



Coastal Protection and
Restoration Authority of Louisiana

**State of Louisiana
Coastal Protection and Restoration Authority
Operations Division**

2014 Annual Inspection Report

for

NAOMI OUTFALL MANAGEMENT

State Project Number BA-03c
Priority Project List 5

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Jefferson Parish

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I. Introduction

The Naomi Outfall Management Project (BA-03c) is located on the west bank of the Mississippi River, south of Lafitte, Louisiana. Although the project features are located entirely in Jefferson Parish, the project outfall area encompasses 27,135 acres in Jefferson and Plaquemines Parishes. More specifically, project features are located on two streams – Goose Bayou Canal and Bayou Dupont – which connect the Barataria Bay Waterway to the Pen (Appendix A).

II. Project Description and History

The Naomi Siphon went into operation in February, 1993 and has delivered an average of 997 cfs of fresh river water (when operating) into the marshes and streams east of the Pen. Much of this fresh water eventually exits the project area via Goose Bayou Canal and Bayou Dupont Canal which connect the Pen with the Barataria Waterway. During periods of high tide, reverse flow occurs and high-salinity water from the Barataria Waterway enters the Pen via the two subject canals. So, the two canals provide a natural avenue for loss of fresh river water from the project area and intrusion of high-salinity water into the project area.

The present project, which consists of fixed crest weirs with boat bays, restricts the hydrologic connections between the Pen and the Barataria Waterway. This restriction holds diverted water and nutrients in the project area, while restricting the high salinity waters from the Barataria Waterway. The weirs moderate or dampen the interchange of water into and out of the Pen through Goose Bayou Canal and Bayou Dupont Canal. Thus, retention of sediment-rich fresh siphon water in the outfall area is maximized, and intrusion of high-salinity water is minimized.

Project construction began on June 1, 2002, and was completed on July 15, 2002. Project life is estimated to be 20 years. Annual project inspections are planned.

On June 20, 2006, a contract was awarded to place two warning buoys in places where warning signs were damaged and to replace 5 navigation lights. This project was completed on October 4, 2006.

The principal project features include:

1. One stone weir at **Goose Bayou Canal**
 - a. Total length of weir = 458 ft.
 - b. Bottom width of boat bay = 30 ft.
 - c. Boat bay bottom elevation = -5 ft. (NAVD 88)
 - d. Weir crest = +1 ft. (NAVD 88)
 - e. Rock placed directly on geotextile
 - f. Rock rip rap = 3,967 tons

- g. Geotextile = 2,851 yards
- h. Rock conforms to Rock Type 1 of Material Specification 523 with a gradation of:

Percent Lighter Than	Rock Unit Weight
100	700 lbs
50-100	300 lbs
15-50	150 lbs
0-15	45 lbs

- i. Four (4) - 4-piling clusters with navigation aid lights and warning signs
 - j. Six (6) single pilings with warning signs
 - k. Thirty-two buoys and associated stainless steel cable
2. One stone weir at **Bayou Dupont Canal**
- a. Total length of weir = 302 ft.
 - b. Bottom width of boat bay = 30 ft.
 - c. Boat bay bottom elevation = -5 ft. (NAVD 88)
 - d. Weir crest +1 ft. (NAVD 88)
 - e. Rock placed directly on geotextile
 - f. Rock rip rap = 8,505 tons
 - g. Geotextile = 3,374 yards
 - h. Rock conforms to Rock Type 1 of Material Specification 523 with a gradation of:

Percent Lighter Than	Rock Unit Weight
100	700 lbs
50 -100	300 lbs
15-50	150 lbs
0-15	45 lbs

- i. Four (4) 4-pile clusters with day mark navigation signs and three (3) of the piling clusters have navigation aid lights.
- j. Three (3) single pilings with warning signs (reduced from five (5) in 2006 repair project)
- k. Twenty-two warning buoys with stainless steel cable
- l. Two (2) marker buoys with warning markings and internal radar reflectors (added during 2006 repair project in place of two (2) single pilings with warning signs).

III. Inspection Purpose and Procedures

The purpose of the annual inspection of the Naomi Outfall Management Project (BA-03c) is to evaluate the constructed project features to identify any deficiencies and prepare a report detailing the condition of project features and recommended corrective actions needed. Should it be determined that corrective actions are needed, CPRA shall provide in the report a detailed cost estimate for engineering, design, supervision, inspection, and construction contingencies, and an assessment of the urgency of such repairs (O&M Plan December 24, 2002). The annual inspection report also contains a summary of maintenance projects and an estimated projected budget for the upcoming three (3) years for operation, maintenance and rehabilitation. The three (3) year projected operation and maintenance budget is shown in Appendix C. A summary of past operation and maintenance projects completed since completion of the Naomi Outfall Management Project are outlined in Section II.

An inspection of the Naomi Outfall Management Project (BA-03c) was held on July 2, 2014, by Barry Richard and Luke Prendergast of CPRA, along with Quin Kinler and Doug Baker of NRCS. Photographs of that inspection are included in Appendix B of this report.

IV. Inspection Results

BAYOU DUPONT CANAL WEIR

Rock Riprap

The structure was altered to facilitate construction of the South Shore of the Pen (BA-41) Project, and remains in this temporary condition to allow access for the Long Distance Sediment Pipeline (BA-43 EB) Project and Bayou Dupont Marsh and Ridge Creation (BA-48) Project, both of which are currently in construction. Rock has been temporarily removed from the weir and stored within the footprint of the structure (Photo #1). The structure will be replaced as designed at a later date.

Pilings

Two pile clusters were removed to enable construction of the BA-41, BA-43, and BA-48 projects. There was no noticeable damage to the remaining pilings.

Warning Signs and Day Board Navigation Signs

All signs are in good condition.

Navigation Aid Lights

Two of the navigation aids have been removed to facilitate construction of the BA-41, BA-43, and BA-48 projects. These will be replaced at a later date. There is a contract in place to handle the maintenance and repair of all navigation lights.

Regulatory Marker Buoys

Buoys have been temporarily relocated to enhance access for the BA-41, BA-43, and BA-48 projects.

GOOSE BAYOU CANAL WEIR

Rock Riprap

The structure has settled an average of 2 feet since construction, resulting in most of the rock being submerged below the water surface.

Pilings

All pilings appeared free of damage and in good condition. Some of the reflective tape was falling off or missing (Photo #2).

Warning Signs and Day Board Navigation Signs

Some of the signs were sun-faded, but were still legible (Photo #2). The orange barrier float buoys on the north side appeared to have been vandalized and were temporarily secured to a pile cluster (Photo #3). A buoy cable on the south side had broken loose from the pile cluster mooring eye, and was secured only by the shore anchor (Photo #4).

Navigation Aid Lights

There was no damage to any navigation lights. There is a contract in place to handle the maintenance and repair of all navigation lights.

V. Conclusions

Overall, the Naomi Outfall Management project is functioning properly and is in fair condition. Vandalism to the navigational aids continues to be a concern. The Bayou Dupont structure was altered to facilitate construction access for the now-completed BA-41 project, and remains in this altered condition to allow access for the nearby BA-43 and BA-48 projects which are currently under construction.

VI. Recommendations

Repairs to the Goose Bayou navigation aids are planned in conjunction with the upcoming Barataria Bay Waterway West Shoreline Protection (BA-23) 2014 Maintenance Project.

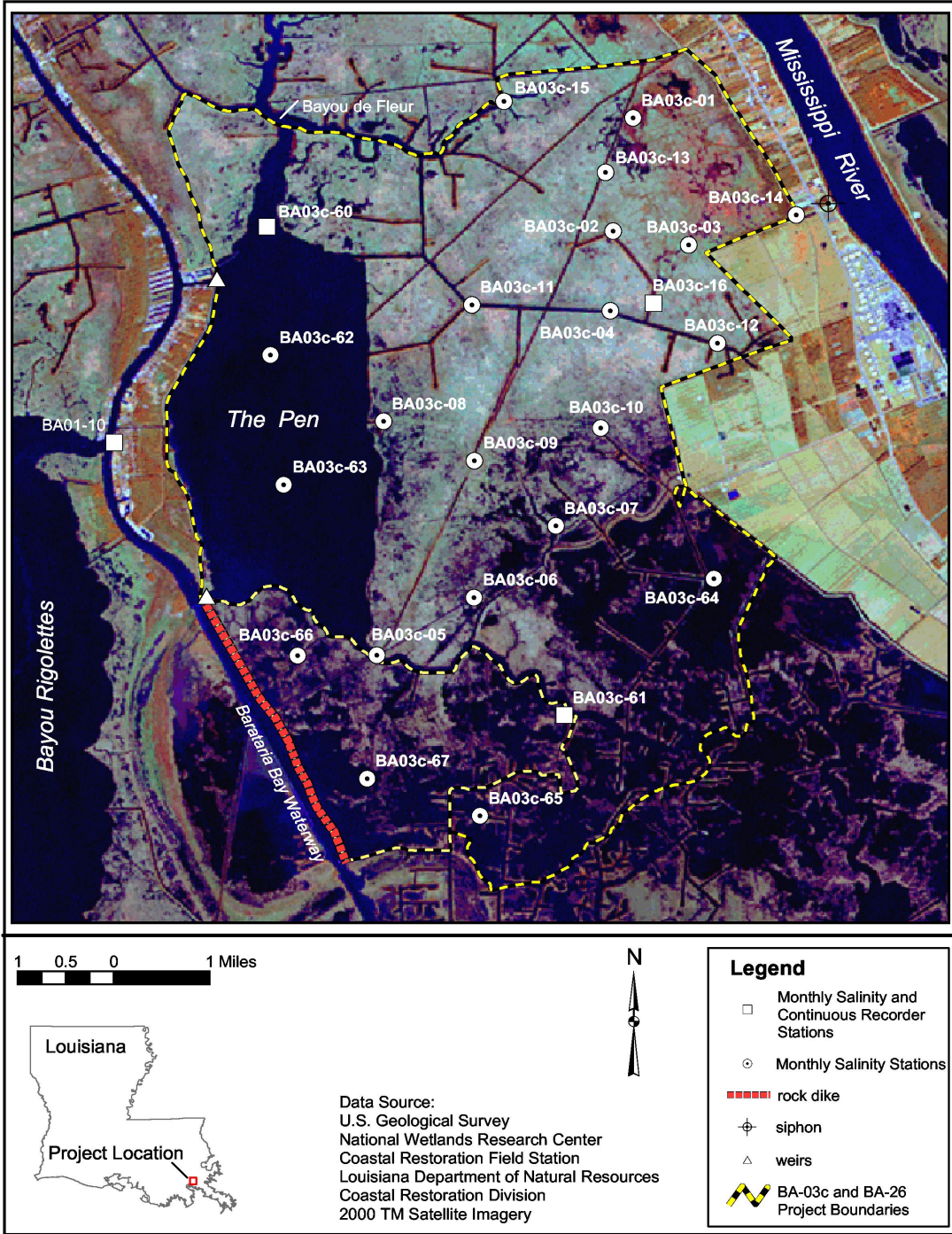
Immediate Repairs

- Itemized repair needs are listed in Section IV.

Programmed Maintenance

- Navigation light maintenance has been added to a state-wide contract.

Appendix A
Project Features Map



Appendix B
Photographs



Photo #1 – Bayou Dupont Canal Weir



Photo #2 – Goose Bayou Pile Cluster



Photo #3 – Buoy Damage at Goose Bayou (North Side)



Photo #4 – Buoy Damage at Goose Bayou (South Side)

Appendix C

Three Year Budget Projection

Annual Inspection Report
 NAOMI OUTFALL MANAGEMENT
 State Project No. BA-013c

Naomi Outfall Management Project (BA-03c)																								
Federal Sponsor: NRCS																								
Construction Completed : 8/2002																								
PPL 5																								
Current Approved O&M Budget June 2009	Year 0 FY03	Year - 1 FY04	Year -2 FY05	Year -3 FY06	Year -4 FY07	Year -5 FY08	Year -6 FY09	Year -7 FY10	Year -8 FY11	Year -9 FY12	Year -10 FY13	Year -11 FY14	Year -12 FY15	Year -13 FY16	Year -14 FY17	Year -15 FY18	Year -16 FY19	Year - 17 FY20	Year -18 FY21	Year -19 FY22	Project Life Budget	Currently Funded		
State O&M	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$488,980	\$488,980		
Corps Admin	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Federal S&A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Total																					\$488,980	\$488,980		
Projected O&M Expenditures																								
Maintenance Inspection										\$3,429	\$3,518	\$3,610	\$3,703	\$3,800	\$3,899	\$4,000	\$4,104	\$4,211	\$4,320	\$4,432	\$32,469	\$11,113		
General Maintenance																					\$0	\$0		
Surveys																					\$0	\$0		
Sign Replacement										\$7,000							\$7,000				\$7,000	\$0		
Federal S&A													\$1,749								\$1,749	\$1,749		
Maintenance/Rehabilitation																					\$0	\$0		
E&D													\$7,454								\$7,454	\$7,454		
Construction													\$186,341								\$186,341	\$186,341		
Construction Oversight													\$37,268								\$37,268	\$37,268		
Total										\$10,429	\$3,518	\$3,610	\$236,515	\$3,800	\$3,899	\$4,000	\$11,104	\$4,211	\$4,320	\$4,432	\$272,281	\$243,925		
O&M Expenditures from COE Report				\$247,069	per Lana Report																		Current O&M Budget less COE Admin	\$488,980
State O&M Expenditures not submitted for in-kind credit				\$0																			Remaining Available O&M Budget	\$241,911
Federal Sponsor MIPRs (if applicable)				\$0																			Incremental Funding Request Amount FY15-FY17	\$30,369
Total Estimated O&M Expenditures (as of June 2014)				\$247,069																			Project Life Budget Request Amount	\$30,369

Appendix D
Field Inspection Form

Annual Inspection Report
 NAOMI OUTFALL MANAGEMENT
 State Project No. BA-023c

FIELD INSPECTION CHECK SHEET							
Project No. / Name:	Naomi Outfall Management			Date of Inspection:	7/2/2014	Time:	11:30 AM
Structure No.	Goose Bayou Canal			Inspector(s):	Richard, Prendergast, Kinler, Baker		
Structure Description:	Stone Weir			Water Level:	Inside: N/A	Outside:	0.90'
Type of Inspection:	Annual			Weather Conditions:	Mostly sunny, light wind		
Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks		
Rock Riprap	Good	None	N/A		Most of rock structure was below water surface elevation.		
Creosote Piling	Good	None	None	#2, 3, 4			
Warning Signs and Day Board	Good	None	None	#2	Weathering of lettering, some reflective tape missing. Continue to observe.		
Navigation Signs							
Navigation Aid Lights	Good	None	None	#2			
Warning Buoys	Poor	See remarks	None	#3, 4	Temporary repair attempt unsuccessful. Permanent repair needed.		
Vandalism	N/A	See remarks	N/A	#3	North-side buoy cables exhibit signs of sabotage/vandalism; Cables have been anchored to unknown submerged heavy object. Retrieval attempt using 200 HP outboard-motor vessel failed.		