

**JACKSON COUNTY MISSISSIPPI COASTAL IMPACT ASSISTANCE PLAN
TIER 1 PROJECT DESCRIPTION**

1. PROJECT TITLE: Rehabilitation of Gravity Sewer Collection System

2. LEAD ORGANIZATION/AGENCY: West Jackson County Utility District

3. FEDERAL TAX ID NUMBER: 030-15757-2

4. PROJECT LEAD/POINT OF CONTACT:

Darryl Sidaway
P.O. Box 1230
Ocean Springs, MS 39566
PHONE: (228) 872-3898
FAX: (228) 872-3861
CELL: (228) 381-0447
wjcud@cableone.net
www.wjcud.com

5. PROJECT SUMMARY

LOCATION OF PROPOSED PROJECT: Orleans Dr: N 30:26.631' W 88:52.039', Repair collections system, update control system. Quail Creek System (Including Woodfield S/D): N 30:26.810' W 88:48.397', Station rehab.

DURATION OF PROPOSED PROJECT: 1 year; funding requested in FY 2010.

PROPOSED START DATE: January 2011

PROPOSED END DATE: December 2011

PROJECT GOAL: The purpose of this project is to eliminate the wasteful use of effective sewer collection and treatment resources and eliminate the escape of untreated sewer into the drainages and bayous of southern Jackson County. This infrastructure upgrade will complement past efforts to protect the coastal environment by further reducing the strain of wastewater contribution by replacing the aging collection pipe system and rehabilitation and upgrade of mature wet wells.

PROJECT OBJECTIVES: During a significant rain event (2 inches or more per hour) the SCADA (Supervisory Control and Data Acquisition) indicates as much as 100,000 gallons of infiltration per entry port. Thus with five entry ports, there is an approximately 500,000 gallon per day increase on system demand that is used to treat rainwater. While the inverse cannot be assumed to determine the loss, there is typically some loss in any system with infiltration. Likewise, the treatment capacity is being consumed and could be re-allocated to treat sewage that is now being treated

by septic systems or other less desirable methods. Also, there is potentially treatment capacity available without growing resources.

Specific objectives are: 1) Complete evaluation at each site to develop work scope; 2) Perform smoke tests to identify and mark areas of repair. 3) Complete planning, and engineering and obtain any necessary permits for repair; 4) Develop packages for bids; 5) Construct and oversee of project; 6) Resmoke test gravity system ensuring success; 7) Compare old readings against new readings after rain event.

This project will reduce inflow at a rate of at least 15% per entry port, or at least 15,000 per 100,000 gallons per entry port.

PROJECT SUMMARY: The West Jackson County Utility District (WJCUD) is the agency responsible for the collection of wastewater in the St. Martin community of Jackson County. Over the past ten years, the District has coordinated various federal, state, and local projects to bring a collection system to homes that relied on individual onsite wastewater collection systems where the soil has been found poorly suited and systems failing. The results of failing wastewater collection and treatment in this area are well documented by the U.S. Environmental Protection Agency (EPA) and the Mississippi Department of Environmental Quality (MDEQ), and are particularly evident in their efforts to solve this problem. The efforts to resolve the problem were paramount in establishing the WJCUD and the Jackson County Board of Supervisors Order that all wastewater in the area to be collected by the WJCUD – which was supported unanimously in a Board resolution on July 12, 1993. This resolution was in response to Administrative Orders of the MDEQ to achieve proper collection and treatment of wastewater. This proposed rehabilitation project addresses the deterioration of the early collection systems that are now reaching 40 to 50 years old. This collection system is what remains of the overall collection and treatment systems when the treatment plants were replaced by the new plants now operated by the Jackson County Utility Authority (JCUA).

All wastewater collected by the old collection system eventually arrives at the JCUA West Jackson County Treatment Plant via a modern transportation system. Using the flow monitoring equipment on the modern system, we are able to observe fluctuations in flow that directly parallel significant rain or tide events. This, along with visual reports, substantiates our concern that the system is at the end of its life cycle. Replacing the old collection system and incorporating any design improvements can eliminate infiltration and wastewater escape in this coastal environment. Thus, the overall goal of this project is to eliminate the escape of untreated wastewater and infiltration of rainwater in the collection system and, ultimately, the treatment system. This infrastructure upgrade will complement past efforts to improve the coastal environment and mitigate for damage to aquatic resources by further reducing the strain of wastewater contribution by replacing the aging collection pipe system and rehabilitation and upgrade of mature wet wells.

During a significant rain event (2 inches or more per hour) the SCADA indicates as much as 100,000 gallons of infiltration per entry port. So with five entry ports, there

is about a 500,000 gallon per day increase on system demand that is used to treat rainwater. While the inverse cannot be assumed to determine the loss, there is typically some loss in any system with infiltration. Likewise, the treatment capacity is being consumed and could be re-allocated to treat sewage that is now being treated by septic systems or other less desirable methods. Also, there is potentially treatment capacity available without growing resources.

PARTNERS/COLLABORATORS: Jackson County and the Mississippi Department of Environmental Quality.

BUDGET AND SPENDING ESTIMATE BY YEAR:

Table 1: CIAP Projected Budget

| Budget Category | 2010 | 2011 | 2012 | 2013 | Total |
|-----------------------------------|------|-------------|------|------|--------------------|
| Total Allocation (FY 2010) | | \$1,200,000 | | | \$1,200,000 |
| Total Budget Amount | | | | | \$1,200,000 |

Total estimated expense by calendar year:

2011 \$1,200,000

6. AUTHORIZED USES:

Table 2: Primary Authorized Use

| Mark one | Authorized Uses of CIAP Funds (as specified by law) |
|----------|--|
| | 1. Project and activities for the conservation, protection, or restoration of coastal areas, including wetland |
| X | 2. Mitigation of damage to fish, wildlife, or natural resources. |
| | 3. Planning assistance and administrative costs of complying with CIAP (for DMR, Harrison, Hancock and Jackson County Administrative Projects only). |
| | 4. Implementation of a federally approved marine, coastal, or comprehensive conservation management plan. |
| | 5. Mitigation of the impact of OCS activities through funding of onshore infrastructure projects and public service needs. |

HOW THIS PROJECT IS CONSISTENT WITH ONE OR MORE OF CIAP’s AUTHORIZED USES? This project is consistent with CIAP Authorized Use 2 because it will result in minimizing and/or eliminating damage to coastal natural resources by identifying and repairing systems that cause waste water inflow and infiltration problems in the St. Martin community. This project will assist the City and County in mitigating impacts to water quality in the Mississippi Sound by providing for the proper long-term collection and treatment of sanitary sewer, and by eliminating the discharge of untreated sewer to surface water.

The effects of a wastewater collection system that has reached the end of its life cycle are easily recognized within the coastal environment. The most evident is the system overload from a rain or tide event. When this occurs, the infiltration in the system forces the system to capacity, and beyond, with storm or seawater for treatment. The

result is an ineffective use of resources and perhaps a denial of treatment resources where needed. One may further conclude that such a well-documented infiltration would suggest that wastewater escape is also present. The recent success in providing wastewater collection and treatment to unsewered areas can sometimes mask the needs of the infrastructure project to repair the dated system and further protect the coastal environment from wastewater.

7. WILL CIAP FUNDS BE USED FOR COST SHARING OR MATCHING PURPOSES FOR ANOTHER FEDERAL PROGRAM? ___ YES__X__ NO.