



## **Coastal Protection and Restoration Authority of Louisiana**

### **Office of Coastal Protection and Restoration**

# **2009 Annual Inspection Report**

## **Hopedale Hydrologic Restoration**

State Project Number PO-24  
Priority Project List 8

July 1, 2009  
St. Bernard Parish

Prepared by:

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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/shrub within the MRGO spoil deposition area. The site was inspected on March 10, 2008 by representatives of OCPR 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.

### **Past O&M Events**

In 2005 the Hopedale structure suffered some minor damage due to Hurricane Katrina. A FEMA claim for this damage was submitted and approximately \$49,000 were obligated for the repairs. In 2007/2008 the repairs were made as follows:

- Repair and replace all damaged fence panels.
- Replaced missing gate stem covers.
- Repaired damaged railing.
- Placed riprap into eroded areas.
- Replaced missing mechanical gate operator.

- Added support beam under walkway.

### **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, OCPR 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 project can be found in Section II.

An inspection of the Hopedale Hydrologic Restoration Project (PO-24) was held on October 1, 2008 by Barry Richard of OCPR. This inspection was prompted by the coastal Louisiana landfall of Hurricanes Gustav and Ike. The flow through the project structure was generated from an approximate 1.0 ft. head. Photographs of that inspection are included in Appendix B of this report.

### **IV. Inspection Results**

#### **Water Control Structure**

The fish gates were opened at the time of the inspection in accordance with the Operation and Maintenance Plan. The flow through the project structure was generated from an approximated 1.0 ft. of head. The damage to the structure was minimal and consisted of two missing vinyl gate stem covers.

The operations of the structure are currently performed by St. Bernard Parish under a three year contract. They declined to operate the structure according to the contract during the 2008 hurricane season as Gustav was approaching in the Gulf of Mexico. It is recommended that the contract be terminated and a new one be let out to perform operations and preventative maintenance. The annually allotted \$8000 will be used to pay the new operations contract.

#### **Electronic Alarm Devices**

Both devices were damaged beyond repair by the 2008 Hurricanes. Replacement is on hold pending decision on operations procedures and necessity.

## **V. Conclusions**

The Hopedale Hydrologic Restoration Project (PO-24) is performing as designed. The structure remains open, but is fully operational and can be closed in the event of a pending storm. The operations of the structure are the responsibility of St. Bernard Parish. However, upon notification of the need to close the structure prior to hurricane landfall they responded that they were too busy to perform the duties of the contract. The need for preventative maintenance and more active participation in operations is evident.

## **VI. Recommendations**

Perform preventative maintenance on a regular basis under a new operations contract.

### **Immediate Repairs**

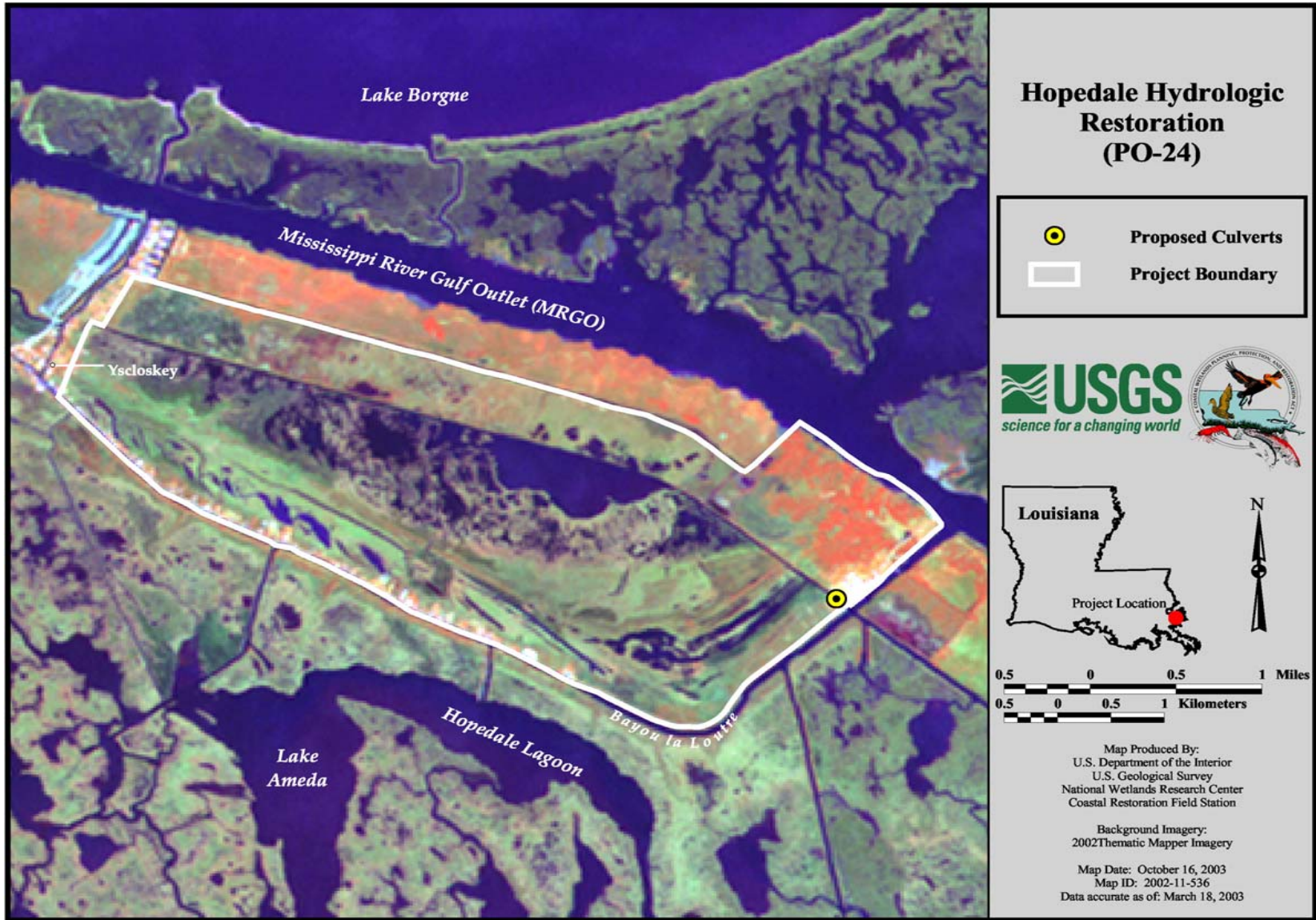
- Replace two vinyl gate stem covers.

### **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.**

## **Appendix C**

### **Three Year Budget Projection**

Hopedale Hydrologic Restoration / PO-24 / PPL 8  
**Three-Year Operations & Maintenance Budgets 07/01/2009 - 06/30/2012**

Project Manager  
 Barry Richard

O & M Manager  
 Barry Richard

Federal Sponsor  
 NMFS

Prepared By  
 Barry Richard

	2009/2010	2010/2011	2011/2012
<b>Maintenance Inspection</b>	\$3,785.00	\$3,883.00	\$3,984.00
<b>General Maintenance</b>	\$0.00	\$0.00	\$0.00
<b>Structure Operation</b>	\$8,196.00	\$8,409.00	\$8,628.00
<b>Administration</b>	\$4,000.00	\$0.00	\$0.00
<b>Maintenance/Rehabilitation</b>			

09/10 Description: Construction costs are for replacement of gate stem covers.

E&D	\$79.20
Construction	\$500.00
Construction Oversight	\$30.00
Sub Total - Maint. And Rehab.	\$ 609.20

10/11 Description:

E&D	\$0.00
Construction	\$0.00
Construction Oversight	\$0.00
Sub Total - Maint. And Rehab.	\$ -

10/11 Description:

E&D	\$0.00
Construction	\$0.00
Construction Oversight	\$0.00
Sub Total - Maint. And Rehab.	\$ -

	2009/2010	2010/2011	2011/2012
<b>Total O&amp;M Budgets</b>	\$ 16,590.20	\$ 12,292.00	\$ 12,612.00

<b>O &amp; M Budget (3 yr Total)</b>	\$ 41,494.20
<b>Unexpended O &amp; M Budget</b>	\$ 423,734.83
<b>Remaining O &amp; M Budget (Projected)</b>	\$ 382,240.63

**OPERATION AND MAINTENANCE BUDGET WORKSHEET 2009/2010**

Hopedale Hydrologic Restoration / PO-24 / PPL 8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,785.00	\$3,785.00
General Structure Maintenance (Radio Equip.)	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$79.20	\$79.20
Operations	LUMP	1	\$8,196.00	\$8,196.00
Construction Oversight	LUMP	1	\$30.00	\$30.00

**ADMINISTRATION**

LDNR / CRD Admin.	LUMP	1	\$2,000.00	\$2,000.00
FEDERAL SPONSER Admin.	LUMP	1	\$2,000.00	\$2,000.00
SURVEY Admin.	LUMP	1	\$0.00	\$0.00
OTHER				\$0.00
<b>TOTAL ADMINISTRATION COSTS:</b>				<b>\$4,000.00</b>

**MAINTENANCE / CONSTRUCTION**

**SURVEY**

SURVEY DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Secondary Monument	EACH	1	\$0.00	\$0.00
	Staff Gauge / Recorders	EACH	1	\$0.00	\$0.00
	Marsh Elevation / Topography	LUMP	1	\$0.00	\$0.00
	TBM Installation	EACH	1	\$0.00	\$0.00
	OTHER				\$0.00
<b>TOTAL SURVEY COSTS:</b>					<b>\$0.00</b>

**GEOTECHNICAL**

GEOTECH DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Borings	EACH	1	\$0.00	\$0.00
	OTHER				\$0.00
<b>TOTAL GEOTECHNICAL COSTS:</b>					<b>\$0.00</b>

**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	1	\$500.00	\$500.00	
	Materials	LUMP	1	\$0.00	\$0.00	
	Mob / Demob	LUMP	1	\$0.00	\$0.00	
	Contingency	LUMP	1	\$0.00	\$0.00	
	General Structure Maintenance	LUMP	1	\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
	OTHER			\$0.00	\$0.00	
<b>TOTAL CONSTRUCTION COSTS:</b>					<b>\$500.00</b>	

**TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$16,590.20**

**OPERATION AND MAINTENANCE BUDGET WORKSHEET 2010/2011**  
Hopedale Hydrologic Restoration / PO-24 / PPL 8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,883.00	\$3,883.00
General Structure Maintenance (Radio Equip.)	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations	LUMP	1	\$8,409.00	\$8,409.00
Construction Oversight	LUMP	1	\$0.00	\$0.00
<b>ADMINISTRATION</b>				
LDNR / CRD Admin.	LUMP	1	\$0.00	\$0.00
FEDERAL SPONSER Admin.	LUMP	0	\$0.00	\$0.00
SURVEY Admin.	LUMP	0	\$0.00	\$0.00
OTHER				\$0.00
<b>TOTAL ADMINISTRATION COSTS:</b>				<b>\$0.00</b>

**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				\$0.00
<b>TOTAL SURVEY COSTS:</b>					<b>\$0.00</b>

**GEOTECHNICAL**

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

**CONSTRUCTION**

CONSTRUCTION DESCRIPTION:	DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
	Repair of storm damage to valves, fencing, and embankment. Replacement of storm damaged gate actuator.				
	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- Gate Actuator, gate sleeves	LUMP	1	\$0.00	\$0.00
	Materials	LUMP	1	\$0.00	\$0.00
	Mob / Demob	LUMP	1	\$0.00	\$0.00
	Contingency	LUMP	1	\$0.00	\$0.00
	General Structure Maintenance	LUMP	1	\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
	OTHER			\$0.00	\$0.00
<b>TOTAL CONSTRUCTION COSTS:</b>					<b>\$0.00</b>

**TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$12,292.00**

**OPERATION AND MAINTENANCE BUDGET WORKSHEET 2011/2012**  
Hopedale Hydrologic Restoration / PO-24 / PPL 8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	\$3,984.00	\$3,984.00
General Structure Maintenance (Radio Equip.)	LUMP	1	\$0.00	\$0.00
Engineering and Design	LUMP	1	\$0.00	\$0.00
Operations	LUMP	1	\$8,628.00	\$8,628.00
Construction Oversight	LUMP	1	\$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
<b>TOTAL ADMINISTRATION COSTS:</b>				<b>\$0.00</b>

**MAINTENANCE / CONSTRUCTION**

**SURVEY**

SURVEY DESCRIPTION:				
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				\$0.00
<b>TOTAL SURVEY COSTS:</b>				<b>\$0.00</b>

**GEOTECHNICAL**

GEOTECH DESCRIPTION:				
Borings	EACH	0	\$0.00	\$0.00
OTHER				\$0.00
<b>TOTAL GEOTECHNICAL COSTS:</b>				<b>\$0.00</b>

**CONSTRUCTION**

CONSTRUCTION DESCRIPTION:					
Rip Rap	LIN FT	TON / FT	TONS	UNIT PRICE	
	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	\$0.00	\$0.00
Navagation Aid	EACH	0	0	\$0.00	\$0.00
Signage	EACH	0	0	\$0.00	\$0.00
General Excavation / Fill	CU YD	0	0	\$0.00	\$0.00
Dredging	CU YD	0	0	\$0.00	\$0.00
Sheet Piles (Lin Ft or Sq Yds)		0	0	\$0.00	\$0.00
Timber Piles (each or lump sum)		0	0	\$0.00	\$0.00
Timber Members (each or lump sum)		0	0	\$0.00	\$0.00
Hardware	LUMP	1	0	\$0.00	\$0.00
Materials	LUMP	1	0	\$0.00	\$0.00
Mob / Demob	LUMP	1	0	\$0.00	\$0.00
Contingency	LUMP	1	0	\$0.00	\$0.00
General Structure Maintenance	LUMP	1	0	\$0.00	\$0.00
OTHER				\$0.00	\$0.00
OTHER				\$0.00	\$0.00
OTHER				\$0.00	\$0.00
<b>TOTAL CONSTRUCTION COSTS:</b>					<b>\$0.00</b>

**TOTAL OPERATIONS AND MAINTENANCE BUDGET: \$12,612.00**

## **Appendix D**

### **Field Inspection Form**

**MAINTENANCE INSPECTION REPORT CHECK SHEET**

Project No. / Name: **Hopedale Hydrologic Restoration Project (PO-24)**

Date of Inspection: 10/1/2008

Time: 10:30 am

Structure No. \_\_\_\_\_

Inspector(s): Richard

Structure Description: Gated Sheetpile Structure

Water Level Inside: -0.5 ft NAVD Outside: +0.5 ft NAVD

Water levels were estimated, water was below gages

Weater Conditions: Cloudy Skies

Type of Inspection: Post Storm

Item	Condition	Pysical Damage	Corrosion	Photo #	Observations and Remarks
Swing Gates 84" D	Good	None	None		
Fish Gates 24" x 84"	Good	None	None		
Handrails Grating Hardware etc.	Good	None	None	1	Two gate stem covers missing.
Galv. Pile Caps	Good	None	None		
Signage /Supports	Good	None	None		
Riprap	Good	None	None		
Silt/Fill	Good	None	None		

Are there any signs of vandalism? No  
 Conditions of existing levees? Good  
 Noticable breaches? None