



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

**2014 Annual Inspection Report**

for

**Jonathan Davis Wetland Protection**

State Project Number BA-20  
Priority Project List 2

July 7, 2014  
Jefferson Parish

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## **I. Introduction**

The Jonathan Davis Wetland Protection (BA-20) project is located in Jefferson Parish within the Barataria Basin. It encompasses 7,199 acres (2,880 ha) of wetlands, which were classified as intermediate marsh in 1994 (OCPR 1998). The project is bounded on the north by the Paillet Canal, on the east by La. Hwy. 301, on the south by Bayous Perot and Rigolettes, and on the west by the Gulf Intracoastal Waterway (GIWW) (Appendix A).

## **II. Project Description and History**

Overall, 1,393 ac (557 ha) of land within the Jonathan Davis Wetland Protection project area have been converted to open water between 1945 and 1989 (Coastal Environments Inc. 1991). The average rate of change of marsh to non-marsh (including loss to both open water and commercial development) has increased since the 1940s. National Biological Survey (NBS) Geographic Information System (GIS) habitat data from 1956 characterized the majority of the area as fresh marsh. However, the 1978 and 1990 data indicate that the area has become more saline. In both 1978 and 1990, the area was classified as primarily intermediate marsh. Chabreck and Linscombe (1988) also characterize the area as intermediate marsh.

Large scale factors influencing degradation in the Barataria basin include subsidence, lack of sedimentation, and reduced freshwater influx due to the levee system on the Mississippi River and its major distributaries. To compound this problem, there are no major external sources of inorganic sediment into the project area although some sediment does enter via the GIWW. Moreover, storm surges moving through numerous oil field canals within the area have facilitated the export of a large portion of the indigenous inorganic and organic sediments.

Other factors influencing wetland loss within the project area are increased water exchange, saltwater intrusion, tidal scour, and shoreline erosion along Bayous Perot and Rigolettes. Shoreline erosion from 1945 to 1989 caused primarily by wave action along Bayou Perot has been measured at 20 ft/yr (6.1 m/yr). Saltwater intrusion and tidal scour are believed to have been enhanced with the construction of various oil field canals that were dredged in the 1940s when oil companies were not responsible for maintaining a continuous spoil bank along the canals. As a result, the breaches that occurred were not repaired and subsequently exposed the interior marsh to increased tidal flows and salinity during storm surges.

Project features consist of shoreline protection, rock armored plugs, rock weirs, and weirs with boat bays. Construction Unit 1, which consists of project features 12, 13, 14, 15, 16, 17, 19, 20, and 21, was completed in September 1998. Construction Unit 2 was completed in May 2001. It encompassed installing a weir at structure 22, and shoreline protection from structures 20 to 22. Construction Unit 3, which consists of shoreline

protection extending from project feature 12, west to the Gulf Intracoastal Waterway, was completed on July 7, 2003. Construction Unit #4, completed in January 2012, consists of rip-rap and pre-cast concrete shoreline protection extending across the northern edge of Bayou Rigolettes and Bayou Perot, from just east of Structure #12 to Structure #20. Construction of features 1, 2, 3, 6, 8, 9, 10, and 11 in the northern project area has been deferred due to the anticipated positive influence of Davis Pond Diversion, lack of funding, and land rights issues. (Appendix A)

On January 30, 2002, Stone Energy Corporation was issued a Coastal Use Permit to plug and abandon existing wells within the Jonathan Davis Wetland Protection Project. This work was completed on 7/18/02 and consisted of removing and replacing structures 13 & 19 to plug and abandon several existing wells located behind these structures. The cost associated with removing and replacing these structures was incurred entirely by Stone Energy Corporation. However, at the request of NRCS, OCPR was required to provide inspection services for this project. OCPR obtained the services of GSE Associates, Inc. to inspect construction activities and prepare a project completion report and as-built drawings. These services were performed for a total cost of \$9,394.13.

As part of the construction documents prepared by NRCS for this project, Stone Energy Corporation was required to reconstruct structure 13, increasing the boat bay crest from 50' to 100' in width and raising the crest elevation from -5.0' NGVD to -2.5' NGVD.

As part of work for Construction Unit 4, maintenance was performed on structures 14, 15, and 17. Due to the location and activity of a pipeline in the vicinity of Structure 16 no work was performed there. However, due to the location and infilling in front of Structure 16, no work is required.

### **III. Inspection Purpose and Procedures**

The purpose of the annual inspection of the Jonathan Davis Wetland Protection (BA-20) project 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 March 18, 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 project are outlined in Section II.

An inspection of the Jonathan Davis Wetland Protection (BA-20) project was held on July 2, 2014, by Barry Richard and Luke Prendergast of CPRA, along with Quin Kinler

and Doug Baker of NRCS. Photographs taken during the inspection are included in Appendix B of this report.

## **IV. Inspection Results**

### **Construction Unit No. 1**

#### **Structure No. 12 – Rock rip-rap armored plug**

The structure was in good condition; some slight settling was observed. All of the signs and supports were in good condition. No maintenance needs were identified for this location at this time.

#### **Structure No. 13 – Rock rip-rap armored weir w/ boat bay**

Due to the water level and structure settlement the structure was not visible. Signs and supports were generally in good condition. No maintenance will be required at this time.

#### **Structure No. 14 – Rock rip-rap armored plug**

The rock plug exhibited some minor settlement; however, the overall condition was good. There is currently no need for maintenance on this structure.

#### **Structure No. 15 – Rock rip-rap weir w/ boat bay**

All maintenance has been performed on this structure during construction of Construction Unit 4. The boat bay has been filled and everything was in good condition.

#### **Structure No. 16 – Rock rip-rap channel plug**

Structure 16 was inaccessible due to prolific growth of emergent vegetation in front of the structure. It is assumed that this structure has stabilized due to the conditions of the channel and the structure signage. No maintenance work is recommended at this time.

#### **Structure No. 17 – Rock rip-rap channel plug**

The structure was in good condition; no maintenance needs were identified here during the inspection.

#### **Structure No. 19 – Rock rip-rap weir w/ boat bay**

Structure 19 appeared to be in good condition. The tides and settlement prevented us from viewing the entire structure. The warning signs and supports were also in good condition. NRCS and CPRA agreed that this structure will not require maintenance at this time.

Structure No. 20 – Rock rip-rap armored plug

The structure appeared to be in good condition with no signs of settlement of the rock plug. The warning signs and supports were also in good condition. The structure was heavily vegetated at the time of inspection. NRCS and OCPR agree that this structure will not require maintenance.

Structure No. 21 – Rock rip-rap armored plug

The rock armored plug appeared to be in good condition with slight settlement on the east side of the structure. This was hard to fully assess due to the amount of vegetation on the structure. CPRA and NRCS agreed that the structure will not require maintenance at this time.

**Construction Unit No. 2**

Structure No. 22 A – Canal bank stabilization

The structure appeared to be in good condition, with little to no sign of settlement. Heavy vegetation growth was observed. CPRA and NRCS agree that maintenance of this structure is not needed at this time.

Structure No.22 – Steel sheet pile weir w/ boat bay

The structure appeared to be in good condition along with the signs, supports, and sheet pile caps. No maintenance requirements were identified at this location during the inspection.

Bayou Rigolettes Bank Stabilization

The rock dike along the northern shore of Bayou Rigolettes appears to be in good condition. There is some noticeable settlement near the western end of this feature, but the structure appears to be providing bank protection. Any maintenance work required will be completed in a future maintenance event.

**Construction Unit No. 3**

Bayou Perot Bank Stabilization

The Bayou Perot Bank Stabilization looks good. There was some erosion noticed at the western most portion of the West Reach of the structure. This are of erosion has increased

and will continue to be monitored. There was also some settlement noticed. It is agreed that some maintenance work is needed for this structure during a future maintenance event.

#### **Construction Unit No. 4**

##### **Concrete Panel Wall Shoreline Protection**

The concrete panel wall sections along the north end of Bayou Perot and Bayou Rigolettes were in good condition. There was no observed damage to the concrete panels, piles, or stainless steel fastening hardware. Warning signs and support piles were also in generally good condition.

### **V. Conclusions**

Overall, this project has proven very effective in reducing shoreline erosion. With the exception of a few locations where individual structures or the rock dike bank stabilization has experienced more rapid settlement, the structures have proven to be very stable. No significant structure maintenance is warranted at this time. Minor sign repair may be needed at a few isolated locations; if this is deemed necessary, CPRA and NRCS will discuss the timing and manner in which these repairs may be accomplished. If more settlement is noticed on a future inspection, then an assessment of needed maintenance will occur at that time.

### **VI. Recommendations**

Continue to monitor the condition of all structures.

#### **Immediate Repairs**

- None at this time.

#### **Programmed Maintenance**

- None at this time.

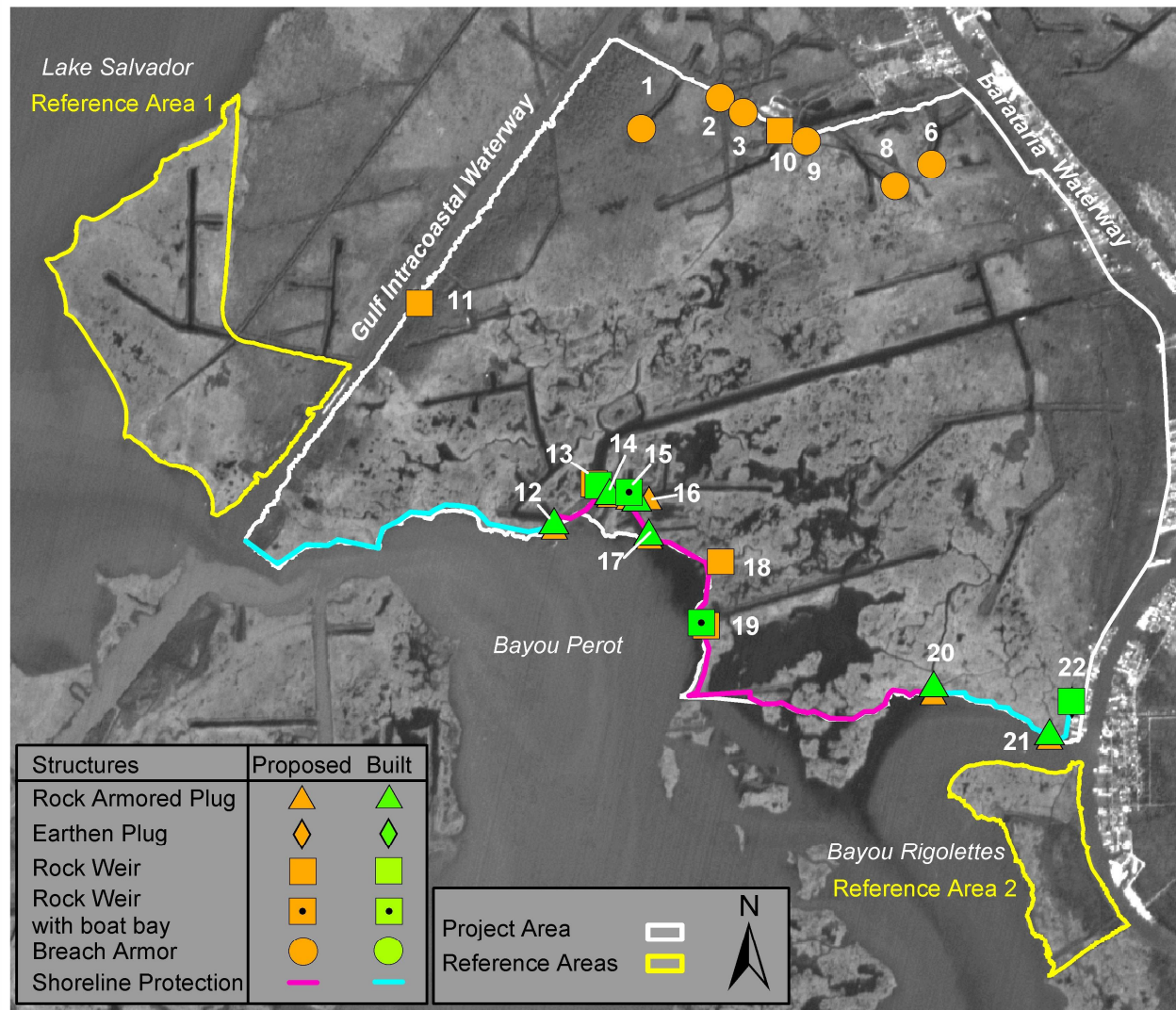
## **Appendix A**

### **Project Features Map**

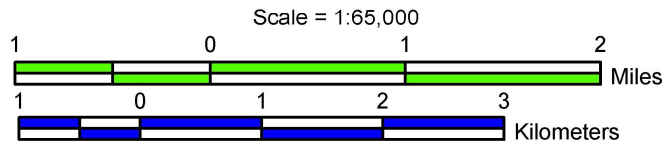




**Jonathan Davis Wetland Protection (BA-20)**  
**Coastal Wetlands Planning, Protection and Restoration Act**  
**Proposed Structures**



Data Source:  
Background image is a 1993 SPOT  
panchromatic satellite image shown at  
1:65,000.



Prepared by:  
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U.S. Geological Survey  
National Wetlands Research Center  
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and  
Louisiana Department of Natural Resources  
Coastal Restoration Division  
New Orleans Field Office



Federal Sponsor:  
U.S. Department of Agriculture  
Natural Resources Conservation Service



Map ID: USGS-NWRC 2004-02-XXXX

## **Appendix B**

### **Photographs**





**Photo #1 – Structure #12**



**Photo #2 – Structure #14**





**Photo #3 – C.U. #4 Concrete Panel Wall**



**Photo #4 – Structure #22A**

## **Appendix C**

### **Three Year Budget Projection**

2014 Annual Inspection Report  
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Jonathan Davis Wetland Restoration Project (BA-20)																						
Federal Sponsor: NRCS																						
Construction Completed : 5/29/2001																						
PPL 2																						
																	</					

## **Appendix D**

### **Field Inspection Form**

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MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: <b>BA-20 Jonathan Davis Wetland</b>					Date of Inspection: <u>7/2/2014</u>	Time: <u>9:30 am</u>
Structure No. _____ Construction Unit No.1 -Site No. 12_____					Inspector(s): <u>Richard, Prendergast, Kinler, Baker</u>	
Structure Description: <u>Rock rip-rap armored plug</u>					Water Level	Inside: <u>N/A</u> Outside: <u>0.9'</u>
Type of Inspection: <u>Annual</u>					Weather Conditions: <u>Mostly sunny, light wind</u>	
Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks	
Signage and supports	Good			#1	<b>Observations:</b> There have been no changes since the last inspection. NRCS and CPRA agree that no maintenance is required at this time.	
Armored Plug	Good			#1		
Earthen Embankment	Good					
<b>Construction Unit No.1</b>						
Structure Description: 294 linear ft. rock rip-rap armored rock-filled plug located in a pipeline channel north of Bayou Perot, west of Bayou Barataria, and east of the GIWW						
The crest of the weir was set at an elevation of +3.9 ft. NGVD. The rock-filled plug contains 2,689 tons of rock filled with 2,518 tons of rip-rap armor. Aluminum warning signs are also located through the rock embankment.						



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Jonathan Davis Wetland Protection  
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MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: <b>BA-20 Jonathan Davis Wetland</b>					Date of Inspection: <u>7/2/2014</u>	Time: <u>9:30 am</u>
Structure No. _____ Construction Unit No.1 -Site No. 17 _____					Inspector(s): <u>Richard, Prendergast, Kinler, Baker</u>	
Structure Description: <u>Rock rip-rap armored plug</u>					Water Level	Inside: <u>N/A</u> Outside: <u>0.9'</u>
Type of Inspection: <u>Annual</u>					Weather Conditions: <u>Mostly sunny, light wind</u>	
Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks	
Signage and supports	Good					
Armored Plug	Good				<b>Observation:</b> Structure is in good condition.	
Earthen Embankment	Good				<b>Remarks:</b>	
<b>Construction Unit No.1</b>						
Structure Description: 197 linear ft. of rock rip-rap armored rock filled plug located in a pipeline channel north of Bayou Perot, west of Bayou Barataria, and east of the GIWW. The crest of the plug was constructed to an elevation of 3.8' NAVD. The rock filled plug contains 2,253 tons of rock fill and 1,201 tons of rock rip-rap armor. Aluminum warning signs supported by galvanized pipe are located through the rock embankment.						

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MAINTENANCE INSPECTION REPORT CHECK SHEET					
Project No. / Name: <b>BA-20 Jonathan Davis Wetland</b>				Date of Inspection: <u>7/2/2014</u> Time: <u>9:30 am</u>	
Structure No. <u>Construction Unit No.2 -Site No. 22</u>				Inspector(s): <u>Richard, Prendergast, Kinler, Baker</u>	
Structure Description: Steel sheet pile structure w/ boat bay				Water Level Inside: <u>N/A</u> Outside: <u>0.9'</u>	
Type of Inspection: <u>Annual</u>				Weather Conditions: <u>Mostly sunny, light wind</u>	
Item	Condition	Physical Damage	Corrosion	Photo #	Observations and Remarks
Steel Bulkhead / Caps	Good				
Handrails Hardware, etc.	Good				<b>Observation:</b> There have been no changes since the last inspection. No maintenance required at this time.
Signage and supports	Good				
Earthen Wingwalls	Good				
Rock Armored Earthen Embankment	Good				
<b>Construction Unit No.2</b>					
Structure Description: 58 linear ft. of steel sheet pile bulkhead with a crest elevation of +1.95 ft. and a 24' - 8-1/2" wide boat bay with a crest elevation of -0.93 ft. located off of Bayou Regolettes, west of Bayou Barataria and east of GWW. The structure consists of a steel sheet pile weir with 1,426 square feet of sheet piling set at +1.95 ft. At the bottom the boat bay, is a 1.5 ft. thick rock rip-rap scour pad section with an invert of -0.93 ft. This structure ties into structure 22A on the west side. Aluminum warning signs supported by 12" diameter timber piles are located at the entrance of the boat bay.					

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