



# Jackson County GOMESA Priority Implementation Plan

August 2018





# Table of Contents

Executive Summary..... iii

Introduction ..... 1

GOMESA Background and History ..... 3

The Jackson County GOMESA Priority Framework ..... 7

5-Year Priority Implementation Plan..... 11

Leveraging Opportunities..... 25

Recommended Next Steps..... 29

## *Appendices*

Appendix I: Project Summary Sheets ..... A-I-1

Appendix II: GOMESA Phase II Revenue Sharing..... A-II-1

Appendix III: GOMESA Leveraging Opportunities ..... A-III-1

Appendix IV: Long-Term and Maintenance Projects ..... A-IV-1



**Project Summary Sheets  
Table of Contents**

<b>Site Number</b>	<b>Site Name/Description</b>	<b>Pages</b>
1.02	Helena Area - Wildwood Rd to Kings Road	A-I-3 to A-I-4
1.03	Dutch Bayou - Moss Point North of Robertson Lake	A-I-5 to A-I-6
2.02	Grierson Street - Moss Point	A-I-7 to A-I-8
2.03	Magnolia Street Mayo Avenue - Moss Point	A-I-9 to A-I-12
2.12	Evergreen Street - Moss Point	A-I-13 to A-I-16
2.13	Bayou Avenue - Moss Point	A-I-17 to A-I-18
2.21	Molden St Verlon Avenue - Moss Point	A-I-19 to A-I-20
2.23	Grierson Street at Hwy 63 - Moss Point	A-I-21 to A-I-22
2.24	Gregory Street - Moss Point	A-I-23 to A-I-24
2.26	North Drive Canals	A-I-25 to A-I-26
3.01	Ladner Street/College Park - Gautier	A-I-27 to A-I-28
3.03	Shamrock Watershed (under Hwy 90) - Gautier	A-I-29 to A-I-30
3.06	Point Clear	A-I-31 to A-I-34
3.07	Bayou Chicot	A-I-35 to A-I-36
4.01	Cedar Grove - St Martin	A-I-37 to A-I-38
4.02	Windsor Port	A-I-39 to A-I-40
4.05(a)	Porteaux Bay Drive - St Martin	A-I-41 to A-I-42
4.05(b)	Porteaux Bay Drive – St. Martin	A-I-43 to A-I-44
4.06	Fairway Drive, Gulf Hills	A-I-45 to A-I-46
4.13	Washington Ave & Front Beach Dr - Ocean Springs	A-I-47 to A-I-48
5.02	Ocean Beach – Center St to North St – Ocean Springs	A-I-49 to A-I-50
5.03	St Andrews Dr - North Tantallon Dr to Ocean Springs Rd - Ocean Springs	A-I-51 to A-I-54
5.09	Davis Bayou	A-I-55 to A-I-56
RD.03 (4)	Porteaux Bay Subdivision - St Martin	A-I-57 to A-I-58
RD.05(4)	Lemoyne Boulevard Erosion Control	A-I-59 to A-I-60



# Executive Summary

---

Thanks to its unique combination of waterways, Jackson County enjoys an abundance of natural resources that uniquely merge together to create a valuable environment that continues to draw tourists, residents, and businesses from all over the world. The confluence of the Pascagoula and Escatawpa Rivers and their vital estuarine connections to the Gulf of Mexico create a natural environment that presents great opportunities. But with those opportunities come challenges as well, not the least of which is balancing the sometimes competing interests of quality of life, economic viability, and environmental responsibility. Managing the needs created by human occupancy within a uniquely complex network of tidally-influenced waterways is a monumental task, specifically with regard to drainage, dredging, and overall stormwater management.

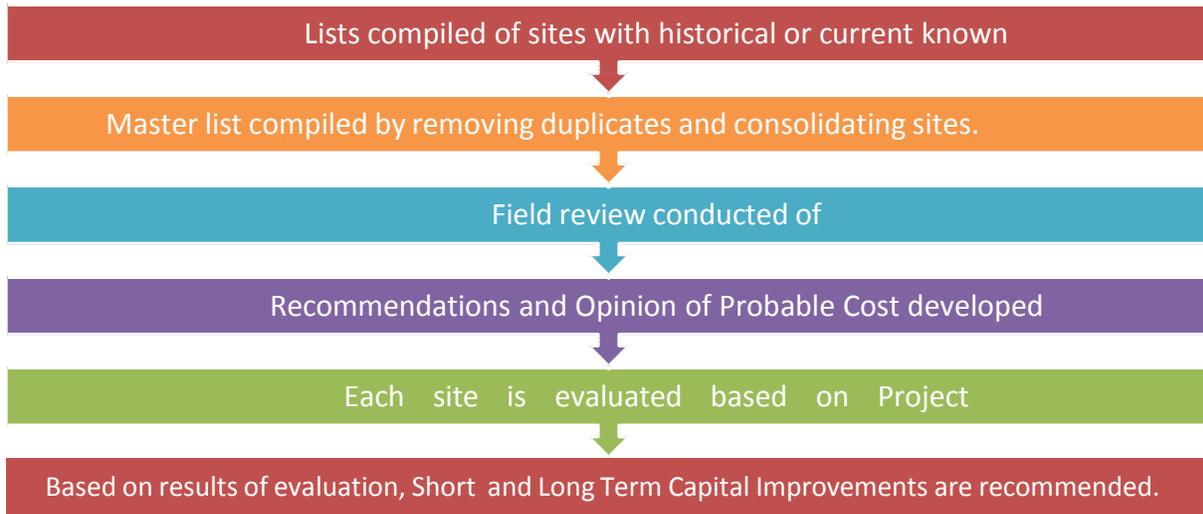
The challenge of this balancing act often falls to the Jackson County Board of Supervisors (JCBOs) who are responsible for the management of all county-owned infrastructure, properties, and waters of the State located within the County. As a component of the JCBOs's commitment to proactive watershed-based stormwater management, the Board hired Waggoner Engineering, Inc. in 2016 to develop a comprehensive countywide plan. The goal of the plan was to provide a unified strategic watershed-based approach to the management of the County's challenging stormwater infrastructure. The initial phase of the plan involved the establishment of a *Conceptual Drainage and Dredging Assessment* of sites across the county with reported deficiencies and the development of an *Implementation Plan* to address the county's short-term priorities.

## *The Conceptual Drainage and Dredging Assessment*

As a first step in the assessment process, individual supervisors and county staff compiled lists of known problem areas throughout the county. The lists were then compiled into a single tabulation of 68 sites by removing duplicate listings and consolidating others where appropriate. The Project Team then conducted a field review of each of the 68 sites and developed recommendations for improvements to each. Each site was then evaluated based on Project Prioritization Criteria developed in collaboration with county officials and staff. Based on the results of this evaluation, projects were recommended for Short and Long Term Capital Improvements Lists. Figure 1 demonstrates the overall process used.



**Figure 1: Site Evaluation Process**



The projects recommended for the Short Term Improvements List are shown in Table 1.

**Table 1: Short Term Recommended Capital Improvements**

Project Number	Project Name
1.02	Helena Area - Wildwood Rd to Kings Road
1.03	Dutch Bayou - Moss Point North of Robertson Lake
2.02	Grierson Street - Moss Point
2.03	Magnolia Street Mayo Avenue - Moss Point
2.12	Evergreen Street - Moss Point
2.13*	Bayou Avenue - Moss Point
2.21*	Molden St Verlon Avenue - Moss Point
2.23	Grierson Street at Hwy 63 - Moss Point
2.24	Gregory Street - Moss Point
2.26	North Drive Canals
3.01	Ladner Street/College Park - Gautier
3.03	Shamrock Watershed (under Hwy 90) - Gautier
3.06	Point Clear
3.07	Bayou Chicot
4.01	Cedar Grove - St Martin
4.02	Windsor Port
4.05(a)	Porteaux Bay Drive - St Martin
4.05(b)	Porteaux Bay Drive – St. Martin
4.06	Fairway Drive, Gulf Hills
4.13	Washington Ave & Front Beach Dr - Ocean Springs

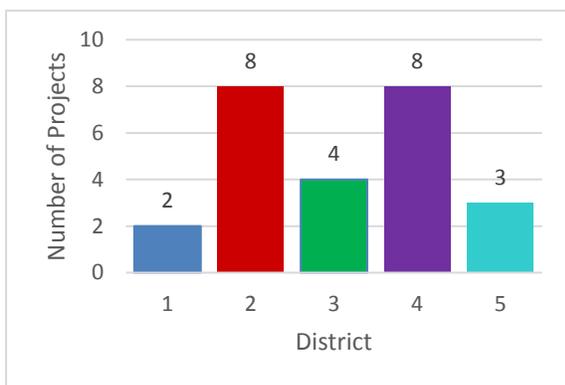


Project Number	Project Name
5.02*	Ocean Beach – Center St to North St – Ocean Springs
5.03*	St Andrews Dr - North Tantallon Dr to Ocean Springs Rd - Ocean Springs
5.09	Davis Bayou
RD.03 (4)	Porteaux Bay Subdivision - St Martin
RD.05(4)	Lemoyne Boulevard Erosion Control

\*Projects that can be bundled.

Figures 2 and 3 depict the number of projects by District and project value, in millions of dollars, by District.

**Figure 2: Number of Projects by District**



**Figure 3: Value of Projects by District, in Millions**



For Figure 3, the darker bar indicates the cost of projects and studies slated for short term implementation. The lighter bars indicate the cost of implementing projects after their initial study phase is complete. These opinions of cost are subject to change based upon the results of the studies being performed and the recommended solutions in the area.

For more details please refer to the *Jackson County Conceptual Drainage and Dredging Assessment Report* which completed in April of 2017.

### *The 5-Year Priority Implementation Plan*

This document (*The Jackson County GOMESA Priority Implementation Plan*) is designed to build upon the County’s initial assessment and prioritization process and establishes a 5-year action plan to address the County’s top priorities. The Plan defines a unified strategic approach that identifies a prioritized schedule of activities and creates an iterative process that is transparent and adaptable to stakeholders. The Plan also represents a living



testament to the Board of Supervisor’s proactive vision and commitment to safeguard the health, safety, and the overall welfare of its citizens.

A logical initial step in the development of the 5-Year Priority Implementation Plan (The Plan) involved the establishment of a project characterization matrix to evaluate each short-term priority site for proper scheduling into The Plan. The identified short-term projects where characterized based on site location, project type, anticipated completion period, cost and potential leveraging opportunities, permitting needs, whether additional studies are needed, and stage of constructability. This characterization coupled with the detailed proactive and coordinated feedback received from the county helped formulate The Plan. The plan outlines a detailed schedule of project activities that is cyclical and adaptable in nature.

**Figure 4: 5-Year Priority Implementation Plan**

Year	Quarter	Project	Type	2018		2019				2020				2021				2022				2023		2023 Onward	Estimated Cost 2018 to 2023	Total Estimated Cost
				3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2			
RD.05(4)		Lemoyne Boulevard Erosion Control	Drainage																						\$ 389,000	\$ 389,000
4.02		Windsor Port	Drainage																						\$ 383,571	\$ 383,571
4.06		Gulf Hills/Fairway Drive	Dredging																						\$ 1,880,871	\$ 1,880,871
4.05(a)		Porteaux Bay Drive	Dredging																						\$ 300,000	\$ 300,000
4.05(b)		Porteaux Bay Drive	Dredging																						\$ 405,887	\$ 405,887
3.07		Bayou Chicot	Dredging																						\$ 2,284,418	\$ 2,284,418
3.06		Point Clear	Dredging																						\$ 4,939,582	\$ 4,939,582
5.09		Davis Bayou	Dredging																						\$ 5,175,381	\$ 9,294,000
1.02		Helena Area	Drainage																						\$ 2,303,918	\$ 3,678,000
2.26		North Drive Canals	Dredging																						\$ 675,293	\$ 675,293
5.02		Ocean Beach - Center St to North St	Drainage																						\$ 218,774	\$ 218,774
2.03		Magnolia Street/Mayo Avenue	Drainage																						\$ 1,520,327	\$ 1,520,327
1.03		Dutch Bayou	Dredging																						\$ 972,820	\$ 972,820
2.02		Grierson Street	Drainage																						\$ 486,540	\$ 486,540
2.23		Grierson Street at Hwy 63	Drainage																						\$ 304,712	\$ 544,000
3.03		Shamrock Watershed	Drainage																						\$ 299,898	\$ 723,000
5.03		St. Andrews Drive	Drainage																						\$ 503,868	\$ 896,000
RD.03(4)		Porteaux Bay Subdivision	Drainage																						\$ 40,978	\$ 319,000
2.13		Bayou Avenue	Drainage																						\$ 262,283	\$ 459,000
2.21		Molden Street/Verlon Avenue	Drainage																						\$ 604,572	\$ 604,572
3.01		Ladner Street/College Park	Drainage																						\$ 194,577	\$ 942,000
4.13		Washington Avenue & Front Beach Drive	Drainage																						\$ 52,474	\$ 414,000
4.01		Cedar Grove	Drainage																						\$ 282,829	\$ 835,000
2.12		Evergreen Street	Drainage																						\$ 109,170	\$ 1,452,000
2.24		Gregory Street	Drainage																						\$ 200,000	\$ 771,000
		Total Estimated Cost																						\$ 24,791,741	\$ 35,388,653	

Key: Study Design Permits Land Acquisition Implementation

As with all municipalities, the JCBOS is facing the constant dilemma of having to "do more with less". The JCBOS simply does not have adequate funds to accomplish these needed improvements within the existing budget. A variety of available funding sources are provided for evaluation, but the recommended approach for the Short Term Recommendations is to leverage funds using a three pronged approach to fund all these improvements. It is not expected that all of the short-term projects will fit the funding requirements of all three programs, but by leveraging the funds, completion of all the Short Term Improvements is possible. This approach includes the following "prongs":

- GOMESA - The Gulf of Mexico Energy Security Act program shares oil and gas leasing revenues with Gulf producing states, their political



subdivisions, and the Land & Water Conservation Fund for coastal restoration projects. Beginning in FY18 the magnitude of the GOMESA funds Jackson County receives directly is expected to greatly increase. These funds could possibly be leveraged as the required match for other federal programs.

- Existing USACE Section 219 Authorization - The Section 219 program historically has provided funding authority for planning, design, and construction of water and sewer related environmental infrastructure and resource protection and development projects for local communities throughout the country. Jackson County has an existing USACE Section 219 authorization, which has never had the funding fully appropriated.
- NRCS - The NRCS Emergency Watershed Protection Program (EWP) is a 75/25 matching program. The EWP Program is designed to help people and conserve natural resources by relieving imminent hazards to life and property caused by floods, fires, drought, windstorms, and other natural occurrences.

### *Next Steps*

While completion of these individual improvements is important and needed to protect property and improve quality of life in Jackson County, a more holistic integrated watershed-based program management approach to promote the long term sustainability of these and other projects is also needed. Drainage and dredging projects are often only a "quick fix" for a reoccurring problem. Implementation of best management practices and other initiatives is needed to extend the life of the capital projects for as long as possible. This implementation plan should be considered as a comprehensive watershed-based stormwater management program that requires ongoing management and updates. To accomplish this the following initiatives are suggested in addition to the Short-Term Recommended Capital Improvement Projects.

<b>Next Steps</b>
• Adopt the recommended 5-Year Priority Implementation Plan.
• Update and reevaluate program priorities annually for proper incorporation into the implementation schedule.
• Procure professional Program support services to assist in the implementation of The 5-Year Priority Implementation Plan and to provide overall watershed-based stormwater management Program support to the County.
• Identify and evaluate potential institutional solutions for sustainable funding, such as special assessment districts and drainage/taxation districts



## Next Steps

- Identify and evaluate best management practices (BMPs) at the micro and Macro-level that can be implemented to promote project sustainability.
- Develop and execute strategies for legislative support at both the state and federal levels, including research, drafting legislative language, and preparation and support for state and federal legislative visits
  - Develop the necessary documentation to support the recommended 3-prong funding approach between NRCS, GOMESA, and USACE 219
- Establish JCBOS participation in the National Waterways Conference and the Floodplain Alliance for Insurance Reform (FAIR). FAIR is comprised of communities and business interests from coastal and riverine areas that advocate for balanced reforms recognizing the risks and benefits of floodplain occupancy.



# Introduction

---

## Background

The Gulf of Mexico Energy Security Act (GOMESA), enacted in 2006, presents a significant opportunity for Jackson County to plan, develop, and implement a comprehensive, long-term, and sustainable ecological, physical, and economic restoration and resiliency program benefitting Jackson County and her residents. In addition to expanding oil and gas leasing activities in the Gulf, a substantial portion of royalties, lease payments, and bonus bids – once largely dedicated to the Federal Treasury – will be shared with the states of Mississippi, Louisiana, Alabama, and Texas, as well as their coastal counties and parishes. While Phase I of GOMESA (Fiscal Years 2006 – 2016) provided relatively marginal revenues to the States and their eligible coastal counties, it is anticipated that Phase II of GOMESA (beginning in Fiscal Year 2017) will generate substantially larger revenues on an annual basis for decades to come. In anticipation of this influx of substantial GOMESA financial resources, the Jackson County Board of Supervisors (JCBOS) launched a proactive watershed management approach that focuses on the development and implementation of a framework plan for GOMESA disbursements to ensure optimization of benefits, regulatory compliance, and financial management and oversight.

## Conceptual Drainage & Dredging Assessment

As an initial key component of this proactive watershed management approach, the JCBOS hired Waggoner Engineering, Inc. (WEI) to complete a conceptual assessment of sites across the county with reported drainage and/or dredging deficiencies. The initial phase of this effort was limited to a conceptual assessment of those sites reported as areas with deficiencies by the JCBOS to WEI and was completed in April of 2017. The results of the initial phase of this effort are detailed in the *Jackson County Conceptual Drainage & Dredging Assessment (JCCDDA) Report*.

The JCCDDA Report identified a total of 68 sites with dredging and drainage deficiencies. Field reviews of all of these sites were completed and recommendations for short and long-term improvements were documented in the JCCDDA Report. Individual reports and Opinions of Probable Cost for each site can be found in the Appendix of the aforementioned JCCDDA Report. Each site was evaluated based on established Project Prioritization Criteria. Based on the results of these evaluations, projects were prioritized and recommended for the Short and Long-Term Capital Improvements Lists. Appendix IV of the present document provides a list of the long-term capital improvements sites and maintenance sites identified in the initial phase of this watershed-based management approach.



## **Purpose of the GOMESA Priority Implementation Plan**

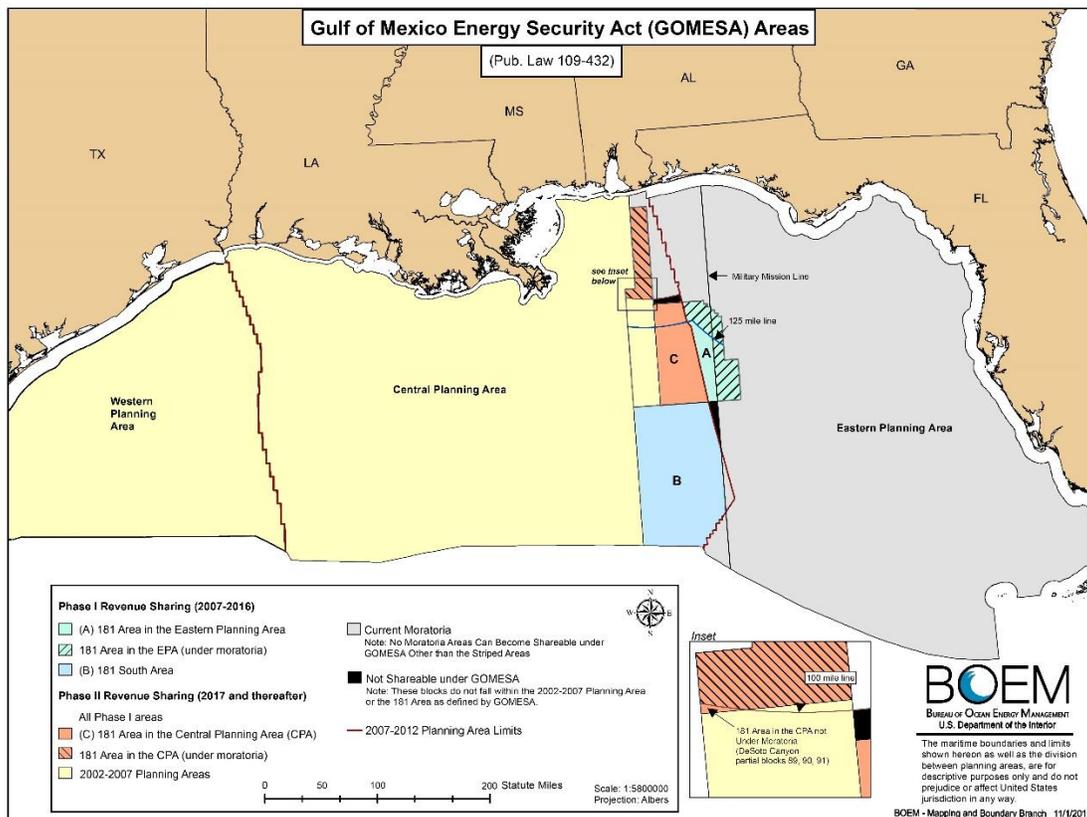
The purpose of this document is to provide a framework that facilitates the development and implementation of the 5-Year Priority Implementation Plan, which Jackson County can use to implement projects and administer the County's anticipated revenues under GOMESA's Phase II revenue sharing allocation in a way that serves the County's goals of restoration, resiliency, and improved economic wellbeing of its coastal environment and infrastructure.



# GOMESA Background and History

In 2006, Congress passed the Gulf of Mexico Energy Security Act (GOMESA) which, after years of offshore drilling moratoria, opened new exploration options for energy development. GOMESA established **permanent** Federal revenue sharing from oil and natural gas leasing and production on the Gulf of Mexico Federal Outer Continental Shelf with the states of Alabama, Mississippi, Louisiana, and Texas. The GOMESA statute provided for two phases of revenue sharing: Phase I and Phase II. Phase I began immediately upon passage of the law in fiscal year 2007 and ended at the end of fiscal year 2016. While GOMESA Phase I only allowed for new exploration in a relatively small portion of the Gulf of Mexico, called Area 181, the area is energy-rich and is estimated to contain 3.4 trillion cubic feet of natural gas and 530 million barrels of oil (BOEM, April 2016). Phase II began in fiscal year 2017 and extends the area included in revenue sharing to the Western Planning Area and the Central Planning Area, as well as Area 181, as seen in Figure 5. For the first 40 years of GOMESA Phase II revenue sharing, the maximum amount available for sharing between states is \$375 Million per year, after which (Fiscal Year 2056) there will be no maximum sharing amount.

**Figure 5: Gulf of Mexico Energy Security Act (GOMESA) Areas**



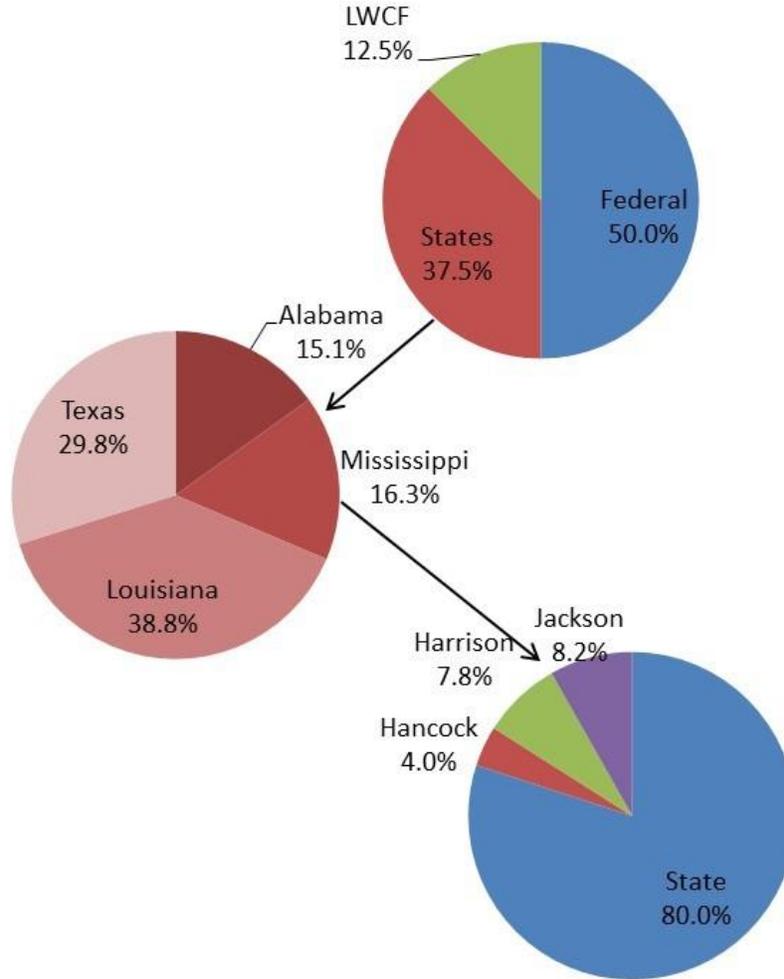


The revenues are primarily dependent upon the prices of crude oil and natural gas. Revenue sharing allocation for each state is formula based on the inverse distance between each lease site and the State's coastline. This formula is also used to determine the allocation for each county and/or parish. All revenue-sharing eligible tracts are weighted equally. In order to perform revenue sharing, the minimum distance between each State's coastline to the geographic center of the applicable leased tract is calculated. The sum of the State's (or County's) inverse minimum distance from all applicable leased tracts is divided by the sum of the inverse minimum distances from all applicable leased tracts across all four Gulf Producing States. That result is then multiplied by the amount of qualified Outer Continental Shelf revenues to be shared.

Under Phase II, 50% of qualified outer continental shelf revenues, consisting of bonus bids, rentals, and royalty revenues, will be shared with the gulf producing states (37.5% of the total) and the Land and Water Conservation Fund (LWCF) (12.5% of the total). The revenue to be shared is on applicable leases sold since the passage of GOMESA on December 7, 2006. Each gulf producing state will receive a minimum of 10% of the revenues. Additionally, 20% of each states' revenue is to be distributed to the state's associated coastal political subdivisions – for the State of Mississippi these subdivisions are the three coastal counties: Jackson County, Harrison County, and Hancock County. The division of revenues occurs on the federal level. Figure 6 shows a graphical representation of anticipated Phase II GOMESA revenue sharing percentages, calculated by the Bureau of Ocean Energy Management (BOEM) (April 2016 – see Appendix II).



**Figure 6: Expected GOMESA Phase II Revenue Split**



The Fiscal Year 2017 (FY17) disbursement is anticipated to be paid in early April 2018. It is anticipated that the State of Mississippi will receive approximately \$30 million leaving \$6.4 million to be split between the three coastal counties. While there are more leases west of Jackson County during Phase II revenue sharing than there were during Phase I, it is still anticipated that Jackson County will receive approximately \$1.5 million to \$2 million for FY17 disbursement.

Early tracking of FY18 disbursements - to be paid in March/April 2019 - indicated the State of Mississippi may receive up to \$55 million which would leave approximately \$10.5 million to be split between the three counties. If early market trends, revenues, and leases are indicators of the FY18 disbursements, Jackson County should anticipate approximately \$2.5 million to \$3 million for FY18 disbursements. These estimated disbursements will need to be recalculated after FY17 disbursements are received in order to accurately readjust for



revenue sharing of the Western Planning Area and Central Planning Area, which opened up at the beginning of Phase II.

Conservatively, based on these estimated GOMESA revenue projections, the County could have on average \$2,000,000 a year available to implement the necessary priority improvements identified in its 5-Year Priority Implementation Plan.



# The Jackson County GOMESA Priority Framework

---

## **Planning Area**

The Planning area on which the Jackson County GOMESA Priority Implementation Plan focuses will include the entirety of Jackson County, its waterways and terrestrial areas.

## **Duration of the Plan**

The Jackson County GOMESA Priority Implementation Plan (Plan) may cover the period concurrent with the authorization of the Gulf of Mexico Energy Security Act, the primary funding source for the development of the Plan and the implementation of the recommended activities. The Plan may cover the present time period through the lifespan of GOMESA and provide for modifications through continuous monitoring and annual re-assessment in order to account for changing economic, infrastructure, and environmental conditions and objectives. Additionally, the Plan may be coordinated with efforts of other local governing agencies, as well as state, interstate, and federal resource groups.

## **Vision of the Jackson County GOMESA Priority Implementation Plan**

The Jackson County GOMESA Priority Implementation Plan holds paramount the economies, lives, and ecosystems of the Gulf Coast. All three elements are part of the unified system of the Mississippi Gulf Coast. As such, the Jackson County GOMESA Priority Implementation Plan's vision is:

*Investing in ecological, physical, and economic protection and restoration efforts to make the Mississippi Gulf Coast a great place to raise a family, work, play, visit, and do business.*

## **Goals and Values of the Jackson County GOMESA Priority Implementation Plan**

The Jackson County GOMESA 5-Year Priority Implementation Plan was established to create a unified strategic approach to achieve the following goals:

- Drive coastal ecological and physical restoration within Jackson County;
- Advance resiliency efforts, particularly through infrastructure, in the County to increase the capacity of humans and the coastal system to adapt and recover from change;
- Improve the economic wellbeing of Jackson County; and to
- Enhance the quality of life for those who live, work, visit, and do business in Jackson County.



### **Coastal Ecological Restoration and Resiliency**

Enhancing coastal ecological and physical restoration and resiliency efforts on the Mississippi Gulf Coast, and in Jackson County, can help protect and preserve the natural and built environment for future generations. The Jackson County GOMESA Priority Implementation Plan can help fill a vital gap by identifying funding and project disparities in Jackson County overlooked by other coastal programs and initiatives on the Mississippi Gulf Coast and rectify these disparities to create a comprehensive and cohesive restored coast.

### **Economic Wellbeing**

Improving the economic wellbeing of Jackson County, and subsequently the Mississippi Gulf Coast, does not only include improving business and industries in Jackson County, but also improving the economic wellbeing of the individuals and families that live and work on the coast. Investing in economic and infrastructure projects may improve the economic wellbeing of Jackson County and the Mississippi Gulf Coast while also enhancing economic and infrastructure resiliency to recover faster and smarter after a disaster.

### **Quality of Life**

Improving the quality of life for those who raise families, work, play, visit, and do business in Jackson County and the Mississippi Gulf Coast is essential to the long-term economic and ecological prosperity of the State of Mississippi. Improving quality of life focuses not just on economic wellbeing and satisfaction, but also on physical health, family, education, employment, wealth, religious beliefs, finance, and the environment. The Jackson County GOMESA Priority Implementation Plan should implement activities that are sustainable; add continuous economic and ecological value to the County, State, and Gulf Coast; and improve the quality of life of Jackson County and the Mississippi Gulf Coast. The Jackson County GOMESA Priority Implementation Plan should be continually responsive to the needs of Jackson





County and the Mississippi Gulf Coast.

The Jackson County GOMESA Priority Implementation Plan reflects the key issues affecting people in and around Jackson County. The values for the Plan include:

- Flood protection – reduce economic losses from flooding to residential, public, industrial, and commercial infrastructure.
- Natural processes – promote a sustainable coastal ecosystem by harnessing the natural processes of the system.
- Coastal habitats – provide habitats suitable to support an array of commercial and recreational activities coast wide.
- Working coast – promote a viable working coast to support regionally and nationally important businesses and industries.

This means, the Jackson County Priority Implementation Plan will focus on projects dealing with the four values listed above.



PAGE INTENTIONALLY LEFT BLANK



# 5-Year Priority Implementation Plan

While GOMESA is a perpetual law which will provide funding to the State of Mississippi and its coastal counties, Jackson County has decided to create a short term plan for GOMESA implementation, focusing on the next five years until 2023, that aligns with the vision and goals previously stated. Using this approach, Jackson County hopes to build upon already completed work that identified areas within the county that currently pose a threat to property, quality of life, and economic wellbeing. This work, *The Jackson County Conceptual Drainage and Dredging Assessment*, was a conceptual assessment of sixty-eight sites across the county with reported drainage and/or dredging deficiencies. The assessment was limited to a conceptual study of those sites that the County Supervisors and County Staff reported as areas of known deficiencies.

From *The Jackson County Conceptual Drainage and Dredging Assessment* seventeen sites were identified as “short-term” implementation sites for project planning and/or implementation within the next five years. After further discussions with Jackson County officials during preparation of the current GOMESA Priority Implementation Plan, several additions were made to the original short-term list.

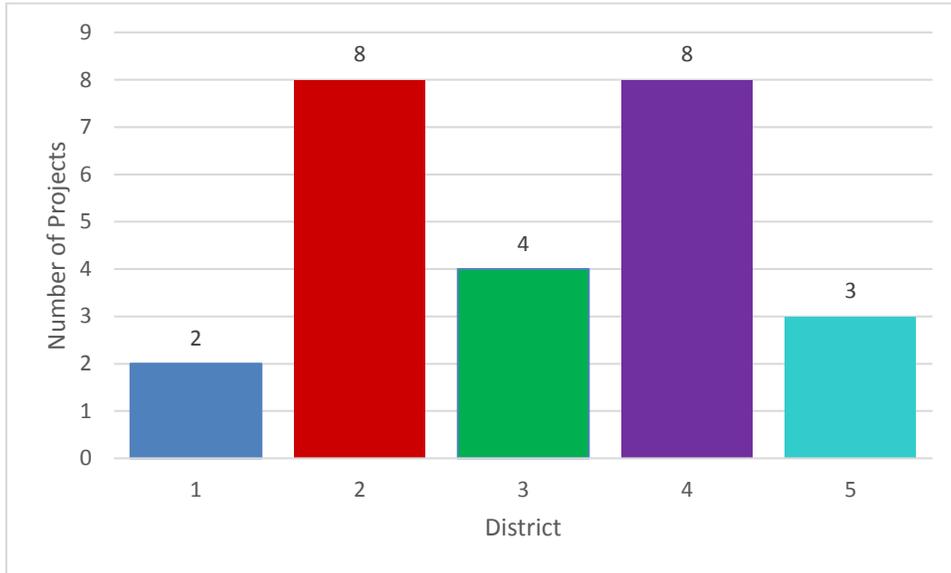
- One of the sites from the JCCDDA was chosen to be broken down into two sites - dredging site 4.05. This site will now be two separate sites, identified as 4.05(a) and 4.05(b).
- Site 5.02 was ranked as a short-term site, but was placed on the County Maintenance list, as a simple site the County could implement with its own work-force. Due to the high priority score of this site, it now has been selected for implementation under the short term implementation list.
- Six additional sites from the Long Term list (2.26, 3.06, 3.07, 4.02, 4.06, and 5.09) were identified through discussions with the County Administrator, the County Road Manager, and the Board of Supervisors for incorporation into the short-term implementation list.
- One additional (new) site was identified (RD.05) through discussion with the County Administrator, the County Road Manager, and the Board of Supervisors for incorporation into the short-term implementation list.

The twenty-five sites are distributed throughout the county into different Supervisor Districts. The figures below show the breakdown of the projects by district. Figure 7 shows



the number of projects in each district while Figure 8 shows the conceptual opinion of costs of the projects in each district.

**Figure 7 Number of Projects by District**



**Figure 8: Opinion of Costs of Projects by District**



For Figure 8, the darker bar indicates the cost of projects and studies slated for short term implementation. The lighter bars indicate the cost of implementing projects after their initial



study phase is complete. These opinions of cost are subject to change based upon the results of the studies being performed and the recommended solutions in the area.

While these twenty-five sites are the main focus of this document, the omission of a site from the initial short-term implementation list does not preclude the addition of supplementary sites, as needed. In fact, adding sites to the list when major problems arise can be done quickly to allow for a fast-response time, all while adhering to the true nature of the document, as stated in the vision and goals.

Due to the nature of this document and the short-term implementation strategy, it is recommended that this document be updated every four years, minimum, to place completed projects on a maintenance schedule, add further sites to the implementation plan, and allow the implementation plan to evolve in such a way as to continually respond to the needs of Jackson County and her residents.

Table 2 shows the project number and project name for all twenty-five sites currently on the short-term implementation list. Appendix I includes project information sheets for each project site. The project sheets further identify and describe each site. Each project information sheet includes the project number and name, the location description, project coordinates, the HUC 12 the site is in, the project type, approximate range of residences or businesses benefitted, anticipated project benefits, implementation period, a suggested implementation timeline, conceptual opinion of project cost, location problems, and recommended solutions.

**Table 2: Short Term Implementation Project Numbers and Names**

Project Number	Project Name
1.02	Helena Area - Wildwood Rd to Kings Road
1.03	Dutch Bayou - Moss Point North of Robertson Lake
2.02	Grierson Street - Moss Point
2.03	Magnolia Street Mayo Avenue - Moss Point
2.12	Evergreen Street - Moss Point
2.13*	Bayou Avenue - Moss Point
2.21*	Molden St Verlon Avenue - Moss Point
2.23	Grierson Street at Hwy 63 - Moss Point
2.24	Gregory Street - Moss Point
2.26	North Drive Canals
3.01	Ladner Street/College Park - Gautier
3.03	Shamrock Watershed (under Hwy 90) - Gautier
3.06	Point Clear
3.07	Bayou Chicot
4.01	Cedar Grove - St Martin



Project Number	Project Name
4.02	Windsor Port
4.05(a)	East Prong, Porteaux Bay Drive - St Martin
4.05(b)	West & Center Prong, Porteaux Bay Drive – St. Martin
4.06	Fairway Drive, Gulf Hills
4.13	Washington Ave & Front Beach Dr - Ocean Springs
5.02*	Ocean Beach – Center St to North St – Ocean Springs
5.03*	St Andrews Dr - North Tantallon Dr to Ocean Springs Rd - Ocean Springs
5.09	Davis Bayou
RD.03 (4)	Porteaux Bay Subdivision - St Martin
RD.05(4)	Lemoyne Boulevard Erosion Control

\* indicates projects that present bundling opportunities

### Bundling Opportunities

To take advantage of economies of scale and maximize benefits to costs, under *The Jackson County Conceptual Drainage and Dredging Assessment*, projects were evaluated for potential combinations. Sites were chosen for possible combination due to their close proximity to one another, similar prioritization score, and reasonably low total combined project cost. The proximity criteria would help minimize the cost of mobilizing construction. The similar score criteria avoids giving unjust prioritization to a lesser ranked site by combining with a higher ranked site. Finally, the project cost criteria keeps the projects in an economically feasible range.

All projects were evaluated for bundling. Currently, there are two potential bundling opportunities for short term projects. Bundling opportunities were taken into consideration when creating the five-year implementation plan and timeline. Furthermore, all of the targeted sites will undergo further evaluations for bundling potential particularly as they approach the site design and construction phases to minimize the cost of implementation.

### Project Characterization Matrix

Table 3 provides a matrix for characterization of each short-term project by defining the project number, project type, anticipated implementation period, potential leveraging sources outside of Jackson County GOMESA funds, what permits are anticipated for the project, what stage the project is in regarding constructability, and whether or not additional study is required to properly identify problems in the site. Below is a description for each header in Table 3.

**Project Number:** this is the project number determined in the *Jackson County Conceptual Dredging and Drainage Assessment*. The first number is the district in which the project is located while the last number is the sequential number from when the project was identified.



**Project Type:** the project type will be identified as the main activity type, as defined in the *Mississippi GOMESA Phase II Program Framework* and include the following:

- *Barrier Island Restoration* – creation and restoration of dune, beach, and barrier marsh to restore offshore barrier islands
- *Hydrologic Restoration* – installation and/or removal of features to restore natural hydrologic patterns that have been altered
- *Marsh Creation/Restoration* – creation and restoration of wetlands
- *Oyster Reef Creation* – Establishment of oyster reefs to improve oyster recruitment, settlement, and propagation
- *Bank Stabilization/Living Shorelines* – onshore placement of earthen fill, other stabilizing material, and vegetation to maintain shorelines
- *Shoreline Protection* – use of hard and/or soft measures to reduce wave energy on shorelines
- *Science and monitoring to support design and management*
- *Channel dredging* – dredging or realignment of existing navigation channels utilizing the Mississippi beneficial use program principles in ecological/physical restoration and resiliency projects
- *Restoration dredging* – to restore natural waterways impacted by human-induced sedimentation
- *Channel realignment* – realign existing channels to avoid cross-sector interference. Sectors can be ecological, infrastructure, navigational, et cetera
- *Infrastructure improvements* – installation of infrastructure projects to mitigate the impacts of Outer Continental Shelf activities and provide economic development opportunities
- *Flood proofing* – community projects to mitigate the infrastructure damage caused by flooding
- *Flood protection* – use of hard and/or soft measures to reduce flooding impacts and may include installation of backwater levees, flood walls, flood gates, and pump facilities
- *Energy development* – projects focused on developing additional energy sources
- *Economic development* – focused on the improvement of economic wellbeing and quality of life for the Gulf Coast by creating and retaining jobs and supporting and growing income. Economic development may include infrastructure projects. This also includes traditional as well as nontraditional economic development activities including recreation, infrastructure, tourism, intermodal freight, transportation, and intercoastal development
- *Harbor dredging* – dredging large and small boat harbors to stimulate economic development, recreation, and tourism
- *Land acquisition* – to aid in the development of other projects



- *Data collection and model development* – to establish a baseline for current conditions, help predict future conditions, and expand the capabilities of existing models of the Gulf Coast

**Timeline:** broken into five distinct parts (study, design, permits, land acquisition, implementation), the timeline represents the estimated amount of time required to finish each of these tasks. Boxes listed as “U” represent a timeline that is unknown and cannot be estimated as further study is required to understand the issues and develop potential solutions. A value of “---” represents an item that is not necessary.

**Other Potential Funding:** a listing of other potential funding sources for planning and implementation other than through Jackson County’s GOMESA funds.

**Permit(s) Required:** a list of foreseeable permits required for project implementation. This includes local, state, and federal permits.

**Ready for Construction:** under this question, there will be four steps: *preliminary engineering, design, permits, and land acquisition*. If the box is yellow, this represents the step is in progress. A green box represents a completed step. Once all four steps are green, the project is ready for implementation, contingent upon funding.

**More Study Required:** this column indicates if a project needs additional study before preliminary engineering and design occurs. While used sparingly, this column identifies sites that need further analysis and study to identify the root of potential problems in the area.



**Table 3: Short Term Project Characterization Matrix**

Project No.	Project Name	GOMESA Project Type	Timeline					Other Potential Funding*	Permit(s) Required	Ready for Construction				More Study Required
			Study	Design	Permits	Land Acquisition	Implementation			Preliminary Engineering	Design	Permit Acquisition	Land Acquisition	
1.02	Helena Area	Flood Proofing, Hydrologic Restoration	1 year	9 months	1 year	1 year	1.5 years	1	Wetlands, MDOT				some ROW needed	Yes
1.03	Dutch Bayou	Channel Dredging, Restoration Dredging	---	6 months	1 year	---	1 year	1, 4	Wetlands, Dredging, Upland Disposal				---	---
2.02	Grierson Street	Flood Proofing, Bank Stabilization	---	9 months	6 months	6 months	6 months	1	Wetlands				some ROW needed	---
2.03	Magnolia St/Mayo Ave	Flood Proofing, Hydrologic Restoration	---	1 year	1 year	1 year	1 year	1	Wetlands				some ROW needed	---
2.12	Evergreen St	Flood Proofing, Restoration Dredging, Bank Stabilization	---	1.5 years	1 year	1.5 years	2 years	1	Wetlands, Dredging, Upland Disposal				some ROW needed	---
2.13	Bayou Ave	Flood Proofing, Restoration Dredging, Hydrologic Restoration	---	6 months	6 months	1 year	1 year	1	Wetlands				some ROW needed	---
2.21	Molden St/Verlon Ave	Flood Proofing, Bank Stabilization	---	1 years	6 months	1 years	1 year	1	Wetlands				some ROW needed	---
2.23	Grierson St at Hwy 63	Flood Protection, Hydrologic Restoration, Bank Stabilization	---	1 years	1.5 years	2 years	1 year	1	Wetlands, MDOT				some ROW needed	---
2.24	Gregory St	Flood Proofing, Bank Stabilization, Channel Realignment	2-3 years	6 months	6 months	1 year	1 year	1	Wetlands				some ROW needed	Yes
2.26	North Drive Canals	Restoration Dredging	---	Completed	6 months	---	6 months	1	Dredging, Upland Disposal				---	---
3.01	Ladner St/College Park	Flood Proofing, Hydrologic Restoration, Bank Stabilization	1-2 years	6 months	6 months	1 year	2 years	1	Wetlands				some ROW needed	Yes
3.03	Shamrock Watershed (under Hwy 90)	Flood Proofing, Bank Stabilization	---	6 months	1 year	2 years	1.5 years	1	Wetlands, MDOT				some ROW needed	---
3.06	Point Clear (East Graveline Bayou)	Restoration Dredging	---	1.5 years	2 years	6 months	1 year	1, 12	Dredging, BUS				---	---
3.07	Bayou Chicot	Restoration Dredging	---	1.5 years	1 year	---	1 year	1, 12	Dredging, BUS				---	---
4.01	Cedar Grove	Flood Protection, Hydrologic Restoration	---	6 months	6 months	6 months	1 year	1	Wetlands				some ROW needed	---
4.02	Windsor Point	Bank Stabilization, Flood Proofing	---	Completed	---	Completed	6 months	1, 13	None				---	---
4.05.a	E. Prong, Porteaux Bay Dr	Restoration Dredging	---	Completed	Completed	---	6 months	1, 3, 12	Dredging, BUS				---	---
4.05.b	West & Center Prong, Porteaux Bay Dr	Restoration Dredging	---	6 months	6 months	---	6 months	1, 3, 12	Dredging, BUS				---	---
4.06	Fairway Dr, Gulf Hills	Restoration Dredging	---	6 months	6 months	---	6 months	1	Dredging, BUS				---	---
4.13	Washington Ave/Front Beach Dr	Flood Protection, Flood Protection	---	9 months	1.25 years	1 year	1.5 years	1, 11	Wetlands				some ROW needed	---
5.02	Ocean Beach - Center St to North St	Infrastructure Improvements, Flood Proofing	---	Completed	6 months	1 year	9 months	1	Wetlands				some ROW needed	---
5.03	St Andrews Dr - North Tantallon Dr	Flood Proofing, Hydrologic Restoration	---	9 months	9 months	1 year	1 year	1	Wetlands				some ROW needed	---
5.09	Davis Bayou (Remaining)	Restoration Dredging	---	3 years	2 years	---	2 years	1, 12	Dredging, BUS				---	---
RD.03 (4)	Porteaux Bay Subdivision	Bank Stabilization, Flood Proofing	---	1.5 years	1 year	2 years	2 years	1	Wetlands				some ROW needed	---
RD.05(4)	Lemoyne Blvd Erosion Control	Bank Stabilization, Flood Proofing	---	Completed	Completed	Completed	9 months	1	Wetlands				---	---

Note: For study sites, the timeline for project implementation has been estimates as best as possible without knowing the recommendations from the study. These estimates are subject to change.

\*Other Potential Funding Sources Key: 1 (Mississippi GOMESA); 2 (RESTORE), 3 (RESTORE NFWF GEBF); 4 (McCIP); 5 (Tidelands); 6 (GOMA); 7 (USEPA GoM Program); 8 (USACE 219); 9 (NRCS EWP); 10 (CELCP); 11 (MDOT); 12 (FEMA); 13 (NRCS)

Color Coding Key: Completed In Progress Not Started



PAGE INTENTIONALLY LEFT BLANK



### 5-Year Priority Implementation Plan

After projects were evaluated for their relative opinions of costs, anticipated completion time, relative importance to the community, and their constructability, the twenty-five projects were incorporated into a 5-Priority Implementation Plan, as seen in Table 4.

The 5-Year Priority Implementation Plan was designed to address all of the short-term priorities identified by the County. It was constructed based upon the Characterization Matrix (Table 3), project bundling opportunities, and feedback received from County officials and the Board of Supervisors. The 5-Year Priority Implementation Plan also factors in hydraulic flow and connectivity in scheduling downstream sites before upstream sites to help prevent additional problems. Finally, the Plan was also developed with the County’s existing Dredging Plan in mind. Figure 9 shows a break down of the number of implementation sites, by district, planned to begin each year of the 5-Year Priority Implementation Plan.

**Figure 9: District Sites per Plan Year**

		District No.				
		1	2	3	4	5
Plan Year	1			2	5	1
	2	2	3			1
	3		1	1	1	1
	4		2	1	1	1
	5		2		1	

The 5-Year Priority Implementation Plan is designed to establish a proposed targeted schedule for project implementation that provides a comprehensive view of all of the identified projects. The purposeful simplicity of this design allows the decision makers to easily track the progress of each project and coordinate the scheduling of existing and new projects in the five year period. It is recommended that the Plan be utilized on a 5-year (or other reasonable timeframe) rotating cycle that allows for the ongoing implementation of all the infrastructural stormwater related priorities for Jackson County. It is also recommended that the plan be reevaluated annually, in coordination with budget planning, to take account of fluctuations in GOMESA revenues, other funding opportunities, changing infrastructure conditions, and other unforeseen circumstances.



The 5-Year Priority Implementation Plan is seen in Table 4 below. The table is delineated by quarter for the first five years of implementation. Each activity has a specific color associated with it. In instances where multiple activities are undertaken during the same quarter, both colors will be shown. The far right-hand column shows the conceptual opinion of cost for each project over the span of the five years. It is important to note that not all twenty-five projects will be completed within the initial five years, and as such, only the cost of the phase occurring within the five years is included in Table 4, total project cost can be found in Appendix I: Project Summary Sheets. It is also important to note that the timelines are anticipated timelines based upon best judgement and experience and that these activities may take more or less time than anticipated.



**Table 4- Proposed Five-Year Priority Action Plan For Implementation**

Year	Quarter	2018	2019				2020				2021				2022				2023		2023 Onward	Estimated Cost 2018 to 2023	Total Estimated Cost			
			3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2								
RD.05(4)	Lemoyne Boulevard Erosion Control	Drainage																					\$	389,000	\$	389,000
4.02	Windsor Port	Drainage																					\$	383,571	\$	383,571
4.06	Gulf Hills/Fairway Drive	Dredging																					\$	1,880,871	\$	1,880,871
4.05(a)	Porteaux Bay Drive	Dredging																					\$	300,000	\$	300,000
4.05(b)	Porteaux Bay Drive	Dredging																					\$	405,887	\$	405,887
3.07	Bayou Chicot	Dredging																					\$	2,284,418	\$	2,284,418
3.06	Point Clear	Dredging																					\$	4,939,582	\$	4,939,582
5.09	Davis Bayou	Dredging																					\$	5,175,381	\$	9,294,000
1.02	Helena Area	Drainage																					\$	2,303,918	\$	3,678,000
2.26	North Drive Canals	Dredging																					\$	675,293	\$	675,293
5.02	Ocean Beach - Center St to North St	Drainage																					\$	218,774	\$	218,774
2.03	Magnolia Street/Mayo Avenue	Drainage																					\$	1,520,327	\$	1,520,327
1.03	Dutch Bayou	Dredging																					\$	972,820	\$	972,820
2.02	Grierson Street	Drainage																					\$	486,540	\$	486,540
2.23	Grierson Street at Hwy 63	Drainage																					\$	304,712	\$	544,000
3.03	Shamrock Watershed	Drainage																					\$	299,898	\$	723,000
5.03	St. Andrews Drive	Drainage																					\$	503,868	\$	896,000
RD.03(4)	Porteaux Bay Subdivision	Drainage																					\$	40,978	\$	319,000
2.13	Bayou Avenue	Drainage																					\$	262,283	\$	459,000
2.21	Molden Street/Verlon Avenue	Drainage																					\$	604,572	\$	604,572
3.01	Ladner Street/College Park	Drainage																					\$	194,577	\$	942,000
4.13	Washington Avenue & Front Beach Drive	Drainage																					\$	52,474	\$	414,000
4.01	Cedar Grove	Drainage																					\$	282,829	\$	835,000
2.12	Evergreen Street	Drainage																					\$	109,170	\$	1,452,000
2.24	Gregory Street	Drainage																					\$	200,000	\$	771,000
Total Estimated Cost																						\$	24,791,741	\$	35,388,653	

Key: Study Design Permits Land Acquisition Implementation



PAGE INTENTIONALLY LEFT BLANK



Finally, while this Plan focuses on twenty-five short-term projects, there were sixty-eight projects identified in the *Jackson County Conceptual Drainage and Dredging Plan*. Appendix IV shows a table of the long-term projects from the JCCDDA Plan that will be addressed in future iterations of the Jackson County Short Term GOMESA Implementation Plan.



PAGE INTENTIONALLY LEFT BLANK



# Leveraging Opportunities

Numerous state and federal programs are in place that impact resource management along the Mississippi Gulf Coast that represent years of work, including public meetings and extensive stakeholder input. These efforts provide a strong backbone for implementation of a wide array of economic, ecosystem and coastal restoration, and infrastructure projects. Implementation of the Jackson County GOMESA Priority Implementation Plan will build on the work of previous efforts and partner, where applicable, with existing programs to maximize deliverables. A list of major existing and previous programs is summarized in Table 5 and then briefly described below. More in-depth information on each of these programs is contained in Appendix III.



**Table 5: Existing and Previous Coastal Programs on the Mississippi Gulf Coast**

Name	Program
CIAP	Coastal Impact Assistance Program
MsCIP	Mississippi Coastal Improvements Program
RESTORE Act	Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act
RESTORE Act: NFWF GEBF	National Fish and Wildlife Foundation (NFWF) Gulf Environmental Benefit Fund (GEBF)
GoCoast 2020	GoCoast 2020
OPA NRDA	Oil Pollution Act of 1990 (OPA) and corresponding Natural Resource Damage Assessment (NRDA)
Tidelands	Tidelands Trust Fund Program
GOMA	Gulf of Mexico Alliance
Gulf of Mexico Program	United States Environmental Protection Agency's Gulf of Mexico Program



Name	Program
CZMA	Coastal Zone Management Act of 1972
National Coastal Zone Management Program	National Coastal Zone Management Program authorized under the Coastal Zone Management Act of 1972
NERRS	National Estuarine Research Reserve System authorized under the Coastal Zone Management Act of 1972
CELCP	Coastal and Estuarine Land Conservation Program authorized under the Coastal Zone Management Act of 1972
USACE 219	United States Army Corps of Engineers, Section 219
EWP	Natural Resources Conservation Service (NRCS) Emergency Watershed Protection (EWP) Program

**Coastal Impact Assistance Program**

The Coastal Impact Assistance Program (CIAP) was signed into law by President Bush on August 8, 2005. CIAP provides federal grant funds, derived from federal offshore lease revenues, to oil producing states for conservation, protection, and restoration of coastal areas including wetlands; mitigation of damage to fish, wildlife, or natural resources; planning assistance and administrative costs of complying with these objectives; implementation of federally approved marine, coastal, or comprehensive conservation management plans; and mitigation of the impact of outer Continental Shelf activities through funding of onshore infrastructure projects and public service needs. Federal grant funds must be used to directly benefit an authorized use to conserve, restore, enhance, and protect renewable natural resources.

While GOMESA Phase II and CIAP will not overlap as CIAP has recently ended, GOMESA can be used to continue CIAP’s work, and potentially achieve broader and more comprehensive objectives and priorities. In fact, both CIAP and GOMESA are authorized for nearly identical purposes in their legislation. However, CIAP was more restrictive than GOMESA can be in the fact that with CIAP the State had to submit a CIAP Plan to BOEMRE (now BOEM) and the federal agency had to approve the Plan before any funds could be disbursed. Under GOMESA the State can decide which activities to fund without federal approval, helping to create a leaner and more autonomous Program allowing the states to focus on their identified priorities.

**Mississippi Coastal Improvements Program**

The Mississippi Coastal Improvement Program (MsCIP) is a comprehensive plan for coastal Mississippi consisting of structural, non-structural, and environmental projects. MsCIP addresses hurricane and storm damage reduction, salt water intrusion, shoreline erosion,



and fish and wildlife preservation. MsCIP is led by the U.S. Army Corps of Engineers Mobile District and includes over 35 projects or studies – in various stages of completion.

MsCIP presents a strong leveraging opportunity for GOMESA as there are multiple projects or studies in MsCIP still awaiting federal funding support for implementation.

### **Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act**

Following the Deepwater Horizon oil spill of 2010, the Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act) was passed. The RESTORE Act created the Gulf Coast Restoration Trust Fund which will receive 80% of the Clean Water Act civil and administrative penalties paid by BP and other companies responsible for the oil spill. 35% of the Trust Fund will be distributed directly to the Gulf Coast states in equal shares. 30% of the Trust Fund plus 50% of the interest earned will go to the Gulf Coast Ecosystem Restoration Council. 30% of the Trust Fund will go to the Gulf States based on their oil spill impacts. The remainder (5% plus 50% of the interest earned) will fund scientific research and monitoring through the Restoration Science Program and Centers of Excellence. Funding from criminal penalties was placed into the North American Wetlands Conservation Fund, the National Fish and Wildlife Foundation (available for each state), and the National Academy of Sciences while funds from the Natural Resources Damages was funneled to the NRDA Trustee Council.

RESTORE and its sister programs are very complimentary to GOMESA and provide places where the Mississippi GOMESA Phase II Program can create leveraging opportunities and fill funding and activities gaps left by RESTORE. Due to the nature in which RESTORE was established, it is much more restrictive than GOMESA can be. Projects must meet very strict criteria under RESTORE to possibly receive funding and the criterion varies by funding source and which “bucket” (or arm of the Trust Fund) the funding comes from. Numerous projects that have the potential to benefit the people of the State of Mississippi have been rejected as they do not meet the strict criteria set forth in RESTORE. As such, funding and project selection gaps have been left. The Mississippi GOMESA Phase II Program can be created to enable a broader range of activity types to be funded and implemented in order to help fill the gaps left by RESTORE.

### **GoCoast 2020**

In 2012, Governor Bryant created GoCoast 2020 to serve as the official advisory body to the Governor for the allocation of funds received by the State of Mississippi under the RESTORE Act. GoCoast 2020 is comprised of more than 100 business and community leaders and elected officials from the Mississippi Gulf Coast.



GoCoast 2020 formed committees to make recommendations to the Governor for initiatives and projects related to eco-restoration, economic development, small business, seafood, tourism, education, infrastructure, and workforce development – all eligible activities under the RESTORE Act.

GoCoast 2020 is complimentary to GOMESA as it can be used as a key document for drafting the Mississippi GOMESA Phase II Program and the Gulf Coast Plan. While GoCoast 2020 does not list specific projects that should be funded, it does provide priorities and criteria against which projects should be considered.

### **Tidelands Trust Fund Program**

The Tidelands Trust Fund Program (Tidelands) began in 1994 with a mission to balance the conflicting needs of upland private property owners and the general public with the use of public trust tidelands and submerged lands owned by the State of Mississippi. The Tidelands Program is administered by the Secretary of State's office and the Mississippi Department of Marine Resources. Tidelands is dedicated to the conservation, reclamation, and preservation of Mississippi's tidelands while enhancing public access areas.

GOMESA can complement Tidelands by providing additional funding to Tidelands, as needed or desired.

### **Gulf of Mexico Alliance**

The Gulf of Mexico Alliance (GOMA) is a partnership of the five Gulf States, federal agencies, academic organizations, businesses, and non-governmental organizations. GOMA focuses on the priorities of coastal resilience, data and monitoring, education and engagement, habitat resources, water resources, and wildlife and fisheries.

GOMA funds, typically with partners, research and projects in each of their priority areas. GOMESA can be used to fund research initiatives, if desired, by partnering with GOMA. GOMESA and GOMA also have the potential to partner to produce documents and workshops for those on the Gulf Coast. Some examples of documents produced by GOMA partnerships include Homeowner Handbooks, StormSmart Coasts, and the Gulf Regional Sediment Management Master Plan.

### **Gulf of Mexico Program**

The U.S. Environmental Protection Agency's Gulf of Mexico Program (GMP) works to protect, maintain, and restore the health and productivity of the Gulf of Mexico. The GMP's principles include committing to voluntary, non-regulatory solutions; taking action based on sound scientific and technical information and working with partners and the public; identifying priority areas and actions through state and coastal community leadership; and providing



federal leadership in research, monitoring, scientific analysis, and financial resources to support state and community action.

The GMP has developed multiple jurisdictional agreements with federal, state, and international partners. In cooperation with its partners, the GMP implements and funds projects to restore and protect Gulf of Mexico ecosystems. GOMESA, through the State of Mississippi, and GMP have the potential to work together to fund activities that would benefit the Mississippi Gulf Coast.

### **Coastal Zone Management Act of 1972**

The Coastal Zone Management Act of 1972 (CZMA) recognized the importance of meeting the challenge of continued growth in the coastal zone. CZMA is administered by the National Oceanic and Atmospheric Administration (NOAA) and the act provides for the management of the nation's coastal resources. The goal of CZMA is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." The CZMA outlines three national programs: the National Coastal Zone Management Program, the National Estuarine Research Reserve System, and the Coastal and Estuarine Land Conservation Program.

The **National Coastal Zone Management Program** comprehensively addresses the nation's coastal issues through a voluntary partnership between the federal government and coastal and Great Lakes states and territories. This program provides the basis for protecting, restoring, and responsibly developing our nation's diverse coastal communities and resources. The Mississippi GOMESA Phase II Program has the potential to partner with Mississippi Coastal Resources Management to fund activities.

The **National Estuarine Research Reserve System** (NERRS) is a network of 28 coastal sites designated to protect and study estuarine systems. NERRS are a partnership between NOAA and the coastal states where they are located. NOAA provides funding and national guidance while each site is managed daily by a lead state agency or university with input from local partners. Mississippi is home to the Grand Bay National Estuarine Research Reserve on the eastern side of the state. Grand Bay and GOMESA can partner on stewardship, research, training, and education activities.



The **Coastal and Estuarine Land Conservation Program (CELCP)** provides matching funds to state and local governments to purchase threatened coastal and estuarine lands or obtain conservation easements. The State of Mississippi has received five CELCP grants – the last one in 2010. While there are not many partnering opportunities between CELCP and GOMESA, the Mississippi GOMESA Phase II Program can help fill the funding gaps within CELCP and could allow another mechanism for the State of Mississippi to purchase these ecologically important areas for protection and restoration.



### **NRCS EWP**

The Emergency Watershed Protection (EWP) program through the U.S. Department of Agriculture’s Natural Resources Conservation Service (NRCS) can help communities address watershed impairments that pose imminent threats to lives and property. All projects undertaken through EWP, with the exception of the purchase of floodplain easements, must have a project sponsor. Sponsors must be a legal subdivision of the State, such as a city, county, general improvement district, or conservation district, or an Indian Tribe or Tribal organization. Through EWP, NRCS may pay up to 75 percent of the construction costs of emergency measures and 90 percent of projects within limited-resource areas as identified by U.S. Census data. The remaining costs must come from local sources and can be made in cash or in-kind services. All EWP projects must reduce threats to lives and property; be economically, environmentally, and socially defensible; be designed and implemented according to sound technical standards; and conserve natural resources.

### **Summary Relation to or Impact on GOMESA**

The table below summarized the relationship to or the impact of potential leveraging sources on GOMESA.



**Table 6: Relationship between GOMESA and potential leveraging sources**

Coastal Programs and Initiatives	Summary Relation to or Impact on GOMESA
<b>Coastal Impact Assistance Program (CIAP)</b>	<ul style="list-style-type: none"> <li>• A precursor program to GOMESA</li> <li>• Similar funding source and authorized uses</li> <li>• CIAP has ended, but GOMESA provides opportunity to continue work begun under CIAP</li> <li>• No federal approvals required under GOMESA as were required with CIAP</li> </ul>
<b>MS Coastal Improvements Program (MsCIP)</b>	<ul style="list-style-type: none"> <li>• Administered by USACE, Mobile</li> <li>• Structural, non-structural, environmental projects</li> <li>• Strong opportunity for leveraging GOMESA funds</li> </ul>
<b>RESTORE Act and related National Fish and Wildlife Foundation (NFWF) Gulf Environmental Benefit Fund (GEBF)</b>	<ul style="list-style-type: none"> <li>• Multiple funding categories with unique and differing criteria</li> <li>• Much more restrictive guidelines for project eligibility than with GOMESA</li> <li>• Leveraging opportunities exist with GOMESA due to gaps left between multiple RESTORE-approved projects</li> </ul>
<b>GoCoast 2020</b>	<ul style="list-style-type: none"> <li>• Created by Governor to advise in application of RESTORE funds</li> <li>• Comprised of more than 100 business and community leaders from Gulf Coast</li> <li>• Identifies priorities and criteria for evaluating project activities</li> </ul>
<b>Tidelands Trust Fund Program</b>	<ul style="list-style-type: none"> <li>• Administered by MS SOS and MDMR</li> <li>• Directed toward conservation, reclamation, and preservation of MS tidelands</li> <li>• Possible opportunity for GOMESA to fill gaps in Tidelands related project funding</li> </ul>
<b>Gulf of Mexico Alliance</b>	<ul style="list-style-type: none"> <li>• Research and education related to Gulf coastal issues</li> <li>• Alliance of five Gulf states</li> </ul>



Coastal Programs and Initiatives	Summary Relation to or Impact on GOMESA
<b>USEPA’s Gulf of Mexico Program</b>	<ul style="list-style-type: none"> <li>• Focused on protection and enhancement of the overall Gulf of Mexico</li> <li>• Heavily partnered with state, federal, and international entities</li> </ul>
<b>USACE 219</b>	<ul style="list-style-type: none"> <li>• Environmental infrastructure funding to help fill gaps left from GOMESA</li> <li>• GOMESA funds can be used for the non-federal share requirement (25%)</li> </ul>
<b>NRCS EWP</b>	<ul style="list-style-type: none"> <li>• Can be used following a natural disaster to restore problems in the watershed</li> <li>• GOMESA funds can be used for the non-federal share requirement (25%)</li> </ul>
<b>Coastal Zone Management Act of 1972 (CZMA)</b>	
<b>National Coastal Zone Management Program authorized under CZMA</b>	<ul style="list-style-type: none"> <li>• Vision and goals of Jackson County GOMESA Plan align with this national program and provide many points of connection, directly and indirectly</li> </ul>
<b>National Estuarine Research Reserve System authorized under CZMA</b>	<ul style="list-style-type: none"> <li>• Grand Bay National Estuarine Research Reserve a member of this network</li> <li>• GOMESA can partner with Grand Bay to fund activities as wanted</li> </ul>
<b>Coastal and Estuarine Land Conservation Program authorized under CZMA</b>	<ul style="list-style-type: none"> <li>• Provides matching funds for purchase of threatened land and conservation easements</li> <li>• Not many partnering opportunities with GOMESA, but latter can fill funding gaps</li> </ul>



# Recommended Next Steps

While completion of these individual improvements is important and needed to protect property and improve quality of life in Jackson County, a more holistic integrated watershed-based program management approach to promote the long term sustainability of these and other projects is also needed. Drainage and dredging projects are often only a "quick fix" for a reoccurring problem. Implementation of best management practices and other initiatives is needed to extend the life of the capital projects for as long as possible. This implementation plan should be considered as a comprehensive watershed-based stormwater management program that requires ongoing management and updates. To accomplish this the following initiatives are suggested in addition to the Short-Term Recommended Capital Improvement Projects.

Next Steps
<ul style="list-style-type: none"> <li>• Adopt the recommended 5-Year Priority Implementation Plan.</li> </ul>
<ul style="list-style-type: none"> <li>• Update and reevaluate program priorities annually for proper incorporation into the implementation schedule.</li> </ul>
<ul style="list-style-type: none"> <li>• Procure professional Program support services to assist in the implementation of The 5-Year Priority Implementation Plan and to provide overall watershed-based stormwater management Program support to the County.</li> </ul>
<ul style="list-style-type: none"> <li>• Identify and evaluate potential institutional solutions for sustainable funding, such as special assessment districts and drainage/taxation districts</li> </ul>
<ul style="list-style-type: none"> <li>• Identify and evaluate best management practices (BMPs) at the micro and Macro-level that can be implemented to promote project sustainability.</li> </ul>
<ul style="list-style-type: none"> <li>• Develop and execute strategies for legislative support at both the state and federal levels, including research, drafting legislative language, and preparation and support for state and federal legislative visits</li> </ul>
<ul style="list-style-type: none"> <li>○ Develop the necessary documentation to support the recommended 3-prong funding approach between NRCS, GOMESA, and USACE 219</li> </ul>
<ul style="list-style-type: none"> <li>• Establish JCBOS participation in the National Waterways Conference and the Floodplain Alliance for Insurance Reform (FAIR). FAIR is comprised of communities and business interests from coastal and riverine areas that advocate for balanced reforms recognizing the risks and benefits of floodplain occupancy.</li> </ul>



PAGE INTENTIONALLY LEFT BLANK



# Appendix I: Project Summary Sheets

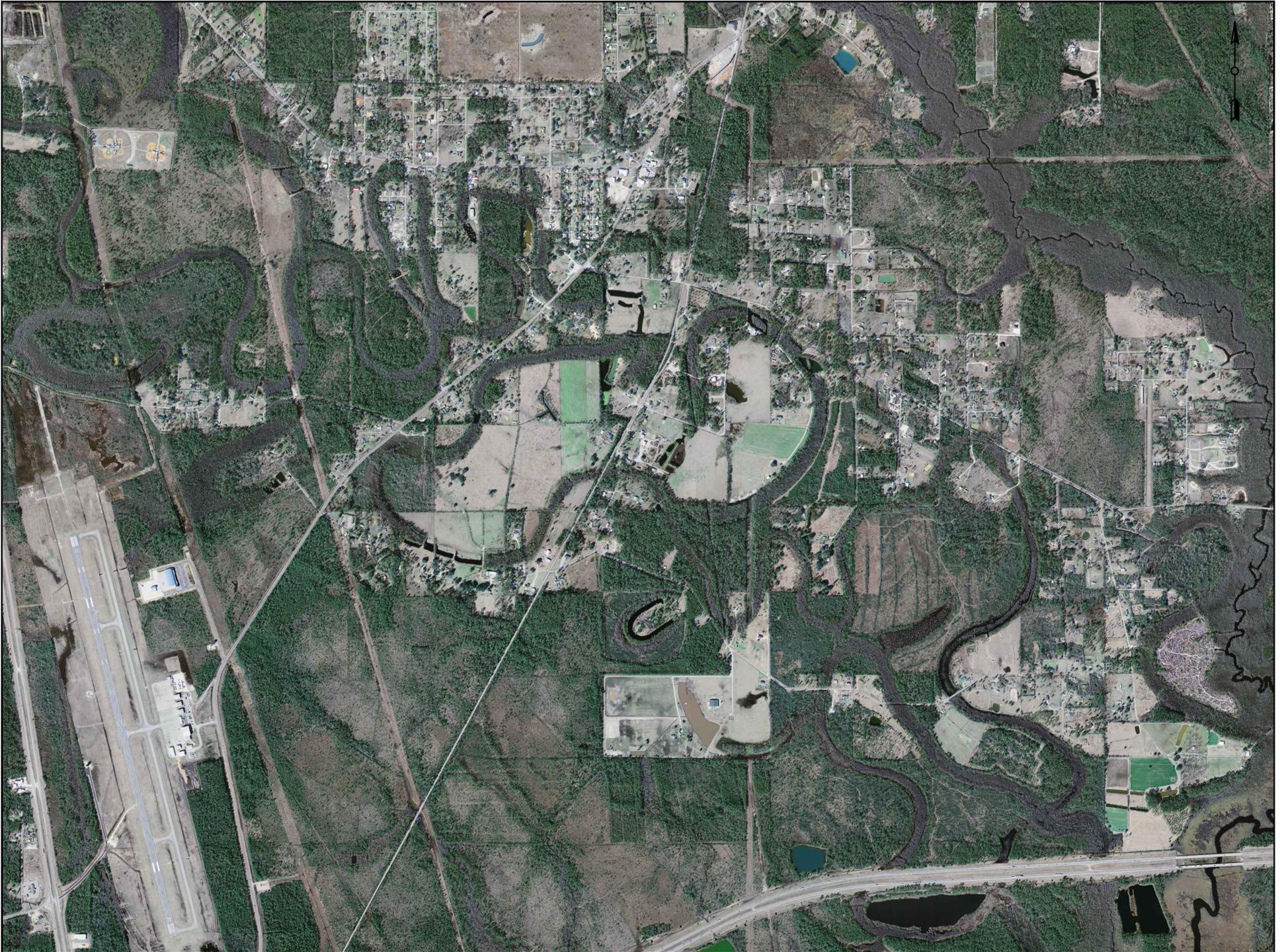
---



PAGE INTENTIONALLY LEFT BLANK

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	1.02
<b>Project Name</b>	Helena Area – Wildwood Road to Kings Road
<b>Location Description</b>	This site is bounded by Ashland Drive to the north, Wildwood Road to the west, and Interstate 10 south of Kings Road to the southeast.
<b>Project Coordinates</b>	30°28'14.61"N, 88°30'48.78"W
<b>HUC12</b>	031700080705
<b>Project Type</b>	Flood Proofing, Hydrologic Restoration
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Possible creation of retention/detention area Reduced flooding of homes in the area and downstream Possible creation of more permanent wetland Improved water quality downstream Reduced sedimentation
<b>Implementation Period</b>	Study: 1 year Design: 9 months Permits: 1 year Land Acquisition: 1 year Implementation: 1.5 years
<b>Suggested Implementation Timeline</b>	Begin project in quarter 3 of 2019.
<b>Estimated Project Cost</b>	Study Cost: \$250,000, Estimated Implementation Cost: \$3,677,700
<b>Location Problems</b>	<p>This area drains very slowly and experiences flooding problems. The area has many remnants of a meandering stream or bayou with many disconnected oxbow lakes. Crossings over old stream beds appear to be restrictive and the topography of the land does not lend itself to draining water quickly. The subdivision at the east end of Wildwood Road experiences flooding. A previous study by Neel-Schaffer determined that a railroad trestle near the intersection of Saracennia Road, Hans Road, and the railroad crossing should be enlarged; however, no proposed project thus far has addressed flooding concerns.</p>  <p>A resident of the area said his home has experienced numerous floods. His backyard borders the old stream bed which is in a low swampy area. He says his land was not always wet and could sometimes be traversed on foot without getting wet. Since 2012 his backyard floods more often with small rain events. Additionally, water has been flowing over Kings Road for 30 years during large storm events, but this has become more extreme since 2012. This site is very large and complex. Numerous potential causes of flooding were identified.</p>
<b>Recommended Solution</b>	Further study is recommended to comfortably identify the cause(s) of flooding and help identify feasible solutions.



<b>PROJECT:</b> 0017091.000	<b>DATE:</b> JAN - 2018	<b>SCALE:</b> 1" = 2000'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	<b>JACKSON CO BOARD OF SUPERVISORS</b> COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	<b>SHEET NAME:</b> SITE 1.02 - HELENA AREA (DRAINAGE)	<b>SHEET NUMBER:</b> 1.02.01
--------------------------------	----------------------------	-----------------------------	---	---	--	---------------------------------

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	1.03
<b>Project Name</b>	Dutch Bayou – Moss Point North of Robertson Lake
<b>Location Description</b>	This location is located south of Dutch Bayou Road, west of Highway 63 along a leg of Dutch Bayou, north of Robertson Lake. The mouth of Dutch Bayou is located on the north shore of the Escatawpa River between Highway 613 and Highway 63. The main channel extends north to I-10 and there are two minor channels – one minor channel branching off to the east and one minor channel branching off to the west that extends past Dutch Bayou Road. Dutch Bayou has an open water main channel surrounded by marshy areas on either side of the channel. This project is connected to project site 2.19 – Elder Ferry Road – which will be addressed in long-term projects.
<b>Project Coordinates</b>	30°25'49.27"N, 88°32'2.28"W
<b>HUC12</b>	031700080705
<b>Project Type</b>	Channel Dredging and Restoration Dredging
<b>Number of residences or businesses benefitted</b>	51-75
<b>Anticipated Project Benefits</b>	Restore channel to natural depths Remove contaminated sediment
<b>Implementation Period</b>	Study: not required Design: 6 months Permits: 1 year Land Acquisition: not required Implementation: 1 year
<b>Suggested Implementation Timeline</b>	Begin project in quarter 3 of 2020.
<b>Estimated Project Cost</b>	Planned Dredging Cost: \$973,000
<b>Location Problems</b>	Residents in the surrounding neighborhoods complain of poor drainage, and request that the bayou be dredged to remove excess sediment from highway construction in the 1970's and 1980's. Current depths in this bayou are around two feet.  The JCBO is currently pursuing funding for a project that would dredge the main channel from the mouth to the bridge at Dutch Bayou Rd, the east minor channel completely, and the west minor channel from its mouth to the bridge at Dutch Bayou Rd.
<b>Recommended Solution</b>	Dredging and Removal of excess vegetation/debris is recommended in the channels between Dutch Bayou Rd and I-10 in addition to the already in place dredging project. Due to the presence of submerged aquatic vegetation (SAVs) found during the dredging permitting process, currently dredging is not a feasible option. As such, further investigation is recommended to produce other feasible alternatives in addition to dredging in Dutch Bayou. If, upon further inspection, SAVs are no longer present, the planned dredging project is recommended.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 500'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

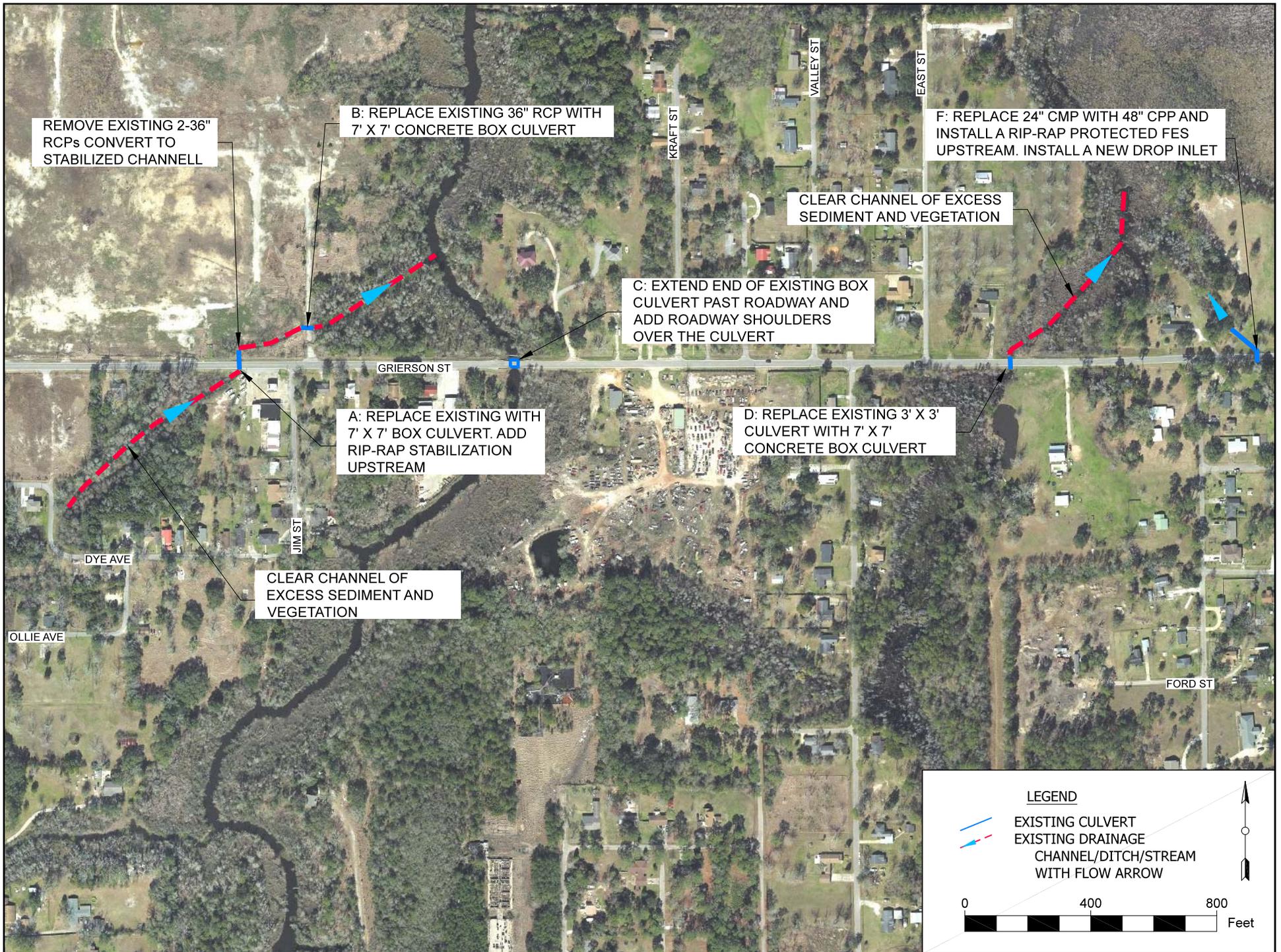
JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:  
SITE 1.03 - DUTCH BAYOU - MOSS POINT  
NORTH OF ROBERTSON LAKE

SHEET NUMBER:  
1.03.01

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	2.02
<b>Project Name</b>	Grierson Street – Moss Point
<b>Location Description</b>	The bounds of this site are Kreole Avenue to the west and Larimore Street to the east. This site is centered on Grierson Street on both the north and south sides. This site can be bundled with site 2.23 (Grierson Street at Highway 63) and site 2.24 (Gregory Street).
<b>Project Coordinates</b>	30°24'48.42"N, 88°29'31.51"W
<b>HUC12</b>	031700080705
<b>Project Type</b>	Flood Proofing, Bank Stabilization
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Reduced sedimentation by armoring banks Improved water quality downstream Prevention of loss of personal property and roadways Reduced flooding of homes in the area
<b>Implementation Period</b>	Begin project in quarter 3 of 2019.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 9 months Permits: 6 months Land Acquisition: 6 months Implementation: 6 months
<b>Estimated Project Cost</b>	\$487,000
<b>Location Problems</b>	<p>This area has numerous flooding problems. Severe erosion, bank sloughing, extreme ponding, and heavy debris and vegetation can be seen when driving around this area. A resident said the Army Corps of Engineers hired contractors in 2015 to help clean out the stream, but all they did was rake out debris in the channel and the project did not fix any flooding issues in the area. The resident's property borders the stream and he has installed makeshift bulkheads to try to prevent his property from falling</p>  <p>into the stream. The other side of the stream is unprotected and it is slowly washing away. Residents between Jim Street and Kreole Avenue flood often.</p>
<b>Recommended Solution</b>	This project includes new and upgraded box culverts, upgrading existing drainage piping, conversion of drainage piping to an open channel, and removal of vegetation/debris.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 400'



2510 14th St, Ste 1200  
 GULFPORT, MS 39501  
 228-206-1115

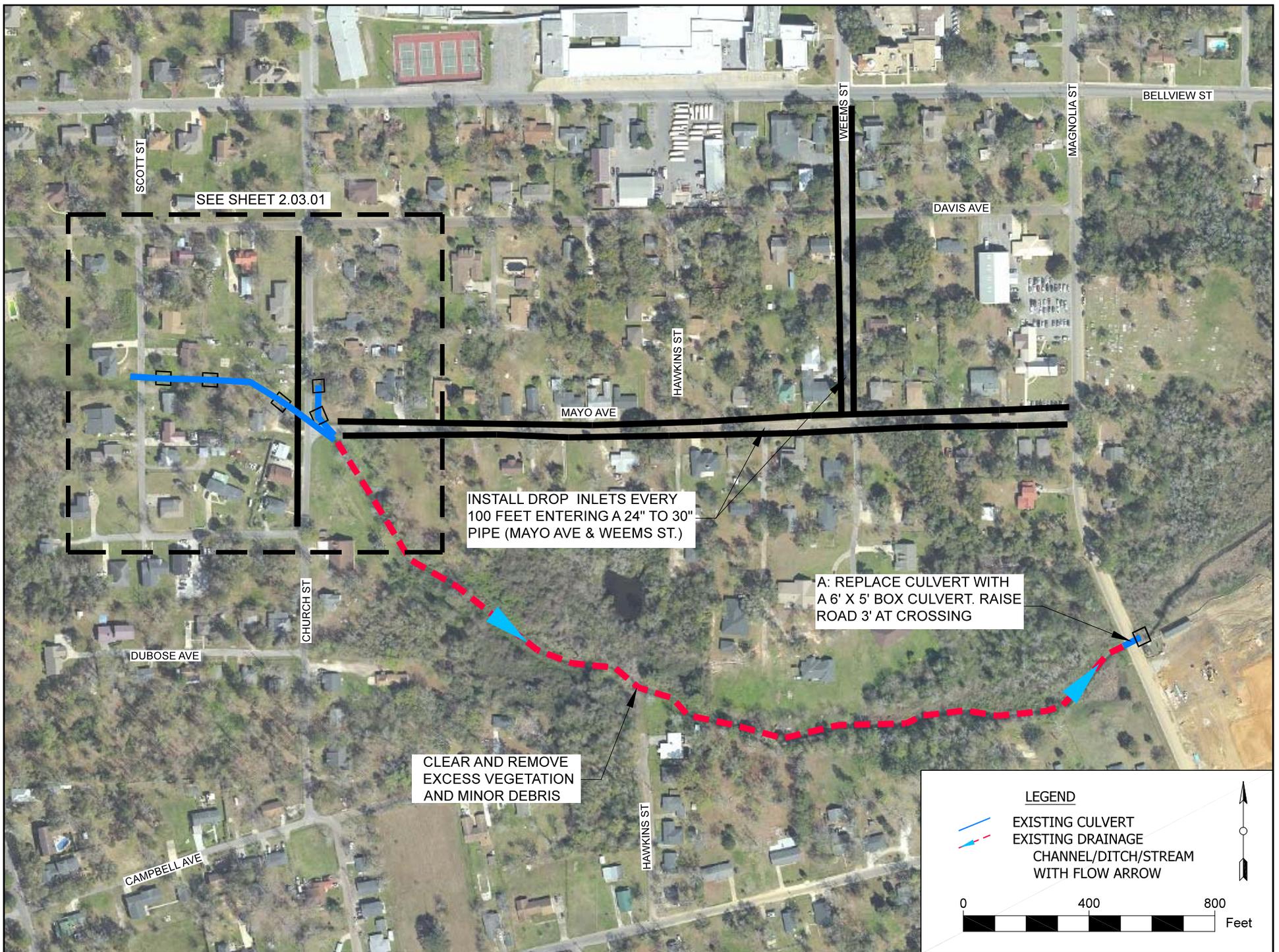
JACKSON CO BOARD OF SUPERVISORS  
 COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:  
SITE 2.02 - GRIERSON ST (DRAINAGE)

SHEET NUMBER:  
2.02.06

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	2.03
<b>Project Name</b>	Magnolia Street and Mayo Avenue – Moss Point
<b>Location Description</b>	The primary bounds for this site are Church Street to the west, Magnolia Street to the east, Mayo Avenue to the north and Campbell/Barnett Streets to the south. However, the study area extends along the creek west of Church Street to Scott Street.
<b>Project Coordinates</b>	30°24'37.62"N, 88°32'57.17"W
<b>HUC12</b>	031700080705
<b>Project Type</b>	Flood Proofing, Hydrologic Restoration
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Improved runoff times for low lying areas Reduced flooding of homes in area Improved retention/detention of area through clearing waterways Reduce flooding of roads to improve access to School
<b>Implementation Period</b>	Begin project in quarter 3 of 2019.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 1 year Permits: 1 year Land Acquisition: 1 year Implementation: 1 year
<b>Estimated Project Cost</b>	\$1,520,000
<b>Location Problems</b>	<p>Magnolia St. floods near the school during moderate rains. Work has been done previously to clean out the ditch by Mayo Avenue, but only debris and vegetation was removed – the ditch was not deepened enough to allow for in-stream storage. Numerous places in site 2.03 experience permanent ponding problems as well as problems with erosion, excess vegetation, and debris in the channel.</p> 
<b>Recommended Solution</b>	This project includes addition of a box culvert, upgrading existing drainage piping, and removal of vegetation/debris.



INSTALL DROP INLETS EVERY 100 FEET ENTERING A 24" TO 30" PIPE (MAYO AVE & WEEMS ST.)

A: REPLACE CULVERT WITH A 6' X 5' BOX CULVERT. RAISE ROAD 3' AT CROSSING

CLEAR AND REMOVE EXCESS VEGETATION AND MINOR DEBRIS

**LEGEND**

-  EXISTING CULVERT
-  EXISTING DRAINAGE CHANNEL/DITCH/STREAM WITH FLOW ARROW

0 400 800 Feet



PROJECT: G016045.000	DATE: DEC - 2016	SCALE: 1" = 400'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	JACKSON CO BOARD OF SUPERVISORS COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME: SITE 2.03 - MAGNOLIA ST & MAYO AVE (DRAINAGE)	SHEET NUMBER: 2.03.05
-------------------------	---------------------	---------------------	--	--	---	--------------------------



**LEGEND**

-  EXISTING CULVERT
-  EXISTING DRAINAGE CHANNEL/DITCH/STREAM WITH FLOW ARROW

0 100 200 Feet

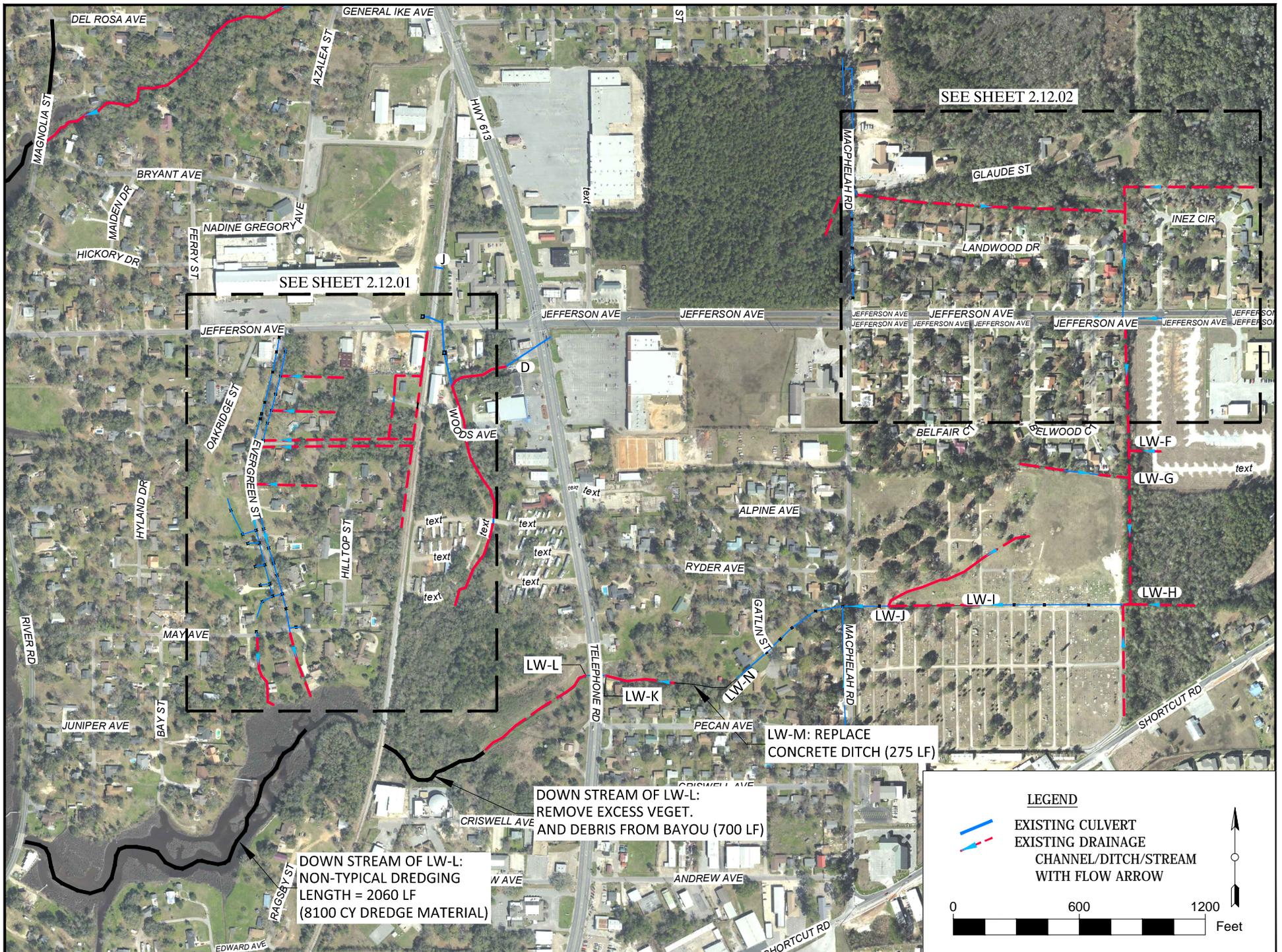


PROJECT: G016045.000	DATE: DEC - 2016	SCALE: 1" = 100'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	<b>JACKSON CO BOARD OF SUPERVISORS</b> COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME: SITE 2.03 - MAGNOLIA ST & MAYO AVE (DRAINAGE)	SHEET NUMBER: 2.03.06
-------------------------	---------------------	---------------------	--	---	--	--------------------------



**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	2.12
<b>Project Name</b>	Evergreen Street – Moss Point
<b>Location Description</b>	The location of this site is just inland from Gurlie Bayou, off Jefferson Avenue west of Main Street. This site includes areas adjacent to the railroad line on the east and west sides. It also includes the natural channel that enters Gurlie Bayou just north of Criswell Avenue and extends northeast to north of Jefferson Street and Inez Circle.
<b>Project Coordinates</b>	30°23'2.53"N, 88°32'10.85"W
<b>HUC12</b>	031700060303
<b>Project Type</b>	Flood Proofing, Restoration Dredging, Bank Stabilization
<b>Number of residences or businesses benefitted</b>	51-75
<b>Anticipated Project Benefits</b>	Reduced flooding of homes Reduced sedimentation Improved water quality downstream
<b>Implementation Period</b>	Begin project in quarter 3 of 2022.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 1.5 years Permits: 1 year Land Acquisition: 1.5 years Implementation: 2 years
<b>Estimated Project Cost</b>	\$1,452,000
<b>Location Problems</b>	<p>This area has a history of drainage problems, according to the City of Pascagoula engineer. Currently, water flows to Gurlie Bayou through two main sources – a stormwater ditch running north and south semi-parallel to Highway 613 and a natural channel which crosses under the railroad to enter the Bayou. Water is forced to flow along the railroad to an undersized opening under the railroad where it can enter the Bayou. Along with drainage ditches in this area, excess vegetation, sediment, and debris can be seen. Additionally, a privately-owned retaining wall close to Gurlie Bayou is leaning severely over the channel and should be replaced before failure, causing damage to the private property and blocking water flow into the Bayou. A concrete lined drainage channel is falling apart and becoming overgrown with vegetation.</p> 
<b>Recommended Solution</b>	This project includes the addition of a box culvert, installation of drop inlets, replacement of a retaining wall, and removal of vegetation/debris.



PROJECT:  
G016045.000

DATE:  
DEC - 2016

SCALE:  
1" = 600'

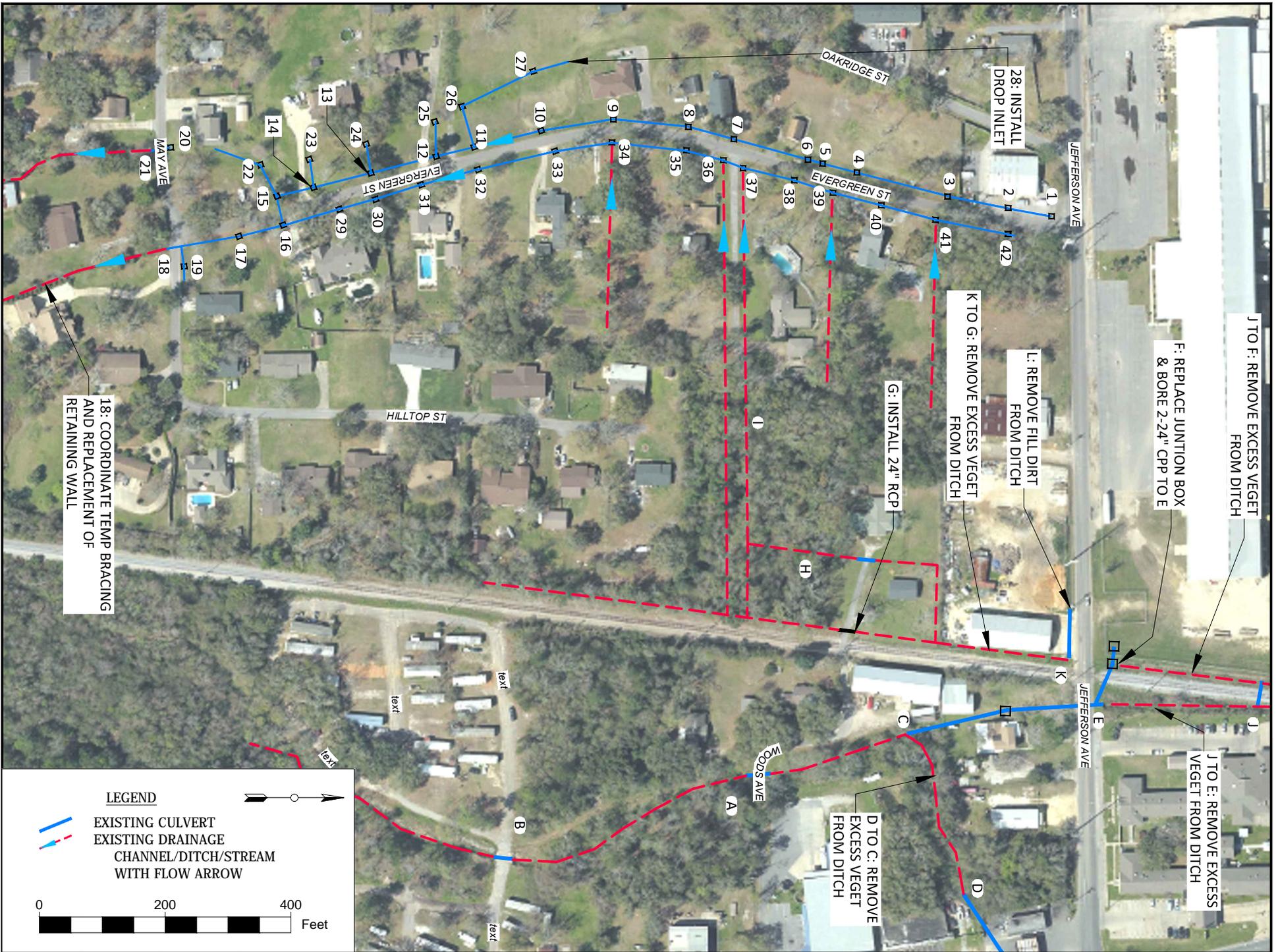
 2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:

SITE 2.12 - EVERGREEN ST

SHEET NUMBER:  
2.12.011



18: COORDINATE TEMP BRACING AND REPLACEMENT OF RETAINING WALL

**LEGEND**

- EXISTING CULVERT
- EXISTING DRAINAGE CHANNEL/DITCH/STREAM WITH FLOW ARROW

0 200 400 Feet

PROJECT: G016045.000	DATE: DEC - 2016	SCALE: 1" = 200'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	<b>JACKSON CO BOARD OF SUPERVISORS</b> COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME: SITE 2.12 - EVERGREEN ST	SHEET NUMBER: 2.12.012
-------------------------	---------------------	---------------------	--	---	---	---------------------------



LW-C TO LW-D: REPLACE EXIST 36" RCP WITH 7'X4' BOX CULVERT

**LEGEND**

-  EXISTING CULVERT
-  EXISTING DRAINAGE CHANNEL/DITCH/STREAM WITH FLOW ARROW

0 200 400 Feet



PROJECT:  
G016045.000

DATE:  
DEC - 2016

SCALE:  
1" = 200'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:

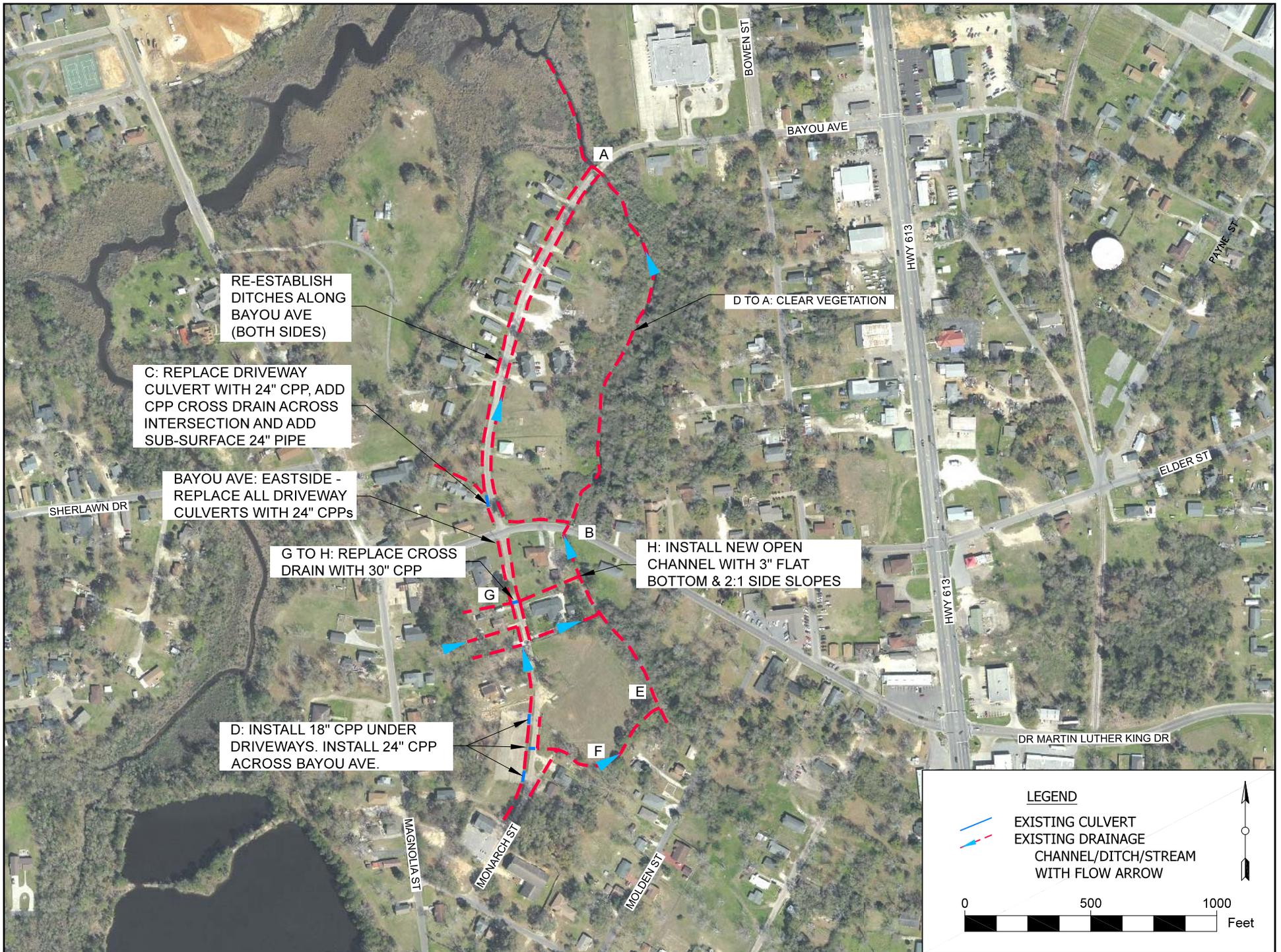
SITE 2.12 - EVERGREEN ST

SHEET NUMBER:

2.12.013

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	2.13
<b>Project Name</b>	Bayou Avenue – Moss Point
<b>Location Description</b>	This site is located along Bayou Avenue between Bowen Street and Pearl Avenue and experiences numerous flooding problems. This site can be bundled with sites 2.21 and 2.04. Site 2.21 drains into this site, and site 2.04 merges with this site and then flows into Rhodes Bayou.
<b>Project Coordinates</b>	30°24'12.46"N, 88°32'36.42"W
<b>HUC12</b>	031700080705
<b>Project Type</b>	Flood Proofing, Restoration Dredging, Hydrologic Restoration
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Reduced flooding of homes in the area Improved water quality downstream Reduced sedimentation
<b>Implementation Period</b>	Begin project in quarter 3 of 2021.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 6 months Permits: 6 months Land Acquisition: 1 year Implementation: 1 year
<b>Estimated Project Cost</b>	\$459,000
<b>Location Problems</b>	<p>This site experiences flooding. In 2015 the County planned to clear out vegetation from the bayous around a large pond located northeast of the intersection of Prentiss Avenue and Magnolia Street, but the landowner of the large pond would not agree to the work because he was afraid the clearing would result in excess water entering his pond, causing more flooding on his property. Interviews with the Supervisor indicated that most of the area is overgrown with vegetation and lacking driveway culverts which prevents water from flowing into the bayou. Residents in the area say that their properties flood frequently during rain.</p> 
<b>Recommended Solution</b>	This project includes dredging of the bayou, installation of new open channel, replacement/installation of driveway culverts, and removal of vegetation/debris.



**LEGEND**

-  EXISTING CULVERT
-  EXISTING DRAINAGE CHANNEL/DITCH/STREAM WITH FLOW ARROW

0 500 1000 Feet

PROJECT:  
G016045.000

DATE:  
DEC - 2016

SCALE:  
1" = 500'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

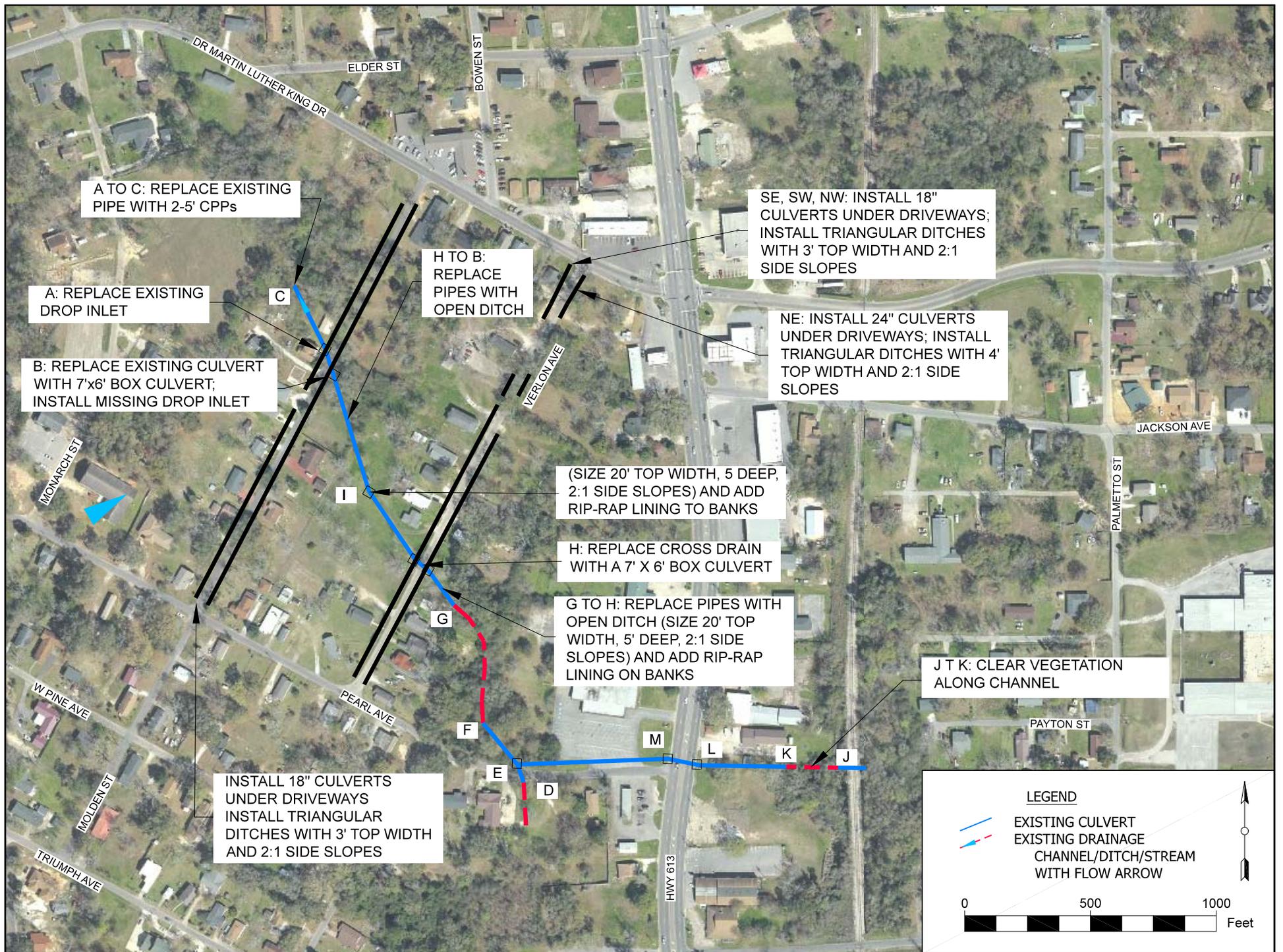
SHEET NAME:

SITE 2.13 - BAYOU AVE (DRAINAGE)

SHEET NUMBER:  
2.13.006

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	2.21
<b>Project Name</b>	Molden Street and Verlon Avenue – Moss Point
<b>Location Description</b>	This site is located along Molden Street and Verlon Avenue in downtown Moss Point. This site is bounded by the railroad tracks to the east, site 2.13 to the north west, and Pearl Avenue to the south. As this site drains into site 2.13, these two sites can be bundled together.
<b>Project Coordinates</b>	30°24'3.47"N, 88°32'31.17"W
<b>HUC12</b>	031700080705
<b>Project Type</b>	Flood Proofing, Bank Stabilization
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Reduced flooding of homes in the area Reduced sedimentation Improved water quality downstream
<b>Implementation Period</b>	Begin project in quarter 3 of 2021.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 1 year Permits: 6 months Land Acquisition: 1 year Implementation: 1 year
<b>Estimated Project Cost</b>	\$605,000
<b>Location Problems</b>	 <p>This area has a long history of drainage/flooding problems. Discussions with the Supervisor suggest that the drainage ditches are overgrown with vegetation, have large amounts of debris in them, and experience sedimentation issues. The problems mentioned by the supervisor were field-verified.</p>
<b>Recommended Solution</b>	This project includes upgrading existing drainage piping, installation of new open channel, replacement/installation of driveway culverts, and removal of vegetation/debris.



PROJECT:  
G016045.000

DATE:  
DEC - 2016

SCALE:  
1" = 500'

 2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

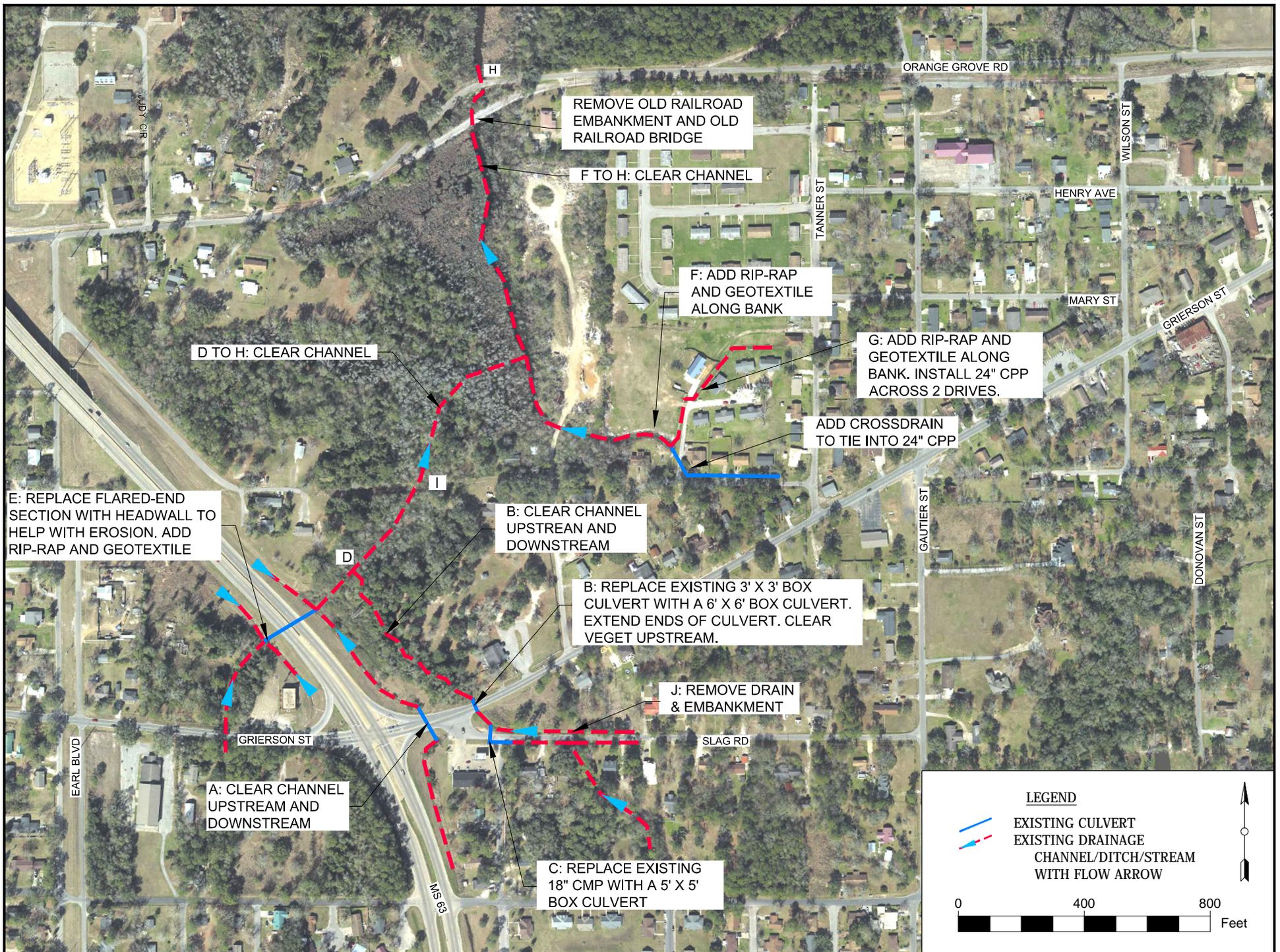
JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:  
SITE 2.21 - MOLDEN ST / VERLON AVE  
(DRAINAGE)

SHEET NUMBER:  
2.21.004

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	2.23
<b>Project Name</b>	Grierson Street at Highway 63 – Moss Point
<b>Location Description</b>	This site is located at the intersection of Grierson Street and Highway 63. The site is bounded on the south side by Slag Road, Highway 63 on the east side, Tanner Street on the west, and the Escatawpa River on the north. Site 2.24 is directly south of this site and a portion of the runoff from site 2.24 flow into site 2.23 south of Slag Road.
<b>Project Coordinates</b>	30°24'30.52"N, 88°30;36.01"W
<b>HUC12</b>	031700080705
<b>Project Type</b>	Flood Protection, Hydrologic Restoration, Bank Stabilization
<b>Number of residences or businesses benefitted</b>	51-75
<b>Anticipated Project Benefits</b>	Restore natural hydrologic connectivity by removing abandoned railway bed Improve water quality by removing homemade bulkheads Reduced sedimentation Reduced flooding of homes and businesses in area
<b>Implementation Period</b>	Begin project in quarter 3 of 2020.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 1 year Permits: 1.5 years Land Acquisition: 2 years Implementation: 1 year
<b>Estimated Project Cost</b>	\$544,000
<b>Location Problems</b>	 <p>This area has a history of drainage problems. Drainage ditches in this site are heavily vegetated, filled with debris, and have sediment deposits. Multiple culverts are damaged, severely restricting flow. To prevent further erosion, residents in a subdivision west of Tanner Street have used corrugated metal sheets and railroad crossties to line the drainage ditch. An old, abandoned rail line still crosses the channel, further restricting flow.</p>
<b>Recommended Solution</b>	This project includes the addition of box culverts, slope stabilization, upgrading drainage piping, removal of vegetation/debris, and removal of railroad embankment and bridge. This project includes components within the MDOT ROW and will require MDOT maintenance.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 400'

2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:  
SITE 2.23 - GRIERSON @ HWY 63  
(DRAINAGE)

SHEET NUMBER:  
2.23.005

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	2.24
<b>Project Name</b>	Gregory Street – Moss Point
<b>Location Description</b>	This site is located along Gregory Street in Moss Point and has a long history of drainage/flooding problems.
<b>Project Coordinates</b>	30°24'22.06"N, 88°29'48.04"W
<b>HUC12</b>	031700080705
<b>Project Type</b>	Flood Proofing, Bank Stabilization, Channel Realignment
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Reduced sedimentation Improved water quality downstream Reduced flooding of homes and businesses in the area
<b>Implementation Period</b>	Begin project in quarter 3 of 2020.
<b>Suggested Implementation Timeline</b>	Study: 2-3 years Design: 6 months Permits: 6 months Land Acquisition: 1 year Implementation: 1 year
<b>Estimated Project Cost</b>	Study: \$100,000 , Estimated Implementation Cost: 570,600
<b>Location Problems</b>	<p>This area has a long history of drainage and flooding problems. Seymour Engineering is extremely knowledgeable of this location and said that all of the bayous coming into Moss Point from the northern side (south side of the Escatawpa River) could be dredged to improve drainage for this area. East of Highway 63 and north of Highway 90 there are a couple of bayous that were included in a NRDC grant application to install channel improvements to help improve drainage in this area. The NRDC application was not funded. Residents in the area around Kinross Street say they do not experience much flooding in their houses except during hurricanes. There is heavy vegetation and debris in the drainage ditches, leading to reduced flow.</p> 
<b>Recommended Solution</b>	Further study is recommended to comfortably identify the cause(s) of flooding and help identify feasible solutions.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 800'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

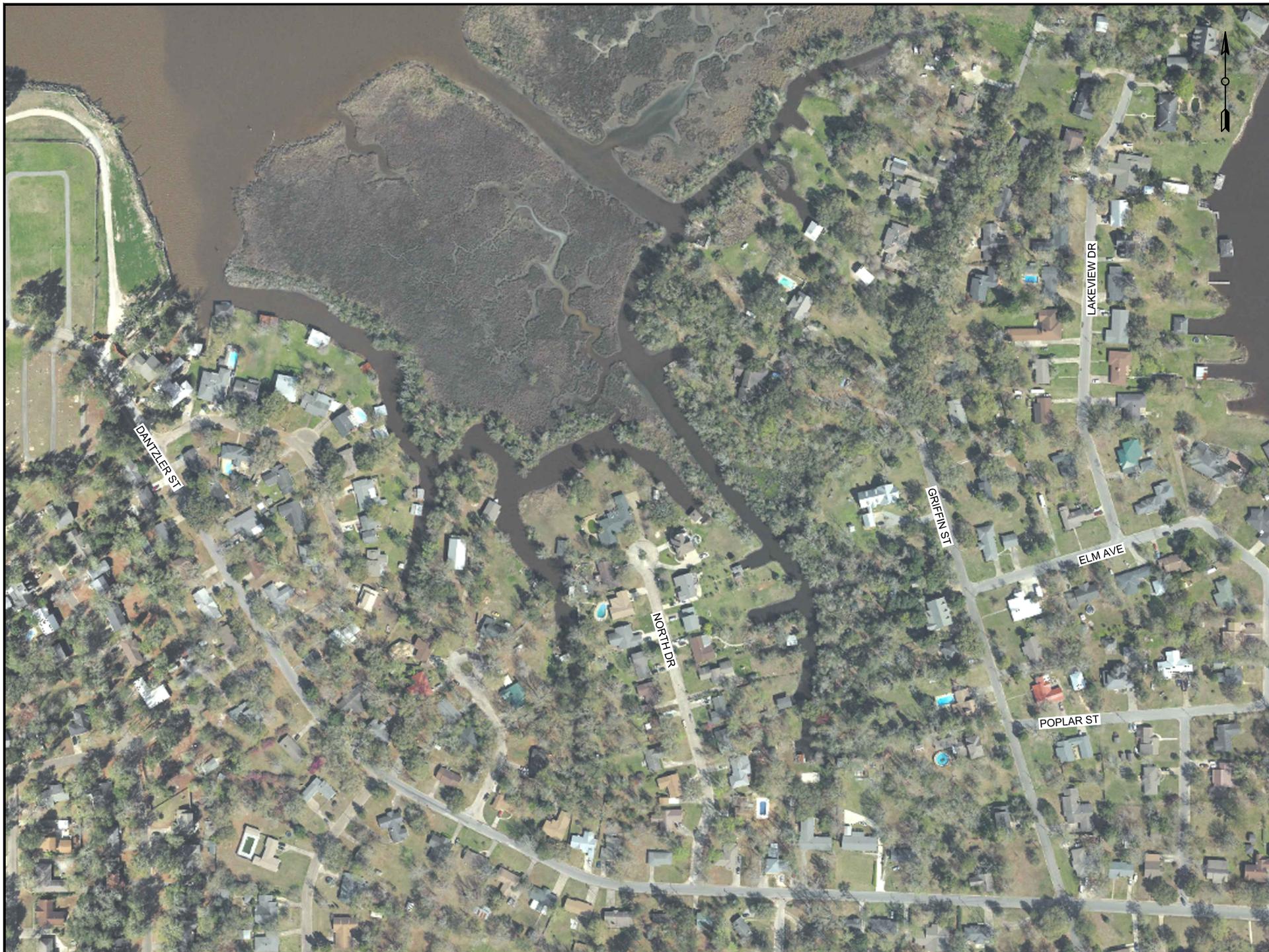
SHEET NAME:

SITE 2.24 - GREGORY STREET  
EAST SIDE OF HWY 63

SHEET NUMBER:  
2.24

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	2.26
<b>Project Name</b>	North Drive Canals
<b>Location Description</b>	This site is located along bayous around North Drive, which is in Sawmill Point subdivision. This site includes bayous between Dantzler Street and Griffin Street in Moss Point.
<b>Project Coordinates</b>	30°25'4.68"N, 88°33'52.05"W
<b>HUC12</b>	031700060303
<b>Project Type</b>	Restoration Dredging
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Restore bayou to historic depths Improve drainage in upland areas
<b>Implementation Period</b>	Begin project in quarter 3 of 2019.
<b>Suggested Implementation Timeline</b>	Study: not required Design: completed Permits: 6 months Land Acquisition: not required Implementation: 6 months
<b>Estimated Project Cost</b>	Dredging Cost: \$400,000
<b>Location Problems</b>	 <p>The canals in this area are very shallow which prevents water-front residents from accessing the Pascagoula River except during very high tides. The shoreline is protected by bulkheads where houses are located. Between the main eastern channel and the main western channel is a marshy area that must be protected. However, this is the only place marsh is visible in this site. It appears as if the North Drive Canals do not receive much stormwater discharge which prevent self-flushing of the system.</p>
<b>Recommended Solution</b>	This project focuses on dredging approximately 20,800 cubic yards of material from the North Drive Canals. However, due to the presence of submerged aquatic vegetation (SAVs) found during the dredging permitting process, currently dredging is not a feasible option. As such, further study is recommended to produce other feasible alternatives in addition to dredging in Dutch Bayou.



PROJECT: G016045.000  
DATE: JAN - 2017

SCALE: 1" = 300'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME: SITE 2.26 - NORTH DRIVE CANALS - MOSS POINT

SHEET NUMBER: 2.26.01

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	3.01
<b>Project Name</b>	Ladnier Street/College Park – Gautier
<b>Location Description</b>	The College Park Subdivision is on the east and west sides of Ladner St, and is bounded on the north by the railroad tracks and on the south by Graveline Rd.
<b>Project Coordinates</b>	30°22'42.30"N, 88°38'49.56"W
<b>HUC12</b>	031700090701 (west) and 031700060303 (east)
<b>Project Type</b>	Flood Proofing, Hydrologic Restoration, Bank Stabilization
<b>Number of residences or businesses benefitted</b>	100+
<b>Anticipated Project Benefits</b>	Reduced flooding of homes and businesses in the area Improved water quality downstream
<b>Implementation Period</b>	Begin project in quarter 3 of 2021.
<b>Suggested Implementation Timeline</b>	Study: 1-2 years Design: 6 months Permits: 6 months Land Acquisition: 1 year Implementation: 2 years
<b>Estimated Project Cost</b>	Study Cost: \$100,000, Estimated Implementation Cost: \$841,900
<b>Location Problems</b>	 <p>This area experiences moderate flooding due to inadequate drainage systems, some ditches being heavily vegetated and silted in, and piping issues. In 2015 meetings with Gautier city officials, they indicated that vegetation was recently cleared from major drainage ways but that the pipes and structures needed to be evaluated. In 2017, the City of Gautier replaced a large CMP in Bacot Park off of Ladnier Street as it had previously collapsed and needed to be replaced. East of Ladnier Street, there is a lack of drainage structures and pipes which seems to be the major cause of flooding in the area. However, a resident of the neighborhood said that Ladnier Street and the sidewalks on the eastern side of the street are regularly overtaken by stormwater. He also stated that Northbrook Drive experiences bad flooding caused by no drainage pipes on the street.</p>
<b>Recommended Solution</b>	Due to the complexity of the site, further study is recommended to comfortably identify the exact cause(s) of flooding and help identify feasible solutions.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 900'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:

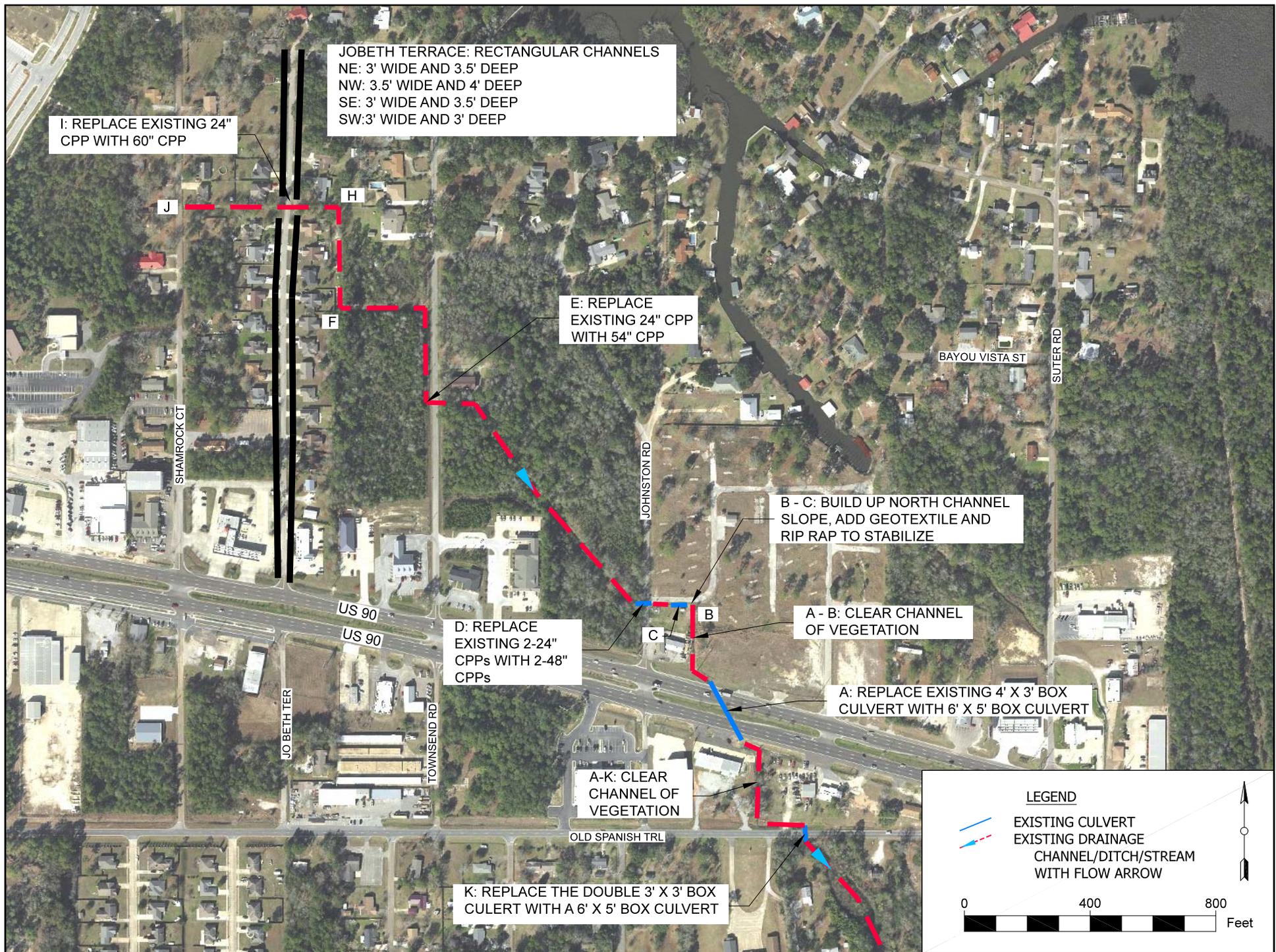
SITE 3.01 - LADNIER ST / COLLEGE PARK  
WATERSHED (DRAINAGE)

SHEET NUMBER:

3.01

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	3.03
<b>Project Name</b>	Shamrock Watershed (under Highway 90) – Gautier
<b>Location Description</b>	This site focuses on the Shamrock Subdivision, north of Highway 90 from Shamrock Court on the west to Johnston Road on the east. As this site is north of and flows into site 3.10 (Bayou Piere/Italian Isle Watershed), these projects can be bundled, if desired. However site 3.03 is a drainage site while site 3.10 is a dredging site.
<b>Project Coordinates</b>	30°23'24.78"N, 88°38'13.80"W
<b>HUC12</b>	031700060303
<b>Project Type</b>	Flood Proofing, Bank Stabilization
<b>Number of residences or businesses benefitted</b>	51-75
<b>Anticipated Project Benefits</b>	Reduce flooding of homes and businesses in the area Reduced sedimentation from stabilized ditch banks reducing degradation Improved water quality downstream
<b>Implementation Period</b>	Begin project in quarter 3 of 2020.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 6 months Permits: 1 year Land Acquisition: 2 years Implementation: 1.5 years
<b>Estimated Project Cost</b>	\$723,000
<b>Location Problems</b>	<p>This area experiences moderate flooding apparently due to inadequate drainage systems and some ditches being heavily vegetated and silted in. In a 2015 meeting with Gautier city officials, they revealed that Gautier Utilities had recently cleaned out vegetation from major ditches between Townsend Road to Johnston Road, and south of Highway 90 across Old Spanish Trail to the bayou. Gautier Utilities also relocated a ditch that used to flow around an Auto Shop at the corner of Johnston and Highway 90 that would flood frequently due to silted in ditches and pipe inverts. Jo Beth Terrace has drainage issues due to additional silting in of the drainage ditches and pipe inverts. Additionally, the pipe under Highway 90 that drains Shamrock Subdivision has problems with pipe invert elevations that need to be corrected.</p> 
<b>Recommended Solution</b>	This project includes replacing culverts with rectangular channels, upgrading an existing box culvert (under Hwy 90), upgrading existing drainage piping, removing vegetation/debris, and slope repairs/stabilization. This project includes components within the MDOT ROW, which must be maintained by MDOT.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 400'



2510 14th St, Ste 1200  
 GULFPORT, MS 39501  
 228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
 COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

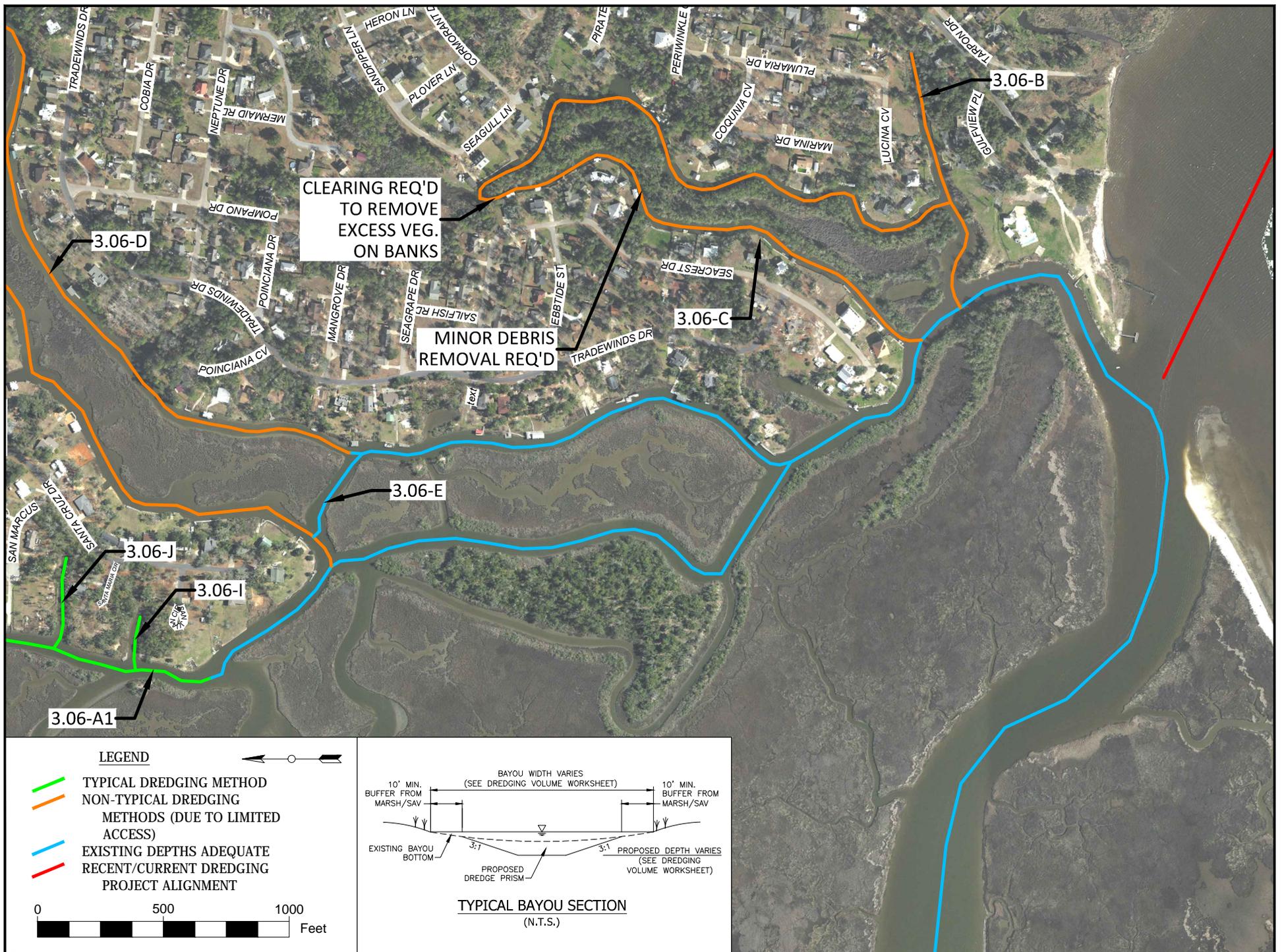
SHEET NAME:

SITE 3.03 - SHAMROCK WATERSHED  
 (UNDER HWY 90) (DRAINAGE)

SHEET NUMBER:  
3.03.006

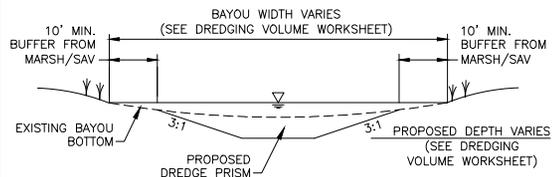
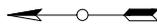
**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	3.06
<b>Project Name</b>	Point Clear Watershed
<b>Location Description</b>	This site includes all of the bayous behind Point Clear Subdivision, which are considered part of the Graveline Bayou system. The banks along this bayou are a mix of timber bulkhead, natural shoreline, and marsh grass.
<b>Project Coordinates</b>	30°22'14.43"N, 88°40'5.69"W
<b>HUC12</b>	031700090701
<b>Project Type</b>	Restoration Dredging
<b>Number of residences or businesses benefitted</b>	100+
<b>Anticipated Project Benefits</b>	Restore bayou to historic depths Improve drainage in upland areas
<b>Implementation Period</b>	Begin project in quarter 3 of 2018.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 1.5 years (in progress) Permits: 2 years (in progress) Land Acquisition: 6 months (in progress) Implementation: 1 year
<b>Estimated Project Cost</b>	\$4,938,000
<b>Location Problems</b>	<p>This site has problems with siltation. In 2011, Seymour Engineering prepared plans related to this site for a DMR project to dredge as needed for flood improvements. The plans went to the U.S. Army Corps of Engineers for approval to be administered under MsCIP, but was rejected, as the project did not meet the Program criteria. Currently, the majority of landowners have constructed timber bulkheads to protect their property. In some locations, trees have fallen into the channel blocking access and creating piles of debris. Vegetation on the banks is overgrown and extends out into the channel which limits boat navigation. Also, the mouth of Graveline bayou has eroded and created a wide, shallow area. This has caused the County to have dredge more frequently here to maintain navigation.</p> 
<b>Recommended Solution</b>	This project focuses on dredging the bayou system behind the Point Clear Subdivision, and using these dredging spoils to create a beneficial use site (BUS) at the mouth of Graveline Bayou to reshape it into a narrower channel that will self-scour and maintain a deeper navigation channel.



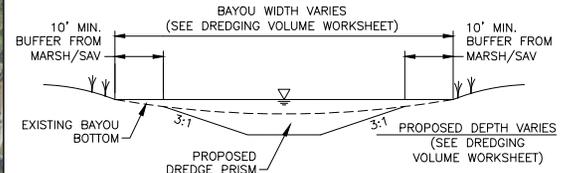
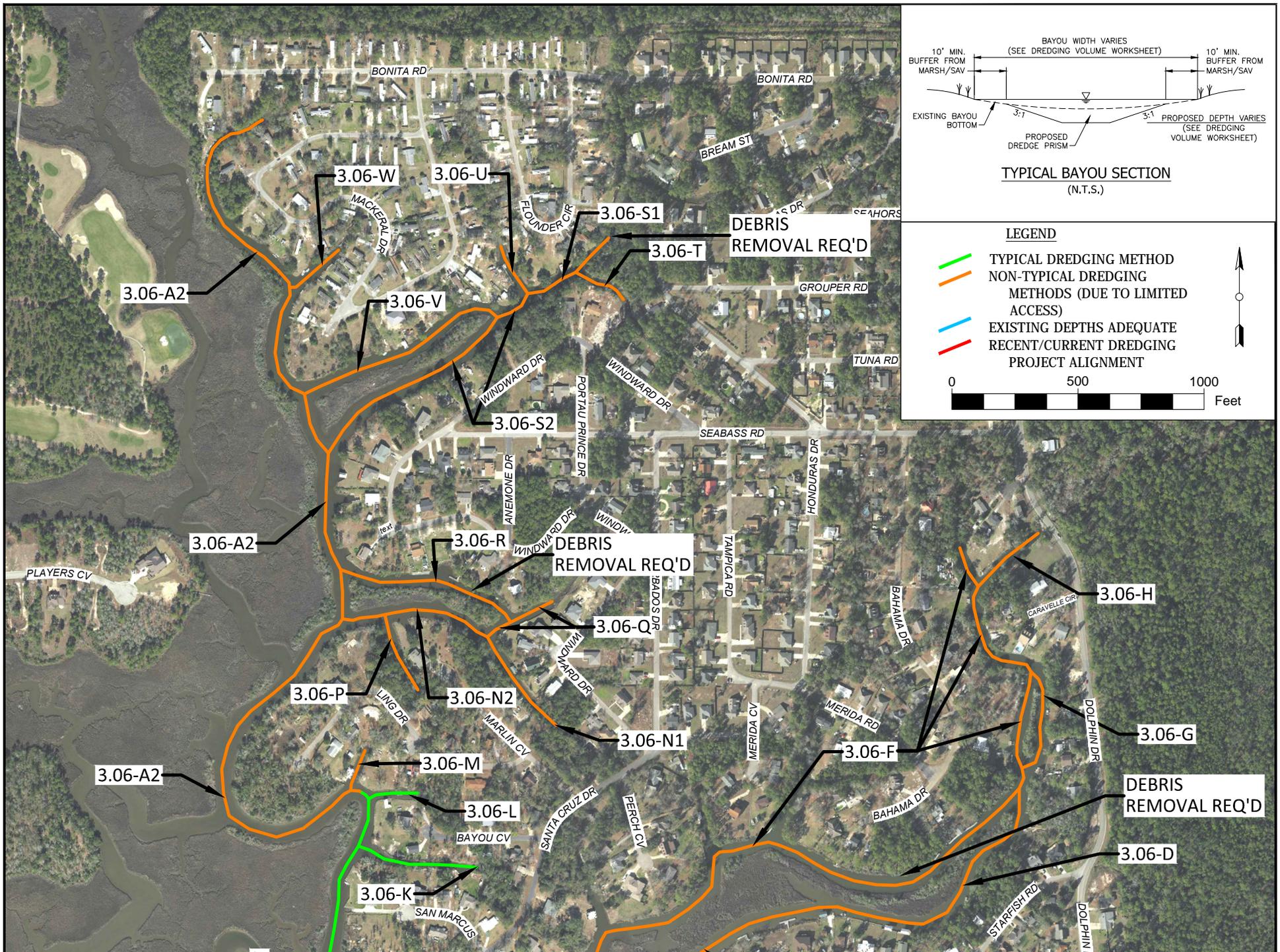
**LEGEND**

- TYPICAL DREDGING METHOD
- NON-TYPICAL DREDGING METHODS (DUE TO LIMITED ACCESS)
- EXISTING DEPTHS ADEQUATE RECENT/CURRENT DREDGING PROJECT ALIGNMENT
- RECENT/CURRENT DREDGING PROJECT ALIGNMENT



**TYPICAL BAYOU SECTION**  
(N.T.S.)

PROJECT: G016045.000	DATE: DEC - 2016	SCALE: 1" = 500'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	JACKSON CO BOARD OF SUPERVISORS COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME: SITE 3.06 - EAST GRAVELINE BAYOU (POINT CLEAR WATERSHED)	SHEET NUMBER: 3.06.002
-------------------------	---------------------	---------------------	--	--	--	---------------------------



**TYPICAL BAYOU SECTION**  
(N.T.S.)

**LEGEND**

- TYPICAL DREDGING METHOD
- NON-TYPICAL DREDGING METHODS (DUE TO LIMITED ACCESS)
- EXISTING DEPTHS ADEQUATE
- RECENT/CURRENT DREDGING PROJECT ALIGNMENT

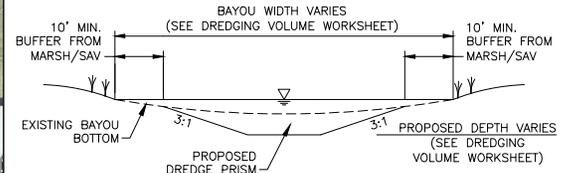
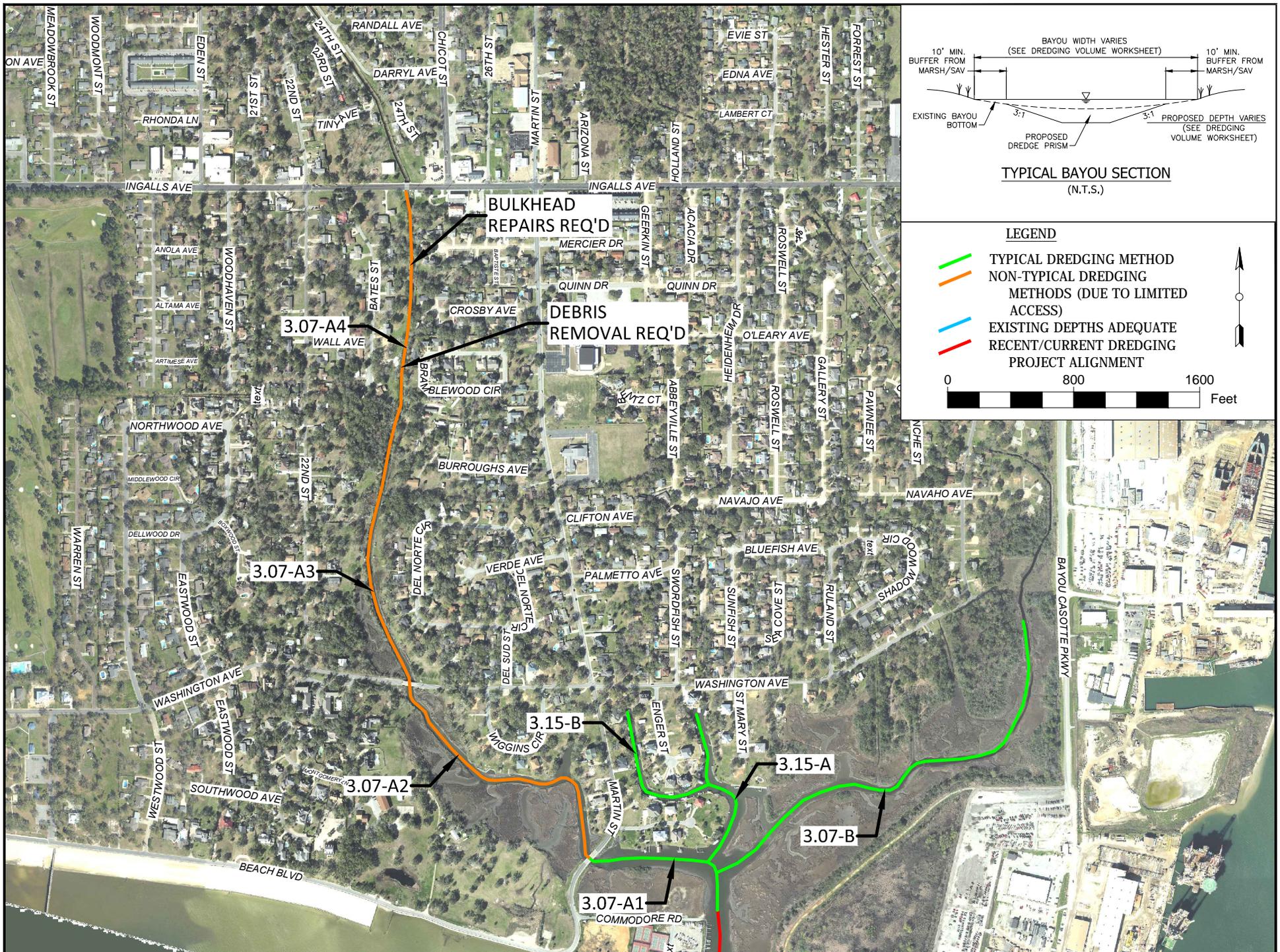
0 500 1000 Feet

PROJECT: G016045.000	DATE: DEC - 2016	SCALE: 1" = 500'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	<b>JACKSON CO BOARD OF SUPERVISORS</b> COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME: <b>SITE 3.06 - EAST GRAVELINE BAYOU (POINT CLEAR WATERSHED)</b>	SHEET NUMBER: <b>3.06.003</b>
-------------------------	---------------------	---------------------	--	---	--	----------------------------------



**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	3.07
<b>Project Name</b>	Chicot Bayou
<b>Location Description</b>	This site is located along the west and east legs of Chicot Bayou from Ingalls Avenue south to the mouth of Chicot Bayou at the east end of Beach Boulevard. A center leg of Chicot Bayou exists between the east and west legs, but was addressed under site 3.15, Enger Bayou. The Chicot Bayou watershed covers a large portion of Pascagoula. The west leg is a mix of timber bulkheads and natural banks with some bulkhead failures.
<b>Project Coordinates</b>	30°20'45.00"N, 88°31'34.99"W
<b>HUC12</b>	031700090301
<b>Project Type</b>	Restoration Dredging
<b>Number of residences or businesses benefitted</b>	51-75
<b>Anticipated Project Benefits</b>	Restore bayou to historic depths Improve drainage in the upland areas
<b>Implementation Period</b>	Begin project in quarter 3 of 2018.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 1.5 years (in progress) Permits: 1 year (in progress) Land Acquisition: not required Implementation: 1 year
<b>Estimated Project Cost</b>	\$2,284,000
<b>Location Problems</b>	<p>This site experiences sedimentation that restricts navigation and leads to upland flooding. This area is an ongoing maintenance dredging issue. It was dredged after Hurricane Katrina but has since silted back in. In 2015 a project was completed that dredged from the Yacht Club south to deep water. In late 2016 into 2017 a preliminary dredging plan was laid out in Chicot Bayou north of the Yacht Club to address the sedimentation issues. This project is still in the planning stage.</p> 
<b>Recommended Solution</b>	This project focuses on dredging the west and east branches of Chicot Bayou.



**TYPICAL BAYOU SECTION**  
(N.T.S.)

**LEGEND**

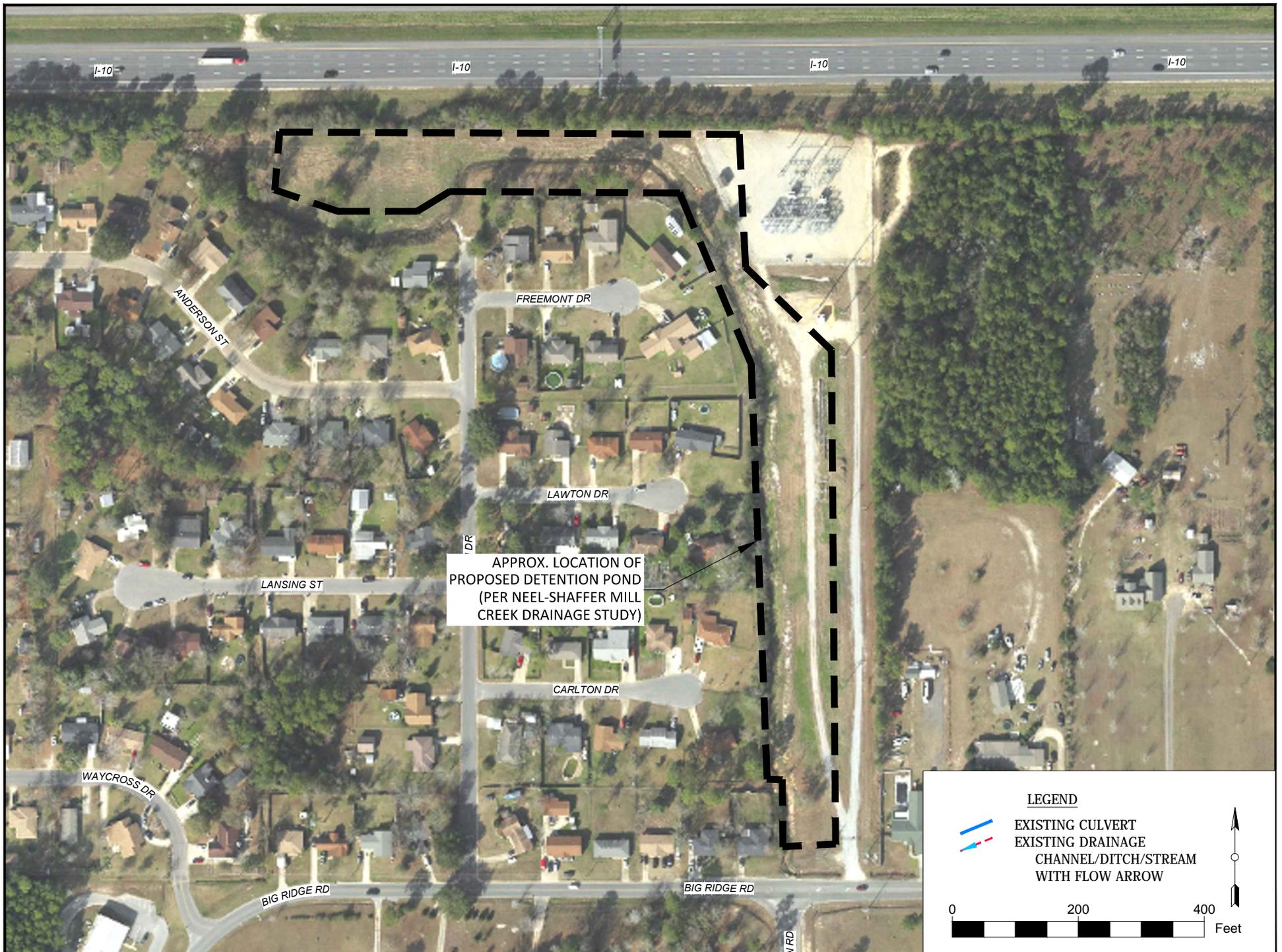
- TYPICAL DREDGING METHOD
- NON-TYPICAL DREDGING METHODS (DUE TO LIMITED ACCESS)
- EXISTING DEPTHS ADEQUATE
- RECENT/CURRENT DREDGING PROJECT ALIGNMENT



PROJECT: G016045.000	DATE: DEC - 2016	SCALE: 1" = 800'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	<b>JACKSON CO BOARD OF SUPERVISORS</b> COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME: SITE 3.07 - CHICOT BAYOU	SHEET NUMBER: 3.07.003
-------------------------	---------------------	---------------------	--	---	---	---------------------------

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	4.01
<b>Project Name</b>	Cedar Grove – St. Martin
<b>Location Description</b>	The location of this site is the east end of the Cedar Grove Neighborhood off Big Ridge Road. The site is bounded by I-10 to the north, an electric substation access road to the east, Newton Drive to the west, and Big Ridge Road to the south.
<b>Project Coordinates</b>	30°27'9.39"N, 88°51'46.68"W
<b>HUC12</b>	031700090407
<b>Project Type</b>	Flood Protection, Hydrologic Restoration
<b>Number of residences or businesses benefitted</b>	51-75
<b>Anticipated Project Benefits</b>	Reduced flooding of homes Creation of retention/detention area Improved water quality downstream Reduced sedimentation
<b>Implementation Period</b>	Begin project in quarter 3 of 2022.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 6 months Permits: 6 months Land Acquisition: 6 months Implementation: 1 year
<b>Estimated Project Cost</b>	\$835,000
<b>Location Problems</b>	<p>This site has severe flooding problems. The Supervisor for this area stated that Lawton Drive, in particular has bad flooding problems. The runoff from Big Ridge Road fills the drainage ditch east of Lawton Drive and backs up onto Lawton Drive. A 2009 study by Neel-Schaffer analyzed this site. It concluded that the box culvert under I-10 is too small which causes stormwater to back up into the ditches that drain the neighborhood and eventually onto the roads.</p> 
<b>Recommended Solution</b>	A drainage study, completed by Neel-Schaffer, Inc. in 2009, recommended construction of a detention pond to alleviate the issues in this area.



PROJECT:  
G016045.000

DATE:  
DEC - 2016

SCALE:  
1" = 200'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:

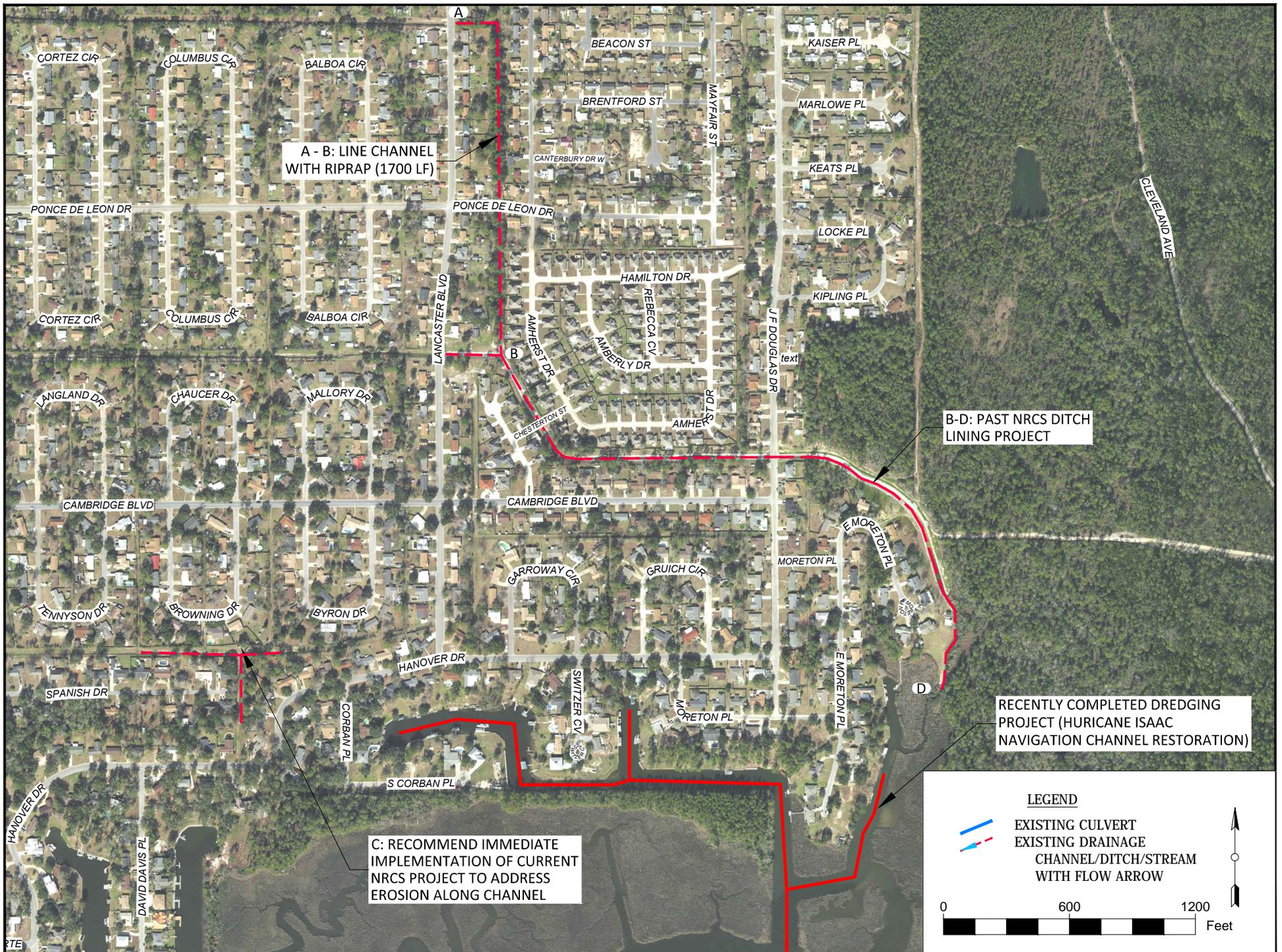
SITE 4.01 - CEDAR GROVE

SHEET NUMBER:

4.01.003

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	4.02
<b>Project Name</b>	Windsor Port
<b>Location Description</b>	The location of this site is the neighborhood of Windsor Port. It is bounded by Old Fort Bayou Road to the north, Old Fort Bayou to the south, Washington Avenue to the west, and Cleveland Avenue to the east.
<b>Project Coordinates</b>	30°25'56.33"N, 88°49'1.78"W
<b>HUC12</b>	031700090605 (west), 031700090604 (east)
<b>Project Type</b>	Bank Stabilization, Flood Proofing
<b>Number of residences or businesses benefitted</b>	76-100
<b>Anticipated Project Benefits</b>	Reduced Sedimentation Improved water quality downstream Prevent loss of personal and county property due to bank sloughing Reduced flooding of homes in the area
<b>Implementation Period</b>	Begin project in quarter 3 of 2018.
<b>Suggested Implementation Timeline</b>	Study: not required Design: complete Permits: not required Land Acquisition: complete Implementation: 6 months
<b>Estimated Project Cost</b>	\$438,000
<b>Location Problems</b>	<p>This area has a major drainage ditch that flows between Lancaster Boulevard and Amherst Drive from Old Fort Bayou Road south to Ponce de Leon Drive that has erosion control issues. There is a second drainage ditch along Hanover Drive that has major erosion control issues. Due to the erosion control issues, the ditch has encroached on private property and is in danger of damaging county infrastructure.</p> 
<b>Recommended Solution</b>	This project includes implementation of erosion control measures along the major drainage ditches and removal of vegetation/debris.



PROJECT:  
G016045.000

DATE:  
DEC - 2016

SCALE:  
1" = 600'

 **WAGGONER**  
Perspective. Passion. Innovation.  
2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

**JACKSON CO BOARD OF SUPERVISORS**  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:

**SITE 4.02 - WINDSOR PORT**

SHEET NUMBER:  
**4.02.002**

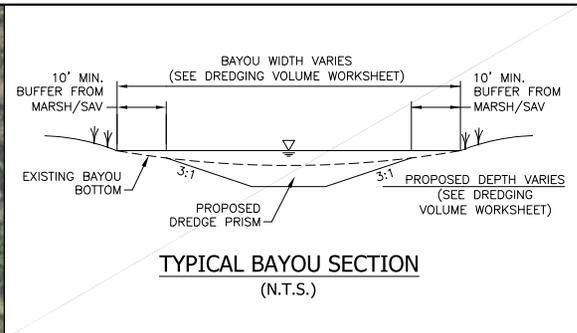
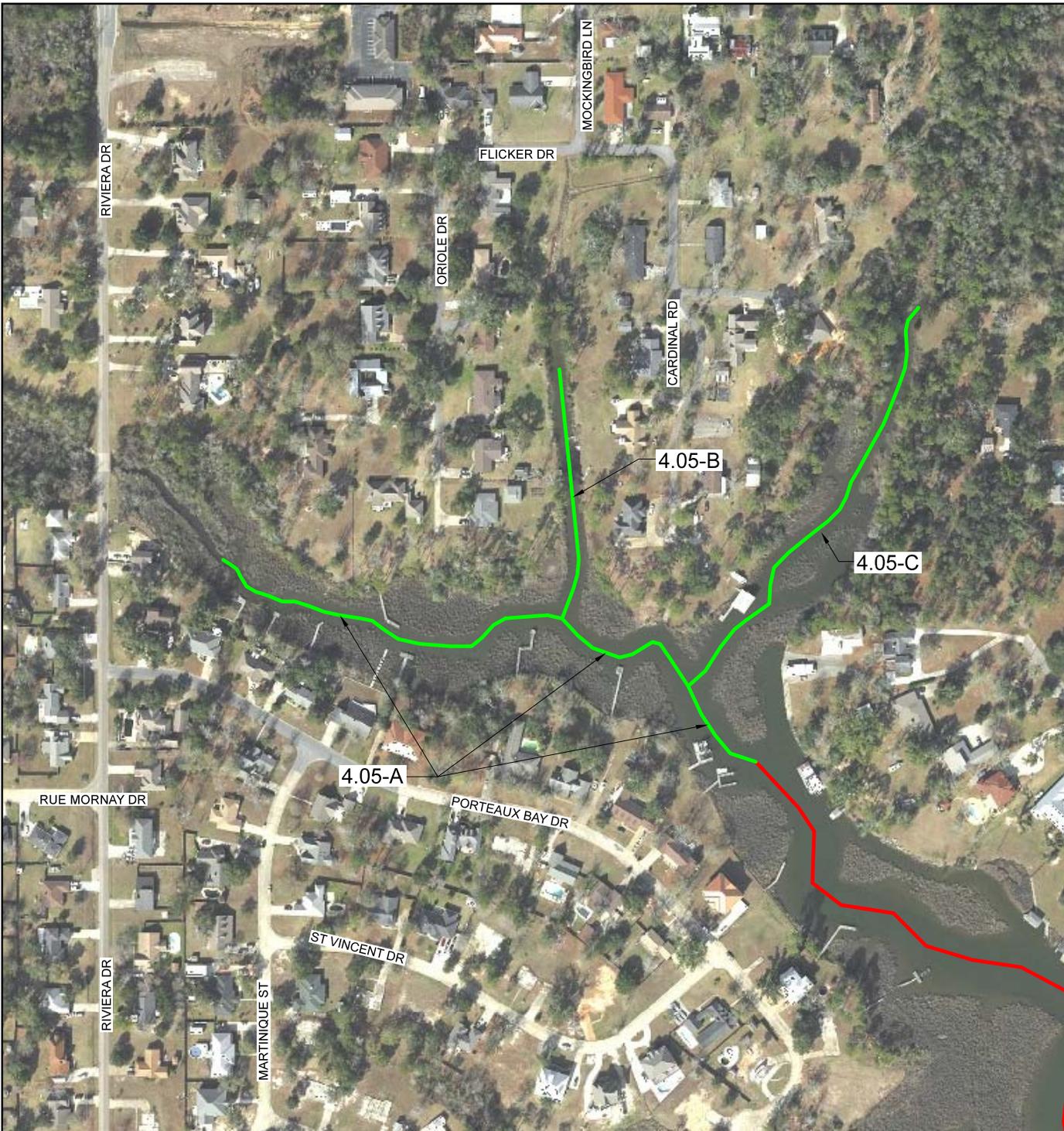
**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	4.05a
<b>Project Name</b>	Porteaux Bay Dirve – St. Martin – current dredging project
<b>Location Description</b>	The bayous to be dredged at this site are part of the Bayou Porteaux System. This site is the Bayou that runs north along Porteaux Bay Drive. There is an offshoot between Oriole Drive and Cardinal Drive and another offshoot east of Cardinal Drive that is included in this site. Site 4.05a consists of Prong 4.05-C as seen in the attached map.
<b>Project Coordinates</b>	30°26'21.15"N, 88°51'0.73"W
<b>HUC12</b>	031700090605
<b>Project Type</b>	Restoration Dredging
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Restore bayou to historic depth Reduced flooding to homes upstream
<b>Implementation Period</b>	Begin project in quarter 3 of 2018.
<b>Suggested Implementation Timeline</b>	Study: not required Design: completed Permits: completed Land Acquisition: not required Implementation: 6 months
<b>Estimated Project Cost</b>	\$300,000
<b>Location Problems</b>	<p>This area of the bayou has silted in over time leading to a reduction in navigability and increased flooding upstream. The bayou is a major stormwater receptor in the area. The bayou shoreline is characterized by marsh on all sides. There are multiple houses along the bayou that have boat docks for recreational use. Existing depths along this bayou are very shallow and range from 0.46 feet to 1.16 feet. Additionally, there are flooding problems for houses on Bayou Pines Drive and deepening the bayou can help relieve flooding. Currently, the County is planning to dredge prong 4.05-C in their annual maintenance dredging operations.</p> 
<b>Recommended Solution</b>	Dredging of this area is recommended to improve area drainage, reduce flooding, and improve navigation.



**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	4.05b
<b>Project Name</b>	Upper Porteaux Bay Drive – St. Martin
<b>Location Description</b>	The bayous to be dredged at this site are part of the Bayou Porteaux System. This site is the Bayou that runs north along Porteaux Bay Drive. There is an offshoot between Oriole Drive and Cardinal Drive and another offshoot east of Cardinal Drive that is included in this site. Site 4.05b consists of Prong 4.05-A and 4.05-B as seen in the attached map.
<b>Project Coordinates</b>	30°26'21.15"N, 88°51'0.73"W
<b>HUC12</b>	031700090605
<b>Project Type</b>	Restoration Dredging
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Restore bayou to historic depth Reduced flooding to homes and businesses upstream
<b>Implementation Period</b>	Begin project in quarter 3 of 2018.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 6 months Permits: 6 months Land Acquisition: not required Implementation: 6 months
<b>Estimated Project Cost</b>	\$406,000
<b>Location Problems</b>	<p>This area of the bayou has silted in over time leading to a reduction in navigability and increased flooding upstream. The bayou is a major stormwater receptor in the area. The bayou shoreline is characterized by marsh on all sides. There are multiple houses along the bayou that have boat docks for recreational use. Existing depths along this bayou are very shallow and range from 0.46 feet to 1.16 feet.</p>  <p>Additionally, there are flooding problems for houses on Bayou Pines Drive and deepening the bayou can help relieve flooding. Currently, the County is planning to dredge prong 4.05-C in their annual maintenance dredging operations.</p>
<b>Recommended Solution</b>	Dredging of this area is recommended to improve area drainage, reduce flooding, and improve navigation.

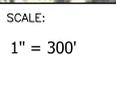


**LEGEND**

- TYPICAL DREDGING METHOD
- NON-TYPICAL DREDGING METHODS (DUE TO LIMITED ACCESS)
- EXISTING DEPTHS ADEQUATE
- RECENT/CURRENT DREDGING PROJECT ALIGNMENT

0 300 600 Feet

PROJECT: G016045.000  
 DATE: JAN - 2017  
 SCALE: 1" = 300'



2510 14th St, Ste 1200  
 GULFPORT, MS 39501  
 228-206-1115

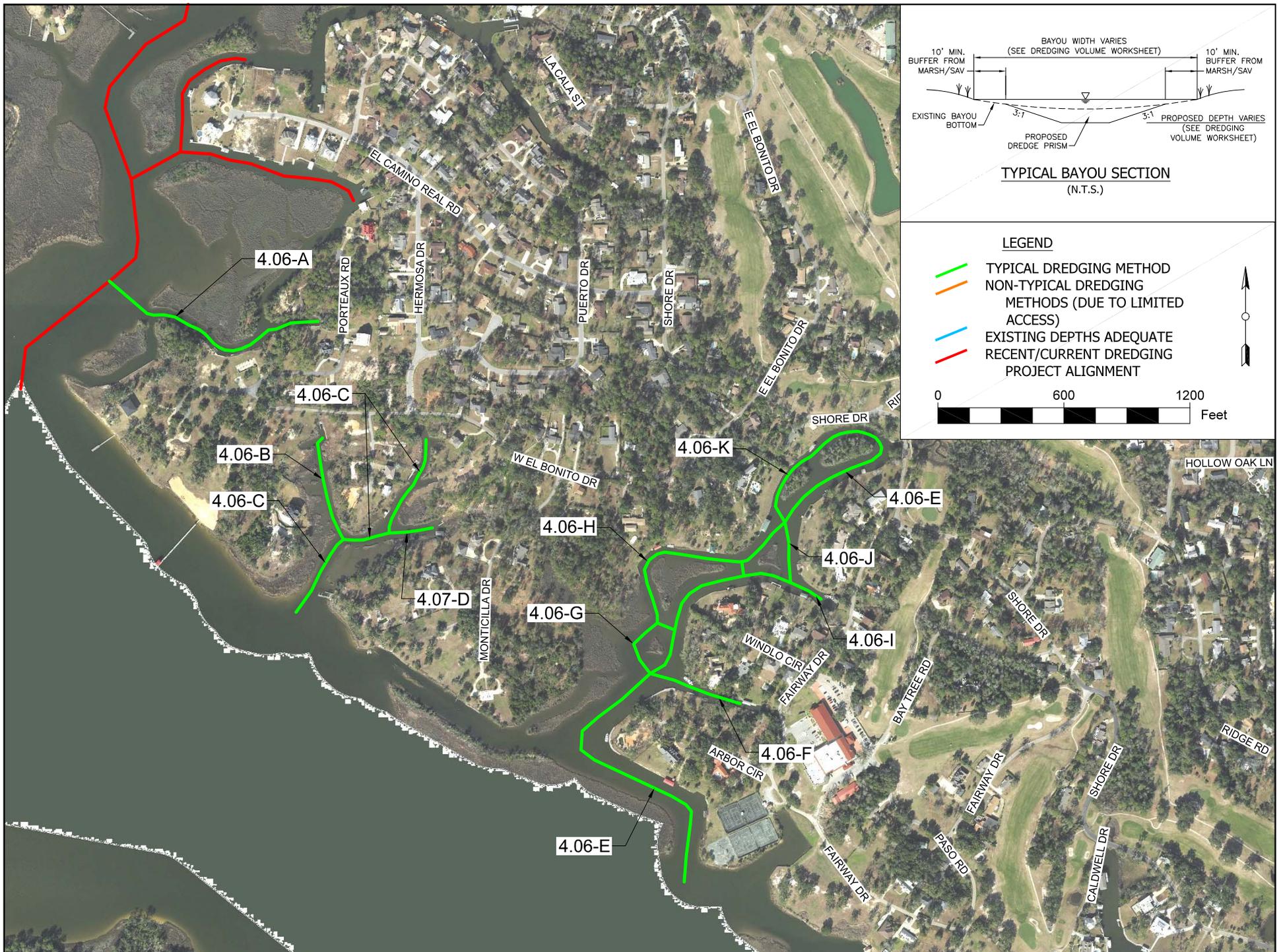
JACKSON CO BOARD OF SUPERVISORS  
 COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME: SITE 4.05 - PORTEAUX BAY DRIVE

SHEET NUMBER: 4.05.002

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	4.06
<b>Project Name</b>	Gulf Hills Fairway Drive
<b>Location Description</b>	This location of this site is the bayou system that is located near Fairway Dr, West El Bonito Dr, and Porteaux Rd on the west side of the Gulf Hills Neighborhood.
<b>Project Coordinates</b>	30°25'36.84"N, 88°50'30.74"W
<b>HUC12</b>	031700090605
<b>Project Type</b>	Restoration Dredging
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Restore bayou to historic depths Improve drainage in upland areas Improved water quality
<b>Implementation Period</b>	Begin project in quarter 3 of 2018.
<b>Suggested Implementation Timeline</b>	Study: not required Design 6 months Permits: 6 months Land Acquisition: not required Implementation: 6 months
<b>Estimated Project Cost</b>	\$1,881,000
<b>Location Problems</b>	 <p>This bayou system has become silted in due to abnormal sediment transport from storms. This bayou system has become difficult to navigate, especially during low tides. The existing shoreline is a mixture of bulkheads and marsh.</p>
<b>Recommended Solution</b>	This project focuses on dredging the bayou system in multiple legs (A-K).



PROJECT: G016045.000	DATE: JAN - 2017	SCALE: 1" = 600'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	JACKSON CO BOARD OF SUPERVISORS COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME: SITE 4.06 - FAIRWAY ( GULF HILLS)	SHEET NUMBER: 4.06.01
-------------------------	---------------------	---------------------	--	--	--	--------------------------

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	4.13
<b>Project Name</b>	Washington Avenue & Front Beach Drive – Ocean Springs
<b>Location Description</b>	The location of this site is the southern end of Washington Avenue, between Lafontaine Avenue and Front Beach Dr.
<b>Project Coordinates</b>	30°24'19.35"N, 88°49'40.24"W
<b>HUC12</b>	031700090606
<b>Project Type</b>	Infrastructure Improvements, Flood Protection
<b>Number of residences or businesses benefitted</b>	100+
<b>Anticipated Project Benefits</b>	Improve access for residents
<b>Implementation Period</b>	Begin project in quarter 3 of 2021.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 9 months Permits: 1.25 years Land Acquisition: 1 year Implementation: 1.5 years
<b>Estimated Project Cost</b>	\$414,000
<b>Location Problems</b>	<p>Washington Avenue is next to a bayou and floods often, limiting access for residents on Front Beach. During flooding water rises and cuts residents off from emergency evacuation routes. A former project aimed to raise the road elevation by three feet, but the City of Ocean Springs was unable to furnish the required matching funds to execute the project.</p> 
<b>Recommended Solution</b>	This project includes raising the elevation of Washington Avenue in this area and potential improvements to the existing box culvert.



**LEGEND**

-  EXISTING CULVERT
-  EXISTING DRAINAGE CHANNEL/DITCH/STREAM WITH FLOW ARROW

0 150 300 Feet



PROJECT: G016045.000	DATE: DEC - 2016	SCALE: 1" = 150'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	<b>JACKSON CO BOARD OF SUPERVISORS</b> COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME:	<b>SITE 4.13 - WASHINGTON AVE &amp;          FRONT BEACH DR</b>	SHEET NUMBER: 4.13.003
-------------------------	---------------------	---------------------	--	---	-------------	---	---------------------------

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	5.02
<b>Project Name</b>	Ocean Beach – Center St. to North St.
<b>Location Description</b>	The location of this site is a stream that originates at the intersection of Main St & Center St and flows north; the stream then crosses Willow St, Spruce St, and North St and discharges into the southern edge of Graveline Bay.
<b>Project Coordinates</b>	30°21'22.44"N, 88°42'41.98"W
<b>HUC12</b>	031700090701
<b>Project Type</b>	Infrastructure Improvements, Flood Protection
<b>Number of residences or businesses benefitted</b>	100+
<b>Anticipated Project Benefits</b>	Reduce time for stormwater to drain off site Improved water quality downstream Reduced sedimentation
<b>Implementation Period</b>	Begin project in quarter 3 of 2019.
<b>Suggested Implementation Timeline</b>	Study: not required Design: completed Permits: 6 months Land Acquisition: 1 year Implementation: 9 months
<b>Estimated Project Cost</b>	\$255,100
<b>Location Problems</b>	 <p>A drop inlet in the parking lot of a Gas Station at the intersection of Main St &amp; Center St is severely filled with sediment. The stream flowing to the north from the Gas Station all the way to Graveline Bay is overgrown with vegetation and has areas of debris.</p>
<b>Recommended Solution</b>	Remove built up sediment in drop inlet at Gas Station and connecting pipes. Remove debris and clear excess vegetation in stream flowing to Graveline Bay.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 500'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

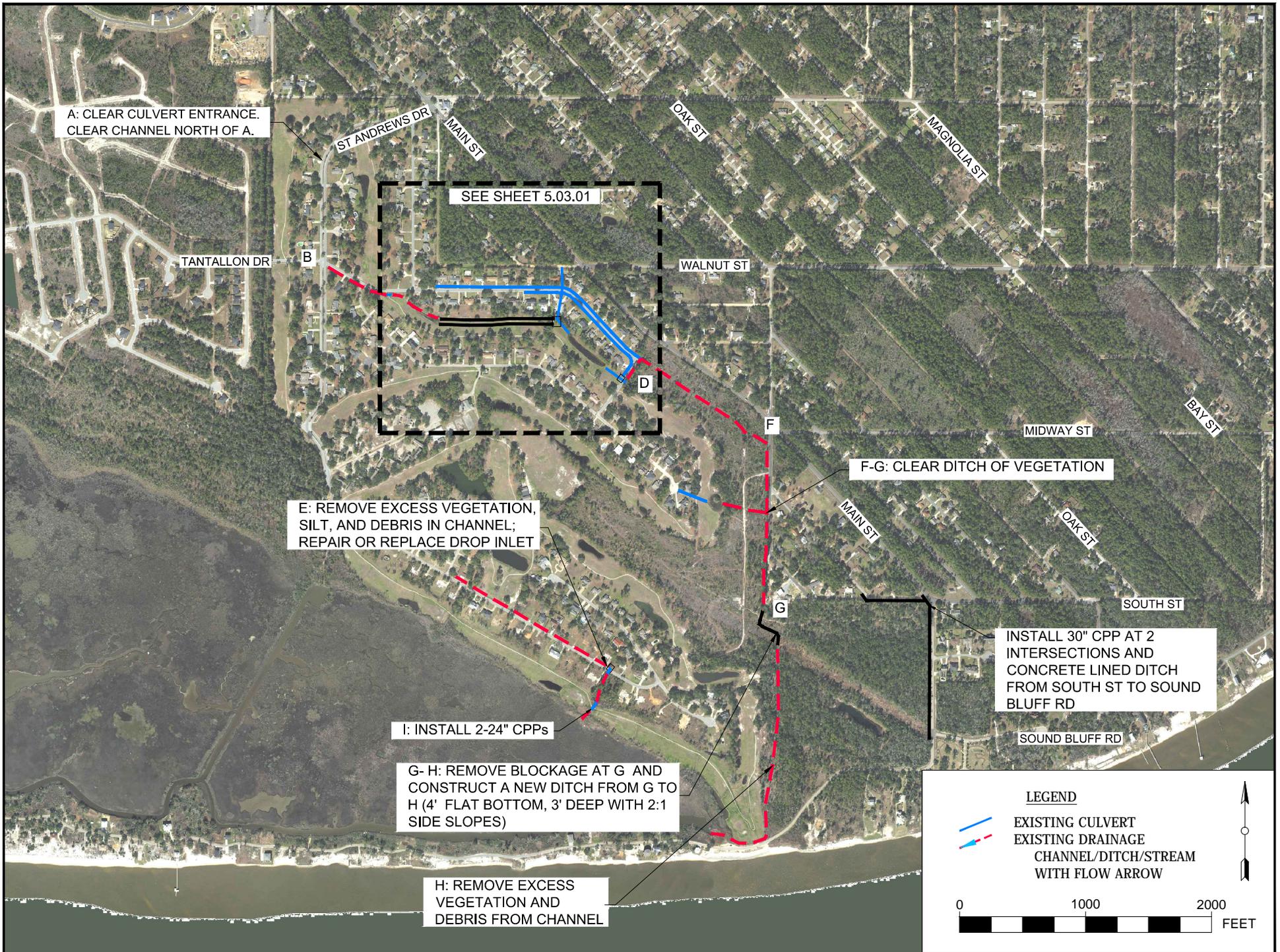
SHEET NAME:

SITE 5.02 - OCEAN BEACH - CENTER ST TO  
NORTH ST (DRAINAGE)

SHEET NUMBER:  
5.02.003

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	5.03
<b>Project Name</b>	St. Andrews Drive – North Tantallon Drive to Ocean Springs Road – Ocean Springs
<b>Location Description</b>	The location of this site is the St Andrews Golf Course (no longer in operation) and neighborhood. St Andrews Drive, Maple Avenue, and Tantallon Drive (north and south sections) are the streets most affected by the poor drainage conditions. Site RD.02, St Andrews South – Sangani Outfall, will address drainage issues related to the outfall of St Andrews Golf Course at the intersection of Main Street and Sound Bluff Road. The recommended County Maintenance project 5.02 Ocean Beach - Center St to North St - Ocean Springs should be completed prior to this project.
<b>Project Coordinates</b>	30°21'12.60"N, 88°42'52.17"W
<b>HUC12</b>	031700090701
<b>Project Type</b>	Flood Proofing, Hydrologic Restoration
<b>Number of residences or businesses benefitted</b>	51-75
<b>Anticipated Project Benefits</b>	Restore natural drainage patterns Reduced flooding of homes in the area Possible creation of more permanent wetland Improved water quality downstream
<b>Implementation Period</b>	Begin project in quarter 3 of 2020.
<b>Suggested Implementation Timeline</b>	Study: complete Design: 9 months Permits: 9 months Land Acquisition: 1 year Implementation: 1 year
<b>Estimated Project Cost</b>	\$896,000
<b>Location Problems</b>	<p>According to the Jackson County Road Manager, the streets flood due to poor drainage. The drainage system is circuitous which causes a lot of problems. The Road Department has worked in the past to resolve these issues, but has had very little success. Efforts in the past to reroute drainage flows to the north were unsuccessful. Most of the major flow paths are overgrown and choked with debris.</p> 
<b>Recommended Solution</b>	Remove excess vegetation, debris, and sediment from ditches and streams. Install new and enlarge existing culverts. The Road Department has recently had a drainage study completed for this neighborhood, and depending on the findings of this study, the recommendations could expand or change.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

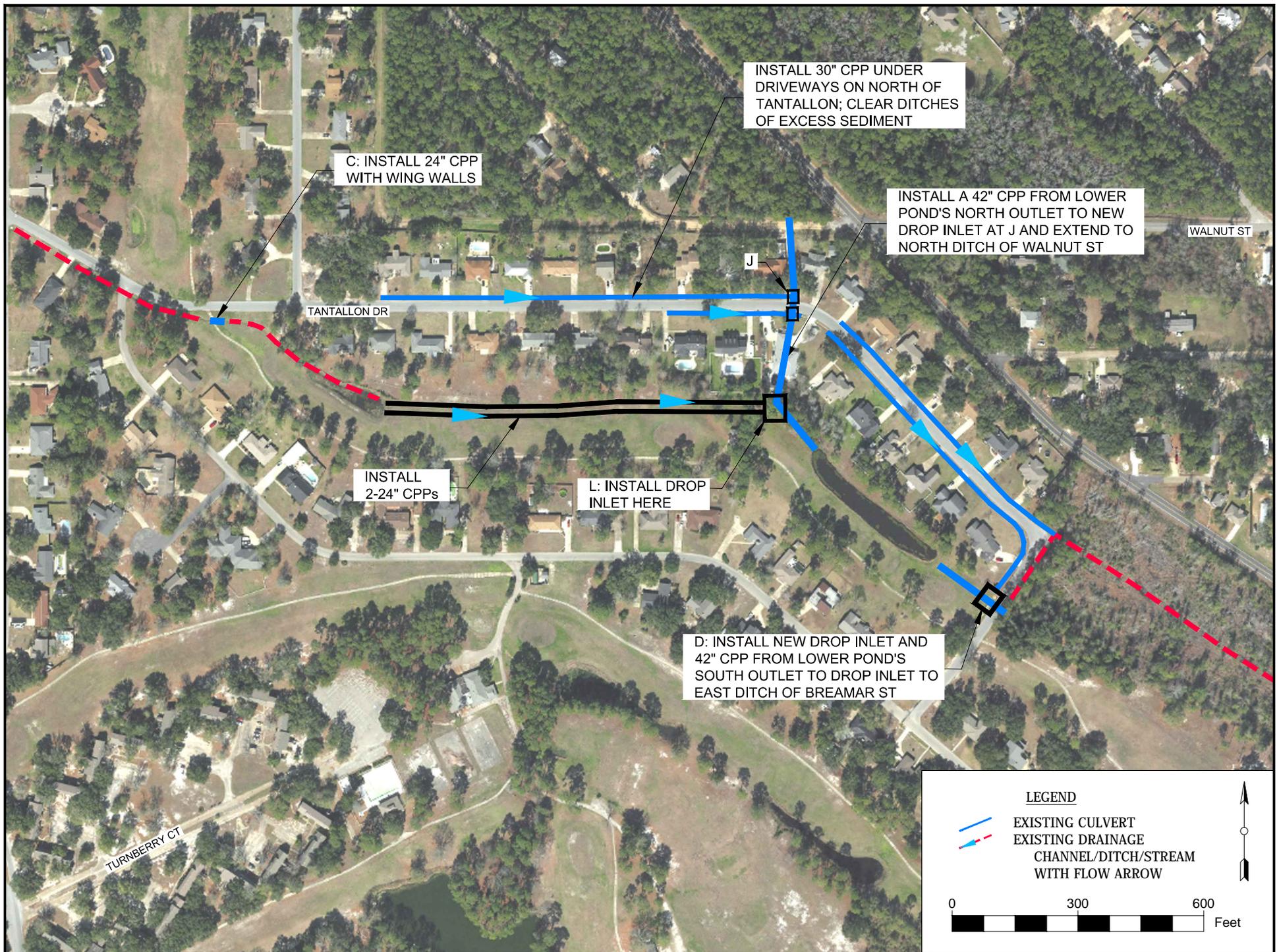
SCALE:  
1" = 1000'

 2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:  
SITE 5.03 - ST ANDREWS DR - NORTH TANTALLON DR TO OCEAN SPRINGS RD (DRAINAGE)

SHEET NUMBER:  
5.03



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 300'

 2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115  
Perspective. Passion. Innovation.

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

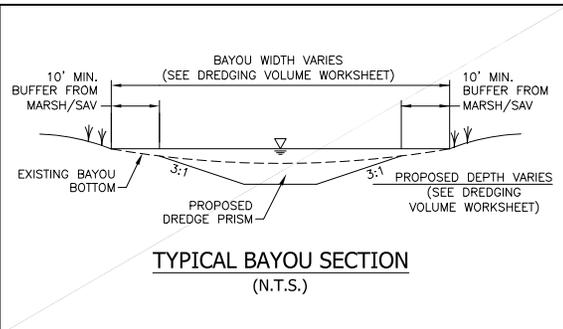
SHEET NAME:  
SITE 5.03 - ST ANDREWS DR - NORTH TANTALLON  
DR TO OCEAN SPRINGS RD (DRAINAGE)

SHEET NUMBER:  
5.03.01



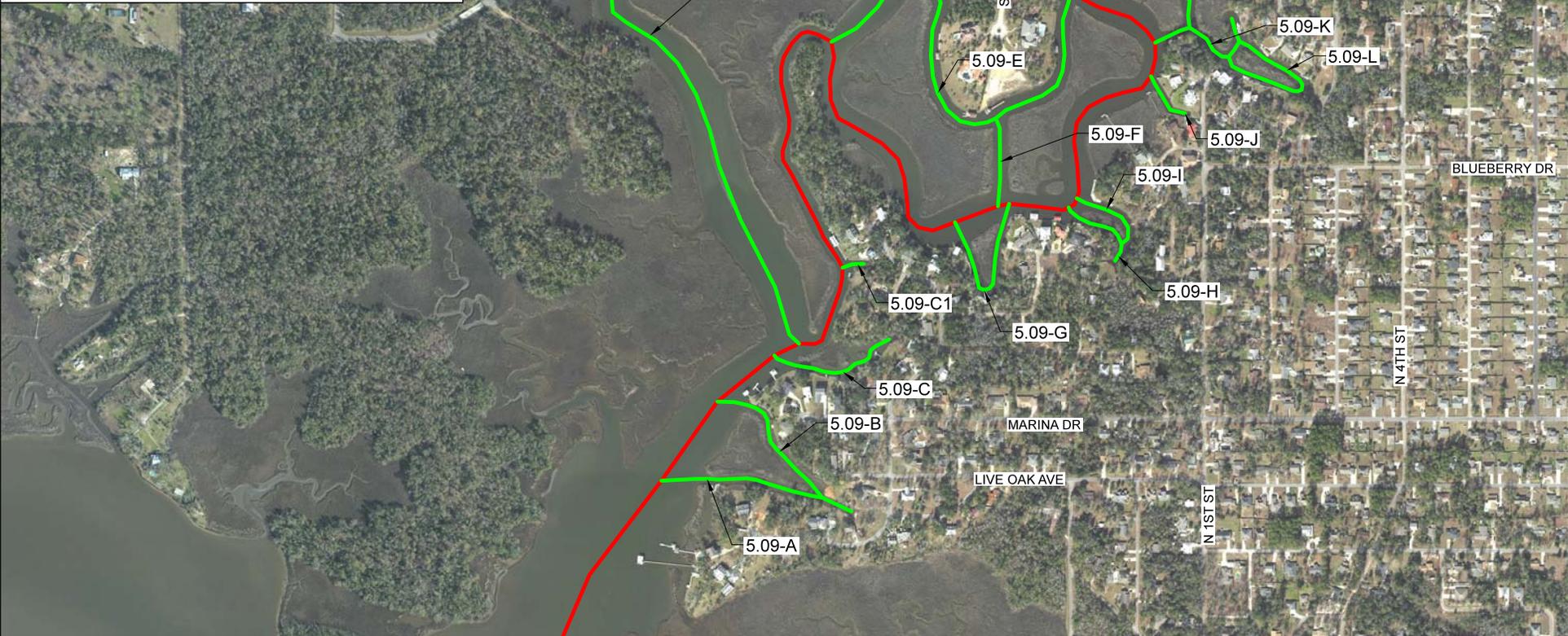
**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	5.09
<b>Project Name</b>	Davis Bayou
<b>Location Description</b>	This site is located at the end of Davis Bayou in from of East Beach in Ocean Springs. The western boundary of this site is Gulf Park Estates. The shoreline around the bayou is mostly marshy with a few short stretches of bulkheads. This area is typically used for recreational boat traffic.
<b>Project Coordinates</b>	30°23'25.41"N, 88°46'9.93"W
<b>HUC12</b>	031700090606
<b>Project Type</b>	Restoration Dredging
<b>Number of residences or businesses benefitted</b>	100+
<b>Anticipated Project Benefits</b>	Restore bayou to historic depths Improve drainage in upland areas
<b>Implementation Period</b>	Begin project in quarter 3 of 2019.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 3 years Permits: 2 years Land Acquisition: not required Implementation: 2 years
<b>Estimated Project Cost</b>	\$9,294,000
<b>Location Problems</b>	 <p>Davis Bayou receives a large amount of stormwater from areas north of Highway 90. Over time, the bayou has silted in reducing navigability for the large amounts of recreational boat traffic in the area. Currently, a large portion of Davis Bayou is being dredged under the Hurricane Isaac Navigational Channel Restoration Project. The site very large, and is thus broken into twenty separate prongs, identified as 5.09-A to 5.09S.</p>
<b>Recommended Solution</b>	This project focuses on dredging parts of Davis Bayou that were not dredged under the Hurricane Isaac Navigational Channel Restoration Project. It is recommended to break this site into multiple, smaller sites for design and implementation to make the overall site more manageable.



**LEGEND**

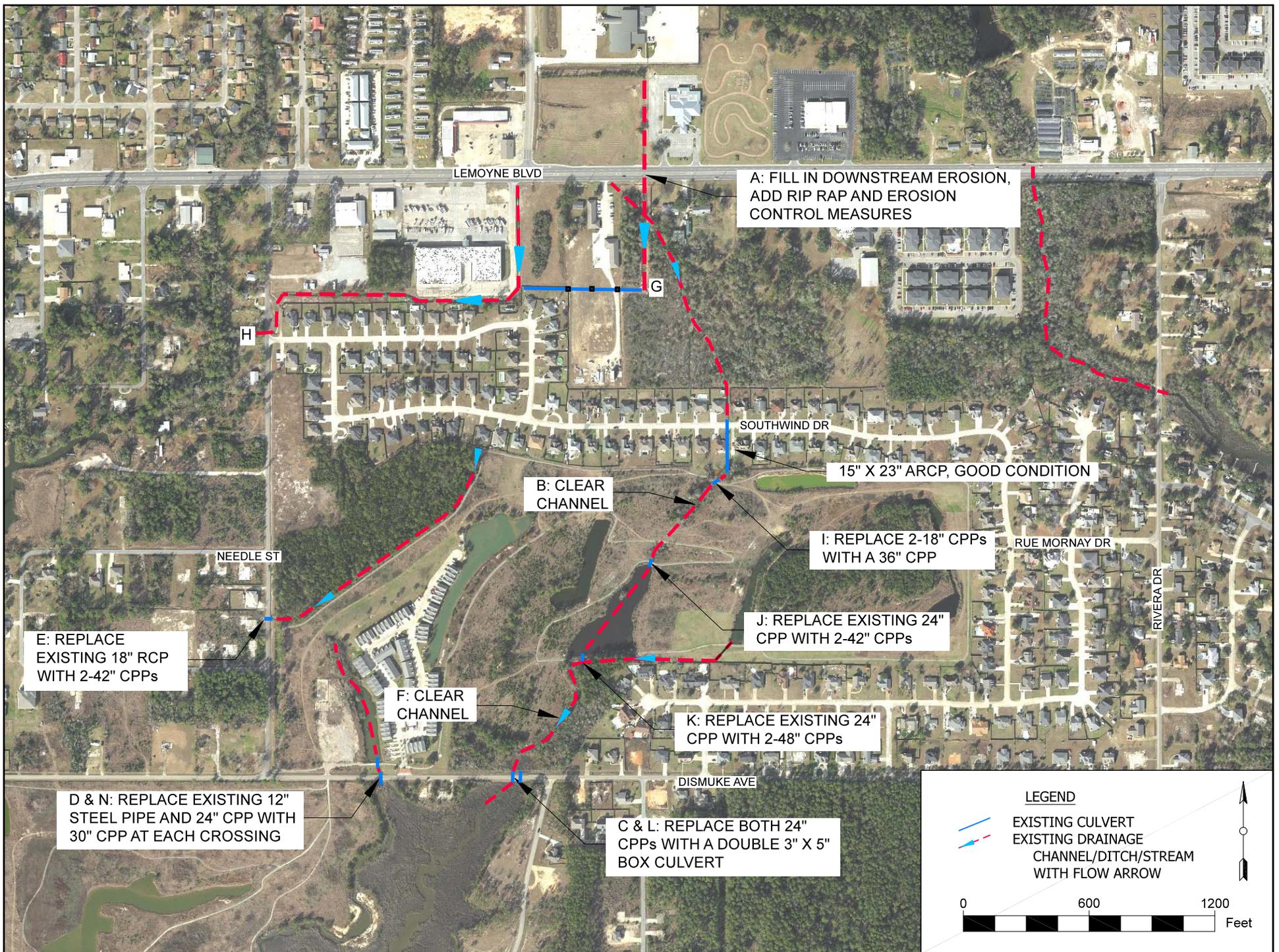
- TYPICAL DREDGING METHOD
- NON-TYPICAL DREDGING METHODS (DUE TO LIMITED ACCESS)
- EXISTING DEPTHS ADEQUATE
- RECENT/CURRENT DREDGING PROJECT ALIGNMENT



PROJECT: G016045.000	DATE: JAN - 2017	SCALE: 1" = 800'	 2510 14th St, Ste 1200 GULFPORT, MS 39501 228-206-1115	<b>JACKSON CO BOARD OF SUPERVISORS</b> COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN	SHEET NAME: <b>SITE 5.09 - DAVIS BAYOU (REMAINING AREAS)</b> <b>- OCEAN SPRINGS</b>	SHEET NUMBER: 5.09.002
-------------------------	---------------------	---------------------	--	---	---	---------------------------

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	RD.03(4)
<b>Project Name</b>	Porteaux Bay Subdivision – St. Martin
<b>Location Description</b>	The location of this site is the Porteaux Bay Subdivision in St. Martin. The Porteaux Bay Subdivision is bordered on the north by Lemoyne Boulevard, on the east by Riviera Road, on the south by Dismuke Avenue, and on the west by Sundown Avenue. The eastern channel flows into dredging site 4.05 – Porteaux Bay Drive. The Porteaux Bay subdivision is rectangular in shape with a golf course occupying the center.
<b>Project Coordinates</b>	30°26'18.71"N, 88°51'38.90"W
<b>HUC12</b>	031700090605
<b>Project Type</b>	Bank Stabilization, Flood Proofing
<b>Number of residences or businesses benefitted</b>	100+
<b>Anticipated Project Benefits</b>	Restore connectivity north and south of Dismuke Avenue Reduced flooding to homes in the area Improve access for residents
<b>Implementation Period</b>	Begin project in quarter 3 of 2020.
<b>Suggested Implementation Timeline</b>	Study: not required Design: 1.5 years Permits: 1 year Land Acquisition: 2 years Implementation: 2 years
<b>Estimated Project Cost</b>	\$319,000
<b>Location Problems</b>	 <p>The golf course has been out of operation for some time now, and drainage structures have not been maintained since its closing. Additionally, the drainage structures within the golf course are not on a consistent grade nor are they sized properly. There are several ponds within the golf course. Porteaux Bay Subdivision experiences poor drainage due to undersized culverts at the outlet of the main channel, and poorly installed drainage structures throughout the subdivision and golf course. The location of the subdivision is just north of the Biloxi Back Bay. This location would typically suggest a greater volume of off-site runoff contributing to the flow through the subdivision, but most off-site runoff has been diverted around the main channel of the subdivision.</p>
<b>Recommended Solution</b>	This project includes the addition of a box culvert, upgrading existing drainage piping, slope stabilization, and removing vegetation/debris.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 600'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:  
SITE RD.03 - PORTEAUX BAY SUBDIVISION  
(DRAINAGE)

SHEET NUMBER:  
RD.03.007

**JACKSON COUNTY GOMESA PRIORITY IMPLEMENTATION PLAN  
PROJECT INFORMATION SHEET**

<b>Project Number</b>	RD.05(4)
<b>Project Name</b>	Lemoyne Boulevard Erosion Control
<b>Location Description</b>	This project is located along Lemoyne Boulevard in the Henderson Drive cul-de-sac in St Martin.
<b>Project Coordinates</b>	30°26'33.73"N, 88°52'29.82"W
<b>HUC12</b>	031700090605
<b>Project Type</b>	Bank Stabilization, Flood Proofing
<b>Number of residences or businesses benefitted</b>	26-50
<b>Anticipated Project Benefits</b>	Reduced Sedimentation Improved water quality downstream Prevent loss of personal and county property due to bank sloughing Reduced flooding of homes in the area
<b>Implementation Period</b>	Begin project in quarter 3 of 2018.
<b>Suggested Implementation Timeline</b>	Study: not required Design: completed Permits: completed Land Acquisition: completed Implementation: 9 months
<b>Estimated Project Cost</b>	\$539,000
<b>Location Problems</b>	 <p>There is major erosion along this drainage ditch to the point where the ditch as expanded outside of the drainage easement. This project originated as a NRCS project; however, NRCS is not addressing the problem areas sufficiently to prevent future problems. Therefore, the County has taken over the project.</p>
<b>Recommended Solution</b>	This project focuses on implementing erosion control methods in the area.



PROJECT:  
G016045.000

DATE:  
JAN - 2017

SCALE:  
1" = 500'



2510 14th St, Ste 1200  
GULFPORT, MS 39501  
228-206-1115

JACKSON CO BOARD OF SUPERVISORS  
COMPREHENSIVE DRAINAGE AND DREDGING MASTER PLAN

SHEET NAME:  
SITE RD.05 - LEMOYNE BLVD EROSION CONTROL  
(DRAINAGE)

SHEET NUMBER:  
RD.05



## Appendix II: GOMESA Phase II Revenue Sharing

---



PAGE INTENTIONALLY LEFT BLANK

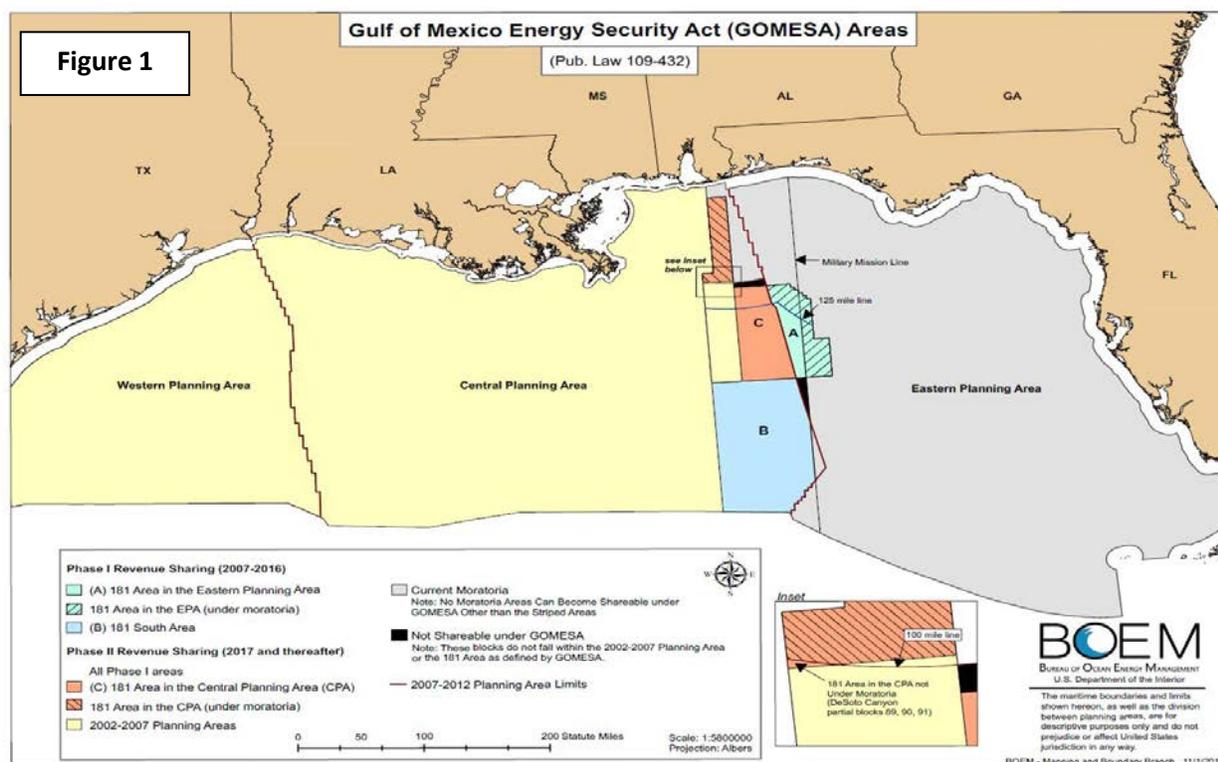
# GOMESA Phase II Revenue Sharing

## The Bureau of Ocean Energy Management's Estimates of Historical Qualified Outer Continental Shelf Revenues & Sharing Proportions with Gulf Producing States & their Coastal Political Subdivisions

### Introduction

The Gulf of Mexico Energy Security Act of 2006 (GOMESA) established permanent sharing of Federal revenues from oil and natural gas leasing and production on the Gulf of Mexico (GOM) Federal Outer Continental Shelf (OCS) with the states of Alabama, Mississippi, Louisiana, and Texas. The GOMESA statute provided for two phases of revenue sharing. The Phase I areas indicated on the map which is Figure 1 started sharing revenue immediately. This paper is only concerned with GOMESA Phase II and will present details about the three basic types of revenues to be shared, estimates of the historic amounts for the 3 revenue sources, materials for estimating future revenues, an explanation of the allocation formulae for revenue sharing, and estimates of allocable shares to all stakeholders.

GOMESA Phase II revenues to be shared with Gulf producing States (GPS) and their associated Coastal Political Subdivisions (CPS) are highly variable. The revenues are primarily dependent on the prices of crude oil and natural gas. Under GOMESA Phase II, Qualified OCS Revenues (QOCSR) consisting of bonus bid, rental, and royalty revenues, from leases generally in the Western and Central Gulf of Mexico (GOM) (Figure 1), will be shared 50% with GPS (37.5%) and the Land and Water Conservation Fund (12.5%) (LWCF).



The revenue will be subject to the following provisions:

- Fiscal year 2017 is the first year of revenue sharing under GOMESA II.
- The revenue is from applicable leases sold since passage of GOMESA on December 7, 2006.
- Of the revenue to be shared, 25% is to be distributed to the LWCF and 75% to the GPS. Twenty percent of the GPS distribution is to be further distributed to the State's CPS.
- At a minimum, each GPS will receive 10% of the revenue shared with all the GPS.
- For the first 40 years of GOMESA II revenue sharing, the maximum amount available for sharing each year is \$500 million (MM), after which there will be no maximum sharing amount.

### **Historical Data**

Lease bonuses, lease rentals, and royalties have been produced from GOMESA II leases since Western Gulf of Mexico Lease Sale 204 held on August 22, 2007, the first lease offering following passage of GOMESA by the 109<sup>th</sup> Congress in December 2006. As of September 30, 2015, there were 16 applicable lease sales in the Central and Western GOM planning areas and 4,462 leases were acquired by industry from those lease sales. Also as of September 30, 2015, 3,091 of these leases were still active, meaning currently under lease, and are either paying rentals or royalties. Table I, *Estimated GOMESA II Production and Historic Qualified OCS Revenues Since Enactment of GOMESA*, provides an accounting of historical information through FY 2015 resulting from the leasing of these 4,462 GOMESA II tracts. Table I lists the estimated QOCSR for fiscal years 2008 through 2015 and demonstrates the components and the calculation of QOCSR. Table I also reflects the complexities and the uncertainties of those components, and how the QOCSR can vary and change unexpectedly. Finally, it is important to recognize that GOMESA II QOCSR and revenue sharing do not actually begin until QOCSR are generated and collected in FY 2017.

Oil and gas production from GOMESA II leases can be subject to one of several royalty arrangements depending on when the GOMESA II leases were acquired. Leases acquired in lease sales held in 2007 are 1/6<sup>th</sup> royalty rate leases, leases acquired after 2007 are 3/16<sup>ths</sup> royalty rate leases. Further, leases in water deeper than 400 meters acquired from 2007 through 2010 are entitled to deep water royalty relief subject to oil and gas price thresholds. This royalty relief affords royalty free production up to a royalty suspension volume (RSV) of 5 MMBOE of oil and/or gas produced from leases in 400 to 800 meters of water depth. The other applicable relief RSV categories are 9 MMBOE in water 800 to 1,600 meters; 12 MMBOE in water 1,600 to 2,000 meters; and 16 MMBOE in water deeper than 2,000 meters.

The RSVs apply only to the first production from the lease and the RSV is exhausted by any oil and/or gas production up to that amount regardless of whether or not royalties are paid on that production. For all years of production in Table I, deep water leases would be expected to pay royalties on oil production as oil prices were above the designated oil price thresholds. However, royalties were not payable on deep water gas production up to each lease's RSV as gas prices have been less than the designated gas price thresholds each year.

**Table I  
Estimated GOMESA II Production and Historic Qualified OCS Revenues (QOCSR)<sup>1</sup> Since Passage of GOMESA**

	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
GOMESA II Leases Producing <sup>2</sup>	1,559	6	14	18	24	33	40	46
GOMESA II Tracts Leased in Fiscal Year	1,559	641	601	-	623	474	323	241
Active GOMESA II Leases at Fiscal Year End	1,559	2,147	2,647	2,573	2,752	3,204	3,238	3,091
Production from 1/6 Royalty Leases <sup>3</sup>								
Oil Production (bbl)		1,170,941	1,169,338	1,284,098	1,626,323	1,371,006	1,342,021	2,147,194
Gas Production (Mcf)		31,467,755	33,284,501	29,003,169	25,647,919	19,872,421	12,864,386	12,297,716
Royalty Free Gas <sup>4</sup> (Mcf)		-	-	-	4,360,395	5,711,573	2,841,923	326,907
Royalty Gas (Mcf)		31,467,755	33,284,501	29,003,169	21,287,524	14,160,848	10,022,463	11,970,809
Effective Royalty Rates <sup>5</sup>								
Oil		16.56%	16.56%	16.56%	16.56%	16.56%	16.56%	16.56%
Gas		15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Production from 3/16 Royalty Leases <sup>6</sup>								
Oil Production (bbl)		9,716	4,212,891	366,141	2,472,250	7,826,441	8,481,904	11,084,831
Gas Production (Mcf)		904,508	5,772,104	8,189,793	22,176,160	23,170,291	31,027,755	45,271,486
Royalty Free Gas <sup>4</sup> (Mcf)		-	2,152,001	-	7,039,165	10,898,725	9,141,453	8,023,568
Royalty Gas (Mcf)		904,508	3,620,103	8,189,793	15,136,995	12,271,566	21,886,302	37,247,918
Effective Royalty Rates <sup>5</sup>								
Oil		18.16%	18.16%	18.16%	18.16%	18.16%	18.16%	18.16%
Gas		17.24%	17.24%	17.24%	17.24%	17.24%	17.24%	17.24%
Royalty Oil Production <sup>7</sup> (bbl)		195,678	958,777	279,150	718,327	1,648,452	1,762,695	2,368,769
Royalty Gas Production <sup>7</sup> (Mcf)		5,032,484	5,782,068	5,906,185	5,907,855	4,309,562	5,325,361	8,274,919
NYMEX Oil Price (\$/bbl Average for FY) <sup>8</sup>		\$ 87.07	\$ 77.20	\$ 92.77	\$ 95.67	\$ 95.67	\$ 99.12	\$ 56.68
NYMEX Gas Price (\$/MMBtu Average for FY) <sup>9</sup>		\$ 6.77	\$ 4.64	\$ 4.15	\$ 2.81	\$ 3.65	\$ 4.28	\$ 3.03
Estimated Royalties <sup>10</sup>		\$ 51,120,275	\$ 100,845,528	\$ 50,421,645	\$ 85,318,598	\$ 173,441,100	\$ 197,526,942	\$ 159,330,077
Bonuses <sup>11</sup>	\$ 6,779,613,145	\$ 758,453,447	\$ 1,034,519,460	\$ -	\$ 2,009,921,242	\$ 1,435,549,296	\$ 868,900,300	\$ 643,484,672
Rentals <sup>12</sup>	\$ 25,547,189	\$ 35,364,001	\$ 43,405,882	\$ 42,238,849	\$ 45,212,273	\$ 52,760,119	\$ 53,069,657	\$ 50,662,009
Total Estimated QOCSR <sup>1</sup>	\$ 6,805,160,334	\$ 844,937,723	\$ 1,178,770,870	\$ 92,660,494	\$ 2,140,452,112	\$ 1,661,750,515	\$ 1,119,496,899	\$ 853,476,758

Table I Footnotes:

<sup>1</sup>Production figures shown are unofficial, also QOCSR for GOMESA Phase II do not actually begin until FY 2017, these QOCSR estimates are intended to show the progression of potential QOCSR over time building up to FY 2017.

<sup>2</sup>Shown are the progression of GOMESA II leases acquired since 12/7/2006 that produced oil or natural gas during the fiscal year.

<sup>3</sup>GOMESA II leases acquired in 2007 carry a 1/6th royalty rate.

<sup>4</sup>Deep water (greater than 400 meters) GOMESA II leases acquired between 2007 through 2010 get deepwater royalty relief subject to price thresholds, gas price thresholds have been above gas prices every year since passage of GOMESA affording gas from these leases to be produced royalty free either until the royalty suspension volume (RSV) for the lease is met or until gas prices rise above the price thresholds. RSV's are based on oil and gas production combined regardless of whether royalties are due on either product.

<sup>5</sup>Effective Royalty Rates are estimated royalty rates based on historical averages for leases with that royalty rate. The effective rates are calculated by dividing royalties received by the sales volumes and are less than the lease royalty rates because of transportation and processing allowances that enter into royalty calculations. This method is a means of estimating the effects of those allowances.

<sup>6</sup>GOMESA II leases acquired after 2007 carry a 3/16ths royalty rate.

<sup>7</sup>Royalty production is the production (oil or gas) times the respective effective royalty rate for both royalty rate lease categories added together. The result is the estimated royalty share of production.

<sup>8</sup>NYMEX Oil Price is for light sweet crude oil.

<sup>9</sup>NYMEX Gas Price is for Henry Hub gas.

<sup>10</sup>Estimated Royalties are the sum of Royalty Oil Production times NYMEX Oil Price and Royalty Gas Production times NYMEX Gas Price. It was assumed that one Mcf of gas was equivalent to one MMBtu for these calculations.

<sup>11</sup>Bonuses are lease bonuses for tracts leased during the fiscal year. Fiscal year timing is by when the lease was issued not by the date of the lease sale which puts results from August lease sales in the following fiscal year.

<sup>12</sup>Rentals are estimated at \$3 per acre of non-producing active leases.

Production in Table I was segregated according to royalty rate. In addition, royalty free gas production was extracted before the royalty values were estimated. Effective royalty rates from all recent GOM production with the same lease royalty rate were used to estimate the royalties. Effective royalty rates were calculated across all similar royalty rate leases by dividing the royalties received from them by the sales value of their production. This calculation inherently accounts for transportation and processing allowances, simplifying the royalty estimation calculations. Finally, the oil and gas prices used for these estimations were the NYMEX oil and gas prices for each year.

Royalties for the year FY 2015 are the first GOMESA II royalties since FY 2011 to decline from the previous year. The decline in FY 2011 was caused by a greater than 70% decrease in oil production that year, most likely attributable to heightened safety standards devised and implemented following the *Deepwater Horizon* incident. However, production has increased steadily each year since then and the

drop in royalties in FY 2015 is clearly a function of lower oil and gas prices from FY 2014. Price uncertainty will likely have a bearing on GOMESA II royalties for the foreseeable future both from direct effects on the value of production but also from the indirect perspective of a reduced pace of OCS leasing, drilling, and development of new production on the OCS including GOMESA II leases.

Lease bonuses shown in Table I are actual lease bonuses received on tracts leased since the passage of GOMESA. Lease bonuses for GOMESA II are attributed to the fiscal year when the bonus bid was accepted and the lease was issued and not to the fiscal year when the lease sale was held. For example, bids from lease sales held in August are not likely to be accepted by BOEM until October or later which is in the following fiscal year (federal fiscal years begin on October 1<sup>st</sup>).

GOMESA II lease bonuses for FY 2015 of \$643MM were at the lowest level for any year since passage of GOMESA. Similarly, only 241 tracts were leased in FY 2015, also the lowest of the GOMESA II era. In contrast, FY 2008 saw the most leases sold and the highest level of lease bonuses with leases being 6-1/2 times greater than for FY 2015 and bonuses being over ten-times greater. As suspected for declining royalties, uncertainty over oil and gas prices are also likely the cause of this decline which may be expected to continue.

Lease rentals are the final component of QOCSR and are payable annually on each active non-producing lease issued since the passage of GOMESA. The applicable portion of the rentals for GOMESA is \$3 per acre per year for each tract. These amounts are estimated in Table I based on the acreage of active non-producing leases at the end of each fiscal year. Leases in 400 meters of water and less have 5-year primary lease terms, those in 400 to 800 meters of water are 8-year leases and leases in greater than 800 meters get 10-year primary terms. Since rentals are payable each year of the primary lease term, rental revenues are cumulative over a series of years. Estimated GOMESA II rentals have been building since the passage of GOMESA. As is true for the royalty estimates, the lease rentals are also estimated amounts that can vary from actual rental amounts received. This may be due to various reasons including the actual timing during each year when rentals are paid and how that timing might relate to the assumptions made here.

Estimated GOMESA II QOCSR is calculated for each fiscal year since passage of GOMESA by combining the estimated values of royalties, bonuses, and rentals. Again, revenue sharing under GOMESA II begins with QOCSR generated in FY 2017 so none of the revenues in Table I will be shared. Further, a primary purpose of this table is to demonstrate the components of the QOCSR, the complexities and the uncertainties of those components, and how the QOCSR can vary and change unexpectedly. For instance, the greatest year of GOMESA II QOCSR thus far has been FY 2008 when QOCSR were estimated to be \$6.8 billion. This was the first year of revenues and before any production or royalties were generated.

In contrast, FY 2015 QOCSR totaled only \$865MM, the third lowest annual total and the lowest since FY 2011 when no lease sales were held. Despite significant increases in royalty oil and gas production since FY 2014, much lower oil and gas prices resulted in lower royalties and lease bonuses. Low prices are

expected to continue for the foreseeable future making forecasting QOCSR for fiscal years 2017 and beyond problematic. This is important for predicting when QOCSR will exceed the annual \$1 billion cap for revenue sharing.

### **Production Statistics**

Oil and gas production has occurred since November 2008 from GOMESA II leases and over that time several trends have emerged in this production information. Figure 2, *GOMESA II Monthly Oil and Gas Production*, presents the oil and gas production history of GOMESA II leases through FY 2015. The curves indicate an expected increasing trend in GOMESA II production. Figure 3, *Producing GOMESA II Leases*, is a monthly accounting of the number of GOMESA II leases that were producing oil and/or gas through FY 2015. The number of producing GOMESA II leases has been increasing in a linear fashion for over the past 5 years. Figure 4, *Monthly BOE per Producing GOMESA II Lease*, is the monthly average GOMESA II oil and gas production per producing GOMESA II lease through FY 2015 expressed in equivalent barrels of oil (BOE). For this analysis we have assumed that one barrel of oil equals one BOE and 5,620 cubic feet of gas equals one BOE. As the number of producing leases has grown, this average seems to have leveled off. Figure 5, *Oil Percent of BOE of Producing GOMESA II Leases*, is the fraction of monthly BOE production that is oil production. Again, as the number of producing leases has grown, this average too has grown steady.

Figures 3, 4, and 5 each provide a necessary component that when combined using the following relationships result in the production values of Figure 2:

$$\text{Oil Production (bbl)} = \text{Number of Leases} * \text{BOE of Production per Lease} * \text{Oil Percentage}$$

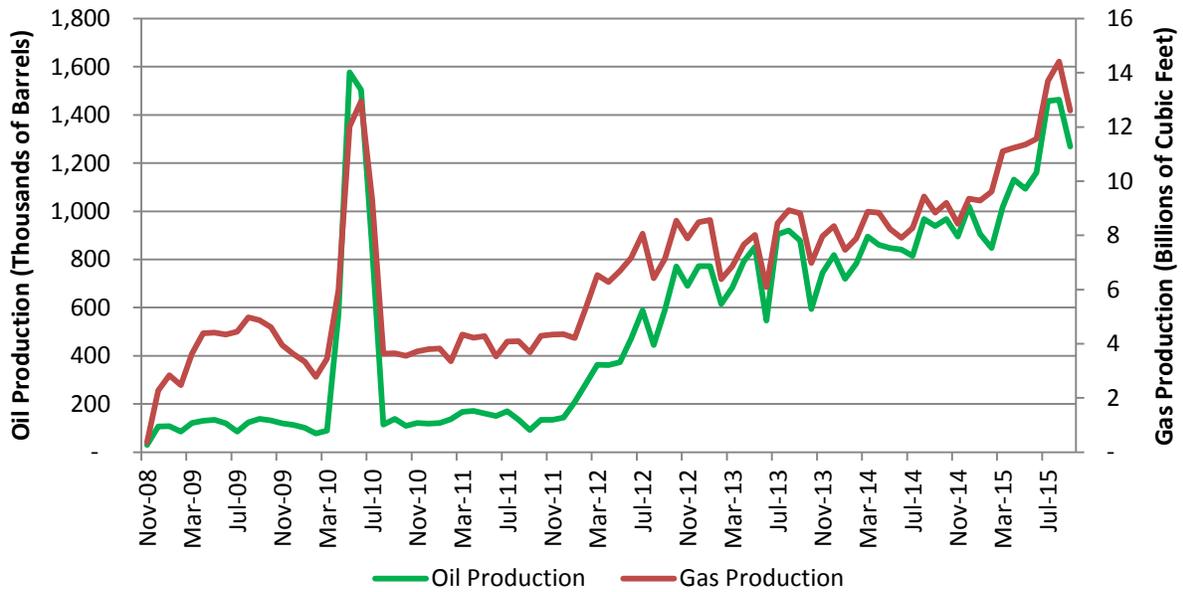
$$\text{Gas Production (mcf)} = \text{Number of Leases} * \text{BOE of Production per Lease} * (1 - \text{Oil Percentage})$$

Under more static economic conditions one could seemingly use this information from these established trends to accurately forecast oil and gas production. However, with oil prices in January 2016 having fallen to approximately one-third of where they were as recently as July 2014, it is conceivable that the upward trend in the number of GOMESA II lease producing will not continue at that pace. Also, while over the past 5 years the average BOE of production per GOMESA II producing lease has stabilized at approximately 50,000 BOE per month, this average could dramatically change with the addition of a prolifically producing lease. Hypothetically, the introduction of a lease, such as one in 2010 that produced over 1MM BOE per month for several months, could increase this average to 70,000 or more BOE per month. For example, over 64 percent of all GOM leases (GOMESA II and earlier) in greater than 800 meters of water produce more than 50,000 BOE per month and the average monthly production from these deep water leases is 200,000BOE.

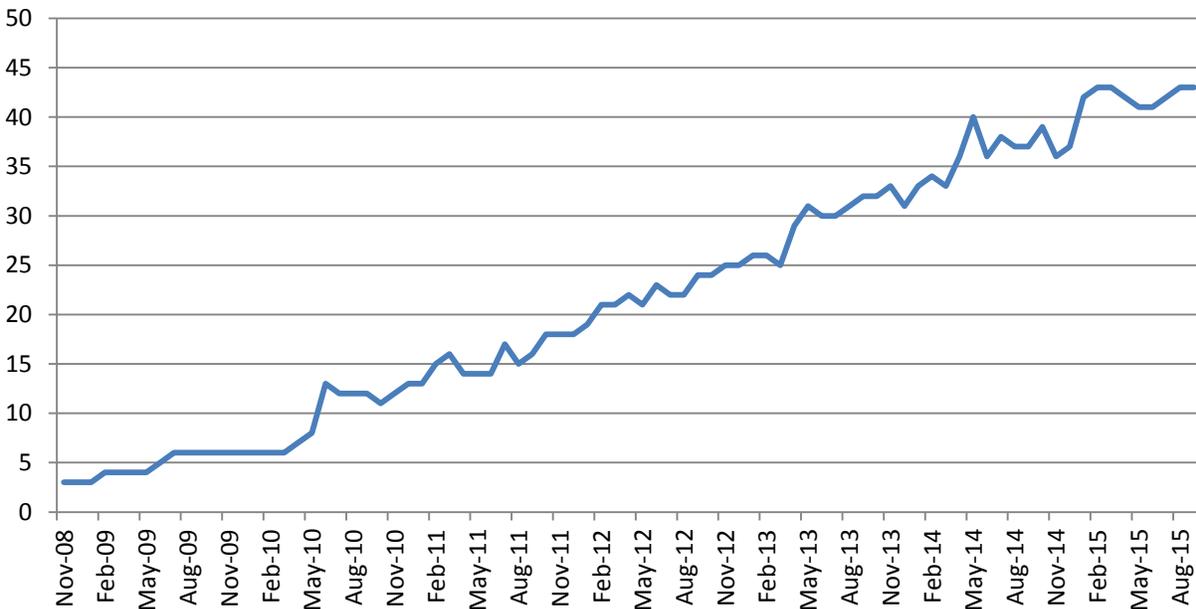
A full 25% of BOE production from GOM waters deeper than 800 meters is from leases that produce more than 1 MM BOE per month. Therefore, as more GOMESA II deep water leases get developed the average production per lease is likely to increase. Similarly, the average oil percentage from BOE

production of all deep water GOM leases is 80% oil compared to 55% as indicated by the trend in Figure 5 for the GOMESA II leases. While using the emerging GOMESA II trends to forecast GOMESA II production is possible, these uncertainties coupled with uncertainties in oil and gas pricing, make forecasting GOMESA II production, royalty revenues, and QOCSR problematic and uncertain.

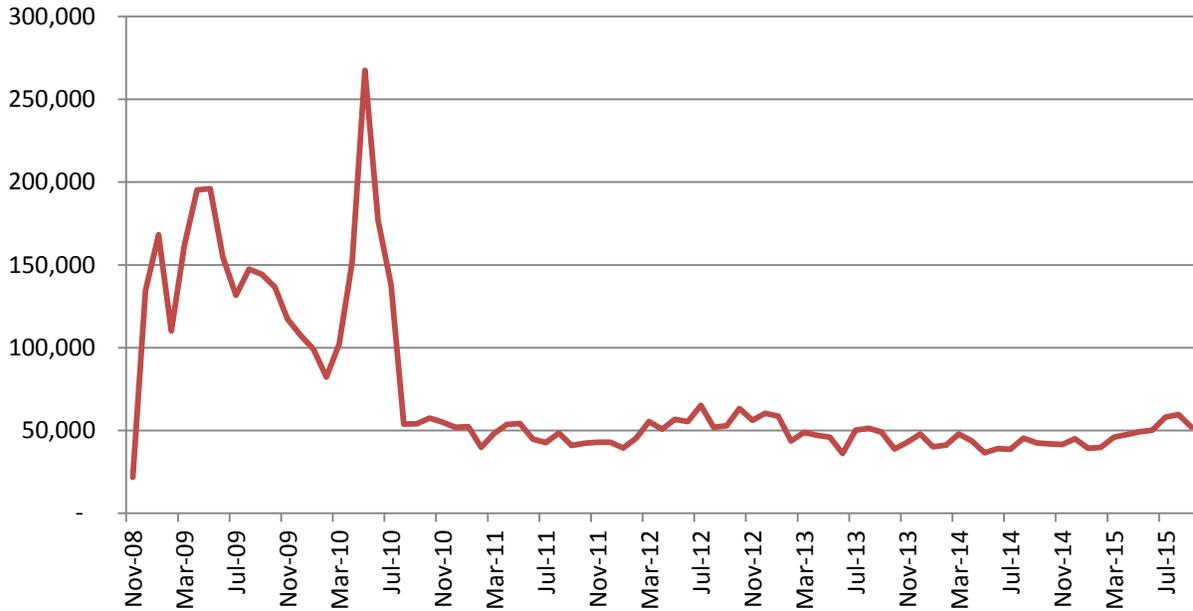
**Figure 2 GOMESA II Monthly Oil and Gas Production**



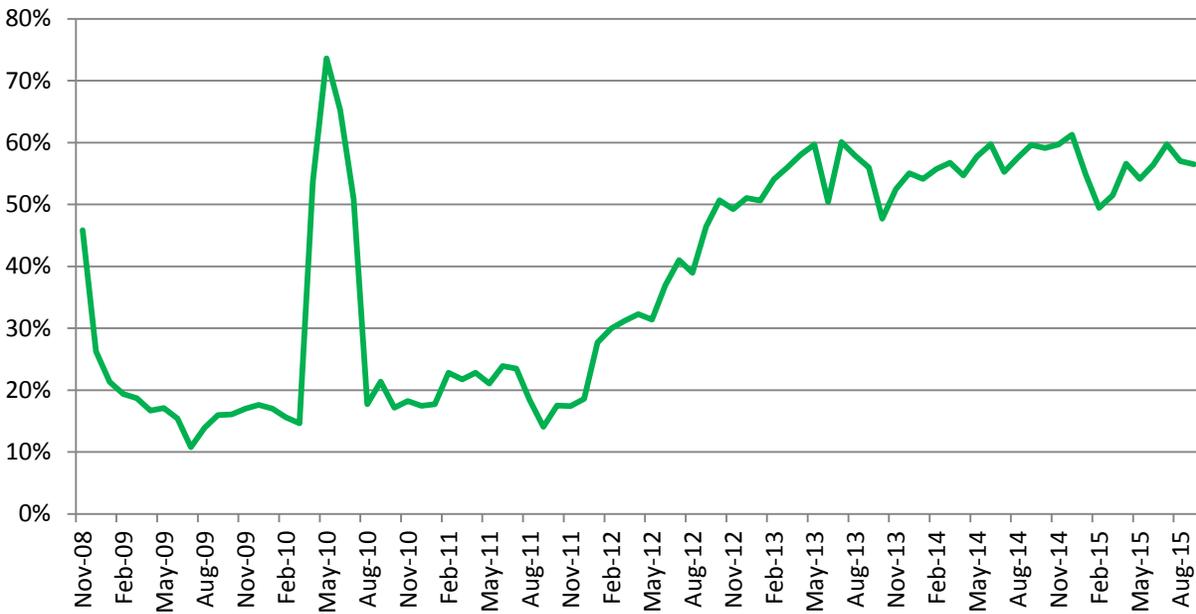
**Figure 3 Producing GOMESA II Leases**



**Figure 4 Monthly BOE per Producing GOMESA II Lease**



**Figure 5 Oil Percent of BOE of Producing GOMESA II Leases**



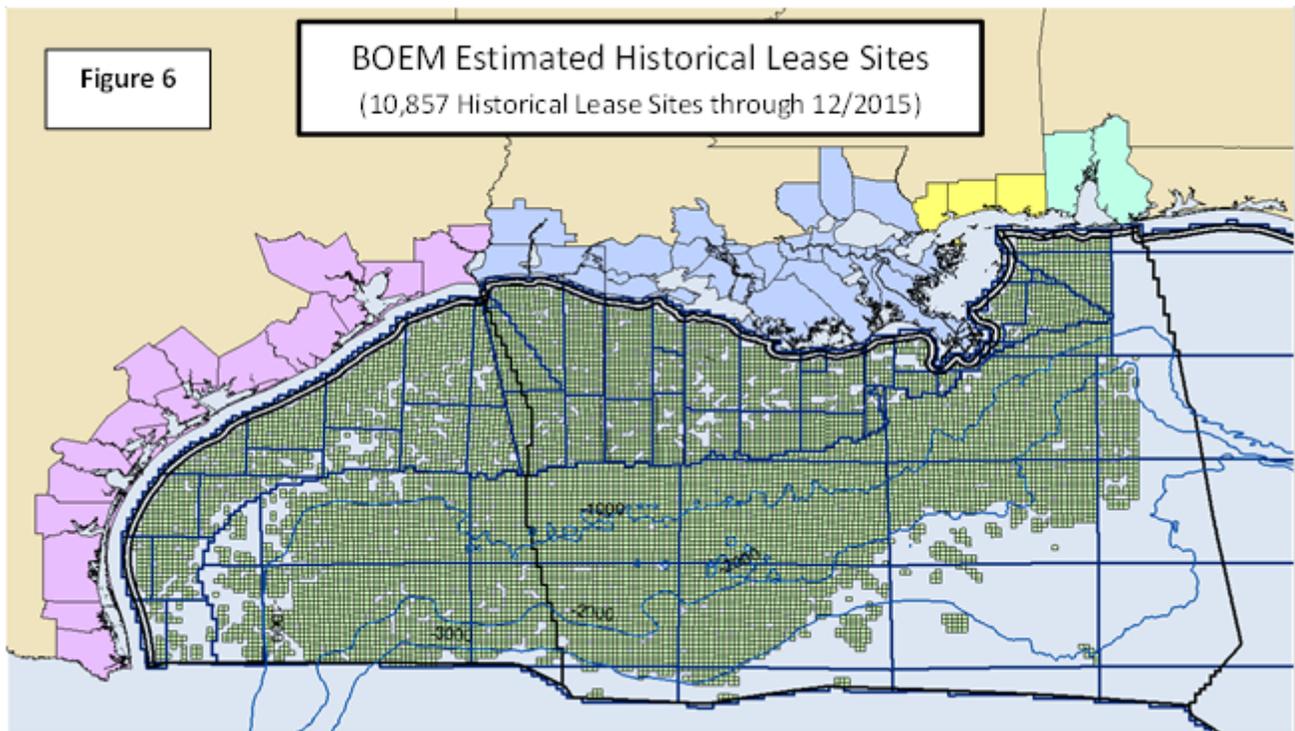
**Revenue Sharing**

Beginning in FY 2017, the GPS, CPS, and the LWCF will annually share 50% of the QOCSR generated each fiscal year under GOMESA II. For the years of FY 2017 through FY 2055, GOMESA II sharing is limited at \$500MM per year (if and when the annual QOCSR reaches at least \$1 billion in a year for this sharing cap

to be invoked). The shared revenue is payable 75% to the four GPS (Alabama, Mississippi, Louisiana, and Texas) and their 42 CPS, and 25% to the LWCF. Each GPS and its CPS are guaranteed to receive at least 10% of the shared revenue payable to the four GPS and their 42 CPS. Of the share to the states, 80% is to be paid directly to the GPS themselves while the remaining 20% directly to the CPS.

The shared revenue payable directly to the GPS is to be allocated in amounts that are inversely proportional to sum of the distances between each historical lease site (HLS) and the corresponding closest point on the coastline of each GPS. This means that a GPS that is closer to more HLSs than another GPS will receive a larger allocation.

Figure 6, *BOEM Estimated Historical Lease Sites*, is a map of the 10,857 HLS that have been unofficially determined by BOEM to exist through December 31, 2015 (the effective date for when the HLS are set for the first five years of GOMESA II revenue sharing). This map also shows the coastlines of the GPS and the locations and outlines of the 42 CPS. BOEM has calculated the distances from each of the 10,857 HLS to the nearest point on the coastline of each GPS and to the nearest point of each CPS. BOEM has compiled this information to calculate unofficial inverse distance shares used in the allocation calculations detailed in Table II. There are scenarios where the official inverse distance allocation could differ from these estimates. For example, the Office of Natural Resources Revenue's (ONRR) official records could indicate a different set of HLS than the 10,857 determined by BOEM or ONRR's distance calculating algorithm may be more precise.



The calculation of allocations to the CPS is more complex as it involves two components in addition to the inverse distance component also used for the GPS allocations. These are the population component, where CPS of higher populations would receive higher allocations, and the coastline length component, where CPS of greater coastline lengths would receive higher allocations. In these CPS allocation calculations, the inverse distance component is used to determine the allocation of 50% of the CPS' QOCSR while the population and coastline length components are each used to determine the allocation of 25% of the CPS' QOCSR.

As can be seen in the diagram of the CPS outlines in Figure 6, not every CPS has a coastline on the Gulf of Mexico. Accordingly, for the State of Louisiana only, there is a special provision that awards Louisiana CPS without a coastline a proxy coastline length equal to one-third of the average of the coastline lengths of Louisiana CPS with a coastline. A CPS without a coastline in any of the other GPS has "0" for their coastline length component and will receive no revenue from this component share of the calculations. This special provision for Louisiana CPS does not affect the allocations for CPS of other States.

Table II, *BOEM Unofficial Estimated Allocations of \$500,000,000 GOMESA II Revenue to the Gulf Producing States and their Coastal Political Subdivisions Based on Historic Lease Sites*, presents BOEM's unofficial estimated allocations of \$375MM in GOMESA II revenues to the GPS and their CPS. The allocations are unofficial for various reasons including, but not limited to: 1) it is the responsibility of ONRR to collect and disburse revenues from Federal oil and gas leases; 2) as noted above, the set of HLS may not be definitive and the inverse distance calculations made with them may not be 100% accurate for the reasons listed; 3) ONRR have a more accurate method of measuring the closest point from each HLS to the coastline of each GPS and the border of each CPS.

Table II represents BOEM's best current estimate of the allocable shares to each GPS and each CPS in any years where the GOMESA II revenue sharing cap of \$500MM is achieved. The LWCF would receive the other \$125MM above the GPS and CPS shares totaling \$375MM. To achieve this cap a minimum of \$1 billion of QOCSR must be collected from GOMESA II leases during a fiscal year. In fiscal years where the sharing cap is not met, the allocable shares revenue to each GPS and CPS should be proportional to the ratio of the total QOCSR collected in the fiscal year to the \$1 billion in QOCSR estimated in the example calculations comprising Table II.

Finally, the level of precision implied within Table II is not intended to be a signal of confidence in the accuracy of the data leading to these calculations using BOEM's estimated data. But rather it is intended as an illustration of the level of precision that will be utilized for the allocations once they are determined by ONRR. It is expected that the "Total Direct to State Allocations" and the "Total Direct to CPS Allocations" indicated will be accurate to within a few percentage points for each GPS and CPS given the uncertainties in the allocation calculations expressed herein for a year when the sharing cap is attained.



## Summary

GOMESA Phase II revenue sharing begins with QOCSR generated from leases in the Central and Western GOM in FY 2017. This revenue will be comprised of lease bonuses, lease rentals, and lease royalties received during FY 2017 from leases acquired since enactment of GOMESA in December 2006. With the understanding that this population of leases is growing as leasing and development of them continues, estimations of these revenues historically provide clear indicators that prevailing oil and gas prices have a big effect on their magnitudes. Evidence to this are QOCSR estimates for FY 2014 of \$1.12 billion when oil prices were \$99.12/bbl and gas prices were \$4.28/MMbtu compared to QOCSR just one year later of \$0.85 billion when oil prices fell to \$56.68/bbl and \$3.03/MMbtu. The important question concerning QOCSR is if and in what years they may be expected to exceed \$1 billion which is the annual cap on QOCSR for revenue sharing through FY 2055, when the cap is lifted.

BOEM is aware of the interest of stakeholders in knowing the future magnitudes of QOCSR and on the expected shared revenues coming their way. BOEM is also acutely aware of the myriad uncertainties in factors contributing to future QOCSR including oil and gas prices, pace of leasing of GOMESA II leases, future magnitudes of lease bonuses paid for GOMESA II leases, and the pace of development of GOMESA II leases. Presented herein are historical values of the important components contributing to QOCSR along with data and suggested methods for estimating future production and GOMESA II royalties. This is provided for readers to use in crafting future QOCSR estimates based on their own beliefs of future uncertain variables. Finally, presented in Table II are BOEM's unofficial calculations of allocable shares of GOMESA II distributions that could be expected by the Gulf Producing States, their Coastal Political Subdivisions, and the Land and Water Conservation Fund in years where the sharing cap is met.



## Appendix III: GOMESA Leveraging Opportunities

---



PAGE INTENTIONALLY LEFT BLANK



## Coastal Impact Assistance Program

The Coastal Impact Assistance Program (CIAP) was signed into law by President Bush on August 8, 2005. CIAP provides federal grant funds, derived from federal offshore lease revenues, to oil producing states for conservation, protection, and restoration of coastal areas including wetlands; mitigation of damage to fish, wildlife, or natural resources; planning assistance and administrative costs of complying with these objectives; implementation of federally-approved marine, coastal, or comprehensive conservation management plans; and mitigation of the impact of outer Continental Shelf activities through funding of onshore infrastructure projects and public service needs. Federal grant funds must be used to directly benefit an authorized use to conserve, restore, enhance, and protect renewable natural resources.

The Secretary of Interior has delegated Federal authority and management of CIAP to the Bureau of Ocean Energy, Management, Regulation, and Enforcement (BOEMRE). In 2011, Federal oversight of CIAP was transferred to the U.S. Fish and Wildlife Service (FWS). Governor Barbour designated the Mississippi Department of Marine Resources as the state agency to oversee the CIAP program for Mississippi.

Mississippi is one of six states eligible to receive CIAP funds. Hancock, Harrison, and Jackson counties are eligible coastal political subdivisions within Mississippi.

To receive CIAP funds, the State and the three counties must submit a combined CIAP Plan to the federal oversight agency describing how the fund would be expended. Mississippi's plan was approved in February 2009. All projects were slated to be complete by 2016, when the program sunset.

Original CIAP goals for the State of Mississippi included: barrier island restoration/shoreline stabilization; storm drain consolidation and sewer system upgrades to improve water quality; acquisition of ecologically significant and important natural areas; wetland and aquatic habitat improvement in the coastal zone; and education on the importance of coastal natural resources. In Tier 1, seventy-five projects were implemented totaling \$71 million; twenty-four projects were implemented in Tier 2 totaling \$18 million.

CIAP goals for Jackson County include promoting environmental education; acquiring land for restoration; conservation to prevent future property loss due to flooding; providing public access to local areas for environmental appreciation and education; and sanitary sewer review, repair, and renovations for environmental protection. In Tier 1, fourteen projects totaling \$15.6 million were implemented. In Tier 2, four projects totaling \$13.6 million were implemented.



In total, 141 projects, totaling \$150.5 million were implemented across Mississippi under CIAP. The allocations for the state and three counties under CIAP was just over \$109 million.

### **Mississippi Coastal Improvement Program**

The Mississippi Coastal Improvement Program (MsCIP) is a comprehensive plan for coastal Mississippi consisting of structural, non-structural, and environmental projects, planned and implemented through the U.S. Army Corps of Engineers, Mobile District. MsCIP addresses hurricane and storm damage reduction, salt water intrusion, shoreline erosion, and fish and wildlife preservation.

Following Hurricanes Cindy, Katrina, and Rita in 2005, Congress directed the U.S. Army Corps of Engineers, through Public Law 109-148 to:

*conduct an analysis and design for comprehensive improvements or modifications to existing improvements in the coastal area of Mississippi in the interest of hurricane and storm damage reduction, prevention of saltwater intrusion, preservation of fish and wildlife, prevention of erosion, and other related water resource purposes at full Federal expense; Provided further, that the Secretary shall recommend a cost-effective project, but shall not perform an incremental benefit-cost analysis to identify the recommended project, and shall not make project recommendations based upon maximizing net national economic development benefits; Provided further, that interim recommendations for near term improvements shall be provided within 6 months of enactment of this act with final recommendations within 24 months of this enactment*

Following several iterations of the plan, including near term project development and implementation, extensive stakeholder involvement, and years of studies and project development, the Mississippi Coastal Improvement Program was introduced in 2009. The Comprehensive Plan for MsCIP includes the restoration of the Mississippi barrier islands; restoration of over 3,000 acres of wetland and coastal forest habitat; acquisition of approximately 2,000 land parcels, with relocation of residents, within high hazard areas; the improvement of a levee at the Forest Heights community in Gulfport, Mississippi; a flood-proofing demonstration in Waveland, Mississippi; and the study of other hurricane and storm damage, risk reduction, and ecosystem restoration options across the coastal area.

The barrier island restoration elements, arguably the pivotal projects in MsCIP, include placement of sand at and adjacent to Camille Cut to connect East Ship and West Ship Islands and augment sediment to the updrift system along East Ship Island and beach restoration at Cat Island. Additionally, future dredge material will be placed adjacent to Horn Island Pass to enhance natural transport of dredge material to Horn Island.



In March 2014, the Mobile District completed a Draft Supplemental Environmental Impact Statement for Comprehensive Barrier Island Restoration. Barrier Island restoration projects for Cat Island, North West Ship Island, and Camille Cut are currently underway.

### **Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act**

In April 2010, the mobile offshore drilling unit Deepwater Horizon exploded, caught fire, and sank into the Gulf of Mexico in the Macondo prospect (Mississippi Canyon 252). As a result, millions of barrels of oil were discharged into the Gulf of Mexico over 87 days, until the well was sealed on September 19, 2010.

Gulf States will receive funds from civil and criminal settlements from the parties responsible for the spill. Sources of funding include, but are not limited to, the Oil Pollution Act of 1990 (OPA) and corresponding Natural Resource Damage Assessment (NRDA); the Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act); and the National Fish and Wildlife Foundation (NFWF) Gulf Environmental Benefit Fund (GEBF).

Governor Barbour designated the Mississippi Department of Environmental Quality as the natural resources trustee under OPA-NRDA, the RESTORE Act, and NFWF GEBF for the State of Mississippi.

#### **RESTORE Act**

In July 2012, the Resources and Ecosystem Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act) was passed into law. The RESTORE Act dedicates 80 percent of all Clean Water Act penalties related to the Deepwater Horizon spill into a Gulf Coast Restoration Trust Fund and outlines a structure under which the funds can be utilized to restore and protect natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, coastal wetlands, and economies in the Gulf Coast Region.

Under the RESTORE Act, the allocation of the Trust Fund is as follows:

- 35 percent divided equally among the five Gulf States for ecological restoration, economic development, and tourism promotion (Bucket 1);
- 30 percent plus 50% of the total interest managed by the Gulf Coast Ecosystem Restoration Council for ecosystem restoration under the Comprehensive Plan (Bucket 2);
- 30 percent divided among the Gulf States according to a formula to implement State expenditure plans, which require approval of the Gulf Coast Ecosystem Restoration Council (Bucket 3);



- 2.5 percent plus 25% of the total interest for the Gulf Coast Ecosystem Restoration Science, Observation, Monitoring and Technology Program within the Department of Commerce’s National Oceanic and Atmospheric Administration (Bucket 4); and
- 2.5 percent plus 25% of the total interest allocated to the Gulf States for Centers of Excellence Research grants, which focus on science, technology, and monitoring related to Gulf restoration (Bucket 5).

Bucket 1 funds, totaling \$373 million per Gulf State, can be used for ecological and economic restoration. Gulf States were required to complete a multi-year implementation plan, to be accepted by the Department of the Treasury, before receiving funds. The State of Mississippi’s Multiyear Implementation Plan was submitted to the U.S. Department of the Treasury in December 2015 and accepted in May 2016.

The 2016 accepted Multiyear Implementation Plan (MIP), eleven projects are to be implemented, totaling \$54.1 million. These projects are: Stennis International Airport Hangar, Port Bienville Trans-Loading Terminal Facility Completion, Improved Fiber Optic Infrastructure, Mississippi Aquarium, Phase I of Jackson County Corridor Connector Road, Work Ready Community Program, Accreditation Support of William Carey University School of Pharmacy, Off-Bottom Oyster Aquaculture Program, Strategic Stream Restoration, Planning Assistance for Project Management System, and Planning Assistance for MIP Amendment Development.

Bucket 2 funds were directed to the Gulf Coast Ecosystem Restoration Council, which is composed of federal officials and the governors of the Gulf States. The \$1.598 billion is to be used to implement a science-based plan to restore and protect Gulf Coast natural resources.

Under Bucket 3, states received varying amounts of the “spill impact” based upon a formula implemented by the Council. Mississippi will receive \$305 million. Funds can be used for ecological and economic restoration. Before receiving funds, Gulf States must complete a state expenditure plan, to be approved by the Council.

The entirety of Bucket 4, \$133 million, is directed to the NOAA Science Program to fund research, observation, and monitoring to support the long-term sustainability of Gulf ecosystems and fisheries. Funding priority is given to long-term, integrated projects.

Bucket 5 is equally distributed among Gulf States, with each state receiving \$27 million, to award competitive grants to nongovernmental entities and consortia in the Gulf Coast region to establish Centers of Excellence to focus on science, technology, and monitoring in the Gulf.

#### **NFWF GEBF**

The National Fish and Wildlife Foundation established the Gulf Environmental Benefit Fund in accordance with the terms of two plea agreements in certain criminal cases against BP and



Transocean as a result of Deepwater Horizon. NFWF will administer and monitor \$2.544 billion in payments over a five-year period; of that, \$356 million is allocated for the State of Mississippi.

The GEBF was established to remedy harm and eliminate or reduce the risk of future harm to Gulf Coast natural resources that were adversely affected by the oil spill. In Mississippi, the GEBF funds may only be used to support projects that remedy harm to natural resources, both habitat and species, that were impacted by the oil spill. The criteria used to evaluate projects are:

- Advance priorities in natural resource management plans, such as those under RESTORE;
- Are within reasonable proximity to where impacts from the oil spill occurred;
- Are cost-effective and maximize environmental benefits;
- Are science-based; and
- Produce measurable and meaningful conservation outcomes to habitats and species impacted by the oil spill.

Current NFWF GEBF projects in Mississippi include habitat restoration and conservation in Turkey Creek; oyster restoration and management; a design challenge for improvement of water quality from beach outfalls, federal lands program habitat restoration, utilization of dredge material for marsh restoration, invasive species management, reef fish assessment, and the coastal streams and habitat initiative.

### **GoCoast 2020**

In 2012, Governor Bryant created GoCoast 2020 to serve as the official advisory body to the Governor for the allocation of funds received by the State of Mississippi under the RESTORE Act. GoCoast 2020 is comprised of more than 100 business and community leaders and elected officials from the Mississippi Gulf Coast.

GoCoast 2020 formed committees to make recommendation to the Governor for initiatives and projects related to eco-restoration, economic development, small business, seafood, tourism, education, infrastructure, and workforce development – all eligible activities under the RESTORE Act.

In January 2013, GoCoast 2020 published its final report with recommendations for RESTORE Act funding received by Mississippi. The report does not list specific projects, rather, it contains priorities and criteria against which projects should be considered. The priorities for the initiatives are:

- Eco-Restoration
  - Healthy Water Resources



- Habitat Conservation, Restoration, and Enhancement
- Sustainable Living Coastal and Marine Resources
- Resilient Coastal Communities
- Economic Development
  - Asset Development and Capacity
  - Enhancing Broadband Infrastructure
  - Educate and Train a Productive Workforce
  - Enhance the Quality of Life/Place and Business Environment
  - Incubators and Accelerators
  - Funding Programs
- Seafood
  - Seafood Promotion
  - Habitat Development and Restoration
  - Infrastructure
  - Seafood Research
  - Commercial and Recreational Fishing
  - Workforce Development
- Infrastructure
  - Job Creation and/or Retention
  - Enhancement of existing industries
  - Establishing future revenue streams for long-term maintenance and operation of infrastructure developed with RESTORE Act funds
- Tourism
  - Increase visitation to the Mississippi Gulf Coast
  - Increase return visits of tourists
  - Provide great value for low cost, unique offerings, and outstanding service
  - Provide a variety of family activities at various price points
- Workforce Development
  - Promote workforce training programs
  - Implement programmatic and curriculum-related activities focused on industry needs
  - Collaboration of education and training providers at all education levels
- Small Business
  - Enhancement of services to small businesses
  - Establishment of business resource centers
  - Increase of tourism related to small business
- Research and Education
  - Foster research capacity, multi-disciplinary and technological in nature
  - Create research and technology development partnerships across sectors



- Develop kindergarten through PhD formal education within state pre-college curricula and Institutions of Higher Learning guidelines with an emphasis on STEM
- Increase public awareness concerning the economic and ecological importance and benefits of a Healthy Gulf of Mexico ecosystem
- Research priorities: fisheries; aquaculture; ecosystem-based management; endangered, threatened, and protected species; comprehensive observation, monitoring, and mapping; habitat restoration; coastal and ocean ecosystem forecasting
- Education priorities: technology-targeted programs competitive on regional to global scales for workforce development; outreach programs to increase public awareness and understanding concerning the ecological and economic importance of a healthy, sustainable Gulf of Mexico; infrastructure and technology upgrades to meet the needs of a STEM-focused workforce.

## **Gulf of Mexico Energy Security Act**

### **Gulf of Mexico Energy Security Act, Phase I**

On December 20, 2006, President Bush signed the Gulf of Mexico Energy Security Act of 2006 (GOMESA) into law. The Law shares leasing revenues with Gulf Producing States and the Land & Water Conservation Fund for coastal restoration projects; bans oil and gas leasing within 125 miles of the Florida coastline in the Eastern Planning Area, and a portion of the Central Planning Area until 2022; and allows companies to exchange certain existing leases in moratorium areas for bonus and royalty credits to be used on other Gulf of Mexico leases.

There are two phases in GOMESA revenue sharing. Phase I began in Fiscal Year 2007 and ends at the end of Fiscal Year 2016. Phase I only allows for new exploration in a relatively small portion of the Gulf of Mexico covering 8.3 million acres, called Area 181, the area is energy-rich and is estimated to contain 3.4 trillion cubic feet of natural gas and 530 million barrels of oil. In Phase I, 37.5 percent of all qualified outer continental shelf revenues, including bonus bids, rentals, and production royalty, is to be shared among Texas, Louisiana, Mississippi, and Alabama and their political subdivisions from new leases issued in Area 181. Additionally, 12.5 percent of revenues are allocated to the Land and Water Conservation Fund.

### **Future Assessment and Context of GOMESA, Phase II**

At the beginning of Fiscal Year 2017, the lease areas available for revenue sharing under GOMESA expand substantially, and these funds will be made available to participating states in Fiscal Year 2018.



In order to effectively, efficiently, and expeditiously execute GOMESA funding for long-term restoration and resiliency of the Gulf Coast, Mississippi has created and implemented a comprehensive Mississippi GOMESA Program under the Department of Marine Resources.

### **USACE 219**

USACE Section 219 provides environmental assistance to non-Federal interests pursuant to Section 219 of the Water Resources Development Act of 1992, Public Law 102-580, as amended. Section 219 can be used for design, construction, or design and construction for projects implemented under the Section. Under Section 219, work performed on projects must be performed by the Government as Section 219 does not contain authority to credit or reimburse for work performed by a sponsor. Section 219 funds may only be used for environmental infrastructure projects.

Section 219, also known as the Environmental Infrastructure Program, authorized the Corps to assist non-Federal interests in carrying out water-related environmental infrastructure and resource protection and development projects. Such assistance may be in the form of technical, planning, and/or design assistance for water supply and storage, treatment and distribution systems, and wastewater treatment systems including treatment plants.

In order to qualify for Section 219 funding, project must be specifically named by Congress in the authorizing language for this program – the Water Resourced Development Act (WRDA). Procurement of design services shall be obtained from private sources unless the services require the use of new technologies unavailable from the private sector, or the Solicitation or Request for Proposals fails to attract two or more bids.

The non-Federal sponsor's share is twenty five percent of total design costs or total project costs. The non-Federal sponsor is responsible for providing all lands, easements, rights-of-way, and relocations (LERR) required for the project and for obtaining any necessary permits. The non-Federal sponsor will receive credit for the value of such LERRs and the cost of obtaining permits towards its share of total project costs, but not to exceed twenty five percent of the total project costs. In addition, the non-Federal sponsor will receive credit toward its share of total design costs or total project costs, as applicable, for the reasonable costs of design work it completes prior to entering into an agreement with the Government. The non-Federal sponsor will be responsible for one hundred percent of the operation, maintenance, repair, rehabilitation, and replacement costs associated with a completed construction project. The Federal cost share is limited to five million dollars.

Formal assurance in the form of a Project Partnership Agreement must be executed with the project sponsor. The project sponsor must normally agree to the following:



- Provide without cost to the United States all Lands, Easements, Rights-of-Way, Relocations, and Disposal areas (LERRDs) necessary for the construction and subsequent maintenance of the project.
- Maintain and operate the project after completion without cost to the United States.
- Assume responsibility for all costs in excess of the Federal cost limitation of \$5,000,000.
- If the value of the sponsor's land contribution does not equal or exceed twenty five percent of the project cost, they must provide cash or work-in-kind contributions to make the sponsor's total contribution equal to twenty five percent.

### NRCS EWP

The United States Department of Agriculture's Natural Resources Conservation Service (NRCS) administers the Emergency Protection Program (EWP), which responds to emergencies created by natural disasters. It is not necessary for a national emergency to be declared for an area to be eligible for assistance.

The EWP is designed to help people while conserve natural resource by relieving imminent hazards to life and property caused by floods, fires, windstorms, and other natural occurrences. EWP is an emergency recovery program. All projects undertaken, with the exception of the purchase of floodplain easements, must have a project sponsor.

NRCS may bear up to seventy five percent of the construction cost of emergency measures. The remaining 25 percent must come from local sources and can be in the form of cash or in-kind services. Ninety percent of the project may be paid for projects within limited-resource areas as identified by the United States Census data. Funding is subject to Congressional approval.

EWP is designed for installation of recovery measures. Activities include providing financial and technical assistance to:

- Remove debris from stream channels, road culverts, and bridges,
- Reshape and protect eroded banks,
- Correct damaged drainage facilities,
- Establish cover on critically eroding lands,
- Repair levees and structures, and
- Repair conservation practices.

NRCE may purchase EWP easements "in lieu of recovery" on any floodplain lands that have been impaired within the last twelve months or that have a history of repeated flooding (i.e. flooded at least two times during the past ten years). If it is more cost effective, EWP-Floodplain Easement) can be used as an alternative to EWP.



EWP work is not limited to any one set of prescribed measures. A case-by-case investigation of the work is made by NRCS.

Public and private landowners are eligible for assistance but must be represented by a project sponsor. All projects undertaken through EWP, with the exception of the purchase of floodplain easements, must have a project sponsor. Sponsors include legal subdivisions of the State, such as a city, county, general improvement district, conservation district, or any Native American tribe or tribal organization as defined in Section 4 of the Self-Determination and Education Assistance Act.

Sponsors are responsible for:

- Providing land rights to do repair work,
- Securing the necessary permits,
- Furnishing the local cost share,
- Accomplishing the installation of work, and
- Performing any necessary operation and maintenance.

Work can be done either through Federal or local contracts.

All EWP projects must reduce threats to lives and property; be economically, environmentally, and socially defensible; be designed and implemented according to sound technical standards; and conserve natural resources.



## Appendix IV: Long-Term and Maintenance Projects

---



PAGE INTENTIONALLY LEFT BLANK



## Long Term Capital Improvements

Table 7 lists the projects that are recommended for long term (5-10 years) completion, in order of their priority.

**Table 7 - Long Term Recommended Capital Improvements**

Site Number	Site Name / Description	Project Type	Opinion of Probable Project Cost
3.09	Hickory Hills Watershed - Gautier	Drainage	\$865,000
5.09	Davis Bayou (remaining areas) - Ocean Springs	Dredging	\$9,294,000
2.26	North Drive Canals - Moss Point	Dredging	\$761,000
4.07	Lemoyne Avenue @ Hwy 609 - St Martin	Dredging	\$2,979,000
2.15	Telephone Road - Pascagoula	Drainage	\$266,000
2.19*	Elder Ferry Road - Moss Point	Drainage	\$1,075,000
2.31	Magnolia St & Jefferson Ave - Moss Point	Drainage	\$796,000
3.02	11th Street / Parsley Street Watershed - Pascagoula	Drainage	\$738,000
5.04	CCC Camp Rd - Reilly Rd to Ocean Springs Rd - Ocean Springs	Drainage	\$1,179,000
3.12	Upper Bayou Casotte Drainage Area - Pascagoula	Dredging	\$1,316,000
2.29	Bellview Street Bayou - Moss Point	Dredging	\$1,197,000
2.30	Small Point Bayous - Moss Point	Dredging	\$1,214,000
3.17	Upper East Graveline Bayou - Gautier	Dredging	\$832,000
2.11	Bay Avenue/Union Street - Moss Point	Drainage	\$933,000
3.11	Community Ave / Bayou Yazoo Watershed - Pascagoula	Dredging	\$1,693,000
5.05	Ocean Springs inlet to Davis Bayou @ Hwy 90	Dredging	\$3,522,000
3.13	Canty Street Bayou - Pascagoula	Dredging	\$1,351,000
3.08	Inner Harbor / Lake Yazoo - Pascagoula	Dredging	\$4,695,000
4.06	Fairway (Gulf Hills) - Ocean Springs	Dredging	\$1,881,000
2.22	McInnis Avenue - Moss Point	Drainage	\$578,000
2.27	Choctaw Marina - Moss Point	Dredging	\$1,676,000
3.10	Bayou Pierre / Italian Isle Watershed - Gautier	Dredging	\$1,601,000
4.12	Fort Avenue Boat Launch - Ocean Springs	Dredging	\$1,300,000



Site Number	Site Name / Description	Project Type	Opinion of Probable Project Cost
5.11	East Simmons Bayou	Dredging	\$2,907,000
1.04	Indiantown Road - Escatawpa, North end of Hwy 613	Drainage	\$709,000
2.18	Frank Griffin Road - Moss Point	Drainage	\$271,000
3.15	Enger Bayou - Pascagoula	Dredging	\$493,000
4.09	Vermont Avenue - Ocean Springs	Dredging	\$3,089,000
5.07	Heron Bayou at Perryman Road area - Ocean Springs	Dredging	\$672,000
<b>Total</b>			<b>\$58,576,000</b>

\*Project includes areas maintained by MDOT.

### Proposed Maintenance Items

Projects selected for implementation directly by Jackson County maintenance forces were chosen based on project cost, simplicity of construction, and the County's equipment limitations. Only projects with an opinion of cost of \$500,000 or less were considered as potential County maintenance projects. The total cost of dredging maintenance projects was kept under Jackson County's yearly dredging budget of \$1,000,000 and left allowances for additional county dredging projects not assessed in this report.

**Table 8 - Proposed County Maintenance Items**

Site Number	Site Name / Description	Project Type	Opinion of Probable Project Cost
1.01	Escatawpa Area - Manchester Drive area (north end) to Wilson Springs	Drainage	\$154,000
RD.04	St Martin Road & Lorraine Circle - St Martin	Dredging	\$181,000
2.04	Sherlawn Drive - Moss Point	Drainage	\$388,000
2.09	Coventry Drive - Escatawpa	Drainage	\$333,000
2.07	Robinway Drive - Moss Point	Drainage	\$338,000
2.05	Belview Street - Moss Point	Drainage	\$324,000
RD.02	St. Andrews South - Sangani Outfall - Ocean Springs	Drainage	\$295,000
3.14	De La Pointe Drive / Frenchmans Drive - Gautier	Dredging	\$171,000



Site Number	Site Name / Description	Project Type	Opinion of Probable Project Cost
3.04	Glen Heath / Holly Heath Watershed - Gautier	Dredging	\$28,000
3.05	Rolling Meadows Watershed - Gautier	Drainage	\$161,000
5.10	Rosemont / Hastings Road - Gautier	Dredging	\$167,000
2.06*	Greenwich Avenue - Moss Point	Drainage	\$470,000
2.17	Morgan Avenue - Pascagoula	Drainage	\$320,000
2.10	Convent Avenue	Drainage	\$75,000
		Total	\$4,098,000

\*Project includes areas maintained by MDOT.