



**State of Louisiana
Department of Natural Resources
Coastal Restoration Division**

2006 Annual Inspection Report

Hopedale Hydrologic Restoration

State Project Number PO-24
Priority Project List 8

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St. Bernard Parish

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I. Introduction

The 3,805 acre Hopedale Hydrologic Restoration Project (PO-24) is located southeast of Yscloskey, in St. Bernard Parish, Louisiana, and is bordered by LA Hwy 46 on the west, the Mississippi River Gulf Outlet (MRGO) spoil deposition area to the north, and Louisiana Highway 624 and Bayou La Loutre to the south and east (Appendix A). The area is predominately brackish marsh (3,086 acres) and open water (719 acres) with a small amount of saline marsh, bottomland hardwoods and bottomland scrub/scrub within the MRGO spoil deposition area. The site was inspected on October 26, 2005 by representatives of LDNR and the National Marine Fisheries Service (NMFS).

II. Project Description and History

Wetlands in the Hopedale area have been adversely impacted because of altered hydrology and partial impoundment caused by the construction of LA Hwy. 624 and the MRGO. During construction of LA Hwy. 624, four sets of non-gated culverts were installed under the highway. These culverts connect Bayou La Loutre with wetlands north of the highway and south of the Bayou La Loutre Ridge, and allow water to enter and exit the general project area.

As part of the construction of the MRGO, a spoil containment dike (back dike) was constructed to allow placement of material from the MRGO dredging operation. The dike almost completely impounded the marsh within the Hopedale project area, with the exception of the back dike borrow canal which directly connected to Bayou La Loutre. A plug and water control structure were originally placed in the borrow canal approximately 400 ft from its intersection with Bayou La Loutre. This structure, which consisted of three iron culverts with flap gates, provided drainage from the area, while limiting tidal increases in minimal storm events. By the mid 1990's the plug had settled and the structure had deteriorated and become inoperable. The present project replaced the original structure with a water control structure fitted with three 82" diameter combination gates (flap/slucice gates) and two, 24"x 84" fisheries access slots (fish gates). The project was completed in December, 2004.

III. Inspection Purpose and Procedures

The purpose of the annual inspection of the Hopedale Hydrologic Restoration Project (PO-24) 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, LDNR 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 April 21, 2005). 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 Caernarvon Outfall Management Project can be found in Section II.

An inspection of the Hopedale Hydrologic Restoration Project (PO-24) was held on October 26, 2005 by representatives of LDNR George Boddie, Barry Richard, Tom Bernard, Melissa Kaintz, Greg Grandy, and Rick Hartman representing National Marine Fisheries Service (NMFS). The flow through the project structure was generated from a 0.8 ft. head with the outside gage reading of +0.3 ft. NAVD-88 and an inside gage reading of -0.5 ft. NAVD-88. Photographs of that inspection are included in Appendix B of this report.

IV. Inspection Results

Water Control Structure

At the time of the inspection, there was medium flow through the two structure fish gates into the interior of the project. The flow was generated from a 0.8 ft. head with the outside gage reading of +0.3 ft. NAVD-88 and an inside gage reading of -0.5 ft. NAVD-88. The inspection team opened the two fish gates at the time of the inspection, as requested by the St. Bernard Parish Officials and NMFS.

There was only slight damage to the main Hopedale Structure. The transparent vinyl gate stem protective covers were missing on all 5 gates, and some of the chain link security fencing on the structure had been dislodged and was lying on the structure floor (Photo #1). The structure; however, is operational in its present condition. The embankment adjacent to the structure was substantially eroded, and some of the upper bank rock protection around the structure was displaced by the storm surge. It is estimated that 75 cubic yards of earthen material was eroded and 60 tons of class "B" stone was displaced.

Prior to Hurricane Katrina, the two fish gates were closed by St. Bernard Parish in accordance with the operations plan. The mechanical actuator and the hand cranks originally furnished to St. Bernard Parish were lost in the storm and will be replaced.

Electronic Alarm Devices

Both devices, inside and outside of the project area, are damaged beyond repair. The outside station was missing except for the solar panel which showed signs of wind damage. The inside station was flooded and was missing its solar panel. Arrangements are being made to replace the devices with similar and more up to date equipment.

V. Conclusions

The Hopedale Hydrologic Project (PO-24) is performing and being operated in accordance with the project's design drawings and permit. The structure remains open,

but is fully operational and can be closed in the event of a pending storm. The minor damage associated with Hurricanes Katrina and Rita will be repaired by June, 2007, and the funding source for these repairs will be FEMA.

VI. Recommendations

Follow up on Hurricane damage repairs.

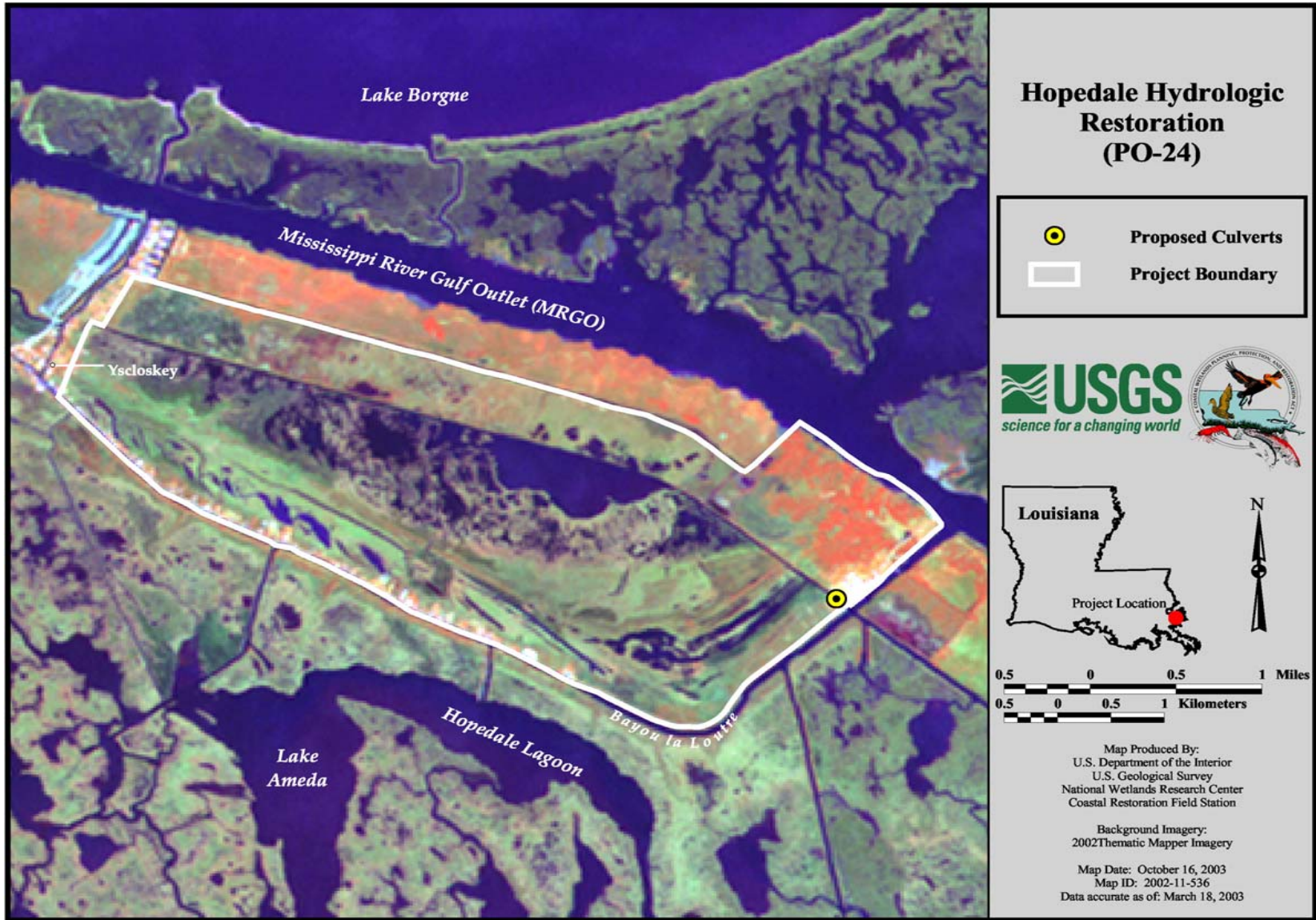
Immediate Repairs

- Repair all the damage mentioned in Section IV.

Programmed Maintenance

- Continue to check gates on structure for operability.
- Service Alarm Devices as necessary.

Appendix A
Project Features Map



Appendix B

Photographs



Photo #1 – Water Control Structure. Standing on the East bank looking south. Note the damage to the railing, fencing, and the debris still in the fencing.

Appendix C
Three Year Budget Projection

Annual Inspection Report
Hopedale Hydrologic Restoration
State Project No. PO-24

Three-Year Operations & Maintenance Budgets 07/01/2006 - 06/30/2009				
<u>Project Manager</u>	<u>O & M Manager</u>	<u>Federal Sponsor</u>	<u>Prepared By</u>	
<i>Barry Richard</i>	<i>Barry Richard</i>	NRCS	<i>Barry Richard</i>	
	2006/2007	2007/2008	2008/2009	
Maintenance Inspection	\$3,257.00	\$3,341.00	\$3,428.00	
Structure Operation	\$3,000.00	\$3,000.00	\$3,000.00	
Administration	\$-	\$-	\$-	
Maintenance/Rehabilitation				
06/07 Description:				
<i>E&D</i>	\$-			
<i>Construction</i>	\$-			
<i>Construction Oversight</i>	\$-			
<i>Sub Total - Maint. And Rehab.</i>	\$-			
07/08 Description:				
<i>E&D</i>		\$-		
<i>Construction</i>		\$-		
<i>Construction Oversight</i>		\$-		
<i>Sub Total - Maint. And Rehab.</i>		\$-		
08/09 Description:				
<i>E&D</i>				\$-
<i>Construction</i>				\$-
<i>Construction Oversight</i>				\$-
<i>Sub Total - Maint. And Rehab.</i>				\$-
	2006/2007	2007/2008	2008/2009	
Annual O&M Budgets	\$6,257.00	\$6,341.00	\$6,428.00	
O & M Budget (3 yr Total)			\$19,026.00	
Existing O & M Budget			\$432,169.58	
Remaining O & M Budget (Projected)			\$413,143.58	

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OPERATION AND MAINTENANCE BUDGET WORKSHEET 2006/2007
 Hopedale Hydrologic Restoration / PO-24 / PPL 8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,257.00	\$3,257.00
General Structure Maintenance	LUMP	0	\$0.00	\$0.00
Engineering and Design	LUMP	0	\$0.00	\$0.00
Operations Contract	LUMP	1	\$3,000.00	\$3,000.00
Construction Oversight	LUMP	0	\$0.00	\$0.00

ADMINISTRATION

LDNR / CRD Admin.	LUMP	0	\$0.00	\$0.00
FEDERAL SPONSER Admin.	LUMP	0	\$0.00	\$0.00
SURVEY Admin.	LUMP	0	\$0.00	\$0.00
OTHER				\$0.00
TOTAL ADMINISTRATION COSTS:				\$0.00

MAINTENANCE / CONSTRUCTION

SURVEY

SURVEY DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Secondary Monument	EACH	0	\$0.00	\$0.00
	Staff Gauge / Recorders	EACH	0	\$0.00	\$0.00
	Marsh Elevation / Topography	LUMP	0	\$0.00	\$0.00
	TBM Installation	EACH	0	\$0.00	\$0.00
	OTHER	EACH	0	\$0.00	\$0.00
TOTAL SURVEY COSTS:					\$0.00

GEOTECHNICAL

GEOTECH DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Borings	EACH	0	\$0.00	\$0.00
	OTHER				\$0.00
TOTAL GEOTECHNICAL COSTS:					\$0.00

CONSTRUCTION

CONSTRUCTION DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL	
	Rip Rap	LIN FT	TON / FT	TONS	UNIT PRICE	ESTIMATED TOTAL
		0	0.0	0	\$0.00	\$0.00
		0	0.0	0	\$0.00	\$0.00
		0	0.0	0	\$0.00	\$0.00
	Filter Cloth / Geogrid Fabric	SQ YD	0	\$0.00	\$0.00	
	Navigation Aid	EACH	0	\$0.00	\$0.00	
	Signage	EACH	0	\$0.00	\$0.00	
	General Excavation / Fill	CU YD	0	\$0.00	\$0.00	
	Dredging	CU YD	0	\$0.00	\$0.00	
	Sheet Piles (Lin Ft or Sq Yds)		0	\$0.00	\$0.00	
	Timber Piles (each or lump sum)		0	\$0.00	\$0.00	
	Timber Members (each or lump sum)		0	\$0.00	\$0.00	
	Hardware	LUMP	0	\$0.00	\$0.00	
	Materials	LUMP	0	\$0.00	\$0.00	
	Mob / Demob	LUMP	0	\$0.00	\$0.00	
	Contingency	LUMP	0	\$0.00	\$0.00	
	General Structure Maintenance	LUMP	0	\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
TOTAL CONSTRUCTION COSTS:					\$0.00	

TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$6,257.00

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OPERATION AND MAINTENANCE BUDGET WORKSHEET 2007/2008
Hopedale Hydrologic Restoration / PO-24 / PPL 8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,341.00	\$3,341.00
General Structure Maintenance	LUMP	0	\$0.00	\$0.00
Engineering and Design	LUMP	0	\$0.00	\$0.00
Operations Contract	LUMP	1	\$3,000.00	\$3,000.00
Construction Oversight	LUMP	0	\$0.00	\$0.00

ADMINISTRATION

LDNR / CRD Admin.	LUMP	0	\$0.00	\$0.00
FEDERAL SPONSER Admin.	LUMP	0	\$0.00	\$0.00
SURVEY Admin.	LUMP	0	\$0.00	\$0.00
OTHER				\$0.00
TOTAL ADMINISTRATION COSTS:				\$0.00

MAINTENANCE / CONSTRUCTION

SURVEY

SURVEY DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Secondary Monument	EACH	0	\$0.00	\$0.00
	Staff Gauge / Recorders	EACH	0	\$0.00	\$0.00
	Marsh Elevation / Topography	LUMP	0	\$0.00	\$0.00
	TBM Installation	EACH	0	\$0.00	\$0.00
	OTHER	EACH	0	\$0.00	\$0.00
TOTAL SURVEY COSTS:					\$0.00

GEOTECHNICAL

GEOTECH DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Borings	EACH	0	\$0.00	\$0.00
	OTHER				\$0.00
TOTAL GEOTECHNICAL COSTS:					\$0.00

CONSTRUCTION

CONSTRUCTION DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Rip Rap	LIN FT	TON / FT	TONS	UNIT PRICE
		0	0.0	0	\$0.00
		0	0.0	0	\$0.00
		0	0.0	0	\$0.00
	Filter Cloth / Geogrid Fabric	SQ YD	0	\$0.00	\$0.00
	Navigation Aid	EACH	0	\$0.00	\$0.00
	Signage	EACH	0	\$0.00	\$0.00
	General Excavation / Fill	CU YD	0	\$0.00	\$0.00
	Dredging	CU YD	0	\$0.00	\$0.00
	Sheet Piles (Lin Ft or Sq Yds)		0	\$0.00	\$0.00
	Timber Piles (each or lump sum)		0	\$0.00	\$0.00
	Timber Members (each or lump sum)		0	\$0.00	\$0.00
	Hardware	LUMP	0	\$0.00	\$0.00
	Materials	LUMP	0	\$0.00	\$0.00
	Mob / Demob	LUMP	0	\$0.00	\$0.00
	Contingency	LUMP	0	\$0.00	\$0.00
	General Structure Maintenance	LUMP	0	\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
TOTAL CONSTRUCTION COSTS:					\$0.00

TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$6,341.00

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 Hopedale Hydrologic Restoration
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OPERATION AND MAINTENANCE BUDGET WORKSHEET 2008/2009
 Hopedale Hydrologic Restoration / PO-24 / PPL 8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,428.00	\$3,428.00
General Structure Maintenance	LUMP	0	\$0.00	\$0.00
Engineering and Design	LUMP	0	\$0.00	\$0.00
Operations Contract	LUMP	1	\$3,000.00	\$3,000.00
Construction Oversight	LUMP	0	\$0.00	\$0.00

ADMINISTRATION

LDNR / CRD Admin.	LUMP	0	\$0.00	\$0.00
FEDERAL SPONSER Admin.	LUMP	0	\$0.00	\$0.00
SURVEY Admin.	LUMP	0	\$0.00	\$0.00
OTHER				\$0.00
TOTAL ADMINISTRATION COSTS:				\$0.00

MAINTENANCE / CONSTRUCTION

SURVEY

SURVEY DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Secondary Monument	EACH	0	\$0.00	\$0.00
	Staff Gauge / Recorders	EACH	0	\$0.00	\$0.00
	Marsh Elevation / Topography	LUMP	0	\$0.00	\$0.00
	TBM Installation	EACH	0	\$0.00	\$0.00
	OTHER	EACH	0	\$0.00	\$0.00
TOTAL SURVEY COSTS:					\$0.00

GEOTECHNICAL

GEOTECH DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Borings	EACH	0	\$0.00	\$0.00
	OTHER				\$0.00
TOTAL GEOTECHNICAL COSTS:					\$0.00

CONSTRUCTION

CONSTRUCTION DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Rip Rap	LIN FT	0	\$0.00	\$0.00
		TON / FT	0.0	\$0.00	\$0.00
		TONS	0	\$0.00	\$0.00
			0	\$0.00	\$0.00
	Filter Cloth / Geogrid Fabric	SQ YD	0	\$0.00	\$0.00
	Navagation Aid	EACH	0	\$0.00	\$0.00
	Signage	EACH	0	\$0.00	\$0.00
	General Excavation / Fill	CU YD	0	\$0.00	\$0.00
	Dredging	CU YD	0	\$0.00	\$0.00
	Sheet Piles (Lin Ft or Sq Yds)		0	\$0.00	\$0.00
	Timber Piles (each or lump sum)		0	\$0.00	\$0.00
	Timber Members (each or lump sum)		0	\$0.00	\$0.00
	Hardware	LUMP	0	\$0.00	\$0.00
	Materials	LUMP	0	\$0.00	\$0.00
	Mob / Demob	LUMP	0	\$0.00	\$0.00
	Contingency	LUMP	0	\$0.00	\$0.00
	General Structure Maintenance	LUMP	0	\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
TOTAL CONSTRUCTION COSTS:					\$0.00

TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$6,428.00

Appendix D
Field Inspection Form

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: Hopedale Hydrologic Restoration Project (PO-24) Date of Inspection: 10/26/2005 Time: 8:30 am

Structure No. _____ Inspector(s): Richard, Boddie, Bernard, Kaintz, Grandy, Hartman

Structure Description: _____ Water Level Inside: -0.5 ft NAVD Outside: +0.3 ft NAVD

Type of Inspection: Post Storm Weather Conditions: Cloudy Skies, Windy

Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Swing Gates 84" D	Good	None	None		Gate Screw Coverings which indicate gate height are missing.
Fish Gates 24" x 84"	Good	None	None		No change due to Hurricanes.
Handrails Grating Hardware etc.	Poor	Extensive	None	1	Some fencing collapsed or damaged. Some handrails bent or damaged.
Galv. Pile Caps	Good	None	None		No change due to Hurricanes.
Signage /Supports	Good	None	None		No change due to Hurricanes.
Riprap	Good	None	None		No change due to Hurricanes.
Silt/Fill	Good	None	None		No change due to Hurricanes.