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# CLEANING OUR WATER & KEEPING IT SAFE

## RECENT INVESTMENTS

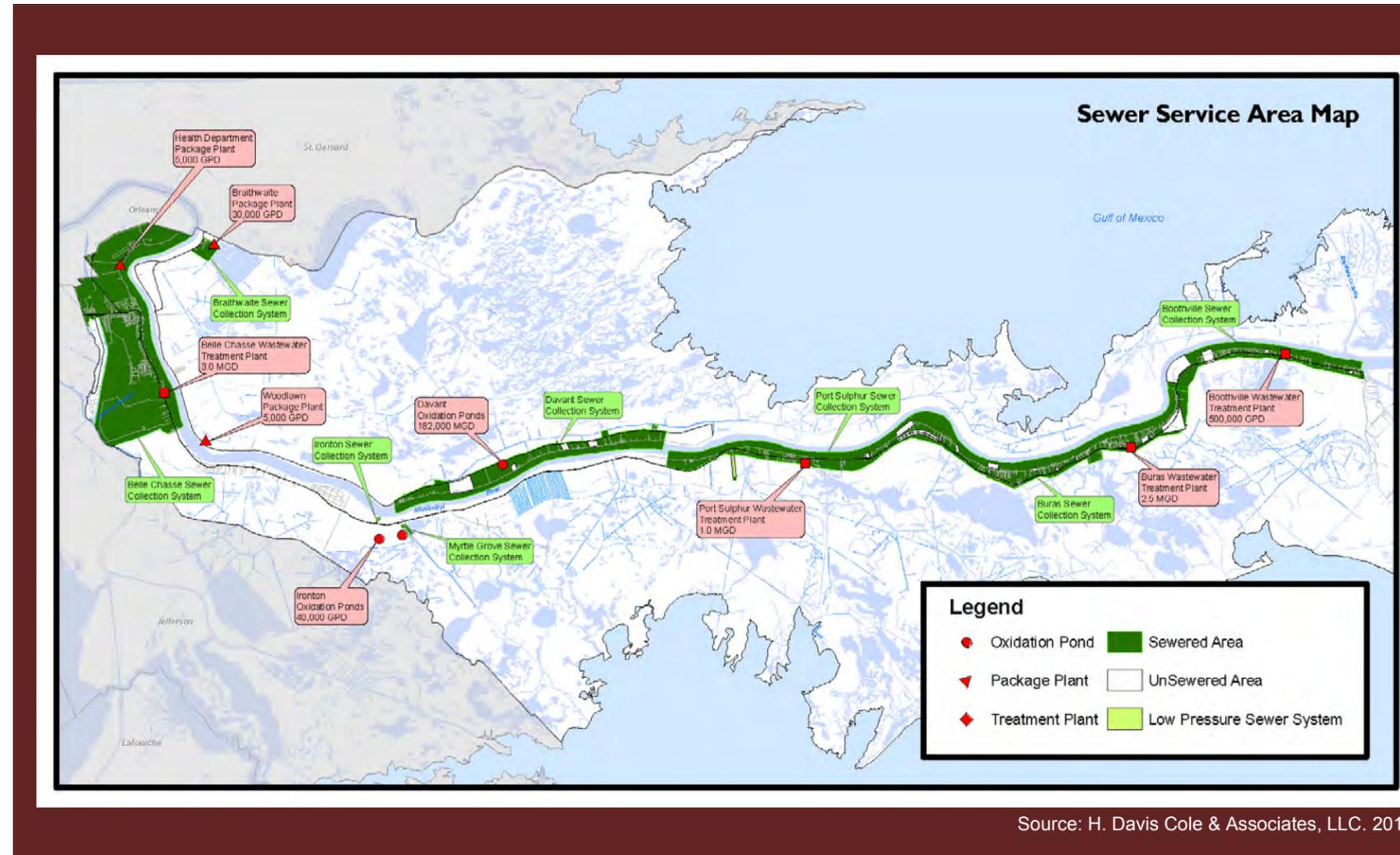
Plaquemines Parish has completed the following investments:

- Harlem Sewer Project (August 2008)
- Davant Oxidation Pond (September 2009)
- Happy Jack Sewer Lines (October 2009)
- Buras WWTP Phases I and II (November 2009)
- Buras WWTP Electrical and Mechanical Repairs (October 2008)
- Boothville Sewer Lift Station

## PLANNED INVESTMENTS

Plaquemines Parish has planned the following investments:

- Rehabilitation of East Bank Sewer Lift Stations
- Rehabilitation of Braithwaite Sewer Treatment Plant
- P-1 Lift Station Replacement
- Re-routing of Lift Station No. 4 Force Main (July 2010)
- Belle Chasse WWTP Rehabilitation (December 2011)
- Port Sulphur WWTP Rehabilitation (October 2010)
- Port Sulphur Lift Stations and Ironton Pond Improvements (December 2010)
- Buras Lift Stations
- Boothville WWTP Rehabilitation (October 2010)
- Bourgeois Lane to Venice Sewer Line
- Repairs to Sewer Lift Stations 4, 7, & 8
- Sewer Plant Upgrades-Davant and Ironton



### Wastewater Treatment Terms Defined

**Cross connections** – Any piping configuration that would allow flow from a user to get back into the distribution system.

**Inflow and Infiltration (I&I)** – Inflow is stormwater that enters into sanitary sewer systems at points of direct connection to the systems. These sources are typically improperly or illegally connected to sanitary sewer systems and include drainage downspouts, sumps, etc. Infiltration is groundwater that enters sanitary sewer systems through cracks and/or leaks in the sanitary sewer pipes and manholes.

**Low Pressure Sewer System** – Low Pressure Sewer Systems are a low-head pressure wastewater collection system and an alternative to gravity sewer or a septic tank. Low Pressure Sewer Systems have been in use since the late 1970's and are commonly used as an alternative to gravity sewer systems and septic tanks.

**MGD** – Million Gallons per Day

**Package Plants** – Package Plants are pre-engineered and pre-fabricated units that are generally sized to provide secondary treatment for small wastewater flows. They are modular units, having all of the unit processes of a larger facility and can meet normal permit requirements when not over-loaded and operated and maintained properly. They are often used to treat wastewater from a sub-division or a business that is not connected to a centralized sewer system.



(above) Major lift station in Plaquemines Parish

Lift stations take collective sewer from the neighborhood level and transport it to the central waste water treatment plant.

(below) Minor lift station in Plaquemines Parish



**What influence does drainage and levees have on Plaquemines Parish? How will related decisions impact fellow community members and me?**

# Plaquemines Parish MASTER PLAN



President Billy Nungesser

**PURPOSE STATEMENT:** (1) To develop a comprehensive understanding of the drainage issues and flood control capacity; (2) With consideration of the planned drainage improvement projects, to determine if the resulting flood control capacity meets the long term needs of the Parish, and (3) To establish a long-range flood control strategy.

## Big Ideas

- The largest need for the Plaquemines Drainage Department is to undergo a storm-proofing or hardening program throughout the 21 drainage pump stations, much like the programs that are currently being installed throughout Orleans and Jefferson Parishes. These hardening projects, with an estimated cost of \$46.2 million, would increase the probability of the stations remaining in service during significant storm events. The types of projects would include:
  - Installation of safe houses to protect the operators during severe storms
  - Installation of storm shutters on the buildings
  - Hardening the buildings which are currently rated for 120 mph winds, but not the 150 mph winds of a Category 5 hurricane
  - New floodwalls
  - Mechanical bar screens that would prevent the stations from being clogged
  - Reinforcement and protection of pump station fuel tanks from potential storm related damage
- Adopt a GIS-based drainage management program. Establish Parish-wide flood control level of service currently provided by the existing systems.
- Develop a strategy to enhance the conveyance capacity in parish canals and to add new pump stations. Improve canal maintenance through dredging and cleaning, reshaping, sheet piling, and control structure modifications. Some canal systems need to be extended for improved efficiency.
- Most of the levees are several feet below the authorized elevation set by the USACE. Plaquemines Parish and the USACE are working to bring these levees up to authorized elevations.

## Big Decisions & Questions

- What impact do coastal restoration efforts have on the levee and drainage system?

### GIS – Geographic Information System

Any scientific effort to combine data to help visualize, analyze, and explore geographically referenced information.

*It is estimated that it will cost \$46.2 million to implement the hardening program to protect Parish pump stations from future storms.*

### Related Big Issues

- ❖ The existing drainage system does not offer adequate flood control desired by residents and businesses.
- ❖ Advisory Base Flood Elevation (ABFE) and the pending FEMA flood maps are critical to the parish's development as zones on the Flood Maps affect the flood insurance.
- ❖ Local flood control improvements should go hand-in-hand with coastal restoration programs to achieve overall flood control benefits.
- ❖ Pursue servitude agreement to bring private drainage ditches into Parish system to ensure proper maintenance and flood protection.

## EXISTING CONDITIONS

### Drainage System

Flooding in the low-lying areas of Plaquemines Parish can be attributed to a variety of sources including the following: intense rainfall, high tides in the Gulf of Mexico, hurricanes, and tropical storms. In the northern portion of the parish, including Belle Chasse, the predominant flooding source is rainfall runoff, which cannot be discharged by the pumping facilities expeditiously. For the areas in the southern portion, the greater flood threat is due to storm surge inundation resulting from hurricanes or other disturbance in the Gulf.

The drainage system in Plaquemines Parish is operated and maintained by the Parish Drainage Department. It primarily consists of drainage canals and ditches: drainage pipes in urban developed areas and 21 drainage pumping stations. The drainage areas are typically bounded by Mississippi River levees on the river side and hurricane protection levees on the Gulf side. Drainage pump stations play a critical role in flood protection.

### Levees

Within Plaquemines Parish, most levees are owned by the U.S. Army Corps of Engineers (USACE) [referred to as federal levees] or Plaquemines Parish [referred to as non-federal levees or back levees]. The levees along the Mississippi River are owned by the USACE, and they function to retain the high waters in the Mississippi River. The levee system maintained by USACE protects less than 4 percent of the land mass in Plaquemines Parish.

Back levees were constructed to protect storm surge from the Gulf, and they provide flood protection from hurricanes and other tropical disturbances. There are 12 levee systems in Plaquemines Parish. Each levee system provides protection to a drainage district. The levee system will also contain drainage pump stations. The 12 levee systems are listed in the inventory below.

### Subsidence

It is widely believed that coastal Louisiana sinks at a rate between 0.04 inches and 0.3 inches per year as a collective result of sediment deposition from Mississippi River to the deltaic coast, compaction and oxidation of sediments, oil and water pumping activities, and sea level rise due to climate change.

**Inventory of Levee Systems  
Plaquemines Parish**

Drainage District	Existing Levee Grade	Authorized Levee Grade	Miles of Levee
<b>West Bank</b>			
Belle Chasse	10'	14'	28.16
Ollie	7.4'	11.5'	12.34
West Pointe a la Hache	9'	11.5'-12'	2.22
Diamond	7'-11'	12.6'-13'	5.11
Hayes	12.7'	13'-15'	11.75
Gainard Woods	13'	13'-15'	17.58
Sunrise	11'-15'	15.5'	8.94
Grand DeLiard	11.5'	15.5'	12.54
Duvic	14'	15.5'-16.5'	16.06
<b>East Bank</b>			
Braithwaite	9.2'	11.5'	2.96
Scarsdale	9.4'	11.5'	31.23
East Pointe a la Hache	14.1'	17.5'	29.64

## FOCUS SHEET

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# LIVING WITH WATER

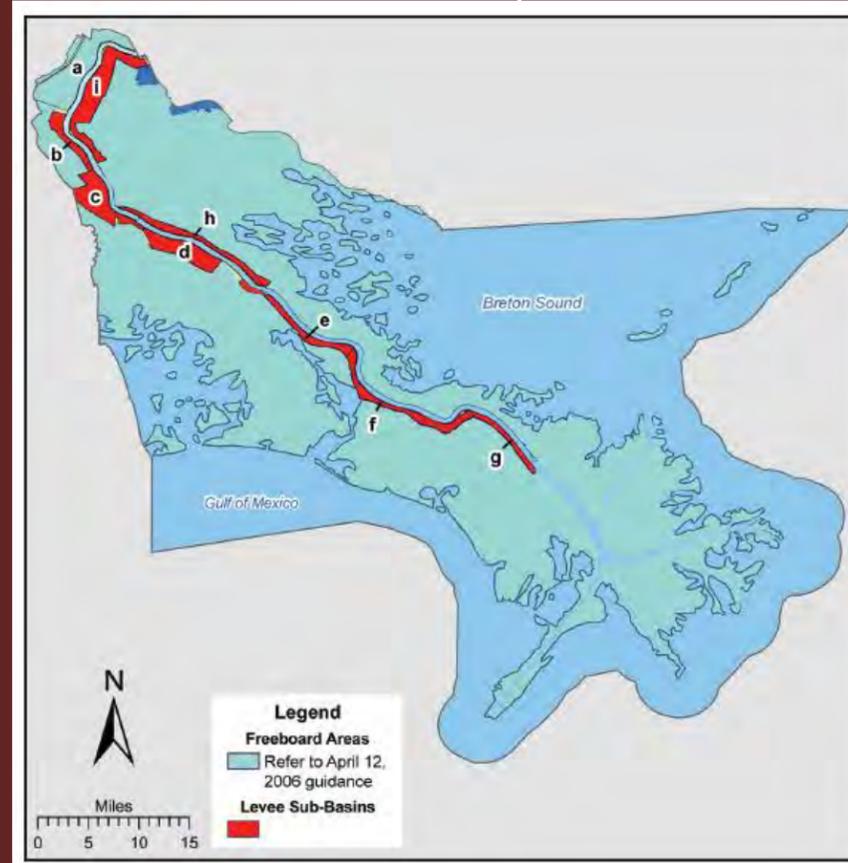
## PLANNED INVESTMENTS

- Following Hurricane Katrina, all 21 pump stations underwent at least minor repairs. Eight pump stations underwent major repairs, which involved rebuilding and replacing key components of the pumps. These eight pump stations are Diamond, Hayes, Gainard Woods #2, Sunrise #2, Scarsdale #2, Scarsdale, Bellevue, East and West Pointe a la Hache.
- Five Plaquemines Parish drainage pump stations are being rebuilt to comply with the Advisory Base Flood Elevation (ABFE) standards using 2009 funding assistance provided by the Federal Emergency Management Agency (FEMA). This \$46.5 million investment will add new pump capacity. The pump station investments include: \$7.6 million for Triumph Drainage Pump Station (Upper), \$8.0 million for Braithwaite Drainage Pump Station, \$7.7 million to the Belair Drainage Pump Station, \$7.4 million to the Sunrise #1 Drainage Pump Station, and \$15.8 million to the Gainard Woods #1 Drainage Pump Station. FEMA also provided \$6.5 million for installation of 17 temporary pumps throughout Plaquemines Parish.
- The USACE is currently inspecting all of the levees that are owned by the USACE. The purpose of these inspections is to cite any deficiencies and to prioritize possible repair/improvement projects. The results of these inspections will likely be published in 2011.
- The on-going, USACE's B-2 Levee improvement is scheduled to be completed by December 2011.

## Updated Advisory Base Flood Elevation Guidelines, Plaquemines Parish

Parish ABFE Levee Sub-Basin Identification Code	USACE Levee Polder Name	FEMA ABFE Based on USACE SWELs (in feet, NAVD88)
a	Belle Chasse	Refer to April 12, 2006 guidance
b	Plaquemines, Non-Federal, Area 6 West	8 feet
c	Plaquemines, Non-Federal, Area 5 West	9 feet
d	Plaquemines, Non-Federal, Area 4 West	10 feet
e	Plaquemines West Bank, Reach A	12 feet
f	Plaquemines West Bank, Reach B-1	11 feet
g	Plaquemines West Bank, Reach B-2	11 feet
h	Plaquemines East Bank, Reach C	16 feet
i	N/A (non-USACE levee polder on east bank)	18 feet

## Sub-basin Locations, Plaquemines Parish



Source: Federal Emergency Management Agency (FEMA), USACE.

## Inventory of Existing Pump Stations Plaquemines Parish

	Pump Station	# of Pumps	Capacity (CFS)	Area (Acres)
<b>West Bank</b>				
1	Belle Chasse No. 2	3	990	14,800
2	Barriere Road	1	24	N/A
3	Belle Chasse No. 1	5	3600	14,800
4	Ollie (Upper)	2	130	3054
5	Ollie (Lower)	1	132	3054
6	Ollie (New)	2	149	3054
7	West Pointe a la Hache	3	48	129
8	Diamond	2	256	800
9	Hayes	2	500	1,377
10	Gainard Woods No. 1	2	408	2,754
11	Gainard Woods No. 2	2	580	2,754
12	Sunrise No. 1	2	180	1,450
13	Sunrise No. 2	2	290	1,450
14	Triumph (Upper)	1	130	N/A
15	Grand DeLiard	3	840	2,100
16	DuVIC	2	560	1,670
<b>East Bank</b>				
17	Braithwaite	2	110	370
18	Scarsdale	4	1784	8,700
19	Belair	1	130	1,700
20	Bellevue	2	500	4,067
21	East Pointe a la Hache	2	500	4,067



(right) lower: Pump station in Plaquemines Parish.

(below) Federal levee along the Mississippi River



How do public facilities and services affect quality of life in Plaquemines Parish? How will related decisions impact fellow community members and me?

# Plaquemines Parish MASTER PLAN



President Billy Nungesser

**PURPOSE STATEMENT:** *The destruction caused by Hurricanes Katrina, Rita, and Gustav severely damaged many parish government and community service facilities. The purpose of this component is to identify opportunities for improving the delivery of services within the parish and to coordinate the expansion of programs and facilities with the community's changing needs and settlement patterns.*

## Big Ideas

- Create a library "System" not just a main library, including expansion of library services to the east bank. The District 1 councilman has agreed to provide space in the Woodlawn Building for a small branch library.
- Incorporate sustainable design standards for new Parish buildings to reduce operating costs.
- Consolidate services into multi-use facilities located in communities throughout the Parish to reinforce community identity and reduce travel time required for citizens.
- Conduct a study to ascertain the space (office, storage, etc.) needs of the various Parish departments by considering staffing levels, storage needs, special space needs, etc. and use industry space standards to determining how much space is needed and plan buildings accordingly.
- Update the Parish GIS system related to Parish-owned facilities to include data on departments and services located in each structure and the size and location of the structure.
- Enhance service delivery through expansion of on-line services offered by the Parish, including on-line applications for planning and zoning activities, jobs, facility rentals, etc.

## Big Decisions & Questions

- How to consolidate facilities and services to reduce operating costs and space needs while maintaining tailored services/facilities as a focal point in each community?
- Determine a permanent location for the Parish seat.
- How to expand access to services to children, seniors and those with limited options for getting around?
- How can recreation programs better serve adults and seniors?
- What can we do to better prepare our community facilities today than we were in 2005 for the next hurricane?

### Improved public facilities and services equals:

- Better delivery of services throughout the community.
- Lower insurance rates through better fire protection coverage.
- Enhanced programs for youth and seniors.

### Related Big Issues

- ❖ Government financing for capital improvements
- ❖ Appropriate tax rates and user fees needed to support services and facilities
- ❖ Economic impact of consolidating government services in key locations; opportunity for co-location of retail services in rural areas of the parish
- ❖ Strategic location of community facilities to serve as emergency response centers
- ❖ Sustainable design reduces operating costs and impact on and from the natural environment

(below) Rendering of Phoenix High School



## FOCUS SHEET

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## EXISTING CONDITIONS

### Public Safety

- Law enforcement in Plaquemines Parish is provided by the Sheriff's Office. Plaquemines is under 24-hour patrol by the criminal division. All patrol vehicles are radio equipped to maintain constant contact with headquarters in Port Sulphur. The Sheriff's Office also maintains a Marine Search and Rescue Division consisting of a fleet of boats that patrol the parish's recreational and commercial waterways. This division works closely with the US Coast Guard and LA Department of Wildlife and Fisheries.
- In addition to traditional services provided by a law enforcement agency the Sheriff's Office is responsible for the collection of property taxes, serving court orders, subpoenas, and performing civil seizures for the courts.
- The Sheriff's Office has three patrol districts: 1<sup>st</sup> District (Belle Chasse south to Myrtle Grove); 2<sup>nd</sup> District (Myrtle Grove south to Venice); and 3<sup>rd</sup> District (entire east bank). Three captains command these districts. They are assisted by 58 deputies. (Plaquemines Parish Sheriff's Office Website. <[www.ppsos.net](http://www.ppsos.net)> June 2010.)

### Fire Protection

- Plaquemines Parish is divided into 7 fire districts with a network of 12 fire stations serving the parish.
- Until recently this system was staffed entirely by volunteer fire fighters; however, the one percent Parish sales tax increase established in January is dedicated to funding a paid fire fighter system.
- In early 2010, the Parish ordered nine new fire fighting vehicles for five of the seven fire districts: Point a La Hache, Woodlawn, Port Sulphur, Buras and Boothville-Venice. The three commercial mini pumpers, three commercial pumpers, one commercial air

support van, a 77-foot ladder truck, and commercial hose tender are scheduled to arrive between April and August, 2010.

- The O'Brien (Empire), Braithwaite, Phoenix, and Lake Hermitage fire stations were completed in 2009 and four new fire stations are scheduled to open this year: Buras (February), Port Sulphur (March), Boothville-Venice (April) and Point a La Hache (Summer). (Plaquemines Parish Press Release, "Plaquemines Parish orders nine new fire trucks" January 29, 2010.)

### Parish Government Offices

- Pointe a la Hache has been the seat of government in Plaquemines since the formation of the Parish. On January 12, 2002 the Parish courthouse there was severely damaged by arson. Since then, the Parish government has used several temporary buildings in Belle Chasse.
- The Parish maintains approximately 139 buildings located throughout the parish ranging from pump stations to Council offices. Hurricane Katrina damaged or destroyed many of these structures, the list of capital improvement projects included here provides an update on the status of their rebuilding and repair.



(above) New fire station in Belle Chasse

# MEETING THE DAILY NEEDS OF OUR COMMUNITY

(continued from previous page)

## Healthcare services

- Before the 2005 Hurricane Season, Plaquemines residents could receive medical care and health services at the Plaquemines Medical Center Hospital and the Medical Human Resources Annex building. Both facilities were destroyed during the storm. As of last fall, FEMA had agreed to allow funding previously provided for the replacement of each of the two destroyed medical buildings to be consolidated into one grant with that will fund the construction of a new, three-story medical facility in Port Sulphur. Construction of the new facility began in February 2010. (LRA, Recovery News release, September 15, 2009).

## Schools

- There are currently seven public schools in the parish. After Hurricane Katrina, the three flooded high schools on the West Bank (Boothville-Venice, Port Sulphur and Phoenix) were permanently consolidated into the new South Plaquemines High School located at the site of Buras High School.
- Phoenix High School is the only school on the East Bank. It services students in Pre-K through 12th grade.
- Pre-Katrina public school enrollment was 4,975.
- Public school enrollment (Fall 2009) was 3,851. Belle Chasse Academy (private school) enrollment was approximately 850 (Fall 2009).

## Libraries

- There are three library facilities in the parish: Belle Chasse, Buras and Port Sulphur. The Buras and Port Sulphur libraries were destroyed by Hurricane Katrina, with the Belle Chasse library also sustaining damage. The Buras library has been rebuilt, with a new 8,900 sq. ft. facility. Reconstruction of the Port Sulphur library has been delayed as an alternate site is considered; however, the temporary library located in a trailer continues to operate. Additionally, a large, fully equipped bookmobile was purchased by the Gulf Coast Libraries Project to serve as a replacement. This library provides weekly service to Buras, Port Sulphur, Boothville, Woodlawn (East Bank), Ironton, and Jesuit Bend.
- A needs assessment for a new Belle Chasse library was completed in September 2009 and recommends razing the current library building and constructing a new state-of-the-art facility to serve as the headquarters of the Plaquemines Parish Library System.
- After an initial post-Katrina drop in circulation, library usage is rebounding. In 2007 the circulation was 16,789; however, this grew to 25,179 in 2008 when the temporary Port Sulphur location was opened.

## Community Centers:

- Pre-Katrina there were ten community service facilities in Plaquemines.
- In 2008, FEMA approved the Parish's plan to consolidate these facilities into four new community centers located in Port Sulphur, Boothville, Buras, and Davant. These new centers are being provided through partnerships between the Plaquemines Parish Council, FEMA, LRA, United Way, YMCA, and local businesses.

## Solid Waste

- The Parish operates three solid waste transfer / collection facilities located in Belle Chasse, Port Sulphur, and Boothville.
- The Parish provides curbside residential solid waste collection service for citizens and utilizes the transfer stations for staging prior to transport to landfill facilities.
- The Parish provides residential collection services for yard waste and debris.
- The landfill facilities currently disposing of waste from Plaquemines Parish include Coast Guard Road Landfill for MSW and Industrial Pipe Landfill for C&D waste.
- The transfer/collection facilities provide recycling containers for various items. The Parish also provides recycle drop-off bins for paper, plastics, and other recyclables.

### Fall 2009 School Enrollment for Plaquemines Parish.

School	Enrollment
Belle Chasse High School	893
Belle Chasse Middle School	678
Belle Chasse Primary School	1070
Boothville-Venice Elementary School	392
Phoenix High School	191
South Plaquemines Elementary School	262
South Plaquemines High School	365
<b>TOTAL</b>	<b>3851</b>

(below) Public library in Belle Chasse



## CAPITAL IMPROVEMENTS

### Completed Improvements

- Edna LaFrance Building, Braithwaite Parish Offices - Completed 2008
- Lake Hermitage Fire House - Completed 2009
- O'Brien Fire House - Completed 2009
- Phoenix Fire Substation - Completed 2009
- Popich Building Elevator Repairs, Belle Chasse Parish Office - Completed 2010
- Buras Auditorium Repairs - Completed April 2010
- District 8 Council Building - Completed April 2010

### Under Construction

- Animal Control Renovations
- Diamond Community Center, Empire Civic Center Repairs and Port Sulphur Council on Aging
- Boothville-Venice Fire Station - Expected completion summer 2010
- Buras Community Center - Expected Completion May 2010
- Buras Library Repairs - Expected Completion: June 2010
- Buras Fire Station Repairs - Expected Completion May 2010
- (Rev. Percy M. Griffin) Davant Community Center, Magnolia Center and District Council Office - Expected completion April or May 2010
- Pointe a la Hache Fire Station - Expected completion summer 2010
- Port Sulphur Civic Center Repairs
- Port Sulphur Medical Center
- Port Sulphur Government Building
- Domestic Violence Office & Port Sulphur Lockup
- Boothville-Venice Senior Center, Venice Community Center and District 9 Council Office
- Public Right of Way Maintenance Building PROM

### On Hold

- Braithwaite Auditorium - Pending Woodlawn Building Acquisition
- Port Sulphur Library - Pending relocation decision
- Port Sulphur Fire Station/EMS - Delayed due to cold weather
- Parish Welcome Center
- Buras Library Parking

### Unscheduled/Pending Funds

- Renovation/Repair - Woodlawn Fire Station
- Parish Welcome Center
- Pointe a la Hache Old School Board Building
- District 1 Council Building
- Woodlawn Building Acquisition and Renovations
- New Government Complex
- Courthouse Renovations
- Acquisition of Building – Special Needs Citizens
- Emergency Operations Center
- Sheriff's Office Building Complex
- Belle Chasse Fire Station Renovation/Repair
- New Parish Courthouse
- Empire Maintenance Building Repairs

(below) Old Court House – East Bank





# FOCUS SHEET PARKS AND RECREATION

President Billy Nungesser

**PURPOSE STATEMENT:** *Plaquemines Parish has an on-going demand for recreation programming and a growing need to expand and improve existing parks and recreational facilities. The purpose of this component is to identify opportunities and strengths and coordinate the expansion of programs and facilities with the needs of the community.*

## EXISTING CONDITIONS

- Fifteen Parish park sites, including sports fields, community centers, and playgrounds, totaling approximately 400 acres
- Organized programs include football, basketball, baseball, and softball
- Plaquemines Parish has a partnership with the Naval Air Station for soccer facilities
- Existing park facilities in need of repair and maintenance programs



(above) The Naval Air Station Joint Reserve Base is an important partner in meeting recreational needs.

- Linear nature of parish and limited access between east and west banks impacts connectivity of recreational facilities
- Park facilities are not equally accessible to residents from every community due to the unique geography of the Parish.
- Shortage of suitable land for future facility development

## INVENTORY OF EXISTING RECREATION FACILITIES\*

Football	2	Fields
Basketball	2	Courts
Baseball/Softball	19	Fields
Soccer**	0	Fields
Tennis	10	Courts
Multipurpose	1	Field
Playgrounds	3	
Walking	4	Trails
Nature Trail	13	Miles
Pool	1	
Historic/Monument	3	Sites

\*Inventory based on interviews and GIS data.

\*\*Soccer facilities shared with Military Base.

## PLANNED INVESTMENTS

- Additional gymnasium space
- Expansion of existing parks and acquisition of land for new parks
- Expansion of programming to include adult and senior citizen program activities
- New playgrounds; new skatepark
- Needs assessment for recreation facilities
- Parish specific guidelines for open space
- Lower Mississippi Wetlands Discovery Center
- Develop regulation sports complex near military base

- *Preservation of historic Fort Jackson and Fort St. Philip as parks and cultural resources has been actively pursued either as a part of the National Park Service or as a local park.*
- *Fishing has been an important recreational activity in the parish that also generates significant annual revenue. How will it be impacted by the Deepwater Horizon Disaster and how soon will it recover?*

**National Recreation and Park Association  
Guidelines for Open Space,  
Recreation, and Facilities**

Currently the Parish has approximately 402 acres of recreation land for 20,942 residents, or 19.2 acres per 1,000 residents. This exceeds the NRPA recommended range of 6.25 to 10.5 acres per 1,000 residents.

The current level of service provided by the Parish typically exceeds the below NRPA guidelines.

2010 Min Level of Service for Parish Facilities

Open Space:	131-220	Acres
Football:	1.0	Field
Ball Fields:	4.2	Fields
Tennis:	10.5	Courts
Basketball:	4.2	Courts

*Based on NRPA Guidelines and Current Population*

Parish-specific guidelines and an accurate inventory and assessment of existing facilities are needed to determine whether the Parish will meet future recreation goals.

(below) Recreation programming has been important to building strong high school teams.



*Plaquemines Parish*  
**MASTER PLAN**



**What parks and recreation programs and resources are missing in Plaquemines Parish, and how will related decisions impact fellow community members and me?**

**Big Ideas**

- Implement a plan that makes efficient use of tax payer dollars to broaden the current scope of recreation to include more programming for children and adults.
- Incorporate sustainable design that can reduce operating costs.
- Establish passive recreation component including greenways.
- Coordinate trail and park access with regional transportation planning.
- Expand programming to include adult and senior programs.
- Create a suitability study prioritizing land acquisition for park expansion and additional facilities.
- Promote tourism through interpretative programs of regionally significant resources: cultural and historical; natural systems; and mineral resources.
- Consider developing community-built playgrounds.
- Map public water ways.
- Maintain equitable distribution of facilities.



(above) A new playground in Plaquemines Parish

**Big Decisions & Questions**

- How does the Parish inform residents and visitors of recreation opportunities?
- What recreation elements might be connected by a parish-wide trail?
- How can local parks and recreation facilities directly benefit tourism?
- What areas of the parish have the greatest demand for recreational programs?
- What elements are expected in the neighborhood/community park?
- What potential activities might serve adults and seniors in the community?

**Related Big Issues**

- ❖ Awareness of ecological restoration issues via interpretive programs to educate park visitors and residents
- ❖ Economic impact of the Deepwater Horizon Disaster on tourism and the recreational fishing industry
- ❖ Recreational facilities can increase connectivity within the parish
- ❖ Safety awareness, coordinate with Hurricane Preparedness Program
- ❖ Sustainable design practices reduce cost of operations and impact on natural resources

**FOCUS SHEET**

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**Why are land use regulations and policies important to Plaquemines Parish? How well are these regulations and policies being enforced and followed?**

**Big Ideas**

- Identify areas that should be preserved, those in need of revitalization and those appropriate for development.
- Use Council initiated rezoning and incentives to encourage the growth of existing communities and nodes development on the East Bank and in South Plaquemines.
- Establish appropriate development regulations to allow for a wide variety of home based businesses while providing protection to neighboring properties from adverse impacts.
- Encourage the development of a series of farmers markets in communities outside of Belle Chasse to provide fresh produce, proteins and other goods to residents in rural areas of the parish.

**Big Decisions & Questions**

- Will the Parish adopt FEMA's National Flood Insurance Program Advisory Base Flood Elevations (ABFEs) for new and rebuilt structures?
- What opportunities are available for developing affordable housing in the Parish?
- Updating the Parish's land development codes reflect current development best practices, including open space preservation, building codes, and stormwater management regulations.

**Related Big Issues**

- ❖ Need stormwater management regulations to help control erosion and sedimentation in built up areas of the parish
- ❖ Extension of sewer service to all areas of the parish to support development and water quality
- ❖ Further development of the Parish's tourism industry
- ❖ Mitigation of traffic congestion in Belle Chasse is necessary for sustaining existing commercial uses along Highway 23 and attracting new businesses
- ❖ Development of a new port facility in Plaquemines will create additional opportunities for commercial and industrial development
- ❖ Acquisition of additional land for parks and community facilities

(below) Undeveloped land provides opportunities for the Parish to shape future development.



*Plaquemines Parish*  
**MASTER PLAN**



President Billy Nungesser

**PURPOSE STATEMENT:** *To determine current land use patterns in Plaquemines Parish in order to identify areas that should be preserved, those in need of revitalization and those appropriate for development in order to determine appropriate strategies for land use and development for the future.*

**EXISTING CONDITIONS**

The largest and southernmost parish in Louisiana, Plaquemines Parish is a peninsula that covers some 90 miles south of New Orleans which is bisected by the Mississippi River. Despite the large size, very little of the parish is actually dry land (5 percent) most of it is water or low-lying wetlands.

Although not "developable" by conventional standards, the wetlands and water areas of the parish are arguably the most used areas of the parish. The Plaquemines Parish economy is heavily dependent on the oil and gas industries and marine fisheries. Large oil and natural gas reserves are located in the coastal waters surrounding the parish. The warm Gulf waters and extensive estuary systems in the parish support the aquaculture industry; Plaquemines is ranked fourth nationally in volume of annual fish and shellfish harvests. Additionally, the vast marshlands and the excellent sport fishing available fuel the Parish's tourism industry.

Due to its unique geography, the majority of the areas suitable for development within the parish lie in the two thin strips of dry land located within the levee system on either side of the river. Hurricanes have destroyed or significantly damaged the majority of structures south of Belle Chasse. Rebuilding began almost immediately and many residents have used the Road Home program to finance residential rebuilding while the Parish government has been successful in leveraging federal funds to re-establish community facilities and services.

Land Area Analysis		
Land Classification	Acres	% of Parish
Developed	72,613	5%
Undeveloped	430,616	28%
Water	1,025,079	67%
<b>Total</b>	<b>1,528,308</b>	<b>100%</b>

Data Sources: LRA 5/1/07 Land Use Data for S. LA and NORPC

Developed Areas - Land Use Analysis		
Land Use	Acres	% of Developed Area
Industrial	10,206	14.06%
Transport - Communication	500	0.69%
Residential	9,574	13.19%
Forest	7,836	10.79%
Commercial	924	1.27%
Agricultural	39,926	54.98%
Civic or Institutional	2,895	3.99%
Parks or Open Space	752	1.04%
<b>Total</b>	<b>72,613</b>	<b>100%</b>

Data Sources: LRA 5/1/07 Land Use Data for S. LA and NORPC

**FOCUS SHEET**

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# MANAGING DEVELOPMENT & FACILITATING DESIRABLE GROWTH

Land use in the parish falls into a number of categories.

**Industrial:** The Parish's natural resources coupled with its location at the mouth of one of the world's most important waterways for the transport of goods and materials has led to significant industrial land development throughout the Plaquemines.

**Agricultural:** Activities in these areas include livestock pastures, citrus groves, and areas with logging or mining activity. These areas are located between the many small communities along the east bank and south of Belle Chasse on the west bank.

**Residential:** Residential land uses include households living in single and multi-family structures as well as institutional living arrangements including nursing homes, correctional institutes, college dormitories, etc. The largest concentration of residential land use is in the Belle Chasse area. Current estimates show 8,701 housing units in Plaquemines<sup>1</sup>, of these approximately 6,807 (78 percent) are occupied: 4,635 (68 percent) owner occupied and the remaining 32 percent (2,172) rental properties<sup>1</sup>. (<sup>1</sup> U.S. Census Bureau, 2006-2008 American Community Survey, 3-year Estimates.)

**Commercial:** Commercial land uses encompass retail and service establishments. These land uses are mostly located in Belle Chasse, although there is some commercial activity in Braithwaite on the east bank. The rural development pattern and unique geography of the Parish create challenges for delivering goods and services to residents in the southern end of the parish due to high costs of transport and comparatively low-demand.

**Transportation and Communications:** This category contains a variety of uses including cell towers, airports, road right-of-ways for major roads, and ferry landings.

**Civic/Institutional:** The land use category includes public and semi-public land uses such as schools, medical facilities, government offices, churches and community centers. The largest civic/institutional land use in Plaquemines is the Naval Air Station Joint Reserve Base located in Belle Chasse. The highest concentration of civic/institutional land use is in Belle Chasse; however there are Parish government offices, community centers, schools, and churches spread throughout the Parish.

**Parks and Open Space:** A little over one percent of the developed area of the parish is comprised of parks and open space. This category includes areas such as the Cypress, Oakville and Diamond parks as well as Ft. Jackson and Ft. Saint Phillip. A number of the Parish's recreation facilities sustained damage from Hurricane Katrina and steady progress has been made in repairing and rebuilding affected facilities as well as expanding facilities and adding new ones to better serve the community.



(left) Agricultural Uses – Citrus Groves



(right) Rural Residential Development

(below) East Bank – Industrial Use



(left) Commercial Activity



(right) Civic/Institutional Uses



(above) "Use" of the water

## LAND DEVELOPMENT

- Development in Plaquemines Parish is overseen by the Parish Permitting Department which administers a number of Parish ordinances.
- The Plaquemines Parish Zoning Ordinance controls the uses and densities of various land uses throughout the Parish, the Subdivision Regulations that provide oversight for the division of parcels and development of new (residential) subdivisions and communities and the Coastal Zone Management and Floodplain Development Regulations that control development and economic activity in these sensitive environmental areas.
- The Parish is divided into 20 zoning districts.

## FOCUS SHEET

Plaquemines Parish  
MASTER PLAN

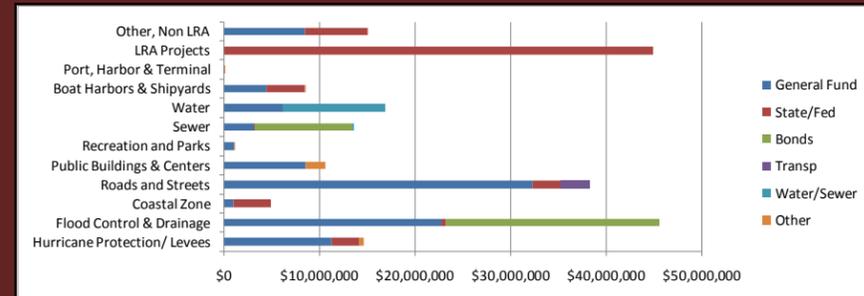


**How is Plaquemines Parish government organized and financed?  
How does this impact fellow community members and me?**

**Big Decisions & Questions**

- Reapportionment of Parish Council Districts following 2010 Census
- Revision of Charter to re-organize Parish Council and Parish Administration
- Establishing a permanent location for the Parish seat
- Winning sufficient state and federal grants to achieve goals in coastal restoration and flood control
- Realignment of fee structure to achieve cost recovery in Enterprise Funds
- Seeking greater diversity and stability in sources of revenue

**Chart 5: Capital Improvements Budget by Project Type and Funding Source**



**Issues in Structure of Government**

- Fair Parish Council representation
- Role of Parish President vs. Parish Council
- Accountability and control in major decision-making
- Span of control for managers
- Efficiency/ Cost effectiveness of government services
- Accessibility of government services to the population

**Issues in Government Finance**

- Difficult geographic conditions for providing services
- Crisis management orientation - dominance of FEMA recovery projects
- Desire to achieve 100 yr flood protection and full service throughout the Parish
- Reliance on grant funds – uncertainty of revenues for future O&M costs
- Reliance on oil and gas revenues which fluctuate and are not stable
- Rising unit costs of government administration
- Increase in population – strain on infrastructure and public facilities
- Deficits in certain Enterprise Funds
- Under-pricing of fees for use of facilities and services
- Capital project evaluation and selection
- Bonded indebtedness
- Changes in financial markets – cost of borrowing, timing issuance of bonds with market conditions

**Sources:**

Plaquemines Parish Primary Government Financial Statements for 2006-2008, Statements B and D.  
Plaquemines Parish Government 2010 Adopted Budget Oil & Gas Price Summary.  
Plaquemines Parish Government, 5-Year Capital Improvements Budget, Feb. 25, 2010 Council Meeting.

**FOCUS SHEET**

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*Plaquemines Parish*  
**MASTER PLAN**



President Billy Nungesser

**PURPOSE STATEMENT:** To examine the current structure of Plaquemines Parish Government's organization, budget, and finances in order to improve its effectiveness and prepare for future needs of a growing population and economic base.

**EXISTING CONDITIONS**

Plaquemines Parish has a relatively small population (22nd smallest parish population in Louisiana) and the largest combined land and water area in Louisiana. It is located on a long, narrow peninsula that is divided by the Mississippi River and levees, making two separate slivers of land to be serviced- the west bank and east bank. Parts of the Parish are only accessible by a circuitous road system and two ferries that are 20 miles apart. Except for Belle Chasse, most Parish residents are remote from supply chains and service centers. The population lives at very low density that is expensive to serve. A number of specialized services are provided – levees, diversions, coastal restoration, mosquito control, ferries, ports, oil and gas mineral rights, boat harbors and marinas, oyster conveyors, etc. These conditions make government structure and finance more difficult.

The finances of Plaquemines Parish are heavily reliant on property taxes, sales taxes, federal grants and oil and gas royalties to support government operations.

Of the total government revenues in 2009, federal grants provided the largest share, 70.8 percent; state grants, with state oil and gas royalties provided 8.8 percent; Parish oil and gas royalties and other property leases provided 6.2 percent. More traditional sources of revenue such as Ad Valorem (property) tax, sales and use taxes, licenses and fees, investment income and other revenues provided the remaining 14.2 percent. See **Chart 1**.

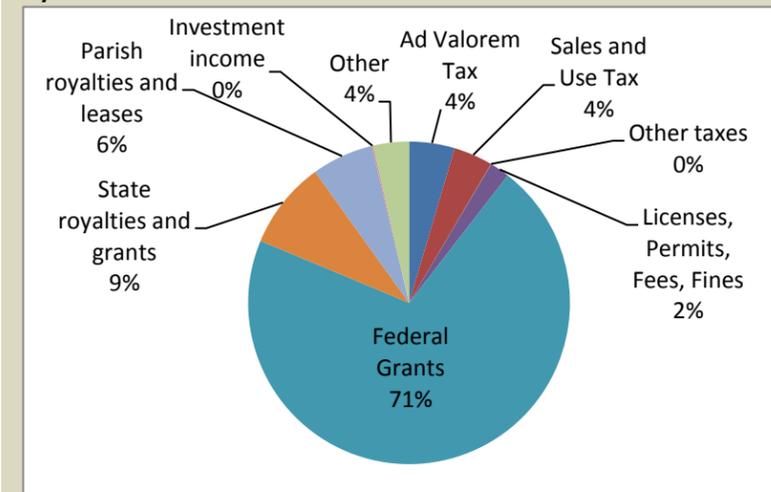
**Chart 2** shows the changing distribution of Parish revenues each year from 2006 to 2009. Clearly federal grants are a dominant factor and federal grants grew sharply since Hurricanes Katrina, Rita, and Gustav battered the Parish. State funds and oil and gas royalties are also very large annual contributors and grew substantially during the 2006-2008 timeframe.

Oil and Gas revenues and sales taxes are can be volatile, varying with fluctuations in the economy. In order to minimize the impact of fluctuations in the oil and gas market, the Parish dedicates portions of the oil and gas revenues each year to a fund balance designated to bonded indebtedness. The fund accumulates the oil and gas revenue received that exceeds established price levels, to be set aside and used for payment of bonded debt in years when oil and gas revenues are low. The fund has a cap of \$10 million.

**Chart 3** shows the distribution of Parish expenditures by category in 2009. The largest major expense category is Public Works, which constituted

*(continues inside)*

**Chart 1: Plaquemines Parish 2009 Governmental Fund Revenues by Source**



# Guiding the Parish & Funding our Initiatives

82 percent of Plaquemines Government expenses in 2009 because of post-Katrina reconstruction financed largely by federal funds.

**Chart 4** shows how Parish Governmental Funds expenses have changed during the past four years. Public Works has usually been a smaller share of total expenses (about 25 percent in 2007). Overall, the Parish's total Government Fund expenditures grew from around \$83 million in 2006 to \$164 million in 2009, but most of that increase was explained by increased Public Works expenditures.

There are four special government activities of Plaquemines Parish that are considered to be "business-type" activities, or Enterprise Funds. These are:

- Water and Sewer
- Port, Harbor, and Terminal
- Boat Harbors and Shipyards
- Port Sulphur Golf Course

The costs of these activities are supposed to be funded entirely from user fees and other direct revenues derived from the activity, not from the general fund; however, the business-type activities of the Parish reported a total operating loss of \$9.3 million in 2007. In 2009, user charges covered only 46.9 percent of total operating costs, while capital grants and contributions provided 15 percent, and property taxes provided 21.5 percent of the revenues required for these government functions.

Plaquemines Parish has a five-year Capital Improvements Program (CIP) with projects totaling \$218.8 million. See **Chart 5** (back of booklet). The CIP includes \$14.6 million for Hurricane protection and levees, \$45.4 million for flood control and \$45 million for projects funded by the Louisiana Recovery Authority

(LRA). Less than one-third of the total capital improvements program was funded by state and federal grants. Most of these projects are funded from Plaquemines Parish's general fund. Approximately \$32.5 million of capital projects are financed with bonds. Plaquemines Parish is organized in accordance with the Charter for Local Self-Government that was approved by voters in April, 1986. The organization provides for a Parish President and a nine-member Parish Council who serve population in their respective Council Districts. The Parish Council is also the governing body for special districts including the Port, Harbor and Terminal District and levee districts. Parish Council is the legislative branch that establishes ordinances and policies, and the Parish President is responsible for all government administration. Parish administration is organized into three primary Departments: Administration, Operations, and Public Services. See **Chart 6**. The largest of these three departments is the Operations Department.

Altogether, in 2010 Plaquemines Parish government employs 648 classified and unclassified employees to manage a wide range of functions and powers including economic development, road and bridge construction and maintenance, drainage, water and sewerage, solid waste disposal, fire protection, parks and recreation, public health, ferry service, boats and harbors, oil and mineral leasing, coastal zone management, zoning and building permits and other public services. There are constitutional officers such as the Sheriff Office, Coroner, Clerk of Court, Registrar of Voters, District Attorney, and Tax Assessor.

Chart 6: Plaquemines Parish Organizational Chart

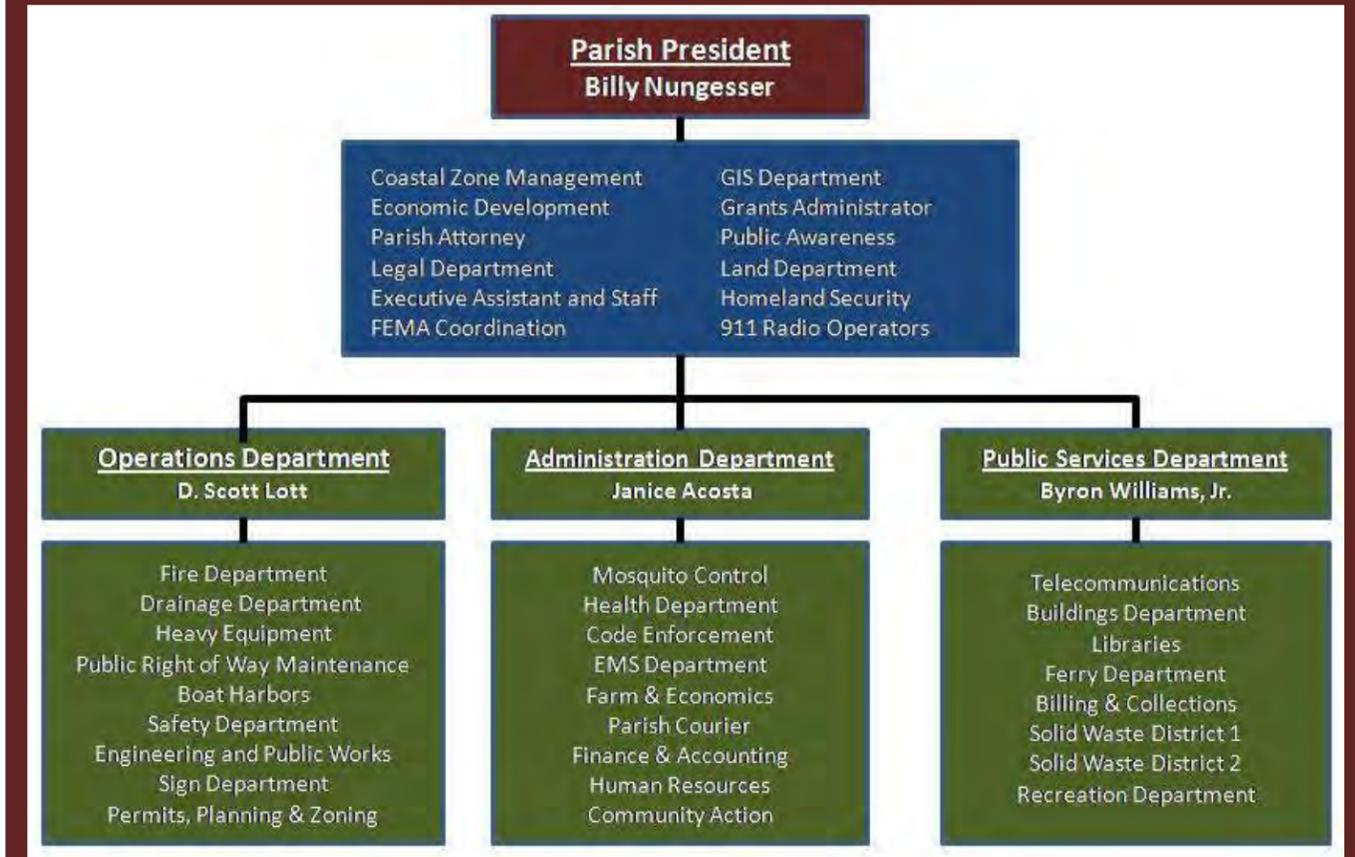


Chart 2: Trends in Plaquemines Parish Governmental Fund Revenues by Source 2006-2009

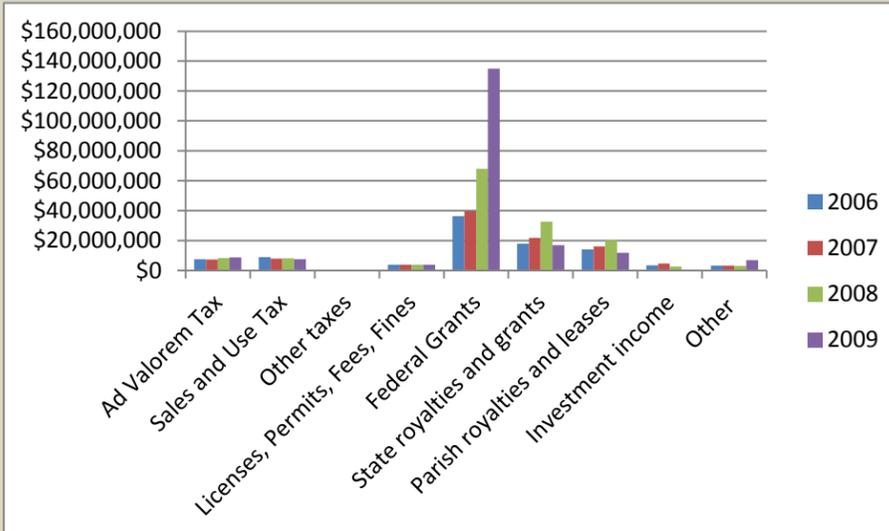


Chart 3: 2009 Total Expenditures, Plaquemines Parish Government Funds

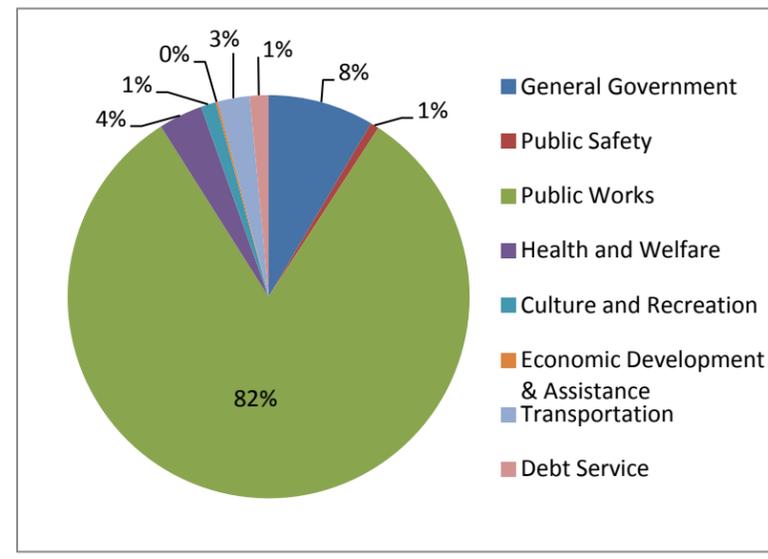


Chart 4: Trends in Total Expenditures, Plaquemines Parish Government Funds, 2006-2009

