State of Louisiana
Department of Natural Resources
Coastal Restoration Division and
Coastal Engineering Division

2005 Operations, Maintenance, and Monitoring Report

for

Lake Portage Land Bridge

State Project Number TV-17
Priority Project List 8

June 2005
Vermilion Parish

Prepared by:

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for
Lake Portage Land Bridge (TV-17)

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Preface

The Operations, Maintenance, and Monitoring (OM&M) Report format is a streamlined approach which combines the Operations and Maintenance annual project inspection information with the Monitoring data and analyses on a project-specific basis. This report includes monitoring data collected through December 2004, and annual Maintenance Inspections through June 2005.

This report is the first in a series of OM&M reports for the Lake Portage Land Bridge (TV-17) project.

I. Introduction

The Lake Portage Land Bridge Protection Project (TV-17) is a shoreline protection project comprising 1,540 acres (623 ha) located in Vermilion Parish, Louisiana. The project area is bounded to the south by the Gulf of Mexico and to the north by Vermilion Bay, and surrounds Lake Portage within the Paul J. Rainey Wildlife Sanctuary and the Louisiana State Wildlife Refuge, west of Southwest Pass (figure 1). This area has exhibited wetland loss of approximately 6 acres (2.4 ha) during the period 1968-1997, as indicated by habitat change analyses conducted by the U.S. Geological Survey National Wetlands Research Center (NWRC) in Lafayette, Louisiana, and the Louisiana Department of Natural Resources (LDNR). Currently, approximately 81 % of the 1,540 total acres (623 ha) is classified as emergent marsh and the remaining 19 % as shallow open water. The estimate of wetland loss during the next 20 years with no action taken is 24 acres (9.7 ha), or 2 % of the remaining emergent marsh area.

The marsh area is characterized as brackish, with vegetation dominated by *Spartina patens* (marshhay cordgrass), *Schoenoplectus robustus* (sturdy bulrush), *Schoenoplectus americanus* (chairmaker's bulrush), and *Juncus roemerianus* (needlegrass rush). Spoilbank vegetation is dominated by *Sesbania drummondii* (rattlebox) and *Baccharis halimifolia* (saltbush). Vegetation occurring adjacent to the shoreline is characterized by *Distichlis spicata* (saltgrass), *Borrichia frutescens* (bushy seaside tansy), *Spartina alterniflora* (smooth cordgrass), *Schoenoplectus pungens* (common three-square), and *Fimbristylis castanea* (marsh fimbry) (U.S. Department of Agriculture, Natural Resources Conservation Service [USDA/NRCS] 2002).

Wetland loss in the project area has occurred in the form of conversion of beach and brackish marsh to open water. The high energy of the Gulf of Mexico has accelerated wave-induced erosion of the southern shoreline. A shoreline change study by Byrnes et al. (1995) found the mean shoreline retreat rate for the chenier plain from Cheniere au Tigre to Southwest Pass to be 9.5 ft/yr (2.9 m/yr) between 1883 and 1994. This loss has resulted primarily from erosional scouring from the same littoral currents that can also contribute to sediment accretion. These littoral currents from the Atchafalaya River and Wax Lake Outlet to the east cause sediment accretion during periods of slow velocity, and cause scouring as current velocity increases due to storms and anthropogenic factors such as the removal of reef shell from Southwest Pass near Marsh Island.

The objective of this project is to backfill the canal associated with the Trunkline Gas Company Pipeline located to the north and south of Lake Portage, using approximately 44,000 yd^3 (33,640 m^3) of dedicated dredge material. The canal is approximately 5,976 ft (1,821 m) long, 90 feet (27 m) wide and 3 feet (0.9 m) deep. Refurbishment of the east levee of the canal will also be required in order to allow for marsh creation to a sufficient elevation. The south end of the canal is connected to the Gulf of Mexico on high tides by a small tributary approximately 4 ft (1.2 m) wide and 2 ft (0.61 m) deep. The canal is otherwise

insulated to the south from the Gulf by approximately 1,800 ft (548.6 m) of marsh. Construction was completed in December, 2004.

Figure 1. Lake Portage Land Bridge (TV-17) project area.

II. Maintenance Activity

a. Project Feature Inspection Procedures

The purpose of the annual inspection of the Lake Portage Land Bridge Project (TV-17) 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. The annual inspection report also contains a summary of maintenance projects which were completed since completion of constructed project features and an estimated projected budget for the upcoming three (3) years for operation, maintenance and rehabilitation. Photographs taken as part of the inspection are presented in Appendix A. The three-year projected operation and maintenance budget is shown in Appendix B.

An inspection of the Lake Portage Land Bridge Project (TV-17) was held on May 11, 2005, under clear skies and warm temperatures. In attendance were Stan Aucoin and Darrell Pontiff from LDNR, Cindy Steyer and Wayne Melancon representing NRCS, and Edmond Mouton, Troy Blair, Dave Soileau, and Cassidy LeJeune representing Louisiana Department of Wildlife and Fisheries (LDWF). The annual inspection began at approximately 10:15 a.m. at the bulkhead of Area 1 and ended at approximately 12:00 p.m. at the earthen plug on the southern end of Area 3.

The field inspection included a complete visual inspection of most of the project features. Photographs were taken at each project feature (see Appendix A) and Field Inspection notes were completed in the field to record measurements and deficiencies (see Appendix C).

b. Inspection Results

<u>Area 1 (Station 0+00 to 22+99, between Lake Portage and Earthen Plug)</u>

Area 1 is in good condition and is showing signs of vegetation starting along the containment banks moving towards the center of the channel. Recent aerial photographs taken by LDWF show increased vegetation growth within the last month, which should continue with warmer temperatures into the next few months. The center part of the filled-in channel was dry and hard enough to walk across in some areas. As a result of the inspection of Area 1, LDNR and NRCS agree that no corrective actions will be required this year. (Photos: Appendix A, Photos 1 & 3).

Area 2 (Station 0+00 to 18+26, between Earthen Plug and Gulf of Mexico)

Area 2 is also in good condition and is fully vegetated. This reach was previously filled and the Lake Portage Land Bridge project added additional dredge material to fill in any trenasses. LDNR and NRCS agree that no maintenance will be required at this time. (Photos: Appendix A, Photo 4).

Area 3 (Station 0+00 to 18+06, between Vermilion Bay and Lake Portage)

Area 3 also is in good condition. The northern part of this reach is fully vegetated, mainly due to the fact that this reach was constructed first, and has been in place since May 2003. The water level at the southern end of this area was estimated to be +1.5 ft based on the level of the water at the weir notch on the 15-in.(38-cm) drain pipe. LDNR and NRCS agree that this area is in good condition and no maintenance will be required at this time. (Photos: Appendix A, Photos 2, 5 & 6).

c. Maintenance Recommendations

i. Immediate/ Emergency Repairs

None

ii. Programmatic/ Routine Repairs

None

d. Maintenance History

There has been no required maintenance on this project.

III. Operation Activity

a. Operation Plan

There are no water control structures associated with this project, therefore no Structural Operation Plan is required.

b. Actual Operations

There are no water control structures associated with this project, therefore no Structural Operation Plan is required.

IV. Monitoring Activity

a. Monitoring Goals

The objectives of the Lake Portage Land Bridge Project are to maintain shoreline integrity and to prevent the formation of a tidal channel/connection between Lake Portage-Vermilion Bay and the Gulf of Mexico.

The following goals will contribute to the evaluation of the above objectives:

1. Evaluate land/water ratios within the project area.

2. Assess the type and condition of emergent vegetation through the use of aerial oblique photography.

b. Monitoring Elements

Aerial Photography

Aerial photography and satellite imagery will be collected for the entire coast through Coastal Reference Monitoring System-*Wetlands* (CRMS-*Wetlands)*. The aerial photography will only be analyzed for CRMS-*Wetlands* stations; however, the satellite imagery will be analyzed to determine land and water areas for the entire coast. This imagery will be subset and used to qualitatively evaluate changes in land and water areas within the TV-17 project area at a coarse (25-m) resolution. Photography and satellite imagery for the Teche/Vermilion Basin will be collected and analyzed for years 2005, 2008, and every three years thereafter. The CRMS imagery will replace the CIR photography originally proposed for 2002 and 2010 and will provide a much higher frequency of land:water analyses than originally proposed.

Emergent Vegetation

Aerial oblique photographs will be acquired of the backfills pipeline canal and associated project area to assess the type and condition of the emergent vegetation present. Vegetation abundance will be estimated and condition will be documented at regular intervals.

c. Preliminary Monitoring Results and Discussion

Construction has been completed, but no data have been collected at this time. Aerial photographs taken pre-construction (2003) and post-construction (2004) are shown below (figures 2-5).

Figure 2. Aerial photograph (Area 3) taken beforeTV-17 project construction, showing the gas pipeline between Vermilion Bay (left) and Lake Portage (right).

Figure 3. Aerial photograph (Areas 1 & 2) taken before TV-17 project construction, showing the gas pipeline between Lake Portage (above) and the Gulf of Mexico (below).

Figure 4. Aerial photography (Area 3) taken after TV-17 project construction, showing the gas pipeline between Vermilion Bay (lower left) and Lake Portage (upper right).

Figure 5. Aerial photography (Areas 1 & 2) taken after TV-17 project construction, showing the gas pipeline between Lake Portage (above) and the Gulf of Mexico (below).

During the May 11, 2005, O&M inspection, Cindy Steyer (NRCS) collected observational vegetation data and filed this report:

> "At Site 1, located immediately south of the bulkhead, the bare portion of the created area was found to be smaller, that is, more narrow than it appears to be in the April aerial photos. New, robust vegetative growth is encroaching inward from both sides of the old canal spoilbanks. The composition of the newly vegetated area was almost 100% *Schoenoplectus robustus*, formerly *Scirpus robustus* (leafy three-square), with a trace *Calystegia sepium* (hedge bindweed). The vegetative community on the adjacent spoilbank was co-dominated by *Phragmites australis* (roseau) and *Spartina cynosuroides* (big cordgrass), with *Cynodon dactylon* (Bermudagrass) and *Baccharis halimifolia* (eastern baccharis) also occurring along with traces *of Spartina patens* (marshhay cordgrass), *Schoenoplectus americanus* (olney three-square), *Sesbania* sp., *Solidago* sp., *Ambrosia artemisiifolia* (ragweed) and *Ranunculus muricatus* (spiny buttercup). The yellow arrows in the photo below indicate the vegetative community colonizing the lateral edges of the created area at Site 1."

"Site 2 is located approximately halfway between Lake Portage and the old existing plug to the south. The conditions here are similar to Site 1, although, the newly developing vegetative community covers a larger percentage of the created area, and is slightly more diverse with leafy three-square as the dominant species, and marshhay cordgrass and *Spartina alterniflora* (smooth cordgrass) co-dominant. *Distichlis spicata* (saltgrass), morning glory, *Iva frutescens* (big leaf sumpweed), eastern baccharis, and *Amaranthus* sp. also occurred in small to trace amounts (see figure below). The deposited sediments were not trafficable yet at Sites 1 or 2."

"Site 3 is located immediately north of the old plug. This area has the largest percentage of unvegetated area of all the sites visited, but natural colonization has begun at the edges."

"Leafy three-square composes approximately 50% of the new vegetative community along the very edge of the created area, with marshhay cordgrass, salt grass, big cordgrass, and smooth cordgrass composing the remainder. However, evidence suggests that vegetative encroachment onto the created area is accelerating. New shoots and stolons were observed encroaching onto bare areas all along the newly-established edge community, as shown in the two pictures below."

"This site is easily trafficable. The elevation is slightly higher and there appears to be a higher sand component in the deposited material than at the other sites, and therefore, is somewhat drier. That may explain why initial establishment of vegetation at this site has occurred more slowly."

"Site 4, located on the created area immediately north of the gulf, is shown in the following two pictures. Yellow arrows point to the old canal spoilbanks."

"Vegetation has colonized this site completely. Here, leafy three-square and smooth cordgrass were found to be the dominant species, with marshhay cordgrass, and big cordgrass co-dominant. Roseau and eastern baccharis also occur in small amounts."

"Site 5 is located on the northern unit of the created area, immediately north of Lake Portage. This site is also almost completely vegetated with a very robust community of smooth cordgrass, leafy three-square, and roseau, as seen in the photo below."

"Findings at this last site contrasted significantly with conditions found in the north unit of the created area at the same time in the previous year. The following pictures of the northern unit were taken in April 2004. Arrows indicate the small pockets of emerging vegetation just beginning to colonize the created area at that time."

"Summary & Recommendations: As shown in the above pictures, less vegetation was found pioneering the created area in the northern unit at this time last year than that found along the edges of the bare area in the southern unit on the date of this field trip, and the northern unit is now totally vegetated. Using this progression of the plant community in the northern unit as a reference, it is reasonable to expect that the remaining bare areas in the south will be vegetated by the end of the growing season this year. A targeted planting with vegetative material would not likely achieve comparable results any sooner, especially given the time required for contracting and plant expansion. A temporary seeding application may achieve cover at a faster rate, but there is no seed for any brackish marsh species readily available, and as no significant erosion appears to be occurring, I do not recommend a critical area seeding application to address the bare areas that remain."

"Natural plant succession has occurred over a large portion of the project's created areas. The composition and condition of the plant communities developed thus far on the created sites is typical of healthy brackish marsh, and no evidence of threat from invasive species was seen at any of the locations visited. Adventitious growth is expanding onto remaining bare areas from a variety of desirable species pioneering the edges. Therefore, based on those conditions, and the evolution of the plant community observed in northern created unit, I recommend that all the created area that remains bare be allowed to continue to vegetate naturally. To confirm that the rate of colonization of remaining bare areas occurs as expected, this should be specifically investigated and noted during the next annual O&M or monitoring field inspection."

V. Conclusions

a. Project Effectiveness

This project appears to be functioning as designed. Changes in land acreage will be determined when the 2005 and 2008 land/water analyses become available. The bare dredge fill areas appear to be vegetating naturally. Emergent vegetation condition will be assessed as aerial oblique photography becomes available at regular intervals.

b. Recommended Improvements

In order to evaluate compaction of the dredge spoil material within the existing pipeline canal, a structural assessment survey performed by a licensed engineering/land surveying firm is recommended within the first five years of construction. The date of assessment survey is to be agreed upon by the state and federal sponsor at the annual maintenance inspection.

c. Lessons Learned

Apparent differences in vegetated cover could be based on soil grain size and elevation. It appears that the areas with larger grain size were more firm, drier, and had less vegetative cover. However, wetland plant succession and establishment may take longer in higher, drier, coarser soils, but will still occur.

VI. REFERENCES

Byrnes, M. R., R. A. McBride, Q. Tao, and L. Duvic 1995. Historical shoreline dynamics along the Chenier Plain of southwestern Louisiana: Trans. Gulf Coast Assoc. Geol. Socs. 35:113-122.

U.S. Department of Agriculture, Natural Resources Conservation Service [USDA/NRCS] 2002. The PLANTS Database, Version 3.1 (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA. State of Louisiana PLANTS list downloaded August 1, 2002.

Appendix A
(Inspection Photographs)

Photo 1- Aerial view of Areas 1 & 2, Flown by LDWF, April 2005 (looking north)

Photo 2- Aerial view of Area 3, Flown by LDWF, April 2005 (looking south)

Photo 3 – Area 1, South canal facing gulf

Photo 4—Area 2, revetment on gulf shoreline (looking east)

Photo 5—Area 3, vegetation on north canal (looking north)

Photo 6—Area 3, 15-in. drain pipe on southern plug of north canal

Appendix B
(Three-Year Budget Projection)

LAKE PORTAGE DREDGING / TV17 / PPL8
Three-Year Operations & Maintenance Budgets 07/01/2005 - 06/30/08

Project Manager	O & M Manager	Federal Sponsor	Prepared By
		NRCS	

	2005/2006	2006/2007	2007/2008
Maintenance Inspection	$ 4,955.00	$ 5,119.00	$ 5,288.00
Structure Operation	$ -	$ -	
Administration	$ -	$ -	$ 2,000.00
Maintenance/Rehabilitation			

05/06 Description:

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

06/07 Description

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

07/08 Description:Perform Structural Assessment

E&D	
Surveying	$ 20,000.00
Construction Oversight	$ -
Sub Total - Maint. And Rehab.	$ 20,000.00

	2005/2006	2006/2007	2007/2008
Total O&M Budgets	**$ 4,955.00**	**$ 5,119.00**	**$ 27,288.00**

OPERATION AND MAINTENANCE BUDGET 07/01/2005-06/30/2006

LAKE PORTAGE DREDGING/TV-17/PPL8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	$4,955.00	**$4,955.00**
General Structure Maintenance	LUMP	1	$0.00	**$0.00**
Engineering and Design	LUMP	1	$0.00	**$0.00**
Operations Contract	LUMP	1	$0.00	**$0.00**
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
			TOTAL ADMINISTRATION COSTS:	**$0.00**

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
			TOTAL SURVEY COSTS:	**$0.00**

GEOTECHNICAL

GEOTECH DESCRIPTION:					
Borings	EACH	0	$0.00	$0.00
OTHER				$0.00
			TOTAL GEOTECHNICAL COSTS:	**$0.00**

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	$0.00	$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	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
				TOTAL CONSTRUCTION COSTS:	**$0.00**

TOTAL OPERATIONS AND MAINTENANCE BUDGET: **$4,955.00**

OPERATION AND MAINTENANCE BUDGET 07/01/2006-06/30/2007

LAKE PORTAGE DREDGING/TV-17/PPL8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	$5,119.00	**$5,119.00**
General Structure Maintenance	LUMP	1	$0.00	**$0.00**
Engineering and Design	LUMP	1	$0.00	**$0.00**
Operations Contract	LUMP	1	$0.00	**$0.00**
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
			TOTAL ADMINISTRATION COSTS:	**$0.00**

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
			TOTAL SURVEY COSTS:	**$0.00**

GEOTECHNICAL

GEOTECH DESCRIPTION:					
Borings	EACH	0	$0.00	$0.00
OTHER				$0.00
			TOTAL GEOTECHNICAL COSTS:	**$0.00**

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	$0.00	$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	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
				TOTAL CONSTRUCTION COSTS:	**$0.00**

TOTAL OPERATIONS AND MAINTENANCE BUDGET: **$5,119.00**

OPERATION AND MAINTENANCE BUDGET 07/01/2007-06/30/2008

LAKE PORTAGE DREDGING/TV-17/PPL8

DESCRIPTION	UNIT	EST. QTY.	UNIT PRICE	ESTIMATED TOTAL
O&M Inspection and Report	EACH	1	$5,288.00	**$5,288.00**
General Structure Maintenance	LUMP	1	$0.00	**$0.00**
Engineering and Design	LUMP	1	$0.00	**$0.00**
Operations Contract	LUMP	1	$0.00	**$0.00**
Construction Oversight	LUMP	1	$0.00	**$0.00**

ADMINISTRATION

LDNR / CRD Admin.	LUMP	1	$0.00	$0.00
FEDERAL SPONSER Admin.	LUMP	1	$0.00	$0.00
SURVEY Admin.	LUMP	1	$2,000.00	$2,000.00
OTHER				$0.00
			TOTAL ADMINISTRATION COSTS:	**$2,000.00**

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	1	$20,000.00	$20,000.00
TBM Installation	EACH	0	$0.00	$0.00
OTHER				$0.00
			TOTAL SURVEY COSTS:	**$20,000.00**

GEOTECHNICAL

GEOTECH DESCRIPTION:					
Borings	EACH	0	$0.00	$0.00
OTHER				$0.00
			TOTAL GEOTECHNICAL COSTS:	**$0.00**

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	$0.00	$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	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
				TOTAL CONSTRUCTION COSTS:	**$0.00**

TOTAL OPERATIONS AND MAINTENANCE BUDGET: **$27,288.00**

Appendix C
(Field Inspection Notes)

MAINTENANCE INSPECTION REPORT CHECK SHEET

Project No. / Name: TV-17 Lake Portage Landbridge

Date of Inspection: May 11, 2005 Time: 10:15 a.m.

Structure No. N/A

Inspector(s): Stan Aucoin, Darrell Pontiff, Wayne Melancon, Cindy Steyer Edmond Mouton, Troy Blair, Dave Soileau, Cassidy LeJeune

Structure Description: Shoreline Protection

Water Level +1.5

Type of Inspection: Annual

Weater Conditions: Clear and mild

Item	Condition	Pysical Damage	Corrosion	Photo #	Observations and Remarks
Steel Bulkhead / Caps					
Steel Grating					
Stop Logs					
Hardware					
Timber Piles	Good				
Timber Wales					
Galv. Pile Caps					
Vegetation	Good				Area 3 fully vegetated, Area 2 existing vegetation, Area 1 beginning to vegetate. (See NRCS report)
Signage /Supports	Good				
Rip Rap (fill)					
Eathern Embankment	Good				
Dredge Spoil	Good				Southern part of Area 1 still soft, holding some water, northern part is hard and can be traversed. Slight settlement

What are the conditions of the existing levees?
Are there any noticable breaches?
Settlement of rock plugs and rock weirs?
Position of stoplogs at the time of the inspection?
Are there any signs of vandalism?