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Executive Summary

Background

The *Mississippi Gulf Region Water and Wastewater Plan* represents a collaborative effort between Mississippi's public and private sectors to respond in an extraordinary way to the devastation of the worst natural disaster in the history of the United States. Hurricane Katrina destroyed or heavily damaged tens of thousands of homes, businesses, community facilities, and government buildings and services, as well as public transportation and utility infrastructure. Although effects from the storm were realized statewide, the most devastating impacts clearly were felt along the Mississippi Gulf Coast (the Gulf Coast).

Local municipal and county leadership, state agencies, and the executive and legislative branches of Mississippi government responded to Katrina's immediate effects both on the local and national level. Two important elements of that response on the home front were the formation of the Governor's Commission on Recovery, Rebuilding and Renewal and the passage in the Mississippi Legislature of Senate Bill (SB) 2943 (dated April 8, 2006, Miss. Code Ann. Sections 49-17-70, et seq.). This bill, as a direct outcome of the Commission's recommendations, provided the necessary means for creation of county-wide utility authorities in the six lower counties, with the intention that these authorities would oversee and manage the development of water, wastewater, and stormwater infrastructure within their jurisdictions. On the national front, Mississippi's leaders worked with the State's Congressional delegation to obtain appropriations of over $5.0 billion in long-term recovery assistance, through the U.S. Department of Housing and Urban Development.

Combining these efforts that came forth on the local and national levels, Governor Barbour directed that a portion of the $5.0 billion in long-term recovery assistance from Congress be designated for funding water, wastewater, and stormwater infrastructure improvements in the six county Mississippi Gulf Region (the Gulf Region), which includes Pearl River, Stone, George, Jackson, Harrison and Hancock Counties. In order to provide a deliberative and systematic means of allocating the funding, which was designated in the form of Community Development Block Grant (CDBG) Disaster Recovery grants, the Governor directed that a plan be prepared to identify and prioritize the most critical water, wastewater, and stormwater infrastructure needs within the Gulf Region. The *Mississippi Gulf Region Water and Wastewater Plan* is the outcome of that directive.

Authority

The *Mississippi Gulf Region Water and Wastewater Plan* (the Plan) was prepared under authority of the contract between the Mississippi Department of Environmental Quality and Mississippi Engineering Group, Inc., dated April 10, 2006.

Plan Objectives

The objective of the Plan is to identify the most critical water, wastewater, and stormwater infrastructure needs within the Gulf Region and to prioritize those needs within the framework of an implementation plan for allocation of the funds designated by Governor Barbour. The improvements are intended to support existing and future growth patterns, particularly as realized through new housing construction, and to promote economic development.

In support of its objective the Plan focuses on the Gulf Region, more than on individual units of government, and encourages centralization and consolidation of infrastructure where practicable; provides for infrastructure in areas of current and projected development; and supports location of facilities in areas that are less vulnerable to hurricane impacts.

Plan Approach

The basic approach to the Plan was to develop a regional infrastructure "backbone" on which a more localized system of improvements could develop as necessary. The major elements of the approach included:

- Detailed inventory and assessment of pre-Katrina infrastructure conditions on a community-by-community basis;
- Analyses of pre- and post-storm demographic data and other conditions relevant to growth and development, in order to arrive at projections of short- and long-term shifts in population;
- Identification of water, wastewater, and stormwater infrastructure improvements to meet the short- and long-term needs within the Gulf Region;
- Development of an implementation plan to address priority allocation of the funding designated for infrastructure improvements within the Gulf Region.

A critical component of the approach was the involvement of local community stakeholders. This component did not constitute any single task; rather, stakeholder involvement was interwoven throughout the process. Stakeholders included members of the county utility authorities, public officials from both county and municipal governments, leadership from the private sector, and state and regional agencies. Outreach meetings were conducted throughout the Gulf Region during the planning period. Stakeholders provided input regarding local infrastructure conditions and needs and were given opportunities to respond and comment on findings of the Plan. Following publication of the Draft Plan in November 2006 a twenty-day public comment period was provided, during which time three public meetings were conducted in the Gulf Region. Input from this public comment process subsequently was integrated into the Plan.

Summary of Findings

Prior to Hurricane Katrina potable water was supplied to customers within the six counties of the Gulf Region by 185 different service providers, including municipalities, utility service districts, non-profit rural water associations, or private entities, each monitored by the Mississippi Department of Health. The Plan also identified 481 different facilities with permitted wastewater discharges in the Gulf Region. In addition to these permitted treatment and discharge facilities, over 85,000 individual, on-site sewage systems were reported to be handling wastewater from approximately 195,000 housing units throughout the region. The volume of wastewater being treated by these systems is approximately 7.3 million gallons per day. Consequently, an important goal of the Plan was to identify feasible alternatives for consolidating multiple facilities into more regionalized systems.

Water and wastewater infrastructure throughout the Gulf Region suffered extensive damage as a result of both storm surge and high winds. Clearly the most severe impacts occurred to facilities located below Interstate 10 in the three coastal counties. Even if structures escaped wind damage, the excessive storm surge flooded most facilities and rendered electrical and mechanical equipment inoperable. Many of these damages to existing facilities are being addressed with hazard mitigation and other programs of funding from FEMA. Consequently, on the whole, the current plan does not seek to remediate damages to local facilities caused by Hurricane Katrina. Rather, as stated previously, the goal of this Plan is to provide new or enhanced infrastructure and to locate new facilities out of harm's way.

Katrina's impact caused a large-scale population shift within and outside the Gulf Region, as well as in Louisiana and Alabama. The impacts to economic growth and development within the Gulf Region resulting from this regional shift in population remains to be seen; however, the impact to infrastructure systems is immediate. Determinations of where to build new facilities and what size they should be are directly impacted by projections of where new centers of housing and population growth will occur. The following table summarizes population data for the Gulf Region immediately before and after Katrina, as well as projections for the short-term and long-term planning periods, including consideration for transient residents.

	2005 (pre-Katrina)	**October 2005** *(with % change)*	**Projected 2010***	**Projected 2025***
George	21,011	25,516 *(+21.4%)*	26,426	32,554
Hancock	46,002	30,409 *(-33.9%)*	52,610	69,391
Harrison	189,444	178,466 *(-5.8%)*	254,206	332,788
Jackson	134,950	121,187 *(-10.2%)*	148,963	193,612
Pearl River	51,809	64,189 *(+23.9%)*	67,624	91,454
Stone	14,359	18,144 *(+26.4%)*	19,418	29,230
Gulf Region	**457,575**	**437,911 *(-4.3%)***	**569,247**	**749,029**

*Projections include both permanent and transient residents.

The immediate effects of Katrina on the Gulf Region population included a reduction in the three coastal counties and a corresponding increase in the three inland counties. This effect is not anticipated to continue over the long term, however, as populations are projected to exceed pre-storm levels in all six counties by 2010. Although sufficient capacity appears to exist for meeting projected demands for water supply and wastewater treatment within each of the Gulf Region counties, the geographic location of existing infrastructure will not provide this demand in a cost-effective manner. Furthermore, the location of a majority of these existing facilities near the coastline makes them continually vulnerable to the impacts of major storm events.

Through an extensive process of involvement with local stakeholders in each of the counties, over 300 projects were identified that addressed the perceived infrastructure needs throughout the Gulf Region. Some of these were projects that had been in some stage of planning or conception prior to Katrina. In order to address these needs in a systematic and equitable manner, criteria were developed for evaluating the relative merits of individual needs and alternatives for meeting those needs. Criteria for evaluating individual projects included credible costs (cost per customer), time required for project implementation, impacts to quality of life (health and safety, access for human use, improved aesthetics), vulnerability to storms, impact to economic development potential, impact on housing construction, and environmental protection.

Plan Priorities

The infrastructure improvements identified through the planning process were categorized as *near-term* (to be completed by 2010) or *long-term* (to be completed by 2025 or beyond, depending on funding). Near-term projects were considered to be those critical to regional recovery, with high levels of stakeholder support, limited permitting requirements, straightforward implementation, and high potential for shared funding. In order to be categorized for near-term implementation, projects had to (1) comply with HUD criteria for CDBG disaster recovery grants, namely, they had to be the direct or indirect result of Hurricane Katrina, and they had to support disaster relief, long-term recovery, and restoration of infrastructure; (2) comply with economic recovery criteria, namely, provide infrastructure in areas currently not served or underserved, and provide infrastructure for economic development; and (3) be implementable by 2010. In order to be implementable by 2010 projects needed to have the support of local stakeholders, as demonstrated through a willingness to invest in project implementation and long-term maintenance and operation. Once near-term projects were identified according to these criteria, they were prioritized for funding and implementation.

The evaluation and prioritization process identified several instances where ongoing, local development projects were expected to create a need for wastewater treatment prior to implementation of the Plan's recommended project. In such cases, consideration was given to interim treatment projects that would allow wastewater to

be treated during this period in a manner that would be consistent with the ultimate improvements recommended as part of the Plan.

The priority system used to rank projects for funding included five criteria, as follows:

1. Extent to which the project accommodates the expected demographic changes, recovery, and development resulting from Hurricane Katrina;

2. The project's impact on economic development and recovery;

3. The project's cost effectiveness, affordability, and benefits, regional and multi-jurisdictional;

4. The time required to implement the project; and

5. The project's necessity to correct or minimize an imminent future public health or environmental threat.

A program of priority water, wastewater, and stormwater infrastructure improvement projects was developed based on the foregoing criteria.

Provisions also were made to identify, from among the priority list, projects of a particularly critical or time sensitive nature. These projects were designated as emergency projects, and funding in the amount of $25 million was set aside out of the overall program allocation to facilitate their accelerated implementation.

Supplemental Programs

Following publication of the Draft Plan in November 2006, many public comments were received regarding the initial program of recommended priority improvements. Significant infrastructure needs were identified beyond those recommended in the draft Plan. After thorough review of each comment, it was determined that many of these additional needs were important to achieving the objectives of the Plan. Consequently, additional funds were made available to the disaster recovery pool. As a result, priority improvements that had been identified earlier were able to be reevaluated through further discussions with stakeholders. Those areas identified for supplemental funding included additional regional infrastructure, ultra-distressed areas, and municipal infill areas, as described hereafter.

Additional Regional Programs

An integral component of the planning process has been stakeholder involvement. The programs shown in the "Listing of Recommended Programs" table, on subsequent pages, reflect the continuing dialogue held with stakeholders following presentation of the initial list of recommended priority projects. After receipt of further funding and in response to stakeholder input, an additional $26 Million in infrastructure programs were added to the recommended program.

Ultra-Distressed Areas

A fundamental tenet of the Plan approach adopted early on was that the Plan should provide for development of a regional infrastructure backbone, on which more localized systems could develop as necessary. For this reason, the Plan initially did not consider funding of localized water distribution or sewer collection networks. During the planning process, however, it became apparent that two particular factors combined to create unique circumstances in Hancock County, relative to the condition of existing localized infrastructure and the amount of damage suffered. First, a majority of the localized water and sewer infrastructure existed in areas impacted by storm surge inundation and consequently suffered catastrophic loss. Secondly, in areas not inundated by surge but where a majority of the housing was destroyed, localized water and sewer networks were sparse, even prior to the storm. These factors combined to create what might be considered ultra-distressed areas. Not only did these areas suffer from hurricane damage, but they also lack the necessary tax base to fund the complementary localized projects that would necessarily be built around the regional systems recommended in the Plan.

Consequently, in order to promote recovery in these areas, the Plan recommends a total of $47 million in funding for local water distribution and wastewater collection projects in these ultra-distressed areas.

Municipal Infill Areas

Similar to that described in the previous paragraph on ultra-distressed areas, other municipalities along the coastline suffered severe damage to localized infrastructure. While FEMA is restoring much of the existing infrastructure to conditions that existed prior to the hurricane, many of these areas are projected to redevelop according to different characteristics and densities than before. In some situations condominiums or hotels will replace single-family residences, in which case living spaces will be elevated above storm surge levels. Such replacement of single-family with multi-family dwellings will result in higher population densities and increased flows of water and wastewater over what has existed historically. The historical capacity of the infrastructure, even when replaced, may not be suitable or able to accommodate this type of dense development.

There also are areas in or near these municipalities that have inadequate water and sewer infrastructure and hence have not fulfilled their full potential for build out. Many of these areas contain vacant lots or land areas with the potential for infill development, if adequate infrastructure were available. The potential for municipal infill into these under-served areas is great and would allow for additional housing and economic growth. The Plan consequently recommends that funding in the amount of $55 million be allocated toward these potential infill areas.

The overall program funding, including the recommended funding of additional regional programs, the localized improvements in the ultra-distressed areas, and funding of the municipal infill programs, is summarized in the following table and illustrated on figures ES-1 through ES-3, as recommended for allocation among the counties of the Gulf Region.

Listing of Recommended Programs				
County	**Name of Program**	**Media**	**Component**	**Cost**
Hancock	Eastern Hancock County Regional Water Supply	Potable Water	Provide water supply system to serve the Hancock County Water and Sewer District (Bayside Park/Shoreline Park), Bay St. Louis, and Waveland	$ 22,800,000
Hancock	Kiln Regional Water Supply	Potable Water	Provide water supply system to serve the Community of Kiln	$ 6,750,000
Hancock	Pearlington-Port Bienville Regional Water Supply System	Potable Water	Provide water supply system to serve the Pearlington-Port Bienville area and the area along MS 604 and US 90	$3,000,000
Hancock	Waveland - US 90 Water System Improvements	Potable Water	Transmission System Improvements along US 90 Corridor	$ 5,000,000
Hancock	Demonstration Project – Pipes on Beaches	Stormwater	Demonstration Project to Enhance Water Quality and Beaches	$ 3,750,000
Hancock	Hancock County Water and Sewer District Water Distribution System	Ultra-Distressed Area - Distribution/Collection	Water Distribution System	$ 9,000,000
Hancock	Kiln Wastewater Collection System	Ultra-Distressed Area - Distribution/Collection	Wastewater Collection System	$ 13,500,000
Hancock	Kiln Water Distribution System	Ultra-Distressed Area - Distribution/Collection	Water Distribution System	$ 6,000,000
Hancock	Pearlington Wastewater Collection System	Ultra-Distressed Area - Distribution/Collection	Wastewater Collection System	$ 9,600,000
Hancock	Pearlington Water Distribution System	Ultra-Distressed Area - Distribution/Collection	Water Distribution System	$ 9,300,000
Hancock	Bay St. Louis - Cedar Point and I-10 Wastewater System Improvements	Wastewater	Transmission System Improvements to serve Cedar Point area and newly annexed area south of I-10	$ 5,000,000
Hancock	Northern Regional (Kiln) WWTF and Transmission System	Wastewater	1.5 MGD WWTF and transmission system to serve Kiln area and areas south of I-10 including Hancock County Water and Sewer District and newly annexed areas of Bay St. Louis and Waveland	$ 20,800,000
Hancock	Western Regional (Pearlington-Port Bienville) WWTF	Wastewater	0.2 MGD WWTF and transmission system	$ 5,500,000
			Hancock County Potable Water Subtotal	$ 37,550,000
			Hancock County Stormwater Subtotal	$ 3,750,000
			Hancock County Ultra-Distressed Area	$ 47,400,000
			Hancock County Wastewater Subtotal	$ 31,300,000
			Hancock County Subtotal	**$ 120,000,000**

Listing of Recommended Programs				
County	**Name of Program**	**Media**	**Component**	**Cost**
Harrison	Biloxi Broadwater Water System Improvements	Potable Water	Water Supply Improvements in the Broadwater area	$ 3,000,000
Harrison	Central Harrison County Regional Water Supply	Potable Water	Provide water supply system to serve Saucier and US 49/MS 67 area including East Wortham Road	$ 11,300,000
Harrison	Eastern Harrison County Regional Water Supply	Potable Water	Provide water supply system along MS 67 beginning in the East Central Harrison Utility Distict through Biloxi-Woolmarket area to MS67/I-110 at the City of D'Iberville	$ 29,200,000
Harrison	Gulfport VA Area Water Supply Improvements	Potable Water	Water Supply Improvements in the VA area	$ 3,000,000
Harrison	Long Beach Water System Improvements	Potable Water	Transmission System Improvements along the US 90 corridor, in the SW portion of the City, and in the 28th Street area	$ 1,900,000
Harrison	North Gulfport/Lyman Regional Water Supply	Potable Water	Provide water supply system from Cowan-Lorraine Road area in North Gulfport to Lyman Community and along County Farm Road	$ 20,000,000
Harrison	Pass Christian Water System Improvements	Potable Water	Transmission System Improvements in the Menge Avenue/Demourelle Rd/Espy Rd area, the Jones Rd area, and the Woodland Way/Montebello Rd area	$ 3,500,000
Harrison	South Gulfport Regional Water Supply	Potable Water	Provide water supply system along US 90 corridor	$ 3,000,000
Harrison	Western Harrison County Regional Water Supply	Potable Water	Provide water supply system to serve area north of I-10 in the West Harrison Utility District , the Delisle community, Pass Christian, and Long Beach	$ 23,100,000
Harrison	Demonstration Project – Pipes on Beaches	Stormwater	Demonstration Project to Enhance Water Quality and Beaches	$ 3,750,000
Harrison	Biloxi Broadwater Wastewater Transmission System Improvements	Wastewater	Wastewater Transmission System Improvements in the Broadwater area	$ 2,000,000
Harrison	DeLisle WWTF and Long Beach/Pass Christian Transmission System	Wastewater	0.2 MGD Expansion of DeLisle WWTF, North Long Beach Interceptor, and transmission system to serve area north of I-10	$ 23,450,000
Harrison	D'Iberville Waterfront Wastewater Transmisson System Improvements	Wastewater	Transmission System Improvements throughout the Waterfront District	$ 5,000,000
Harrison	D'Iberville WWTF and Transmission System	Wastewater	1.5 MGD WWTFand transmission system from existing D'Iberville WWTF	$ 23,100,000
Harrison	East Central Harrison County Regional WWTF	Wastewater	2.0 MGD WWTF to serve East Central Harrison County Public Utility District and North Woolmarket	$ 19,000,000
Harrison	Gulfport VA Area Wastewater Transmission System Improvements	Wastewater	Wastewater Transmission System Improvements in the VA area	$ 2,000,000
Harrison	Long Beach Wastewater System Improvements	Wastewater	Transmission System Improvements along the US 90 corridor and in the 28th Street area	$ 3,100,000
Harrison	Pass Christian Wastewater System Improvements	Wastewater	Transmission System Improvements along the US 90 corridor and the area near North Street in eastern Pass Christian	$ 1,500,000
Harrison	Saucier WWTF and Riverbend/Robinwood Forest Transmission System	Wastewater	Two 0.2 MGD Interim WWTFs and transmission system to transport wastewater from Saucier and Riverbend/Robinwood to the East Central Harrison County WWTF	$ 13,300,000
Harrison	South Gulfport Regional Transmission System	Wastewater	Transmission system to serve US 90 area	$ 5,600,000
Harrison	South Woolmarket WWTF and Transmission System	Wastewater	0.2 MGD Interim WWTF, 1.5 MGD WWTF, and transmission system to serve the South Woolmarket/Biloxi area	$ 32,200,000
Harrison	West Gulfport Regional Interceptor	Wastewater	Interceptor to serve area south of of MS 53 and west of US 49	$ 3,200,000
Harrison	West Gulfport Regional Transmission System	Wastewater	Transmission system to serve Landon Road and I-10 area	$ 7,900,000
			Harrison County Potable Water Subtotal	$ 98,000,000
			Harrison County Wastewater Subtotal	$ 141,350,000
			Harrison County Stormwater Subtotal	$ 3,750,000
			Harrison County Subtotal	**$ 243,100,000**

Listing of Recommended Programs				
County	**Name of Program**	**Media**	**Component**	**Cost**
Jackson	Eastern Jackson County Regional Water System	Potable Water	Provide water supply system to Big Point and Hurley, then along MS 614 to Wade and Polletown areas.	$ 15,200,000
Jackson	Gautier Water Transmission Improvements	Potable Water	Hickory Hills Area Transmission System Improvements	$ 2,000,000
Jackson	Moss Point - Three Rivers Regional Water Treatment and Transmission System	Potable Water	Water Treatment Plant Enhancement and Transmission System along MS 63	$ 6,315,000
Jackson	Ocean Springs Water Transmission System Improvements	Potable Water	Transmission System Improvements along Ocean Springs Road and US 90 to MS 57	$ 1,500,000
Jackson	Pascagoula - Beach Boulevard Water Transmission Improvements	Potable Water	Water Transmission Improvements to the East End of Beach Boulevard	$ 500,000
Jackson	Pascagoula - Chipley Water Transmission Improvements	Potable Water	Transmission System Improvements	$ 1,000,000
Jackson	Pascagoula - River Park Water Transmission Improvements	Potable Water	Provide water transmission to River Park area in Pascagoula	$ 750,000
Jackson	Western Jackson County Regional Water Supply	Potable Water	Provide water supply system to serve the Cities of Gautier and Ocean Springs and the areas of Vancleave and Latimer	$ 24,000,000
Jackson	Escatawpa Regional WWTF Improvements	Wastewater	Upgrade Sludge Handling Capabilities to expand capacity at existing WWTF	$ 1,500,000
Jackson	Gautier Regional WWTF Improvements	Wastewater	Add Clarifier to handle additional flow to expand capacity at existing WWTF	$ 1,500,000
Jackson	Gautier Wastewater Transmission System Improvements	Wastewater	Hickory Hills Area Transmission System Improvements	$ 2,600,000
Jackson	Gulf Park and Ocean Beach Areas Transmission System Improvements	Wastewater	Transmission System Improvements	$ 9,400,000
Jackson	North Jackson County Decentralized WWTFs	Wastewater	4 - 0.125 MGD Decentralized WWTFs and transmission systems to serve Big Point, Hurley, Wade, and Vancleave area	$ 14,900,000
Jackson	Ocean Springs Wastewater Transmission System Improvements	Wastewater	Transmission System Improvements along north side of US 90 from Riley Rd to MS 57	$ 2,800,000
Jackson	Pascagoula - Beach Boulevard Wastewater Transmission Improvements	Wastewater	Wastewater Transmission Improvements to the East End of Beach Boulevard	$ 500,000
Jackson	Pascagoula - Chipley Wastewater Transmission Improvements	Wastewater	Transmission System Improvements	$ 1,500,000
Jackson	Pascagoula - River Park Wastewater Transmission Improvements	Wastewater	Provide wastewater transmission to River Park area in Pascagoula	$ 750,000
Jackson	Pascagoula - Shortcut Road Transmission System Improvements	Wastewater	Transmission System Improvements along Shortcut Road	$ 620,000
Jackson	West Jackson Regional WWTF Improvements and Transmission System	Wastewater	Expand existing WWTF by 2 MGD and transmission system	$ 33,200,000
			Jackson County Potable Water Subtotal	$ 51,265,000
			Jackson County Wastewater Subtotal	$ 69,270,000
			Jackson County Subtotal	**$ 120,535,000**

Listing of Recommended Programs				
County	**Name of Program**	**Media**	**Component**	**Cost**
Pearl River	Picayune Regional Water Supply System	Potable Water	Provide water supply system to serve Picayune and Dixie Utilities service area	$ 9,400,000
Pearl River	Poplarville Regional Water Supply System	Potable Water	Provide water supply system to serve the City of Poplarville and Sunny Oaks, North Lumberton, and Carnes areas	$ 10,900,000
Pearl River	Picayune Regional WWTF and Transmission System	Wastewater	1.6 MGD WWTF and transmission system	$ 22,100,000
Pearl River	Poplarville Regional WWTF and Transmission System	Wastewater	Expand Existing WWTF to 1.1 MGD and transmission system	$ 17,500,000
			Pearl River County Potable Water Subtotal	$ 20,300,000
			Pearl River County Wastewater Subtotal	$ 39,600,000
			Pearl River County Subtotal	**$ 59,900,000**
Stone	Southern Stone County Regional Water Supply System	Potable Water	Provide water supply system south along US 49 to McHenry area	$ 10,300,000
Stone	South Stone County WWTF	Wastewater	0.25 MGD WWTF and Tranmission System	$ 9,800,000
Stone	Wiggins Regional WWTF and Transmission System	Wastewater	0.5 MGD WWTF and Transmission System	$ 18,500,000
			Stone County Potable Water Subtotal	$ 10,300,000
			Stone County Wastewater Subtotal	$ 28,300,000
			Stone County Subtotal	**$ 38,600,000**
Total Recommended Project Cost				**$ 582,135,000**
Contigency				**$ 24,000,000**
Program Administration				**$ 24,000,000**
Total Program Cost				**$ 630,135,000**

Notes:

WWTF = wastewater treatment facility

MGD = million gallons per day

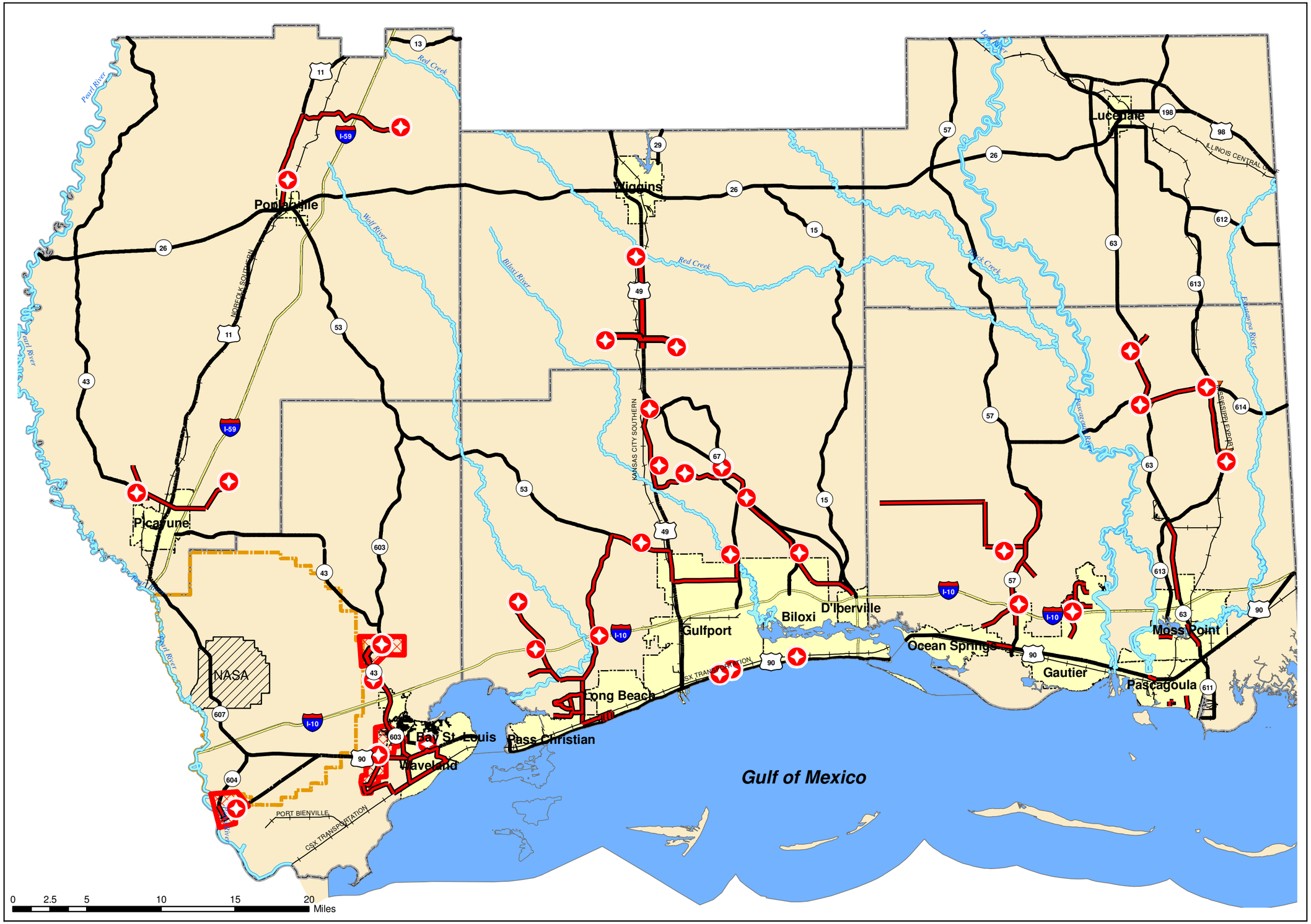

Figure ES-1
Gulf Region -
Recommended Water
Projects

Legend

- Recommended Water Transmission Mains
- Recommended Water Supply
- Recommended Distribution System

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MISSISSIPPI GULF REGION - RECOMMENDED WATER PROJECTS

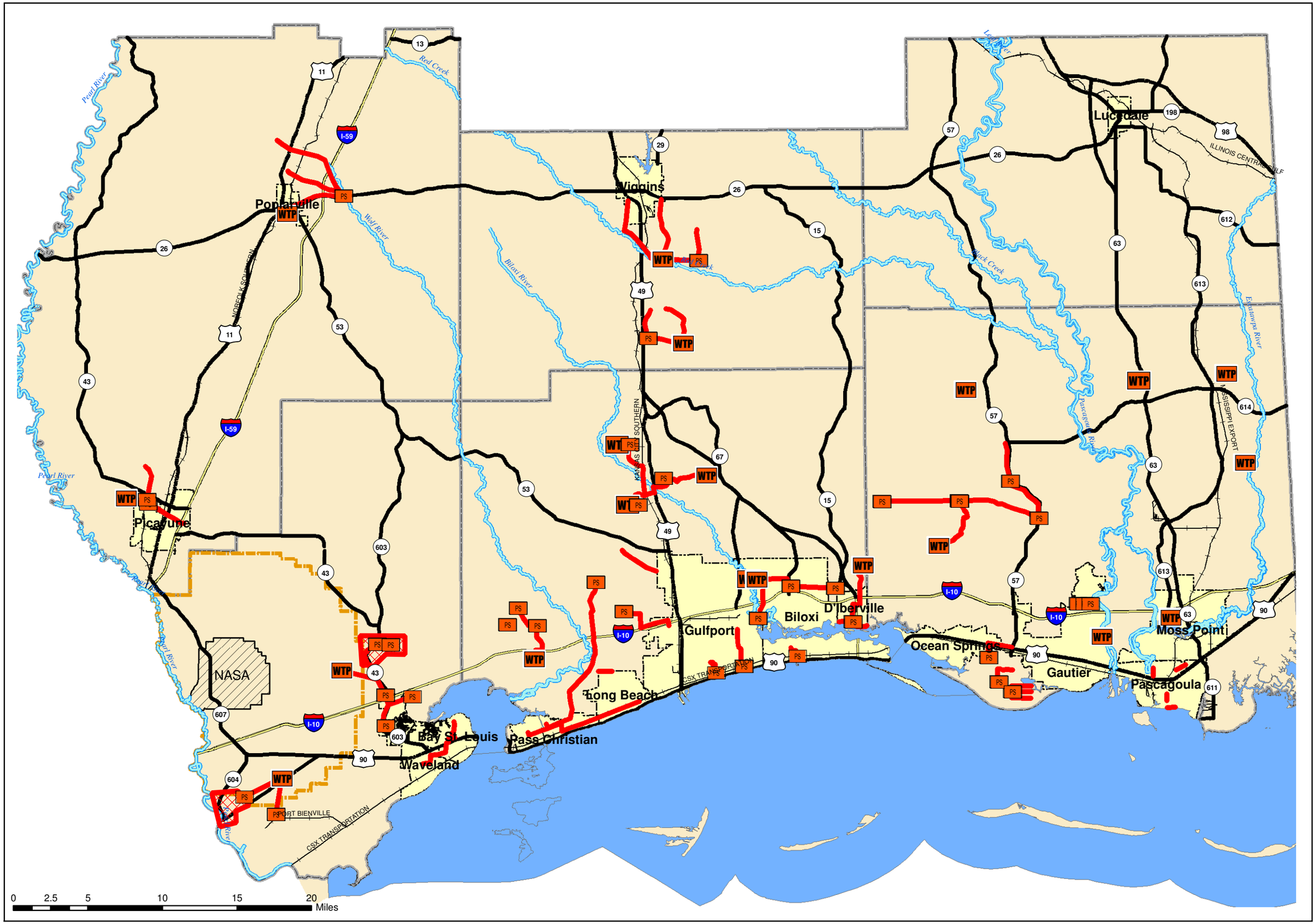

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Figure ES-2
Gulf Region -
Recommended Wastewater Projects

Legend

- Recommended Wastewater Transmission Mains
- PS — Recommended Pumping Station
- WTP — Recommended Treatment Facility
- Recommended Collection System

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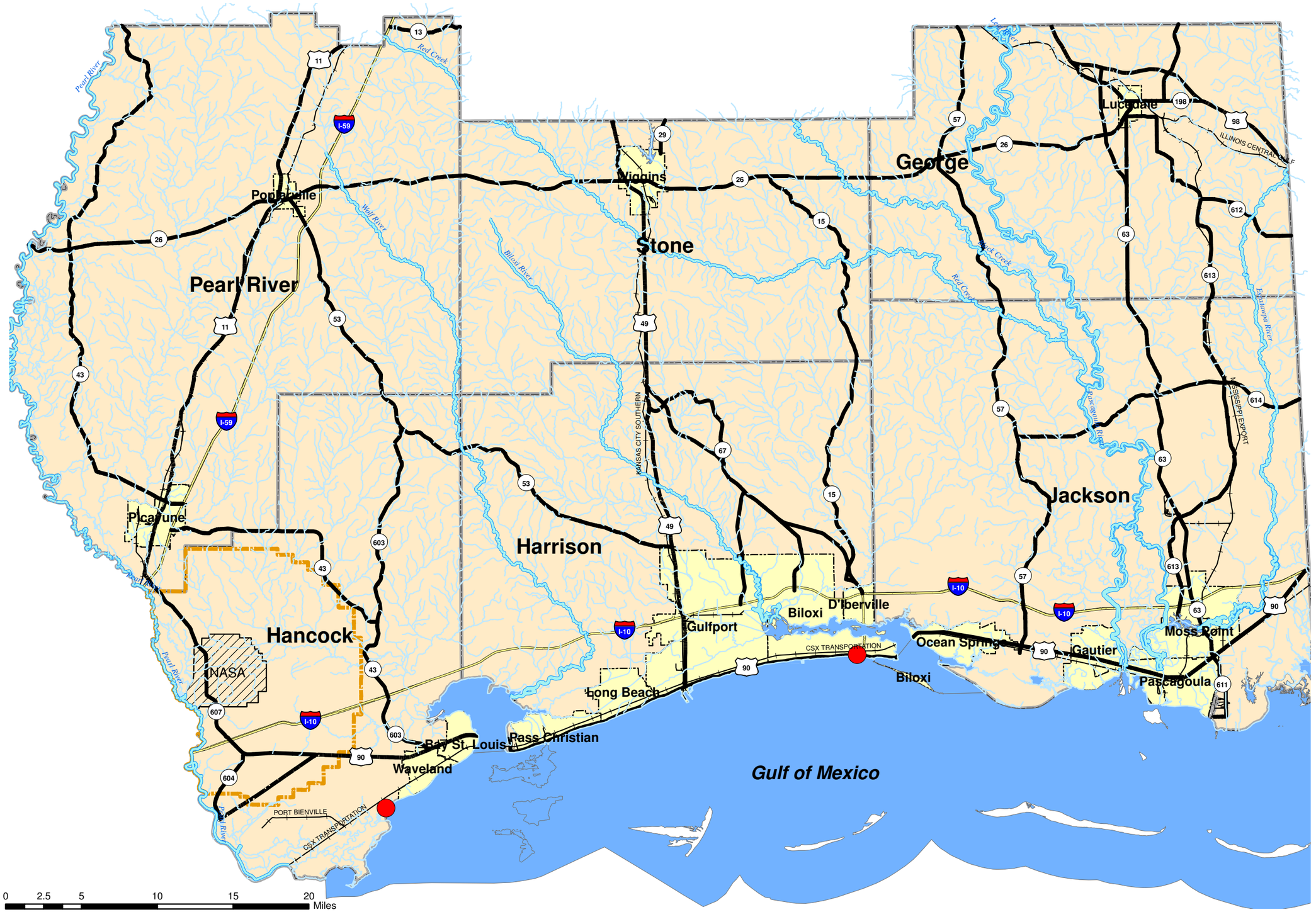
MISSISSIPPI GULF REGION - RECOMMENDED WASTEWATER PROJECTS



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Figures ES-3
Gulf Region -
Stormwater Demonstration
Projects

Legend

- Interstate
- StateHwy
- UShwy
- Railroads
- County Boundary
- City Limits
- Rivers
- Intermittent / Annual Streams
- Stennis Space Center
- NASA
- Demonstration Project

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MISSISSIPPI GULF REGION - STORMWATER DEMONSTRATION PROJECTS

Summary of Recommended Programs for CDBG Disaster Recovery Funding		
County	**Media**	**Near-Term ProgamCost**
Hancock	Potable Water	$37,550,000
	Wastewater	$31,300,000
	Stormwater	$3,750,000
	Ultra-Distressed Areas - Distribution/Collection	$47,400,000
	Hancock County Subtotal	**$120,000,000**
Harrison	Potable Water	$98,000,000
	Wastewater	$141,350,000
	Stormwater	$3,750,000
	Harrison County Subtotal	**$243,100,000**
Jackson	Potable Water	$51,265,000
	Wastewater	$69,270,000
	Jackson County Subtotal	**$120,535,000**
Pearl River	Potable Water	$20,300,000
	Wastewater	$39,600,000
	Pearl River County Subtotal	**$59,900,000**
Stone	Potable Water	$10,300,000
	Wastewater	$28,300,000
	Stone County Subtotal	**$38,600,000**
Subtotal	**MS Gulf Region Program Subtotal**	**$582,135,000**
Media Subtotals	**Potable Water Subtotal**	**$217,415,000**
	Wastewater Subtotal	**$309,820,000**
	Stormwater Subtotal	**$7,500,000**
	Ultra-Distressed Areas - Distribution/Collection	**$47,400,000**
Gulf Region	**MS Gulf Region Program Subtotal**	**$582,135,000**
	Program Contingency	**$24,000,000**
	Program Administration	**$24,000,000**
	MS Gulf Region Total	**$630,135,000**

Next Steps

The *Mississippi Gulf Region Water and Wastewater Plan* recommends a program of infrastructure improvements intended to promote and support immediate rebuilding and renewal, as well as long-term, sustainable growth and development. In order to achieve these objectives a deliberate program of implementation must be undertaken by MDEQ. Following is a list of critical next steps.

- MDEQ submit Plan to MDA/DHUD for approval
- Prepare CDBG Applications for program elements
- MDEQ conduct NEPA due diligence activities on program elements
- MDEQ submit NEPA documentation to MDA/DHUD for approval
- County Utility Authorities procure engineering, administrative, legal services
- County Utility Authorities begin pre-construction activities (design, permitting, rights-of-way, etc.)

Following commencement of preconstruction activities by the county utility authorities for the various infrastructure projects, activities will continue on an ongoing basis through project construction and close-out, up through the year 2010.

Schedules for individual projects will vary according to nature and scope but will include the following activities on the part of the county utility authorities, with support from their administrative, engineering, and legal staff:

- Preparation of contract documents and specifications;
- Acquisition of easements and rights-of-way;
- Bid, award, administration, construction review, and close-out of construction projects; and
- Acceptance for ongoing operation and maintenance.

In addition to the responsibility for coordinating the activities and progress of the individual county utility authorities, MDEQ will have ongoing program delivery obligations for each project, which will include several areas of responsibility, as follows:

- Administration of program funding;
- Compliance with CDBG/DHUD requirements;
- Review and approval of preconstruction documents, in collaboration with Mississippi State Department of Health and other pertinent agencies;
- Monitoring and oversight of planning, design, acquisition, and construction activities;
- Close-out of projects with county utility authorities and DHUD.

The *Mississippi Gulf Region Water and Wastewater Plan* is comprehensive and ambitious; yet, it is responsive to both near-term and long-term needs of a historic magnitude. The program of infrastructure improvements recommended in the Plan will provide the framework for the critical but certain rebuilding of residential, commercial, and industrial complexes throughout the Gulf Region and will support long-term growth and economic development.