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Section 6

Conclusions and Recommendations

Section 5 presented numerous alternatives for resolving water, wastewater, and stormwater issues within the Gulf Region; and, out of those presented, preferred alternatives were selected for further evaluation. The current section defines projects (or portions of projects) critical for implementation by 2010, and it establishes priority projects for Community Development Block Grant (CDBG) Disaster Recovery Grant funding.

6.1 Recommended Projects

The projects recommended in Section 5 were categorized for two phases of implementation, including:

- *Near-term projects* that will be completed within five years; and
- *Long-term projects* that will be completed by 2025 or beyond, depending on funding.

Near-term projects are the projects or phases of projects critical to regional recovery, with high levels of stakeholder support, straightforward implementation and high potential for shared funding. Since local funds are limited, it is anticipated that near-term projects capable of implementation may need outside funding, either through CDBGs or other sources. In order to meet the goals of implementing critical near-term projects, the Plan identified projects or phases of projects that meet HUD and MDEQ eligibility criteria for CDBG Disaster Recovery Grant funding; and established priorities for allocation of the available funding among the eligible near-term projects.

6.1.1 Eligibility Criteria

Three criteria were established for determining if a project is eligible for near-term implementation, including that it:

- Complies with HUD Criteria for CDBG Disaster Recovery Grants;
- Complies with Criteria defined by MDEQ; and
- Is capable of being implemented near term.

HUD established two primary criteria for determining if a project is eligible for CDBG Disaster Recovery funding:

- Project is a direct or indirect result of Hurricane Katrina.
- Project supports disaster relief, long-term recovery, and restoration of infrastructure.

HUD also specified that projects cannot be duplicative of FEMA or Corps of Engineers funding.

MDEQ established two criteria for evaluating impacts on economic recovery, namely that projects:

- Provide infrastructure, in areas currently not served or under-served, that will spur economic growth and housing as projected by demand or demographic studies; and
- Provide infrastructure in direct support of economic development (e.g., industry, hotels, casinos, tourism, and commerce).

Finally, project implementability criteria were based on the willingness of stakeholders to support timely project implementation, both by their actions and financial investment. Project stakeholders, either the county utility authorities or other willing entities, also must commit to support the long-term operation and maintenance of the project.

6.1.2 Summary of Potential Near-Term Projects

The preceding evaluation criteria were used to divide the projects recommended in Section 5 into eligible near-term and long-term projects. In many cases, the near-term project is a component or phase of a long-term project that meets the eligibility criteria. **Tables 6-1** through **6-3** list each water, wastewater, and stormwater project, respectively, that was recommended in Section 5. In general, the recommendation in Section 5 provides the long-term project needs, including elements that may be potentially available for funding by outside sources. In some cases, the near-term project is the entire long-term project, where the entire project meets the near-term eligibility criteria. In other cases, the near-term project is an initial phase or component of the long-term project that needs to be completed soon and meets all other eligibility criteria.

Many of the projects will require complementary local infrastructure improvements to provide distribution systems for water, collection systems for wastewater, and coordination and interconnection of local infrastructure to regional infrastructure. These complementary improvements will require County Utility Authorities, other local units of government, and utilities to obtain funding from other sources to implement the program elements and necessary interconnections.

Given the broad scope and conceptual nature of this planning effort, many of the project details are yet to be developed. These details will emerge as the planning effort is fine-tuned, including additional input through the county utility authorities and local entities, and as preliminary engineering work gets underway.

Name of Sub-Regional Plan	County	Media	Near-Term Water Projects	
			Component	Cost
Central George County Regional Water Supply	George	Potable Water	Provide water supply system for Lucedale and Combined Utilities along MS 63	\$ 4,017,000
George County Regional Water System	George	Potable Water	Extend water transmission along Evanston Road / MS 613 from US 198 southward to Cooks Corner Road, then along Cooks Corner Road to MS 63	\$ 5,800,000
George County Regional Water System II	George	Potable Water	Extend water transmission along MS 26 from MS 63 westward to Basin Central Road	\$ 2,900,000
George County Regional Water System III	George	Potable Water	Extend water transmission along MS 198 from Bexley Road eastward to MS 63 East of Lucedale, and along Mable Street from MS 198 southward to MS 26	\$ 4,500,000
Lucedale Water Main Extension	George	Potable Water	Replace existing problematic water mains	\$ 3,800,000
Northeast George County Regional Water Supply	George	Potable Water	Provide water supply system to serve Multi-Mart Utilities, Rocky Creek Water Association, and Lucedale along MS 198	\$ 3,012,000
Eastern Hancock County Regional Water Supply	Hancock	Potable Water	Provide water supply to serve the Community of Shoreline Park, and the Cities of Bay St. Louis and Waveland	\$ 22,800,000
Eastern Hancock County Regional Water System II	Hancock	Potable Water	Extend water transmission along MS 603 from Kiln-Delisle Road northward to East Central Hancock High School	\$ 4,500,000
Eastern Hancock County Regional Water System III	Hancock	Potable Water	Provide potable water supply, storage and transmission along I-10 from MS 603 eastward to the Hancock/Harrison County line	\$ 6,400,000
Eastern Hancock County Regional Water System IV	Hancock	Potable Water	Extend water transmission along Waveland Road from US 90 southward to the railroad, then westward along the railroad to Clearmont Road	\$ 2,200,000
Eastern Hancock County Regional Water System V	Hancock	Potable Water	Extend water transmission along US 90 from Hancock Road westward to Lakeshore Road, then southward along Lakeshore Road to Pearlington Road, then eastward along Pearlington Road to Clearmont Road, then southward along Clearmont Road to the railroad	\$ 4,700,000
Kiln Regional Water Supply	Hancock	Potable Water	Provide water supply to serve the Community of Kiln	\$ 6,750,000
Pearlington-Port Bienville Regional Water Supply System	Hancock	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
Western Hancock County Regional Water System VI	Hancock	Potable Water	Provide potable water supply, storage and transmission along Lower Bay Road from Port and Harbor Drive eastward to Pearlington Road	\$ 3,500,000
Western Hancock County Regional Water System VII	Hancock	Potable Water	Extend water transmission to interconnect Pearlington with Port Bienville Industrial Park	\$ 4,100,000
Central Harrison County Regional Water Supply	Harrison	Potable Water	Provide water supply system to serve Saucier and US 49/MS 67 area	\$ 11,300,000
Eastern Harrison County Regional Water Supply	Harrison	Potable Water	Provide water supply system along MS 67 through Biloxi-Woolmarket area to MS67/I-110 at the City of D'Iberville	\$ 29,200,000
Harrison County Regional Water System IX	Harrison	Potable Water	Extend water transmission along US 49 from MS 53 northward to Little Biloxi River Bridge and from Biloxi River Bridge northward to Old Hwy 49 at Saucier	\$ 3,200,000
Harrison County Regional Water System II	Harrison	Potable Water	Extend water transmission along MS 15 from I-110 / I-10 Interchange northward to near Anna Road. Provide water supply and storage to support industrial development	\$ 7,300,000
Harrison County Regional Water System III	Harrison	Potable Water	Extend water transmission along Lorraine-Cowan Road from O'Neal Road southward to US 90	\$ 4,900,000
Harrison County Regional Water System IV	Harrison	Potable Water	Extend water transmission along Lorraine-Cowan Road from O'Neal Road northward to MS 67	\$ 3,300,000

Table 6-1 Near-Term Water Projects

Name of Sub-Regional Plan	County	Media	Near-Term Water Projects	
			Component	Cost
Harrison County Regional Water System V	Harrison	Potable Water	Extend water transmission along I-10 from I-110 eastward to MS 605 (proposed) and along MS 67 (new alignment) from I-10 northward to intersection of MS 67 (new alignment) and MS 67 (existing alignment)	\$ 9,700,000
Harrison County Regional Water System VI	Harrison	Potable Water	Extend water transmission along County Farm Road from Landon Road northward to MS 53	\$ 4,000,000
Harrison County Regional Water System VII	Harrison	Potable Water	Extend water transmission along I-10 from Canal Road westward to Menge Avenue	\$ 5,000,000
Harrison County Regional Water System VIII	Harrison	Potable Water	Extend water transmission along Firetower Road from I-10 northward to Cable Bridge Road, Provide water supply and storage	\$ 4,800,000
North Gulfport/Lyman Regional Water Supply	Harrison	Potable Water	Provide water supply system from Cowaine-Lorraine Road area in North Gulfport to Lyman Community	\$ 20,000,000
South Central Harrison County Regional Water Supply	Harrison	Potable Water	Provide water supply system to serve the Lizana, Robinwood/Riverbend, Lyman, and Orange Grove-HWY 49 areas	\$ 18,630,000
South Gulfport Regional Water Supply	Harrison	Wastewater	Provide water supply system along US 90 corridor	\$ 3,000,000
Western Harrison County Regional Water Supply	Harrison	Potable Water	Provide water supply system to serve the Delisle Community, Pass Christian, and Long Beach	\$ 23,100,000
Eastern Jackson County Regional Transmission	Jackson	Potable Water	Provide water supply system from proposed (by Jackson County) surface water treatment plant (intersection of MS 63 and MS 613) along MS 613 to Big Point and Hurley, then along MS 614 to Wade.	\$ 15,200,000
Western Jackson County Regional Water Supply	Jackson	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
Western Jackson County Regional Water System II	Jackson	Potable Water	Extend water transmission along US 90 from East Ocean Springs westward to Biloxi - Ocean Springs Bridge	\$ 3,600,000
Western Jackson County Regional Water System III	Jackson	Potable Water	Extend water transmission along I-10 from MS 57 westward to Jackson/Harrison County Line	\$ 6,500,000
Western Jackson County Regional Water System IV	Jackson	Potable Water	Extend water transmission along I-10 from MS 57 eastward to Gautier-Vancleave Road, along US 90 from MS 57 eastward to Pascagoula River Bridge, and along Gautier-Vancleave Road from US 90 northward to Indian Point Parkway	\$ 7,700,000
Western Jackson County Regional Water System V	Jackson	Potable Water	Extend water transmission along Old Biloxi Road / Daisy Vestry Road from Jim Ramsey Road southward to I-10	\$ 3,700,000
Northern Pearl River County Regional Water System II	Pearl River	Potable Water	Extend water transmission along MS 26 from US 11 eastward to Gumpond-Beall Road	\$ 5,400,000
Northern Pearl River County Regional Water System III	Pearl River	Potable Water	Extend water transmission along Gumpond-Beall Road from Hillsdale-Gumpond Road southward to MS 26, then along Oscar Lee Road from MS 26 to Progress Road, then along Progress Road from Oscar Lee Road to Interstate 59	\$ 7,000,000
Northern Pearl River County Regional Water System IV	Pearl River	Potable Water	Extend water transmission along I-59 from Progress Road northward to MS 26	\$ 2,800,000
Picayune Regional Water Supply System	Pearl River	Potable Water	Provide water supply system to serve Picayune and Dixie Utilities service area	\$ 9,400,000
Poplarville Regional Water Supply System	Pearl River	Potable Water	Provide water supply system to serve Picayune and Dixie Utilities service area	\$ 10,900,000
Southern Pearl River County Regional Water System II	Pearl River	Potable Water	Extend water transmission along I-59 from I-59 / MS 43 interchange southward to I-59 / US 11 interchange	\$ 2,600,000
Southern Pearl River County Regional Water System III	Pearl River	Potable Water	Extend water transmission along MS 43 from I-59 eastward to Old Kiln Road, then along Old Kiln Road eastward to the Pearl River / Hancock County line	\$ 6,300,000

Table 6-1 Near-Term Water Projects (Continued)

Name of Sub-Regional Plan	County	Media	Near-Term Water Projects	
			Component	Cost
Southern Pearl River County Regional Water System IV	Pearl River	Potable Water	Extend water transmission along Sycamore Road from Rayburn Road to West Union Road, then along West Union Road northwestward to US 11	\$ 4,700,000
Southern Pearl River County Regional Water System V	Pearl River	Potable Water	Extend water transmission along Liberty Road / Burgetown Road from Otis Stewart Road northeastward to US 11	\$ 3,200,000
Southern Pearl River County Regional Water System VI	Pearl River	Potable Water	Extend water transmission along West Union Road from Sycamore Road eastward to FZ Goss Road, then southward along FZ Goss Road to Old Kiln Road	\$ 5,300,000
South Stone County Regional Water Supply System	Stone	Potable Water	Provide water supply system south along US 49 to McHenry area	\$ 10,300,000
Stone County Regional Water System II	Stone	Potable Water	Extend water transmission along West McHenry Road from Horse Creek Road westward to Perkinson-Silver Run Road, then westward along Perkinson-Silver Run Road to Riceville Road. Provide supply and storage	\$ 5,700,000
Stone County Regional Water System III	Stone	Potable Water	Extend water transmission along MS 26 from US 49 westward to Magnolia Road	\$ 7,300,000
Stone County Regional Water System IV	Stone	Potable Water	Extend water transmission along US 49 from Shadeville Road southward to Perkinson community	\$ 5,800,000
Stone County Regional Water System V	Stone	Potable Water	Extend water transmission along MS 26 from Big Four/City Bridge Road westward to US 49	\$ 4,700,000

Table 6-1 Near-Term Water Projects (Continued)

Name of Sub-Regional Plan	County	Media	Near-Term Wastewater Projects	
			Component	Cost
Lucedale WWTF and Transmission System Improvements	George	WasteWater	Expand existing transmission system along MS 198 and MS 63 and WWTF Improvements	\$ 3,300,000
Diamondhead Wastewater Transmission to Kiln Regional WWTF	Hancock	Wastewater	Transmission system to transport Diamondhead wastewater to Kiln Regional WWTF and expand Kiln Regional WWTF from 1.5 MGD to 3.5 MGD	\$ 15,500,000
Kiln Regional WWTF	Hancock	Wastewater	1.5 MGD WWTF and transmission system to serve Kiln 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
Pearlington-Port Bienville Regional WWTF	Hancock	Wastewater	0.2 MGD WWTF and transmission system	\$ 5,500,000
DeLisle WWTF, Long Beach/Pass Christian WWTF, and Transmission System	Harrison	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
D'Iberville Interceptor	Harrison	Wastewater	18" Gravity Main along Lamey Bridge Road to serve the area north of new WWTF	\$ 9,330,000
D'Iberville WWTF and Transmission System	Harrison	Wastewater	1.5 MGD WWTF and transmission system from existing D'Iberville WWTF	\$ 23,100,000
East Central Harrison County Regional WWTF	Harrison	WasteWater	2.0 MGD WWTF to serve East Central Harrison County Public Utility District and North Woolmarket	\$ 19,000,000
Gulfport North WWTF	Harrison	WasteWater	3.5 MGD Expansion of WWTF	\$ 36,500,000
Saucier WWTF and Riverbend/Robinwood Forest Transmission System	Harrison	WasteWater	Two 0.2 MGD Interim WWTFs and transmission system to transport Riverbend/Robinwood Forest wastewater to East Central Harrison County WWTF	\$ 13,300,000
South Gulfport Regional Transmission System	Harrison	Wastewater	Transmission system to serve US 90 area	\$ 5,600,000
South Woolmarket Interceptor I	Harrison	Wastewater	27" Gravity Main in the vicinity of Mill Creek and Three Rivers Road	\$ 11,200,000
South Woolmarket Interceptor II	Harrison	Wastewater	27" Gravity Main in the vicinity of Parker Creek and existing Highway 67 South	\$ 3,900,000
South Woolmarket Interceptor III	Harrison	Wastewater	27" Gravity Main in the vicinity of Big John & Krohn Roads and Tchoutacabouffa River	\$ 7,000,000
South Woolmarket WWTF and Transmission System	Harrison	WasteWater	0.2 MGD Interim WWTF, 1.5 MGD WWTF, and transmission system to serve the South Woolmarket/Biloxi area	\$ 32,200,000
West Gulfport Regional Interceptor	Harrison	Wastewater	Interceptor to serve area south of of MS 53 and west of US 49	\$ 3,200,000
West Gulfport Regional Interceptor II	Harrison	Wastewater	Interceptor to serve area south of of MS 53, west of US 49, and north of Landon Road	\$ 10,300,000
System	Harrison	WasteWater	Transmission system to serve Landon Road and I-10 area	\$ 7,900,000
Escatawpa Regional WWTF Improvements	Jackson	WasteWater	Upgrade Sludge Handling Capabilities to expand capacity at existing WWTF	\$ 1,500,000
Escatawpa Utility District - Transmission System along MS 613	Jackson	WasteWater	Wastewater transmission along MS 613	\$ 6,500,000
Escatawpa Utility District - Transmission System along MS 63	Jackson	WasteWater	Wastewater transmission along MS 63	\$ 3,200,000

Table 6-2 Near-Term Wastewater Projects

Name of Sub-Regional Plan	County	Media	Near-Term Wastewater Projects	
			Component	Cost
Escatawpa Utility District - Transmission System along MS 63 Phase II	Jackson	WasteWater	Wastewater transmission along MS 63	\$ 3,300,000
Gautier Regional WWTF Improvements	Jackson	WasteWater	Add Clarifier to handle additional flow to expand capacity at existing WWTF	\$ 1,500,000
Gulf Park and Ocean Beach Areas Transmission System Improvements	Jackson	WasteWater	Transmission System Improvements	\$ 9,400,000
North Jackson County Decentralized WWTFs	Jackson	WasteWater	4 - 0.125 MGD Decentralized WWTFs and transmission systems to serve Big Point, Hurley, Wade, and Vancleave area	\$ 14,900,000
Pascagoula WWTF	Jackson	WasteWater	Relocate Treatment Plant	\$ 72,500,000
Vancleave Transportation System I	Jackson	Wastewater	Eastern Fork of Vancleave Transportation System in the vicinity of Old River Road	\$ 3,300,000
Vancleave Transportation System II	Jackson	Wastewater	6" Forcemain along Hwy 57 south to connect to the Vancleave Pump Station	\$ 350,000
West Jackson Regional WWTF Improvements and Transmission System	Jackson	WasteWater	Expand existing WWTF by 2 MGD and transmission system	\$ 33,200,000
Picayune Regional Transmission System II	Pearl River	WasteWater	Picayune Plant Interceptor	\$ 2,000,000
Picayune Regional Transmission System III	Pearl River	WasteWater	West Boley Interceptor Phase I and Mill Creek Interceptor	\$ 3,800,000
Picayune Regional WWTF and Transmission System	Pearl River	WasteWater	1.6 MGD WWTF and transmissions system	\$ 22,100,000
Poplarville Regional Transmission System II	Pearl River	WasteWater	Beaverdam Creek Interceptor	\$ 2,800,000
Poplarville Regional Transmission System III	Pearl River	WasteWater	Hwy 26 Interceptor Phase II and Alligator Creek Interceptor	\$ 4,750,000
Poplarville Regional WWTF and Transmission System	Pearl River	WasteWater	Expand Existing WWTF to 1.1 MGD and transmission system	\$ 17,500,000
South Stone County WWTF	Stone	WasteWater	0.25 MGD WWTF and Transmission System	\$ 9,800,000
Southwest Stone County WWTF	Stone	WasteWater	0.25 MGD WWTF and Transmission System	\$ 9,800,000
Wiggins Regional WWTF and Transmission System	Stone	WasteWater	0.5 MGD WWTF and Transmission System	\$ 18,500,000
Wiggins Transmission System II	Stone	WasteWater	Transmission System Expansion	\$ 9,400,000

Table 6-2 Near-Term Wastewater Projects (Continued)

Name of Sub-Regional Plan	County	Media	Near-Term Stormwater Projects	
			Component	Cost
Bayou Caddy Ecosystem Restoration	Hancock	Stormwater	Installation of an earth dike and saltwater marsh habitat to protect existing marsh from further erosion	\$ 5,800,000
Beach Pipes Improvements	Hancock	Stormwater	Aesthetic and water quality enhancements of beaches and MS Sound	\$ 15,000,000
Demonstration Project - Pipes on Beaches	Hancock	Stormwater	Demonstration Project - Pipes on Beaches	\$ 3,750,000
Beach Pipes Improvements	Harrison	Stormwater	Aesthetic and water quality enhancements of beaches and MS Sound	\$ 15,000,000
Demonstration Project - Pipes on Beaches	Harrison	Stormwater	Demonstration Project - Pipes on Beaches	\$ 3,750,000
Turkey Creek Flood Damage Reduction	Harrison	Stormwater	Drainage improvements to reduce flooding in the Turkey Creek Basin during heavy rainfall	\$ 15,300,000
Bayou Casotte Drainage Improvements	Jackson	Stormwater	Drainage improvements to reduce flooding	\$ 50,500,000
Cypress Creek Stormwater Drainage Improvements	Jackson	Stormwater	Drainage improvements to reduce flooding of properties along MS 609/Tucker Road and Cook Road	\$ 4,300,000
Hobolochitto Creek Flood Damage Reduction	Pearl River	Stormwater	Drainage improvements to reduce flooding of Hobolochitto Creek for approximately 250 ac of the drainage area	\$ 9,000,000

Table 6-3 Near-Term Stormwater Projects

6.2 Prioritization of Projects

The eligible near-term projects in Tables 6-1 through 6-3 were evaluated further to establish funding priorities for CDBG Disaster Recovery Grants. The following subsections outline the prioritization process used, define those projects with high and moderate priorities for funding, and present a brief description of the high-priority projects along with the project's environmental review requirements.

6.2.1 Prioritization Process

Five major criteria were utilized to compare and evaluate the added value of alternative utility projects. These criteria and the factors used for considerations of priority for each project are discussed hereafter.

6.2.1.1 Criterion 1: The project is to accommodate the expected demographic changes, recovery, and development in the aftermath of Hurricane Katrina.

Evaluation of this criterion was related to the demonstrated need for the project, including the degree of devastation of the community, projected level of recovery and restoration, and projected level of development. An important consideration in the evaluations was that infrastructure should be provided in under-served areas where demographic projections or other demands indicate growth and in areas less vulnerable to storms. These projects are the ones that were considered to facilitate housing development for the displaced citizens in the region.

Key considerations

- Project in an area of severe storm damage and affects recovery and restoration
- Project affects new development
- Project provides service to existing housing/development
- Project reduces vulnerability to storms

6.2.1.2 Criterion 2: The project provides for economic development and recovery.

Evaluation of this criterion was related to the project's contribution to economic development and recovery. Economic development would include projects that would affect development and sustainability of industry, hotels, casinos, commercial development, tourism, seafood industry, and other related components of economic growth.

Key considerations

- Project affects economic development and recovery.
- Urgency of project - Project responds to immediate needs.

6.2.1.3 Criterion 3: Cost Effectiveness/Affordability/Benefits of the Project

Evaluation of the affordability of the project considered the overall costs associated with implementation and the benefits to the users. Consideration was given to whether the County Utility Authority (CUA), other local government, or outside agency likely would provide funding for additional components, such as collection or distribution systems. In addition, costs to the end user should not be unreasonable, for instance, in relation to rates in similar areas.

Key considerations

- Project supports creation of new housing units.
- Project supports creation of new jobs.
- Project affordability and impact on user costs
- CUA, local, or outside agency funding availability for additional project elements
- Project supports existing business.
- Project provides multi-jurisdictional and regional benefits.

6.2.1.4 Criterion 4: Time to implement the project.

The criterion consisted of evaluation of the projected time required to implement the recommended improvement and an assessment of whether the project addresses short-term, medium-term, or long-term needs. Priority was given to shorter term projects that address immediate needs (within the next 10 years).

6.2.1.5 Criterion 5: The project is necessary to correct an imminent public health threat or an environmental threat.

This criterion is straightforward and consisted of whether the recommended improvement is necessary to correct, minimize or prevent a threat to the public health or environment.

6.2.2 Recommended Projects for CDGB Funding

The projects identified through the foregoing evaluation process and recommended for priority implementation are discussed hereafter. Implementation of many of these priority projects will require the County Utility Authorities, other local units of government, and local utility providers to implement complementary local infrastructure projects, such as water distribution systems and sanitary sewer collection systems. Also coordination and interconnection of local infrastructure networks to regional infrastructure will be required.

6.2.2.1 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 recommended programs 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.

A brief description of each project recommended for CDBG Disaster Recovery funding follows and is shown in **Table 6-4**.

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

Table 6-4 Projects Recommended For Funding

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 District 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 Transmission System Improvements	Wastewater	Transmission System Improvements throughout the Waterfront District	\$ 5,000,000
Harrison	D'Iberville WWTF and Transmission System	Wastewater	1.5 MGD WWTF and 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

Table 6-4 Projects Recommended for Funding (Continued)

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 Vanclave 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 Vanclave 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

Table 6-4 Projects Recommended for Funding (Continued)

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 Transmission 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	
Contingency				\$ 24,000,000	
Program Administration				\$ 24,000,000	
Total Program Cost				\$ 630,135,000	

Table 6-4 Projects Recommended for Funding (Continued)

6.2.2.2 Water Projects Recommended for CDBG Disaster Recovery Funding

The recommended water supply program elements are discussed hereafter and illustrated in **Figure 6-1**. The recommended projects were developed to meet priority needs identified through the planning process and are conceptual in nature. Project components may be modified when more detailed planning and design activities are completed. For example, proposed routing of water lines might be adjusted or sizing of facilities might be refined. A conceptual opinion of implementation cost is presented at the end of each project description.

W1 - Pearl River - Poplarville Regional Water Supply System - Provide water supply system to the City of Poplarville, Sunny Oaks Utility Association, North Lumberton Water Association, and Carnes Utility Association

Northern Pearl River County, including the City of Poplarville and areas in its general vicinity, experienced significant growth in the aftermath of Katrina. Poplarville’s capacity to provide potable water was limited to the extent that Mississippi Department of Health imposed a moratorium against adding new connections to the distribution system.

The project described here will begin the effort to interconnect the City’s water supply and distribution network to those of surrounding water service providers, in order to provide a more resilient supply to the area. The scope of this phase of the project includes a water transmission line from the City of Poplarville north and east to the Hillsdale community. Additionally, this phase of the project includes two new 500-gallon-per-minute water supply wells and 750,000 gallons of storage capacity near the City and the Hillsdale community to support growth currently underway in these areas.

\$10.9 Million

W2 - Pearl River – Picayune Regional Water Supply System – Provide water supply system to serve Picayune and Dixie Utilities service area

Southern Pearl River County, including the City of Picayune and vicinity, experienced growth in the aftermath of Hurricane Katrina. The existing water supply and distribution systems contained sufficient capacity to address this immediate growth. However, the area from the Pearl River/Hancock County line north along Interstate 59 to approximately Savannah-Millard Road is projected to experience a substantial increase in population over the next 20 years; and, to sustain such growth, a sufficient supply of potable water must be available.

The recommended project provides two 500-gallon-per-minute water supply wells, 500,000 gallons of storage capacity, and transmission mains along North Beech Street, between Westchester Drive and MS 43, and along Liberty Road from MS 43 to approximately Otis Stewart Road, the area formerly served by Dixie Utilities. This phase also includes the initial development of a water supply loop in the area north of Picayune. Specifically, this section of the loop will begin at the northwestern corporate limits, extend eastward along MS 43 to Sycamore Road, then north and east to the approximate intersection of Rayburn and Sycamore Roads. Water supply and storage for this segment is generally proposed for the area near the intersection of Sycamore and Rayburn Roads. This phase of the project will support growth immediately north of Picayune and adjacent to the Interstate 59 corridor.

\$9.4 Million

W3 - Hancock – Pearlinton-Port Bienville Regional Water Supply System – Provide water supply system to serve the Pearlinton-Port Bienville area and the area along MS 604 and US 90

The Pearlinton community presently has no centralized water supply and distribution system; consequently, residential and commercial entities obtain potable water through individual wells. Such a mechanism of supply leads to a potential concern for public health and safety, since the use of individual water supply wells, in proximity to poorly-operating individual on-site wastewater disposal systems, presents a path for potential contamination of source waters by partially-treated wastewater.

This project proposes to provide a centralized water supply for the Pearlinton area and includes a water supply capable of providing 800 gallons per minute, 250,000 gallons of storage, and a transmission line along MS 604, from its intersection with Birch Drive to its intersection with U.S. 90. This project will provide a safe, reliable source of potable water to the residential and commercial customers in the Pearlinton community, while also addressing the quantity of potable water needed to accommodate anticipated future growth.

\$3.0 Million

W4- Hancock – Pearlinton Water Distribution System - Ultra-Distressed Area

In addition to suffering massive hurricane damage, the Pearlinton area also lacks the necessary tax base to fund the complementary localized projects that would necessarily be built around the proposed regional water transmission system.

Consequently, in order to promote recovery in this area, the recommended plan is funding for a local water distribution system.

\$9.3 Million

W5 - Hancock - Kiln Regional Water Supply - Provide water supply system to serve the Community of Kiln

The residents of the Kiln Community and surrounding area are provided potable water service by the Kiln Water and Fire Protection District, and this system currently is operating at full capacity. The District has implemented a voluntary moratorium against the addition of new connections to its water system due to the lack of available reserve capacity. Growth over the next twenty years is projected to increase the area population significantly; however, this growth will likely not occur without adequate available water supply.

The recommended project will provide a centralized regional water supply, including 1,500 gallons per minute of capacity to address water supply needs of the Kiln community. The project also includes 1,000,000 gallons of storage capacity north of Interstate 10 near MS 603, as well as a transmission main along MS 603 from about Stennis Airport Road northward to Kiln-Delisle Road, then eastward along Kiln-Delisle Road to about Sister Mary Ellen Road.

\$6.7 Million

W6- Hancock - Kiln Water Distribution System - Ultra-Distressed Area

The Kiln area is Ultra-Distressed and also lacks the necessary tax base to fund the complementary localized projects that would necessarily be built around the proposed regional water transmission system. Consequently, in order to promote recovery in this area, the recommended plan is funding for a local water distribution system.

\$6.0 Million

W7 - Hancock - Eastern Hancock County Regional Water Supply - Provide water supply system to serve the Hancock County Water and Sewer District and the Cities of Bay St. Louis and Waveland

Prior to Hurricane Katrina, the Cities of Bay St. Louis and Waveland and the Shoreline Park area were experiencing both residential and commercial growth; however, in the wake of Hurricane Katrina, much of this area was left decimated including the water service infrastructure. The Cities of Bay St. Louis and Waveland, as well as the Shoreline Park and Bayside Park areas served by the Hancock County Water and Sewer District, are expected to redevelop over the next several years and grow in population. It is proposed to construct 1,000-gallon-per-minute water supply wells and 500,000 gallon storage tanks near the intersection of MS 603 and Stennis Airport Road, near the intersection of US 90 and Hancock Drive, and near the intersection of US 90 and MS 603. This project also includes construction of a transmission main along MS 603 from about Stennis Airport Road southward to Kiln-Waveland Cutoff Road, then along Kiln-Waveland Cutoff Road to US 90, then eastward along US 90 to the Waveland-Bay St. Louis City Limits Boundary. A

transmission main is also proposed for this project along Waveland Avenue from US 90 southward to the railroad, then westward along the railroad to Clearmont Road, then northward along Clearmont Road to Pearlington Road, then westward along Pearlington Road to Lakeshore Road, then northward along Lakeshore Road to Hancock Drive, then northward along Hancock Drive to US 90, then eastward along US 90 to Kiln-Waveland Cutoff Road. An additional transmission line is also proposed along Harbor Drive from US 90 northward to Cardinal Lane. The proposed system would augment available water supply in the Cities of Bay St. Louis and Waveland, as well as provide capacity to the Hancock County Water and Sewer District to enhance service in developed and developing areas served by this agency.

\$22.8 Million

W8- Hancock - Hancock County Water and Sewer District Water Distribution System - Ultra-Distressed Area

In addition to suffering massive hurricane damage, the Bayside Park and Shoreline Park area of Hancock County Water and Sewer District also lacks the necessary tax base to fund the complementary localized projects that would necessarily be built around the proposed regional water transmission system. Consequently, in order to promote recovery in this area, the recommended plan is funding for a local water distribution system.

\$9.0 Million

W9- Hancock - Waveland US 90 Water System Improvements

The City of Waveland has experienced some degree of economic recovery since Hurricane Katrina, including the addition of a Lowe's store along MS 603 and a Home Depot along U.S. 90. These additions along with the development of some smaller shopping areas, such as the strip mall in front of Walmart, have prompted the City to increase its water supply capacity to meet fire flow requirements. A major component of this system enhancement will be a distribution loop around the City. This loop would be continued from U.S. 90 down Margie St., Sycamore St., Dicks St, Tabor St., Birch St., Olivari St., Morris St., Combel St., and Herlihy St. Additional lines also would be constructed off the loop to serve localized areas.

\$5.0 Million

W10 - Stone - Southern Stone County Regional Water System - Provide water supply system south along US 49 to the McHenry area

The Highway 49 corridor from Wiggins to the Gulf Coast is anticipated to become an area of rapid growth and development in the future. In Stone County, developers are presently considering large tracts of land adjacent to Highway 49 between Wiggins and the Stone/Harrison County Line. Potable water service in this area is provided through several rural associations that may have insufficient capacity to support the proposed level of development. This project is an initial step to allow for interconnection of water service providers in Stone County, improving the resiliency of each individual system by providing an additional supply of potable water for use. This project consists of a major transmission line from the Perkinson area, along

Highway 49, to approximately one mile south of the McHenry Community, providing an opportunity to interconnect the water supply and distribution systems of the Stone Utility Association, Sunflower Utility Association, and McHenry Utility Association along the US 49 corridor. Additional transmission is proposed along East McHenry Road to approximately Percy-ONEal Road and along West McHenry Road to approximately Horse Creek. Further, new water supply wells of 500 gallons-per-minute each and storage capacity of 250,000 gallons each are proposed near the Perkinston community, the approximate intersection of East McHenry Road and Percy-ONEal Road, and the approximate intersection of West McHenry Road and Horse Creek to augment available supply and support the potable water needs of proposed new development in this general area.

\$10.3 Million

W11 - Harrison - Central Harrison County Regional Water Supply - Provide water supply system to serve Saucier and US 49 corridor in north-central Harrison County

The Saucier community and the areas east, west, and south of Saucier along the US 49 corridor are expected to grow at a rapid rate over the next several years as the county rebuilds following a northward shift in population. Currently, no centralized water service infrastructure exists in the area beyond the generally-accepted boundaries of Saucier. As this area and other areas surrounding Saucier grow, ample water supply is imperative to support the development. The selected alternative proposes 2,000 gallons per minute of water supply wells and 1,250,000 gallons in storage tanks located in the area generally near the intersection of US 49 and MS 67 (existing) and along US 49 near Hilltop Road. In addition, the project proposes transmission mains be constructed along US 49 from Biloxi Cutoff Road southward to East Wortham Road, then eastward along East Wortham Road to Turan Road. This project would provide additional water supply in areas of anticipated growth in northern Harrison County.

\$11.3 Million

W12- Harrison - Pass Christian Water System Improvements

There is an urgent immediate need for municipal water service and fire protection along Demourelle Road and Espy Avenue, which are within the current City Limits of Pass Christian. Additional water main extensions needed to accommodate development include water mains and fire hydrants to serve the most densely populated area along Menge Avenue and Espy Avenue, north to Canal Number 3, Knollwood Subdivision area along Jones Road, and the Woodland Way/Montebello Road area.

\$3.5 Million

W13 - Harrison - Western Harrison County Regional Water Supply - Provide water supply system to serve the area north of I-10, the DeLisle Community, and the cities of Pass Christian and Long Beach

The DeLisle community currently provides no centralized mechanism of water supply and distribution to the entirety of its residents. Primary water supply in the

community is provided through individual wells. The DeLisle Community is expected to experience growth over the next several years due to a northward shift in population that is occurring in the coastal counties. As the cities of Pass Christian and Long Beach rebuild, they will experience population growth as well. To allow these areas to grow as expected, adequate water supply infrastructure will need to be in place. The selected alternative is to construct water supply wells and storage tanks north of Interstate 10 near County Farm Road and Kiln Firetower Road, as well as near the intersection of Kiln Firetower Road and Katie Drive. Additionally, the project proposes the construction of transmission mains from the supply source on Kiln Firetower Road southward along Menge Avenue to Freddie Frank Road, westward along Cuevas-Delisle Road from Menge Avenue to Wittman Road, and eastward along Freddie Frank Road from Menge Avenue to Red Creek Road. Transmission mains are also proposed from the supply source on County Farm Road northward to Landon Road, southward along County Farm/Red Creek Road to Espy Road, southward along Espy Road from Red Creek Road to the railroad, and eastward along the railroad from Espy Road to Beatline Road. Finally, a transmission main is proposed along Kiln Firetower Road from Interstate 10 northwestward to approximately Katie Road. The proposed project provides additional potable water supply to the Cities of Long Beach and Pass Christian, the Delisle Community, and along a projected growth corridor north of Interstate 10 in Western Harrison County.

\$23.1 Million

W14- Harrison -Long Beach Water System Improvements

The area along 28th Street between Beatline Road and Klondyke Road is the only area within the City not presently served by municipal water and sewer systems. It is proposed to connect the existing dead-end water mains on Beatline Road and on Klondyke Road with a new 10" connector pipe, thereby serving the 28th Street area for the first time, and also reinforcing fire flows at the northern end of Beatline and Klondyke. In addition to these improvements, large diameter mains are proposed in the southwest corner of the City to supply additional fire protection and water supply to the expected high-density development in the area.

\$1.9 Million

W15 - Harrison - North Gulfport/Lyman Regional Water Supply - Provide water supply system from Lorraine-Cowan Road area in North Gulfport to Lyman Community

The City of Gulfport was experiencing residential and commercial growth before Hurricane Katrina and is expected to grow as the area redevelops especially in northern Gulfport. To support the redevelopment and population shift into northern Gulfport, it is proposed to construct water supply wells totaling 2,000 gallons per minute and water storage capacity totaling 1,000,000 gallons at the approximate intersection of MS 53 and Mark West Road and along Proposed MS 605 (Lorraine-Cowan Road) at the approximate intersection of Proposed MS 605 and Three Rivers road. It is also proposed to construct transmission mains south along Proposed MS 605, from the intersection of Proposed MS 605 to O'Neal Road, then westward along

O'Neal Road to US 49, then northward along US 49 to MS 53, then westward along MS 53 from US 49 to County Farm Road, then south on County Farm Road to Landon Road. This supply would serve to augment existing supply in the City of Gulfport and the Lyman area, as well as address the need for additional supply along principal growth corridors in central Harrison County.

\$20.0 Million

W16- Harrison -Gulfport VA Area Water System Improvements

Much of the US 90 corridor experienced massive hurricane damage, including the area surrounding the Veterans Administration Building. This area is projected to experience higher-density development as recovery efforts continue, including the area near the Veterans Administration Building. In order to support this development water infrastructure improvements are needed including an additional elevated tank near 16th street.

\$3.0 Million

W17 - Harrison - South Gulfport Regional Water Supply - Provide water supply system along US 90 corridor

City of Gulfport is experiencing significant high-density residential and commercial re-development along the US 90 corridor in the aftermath of Hurricane Katrina. To sustain these re-development efforts, it is proposed to construct a water supply well of approximately 1,000 gallons per minute at the approximate intersection of Teagarden Road and the railroad. It is also proposed to upgrade existing water transmission main sizes to accommodate the increased demand from these high-density developments. These upgraded transmission mains represent the initial phase of a county-wide water transmission backbone along the US 90 corridor to provide water supply for high-density residential and commercial development along the coastline.

\$3.0 Million

W18 - Harrison - Eastern Harrison County Regional Water Supply - Provide water supply system along Wortham Road, Tradition Parkway, and MS 67 through Biloxi-Woolmarket area to MS 67/I-110 at the City of D'Iberville

The City of D'Iberville and the Woolmarket area are experiencing rapid growth in the aftermath of Hurricane Katrina. Additionally, areas in north-central Harrison County are projected to experience significant growth as coastal residents relocate northward to more inland regions. To support and sustain this level of growth, as well as to continue support of current residents, the areas have requested additional water supply capacity. The selected alternative to address these needs is to construct six 1,000 gallon-per-minute water supply wells and 3,500,000 gallons of storage capacity at strategic locations in the area. The project also proposes to construct transmission mains along East Wortham Road and western Tradition Parkway and along MS 67 from MS 605 southeastward through the Woolmarket area into the City of D'Iberville.

\$29.2 Million

W19- Harrison – Biloxi Broadwater Water System Improvements

Much of the US 90 corridor experienced massive hurricane damage, including the Broadwater area. This area is projected to experience higher-density development as recovery efforts continue. In order to support this development water infrastructure improvements, including a 1.0 million gallon elevated storage tank and associated transmission mains, are needed in the Broadwater area.

\$3.0 Million

W20 - Jackson - Western Jackson County Regional Water Supply - Provide water supply to serve the Cities of Gautier and Ocean Springs, as well as the areas of Vancleave, Big Hill Acres and Latimer

Western Jackson County experienced growth prior to the arrival of Hurricane Katrina and this growth is expected to continue, if not increase, as the area rebuilds. In anticipation of needs arising from rebuilding efforts in this area, the Cities of Gautier and Ocean Springs, along with the Vancleave, Big Hill Acres, and Latimer areas north of Interstate 10 have each submitted requests to increase available potable water supply to their individual areas of service. To maximize flexibility in addressing these needs, a regional supply and transmission system has been developed to augment available supply of potable water in each area, allowing each area to satisfy demands associated with the ongoing rebuilding efforts. The initial component of the proposed regional supply and transmission system consists of 1,000 gallon per minute water supply wells and 500,000 gallon storage capacity tanks located generally along Humphrey Road, near the intersection of I-10 and MS 57, and near the intersection of I-10 and Gautier-Vancleave Road. The project also proposes construction of transmission mains along Jim Ramsey/Joe Batt Road from Old Biloxi Road eastward to Old Fort Bayou Road, along Old Fort Bayou Road from Jim Ramsey Road southward to Humphrey Road, along Humphrey Road from Old Fort Bayou Road to MS 57, along MS 57 from about Bunker Hill Road to C. Byrd Road, along Gautier-Vancleave Road from MS 57 to about Rock Hill Street and from Crane Lane to Indian Point Parkway. This system provides flexibility in addressing needs of the communities in Western Jackson County by maximizing the benefit derived from applied resources and being responsive to needs throughout the region during rebuilding.

\$24.0 Million

W21 - Jackson - Ocean Springs Water Transmission Improvements

The City of Ocean Springs anticipates significant growth along its eastern boundary and, indeed, is presently experiencing such growth. An adequate water supply is needed in order to sustain and promote this growth. The alternative selected for inclusion in this plan extends ongoing infrastructure development activities by the City, as well as expansion of the proposed West Jackson County Regional Water Supply System to support the potable water needs of Ocean Springs. Specifically, a water transmission main is proposed along US 90 from MS 57 westward to about Riley Road. Additional transmission mains are proposed to connect existing segments of the City of Ocean Springs' water system to the West Jackson County

Regional Water Supply System along Ocean Springs-Vancleave Road near Riley Road and along MS 57 near the Sunplex Industrial Park. These improvements will insure the availability of an adequate supply of potable water along the eastern boundary of Ocean Springs to support residential, commercial, and industrial development in the area.

\$1.5 Million

W22 - Jackson - Gautier Water Transmission Improvements- Install water transmission infrastructure to address needs in Hickory Hills area

The Hickory Hills area of Gautier is anticipated to grow as coastal residents migrate to more inland areas. With this growth come increased demands on water supply in the area. To insure adequate water supply is available to support additional growth in the area, the alternative selected for inclusion in this plan considers the upgrading of existing undersized and dead-end water lines and providing a water transmission backbone central to the area. Specifically, transmission mains are proposed along Crane Lane from Gautier-Vancleave Road to the western boundary of the Hickory Hills area, providing a redundant source of supply by connecting the Hickory Hills area to the West Jackson County Regional Water Supply System. Water transmission lines are also proposed along the western boundary of the Hickory Hills area, as well as Fairway Drive, Martin Bluff Road, Hastings Road and Riverside Drive within the Hickory Hills area. These improvements will insure the availability of adequate water supply in support of ongoing development in the area.

\$2 .0 Million

W23 - Jackson - Eastern Jackson County Regional Water System - Provide water supply and transmission system for Hurley, Wade, Polletown, and Big Point Communities in northeastern Jackson County

The communities of Hurley, Wade, and Big Point presently have no community-wide potable water supply and distribution systems to address the needs of the population in these areas. Rather, individual home wells are used to provide potable water for consumption. The population of these areas is projected to increase consistently throughout the next 20 years as the population of Jackson County migrates northward. To address the increase in demand for potable water in these communities, while at the same time mitigating the potential public health concern associated with the use of individual wells for domestic water supply, it is proposed that a centralized supply and transmission facility be developed between these communities. The alternative proposed to address the needs of this area include construction of water supply wells totaling 2,000 gallons per minute in capacity and storage tanks totaling 1.5 million gallons in capacity at selected locations in the area. The project also proposes the construction of water transmission mains along MS 613 from the Big Point Community northward to MS 614, then westward along MS 614 to MS 63, then northward along MS 63 to Polletown Road, then northeastward along Polletown Road to the Polletown area. The proposed system will insure that each community will have a sufficient supply of potable water to address both present and projected needs of residents in these areas.

\$15.2 Million

W24 - Jackson - Moss Point - Three Rivers Regional Water Treatment and Transmission System - Install water transmission infrastructure along Bayou MS 63 from Escatawpa River to MS 613

It is anticipated that a substantial portion of the residential, commercial and industrial activity in the low-lying areas of Moss Point and Pascagoula will relocate to higher ground along MS 63 and MS 613 north of I-10. To support this northward migration, the Moss Point-Escatawpa Utility District is nearing completion of final design on a new reverse-osmosis water treatment facility as well as design of transmission mains to serve the areas of anticipated growth. The alternative selected for inclusion in this plan consists of supplementing the cost of these improvements, including a water transmission main along MS 63 from Fredrick Street northward to Elder Ferry Road, crossing the Escatawpa River, and from about New Saracennia Road to MS 613. A segment of transmission main along Bellview Avenue from about Weems Street eastward to MS 613 is also included in this selected alternative.

\$6.3 Million

W25 - Jackson - Pascagoula - River Park Water Transmission Improvements - Install water transmission infrastructure to support development of River Park area in Pascagoula

The area now known as River Park is limited in development by a lack of infrastructure support. Neither water nor sewer is available at the site, so the only current use is a pier and boat launch. Development plans have been considered in the past that would bring a combination of residential development and commercial ventures that would complement the development of a more complete pier & marina facility. Currently, none of these possibilities are feasible because of the expense related to water and sewer services. The alternative selected for inclusion in this plan consists of extending a water transmission main along US 90 from Pascagoula Street westward to River Park access road, then along River Park access road to the approximate center of River Park. This infrastructure will support additional economic development activities planned for the area.

\$0.75 Million

W26 - Jackson - Pascagoula - Chipley Water Transmission Improvements - Upgrade water transmission infrastructure in Chipley area of Pascagoula

The Chipley Area is a neighborhood near the south-central portion of the City that contained standard single family residential development prior to Hurricane Katrina. Nearly all of the structures were destroyed and more than likely will be replaced with higher density development, built above the advisory base flood elevations. The existing water and sewer mains through the area are not sufficient to convey flow for the higher densities. The alternative selected for inclusion in this plan consists of upgrading water transmission mains along 11th Street between King Avenue and Washington Avenue, along 13th and 14th Streets between King Avenue and Chickasaw Avenue, and along King Avenue between 11th and 14th Streets.

\$1.0 Million

W27 - Jackson - Pascagoula - Beach Boulevard Water Transmission Improvements - Install water transmission infrastructure to support development along Eastern Beach Boulevard

The area at the east end of Beach Boulevard currently supports a private yacht club and, prior to Hurricane Katrina, a number of condominium units. The existing water and sewer services to this area limit the density of redevelopment to what previously existed. Proposed development in the area consists of a mixed use commercial/residential center as well as higher density residential development. Infrastructure improvements are necessary to facilitate this re-growth. The alternative selected for inclusion in this plan consists of extending a water transmission main along Martin Street from Washington Avenue to Beach Boulevard. This project will provide water supply necessary to support redevelopment activities in the area.

\$0.5 Million



Figure 6-1
Recommended Water Projects

Legend

-  Emergency Water Infrastructure
-  Recommended Water Mains
-  Recommended Water Supply
-  Recommended Distribution System

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MISSISSIPPI GULF REGION - RECOMMENDED WATER PROJECTS

6.2.2.3 Wastewater Projects Recommended for CDBG Disaster Recovery Funding

The recommended wastewater program elements are discussed hereafter and illustrated in **Figure 6-2**. The recommended projects were developed to meet priority needs identified through the planning process and are conceptual in nature. Project components may be modified when more detailed planning and design activities are completed. For example, proposed routing of transmission lines might be adjusted or sizing of facilities might be refined. A conceptual opinion of implementation cost is presented at the end of each project description.

The subsequent paragraphs will include the following abbreviations:

- WWTF = Wastewater Treatment Facility
- MGD = Million Gallons Per Day

S1 - Pearl River - Poplarville Regional WWTF and Transmission System

The existing Poplarville WWTF is not adequate to meet the projected needs of the area. In order to provide for this growth, the recommended project proposes to expand the current facility to a capacity of 1.1 million gallons per day. Additionally, in order to serve the growth area around Poplarville, transmission mains are proposed for approximately four miles along MS 26 east to Wolf Creek, for approximately three miles along Beaverdam Creek, and for approximately four and one half miles northwesterly along Hickory and Wolf Creeks to vicinity of U.S. 11.

\$17.5 Million

S2 - Pearl River - Picayune Regional WWTF and Transmission System

The existing Picayune WWTF is currently exceeding its 2-million-gallons-per-day capacity, due to population shifts caused by Hurricane Katrina. Additionally, the areas surrounding the city currently have no municipal sewer service. The situation is expected to continue to degrade as the population increases in and around the City. In order to accommodate the growth, the recommended project will include a new 1.6-million-gallon-per-day WWTF located northwest of Picayune and transmission mains to serve the surrounding areas. The transmission mains consist of a combination of approximately two miles of gravity sewer north along Boley Creek and approximately two and one half miles of gravity sewer and approximately two miles of force mains and pump stations from the new WWTF southwesterly along Boley Creek to the vicinity of Interstate 59.

\$22.1 Million

S3 - Hancock - Western Regional WWTF (Pearlington/Port Bienville Plant)

Prior to Hurricane Katrina, the Pearlington community was preparing to begin construction of the first phase of a sewer collection system and a new WWTF. This area has a history of problems associated with failing individual on-site treatment systems. Completing implementation of the WWTF is a vital step in promoting the

repopulation of this area. Additionally, this WWTF will serve the nearby Port Bienville Industrial Park. The recommended project includes construction of a 0.2-million-gallons-per-day WWTF, along with pump stations and transmission mains from the WWTF along U.S. 90 to serve Pearlington and south to Port Bienville.

\$5.5 Million

S4- Hancock – Pearlington Wastewater Collection System- Ultra-Distressed Area

In addition to suffering massive hurricane damage, the Pearlington area also lacks the necessary tax base to fund the complementary localized projects that would necessarily be built around the proposed regional wastewater transmission system. Consequently, in order to promote recovery in this area, the recommended plan is funding for a local wastewater collection system.

\$9.6 Million

S5 - Hancock - Northern Regional WWTF (Kiln Plant)

Currently, no centralized wastewater services are provided in the Kiln community; consequently, the wastewater needs are met by individual on-site treatment systems. As discussed in previous sections of the Plan, these types of systems have a historically high failure rate in the Gulf Region. Additionally, development of the area is limited by the lack of centralized infrastructure. The recommended project consists of a 1.5-million-gallons-per-day WWTF to be located in the NASA buffer zone, with pump stations and transmission mains to serve the Kiln community. Transmission mains would extend north on MS 603, east along Kiln-DeLisle Road, and south along MS 43 to south of I-10. This centralized system would support development opportunities for an area that has already experienced significant growth post-Katrina.

\$20.8 Million

S6- Hancock – Kiln Wastewater Collection System- Ultra-Distressed Area

In addition to suffering massive hurricane damage, the Kiln area also lacks the necessary tax base to fund the complementary localized projects that would necessarily be built around the proposed regional wastewater transmission system. Consequently, in order to promote recovery in this area, the recommended plan is funding for a local wastewater collection system.

\$13.5 Million

S7- Hancock – Bay St. Louis - Cedar Point and I-10 Wastewater System Improvements

The Cedar Point area of Bay St. Louis is projected to experience high-density development, and an additional transmission main and pump station are needed to transport these flows to the Waveland WWTF. The newly annexed area south of I-10 also is projected to experience high-density development. In order to serve this area, another transmission main and pump station are recommended. These flows would be transported to the Northern Regional WWTF (Kiln Plant).

\$5.0 Million

S8 - Stone – Wiggins Regional WWTF and Transmission System

The City of Wiggins currently operates two wastewater treatment lagoons. The West Lagoon is currently discharging in excess of design capacity, and the problem is expected to continue as the population increases in the City and surrounding areas. In order to meet the wastewater needs of the City and surrounding community the selected plan is to construct a 0.5-million-gallons-per-day, zero-discharge WWTF and transmission system to serve the area south of Wiggins. The transmission system will allow the West Lagoon to be taken off-line by means of approximately six miles of gravity mains along Red Creek and Four Mile Creek. Additionally, approximately five miles of gravity mains will be added for service along the east U.S. 49 corridor on Church House Creek.

\$18.5 Million

S9 - Stone – South Stone County WWTF

There are several large residential developments currently being proposed in South Stone County, and there is no centralized sewer service outside the City of Wiggins. In order to support growth and sustain quality of life, a regional wastewater treatment facility is needed. The proposed project will include construction of a 0.25-million-gallons-per-day, zero-discharge WWTF near Saucier Creek and a transmission system that will serve the needs of this growing area of Stone County. The project will include approximately four miles of gravity main on McHenry Branch, two miles of gravity main along Saucier Creek and approximately five miles of force main and pump stations to deliver wastewater to the WWTF.

\$9.8 Million

S10 - Harrison – Saucier WWTF and Riverbend/Robinwood Forest Transmission System

The Saucier community currently has no centralized sewer service, and the area is expected to develop rapidly over the next few years. Two particular developments that will be part of this significant growth are Robinwood Forest and Riverbend, which have collection systems and lagoon treatment systems; however, their existing lagoons do not have the needed treatment capacity to accommodate the expected growth. The proposed project includes construction of two 0.2-million-gallon-per-day Interim WWTF's to meet immediate needs in the area. One Interim WWTF is planned at the proposed Northpark Industrial Park west of U.S. Highway 49 in Saucier. The other Interim WWTF will be constructed in Robinwood Forest area and will provide regional wastewater treatment to include the Robinwood Forest and Riverbend developments. Pump stations and transmission mains will be constructed from the Saucier site to the Riverbend/Robinwood site and across U.S. 49 at Wortham Road, and then to the East Central Harrison WWTF near Tradition.

\$13.3 Million

S11 - Harrison – East Central Harrison County Regional WWTF

The area of Harrison County along the corridor of U.S. 49 and MS 67, which includes Saucier, Tradition, and North Woolmarket, is expected to develop rapidly over the

next few years. Currently this area has no centralized sewer services. In order to accommodate anticipated development, a regional WWTF is needed. The proposed project includes a 2.0-million-gallon-per-day WWTF adjacent to the existing facility near the Tradition development. Such a regionally located facility would provide more efficient, cost-effective, and environmentally friendly service than multiple small plants located at each development.

\$19.0 Million

S12 - Harrison - DeLisle WWTF, Long Beach/Pass Christian WWTF, and Transmission System

The West Harrison WWTF (at DeLisle) is in need of expansion to accommodate post-Katrina residential and commercial development. The western I-10 corridor of Harrison County also is expected to develop rapidly in the post-Katrina era. In order to provide the needed wastewater service to this area, the selected plan is to expand the West Harrison WWTF at DeLisle and construct a network of pump stations and force mains in the Western Harrison County Utility District to transmit flow from north of Interstate 10 to this WWTF. The West Harrison WWTF will be expanded by 0.2 million gallons per day. Additionally, the North Long Beach Interceptor will be constructed to serve the area north of Long Beach to Interstate 10. This interceptor will traverse along County Farm Road north of I-10, cross I-10 and travel south along Red Creek Road and Menge Avenue and through Pass Christian to the Pass Christian/Long Beach WWTF.

\$23.5 Million

S13- Harrison - Pass Christian Wastewater System Improvements

Much of the U.S. 90 corridor experienced massive hurricane damage. This area is projected to experience higher-density development as recovery efforts continue. In order to support this development, additional wastewater transmission mains are needed along U.S. 90. These improvements would serve both the Cities of Pass Christian and Long Beach. In addition to these improvements, eastern Pass Christian is in need of pumping and transmission facilities to promote development in an area that is not susceptible to storm surge, but that has not developed previously due to lack of infrastructure.

\$1.5 Million

S14 -Harrison - West Gulfport Regional Interceptor

The area south of MS 53 and west of U.S. 49 is projected to experience rapid growth in the next few years. In order to accommodate development in this area and to provide well-managed wastewater treatment systems, the proposed project will provide a gravity main west of Gulfport. The interceptor will be constructed along Flat Branch, between MS 53 and John Clark Road, to the existing Gulfport City Limits. This gravity main will deliver wastewater to the existing Gulfport North WWTF.

\$3.2 Million

S15 - Harrison - West Gulfport Regional Transmission System

The I-10 corridor is projected to experience rapid growth in the next few years, including the area west of Gulfport. In order to accommodate development in this area and to provide well-managed wastewater treatment systems, the selected plan is a transmission main and pump station along Landon Road west of Gulfport, south to Interstate 10, to an existing pump station south of Interstate 10 west of the U.S. 49 interchange. This transmission main will deliver wastewater to the existing Gulfport North WWTF.

\$7.9 Million

S16- Harrison -Long Beach Wastewater System Improvements

Much of the U.S. 90 corridor experienced massive hurricane damage. This area is projected to experience higher-density development as recovery efforts continue. In order to support this development wastewater transmission mains are needed along U.S. 90. These improvements would serve both the Cities of Pass Christian and Long Beach. In addition to these improvements, the area along 28th Street between Beatline Road and Klondyke Road is the only area within the City not presently served by the municipal sewer system. The selected plan includes construction of a transmission main along 28th Street.

\$3.1 Million

S17- Harrison -Gulfport VA Area Wastewater System Improvements

Much of the U.S. 90 corridor experienced massive hurricane damage, including the area surrounding the Veterans Administration Building. This area is projected to experience higher-density development as recovery efforts continue. In order to support this development wastewater infrastructure improvements are needed including a pump station along Railroad Street and a transmission main to the existing pump station on 34th Street.

\$2 .0 Million

S18 - Harrison - South Gulfport Regional Transmission System

The U.S. 90 corridor in Gulfport is expected to experience rapid, high density development in the next few years. In order to accommodate development in this area and to provide well-managed wastewater treatment systems, the selected plan is to locate a regional pump station and transmission main from the area along U.S. 90 in East Gulfport to the existing Gulfport North WWTF.

\$5.6 Million

S19 - Harrison - South Woolmarket WWTF and Transmission Mains

The South Woolmarket area of Biloxi has previously had only limited development due to lack of infrastructure. As the residential population of the county shifts northward in coming years, the population of this area is expected to increase at a high rate. Additionally, the Eagle Point area currently is served by an existing lagoon, which is nearing capacity. In order to provide for well-managed wastewater

treatment systems, a regional facility is needed. The proposed project includes construction of a 0.2-million-gallon-per-day Interim WWTF on the Biloxi River in South Woolmarket to provide for the immediate needs. Additionally, the plan includes construction of a 1.5-million-gallon-per-day WWTF at this site as the area grows, as well as a transmission system to transport the Eagle Point wastewater flows to the new WWTF. Pump stations are planned in the vicinity of MS 15 and MS 67 with transmission mains traversing westerly to the WWTF.

\$32.2 Million

S20 - Harrison - D'Iberville WWTF and Transmission System

The existing D'Iberville WWTF is currently approaching capacity, with no room for expansion. The population of the D'Iberville service area is expected to increase substantially; and, potential large commercial developments would not be possible due to this lack of treatment capacity. Additionally, the WWTF was completely submerged during Hurricane Katrina. The proposed project includes construction of a 1.5-million-gallons-per-day WWTF, a pump station at the existing WWTF, and a transmission main between the two plants. The transmission main will partially follow Lamey Bridge Road to allow flows from development in this area to be added as necessary. The proposed plan will allow economic development in the area and, in the long term, will allow closure of the existing facility.

\$23.1 Million

S21- Harrison -Biloxi Broadwater Wastewater System Improvements

Much of the US 90 corridor experienced massive hurricane damage, including the Broadwater area. This area is projected to experience higher-density development as recovery efforts continue. In order to support this development wastewater infrastructure improvements are needed including a pump station and transmission main to transport flow from the Broadwater area to the West Biloxi WWTF.

\$2 .0 Million

S22- Harrison -D'Iberville Waterfront Wastewater System Improvements

In order to support planned high density redevelopment in the Old Town District, wastewater infrastructure improvements are needed in order to expand capacity. The existing low-pressure system would not be adequate for the proposed development and needs replacement.

\$5.0 Million

S23 - Jackson - West Jackson Regional WWTF and Transmission Mains

Many areas of West Jackson County have no centralized sewer systems. These areas include Vancleave, Latimer, Big Hill Acres, developments along Joe Batt Road and Jim Ramsey Road. These areas are projected to develop rapidly, partially due to the construction of a new five-lane MS 57 to I-10. A regional wastewater treatment system is necessary to provide for well-managed systems. The proposed project includes expansion of the existing West Jackson WWTF, which appears to be the most

cost-effective and environmentally friendly approach to developing a regional system. The plan calls for a 2-million-gallon-per-day expansion of the existing West Jackson WWTF and construction of transmission mains along Joe Batt and Jim Ramsey Road to Vancleave, and areas north along MS 57.

\$33.2 Million

S24-Jackson – Ocean Springs Wastewater Transmission Improvements

The area along U.S. 90 is projected to experience higher-density growth in the next few years. In order to accommodate development in this area and to provide well-managed wastewater treatment systems, the proposed project will provide a transmission main from Reilly Road to the intersection of U.S. 90 and MS 57 and then north along MS 57.

\$2.8 Million

S25 – Jackson – Gulf Park and Ocean Beach Areas Transmission System Improvements

The area located between Ocean Springs and Gautier, south of U.S. 90, is commonly referred to as Gulf Park Estates to the west and Ocean Beach/St. Andrews to the east. In order to provide improved wastewater transportation service and for collection systems to be installed in these devastated areas, the selected plan includes expansion of two existing pump stations and construction of a transmission network in Ocean Beach Estates.

\$9.4 Million

S26 – Jackson – North Jackson County Decentralized WWTFs

The communities of Big Point, Wade, and Hurley, and the area north of Vancleave, including other nearby areas have no centralized sewer service; and, each of these areas is projected to increase in population. Because of the lack of wastewater facilities, growth is being hindered in these areas. Therefore, an immediate need exists for access to wastewater facilities to accommodate the demand for new housing. The selected plan for this area is the construction of four decentralized WWTF's and transmission mains. The WWTF's will have a capacity of approximately 0.125 million gallons per day. The WWTF sites will be identified to accommodate the highest density of development in an area, and the transmission mains will follow existing roads to allow for connection of subdivisions to the decentralized system.

\$14.9 Million

S27-Jackson – Gautier Wastewater Transmission Improvements

The northern end of Gautier is projected to experience increased development. In order to accommodate the projected population increase in the Hickory Hills area, enhancements are needed to the existing pump stations and transmission networks.

\$2 .6 Million

S28- Jackson – Gautier Regional WWTF Improvements

Wastewater from the City of Gautier and surrounding area is collected and transported to the Gautier WWTF for treatment. This area is projected to experience rapid growth. The clarification system is limiting the plant’s ability to meet the 4-million-gallons-per-day design capacity by at least 1 million gallons per day. The proposed project includes construction of a new clarifier at the existing WWTF. The upgrade to the clarifier will ensure that the WWTF can continue to handle future growth.

\$1.5 Million

S29 - Jackson – Escatawpa Regional WWTF Improvements

The existing Escatawpa WWTF serves the community of Escatawpa and a portion of the City of Moss Point. This complete mix conventional aeration facility has a capacity of 3 million gallons per day; however, the facility produces more sludge than typically expected and cannot meet the design capacity. The selected plan is to expand the sludge handling facilities at the existing WWTF. This improvement will accommodate the increased flow in the area, from the community of Helena, and growth anticipated along MS 63 and MS 613.

\$1.5 Million

S30-Jackson – Pascagoula - River Park Wastewater Transmission Improvements

Development potential in this area is limited due to a lack of infrastructure. However, the area otherwise is poised for both residential and commercial development. Improvements to the wastewater infrastructure in this area are needed in order to serve the increased population. The proposed project includes provision of needed sewer infrastructure improvements.

\$0.8 Million

S31-Jackson – Pascagoula - Shortcut Road Transmission System Improvements

This area is limited in development due to a lack of wastewater infrastructure to complement the existing water infrastructure. Improvements to the wastewater infrastructure in this area are needed in order to serve the projected population. The proposed project includes expansion of the existing transmission main along Shortcut Road to the City limits.

\$0.6 Million

S32-Jackson – Pascagoula - Chipley Wastewater Transmission Improvements

This area is poised for higher-density development, which will assist the local and regional economy in its struggle to rebuild. Improvements to the wastewater infrastructure in this area are needed in order to serve this increased population. The proposed project includes expansion of transmission capacity in this area.

\$1.5 Million

S33 - Jackson - Pascagoula - Beach Boulevard Wastewater Transmission Improvements

This area is poised for higher-density development, which will assist the local and regional economy in its struggle to rebuild. Improvements to the wastewater infrastructure at the east end of Beach Boulevard are needed in order to serve this increased population. The proposed project includes construction of pumping and transmission facilities along the east end of Beach Boulevard.

\$0.5 Million

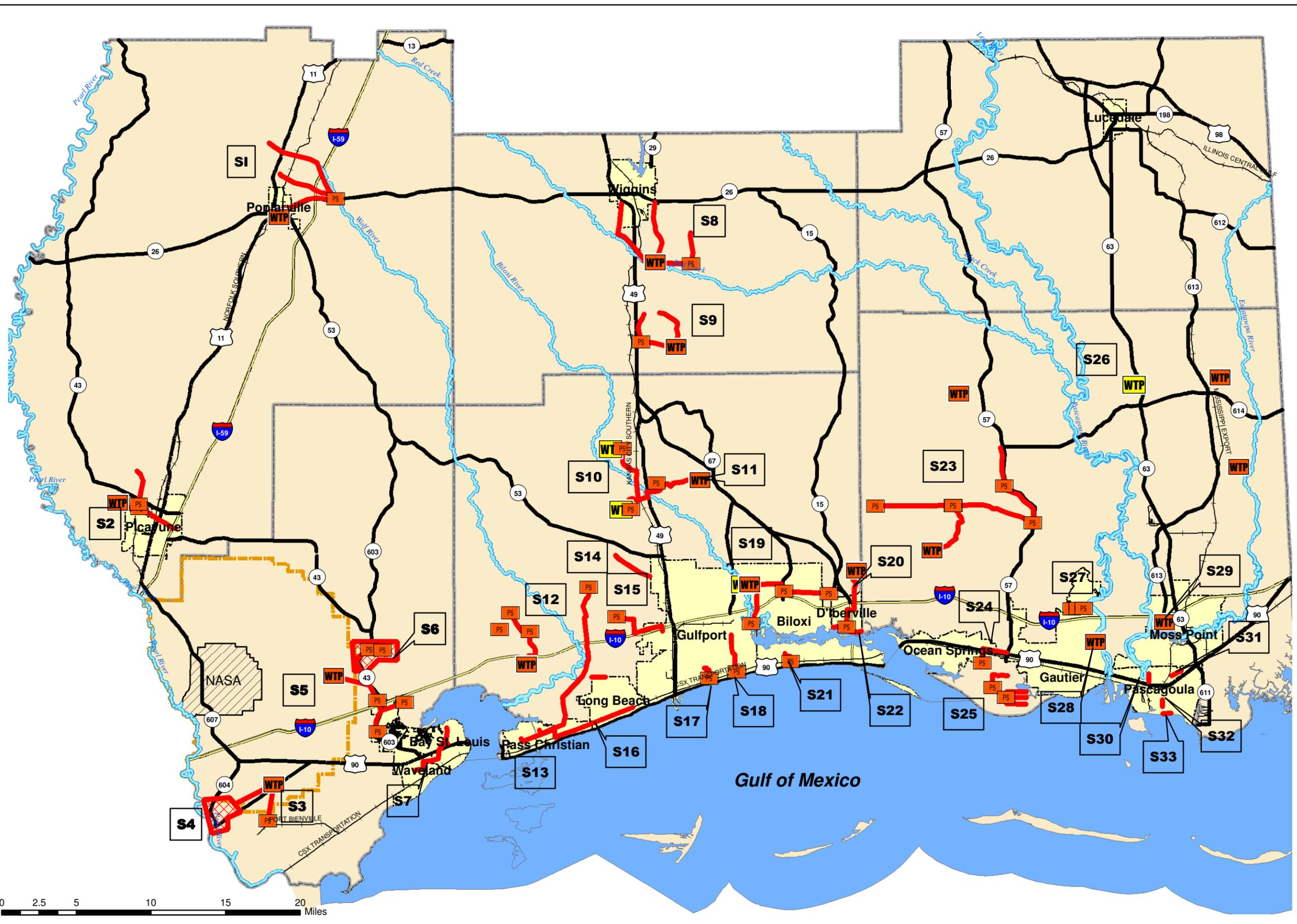


Figure 6-2
Recommended Wastewater
Projects

Legend

- Emergency Wastewater Infrastructure
- Recommended Wastewater Mains
- Recommended Pumping Station
- Recommended Treatment Facility
- Collection System Improvements

0 2.5 5 10 15 20 Miles

MISSISSIPPI GULF REGION - RECOMMENDED WASTEWATER PROJECTS

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6.2.2.4 Stormwater Projects Recommended for CDBG Disaster Recovery Funding

The recommended stormwater program elements are discussed hereafter. The projects are also illustrated on **Figure 6-3**.

Hancock - Demonstration Project - Pipes on Beaches

This effort will include a demonstration project to enhance water quality in the Mississippi Sound and aesthetics along the beach. The project will consist of using the discharge water from the beach outfalls to nourish and enhance wetlands in the vicinity of Buccaneer State Park and Jackson Marsh.

\$3.8 Million

Harrison - Demonstration Project - Pipes on Beaches

This effort will include a demonstration project to enhance water quality in the Mississippi Sound and aesthetics along the beach. The project will consist of diverting the discharge water from the beach outfalls to develop a bio-retention facility in the vicinity of the I-110 ramp.

\$3.8 Million

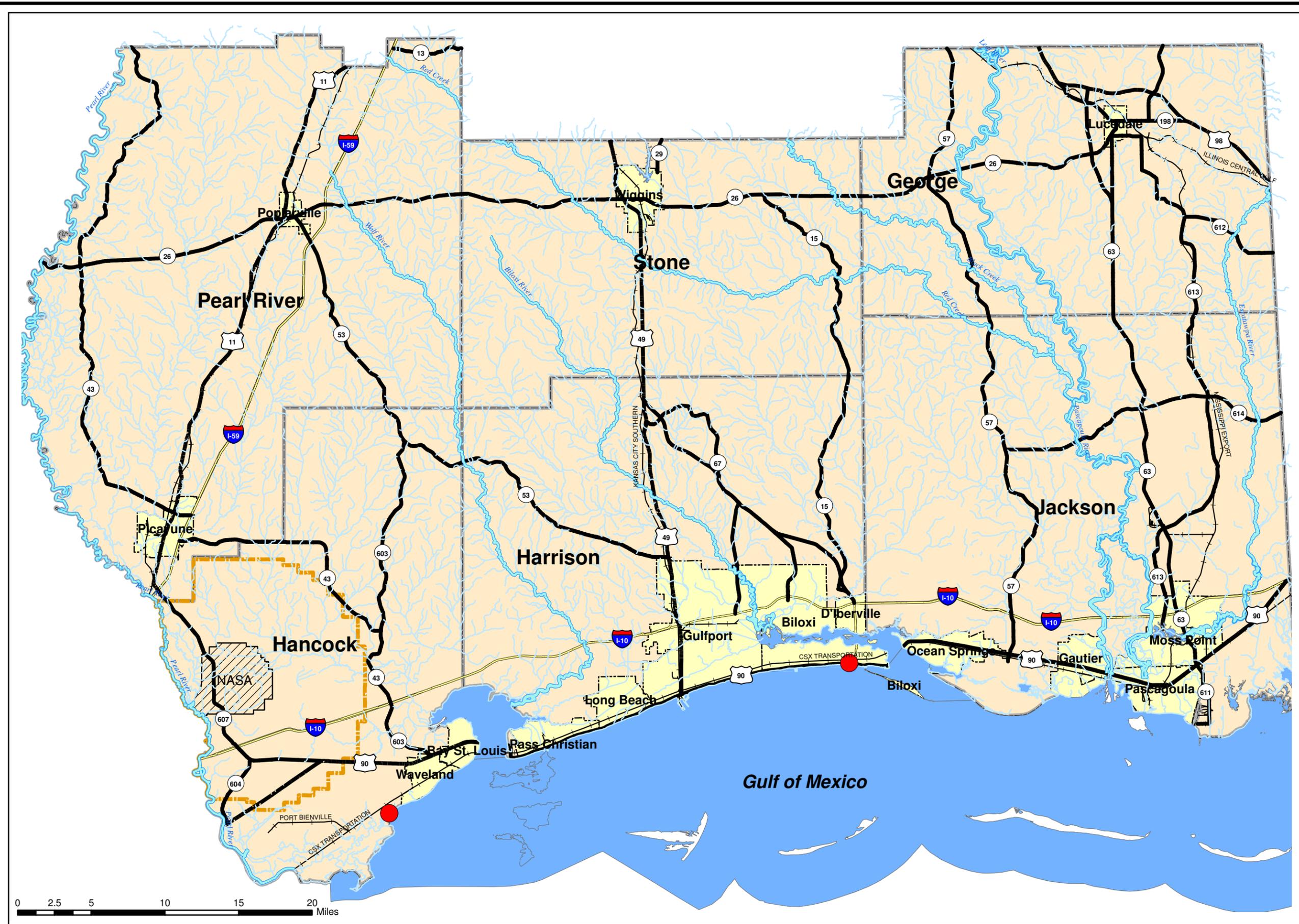


Figure 6-3
Demonstration Projects

Legend

- Interstate
- State Hwy
- US Hwy
- Railroads
- County Boundary
- City Limits
- Rivers
- Intermittent / Annual Streams
- Stennis Space Center
- NASA
- Demonstration Project

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MISSISSIPPI GULF REGION - DEMONSTRATION PROJECTS

6.2.2.5 Emergency CBDG Disaster Recovery Funding

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. Criteria for determination of award of emergency funding are as follows:

- The project is not eligible for Federal Emergency Management Agency (FEMA) funding;
- The project was necessitated by a direct or indirect result of conditions caused by Hurricane Katrina;
- Construction of the project cannot reasonably be delayed until the Plan is completed;
- The project is necessary to prevent or reduce the threat of loss of life;
- The project is necessary to correct an imminent public health threat; and
- The project is necessary to correct damage to the environment that has resulted in public contact with or consumption of polluted or contaminated drinking or surface waters.
- Any project that supports housing development.

A brief description of each project recommended for Emergency CDBG Disaster Recovery funding follows.

Pearl River - Poplarville Area - Provide water supply system

Northern Pearl River County, including the City of Poplarville and areas in the general vicinity of Poplarville, experienced significant growth immediately following landfall of Hurricane Katrina. This growth greatly impacted the City of Poplarville's available capacity to provide potable water such that the Mississippi Department of Health imposed a moratorium against adding new connections to the water distribution system. This project begins an effort to interconnect the City of Poplarville's water supply and distribution network with those of surrounding water service providers to provide a more resilient water supply and distribution system to customers served by these providers. The scope of this phase of the project includes new water supply and storage near the City of Poplarville to augment available supply in support of growth currently underway in these areas.

\$2.0 Million

Hancock - Eastern Hancock County Regional Water Supply (Kiln)

The residents of the Kiln Community and surrounding area are provided potable water service by the Kiln Water and Fire Protection District, and this system currently is operating at full capacity. The District has implemented a voluntary moratorium against the addition of new connections to its water system due to the lack of available reserve capacity. Growth over the next 20 years is projected to increase the area population significantly; however, this growth will likely not occur without

adequate available water supply. The recommended project will provide a centralized regional water supply including 1,500 gallons per minute of capacity to address water supply needs of the Kiln community. The project also includes 1,000,000 gallons of storage capacity north of Interstate 10 near MS 603 and a transmission main from the water source north along MS 603 to approximately Kiln-Picayune Road.

\$5.7 Million

Harrison - Saucier WWTF and Riverbend/Robinwood Forest Transmission System (Interim WWTF's)

The Saucier community currently has no municipal sewer service and is part of the area of central Harrison County that is expected to develop rapidly over the next few years. The developments of Robinwood and Riverbend have collection systems and lagoon treatment systems; however, the lagoons do not have the needed treatment capacity to accommodate the expected development. Regional wastewater treatment is needed for this rapidly developing area. The selected plan includes construction of two 200,000 gallon-per-day Interim WWTF's to meet immediate needs in the area. One Interim WWTF will serve the Saucier community and the other will serve the Robinwood and Riverbend developments.

\$4.0 Million

Harrison - South Woolmarket WWTF and Transmission Mains

The South Woolmarket area of Biloxi has previously only had limited development due to lack of infrastructure. In the post-Katrina area, as the residential population shifts north, this area is expected to increase significantly. In order to provide for well-managed wastewater treatment systems a regional wastewater treatment facility is needed. The selected plan is construction of a 200,000 gallon-per-day Interim WWTF and transmission mains.

\$6.0 Million

Jackson - North Jackson County Decentralized WWTF's

The communities of Big Point, Wade, and Hurley, and the area north of Vancleave, including other nearby areas have no centralized sewer service; and, each of these areas is projected to increase in population. Because of the lack of wastewater facilities, growth is being hindered in these areas. Therefore, an immediate need for access to wastewater facilities is needed to accommodate the demand for new housing. The selected plan for this area is the construction of **one of four** decentralized WWTF's and transmission mains. The WWTF's will have a capacity of approximately 0.125 million gallons per day. The WWTF sites will be identified to accommodate the highest density of development in an area, and the transmission mains will follow existing roads to allow for connection of subdivisions to the decentralized system.

\$3.9 Million