

FINAL ARCHIVED BINDER

Breaux Act

Coastal Wetlands Planning, Protection and Restoration Act



Technical Committee Meeting

December 7, 2005

New Orleans, Louisiana

BREAUX ACT

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

AGENDA

December 7, 2005, 9:30 a.m.

Location:

U.S. Army Corps of Engineers Office
7400 Leake Avenue
New Orleans, Louisiana
District Assembly Room

Documentation of Task Force and Technical Committee meetings may be found at:

http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

or

<http://lacoast.gov/reports/program/index.asp>

Tab Number

Agenda Item

- 1 Decision: 2006 Report to Congress – FY06 Planning Budget Addendum (Podany) 9:30 a.m. to 9:40 a.m.** The Technical Committee will develop a recommendation for an addendum to the FY06 Planning Budget for the 2006 Report to Congress.
- 2 Decision: Request for additional Phase I funds for the South Lake DeCade TE-39 Project (Paul) 9:40 a.m. to 9:50 a.m.** The Technical Committee will consider a request by NRCS and LDNR for an increase to the Phase I budget in the amount of \$175,000.
- 3 Report: Status of Breaux Act Program and Project Funds (Browning and Monnerjahn) 9:50 a.m. to 10:00 a.m.** Ms. Gay Browning and Mr. Chris Monnerjahn will discuss the construction program and status of the CWPPRA accounts.
- 4 Decision: PPL 15 Candidate and Demonstration Projects (Podany) 10:00 a.m. to 11:30 a.m.** The Technical Committee will review the results of the 15th Priority Project List (PPL 15) candidate and demonstration project evaluations. The committee will recommend candidate and demonstration projects to the CWPPRA Task Force for selection on PPL 15.
- 5 Decision: Request for Construction Approval and Phase II Authorization for Projects on all PPL's (Podany) 12:30 p.m. to 3:30 p.m.** The Technical Committee will consider requests for Phase II approval of projects on PPLs 9 through 14, for recommendation to the Task Force. Due to limited funding, the Technical Committee will recommend a list of projects to the Task Force for Phase II approval and project funding within available program construction funding limits. Each project listed in the

below table will be discussed individually by its sponsoring agency, Technical Committee members and the general public in the following format:

- a. Agency presentation on individual projects (5 minutes max)
- b. Technical Committee questions and comments on individual projects
- c. Public comments on individual projects (Comments should be limited to 1-2 minutes)

Following presentations and discussion on individual projects, the Technical Committee will rank all projects to aid in deciding which to recommend to the Task Force for Phase II funding.

Agency	Project No.	PPL	Project Name	Construction Start Date	Phase II Incr. 1 Funding Request*	Phase II Total Cost	Acres Benefited Over 20 Years	Prioritization Score	30% Design Review Date	95% Design Review Date
NRCS	BA-27c(3)	9	Barataria Basin Landbridge, Phase 3 - CU 7	Jul-06	\$15,742,430	\$18,801,185	180	45.55	20-Aug-03	2 Sep 04
NMFS	AT-04	9	Castille Pass Channel Sediment Delivery	Jun-06	\$10,529,752	\$17,811,369	577	64.50	20-Jan-04	13 Oct 05
FWS	BA-36	11	Dedicated Dredging on Bara Basin LB	Aug-06	\$31,000,584	\$31,132,727	605	61	17-Dec-03	29 Jul 04
NMFS	BA-30	9	East Grand Terre Island Restoration	May-06	\$27,311,634	\$28,914,508	335	60	26-May-05	30 Nov 05
COE	TV-11b	9	Freshwater Bayou Bank Stab-Belle Isle Canal-Lock	Apr-06	\$14,204,558	\$16,257,501	241	42.5	27-Jun-02	22 Jan 04
NRCS	TE-43	10	GIWW Bank Restoration of Critical Areas in Terre	Aug-06	\$25,336,578	\$28,251,658	366	40.25	21-Jan-03	26 Aug 04
COE	ME-21	11	Grand Lake Shoreline Protection	Aug-06	\$14,198,931	\$16,202,094	540	66.25	11-May-04	16 Aug 04
COE	PO-32	12	Lake Borgne & MRGO Shoreline Prot - Total	Mar-06	\$30,708,143	\$37,809,365	266	43.05	11-Aug-04	29 Mar 05
COE	PO-32a	12	Lake Borgne & MRGO Shoreline Prot - Lake Borgne	Mar-06	\$13,799,702	\$16,434,334	93	44	11-Aug-04	29 Mar 05
COE	PO-32b	12	Lake Borgne & MRGO Shoreline Prot - MRGO	Mar-06	\$16,898,695	\$21,400,544	173	36.5	11-Aug-04	29 Mar 05
EPA	PO-30	10	Lake Borgne Shoreline Protection	Jun-06	\$16,622,590	\$17,044,540	165	41.5	18-Aug-05	29 Nov 05
NMFS	BA-35	11	Pass Chaland to Grand Bayou Pass	Apr-07	\$26,904,301	\$27,873,180	262	49.85	16-Sep-04	7 Nov 05
NMFS	ME-18	10	Rockefeller Refuge Gulf Shoreline Test Sections	Jul-06	\$7,625,145	\$7,625,145	NA	NA	28-Sep-04	20 Sep 05
EPA	TE-47	11	Ship Shoal: Whiskey West Flank Restoration	May-06	\$38,909,247	\$39,176,768	195	60	5-Oct-04	28 Sep 05
NRCS	TE-39	9	South Lake DeCade - CU 1	Aug-06	\$2,243,910	\$3,203,133	202	74.95	19-Jul-04	2 Sep 04
FWS	TE-46	11	West Lake Boudreaux	Aug-06	\$14,654,600	\$16,197,377	277	51.4	16-Jun-05	8 Nov 05

* Amount may change based upon updates to fully funded cost estimates.

6 Additional Agenda Items (Podany) 3:30 p.m. to 3:45 p.m.

7 Announcement: PPL 16 Regional Planning Team Meetings

January 10, 2006	Region IV Planning Team Meeting (Abbeville)
January 11, 2006	Region III Planning Team Meeting (Morgan City)
January 12, 2006	Regions I and II Planning Team Meetings (New Orleans)
February 1, 2006	Coast-wide RPT Voting Meeting (Baton Rouge)

8 Date of Upcoming Task Force Meeting (Podany) 3:45 p.m. to 3:50 p.m. The winter Task Force meeting will be held January 25, 2006 at the U.S. Army Corps of Engineers office in New Orleans, LA. The Task Force will approve Phase I funding for PPL 15 and Phase II or construction approval on projects ready for construction at the January meeting. Agenda items and supporting documents for the meeting should be submitted by January 6, 2006.

9 Scheduled Dates of Future Program Meetings (Podany):

2006			
January 25, 2006	9:30 a.m.	Task Force	New Orleans
March 15, 2006	9:30 a.m.	Technical Committee	New Orleans
April 12, 2006	9:30 a.m.	Task Force	Lafayette
June 14, 2006	9:30 a.m.	Technical Committee	Baton Rouge
July 12, 2006	9:30 a.m.	Task Force	New Orleans
August 30, 2006	7:00 p.m.	PPL 16 Public Meeting	Abbeville
August 31, 2006	7:00 p.m.	PPL 16 Public Meeting	New Orleans
September 13, 2006	9:30 a.m.	Technical Committee	New Orleans
October 18, 2006	9:30 a.m.	Task Force PPL 16 Approval	New Orleans
December 6, 2006	9:30 a.m.	Technical Committee	Baton Rouge
2007			
January 31, 2007	9:30 a.m.	Task Force	Baton Rouge

Adjourn

Decision: 2006 Report to Congress – FY06 Planning Budget Addendum

Coastal Wetlands Planning, Protection, and Restoration Act

Fiscal Year 2006 Planning Schedule and Budget

P&E Committee Recommendation, 25 August 2005

Tech Committee Recommendation, 19 October 2005

Approved by Task Force, 2 November 2005

NOTE: Number shown in parentheses in line item tasks represents the number of meetings for that task.					CWPPRA COSTS												
Task Category	Task No.	Task	Start Date	End Date	Dept. of Interior				State of Louisiana				EPA	USDA	USDC	Other	Total
					USACE	USFWS	NWRC	USGS BR	DNR	DWF	Gov. Ofc.						
Project and Program Management Tasks																	
PM	16100	Program Management--Coordination	10/1/05	9/30/06	393,505	88,326	14,973	0	61,964	1,502	58,500	115,100	86,709	125,000	0	945,579	
PM	16110	Program Management--Correspondence	10/1/05	9/30/06	40,203	25,236	3,611	0	25,138	1,502	0	37,900	40,711	84,600	0	258,901	
PM	16120	Prog Mgmt--Budget Development and Oversight	10/1/05	9/30/06	67,548	15,773	3,711	0	4,973	1,502	1,000	25,500	44,360	78,000	0	242,367	
PM	16130	Program and Project Management--Financial Management of Non-Cash Flow Projects	10/1/05	9/30/06	58,669	10,094	0	0	17,718	0	0	4,600	16,126	32,000	0	139,207	
PM	16200	P&E Meetings (3 meetings preparation and attendance)	10/1/05	9/30/06	30,965	8,202	3,924	0	4,291	4,506	500	11,500	17,277	6,000	0	87,165	
PM	16210	Tech Com Mtngs (5 mtngs; prep and attend)	10/1/05	9/30/06	90,509	28,391	5,516	0	17,303	7,510	3,500	17,900	24,467	9,000	0	204,096	
PM	16220	Task Force mtngs (4 mtngs; prep and attend)	10/1/05	9/30/06	89,056	31,545	6,619	0	18,151	6,008	6,500	28,800	36,733	40,000	0	263,412	
PM	16300	Prepare Evaluation Report (Report to Congress) NOTE: next update in FY08 budget	10/1/05	9/30/06	6,000	6,000	75,000	0	3,000	0	1,000	1,000	3,000	3,250	0	98,250	
PM	16400	Agency Participation, Review 30% and 95% Design for Phase 1 Projects	10/1/05	9/30/06	26,086	11,041	0	0	10,347	6,008	1,500	12,800	13,595	12,000	0	93,377	
PM	16410	Engineering & Environmental Work Groups review Phase II funding of approved Phase I projects (Needed for adequate review of Phase I.) [Assume 8 projects requesting Ph II funding in FY06 (present schedule indicates more projects). Assume 3 will require Eng or Env WG review; 2 labor days for each.]	10/1/05	9/30/06	18,590	11,041	0	0	3,956	7,510	2,500	6,900	7,885	12,000	0	70,382	
PM	16500	Helicopter Support: Helicopter usage for the PPL process.	10/1/05	9/30/06	0	20,000	0	0	0	0	0	0	0	0	0	20,000	
PM	16600	Miscellaneous Technical Support	10/1/05	9/30/06	41,583	9,464	0	0	142,406	0	1,000	11,900	31,733	13,000	0	251,086	
FY06 Subtotal Project Management Tasks					862,714	265,113	113,354	0	309,247	36,048	76,000	273,900	322,596	414,850	0	2,673,822	
FY06 Total for PPL Tasks					1,171,199	464,478	137,071	0	386,677	73,598	87,500	439,800	590,937	570,350	0	3,921,610	

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					USACE	USFWS	NWRC	USGS BR	DNR	DWF	Gov. Ofc.						
SUPPLEMENTAL PLANNING AND EVALUATION TASKS																	
SPE	16100	Academic Advisory Group [NOTE: MOA between sponsoring agency and LUMCON available through FY19.] [Prospectus, page 7-8]	10/1/05	9/30/06	0	0	0	0	0	0	0	0	0	0	0	99,000	99,000
SPE	16200	Maintenance of web-based project reports and website project fact sheets. [NWRC Prospectus, pg 9] [Corps Prospectus pg 10] [LDNR Prospectus, pg 11]	10/1/05	9/30/06	3,459	0	43,631	0	14,608	0	0	0	0	0	0	0	61,698
SPE	16400	Core GIS Support for CWPPRA Task Force Planning Activities. [NWRC Prospectus, pg 12] [LDNR Prospectus, page 13]	10/1/05	9/30/06	0	0	296,294	0	8,955	0	0	0	0	0	0	0	305,249
SPE	16500	Phase 0 analyze of impacts to oyster leases for PPL project development [NWRC prospectus, pg 14] [DNR Prospectus, pg 15]	10/1/05	9/30/06	0	0	72,007	0	31,059	0	0	0	0	0	0	0	103,066
SPE	16900	Update Land Loss Maps (\$62,500 in FY04, \$63,250 in FY05, \$63,250 FY06) [Del Britsch] [Prospectus, page 16]	10/1/05	9/30/06	63,250	0	0	0	0	0	0	0	0	0	0	0	63,250
SPE	16950	Storm Recovery Procedures (2 events) [Prospectus, page 17-19]	10/1/05	9/30/06	0	0	0	0	97,534	0	0	0	0	0	0	0	97,534
FY06 Total Supplemental Planning & Evaluation Tasks					66,709	0	411,932	0	152,156	0	0	0	0	0	99,000	729,797	
FY06 Agency Tasks Grand Total					1,237,908	464,478	549,003	0	538,833	73,598	87,500	439,800	590,937	570,350	99,000	4,651,407	

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					Dept. of Interior				State of Louisiana							
Task Category	Task No.	Task	Start Date	End Date	USACE	USFWS	NWRC	USGS BR	DNR	DWF	Gov. Ofc.	EPA	USDA	USDC	Other	Total
Otrch	16100	Outreach - Committee Funding	10/1/05	9/30/06	0	0	0	0	0	0	0	0	0	0	388,548	388,548
Otrch	16200	Outreach - Agency	10/1/05	9/30/06	6,600	3,300	29,500	0	6,600	0	6,600	6,600	6,600	6,600	0	72,400
																0
FY06 Total Outreach					6,600	3,300	29,500	0	6,600	0	6,600	6,600	6,600	6,600	388,548	460,948
Grand Total FY06					1,244,508	467,778	578,503	0	545,433	73,598	94,100	446,400	597,537	576,950	487,548	5,112,355
Disallowances																
									545,433	73,598	94,100					
Proposed Revised Grand Total FY06									545,433	73,598	94,100					

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					USACE	USFWS	NWRC	USGS BR	DNR	DWF	Gov. Ofc.						
PPL 15 TASKS																	
PL	15600	TF Selection and Funding of the 15th PPL (1)	10/26/05	10/26/05	4,130	4,732	0	0	2,202	1,502	1,500	3,600	8,527	9,600	0	35,793	
PL	15700	PPL 15 Report Development	10/26/05	5/31/06	39,754	2,524	0	0	0	0	0	0	3,419	0	0	45,697	
PL	15800	Corps Upward Submittal of the PPL 15 Report	6/1/06	6/1/06	1,017	0	0	0	0	0	0	0	0	0	0	1,017	
PL	15900	Corps Congressional Submission of the PPL 15 Report	8/1/06	8/1/06	795	0	0	0	1,862	0	0	0	0	0	0	2,657	
FY06 Subtotal PL 15 Tasks					45,696	7,256	0	0	4,064	1,502	1,500	3,600	11,946	9,600	0	85,164	

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CWPBRA COSTS																	
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					USACE	USFWS	NWRC	USGS BR	DNR	DWF	Gov. Ofc.	EPA					
PPL 16 TASKS																	
PL	16200	Development and Nomination of Projects															
PL	16210	DNR/USGS prepares base maps of project areas, location of completed projects and projected loss by 2050. Develop a comprehensive coastal LA map showing all water resource and restoration projects (CWPPRA, state, WRDA projects, etc.) NWRC costs captured under SPE 16400.	10/13/05	1/19/06	1,574	0	0	0	3,067	0	0	0	1,023	0	0	5,664	
PL	16220	Sponsoring agencies prepare fact sheets (for projects and demos) and maps prior to and following RPT nomination meetings.	10/13/05	1/9/06	32,098	31,545	0	0	6,152	0	0	30,700	11,338	35,200	0	147,033	
PL	16230	RPT's meet to formulate and combine projects. Each basin nominates no more than 2 project, with exception of 3 in Barataria and Terrebonne [20 nominees] and up to 6 demos (3 meetings)	1/10/06	1/12/06	26,143	14,195	0	0	8,548	4,506	2,500	11,500	23,019	12,600	0	103,011	
PL	16240	RPT Voting meeting (20 nominees and up to 6 demos)	2/1/06	2/1/06	11,618	2,524	0	0	2,653	1,502	500	3,900	7,987	4,200	0	34,884	
PL	16300	Ranking of Nominated Projects															
PL	16320	Engr Work Group prepares preliminary fully funded cost ranges for nominees.	3/1/06	3/2/06	8,560	2,524	0	0	1,937	0	1,000	4,600	5,930	4,600	0	29,151	
PL	16330	Environ/Engr Work Groups review nominees	3/1/06	3/2/06	12,665	7,886	0	0	2,212	1,502	1,000	5,300	12,131	3,600	0	46,296	
PL	16340	WGs develop and P&E distributes project matrix	3/3/06	3/3/06	843	2,208	0	0	658	0	0	2,800	2,662	3,200	0	12,371	
PL	16350	TC selection of PPL16 candidates (6) and demo candidates (up to 3)	3/15/06	3/15/06	1,853	2,524	0	0	2,847	1,502	0	1,700	8,215	3,200	0	21,841	

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CWP/PRA COSTS																
Task Category	Task No.	Task	Start Date	End Date	Dept. of Interior				State of Louisiana			EPA	USDA	USDC	Other	Total
					USACE	USFWS	NWRC	USGS BR	DNR	DWF	Gov. Ofc.					
PL	16400	Analysis of Candidates														
PL	16410	Sponsoring agencies coordinate site visits for all projects	3/16/06	5/31/06	18,507	20,504	0	0	13,891	9,012	0	19,700	32,719	21,800	0	136,133
PL	16420	Engr/Environ Work Group refine project features and determine boundaries	5/1/06	8/30/06	9,373	15,773	5,793	0	3,321	9,012	2,000	9,200	9,126	9,800	0	73,398
PL	16430	Sponsoring agencies develop project information for WVA; develop designs and cost estimates (projects and demos)	5/1/06	8/30/06	47,597	36,277	12,131	0	3,433	0	0	34,500	41,876	3,800	0	179,614
PL	16440	Environ/Engr Work Groups project wetland benefits (with WVA)	5/1/06	8/30/06	25,024	25,236	5,793	0	5,402	3,004	2,000	17,300	33,956	24,000	0	141,715
PL	16450	Engr Work Group reviews/approves Ph 1 and Ph 2 cost estimates from sponsoring agencies, incl cost estimates for demos	5/1/06	8/30/06	20,357	3,785	0	0	7,179	0	1,000	8,700	22,590	7,300	0	70,911
PL	16460	Economic Work Group reviews cost estimates, adds monitoring, O&M, etc., and develops annualized costs	5/1/06	8/30/06	18,003	1,577	0	0	1,630	0	0	0	6,215	0	0	27,425
PL	16475	Envr and Eng WG's prioritization of PPL 16 projects and demos	5/1/06	8/30/06	6,887	7,886	0	0	2,870	1,502	0	5,800	12,338	3,600	0	40,883
PL	16480	Prepare project information packages for P&E.	5/1/06	8/30/06	4,564	7,571	0	0	2,483	0	0	2,600	2,926	2,400	0	22,544
PL	16485	P&E holds 2 Public Meetings	8/30/06	8/31/06	15,270	3,785	0	0	4,754	3,004	0	2,300	16,945	3,000	0	49,058
PL	16490	TC Recommendation for Project Selection and Funding	9/13/06	9/13/06	1,853	6,309	0	0	329	1,502	0	1,700	5,399	3,600	0	20,692
FY06 Subtotal PPL 16 Tasks					262,789	192,109	23,717	0	73,366	36,048	10,000	162,300	256,395	145,900	0	1,162,624

Coastal Wetlands Planning, Protection and Restoration Act
Fiscal Year 2006 Budget Summary

P&E Committee Recommendation, 25 August 2005

Tech Committee Recommendation, 19 October 2005

Task Force Approval, 2 November 2005

	FY2002 Amount (\$)	FY2003 Amount (\$)	FY2004 Amount (\$)	FY2005 Amount (\$)	FY2006 Amount (\$)
<u>General Planning & Program Participation [Supplemental Tasks Not Included]</u>					
State of Louisiana					
DNR	414,856 ^{30,31}	430,640	405,472	460,066	386,677 ³³
Gov's Ofc	83,225	73,500	81,000	92,000	87,500 ³³
LDWF	65,000	71,529 ³²	37,760	72,096	73,598
Total State	<u>563,081</u>	<u>575,669</u>	<u>524,232</u>	<u>624,162</u>	<u>547,775</u>
EPA	433,735 ²⁹	458,934	460,913	400,700	439,800 ³³
Dept of the Interior					
USFWS	385,370 ²⁹	430,606	474,849	450,650	464,478 ³³
NWRC	188,242 ³¹	26,905	47,995	148,363	137,071 ³³
USGS Reston					
USGS Baton Rouge					
USGS Woods Hole	25,000	5,000			
Natl Park Service					
Total Interior	<u>598,612</u>	<u>462,511</u>	<u>522,844</u>	<u>599,013</u>	<u>601,549</u>
Dept of Agriculture	392,395 ²⁹	452,564	498,624	600,077	590,937 ³³
Dept of Commerce	407,257 ²⁹	520,585	540,030	561,306	570,350 ³³
Dept of the Army	891,366	1,178,701	1,201,075	1,251,929	1,171,199 ³³
Agency Total	<u>3,286,446</u>	<u>3,648,964</u>	<u>3,747,718</u>	<u>4,037,187</u>	<u>3,921,610</u>
<u>Feasibility Studies Funding</u>					
Barrier Shoreline Study					
WAVCIS (DNR)					
Study of Chenier Plain					
Miss R Diversion Study					
Total Feasibility Studies					
<u>Complex Studies Funding</u>					
Beneficial Use Sed Trap Below Venice (COE)					
Barataria Barrier Shoreline (NMFS)					
Diversion into Maurepas Swamp (EPA/COE)					
Holly Beach Segmented Breakwaters (DNR)					
Central & Eastern Terrebonne Basin					
Freshwater Delivery (USFWS)					
Delta Building Diversion Below Empire (COE)	46,700				
Total Complex Studies	<u>46,700</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

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	FY2002 Amount (\$)	FY2003 Amount (\$)	FY2004 Amount (\$)	FY2005 Amount (\$)	FY2006 Amount (\$)
Outreach					
Outreach	521,500	506,500	421,250	437,900	460,948
Supplemental Tasks					
Academic Advisory Group	239,450 ³⁰	100,000	99,000	99,000	99,000
Database & Web Page Link Maintenance	112,092	111,416	109,043	52,360	61,698
Linkage of CWPPRA & LCA	351,200	400,000	200,000	120,000	
Core GIS Support for Planning Activities		265,298	278,583	303,730	305,249
Oyster Lease GIS Database-Maint & Anal	124,500	64,479	88,411	98,709	103,066
Oyster Lease Program Mgmt & Impl			74,472		
Joint Training of Work Groups	25,000	97,988	50,000	30,383	
Terrebonne Basin Recording Stations	100,256	92,000	18,000		
Land Loss Maps (COE)			62,500	63,250	63,250
Storm Recovery Procedures (2 events)			76,360	97,534	97,534
Landsat Satellite Imagery		42,500			
Digital Soil Survey (NRCS/NWRC)	50,047				
GIS Satellite Imagery	42,223				
Aerial Photography & CD Production	75,000				
Adaptive Management	453,319	108,076			
Development of Oyster Reloc Plan	32,465	47,758			
Dist & Maintain Desktop GIS System	124,500				
Eng/Env WG rev Ph 2 of appr Ph 1 Prjs	40,580				
Evaluate & Assess Veg Plntgs Coastwide	88,466				
Monitoring - NOAA/CCAP ²³					
High Resolution Aerial Photography (NWRC)					
Coast-Wide Aerial Vegetation Svy					
Repro of Land Loss Causes Map					
Model flows Atch River Modeling					
MR-GO Evluation					
Monitoring -					
Academic Panel Evaluation					
Brown Marsh SE Flight (NWRC)					
Brown Marsh SW Flight (NWRC)					
COAST 2050 (DNR)					
Purchase 1700 Frames 1998					
Photography (NWRC)					
CDROM Development (NWRC)					
DNR Video Repro					
Gov's Office Workshop					
GIWW Data collection					
Total Supplemental	1,859,098	1,329,515	1,056,369	864,966	729,797
Total Allocated	5,713,744	5,484,979	5,225,337	5,340,053	5,112,355
Unallocated Balance	(713,744)	(484,979)	(225,337)	(340,053)	(112,355)
Total Unallocated	1,305,535	901,934	687,978	432,925	320,570

**Coastal Wetlands Planning, Protection and Restoration Act
Fiscal Year 2006 Budget Summary**

P&E Committee Recommendation, 25 August 2005

Tech Committee Recommendation, 19 October 2005

Task Force Approval, 2 November 2005

FY2002 Amount (\$)	FY2003 Amount (\$)	FY2004 Amount (\$)	FY2005 Amount (\$)	FY2006 Amount (\$)
-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Footnotes:

- ¹ amended 28 Feb 96
- ² \$700 added for printing, 15 Mar 96 (TC)
- ³ transfer \$600k from '97 to '98
- ⁴ transfer \$204k from MRSNFR TO Barrier Shoreline Study
- ⁵ increase of \$15.1k approved on 24 Apr 97
- ⁶ increase of \$35k approved on 24 Apr 97
- ⁷ increase of \$40k approved on 26 Jul 97 from Corps Planning Funds
- ⁸ Original \$550 in Barrier Shoreline Included \$200k to complete Phase 1 EIS, and \$350k to develop Phase 2 feasibility scope.
- ⁹ Assumes a total of \$420,000 is removed from the Barrier Shoreline Study over 2 years from Phase 1 EIS
- ¹⁰ Excludes \$20k COE, \$5k NRCS, \$5k DNR, \$2kUSFWS, and \$16k NMFS moved to Coast 2050 during FY 97 for contracts & @\$255k absorbed in agency FY 97 budgets for a total of \$303,000. to COAST2050 during FY 97 for contracts & @\$255k absorbed in agency FY 97 budgets for a total of \$303,000.
- ¹¹ Additional \$55,343 approved by Task Force for video documentary.
- ¹² \$29,765 transferred from DNR Coast 2050 to NWRC Coast 2050 for evaluation of Report.
- ¹³ \$100,000 approved for WAVCIS at 4 Aug 99 Task Force meeting. Part of Barrier Shoreline Study.
- ¹⁴ Task Force approved 4 Aug 99.
- ¹⁵ Task Force approved additional \$50,000 at 4 Aug 99
- ¹⁶ Carryover funds from previous FY's; this number is being researched at present.
- ¹⁷ \$600,000 given up by MRSNFR for FY 2000 budget.
- ¹⁸ Total cost is \$228,970.
- ¹⁹ Task Force approved FY 2000 Planning Budget 7 Oct 99 as follows:
 - (a) General Planning estimates for agencies approved.
 - (b) 75% of Outreach budget approved; Agency outreach funds removed from agency General Planning funds; Outreach Committee given oversight of agency outreach funds.
 - (b) 50% of complex project estimates approved.
- ²⁰ Outreach: original approved budget was \$375,000; revised budget \$415,000.
 - (a) 15 Mar 2000, Technical Committee approved \$8,000 increase Watermarks printing.
 - (b) 6 Jul 2000, Task Force approved up to \$32,000 for Sidney Coffee's task of implementing national outreach effort.
- ²¹ 5 Apr 2000, Task Force approved additional \$67,183 for preparation of report to Congress. \$32,000 of this total given to NWRC for preparation of report.
- ²² 6 Jul 00: Monitoring - Task Force approved \$30,000 for Greg Steyer's academic panel evaluation of monitoring program.
- ²³ Definition: Monitoring (NWRC) - NOAA/CCAP (Coastwide Landcover [Habitat] Monitoring Program
- ²⁴ 29 Aug 00: Task Force fax vote approves \$29,500 for NWRC for brown marsh southeastern flight
- ²⁵ 1 Sep 00: Task Force fax vote approves \$46,000 for NWRC for brown marsh southwestern flight
- ²⁶ 10 Jan 2001: Task Force approves additional \$113,000 for FY01.
- ²⁷ 30 May 01: Tech Comm approves 86,250 for Coast-Wide Aerial Vegetation Survey for LDNR; T.F. fax vote approves
- ²⁸ 7 Aug 2001: Task Force approves additional \$63,000 in Outreach budget for Barataria Terrebonne National Estuary Foundation Superbowl campaign proposal.
- ²⁹ 16 Jan 2002, Task Force approves \$85,000 for each Federal agency (except COE) for participation in LCA/Coast 2050 studies and collocation. Previous budget was \$45,795, revised budget is \$351,200, an increase of \$305,405. This task is a supplemental activity in each agency's General Planning budget.
- ³⁰ 2 Apr 02: LADNR requested \$64,000 be transferred from its General Planning budget to LUMCON for Academic Assistance on the Adaptive Management supplemental task.
- ³¹ 1 May 02: LADNR requested \$1,500 be transferred from their General Planning (activity ER 12010, Prepare Report to Congress) and given to NWRC for creation of a web-ready version of the CWPPRA year 2000 Report to Congress for printing process.
- ³² 16 Jan 2003: Task Force approves LDWF estimate that was not included in originally approved budget.
- ³³ 25 Jan 2006: FY2006 budget, \$98,250 for Report to Congress item added to approved budget

**Coastal Wetlands Planning, Protection and Restoration Act
Fiscal Year 2006 Budget Refinement**

Activity	P & E Recommends to Tech 25-Aug-05 Amount (\$) (1)	Tech Committee Recommends 19-Oct-05 Amount (\$) (2)	Task Force Approves 2-Nov-05 Amount (\$) (3)	Tech Comm Recommends Rpt to Cong 7-Dec-05 Amount (\$) (4)	Amount (\$) (5)
General Planning & Program Participation (does not include Supplemental Activities)					
State of Louisiana					
DNR	383,677	383,677	383,677	386,677	
Gov's Ofc	86,500	86,500	86,500	87,500	
LDWF	73,598	73,598	73,598	73,598	
Total State	543,775	543,775	543,775	547,775	
EPA	438,800	438,800	438,800	439,800	
Dept of the Interior					
USFWS	458,478	458,478	458,478	464,478	
NWRC	62,071	62,071	62,071	137,071	
USGS Reston					
USGS-B.R.					
USGS-Woods Hole					
NPS					
Total Interior	520,549	520,549	520,549	601,549	
Dept of Agriculture	587,937	587,937	587,937	590,937	
Dept of Commerce	567,100	567,100	567,100	570,350	
Dept of the Army	1,165,199	1,165,199	1,165,199	1,171,199	
Agency Total	3,823,360	3,823,360	3,823,360	3,921,610	
Supplemental Tasks					
Academic Advisory Group	99,000	99,000	99,000	99,000	
Maint of Web-Based Project Reports	61,698	61,698	61,698	61,698	
Linkage of CWPPRA and LCA					
Core GIS Support for Planning Activities	305,249	305,249	305,249	305,249	
Oyster Lease Database Maint & Analysis	103,066	103,066	103,066	103,066	
Oyster Lease Program Mgmt & Impl					
Joint Training					
Terr Basin Recording Stations					
Update Landloss Maps	63,250	63,250	63,250	63,250	
Storm Recovery Procedures (2 events)	97,534	97,534	97,534	97,534	
Independent Consultant-Review Process					
Oyster Relocation Plan					
Bob Morton Subsidence Investigation					
High Resolution Satellite					
Landsat Satellite Imagery					
Subtotal Supplemental	729,797	729,797	729,797	729,797	

**Coastal Wetlands Planning, Protection and Restoration Act
Fiscal Year 2006 Budget Refinement**

Activity	P & E Recommends to Tech 25-Aug-05 Amount (\$) (1)	Tech Committee Recommends 19-Oct-05 Amount (\$) (2)	Task Force Approves 2-Nov-05 Amount (\$) (3)	Tech Comm Recommends Rpt to Cong 7-Dec-05 Amount (\$) (4)	Amount (\$) (5)
Outreach					
Outreach Committee	460,948	460,948	460,948	460,948	
Agency Participation: USACE					
Agency Participation: USFWS					
Agency Participation: NWRC					
Agency Participation: DNR					
Agency Participation: Ofc of Gov					
Agency Participation: EPA					
Agency Participation: NRCS					
Agency Participation: NMFS					
Agency Administration: NWRC					
Dedications Support (no helicopters)					
Helicopter Overflights for Special events (no dedications)					
Outreach Committee Operations Budget:					
Outreach Coordinator - Gabrielle Bodin					
Watermarks					
LaCoast Internet Home Page					
Outreach Assistant/Interpretive Specialist					
Printing, Video, & Graphics Support					
Conference/Exhibit Support					
Travel					
Product Reproduction					
Contractural Support for Outreach Dist					
Awareness Poster Development (COE)					
Broadcast Quality B-roll Aerial Video					
Project Sign Development (NRCS)					
Contract Writer (USGS)					
New Initiative-Science of Rest Video/CD					
New Initiative-					
New Initiative-					
and Values CD					
Subtotal - Outreach	460,948	460,948	460,948	460,948	
Total Allocated	5,014,105	5,014,105	5,014,105	5,112,355	
Unallocated Balance	(14,105)	(14,105)	(14,105)	(112,355)	5,000,000
Total Unallocated	418,820	418,820	418,820	320,570	5,432,925
(Carryover = \$432,925)					
\$432,925					

Report to Congress Funding History									
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FY	Total	COE	DNR	Ofc of Gov	FWS	NWRC	EPA	USDA	NMFS
FY 1996	\$39,610	\$4,437	\$31,903		\$1,151			\$2,119	
FY 1997	\$61,331	\$4,348	\$31,903		\$3,914	\$5,707	\$5,660	\$3,628	\$6,171
FY 1998	\$21,930		\$10,691		\$1,223			\$3,519	\$6,497
FY1999	\$44,396		\$22,001		\$2,038	\$10,652	\$498	\$2,696	\$6,511
FY 2000	\$85,832	\$1,995	\$71,250		\$1,494	\$1,425	\$1,907	\$3,932	\$3,829
FY 2001	\$10,695	\$3,000			\$839		\$2,007	\$2,031	\$2,818
FY 2002	\$69,238	\$3,000	\$36,468	\$5,000		\$3,550	\$800	\$7,247	\$13,173
FY 2003	\$96,837	\$9,938	\$61,615	\$8,500		\$2,157	\$800	\$7,627	\$6,200
FY 2004	\$0								
FY 2005	\$10,000		\$10,000						
Total	\$439,869	\$26,718	\$275,831	\$13,500	\$10,659	\$23,491	\$11,672	\$32,799	\$45,199

**Decision: Request for additional Phase I funds for the South Lake DeCade TE-39
Project**

Monnerjahn, Christopher J MVN

From: Broussard, Loland - Lafayette, LA [Loland.Broussard@la.usda.gov]
Sent: Tuesday, November 29, 2005 3:09 PM
To: Monnerjahn, Christopher J MVN
Cc: Paul, Britt - Alexandria, LA; LeBlanc, Julie Z MVN; Jurgensen, John - Alexandria, LA; Browning, Gay B MVN; Gallipeau, Mitzi - Alexandria, LA
Subject: RE: TE-39 S Lake Decade Cost Increase Request

I sent the wrong spreadsheet. [Here's a prettier version!](#) Please replace previous one sent.

Loland

From: Broussard, Loland - Lafayette, LA
Sent: Tuesday, November 29, 2005 3:02 PM
To: Monnerjahn, Christopher J MVN
Cc: Paul, Britt - Alexandria, LA; LeBlanc, Julie Z MVN; Jurgensen, John - Alexandria, LA; 'Browning, Gay B MVN'; Gallipeau, Mitzi - Alexandria, LA
Subject: RE: TE-39 S Lake Decade Cost Increase Request

Chris,

As per Gay's review and comments noted below, please modify NRCS's request for additional Phase 1 funding for the TE-39 South Lake Decade Project to \$175,000. The attached spreadsheet can be used as our basis for justification.

Thanks,
Loland

From: Browning, Gay B MVN [mailto:Gay.B.Browning@mvn02.usace.army.mil]
Sent: Friday, November 18, 2005 4:58 PM
To: Broussard, Loland - Lafayette, LA; Monnerjahn, Christopher J MVN
Cc: Paul, Britt - Alexandria, LA; LeBlanc, Julie Z MVN; Jurgensen, John - Alexandria, LA
Subject: RE: TE-39 S Lake Decade Cost Increase Request

All - I took Loland's spreadsheet and tried to only focus on Phase I to get some idea of what your estimate will be. I think I kept only the Phase I numbers, but ya'll will have to verify. My bottom line need shows that you need a little less than your estimate. It was quick and dirty, and ya'll know more about the details, but it was my stab at it.

Gay

-----Original Message-----

From: Broussard, Loland - Lafayette, LA [mailto:Loland.Broussard@la.usda.gov]
Sent: Friday, November 18, 2005 3:04 PM
To: Monnerjahn, Christopher J MVN
Cc: Paul, Britt - Alexandria, LA; LeBlanc, Julie Z MVN; Browning, Gay B MVN; Jurgensen, John - Alexandria, LA
Subject: TE-39 S Lake Decade Cost Increase Request

Chris,

In a previous email, John Jurgensen requested that an additional item be placed on the Technical Committee agenda concerning a budget increase for the TE-39 South Lake Decade Project. Attached is a spreadsheet Gay

provided to me last year that I modified to reflect various cost information for the project. Note that the increase NRCS is requesting will be for Phase 1 items E&D, Fed S&A, and State S&A in the amount of \$193,065.

I will be on leave all next week, therefore if you or Gay have any questions regarding this request, contact John or Mitzi in Alexandria.

Thanks & Have a great Thanksgiving Holiday,
Loland

Report: Status of Breaux Act Program and Project Funds

Potential Funding Requests for 25 January 2006 Task Force				6-Dec-05
<i>Last Updated: 6 Dec 2006</i>				
	Total	Total	Fed	Non-Fed
Funds Available:				
Funds Available, 1 Dec 2005		(5,451,655)	(5,451,655)	
FY06 Const Program Funding (anticipated)		68,305,465	58,059,645	10,245,820
Total	62,853,810	62,853,810	52,607,990	10,245,820
January 2006 Phase I Requests:				
Bayou Lamoque Freshwater Diversion		1,205,354	1,024,551	180,803
Lake Hermitage Marsh Creation		1,197,590	1,017,952	179,639
Venice Ponds Marsh Creation and Crevasses		1,074,522	913,344	161,178
South Terrebonne Terracing		1,243,192	1,056,713	186,479
Bird Island/Southwest Pass Marsh Creation & SP		1,470,115	1,249,598	220,517
South Pecan Island Freshwater Introduction		1,102,043	936,737	165,306
Total	7,292,816	7,292,816	6,198,894	1,093,922
January 2006 Phase II Incr 1 Requests:				
Barataria Basin LB, Phase 3, CU 7		15,742,430	13,381,066	2,361,365
Castille Pass		10,529,752	8,950,289	1,579,463
Dedicated Dredging on Bara Basin LA		31,000,584	26,350,496	4,650,088
East Grand Terre		27,311,634	23,214,889	4,096,745
Freshwater Bayou Canal		14,204,558	12,073,874	2,130,684
GIWW Bank Restoration		25,336,578	21,536,091	3,800,487
Grand Lake		14,198,931	12,069,091	2,129,840
Lake Borgne & MRGO SP - Total **		30,708,143	26,101,922	4,606,221
Lake Borgne & MRGO SP - Lake Borgne		13,799,702	11,729,747	2,069,955
Lake Borgne & MRGO SP - MRGO		16,898,695	14,363,891	2,534,804
Lake Borgne Combined		16,622,590	14,129,202	2,493,389
Pass Chaland to Grand Bayou Pass		26,904,301	22,868,656	4,035,645
Rockefeller Refuge		7,625,145	6,481,373	1,143,772
Ship Shoal: Whiskey West Flank		38,909,247	33,072,860	5,836,387
South Lake DeCade - CU1		2,243,910	1,907,324	336,587
West Lake Boudreaux		14,654,600	12,456,410	2,198,190
Total	275,982,657	275,982,657	234,585,258	41,397,399
	Shortfall	(220,421,663)		
** The Lake Borgne & MRGO Shoreline Protection -Total project is not included in the total line; only 2 subprojects.				

TECHNICAL COMMITTEE FUNDING TALLY SPREADSHEET		7 Dec 05	
	Project Cost (Fed + non-Fed)	Approved? (enter "Y")	TALLY of Remaining Funds (Fed + non-Fed)
Funds Available:			
Funds Available, 1 Dec 2005			-\$5,451,655
FY06 Const Program Funding (anticipated)			\$68,305,465
Agenda Item 2 - Ph 1 incr for S Lk DeCade	\$175,000		\$0
Agenda Item 4 - Phase I Requests:			
Bayou Lamoque Freshwater Diversion	\$1,205,354		\$0
Lake Hermitage Marsh Creation	\$1,197,590		\$0
Venice Ponds Marsh Creation and Crevasses	\$1,074,522		\$0
South Terrebonne Terracing	\$1,243,192		\$0
Bird Island/Southwest Pass Marsh Creation & SP	\$1,470,115		\$0
South Pecan Island Freshwater Introduction	\$1,102,043		\$0
Agenda Item 4 - Phase I Requests - DEMOS:			
Enter Demo Project Name	Enter Cost		\$0
Enter Demo Project Name	Enter Cost		\$0
Agenda Item 5 - Phase II Incr 1 Requests:			
Barataria Basin LB, Phase 3, CU 7	\$15,742,430		\$0
Castille Pass	\$10,529,752		\$0
Dedicated Dredging on Bara Basin LA	\$31,000,584		\$0
East Grand Terre	\$27,311,634		\$0
Freshwater Bayou Canal	\$14,204,558		\$0
GIWW Bank Restoration	\$25,336,578		\$0
Grand Lake	\$14,198,931		\$0
Lake Borgne & MRGO SP - Total	\$23,397,360		\$0
Lake Borgne & MRGO SP - Lake Borgne	\$12,921,217		\$0
Lake Borgne & MRGO SP - MRGO	\$15,122,227		\$0
Lake Borgne Combined	\$16,622,590		\$0
Pass Chaland to Grand Bayou Pass	\$26,904,301		\$0
Rockefeller Refuge	\$7,625,145		\$0
Ship Shoal: Whiskey West Flank	\$38,909,247		\$0
South Lake DeCade - CU1	\$2,243,910		\$0
West Lake Boudreaux	\$14,674,317		\$0
REMAINING FUNDS			\$62,853,810

Decision: PPL 15 Candidate and Demonstration Projects

Priority Project List Number 15

Candidate Projects



Public Meetings -- November 2005

Abbeville

Houma

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The 15th Priority List Planning Process

- Citizens nominated 11 projects across the Louisiana coastal zone at Regional Planning Team (RPT) meetings held in February 2005.
- At the direction of the CWPPRA Task Force, the Technical Committee selected 6 candidate projects for detailed evaluation on March 16, 2005.
- Interagency project site visits were conducted with the participation of interested landowners and local government representatives during the spring and early summer.
- Members of the Environmental and Engineering Workgroups met to review project features, aerial videotapes, and field notes to determine project boundaries.
- Environmental Workgroup conducted Wetland Value Assessments (WVA) on each candidate project to estimate environmental benefits.
- Engineering Workgroup reviewed designs and cost estimates for each project.
- The work groups met jointly to prioritize the candidate projects.
- Economics Workgroup projected fully funded costs to construct, monitor and maintain each candidate project.
- Hold public meetings to present project evaluation results.
- On December 7, 2005, the Technical Committee will review project evaluation results and develop a recommendation to the Task Force for project selection.
- The CWPPRA Task Force will select the 15th Priority Project List on January 25, 2006.

Bayou Lamoque Freshwater Diversion

Coast 2050 Strategies:

- Coastwide-Restore/sustain marshes
- Regional-Restore natural drainage patterns, gap spoil banks and plug canals in lower bay marshes

Project Location: Region 2, Breton Sound Basin, Plaquemines Parish, American Bay Mapping Unit, along the east bank of the Mississippi River approx. 3.4 miles north of Empire across from “Sixty-mile Point.”

Problem: Wetland loss rates are low, probably due to beneficial effects of occasional opening of the Bayou Lamoque structures, influence from the mouth of the Mississippi River, and possibly, stabilizing effect of being on the flanks of the Mississippi River natural levee. Two large freshwater diversion structures are located here. One was built in 1955 and is capable of diverting 4,000 cubic feet per second (cfs). The other was built in 1978 and is capable of diverting 8,000 cfs. Structures were operated periodically by the Louisiana Department of Wildlife and Fisheries until 1994. Neither structure is officially used any longer because of repair and operation issues and the lack of an interagency management plan. The structures are being operated “unofficially” to some extent, but it is not known how much. This proposed project area is best viewed not as having a problem, but as representing an opportunity to actually create new land by diverting Mississippi River water.

Goals: Achieve the following within 20 years, by continuously diverting up to 13,000 cfs (average 2500 cfs) of Mississippi River water into Bayou Lamoque, and by improving the distribution of diverted water in the benefit area by strategically gapping spoil banks along Bayou Lamoque: 1) Create approximately 620 acres of new marsh; 2) Increase the percent cover of aquatic vegetation in interior marsh ponds and channels; 3) Increase the area of shallow open water habitat in the project area; 4) Decrease mean salinity in the project area

Proposed Solution:

- 1) Repair the Bayou Lamoque freshwater diversion structures through the removal of the gates and their mechanical operating systems to allow free-flowing diversion at the maximum capacity of both structures;
- 2) Construct gaps in the natural levee ridges or spoil banks on Bayou Lamoque at strategic locations to facilitate distribution of diverted water and to promote the accretion of new wetlands through the deposition of diverted river sediments;

Project Benefits: The project would benefit approximately 9,435 acres of intermediate marsh, brackish marsh, and open water habitats. Approximately 620 acres of marsh would be created/protected over the 20-year project life.

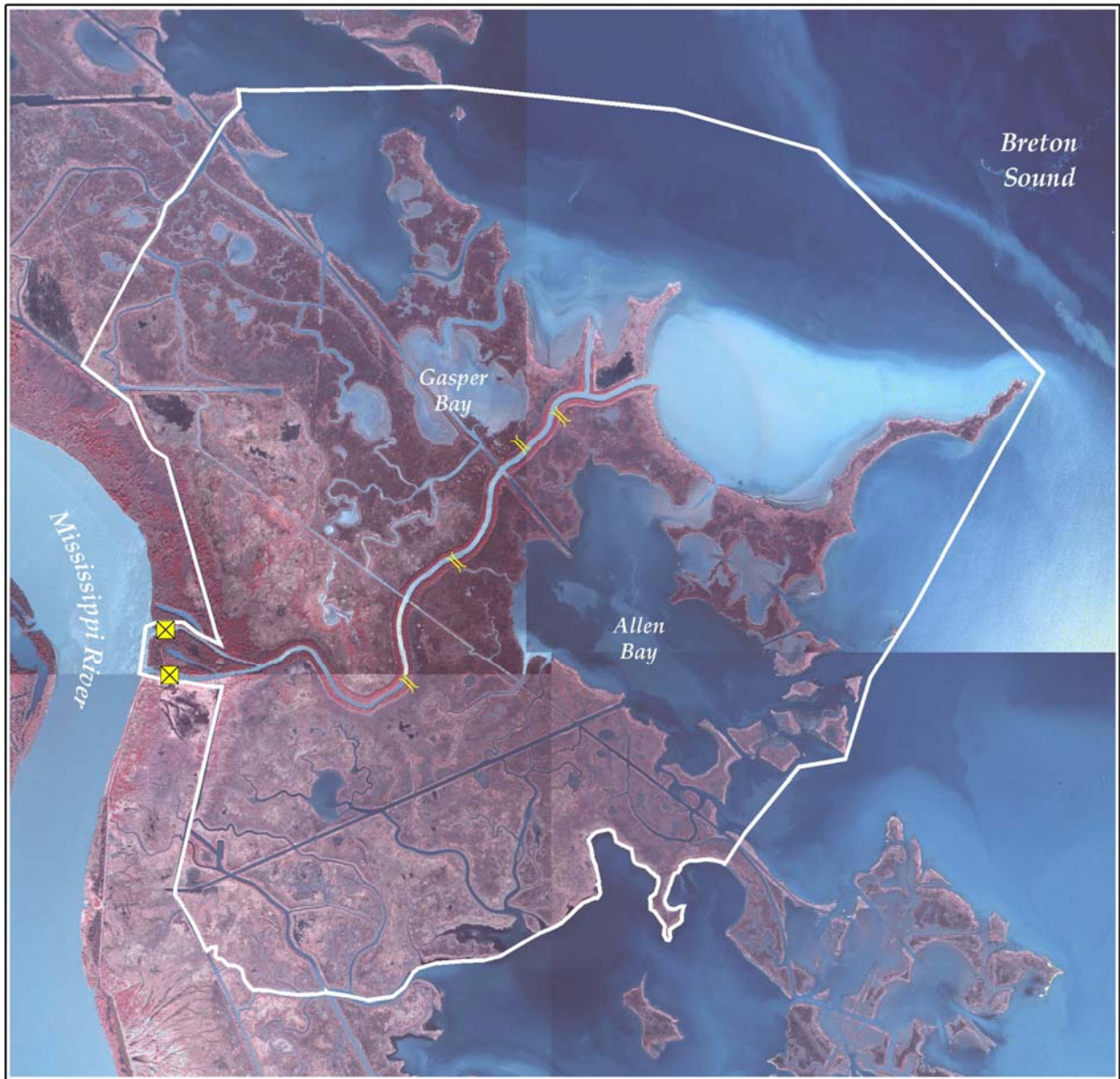
Project Costs: The total fully funded cost for the project is \$5,375,741.

Preparers of Fact Sheet:

Kenneth Teague, EPA, (214) 665-6687, Teague.Kenneth@epamail.epa.gov

Chris Monnerjahn, USACE, (504) 862-2415, Christopher.J.Monnerjahn@mvn02.usace.army.mil

Greg Miller, USACE, (504) 862-2310, Gregory.B.Miller@mvn02.usace.army.mil



Bayou Lamoque Freshwater Diversion (PPL15 Project Candidate)



-  Gate Removal
-  Spoil Bank Gapping
-  Project Boundary

* denotes proposed features



Scale 1:49,500



Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, LA

Map ID: USGS-NWRC 2005-11-0264
Map Date: July 7, 2005

Image Source:
2004 Digital Orthophoto Quadrangle

Lake Hermitage Marsh Creation

Coast 2050 Strategies:

- Coastwide: Dedicated dredging to create, restore, or protect wetlands
- Coastwide: Off-shore and riverine sand and sediment resources
- Coastwide: Maintenance of Gulf, bay and lake shoreline integrity

Project Location: Region 2, Barataria Basin, Plaquemines Parish, West Point a la Hache Mapping Unit, south and east of Lake Hermitage

Problem: From 1932 to 1990, the West Point a la Hache Mapping Unit lost 38% of its marsh. Through 2050, 28% of the 1990 marsh acreage is expected to be lost. That loss is expected to occur even with operation of the West Point a la Hache Siphon and implementation of the West Point a la Hache Outfall Management Project. Significant marsh loss has occurred south and east of Lake Hermitage and along the eastern lake shoreline. Deterioration of the lake rim will expose interior marshes to the wave energy of Lake Hermitage and increase tidal exchange.

Goals: The goals of this project are to create approximately 593 acres of wetlands, reduce tidal exchange in marshes surrounding Lake Hermitage, and reduce fetch and turbidity to enhance open water habitats.

Proposed Solution:

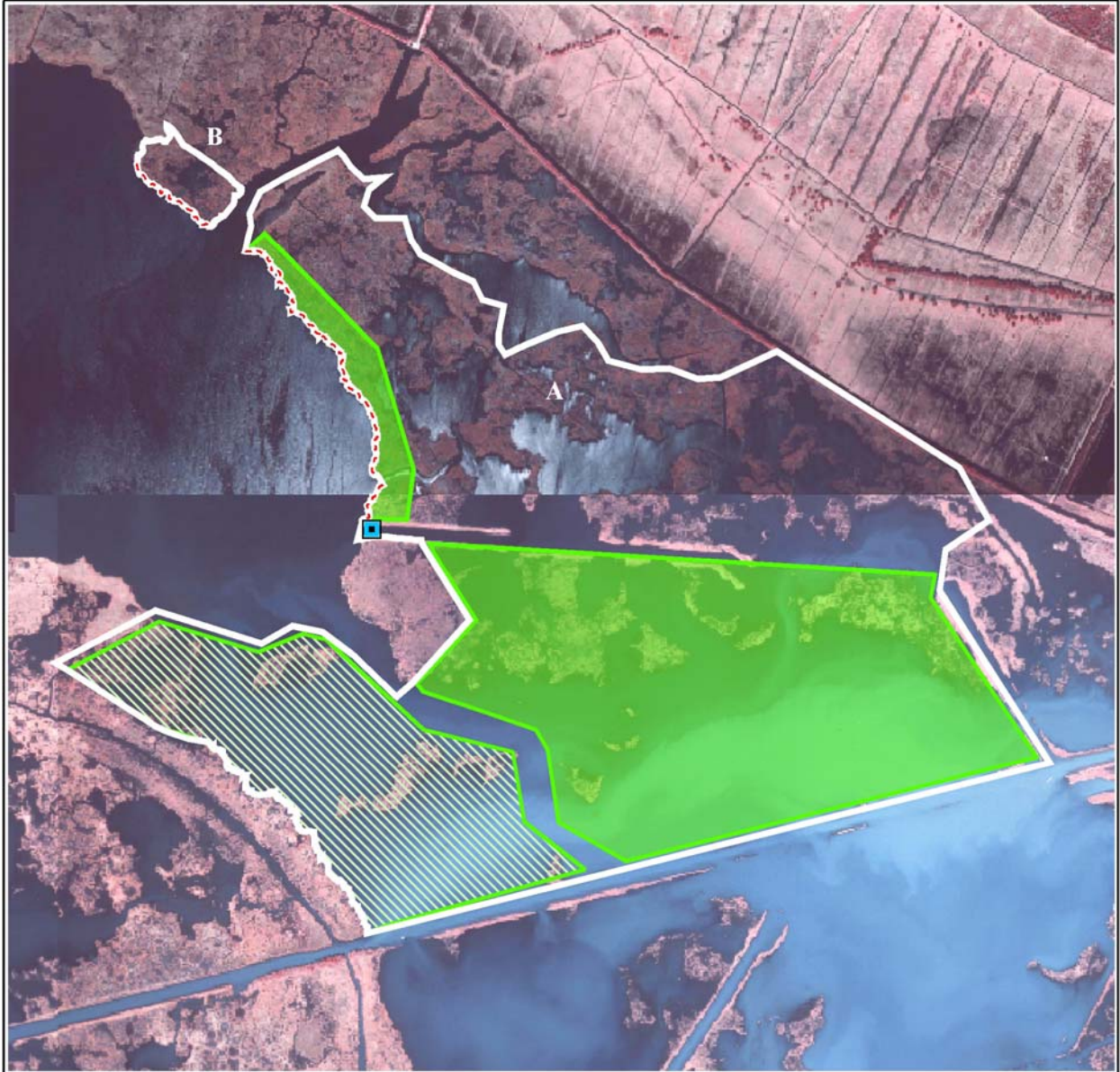
1. Riverine sediments will be hydraulically dredged and pumped via pipeline to create approximately 593 acres of marsh in the project area.
2. Approximately 25,000 linear feet of terraces (16 acres) will be constructed to reduce fetch and turbidity and promote submerged aquatic vegetation.
3. Approximately 6,000 linear feet of rock dike will be constructed along the eastern Lake Hermitage shoreline.
4. An earthen plug will be constructed on an oil and gas canal to return tidal exchange to natural waterways within the project area.

Project Benefits: The project would benefit approximately 1,581 acres of brackish marsh and open water habitats. Approximately 438 acres of marsh would be created/protected over the 20-year project life.

Project Costs: The total fully funded project cost is \$32,673,327.

Preparer of Fact Sheet:

Kevin Roy, U.S. Fish and Wildlife Service, (337) 291-3120, kevin_roy@fws.gov



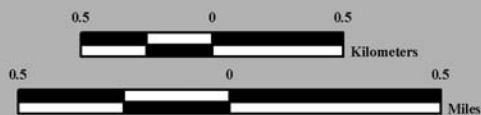
Lake Hermitage Marsh Creation (PPL15 Project Candidate)



-  Plug *
-  Terracing *
-  Shoreline Protection *
-  Marsh Creation *

 Project Boundary

* denotes proposed features



Scale 1:26,000



Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, LA

Map ID: USGS-NWRC 2005-11-0250
Map Date: June 17, 2005

Image Source:
2004 Digital Orthophoto Quarter Quadrangles

Venice Ponds Marsh Creation and Crevasses

Coast 2050 Strategies:

- Coastwide: Dedicated dredging to create, restore, or protect wetlands.
- Coastwide: Off-shore and Riverine Sand and Sediment Resources.

Project Location: Region 2, Mississippi River Delta Basin, Plaquemines Parish, south of Venice, Louisiana, adjacent to the Red, Tiger, and Grand Passes.

Problem: Between 1932 and 1974, the mapping unit lost 38,400 acres of the original 59,640 acres of marsh as a result of subsidence, tropical storm activity, canal creation and maintenance and hydrologic modification. Between 1974 and 1990 another 13,260 acres of land had been lost (LCWCRTF & WRCA 1998b). It is estimated that without restoration efforts over 91% of the remaining land would be lost by the year 2050. The project would create marsh in open water areas that were nearly solid wetlands in 1956 by construction of crevasses and performing dedicated dredging.

Goals: The goals of the project are to create, maintain, nourish, and replenish existing deteriorating wetlands through dedicated dredging, hydrologic restoration, crevasse construction, and crevasse enhancement.

Proposed Solution:

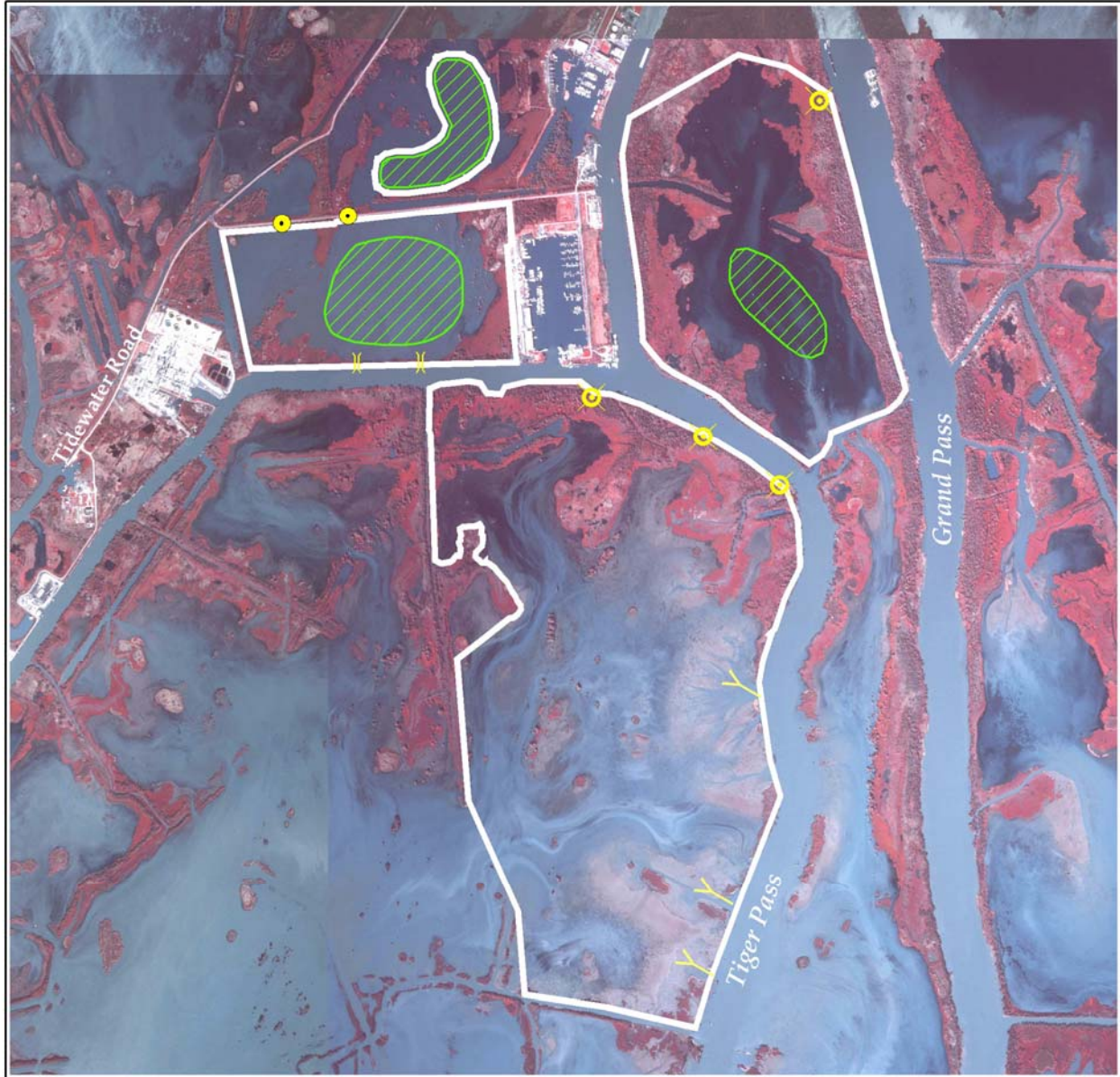
1. 178 acres of marsh will be created in Sites 1, 2 and 3 (see Project Map) by hydraulically dredging material from Grand and Tiger Passes. The target elevation after one year in the Sites will be a maximum of +2.5 ft. NAVD88 and a minimum of +0.5 ft. NAVD88. The marsh creation areas will be pumped unconfined into the open water areas identified in Sites 1, 2, and 3. Existing marsh boundaries will also aid in the retention of dredged material and re-establishment of marsh habitat.
2. Four crevasses, one into Site 3 and three into Site 4, will convey the sediment laden waters of Grand and Tiger Passes into the benefit areas.
3. Four existing crevasses off of Tiger Pass that discharge into Site 4 will be improved through bifurcation dredging.
4. Two sets of 2-36" diameter culverts will be installed under Venice Marina Road thereby increasing the hydrologic connection between Sites 1 and 2.
5. Two gaps will be installed between Pass Tante Phine and Site 2 thereby increasing hydrologic connectivity.

Project Benefits: The project would benefit approximately 1,944 acres of fresh marsh and open water. Approximately 511 acres of marsh would be created/protected over the 20-year project life.

Project Costs: The total fully funded cost for the project is \$8,992,955.







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**Venice Ponds Marsh Creation and Crevasses
(PPL15 Project Candidate)**

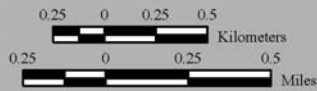


-  Crevasse Enhancement *
 -  Crevasse *
 -  Culvert *
 -  Gap *
 -  Marsh Creation *
 -  Project Boundary
- * denotes proposed features



Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, LA

Map ID: USGS-NWRC 2005-11-0318
Map Date: August 12, 2005



Scale 1:33,230

Image Source:
2004 Digital Orthophoto Quadrangle

South Terrebonne Terracing

Coast 2050 Strategy:

- Terracing; Maintain marshes along Timbalier Bay

Project Location: Region 3, Terrebonne Parish; Madison Bay, Bayou Terrebonne, and Lake Boudreaux

Problem: These areas have experienced tremendous wetland loss due to a variety of forces including subsidence, saltwater intrusion, a lack of sediment supply, and oil and gas activities. The proposed project would re-establish marsh and some bay edge habitat. Loss rates range from $-0.41\%/yr$ to $-4.9\%/yr$ for the project subareas. The Boudreaux and Montegut mapping units have a 1.1 to 2.0 ft/century subsidence rate. Loss rates based on newer analyses of both aerial infrared photography and satellite imagery and evaluation of sediment cores support rapid loss predominantly caused by subsidence.

Goals: Project goals include creating emergent marsh and associated edge habitat and reduce the wave erosion of marshes along the fringes of Lake Boudreaux, Lake Quitman, and Madison Bay by constructing terraces and secondarily promote conditions more conducive to the colonization of submerged aquatic vegetation (SAV) than presently exist. Specific phase 0 goals include constructing approximately 113,340 ft of terraces, which would create a net of 60 acres of intertidal, and supratidal marsh elevations from the terraces and reducing shoreline erosion would protect 20 acres of existing marsh. Lastly, the percent cover of SAV is projected to increase in the project area.

Proposed Solution: Based on the survey information obtained, areas with an average water depth of 3.0 ft or less were targeted. Approximately 95,340 ft of small or interior terraces would be constructed and 18,000 ft of large or exterior terraces would be constructed near Madison Bay, Bayou Terrebonne, and Lake Boudreaux. The terraces would have a 1:4 side slope, an initial height of +4.0 ft NAVD88, and a settled height of +2.5 ft NAVD88. The small terraces would have 10 ft crown and the large terraces would have a 25 ft crown. The terraces would be planted with four rows of smooth cordgrass (i.e., 2 rows per side) and 2 rows of marshhay cordgrass on the crown. Sufficient funds are included in the cost estimate for replacement of 30% of the original terrace volumes at target year 14.

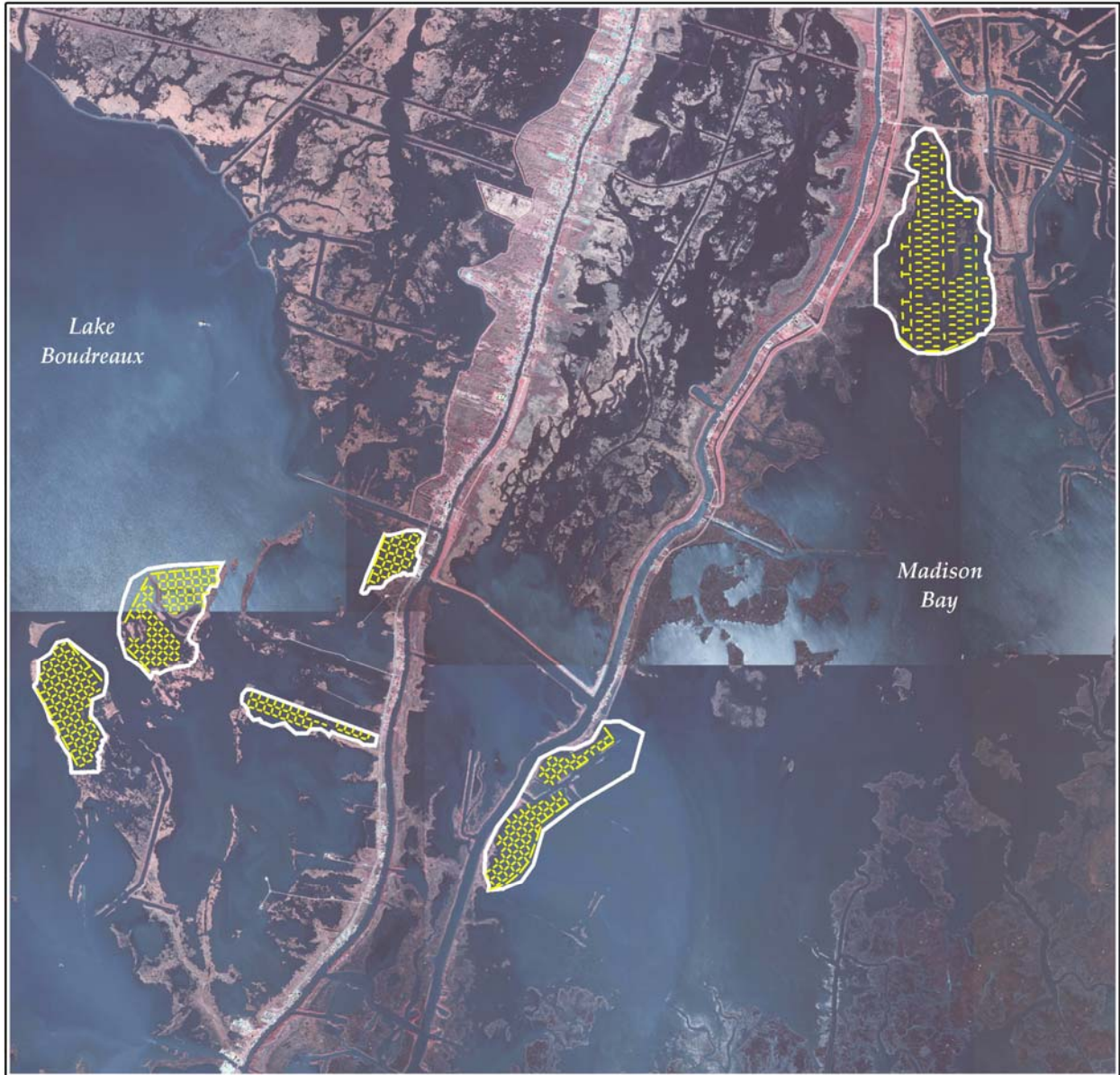
Project Benefits: The project would benefit approximately 1,369 acres of brackish marsh, saline marsh, and open water habitats. Approximately 80 acres of marsh would be created/protected over the 20-year project life.

Project Costs: The total fully funded cost for the project is \$7,477,864.

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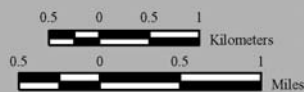


South Terrebonne Terracing (PPL15 Project Candidate)



- Terracing *
- Project Boundary

* denotes proposed features



Scale 1:68,000



Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, LA

Map ID: USGS-NWRC 2005-11-0267
Map Date: July 05, 2005

Image Source:
2004 Digital Orthophoto Quarter Quadrangle

Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

Coast 2050 Strategies:

- Maintain shoreline integrity and stabilize critical areas of Teche-Vermilion Bay systems including the gulf shorelines.
- Dedicated delivery of sediment for marsh building by any feasible means.

Project Location: Region 3, Teche/Vermilion Basin, between the Marsh Island Wildlife Refuge in Iberia Parish, and Paul J. Rainey Wildlife Sanctuary in Vermilion Parish.

Problem: The shorelines associated with Lighthouse Point and Southwest Point have an average erosion rate of 13.5 feet per year and 9.5 feet per year respectively. This is reducing the ability of those landmasses to maintain a mainland barrier against gulf storm surges, wave energies, and tidal fluctuations. An existing colonial wading bird rookery (Bird Island) located north of Tojan Island within Southwest Pass has also sustained severe subsidence and erosion. Such impacts have reduced that island's effectiveness in providing nesting habitat for wading birds. Shoreline erosion of the Tojan Island land mass in combination with interior north/south oriented tidal creeks increase the vulnerability of the island to withstand storm surges which threaten the peninsula's integrity.

Goals: The project goals are to protect and stabilize critical points within Southwest Pass and create wildlife habitat associated with emergent marsh.

Proposed Solution: The shoreline protection would consist of armored shoreline protection with onshore revetment at Southwest Point along the south shoreline of Vermilion Bay (8,759 linear ft), and a foreshore rock dike at the north shoreline of the Gulf of Mexico at Lighthouse Point (4,619 linear ft). The foreshore rock dike would be constructed near and parallel to the existing shoreline. Marsh creation would provide additional stabilization to this area and would be accomplished by hydraulically dredging material to an elevation that would settle at marsh height on Tojan Island, and one foot above marsh height on the New Bird Island.

Project Benefits: The project would benefit approximately 149 acres of brackish marsh and open water. Approximately 133 acres of marsh would be created/protected over the 20-year project life.

Project Costs: The total fully funded cost for the project is \$17,765,314.

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**Bird Island/Southwest Pass
Marsh Creation and Shoreline Protection
(PPL15 Project Candidate)**



- Shoreline Protection*
- Retention Levee*
- Tidal Creeks*
- Possible Island Location*
- Marsh Creation *
- Project Boundary

* denotes proposed features



Scale 1:40,000



Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, LA

Map ID: USGS-NWRC 2005-11-0204
Map Date: June 1, 2005

Image Source:
2004 Digital Orthophotographic Quarter Quadrangles

South Pecan Island Freshwater Introduction

Coast 2050 Strategies:

- Move water from north to south across Highway 82 with associated drainage improvements south of Highway 82.
- Maintain Lake's Subbasin target water level.

Project Location: Region 4, Mermentau Basin, Vermilion Parish, Conveyance channel from White Lake under LA Highway 82 into CWPPRA Pecan Island Terracing Project (ME-14).

Problem: The Chenier Subbasin south of Hwy 82 has been experiencing saltwater intrusion due to lack of freshwater and sediment input from the Lakes Subbasin north of Hwy 82, while north of the highway water is retained. Although culverts were installed in some areas along the highway during construction, those have filled in over the years and recent attempts to restore hydrology have been isolated.

Goals: Provide freshwater flow over 200cfs to 7,000 acres for at least 3 months/year, and create 98 acres of marsh.

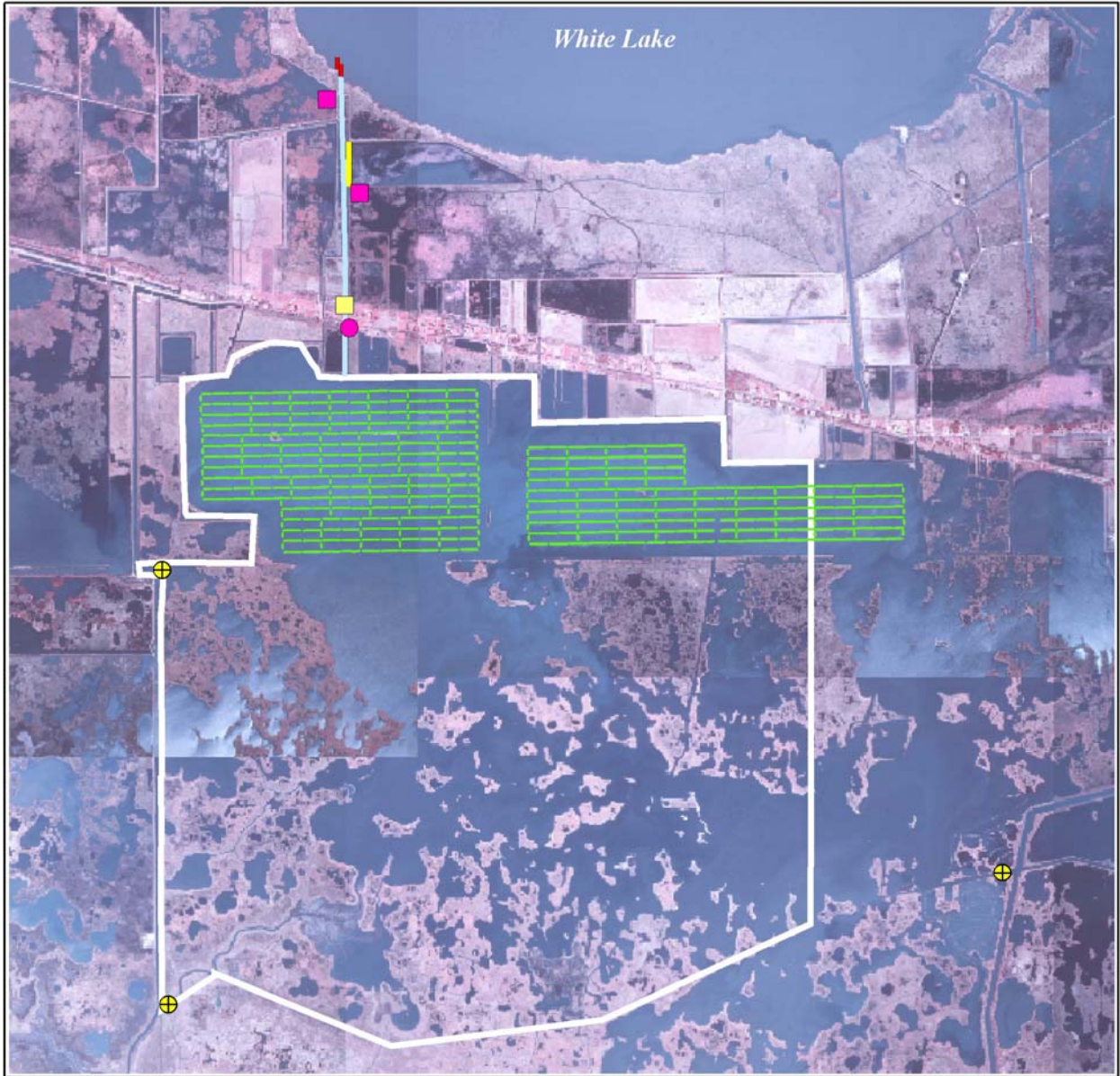
Proposed Solution: The project would be constructed to allow excess freshwater to drain, while preventing saltwater intrusion into the Lakes Subbasin. At Hwy 82, four 48" pipes would be installed with south facing flap gates to allow freshwater and sediment introduction from White Lake into the marsh south of Hwy 82. To prevent erosion, 200 ft on each side of the new structure would be rock armored. An existing 7,000 linear ft channel north of HWY 82 would be excavated approximately 4 ft with a 25 ft bottom width (40 ft top width). The excavated material would be used to build a 1,300 ft section of bank needed along the northeast portion of the channel, and to refurbish existing banks. An existing plug would be removed at White Lake and rock armoring installed at the entrance. A pump would be relocated and an additional pump installed to maintain the landowners existing drainage needs that would be affected by the conveyance channel.

Project Benefits: The project would benefit approximately 7,005 acres of brackish marsh, submerged aquatic vegetation, and open water. Approximately 98 acres of marsh would be created over the 20-year project life.

Project Costs: The total fully funded cost for the project is \$4,438,695.

Preparer of Fact Sheet:

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South Pecan Island Freshwater Introduction (PPL15 Project Candidate)



- Existing Pump
- Pumps *
- Culvert Enlargement*
- ⊕ Existing Water Control Structure
- ⚡ Armored Opening*
- ⚡ Conveyance Channel *
- ⚡ Containment Dike *
- ⚡ Existing Terrace
- Project Boundary

* denotes proposed features



Scale 1:52,500



Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, LA

Image Source:
2004 Digital Orthophoto Quarter Quadrangles

Map ID: USGS-NWRC 2005-11-0313
Map Date: August 5, 2005

DEMONSTRATION PROJECTS

Section 303(a) of the CWPPRA states that in the development of Priority Project List, “. . . [should include] due allowance for small-scale projects necessary to demonstrate the use of new techniques or materials for coastal wetlands restoration.”

The CWPPRA Task Force on April 6, 1993, stated that: “The Task Force directs the Technical Committee to limit spending on demonstration projects to \$2,000,000 annually. The Task Force will entertain exceptions to this guidance for projects that the Technical Committee determines merit special consideration. The Task Force waives the cap on monitoring cost for demonstration projects.”

What constitutes a demonstration project:

1. Demonstration projects contain technology that has not been fully developed for routine application in coastal Louisiana or in certain regions of the coastal zone.
2. Demonstration projects contain new technology, which can be transferred to other areas of the coastal zone.
3. Demonstration projects are unique and are not duplicative in nature.

PPL 15 Demonstration Project Candidates

The following proposed demonstration projects were evaluated for the 15th Priority Project List.

- Enhancement of Barrier Island and Salt Marsh Vegetation Demonstration Project
- Barrier Island Sand Blowing Demonstration Project
- Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging Demonstration Project
- Dredge Containment System for Marsh Creation Demonstration Project
- Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demonstration Project
- Thin Layer Dredge Disposal Demonstration Project
- Floating Wave Attenuator System Demonstration Project
- HESCO Concertainer Baskets for Shoreline Protection Demonstration Project
- Lake Pontchartrain Shoreline Protection and Habitat Enhancement Demonstration Project
- Backfilling Canals to Maximize Hydrologic Restoration Demonstration Project
- Delta Management Demonstration Project
- Flowable Fill Demonstration Project
- Backshore and Dune Stabilization Demonstration Project

Enhancement of Barrier Island and Salt Marsh Vegetation Demonstration Project

Coast 2050 Strategies:

- Coastwide Common Ecosystem Strategy; Restore/Maintain Barrier Islands, Headlands, Shorelands;
- Region 2 Strategy # 17 Caminada Bay – Maintain Shoreline Integrity e.g. vegetative plantings of mangroves or marsh;
- Region 3 Regional Ecosystem Strategy; Protect Bay/Lake Shorelines, #10 Maintain shoreline integrity and stabilize critical areas of Teche/Vermillion Bay Systems including the Gulf Shorelines (bay/lake/gulf)

Project Location: There are multiple projects planned and ongoing that fit within the strategies listed above, most of which include use of vegetative plantings on barrier islands. One possible project site in Region 3 is the Timbalier Island Dune and Marsh Restoration project (TE-40) that recently completed planting nearly 110,000 plants, eight different species. Additional project locations are available in Regions 2 and 3.

Problem: Barrier Islands provide critical habitat and are the first line of defense to not only day-to-day coastal erosion but also to the destructive forces of major storm events. Developing methodologies to enhance vegetation establishment and growth in barrier island restoration projects is important because healthy vegetative cover traps, binds, and stabilizes sand and sediment, thereby improving island integrity during storm and overwash events. Barrier islands are very stressful environments and there remains a critical need to develop cost-effective improvements to existing restoration methodologies that will enhance the successful establishment and spread of vegetation in these expensive and important restoration projects.

Goals: Test several technologies and/or products to enhance the cost-effective establishment and growth of key barrier island and salt marsh vegetation.

Proposed Solution: Humic acid and broadcast fertilization regimes will be applied. Humic acid benefits will be demonstrated in both intertidal and supratidal plantings, whereas broadcast fertilization benefits will only be demonstrated in supratidal plantings. Each product (humic acid and fertilizer) will be commercially available and off-the-shelf. Enhancing the establishment of woody vegetation (black mangrove and groundsel bush) will be achieved via high-density dispersal techniques of propagule and seeds. All treatment test sections and reference planting areas will be visually inspected and sampled quarterly (plant and soil variables) and compared to the reference area to develop recommendations for future planting projects.

Project Benefits: The humic acid amendment and broadcast fertilization regime techniques are intended to “jump start” and facilitate the rapid establishment and expansion of vegetation. Establishing woody vegetation (black mangrove and groundsel bush) via propagules and seeds is a cost-saving alternative to planting container-grown transplants of these trees. If successful, these techniques can be applied coastwide.

Project Costs: The total fully funded cost for the project is \$845,187.

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Barrier Island Sand Blowing Demonstration Project

Coast 2050 Strategy:

- Region 1 – revised strategy 14 - restore and maintain barrier islands.

Project Location: It is recommended demonstrating this technology at Breton Island, although any other barrier island in Louisiana could be selected.

Problem: Barrier islands are rapidly disappearing as a result of tropical storm and hurricane activity. Storms cause surge that over-wash and often breach the islands. Many times breaches or gaps form in the island that continue to erode and eventually form large cuts in the island. Closing barrier island breaches quickly with high quality sediments is the easiest and least expensive strategy to maintain shoreline integrity. One of the challenges in barrier island restoration is finding the most cost effective and highest quality borrow source available. When a source of sand is found it is often times encumbered by pipeline networks and covered by layers of silts or organics and/or may be too far from the restoration site for cost effective mining and placement.

Goals:

1. To demonstrate the use of the sand blowing technology for the purposes of mining sand sites in the dry and placing (unloading) the sand in the dry.
2. To demonstrate the cost effectiveness of using confined upland disposal sites as a potential source of sand for barrier island restoration projects.
3. To demonstrate the effectiveness of using this placement method to close newly formed gaps (breaches) and/or over-wash areas resulting from Major Storm events such as tropical storms and hurricanes.
4. To demonstrate the effectiveness of using this placement method to place high quality sediments in precise areas, such as breaches or beaches, on eroding barrier islands

Proposed Solution: The demonstration project involves the mining of high quality sand (dry) from a USACE, Mobile District's upland confined disposal site using the sand blowing method. The sand will then be placed on a barge and towed to Breton Island. The sand will then be offloaded from the barges and placed on Breton Island using the sand blowing method. The sand will be used to close breaches or areas of over-wash on the island.

Project Benefits: This project allows use of material not being used beneficially, would decrease impacts to water quality at the disposal site, and avoid impacts resulting from containment dike construction.

Project Costs: The total fully funded cost for the project is \$1,919,343.

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Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging Demonstration Project

Coast 2050 Strategy:

- Dedicated dredging for wetland creation

Project Location: Either side of the Houma Navigation Channel and multiple locations in Barataria Basin and Penchant Basin.

Problem: 1) Many cypress/tupelo swamps in coastal Louisiana have experienced altered hydrology either through the loss of sediments (i.e., flood control levees along the Mississippi river) causing increased subsidence rates or through impoundments (i.e., roads, levees, etc.). These swamps are also affected by saltwater intrusion (due to the construction of canals). These trees slowly die when they are exposed to prolonged, deep flooding for longer than normal duration and regeneration of new trees cannot occur under these flooded conditions. 2) Several State and Federal agencies have denied the possible use of dredged material to rehabilitate permanently flooded cypress/tupelo swamps because of the perception that it would harm those trees.

Goals: To demonstrate how the deposition of differing amounts (depths) of dredged material within a cypress/tupelo swamp would affect the growth of cypress trees and how that would affect the ability of those cypress trees to naturally regenerate. Survival rates of several methods of tree planting in newly deposited dredged material would be tested.

Proposed Solution: 1) Containment dikes at each of 3 study sites will be constructed to provide 3 contiguous 3-acre blocks (27 acres) with similar pre-project hydrology. Each study site will have 1 control block consisting of 3 acres (9 acres total). To the greatest degree possible dredge disposal areas will be chosen to include a range of bald cypress size classes (and hopefully age classes) in both stressed and healthy conditions within each block. At each study site the 3 blocks will be filled with 1 ft (30 cm), 2 ft (60 cm) and 3 ft (90 cm) of sediment. Only 1 sediment treatment per block will be used due to the cost of dike construction. 2) Certain physiological and morphological measurements would be preformed pre/post sediment placement on selected mature trees within each plot to document the effects of placing sediment at differing depths on mature trees. Also, a detailed soil analysis will be carried out within each plot. 3) Areas within these units with very little tree cover would be used to test methods of tree planting. Areas with mature trees will determine the effects of the addition of soil to natural regeneration.

Project Benefits: The total acres of forested wetlands in coastal Louisiana are over 500,000. Much of these cypress swamps are not currently sustainable because of the significant increase in the number of days flooded per year. This project would test the applicability of beneficially using dredge material in subsiding cypress swamp and answer questions ask in the Coastal Wetland Forest Conservation and Use Science Working Group, which was endorsed by Governor Blanco.

Project Costs: The total fully funded cost for the project is \$1,550,188.

Preparer of Fact Sheet:

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Dredge Containment System for Marsh Creation Demonstration Project

Coast 2050 Strategy:

- Coastwide Strategy: Dedicated dredging for wetland creation

Project Location: Coastwide

Problem: Containment is one of the most critical and costly aspects associated with designing a beneficial use dredge project. If the environment in which the material is to be discharged does not have features conducive to natural containment, such as spoil banks, ridges, or enclosed marsh, then containment must be constructed using rock or earthen levee created from on-site materials. The problem with such containment is that it 1) requires heavy equipment, which increases cost, 2) is dependant upon the soil condition upon which it is placed, and 3) may be limited by subsurface features (e.g. pipelines) that prevent the building of containment by conventional means.

Goals: The overall goal of the project is to demonstrate a cost-effective alternative to traditional containment methods for beneficial use dredging, which potentially expands the feasibility of dredging in areas previously considered unsuitable by soil conditions or obstruction.

Proposed Solution: Net Gains LLC recently patented a new cost-effective containment technology. The containment system, which can be constructed in 2-3 feet of open water, consists of a filter cloth or geotextile fabric that is anchored by a chain and floated on the surface by an absorbent boom. The containment can be deployed from a small watercraft, such as an outboard or airboat, with minimal labor. To fasten the containment wall in place during hydraulic dredging anchoring poles are deployed around the perimeter of the containment boom. As sediments are introduced into the containment area, dewatering occurs via a stop-log weir located on the periphery of the boom. Boards are added to the weir to contain the material as sediment accretion occurs. Upon completion of the dredging, the material is allowed to settle and dewater and subsequently may be planted with vegetation. Once vegetation becomes established, the containment cloth as well as the flotation boom may be cut away and the anchor poles removed.

Project Benefits: The project provides a potentially cost-effective alternative to traditional containment systems and may also expand options for dredge projects in areas limited by poor soil conditions or contains obstructions such as pipelines.

Project Costs: The total fully funded cost for the project is \$1,073,163.

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Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demonstration Project

Coast 2050 Strategy

- Stabilize Gulf of Mexico shoreline from old Mermentau River to Dewitt Canal, preserve and stabilize the gulf shoreline, maintain integrity of Gulf of Mexico shoreline where needed.

Project Location: Region 4, Mermentau Basin, Cameron/Vermilion Parish, Rockefeller Refuge west of Rollover Bayou

Problem: Louisiana's coastline has received national attention for the past 2-3 decades due to its rapid erosion rates. Poor soil load bearing capacities is one example that could limit the use of more traditional restoration techniques along many areas of coastal Louisiana.

Goals: The goal of this project is to investigate specific designs of bioengineered reefs and their ability to mitigate erosion. Additional goals focus on environmental benefits both at the time of installation and over the development life of the oysterbreak; and investigation of stability and growth of the structures over time.

Proposed Solution: Many locations in coastal Louisiana would be appropriate. Because this is intended to be a biologically dominated engineered structure, there is a need for sufficient oyster spat and appropriate growing conditions. Maturity will be influenced by oyster growth rates. Thus, areas of high oyster growth would be preferred. The technology termed an "oysterbreak" is designed to stimulate the growth of biological structures in the shape of submerged breakwaters. The project would entail construction of a near-shore break-water along the Gulf of Mexico shoreline. The break-water would extend from the western bank of Joseph's Harbor canal westward for 600 feet. It would be designed to attenuate shoreline retreat along this stretch of Gulf shoreline, as well as promote shallowing, settling out, and natural vegetative colonization of over-wash material landward of the proposed structure. The resultant design would be placed offshore along the -3' contour. The crest height of the proposed structure would be 6 feet above the Gulf floor, with a 10 foot crown and 1:3 slope on both sides.

Project Benefits: This project is anticipated to benefit 2.4 acres of saline marsh (600 ln ft X 35 ft/yr X 5 yrs).

Project Costs: The total fully funded cost for the project is \$1,421,702.

Preparer of Fact Sheet

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Thin Layer Dredge Disposal Demonstration Project

Coast 2050 Strategy:

- Beneficial Use of Dredged Material or Dedicated Dredging to Create, Restore or Protect Wetlands

Project Location: This project could be built in any deteriorating marsh in coastal Louisiana, Regions 1 - 4. Project areas will be sited in saline and/or possibly brackish marsh.

Problem: Wetland loss often begins with deterioration and fragmentation of wetland areas, however, most restoration projects to date have not focused on restoring deteriorating areas but rather re-creating wetlands that have converted to open water. Thin layer sediment nourishment has the potential to restore deteriorating marshes, reduce project costs, minimize adverse impacts and be more constructible. However, thin layer sediment nourishment use has been limited, in part due to lack of standard information regarding applicability, design, and implementation.

Goals: The project goal is evaluate the effectiveness of thin layer marsh nourishment designs and construction methods to develop design and implementation guidance and specifications. Technical guidance would assist in designing and implementing projects that optimize the benefits of this little used restoration technique while minimizing adverse impacts to existing marsh.

Proposed Solution: Construction of four to six, small (i.e., five to 10 acres each) controlled, unconfined, thin layer sediment nourishment projects. The nourishment projects will be constructed using three (high, medium and low) sediment-to-water slurry concentrations. Post-construction performance assessments (using elevation surveys, vegetative monitoring and aerial photography) will be conducted to determine the relationship between slurry concentration, geographical extent of sediment influence, and level of benefits. Technical guidance regarding project design, construction techniques, and construction implementation will be developed.

Project Benefits: The nourishment of approximately 20 - 60 acres of deteriorating marsh through the construction of four to six small (five to 10 acres each) controlled, unconfined, thin layer sediment nourishment projects. Additionally, more widespread and successful application of this little used technique will be encouraged by the development of design guidance and construction management practices that optimize wetland benefits.

Project Costs: The total fully funded cost for the project is \$1,232,780.

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Floating Wave Attenuator System Demonstration Project

Coast 2050 Strategies:

- Coastwide Common Strategy; Maintenance of Bay and Lake Shoreline Integrity, Stabilization of Major Navigation Channels
- Region 1 Regional Ecosystem Strategy; Maintain shoreline integrity of Lake Borgne and Biloxi Marsh, Maintain Eastern Orleans Land Bridge by marsh creation and shoreline protection, Stabilize the entire north bank of the MRGO
- Region 2 Regional Ecosystem Strategy; Construct wave absorber at the heads of bays, Build entire Breaux Act land bridge shore protection project, Preserve bay and lake shoreline integrity on the land bridge,
- Region 3 Regional Ecosystem Strategy; maintain shoreline integrity and stabilize critical areas of Teche-Vermilion Bay systems including the gulf shorelines, Maintain shoreline integrity of marshes adjacent to Caillou, Terrebonne, and Timbalier Bays
- Region 4 Regional Ecosystem Strategy; Stabilize Grand Lake and White Lake shorelines, Stabilize Gulf of Mexico shoreline in the vicinity of Rockefeller Refuge, Stabilize Gulf of Mexico shoreline from Calcasieu Pass to Johnson's Bayou

Project Location: There are multiple projects planned and ongoing that fit within the strategies listed above. One possible application is in Region 1, Pontchartrain Basin, St. Bernard Parish, EPA's Lake Borgne Shoreline Protection Project (PO-30) near Bayou Dupre.

Problem: Shorelines throughout coastal Louisiana are eroding and exposing the interior marsh to breaches that form channels to convey saltwater into the interior marshes. The most common means of addressing this situation is installation of expensive rock dikes on or near the eroding shorelines. The poor soils common throughout the area result in sinking of the rock dikes, requiring maintenance and rebuilding in many cases. In addition, the installation of rock dikes often requires dredging of flotation channels, which can be problematic when there are submerged cultural or ecological resources in the area.

Goals: Test several floating wave attenuation systems with different mooring systems to determine the efficacy of this type of product in protecting shoreline.

Proposed Solution: Install three or four 500-foot long sections of floating wave attenuator systems as part of a project. Each product should be installed according to the specific manufacturer's installation recommendations, visually inspected once a year for structural integrity, sediment accretion, and wave energy reduction.

Project Benefits: If successful, the systems will protect the shorelines at a cost comparable to rock dikes, with less site disturbance and perhaps less operation and maintenance costs. In some cases, the system may be manufactured locally within Louisiana rather than importing stone from other states, resulting in a more environmentally preferred and sustainable alternative.

Project Costs: The total fully funded cost for the project is \$1,792,804.

Preparer of Fact Sheet:

Patricia A. Taylor, P.E. EPA Region 6, (214) 665-6403, taylor.patricia-a@epa.gov

HESCO Concertainer Baskets for Shoreline Protection Demonstration Project

Coast 2050 Strategies:

- Coastwide strategy: Maintenance of bay and lake shoreline integrity
- Regional strategy: Maintain shoreline integrity of Lake Pontchartrain

Project Location: The proposed demonstration could take place at almost any location in the coastal zone where eroding shorelines are a problem except along the gulf shoreline. The team working on the application of the system feels that high potential exists for demonstrating the technique in areas with poor soil conditions with low to moderate wave energies. Several locations in the Pontchartrain Basin along the East Orleans Landbridge have been evaluated. These sites include locations on Lake Pontchartrain, The Rigolets and in Lake St. Catherine.

Problem: The proposed demonstration would be used to address shoreline erosion in areas with generally poor soil conditions and that experience shoreline erosion as a result of moderate and low wave conditions. Land loss and shoreline change maps in the Pontchartrain basin have documented erosion rates ranging from 10 feet per year to 60 feet per year in various locations. Specific data along the shorelines of the East Orleans Landbridge show shoreline change rates of 54 feet per year at Chef Pass, 10 feet per year at Grand Coin Pocket, and 15 feet per year at Saw Mill Pass.

Goals: This project is intended to demonstrate that HESCO baskets can be employed to reduce or eliminate shoreline erosion in areas with low to moderate wave energies and poor soil conditions.

Proposed Solution: This demonstration project involves deploying HESCO concertainer baskets to evaluate their effectiveness in preventing shoreline erosion. HESCO baskets would be deployed in several configurations (single line, double line, and three units stacked) in locations with varying wave conditions. During deployment the baskets would be placed in approximately two feet of water and filled with sediment borrowed from adjacent onsite sources. The baskets are available in several sizes including the proposed 3 ft X 3 ft X 3ft group. The units can be bound in multiple lengths and are flexible to allow conformity to shorelines and depth contours.

Project Benefits: The system potentially offers a cost competitive advantage over traditional rock breakwater techniques without sacrificing long-term performance in combating erosion problems.

Project Costs: The total fully funded cost for the project is \$1,462,854.

Preparer of Fact Sheet:

Gregory Miller, USACE, (504) 862-2310, Gregory.B.Miller@mvn02.usace.army.mil.

Lake Pontchartrain Shoreline Protection and Habitat Enhancement Demonstration Project

Coast 2050 Strategies:

- #10 - Maintain shoreline integrity of Lake Pontchartrain to protect regional ecosystem values.
- Mapping unit strategy – Restore submerged aquatic vegetation beds and stabilize lake rim marshes and beaches.

Project Location: Region One, Pontchartrain Basin, Jefferson Parish, several areas along the southern shoreline of Lake Pontchartrain, Louisiana

Problem: Shoreline marshes in Lake Pontchartrain have been highly impacted through human development and natural erosion. While thousands of acres of wetland existed along the original southern shoreline of Lake Pontchartain, the Lake Pontchartrain Environmental Atlas indicates that less six acres of shoreline marsh remains along the lake between the Parish Line Canal in Jefferson and Paris Road in Orleans.

Goals: The goal is to test new materials (reef balls, HESCO concetainers, geo-textile sediment bags) and configurations (multiple tiering on a shoreline with different materials) for shoreline protection and compare the results and prices for each against traditionally used materials (limestone rocks, rip-rap) in a large lake with high energy. Some of these materials and configurations have never been test for these purposes in Louisiana. The reason for placing these materials near shore is to encourage sediment accretion, wetland creation and subsequent protection of these created wetlands along the southern shore of Lake Pontchartrain in Jefferson Parish. If successful, these techniques can be applied on a large scale in other similar areas in Louisiana.

Proposed Solution: Construct innovative shoreline protection measures to reduce wave energy and promote sediment accretion and vegetation colonization. Segments of the southern shoreline of Lake Pontchartrain contain patches of smooth cordgrass and submerged aquatic vegetation that have colonized small coves and other protected areas. The natural colonization of marsh vegetation in these areas indicates the ability of plants to grow on the southern lake shoreline given the proper low energy conditions. The objective of the project is to mimic these natural success stories through the construction of engineered features that would reduce wave energies. Potential construction methods include reef balls in shallow water, HESCO Concertainer baskets, sediment-filled geo-textile bags (“boudin-bags”), etc. Besides using unique materials, the configuration would be staggered shoreward to provide a more gradual breaking of the wave energy.

Project Benefits: These shoreline protection systems potentially offer a cost competitive advantage over traditional rock breakwater techniques without sacrificing long-term performance in combating erosion problems.

Project Costs: The total fully funded cost for the project is \$2,596,584.

Preparer of Fact Sheet:

Gregory Miller, USACE, (504) 862-2310, Gregory.B.Miller@mvn02.usace.army.mil.

Backfilling Canals to Maximize Hydrologic Restoration Demonstration Project

Coast 2050 Strategy:

- Coastwide-Restore/sustain marshes; Regional-Restore natural drainage patterns, gap spoil banks and plug canals in lower bay marshes

Project Location: This is a broadly applicable technique. Examples include: 1) Region 3, Teche/Vermilion Basin, Vermilion Parish, East of Onion Lake, between GIWW and Green Island Bayou; 2) Region 3, Atchafalaya Basin, St. Mary Parish, Marone Point area, west of Hwy 317.

Problem: Canal dredging is known to contribute significantly to land loss in Louisiana, yet little has been done to reverse the damage caused by canals and spoil banks. Canals have turned marsh to open water, and spoil banks have replaced marsh with an upland environment. Indirectly, spoil banks restrict water flow above and below the marsh surface and cause increased periods of flooding and drying of the marsh behind them. Increased flooding leads to stress and mortality of marsh vegetation, while drying increases subsidence through oxidation of organic matter. These hydrologic alterations also limit sediment deposition in the adjacent marshes.

Goals: 1) To reverse damage done to coastal marshes by canal dredging and spoil bank placement; 2) To create marsh on former spoil bank areas and establish marsh or SAV in canals. 3) To restore natural hydrologic conditions and allow for more natural flooding and draining of marsh which would allow for marsh creation in surrounding open water areas; 4) To strategically target a cluster of canals at a given location to learn about the biological, geological and sociological opportunities for backfilling.

Proposed Solution: This project will backfill canals in strategic landscape positions to maximize the restoration of natural hydrologic conditions. Backfilling has been successful in the past at restoring single canals in a variety of locations, but it has never been attempted as a strategy to restore open water areas surrounding the canal. Removing the spoil banks in a strategic manner will allow the natural marsh drainage networks to reemerge, and allow for higher marsh sedimentation through a more natural flooding cycle. This would be done in phases: identification of clusters of canals that could be backfilled, working with landowners/agencies to rank identified sites, engineering cost, implementation, and monitoring. Monitoring of project success would include aerial photography analysis of land/water ratios every 5 years for 10-15 years.

Project Benefits: Emergent wetland, shallow water habitat, and submerged aquatic vegetation would be created. Degraded wetlands behind spoil banks would be restored over time.

Project Costs: The total fully funded cost for the project is \$1,718,766.

Preparer of Fact Sheet:

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Delta Management Demonstration Project

Coast 2050 Strategies:

- Region 3, Strategy # 2 - Maximize land building in Atchafalaya Bay,
- Region 2, Strategy #6 – Enrich existing diversions with sediment,
- Region 2, Strategy #7 – Continue building and maintaining delta splays,
- Region 2, Strategy #8 – Construct most effective small diversions,
- Region 2, Strategy #10 – Construct a delta-building diversion at Myrtle Grove,
- Region 2, Strategy #11 – Construct delta-building diversion in Bastion Bay,
- Region 2, Strategy #12 – Construct delta-building diversion into Benny’s Bay,
- Region 2, Strategy #13 – Construct delta-building diversion into American Bay,
- Region 2, Strategy #14 – Construct delta-building diversion at Quarantine Bay

Project Location: Region 3, Atchafalaya Basin, St. Mary Parish, Atchafalaya and/or Wax Lake Deltas

Problem: Growth of the Atchafalaya River and Wax Lake Outlet Deltas provides an opportunity to offset wetland loss occurring in other areas. Excluding sediment supply issues, growth of those deltas is diminished by the partial erosion during fall/winter high wave energy events of recently deposited subaqueous sediments. This in turn reduces formation of marsh along developing distributary and crevasse channels. Marsh formation and retention of valuable suspended sediments within the delta could be accelerated by installing sediment trapping features at the distal ends of distributary channels to facilitate sediment capture and associated vegetative colonization.

Goals: This demonstration project would seek to develop cost-efficient means for accelerating natural levee formation and possibly increasing sediment deposition within interdistributary areas. Accelerated natural levee formation would in turn provide opportunities for constructing crevasses to nourish interdistributary areas. Information gained through this project could be applied to future sediment diversion projects as well as in existing deltas.

Proposed Solution: A series of structures (using brush fences, low-level earthen levees, coconut fiber logs, and/or other materials, with varying spacing, orientation, and length) would be installed on the forming subaqueous natural levees to accelerate and possibly widen the forming subaerial natural levee and to facilitate more rapid vegetative colonization.

Project Benefits: In addition to increasing emergent wetlands, shallow water habitat, and submerged aquatic vegetation, the project, if successful, would provide the knowledge needed to increase the effectiveness of deltaic land-building and sediment diversion projects. If the most effective techniques are of low cost as hoped, then use of those techniques might also be applied as mitigation for development projects.

Project Costs: The total fully funded cost for the project is \$1,131,096.

Preparer of Fact Sheet:

Ronny Paille, USFWS, (337) 291-3117, Ronald_Paille@FWS.GOV

Flowable Fill Demonstration Project

Coast 2050 Strategies:

- Maintenance of Bay and Lake Shoreline Integrity
- Stabilization of Major Navigation Channels
- Protect Wave/Wake Absorbers

Project Location: This project has one distinct location within Coast 2050, Region 3. The potential site would be the rock structure associated with the TV-11b Freshwater Bayou Bank Stabilization Project located in Vermilion Parish, Louisiana.

Problem: Several post constructed projects suffer from high maintenance due to rock slippage caused by storms, incessant wave energy or high tides coupled with high wake energy which shear off the top-most part of rock structures. A rock structure which has been bonded together will also be resistant to vandalism. These scenarios sometimes call for the affected works to be repaired or have intensive maintenance soon after initial construction.

Goals: The goal of this demonstration is to test a technique whereby rock structures have increased integral strength without adding to overall structure weight.

Proposed Solution: For rock structures, slippage can be controlled by injecting/applying a flowable, fill material consisting of Portland cement, sand, water, and a plasticizer. This material will bond rocks together and reduce the incidence of re-working or adding new material to the structure due to rock loss, an example of which is occurring at the structure along Freshwater Bayou. This material has an approximate weight of 2,615 lbs./cu yd and an approximate strength of 1,500 pounds per square inch (psi) and will set-up and cure in underwater applications. Flowable Fill could eliminate or reduce maintenance on existing and future projects.

Project Benefits: Eliminate or minimize post construction (re-working) or yearly maintenance of structures built for the control of shoreline erosion. The application of flowable fill over existing or new rock type structures will assist in bonding the structure together resulting in less rock slippage and eventual loss which diminishes the effectiveness of the structures designed use and results in increased costs during the operation/maintenance phase of the project.

Project Costs: The total fully funded cost for the project is \$926,986.

Preparer of Fact Sheet:

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Backshore and Dune Stabilization Demonstration Project

Coast 2050 Strategy:

- Stabilize Gulf of Mexico Shoreline (Regional Strategies 16 and 17)

Project Location: Region 4, Calcasieu-Sabine and Mermentau Basins, Cameron and Vermilion Parishes. A preferred site would be the Long Beach area in Cameron Parish, west of the existing Holly Beach to Constance Beach segmented breakwaters.

Problem: The problem is Gulf of Mexico shoreline erosion in the Chenier Plain and the need for a cost-effective shoreline stabilization technique that does not interfere with long shore sediment processes. Past solutions included the construction of hard shoreline stabilization structures (i.e., segmented breakwaters, jetties and groins) parallel or perpendicular to the Gulf shoreline that increased shoreline erosion down drift from those structures.

Goals: The goal of this project is to stop Gulf shoreline erosion without disturbing the natural long shore hydrologic and sediment processes.

Proposed Solution: Install 3,000 linear feet of wire sediment confinement (concertainers) structures (dimensions 2x2x10 feet, 3x3x15 feet, or 4x3x15 feet) in the backshore or dune/ridge beach area, fill with in situ materials, and then cover them with sand to create a natural dune/berm profile (Figure 1). The design consists of three units; two at the base and a third unit placed on top of the base layer. The concertainers would strengthen and stabilize the backshore preventing it from being eroded during storm events. The concertainers consist of rectangular galvanized coated wire baskets (life 38 years), lined with a polypropylene or other material geotextile fabric. Concertainers would be placed at the base of existing dune/berms, filed with in situ beach/shore materials (sand, broken shell, clays), and covered with imported sand. Concertainers come in a folded condition and are easily transported to the construction site reducing construction costs. The filled concertainers would add additional strength and integrity to the existing dune/berm shore.

Project Benefits: The small 3,000-foot demonstration project would protect 14 to 28 acres of beach shoreline in a 20-year life at existing shoreline erosion rates of 10 to 20 feet per year. The concertainer technique could prove to be a cost-effective Gulf shoreline stabilization method that does not interfere with natural beach and near shore geomorphic processes.

Project Costs: The total fully funded cost for the project is \$883,536.

Preparer of Fact Sheet:

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PPL 15 Candidate Project Evaluation Matrix

Project Name	Region	Parish	Project Area	Average Annual Habitat Units (AAHU)	Net Acres	Prioritization Score	Total Fully Funded Cost	Fully-Funded Phase I Cost	Fully-Funded Phase II Cost	Average Annual Cost (AAC)	Cost Effectiveness (AAC/AAHU)	Cost Effectiveness (Cost/Net Acre)
Bayou Lamoque Freshwater Diversion	2	Plaquemines	9,435	560	620	74.00	\$5,375,741	\$1,205,354	\$4,170,387	\$382,950	\$684	\$8,671
Lake Hermitage Marsh Creation	2	Plaquemines	1,581	191	438	58.45	\$32,673,327	\$1,197,590	\$31,475,737	\$2,556,021	\$13,382	\$74,597
Venice Ponds Marsh Creation and Crevasses	2	Plaquemines	1,944	153	511	67.20	\$8,992,955	\$1,074,522	\$7,918,433	\$702,079	\$4,589	\$17,599
South Terrebonne Terracing	3	Terrebonne	1,369	54	80	33.05	\$7,477,864	\$1,243,192	\$6,234,672	\$549,512	\$10,176	\$93,473
Bird Island/Southwest Pass Marsh Creation and Shoreline Protection	3	Iberia & Vermilion	149	62	133	35.30	\$17,765,314	\$1,470,115	\$16,295,199	\$1,245,320	\$20,086	\$133,574
South Pecan Island Freshwater Introduction	4	Vermilion	7,005	100	98	51.50	\$4,438,695	\$1,102,043	\$3,336,652	\$331,331	\$3,313	\$45,293

PPL 15 Demonstration Project Evaluation Matrix

Demonstration Project Name	Lead Agency	Total Fully Funded Cost	Parameter (P _n)						Total Score
			P ₁ Innovativeness	P ₂ Applicability or Transferability	P ₃ Potential Cost Effectiveness	P ₄ Potential Env Benefits	P ₅ Recognized Need for Info	P ₆ Potential for Technological Advancement	
Enhancement of Barrier Island Vegetation Demo	EPA	\$845,187	3	3	3	3	2	2	16
Barrier Island Sand Blowing Demo	USACE	\$1,919,343	3	2	2	3	3	2	15
Nourishment of Permanently Flooded Cypress Swamps Through Dedicated Dredging Demo	FWS	\$1,550,188	3	2	2	3	3	2	15
Dredge Containment System for Marsh Creation Demo	NRCS	\$1,073,163	3	3	2	2	2	2	14
Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demo	NMFS	\$1,421,702	2	2	2	2	3	3	14
Thin Layer Dredge Disposal Demo	NMFS	\$1,232,780	2	3	2	2	3	2	14
Floating Wave Attenuator Demo	EPA	\$1,792,804	3	2	2	2	2	2	13
HESCO Concertainer Baskets for Shoreline Protection Demo	USACE	\$1,462,854	2	2	3	2	2	2	13
Lake Pontchartrain Shoreline Protection and Habitat Enhancement Demo	USACE	\$2,596,584	2	2	2	2	2	2	12
Backfilling Canals to Maximize Hydrologic Restoration Demo	EPA	\$1,718,766	1	2	2	3	2	1	11
Delta Management Demo	FWS	\$1,131,096	2	1	2	2	2	2	11
Flowable Fill Demo	NRCS	\$926,986	3	1	1	2	1	2	10
Backshore and Dune Stabilization Demo	FWS	\$883,536	1	1	2	2	1	1	8

(Parameter grading as to effect: 1 = low; 2 = medium; 3 = high)

MEMORANDUM FOR RECORD

SUBJECT: Notes from PPL15 Public Meeting, Tuesday, 8 Nov 05, Abbeville, LA 7pm
Abbeville Courthouse

1. Mr. Chris Monnerjahn opened the meeting at 7:05 pm. Mr. Monnerjahn went over the details of what would be covered at the meeting. He stated that the goal of the meeting is to go over the PPL15 process and present the PPL15 candidate projects and demonstration projects, and then open the floor for public support and or comments. A sign-in sheet is included as **Encl 1**. The agenda for the meeting is **Encl 2**. PPL15 Candidate Project packets were handed out to the meeting attendees (**Encl 3**). Mr. Monnerjahn asked that written public comments be provided to the CWPPRA Task Force by 30 Nov 05, for consideration by the Technical Committee at their Dec 7th meeting.

2. Introductions around the room were made. Mr. Monnerjahn went over a Powerpoint presentation (**Encl 4**) that included the 15th PPL process and the 6 candidate projects (one slide and a map per candidate project). The slides for each project included: project location, project description, acres of marsh that would remain in the project area after 20 years, and the fully funded cost estimate. Projects were presented in the following order at this meeting: Region 4, 3, and 2 (there were no projects in Region 1). There were also 13 proposed demonstration projects this year. Mr. Monnerjahn explained that demonstration projects must demonstrate a new technique/technology that could be applied on a coast wide basis. Mr. Monnerjahn went over these thirteen projects (one slide each). Mr. Monnerjahn went over the remaining steps in the PPL15 process. He explained that after the public meetings, the Technical Committee will meet on 7 Dec 05 and review the project results and make a recommendation to the Task Force. The Task Force will meet on 25 Jan 06 and select projects for PPL15.

3. The floor was opened for public comments, by region:

South Pecan Island Freshwater Introduction

- Randy Moertle, representing MO Miller Estates, stated that as the landowner on which the project will be constructed, they are in full support of the project.
- WP Edwards III, representing Vermilion Corporation, stated that they are on the receiving end of the project, and they believe it to be a good project. They have been operating within the operational plan for 15+ years. Before Rita the area was beginning to start to show signs of recovery. This project will get the area back on track and restore it back to pre-Rita. Vermilion Corporation and Vermilion Parish are in support of the project.

- Sherrill Sagrera, representing Vermilion Parish Coastal Advisory Committee, stated that he had a question regarding the 98 acres benefited for the project. Mr. Sagrera wanted to know if we took into account the benefit to the existing terracing project. Kevin Roy stated that the acres attributed to the project are acres of marsh that will be saved after the 20 year life should the project be built. We don't differentiate if the acres are in the existing terraces or other acreage in the project area.

Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

- Sherrill Sagrera, representing Vermilion Parish Coastal Advisory Committee, stated that as the landowner affected by the project, they are in full support of the Bird Island project. Over the years, Bird Island was a rookery where a lot of shore birds were. The island has deteriorated, and they would like to see it reestablished. Plus the project will protect the landmass on both sides of the pass. If nothing is done, the pass will be bigger.
- WP Edwards, representing Vermilion Corporation, asked that we pull up a map of the Bird Island project. He stated that he has been told that water travels on the surface and it really doesn't matter how deep the water is regarding the amount of flow through the pass. Maybe scientists can confirm or refute this. He has heard that it doesn't matter how deep the pass is...what really matters is how wide the pass is. The shoreline protection features on the northern edge of the Pass (SW Point) isn't but 100' wide and everyone has been watching it disappear. If this washes away, the width of the pass will double. If what they have been told is true, then this will have a dramatic impact on the hydrology of all of the marshes behind SW Pass. He encouraged the Technical Committee and those making decisions on the project to consider this. He would like to know that if it is true that the width of the pass matters this much. The biggest problem in this basin is tidal flux...if the shoreline is eroded, this will increase the tide.

South Terrebonne Terracing

- WP Edwards, representing Vermilion Corporation, made comments about the South Terrebonne Terracing. There was a demonstration project incorporated into the South White Lake Shoreline Protection project. There is a demo project of the 13 presented here tonight (Flowable Fill) and this idea has been knocked around. There were 2 applications for a flowable fill demo (one was to cement/bind rock dikes and the other was to armor or protect the windward edge of terraces exposed to heavy wave action). Mr. Edwards stated that the South Terrebonne Terracing project could be combined with the Flowable Fill demo to protect the windward edge, should both projects be selected.

Bayou Lamoque Freshwater Diversion

- WP Edwards, representing Vermilion Corporation, had a question on the Bayou Lamoque project. He stated that it sounded like the main component is to remove gates from existing structures. What will cost \$5.3M? Mr. Monnerjahn answered that the cost is the 20-year cost. It also includes rehabilitation of pile clusters at the structures, cleaning out of the intake side of the structures, outfall management features, and receiving side construction. There is also cost for NEPA compliance and engineering design. The construction cost is less than the \$5M cost. Mr. Edwards added that it looks like a worthwhile project.

General Comment

- Randy Moertle, representing MO Miller Estates, said that he has flown over Plaquemines Parish after Katrina and Rita. Have we looked at these projects after both and are the projects still viable? Mr. Monnerjahn answered: yes, projects are still viable. There has been some marsh deterioration in Terrebonne, the Lamoque structures still in place, Venice Ponds marsh area looked bad. In the vicinity of the South Pecan Island project the water was still high when we flew. Mr. Moertle stated that he knew that Plaquemines Parish needs assistance, he just wanted to make sure the projects were still viable.

Evaluation of Bioengineered Reefs Performing as Submerged Breakwaters Demo

- Sherrill Sagrera asked a question on the submerged oyster breakwater project to Dr. John Foret: how high is the reef submerged? Dr. Foret stated that the idea is to build them 1' above Gulf at the -4 foot contour. The reefs would be 1' above the Gulf elevation.

Dredge Containment System for Marsh Creation Demo

- WP Edwards asked a question on the dredge containment system demo. He wanted to find out who knew something about this and wanted to discuss further after the meeting. Mr. Monnerjahn added that the system is like the blue inflatable pools that you can buy at Walmart or almost anywhere that rise as you fill them up with water.

Flowable Fill Demo

- Sherril Sagrera stated that he would like to see the Flowable Fill project funded. It might worth funding this project through a different angle, but, would like to see it funded.

Backfilling Canals to Maximize Hydrologic Restoration Demo

- WP Edwards had a comment on backfilling canals demo. He asked why we needed a demo project to backfill a canal? Kevin Roy agreed and stated that this wasn't the reason for the demo. Mr. Edwards asked if there would be any consideration given to what the hydrology was like before the dredging in the area? There were no canals. When you breach the canals, you introduce a tidal situation that didn't exist previously. You eliminate annual growth because now the marsh is getting flooded at least 3-5 times per week. Before there was any channel to bring tidal waters in, the marsh dried out and only flooded when it rained. He cautioned the Technical Committee and workgroups, that when they monitor it have to carefully select sites...what was the condition before man built the canals, there was no tidal flow. Kevin Roy indicated that we would have to study the location before selection. The location has to be approved by the workgroups to make sure we are selecting the right place. Mr. Edwards stated that if the demo was selected and found to be successful, we need to say that it cannot just be used anywhere. Backfilling canals will not solve their problem.

4. After the last public comment, Mr. Monnerjahn stated that public input is critical. This information is provided to the Tech Committee and Task Force. He asked people to allow time to come in to New Orleans for the next few meetings. At the December 7th meeting, the Technical Committee will recommend PPL15 *and* Phase II requests for construction money (\$250M).

Mr. Wes McQuiddy asked that Chris mention that if a PPL 15 project isn't selected for Phase I funding, they will roll into PPL16. Mr. Monnerjahn reiterated that as a result of Katrina, the PPL15 public meetings were pushed back and therefore PPL15 Phase I selection will not be finalized until Jan 26th, 2006. The PPL16 RPT meetings are scheduled for Jan 10-12th, 2006. Therefore, the Task Force on 2 Nov approved a change to the PPL16 process allowing projects that don't make the PPL15 list to automatically be rolled into PPL16 as nominees for consideration at the coastwide voting meeting on February 1st, 2006.

Mr. Sherrill Sagrera also stated that nominations for demo projects will also take place at the RPT meetings. Mr. Monnerjahn indicated that this was correct. Demos have to be nominated at the RPT meetings this year, not later.

5. Meeting was adjourned at 7:45 pm.

MEMORANDUM FOR RECORD

SUBJECT: Notes from PPL15 Public Meeting, Wednesday, 9 Nov 05, Houma, LA 7pm
Houma Municipal Auditorium

1. Mr. Chris Monnerjahn opened the meeting at 7:05 pm. Mr. Monnerjahn went over the details of what would be covered at the meeting. He stated that the goal of the meeting is to go over the PPL15 process and present the PPL15 candidate projects and demonstration projects, and then open the floor for public support and or comments. A sign-in sheet is included as **Encl 1**. The agenda for the meeting is **Encl 2**. PPL15 Candidate Project packets were handed out to the meeting attendees (**Encl 3**). Mr. Monnerjahn asked that written public comments be provided to the CWPPRA Task Force by 30 Nov 05, for consideration by the Technical Committee at their Dec 7th meeting.

2. Mr. Monnerjahn noted that the dates for the PPL16 process were out on the back table. Introductions around the room were made. Mr. Monnerjahn went over a Powerpoint presentation (**Encl 4**) that included the 15th PPL process and the 6 candidate projects (one slide and a map per candidate project). The slides for each project included: project location, project description, acres of marsh that would remain in the project area after 20 years, and the fully funded cost estimate. Projects were presented in the following order at this meeting: Region 2, 3, and 4 (no projects in Region 1). There were also 13 proposed demonstration projects this year. Mr. Monnerjahn explained that demonstration projects must demonstrate a new technique/technology that could be applied on a coast wide basis. Mr. Monnerjahn went over these thirteen projects (one slide each) and went over the remaining steps in the PPL15 process. He explained that after the public meetings, the Technical Committee will meet on 7 Dec 05 and review the project results and make a recommendation to the Task Force. The Task Force will meet on 25 Jan 06 and select projects for PPL15.

3. The floor was opened for public comments, by region. Letters entered into the record during the meeting are included as **Encl 5**.

Bayou Lamoque Freshwater Diversion Project

- Kerry St. Pe, Barataria-Terrebonne National Estuary Program (BTNEP), had planned to keep comments confined to projects with Barataria-Terrebonne system. The Bayou Lamoque project is not in the Barataria-Terrebonne system, however, it is a “no-brainer” project. The project proposes to remove a current gate that will allow freshwater to enter into an area. It is consistent with the management plan. Plaquemines Parish is in their program and the project is in their parish. He supports the project as worthwhile.

Lake Hermitage Marsh Creation Project

- Kerry St. Pe, BTNEP, stated that this project is within the Barataria-Terrebonne system. Management conference members and Plaquemines Parish heavily support the project. It employs the use of a strategy that the program has been supporting (beneficial use of the sediment bedload of the Mississippi River for restoration). Mr. St. Pe stated that he would like to see sediment material used on a more widespread basis. He would like to see it transported to Terrebonne Parish. He noticed that we are recreating shallow open marsh, but in one area we are building terraces. Why are we building terraces and not creating marsh in all areas? Mr. Monnerjahn stated that maybe the reason was a cost issue. Mr. St. Pe stated that it would seem more cost efficient to create marsh in the area than fashion a terrace to marsh elevation. There must be a reason, he just doesn't know what it is. You can have a great deal of habitat diversity using pipeline technique. They've done it in Fourchon. The project uses material that is currently being lost off the Continental shelf.

Venice Ponds Marsh Creation and Crevasses Project

- Kerry St Pe, BTNEP, stated that this project is in the Barataria-Terrebonne system. Plaquemines Parish heavily supports it. They feel it is a good project. Contrary to popular belief there is a lot in this area that needs protection. Industrial and commercial fisheries, etc. At least before Katrina there was a lot that needed protection. This illustrates the need to rebuild the area.

South Terrebonne Terracing Project

- Kerry St Pe, BTNEP, stated that the project is in the Barataria-Terrebonne system. Terrebonne Parish is an active member of their conference. Katrina demonstrated that there is a need to protect upper Madison Bay, there was a breach in Montegut during Rita that has also breached several times from minimal storms. Terraces are one of the few tools that the parish has. They fully support it while waiting for a pipeline from the Mississippi River to fully restore the area.
- Barry Blackwell, Parish manager for Terrebonne Parish, presented a written statement to the record from Don Schwab, Parish President of Terrebonne Parish Consolidated Government. Terrebonne Parish fully supports for South Terrebonne project. The magnitude of devastation due to Katrina and Rita is massive and has shown the urgent need to build coastal restoration projects needed protection to infrastructure. Subsidence, saltwater intrusion, and oil and gas activities have impacted the coastal area. The area to the north is less suitable to marsh wildlife. Madison Bay protection will provide protection to the levee. Morganza to the Gulf Hurricane Protection project will be protected by the project. It will reduce wave erosion.
- Al Levron, Terrebonne Parish, followed up on Mr. Blackwell's comments. Madison Bay experienced an east wind problem during Hurricane Rita. The town of Montegut flooded because of the wind on the bay. Creating marsh as a buffer will reduce the flow in to the area. The lower section of Madison Bay along Bayou Terrebonne will work in concert with coastal impact project that the parish has (obtaining oyster leases) to reduce storm flows coming into basin. Areas

along Bayou Petit Caillou are particularly of interest. People can't "see" any coastal restoration projects, but, if this project were to be built, one would be able to see this activity while traveling to Cocodrie. This will generate more support for restoration in the parish.

- Leslie Swazo, Director of Coastal Restoration for Terrebonne, echoed the comments of the parish president, and the chairman of CZM on behalf of committee members. She mentioned that they have had discussion with landowners. Burlington Resources is supportive and would like to see the project move forward. She read a letter of support from state legislators who were unable to attend meeting tonight into the record in support of the project. Infrastructure exposed to open water conditions is a problem and the area has had impact to wildlife habitat. There was a project completed in Pointe Au Chene area that shows that we can quickly convert open water to terraces.
- Nolan Bergeron, CZM for Terrebonne Parish, stated that we will have positive effect protecting hurricane protection if this project is built. It will stop the current from washing into Bayou Terrebonne. In Lake Boudreaux it can stop saltwater intrusion. It will have positive impacts and will be a good test project. They don't have a way to bring in sand (until Kerry St. Pe brings it in from the Mississippi River). Will be able to see just how good the project will be. When the project was originally conceived, it was much bigger. He understands that it had to be cut down due to money and fact that the water was too deep in some areas. There is unanimous support from the CZM. The program did an excellent job in putting the project together.
- James Miller, CZM Terrebonne, echoed similar comments on this project. It is a good project and is needed. He read a letter into the record from Apache Louisiana Minerals, Inc. They are a major landowner in the area and throughout the state. They support the efforts of CWPPRA and have participated in other CWPPRA projects on their property. A portion of the terracing project falls in their land in Terrebonne Basin. Apache went on record in support of the project and commit to grant landrights for the project.
- Jerome Zeringue, Terrebonne Levee District, stated that we know that during Hurricane Rita those levees that were protected by marsh and not exposed held up much better. There are two bills in the special session that address levee districts. This project demonstrates complimentary coastal restoration and hurricane protection efforts. The project will protect the Morganza to the Gulf Hurricane protection system.
- Nolan Bergeron, Terrebonne Parish CZM, stated that the council has a resolution supporting this project fully. He stated that he would send it to us.

Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

- No comments

South Pecan Island Freshwater Introduction

- No comments

Mr. Monnerjahn asked for comments on demonstration projects

Nourishment of Permanently Flooded Cypress Swamps through Dedicated Dredging Project

- Al Levron, Terrebonne Parish, indicated that there is an enormous area along the Houma Navigation Canal that is impacted by saltwater intrusion. If selected, he would like to see the project demonstrated in Region 3.
- Kerry St Pe, BTNEP, stated that adding sediment layers in cypress swamps is a timely endeavor. There is a lot of work ongoing on coastal forests. There are forests that are permanently flooded, and we don't know the impact of adding sediment to those forests. It is project that we need to do now so that we know how to deal with these flooded forests. They support it.

4. After the last public comment, Mr. Monnerjahn stated that public input is critical. This information is provided to the Tech Committee and Task Force. At the December 7th meeting, the Technical Committee will recommend PPL15 *and* Phase II requests for construction money (\$250M).

Mr. Monnerjahn mentioned that if a PPL 15 project isn't selected for Phase I funding, they will roll into PPL16 as nominees. Mr. Monnerjahn reiterated that as a result of Katrina, the PPL15 public meetings were pushed back and therefore PPL15 Phase I selection will not be finalized until Jan 26th, 2006. The PPL16 RPT meetings are scheduled for Jan 10-12th, 2006. Therefore, the Task Force on 2 Nov approved a change to the PPL16 process allowing projects that don't make the PPL15 list to automatically be rolled into PPL16 as nominees for consideration at the coastwide voting meeting on February 1st, 2006.

5. Meeting was adjourned at 8:10 pm.



ATTENDANCE RECORD



DATE 9 NOV 2005	SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION Houma, LA
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PURPOSE

BREAUX ACT - 15th Priority Project List Public Meetings

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	E MAIL ADDRESS	TELEPHONE NUMBER
David McWhorter	Biologist - CH2M Hill	dmcwhort@ch2m.com	985-819-6125
Lillian Miller	H-T Charley / Gen-Fish Hurricane / Cimarron	lillian@swm.com	985-876-1810
Ronny Palle	USFWS		337-291-3117
Oneil Malbrough	Shaw / Jefferson Ph	oneil.malbrough@shawgrp.com	
BARRY BLACKWELL	TPCG	BBLACKWELL@TPCG.ORG	985-873-6405
NOLAN BERGERON	CHAIRMAN CEM & CRAC Terrebonne	scorpion01@charter.net	985-594-5031
Daniel Truchan			594-489 0
Mary Bergeron			985-594-5031
Al Levron	Public Works Director	allevron@tpcg.org	985-873-6407
Wes McQuiddy	EPA	mcquiddy.david@epa.gov	214-665-6722
JAMES MILLER	Terrebonne CZM	jmiller@TPCG.ORG	985-580-8145
Will Norman	DNR	encharlesn@mar.k.gov	225-342-9432
DAN LLEWELLYN	DNR	DANIEL.LLEWELLYN@LA.GOV	225-342-5159
Jerome Zeringue	TLCD	jzee@tlcd.org	985-594-4104
Frank [unclear]	TPCG		985 856 5419
Beau [unclear]	Southern Comfort	dulacsouth.com@AOL.com	804/1603
Rory [unclear]	STNEP		
John Pettibon	COE		504-862-2732
Michael Trusciani	NRCS	michael.trusciani@la.usda.gov	985-417-3871
WENDY BILLIOT	LOCAL AUTHORITY WETLAND ADVOCATE	wbilliot@wetlandbooks.com	

Leslie [unclear] TPCG
 Chris Monner [unclear] COE
 Julie LeBlanc COE

ksuazo@tpcg.org 985
 873-6889

**Public Support Letters for Candidate Projects
for the
15th Priority Project List**

Bayou Lamoque Freshwater Diversion

Lake Hermitage Marsh Creation

Venice Ponds Marsh Creation and Crevasses

South Terrebonne Terracing

- Paul Labat, representing Terrebonne Parish Council wrote a resolution in support of this project (27 Jan 05)
- Honorable Senator Reggie P. Dupre, Jr. wrote a letter in support of this project (31 Jan 05).
- Kandy Theriot, representing Houma Terrebonne Chamber of Commerce wrote a letter in support of this project (1 Feb 05).
- Don Schwab, Parish President, Terrebonne Parish wrote a letter in support of this project (9 Nov 05).
- Don Schwab, Parish President, Terrebonne Parish wrote a letter in support of this project (29 Nov 05).
- Lafourche and Terrebonne Delegation, Honorable Senator Reggie Dupre, Jr., Honorable Senator Butch Gautreaux, Honorable Representative Carla Dartez, Honorable Representative Gordon Dove, and Honorable Representative Damon J. Baldone wrote a letter in support of this project (9 Nov 05).
- John W. Woodard, representing Apache Louisiana Minerals, Inc. wrote a letter in support of this project (9 Nov 05).

Bird Island/Southwest Pass Marsh Creation and Shoreline Protection

South Pecan Island Freshwater Introduction



DON SCHWAB
PARISH PRESIDENT

OFFICE OF THE PARISH PRESIDENT
TERREBONNE PARISH CONSOLIDATED GOVERNMENT
P. O. Box 6097
HOUMA, LOUISIANA 70361



(985) 873-6401
FAX: (985) 873-6409

November 9, 2005

Members of the CWPPRA Task Force
Members of the CWPPRA Technical Committee

Ladies and Gentlemen:

I am writing to you today on behalf of the Terrebonne Parish Consolidated Government and the citizens of Terrebonne Parish to express our full support for the South Terrebonne Terracing Project being presented this evening as a candidate for CWPPRA Phase I funding for Project Priority List 15 (PPL 15).

While it may be impossible at this time to accurately quantify the wetland impacts sustained by our Parish as a result of Hurricanes of Katrina and Rita, early estimates indicate that the State of Louisiana has sustained a loss of approximately 100 square miles of the coast. Aerial images and first hand inspections of the Terrebonne Basin leave no doubt as to the magnitude of devastation we have experienced here in our own back yards. These hurricanes have only reinforced the urgent need for restoration projects that will not only create marsh and reduce erosion, but also enhance hurricane protection efforts and protect infrastructure. Although it is a small project relative to the enormity of our problems, the South Terrebonne Terracing project is a significant step in achieving these objectives.

As the elected leader of Terrebonne Parish Consolidated Government, I am keenly aware of the urgent need for restoration projects in the Terrebonne Basin. The proposed project encompasses three areas which have experienced tremendous wetland loss due to a variety of forces, including subsidence, salt water intrusion, a lack of sediment supply and oil and gas activities. The loss of these marshes has exposed significant public infrastructure to open water conditions, and has made the areas to the north less suitable for various wildlife. The proposed project would re-establish some semblance of marsh function in the Madison Bay vicinity, and between Lake Boudreaux and Lake Quitman. More specifically, the Madison Bay project area would provide immediate marsh protection to the Montegut drainage levee – an area which has lost most of its marsh protection to open water and recently succumbed to the powerful storm surges of Hurricane Rita. In addition, certain reaches of the proposed Morganza to the Gulf

Hurricane Protection system will benefit from the marsh creation provided by this project.

Finally, in addition to the creation of emergent marsh and associated edge habitat, the construction of this project will improve the condition of aquatic habitat, and reduce the wave erosion of marsh along the fringes of Lake Boudreaux, Lake Quitman and Madison Bay.

Thank you for the opportunity to express my support of this project for and on behalf of the citizens of Terrebonne Parish. Kindly include these comments as part of your official proceedings for the evening.

Sincerely,

A handwritten signature in dark ink that reads "Don Schwab". The signature is written in a cursive style with a large initial "D".

Don Schwab
Parish President



**STATE OF LOUISIANA
Lafourche and Terrebonne Delegation**

Senator Reggie Dupre, Jr. (District 20)
P.O. Box 3893
Houma, LA 70361 Phone 985-876-9902

Representative Carla Dartez (District 51)
1006 8th Street
Morgan City, LA 70080 Phone 985-385-7019

Representative Gordon Dove (District 52)
P.O. Box 629
Houma, LA 70361 Phone 985-876-8823

Senator Butch Gautreaux (District
1103 Eighth Street
Morgan City, LA 70080 Phone 985-380-2433

Representative Damon J. Baldone (District 53)
162 New Orleans Blvd.
Houma, LA 70364 Phone 985-876-8872

November 9, 2005

**Members of the CWPPRA Task Force
Members of the CWPPRA Technical Committee**

Ladies and Gentlemen:

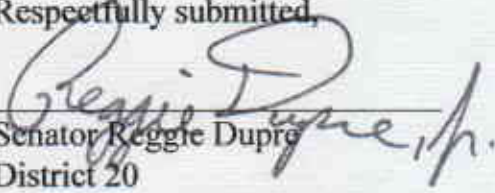
We are writing to you today to express our full support for the South Terrebonne Terracing Project being presented this evening as a candidate for CWPPRA Phase I funding for Project Priority List 15 (PPL 15). Unfortunately, due to the demands of the ongoing Special Legislative Session, we are unable to attend tonight's public hearing to affirm our interest in this project.


As elected representatives of the people of Terrebonne Parish, we are keenly aware of the urgent need for restoration projects in the Terrebonne Basin, an area which consistently experiences a tremendous amount of land loss. The proposed project encompasses three areas which have experienced tremendous wetland loss due to a variety of forces, including subsidence, salt water intrusion, a lack of sediment supply and oil and gas activities. The loss of these marshes has exposed significant infrastructure to open water conditions, and has made the areas to the north less suitable for various wildlife. The construction of this project would not only improve the condition of aquatic habitat, but will create emergent marsh and reduce the wave erosion of marsh along the fringes of Lake Boudreaux, Lake Quitman and Madison Bay. A model of this type of project has been done in the southeastern part of the Parish in the Pointe-Aux-Chenes area. Terracing seems to be a very efficient and quick manner of creating and rebuilding wetlands in an area that has quickly turned into open water.

We would urge this task force to support and fund this project as soon as possible. We appreciate the opportunity to express our support of this project for the citizens of

Terrebonne Parish and request you to include our comments as part of your official proceedings for the evening.

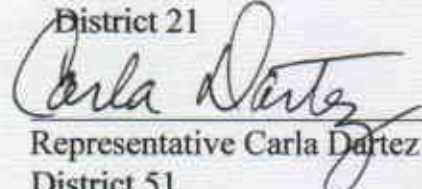
Respectfully submitted,


Senator Reggie Dupre
District 20


Representative Damon Baldone
District 53


Representative Gordon Dove
District 52


Senator Butch Gautreaux
District 21


Representative Carla Darte
District 51

SOUTHPORT

Cotton-7100

FINEN

APACHE LOUISIANA MINERALS, INC.

A Subsidiary of APACHE Corporation



POST OFFICE BOX 206 / HOUMA, LOUISIANA 70361-0206

1913 LATERRE COURT / HOUMA, LOUISIANA 70363-7525

TEL (985) 879-3528

FAX (985) 876-5267

November 9, 2005

CWPPRA Technical Committee

RE: South Terrebonne Marsh Terracing Project - 15th Priority Project List

Gentlemen:

Apache Louisiana Minerals, Inc. is a major coastal landowner in Louisiana, owning and managing approximately 267,000 acres of wetlands statewide. We have always supported the efforts of CWPPRA to preserve and restore our fragile wetlands, and have participated in several CWPPRA projects which are located on our property. A portion of the proposed South Terrebonne Marsh Terracing Project falls within our fee lands. This project is located within the Terrebonne Basin, which as you know is one of the most rapidly disappearing wetland areas in the world.

Apache Louisiana Minerals, Inc. would like to go on record as being an enthusiastic supporter of this project. We have met with the Terrebonne Parish officials who have developed this project, in conjunction with the National Marine Fisheries Service, and believe this marsh terracing concept will provide immediate and lasting benefits to the surrounding areas. We also pledge our commitment to grant 'Land rights' for this project, once it is approved for construction. We are respectfully requesting that the Technical Committee recommend this project to the task force for funding and implementation.

Thank you for the opportunity to present our views on this worthy project.

Sincerely,

APACHE LOUISIANA MINERALS, INC.

A handwritten signature in blue ink that reads "John W. Woodard". The signature is written in a cursive style.

John W. Woodard
General Manager

Cc: Leslie Suazo, Terrebonne Parish Consolidated Government



P.O. BOX 6097
HOUMA, LOUISIANA 70361
(985) 868-5050



P.O. BOX 2768
HOUMA, LOUISIANA 70361
(985) 868-3000

TERREBONNE PARISH
CONSOLIDATED GOVERNMENT

*Office of Coastal Restoration
and Preservation*

November 29, 2005

Colonel Richard Wagenaar, USACoE
Chairman CWWPRA Task Force
P.O. Box 60267
New Orleans, Louisiana 70160-0627

Dear Colonel Wagenaar:

Thank you for the opportunity to provide comments on behalf of CWWPRA candidate projects for PPL 15 at the recent public hearing held in Houma, Louisiana.

At that time, comments in support of the South Terrebonne Marsh Terracing Project were provided on behalf of our Parish President, Don Schwab, as well as members of the State Legislative Delegation who were unable to attend that evening. In addition, a written statement of support was provided by the Apache Corporation, a major landowner in the project area, and oral comments in support of the project were provided by Mr. Kerry St. Pe', Director of the Barataria-Terrebonne National Estuary Program.

Of particular note that evening, were comments stressing the benefits of this terracing project to adjacent levees in the Montegut area, as well its ability to generate optimism and support as certain project areas are readily visible to the public.

In an effort to reiterate the local support for this project, I am enclosing for your benefit, copies of resolutions passed by the Terrebonne Parish Council and other letters of support expressed at the start of the PPL 15 planning rounds.

Please feel free to contact me should you have any questions or require additional information. We hope that the members of the CWWPRA Technical Committee and the Task Force will give every favorable consideration possible to this worthwhile project.

Sincerely,

Leslie R. Suazo, Director
Office of Coastal Restoration and Preservation
Terrebonne Parish Consolidated Government

PETER RHODES, CHAIRMAN

PAUL A. LABAT, CLERK

ALVIN TILLMAN, SR., VICE-CHAIRMAN

DISTRICT 5
CHRISTA M. DUPLANTIS, R.N.

DISTRICT 1
ALVIN TILLMAN, SR.

PARISH COUNCIL

DISTRICT 6
HAROLD LAPEYRE

DISTRICT 2
WAYNE THIBODEAUX

PARISH OF TERREBONNE

DISTRICT 7
CLAYTON J. VOISIN

DISTRICT 3
KIM ELFERT

POST OFFICE BOX 2768

DISTRICT 8
PETER RHODES

DISTRICT 4
TERI C. CAVALIER

HOUMA, LOUISIANA 70361

(985) 873-6519

DISTRICT 9
PETE LAMBERT

FAX (985) 873-6521

plabat@tpcg.org

www.tpcg.org

January 27, 2005

MEMO TO: Al Levron

FROM: Paul A. Labat *PLA*

RE: CWPPRA Funding



As per our discussion, I have attached an original resolution adopted by the Council that supports the Coastal Zone Management & Restoration Advisory Committee's recommendation to submit the North Lost Lake Marsh Creation Project and the South Terrebonne Parish Terracing Project as the two top projects to be considered for receipt of CWPPRA funding in the upcoming funding cycle. As I understand, you will be the lead person in making the presentation to the proper officials.

Please let me know if you need anything more from this office prior to the presentation.

PAL

Attachment

cc: Mr. Nolan Bergeron (with attachment)

Mr. James Miller (with attachment)

Mr. Steve Smith (with attachment)

OFFERED BY: Mr. P. Lambert.
SECONDED BY: Mr. C. Voisin.

RESOLUTION NO. 05-038

WHEREAS, each year, grants from the Coastal Wetlands Planning, Protection and Restoration Act are awarded to projects that are designed to lengthen the life of coastal communities throughout this country, and

WHEREAS, Terrebonne Parish has been the recipient of these grant funds on more than one occasion and the projects funded by this program have helped to make tremendous strides in protecting the coastline of Terrebonne Parish, and

WHEREAS, following many weeks of substantial review and the evaluation of several needed projects, the Terrebonne Parish Coastal Zone Management and Restoration Committee has recommended that two projects in Terrebonne Parish receive priority status in the CWPPRA funding review process, and

WHEREAS, the Terrebonne Parish Council has received the recommendations of the Committee and would like to express its support for both of these projects to receive CWPPRA funding.

NOW THEREFORE BE IT RESOLVED, by the Terrebonne Parish Council, on behalf of the Terrebonne Parish Consolidated Government that this governing body accepts the recommendations of the Terrebonne Parish Coastal Zone Management & Restoration Committee and supports the following two projects for funding from the 2005 grant cycle of the Coastal Wetlands Planning, Protection & Restoration Act:

1. North Lost Lake Marsh Creation Project
2. South Terrebonne parish Terracing Project

AND BE IT FURTHER RESOLVED that a copy of this resolution be sent to all members of the Terrebonne Parish Congressional and Legislative Delegations so that they may be aware of the Council's position on this most important matter.

THERE WAS RECORDED:

YEAS: P. Rhodes, P. Lambert, A. Tillman, W. Thibodeaux, K. Elfert, T. Cavalier, C. Duplantis, H. Lapeyre and C. Voisin.

NAYS: None.

ABSTAINING: None.

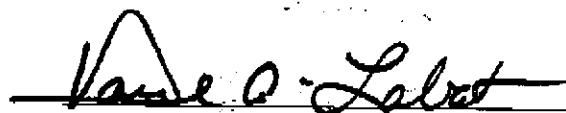
ABSENT: None.

The Chairman declared the resolution adopted on this, the 26th day of January, 2005.

I, PAUL A. LABAT, Council Clerk for the Terrebonne Parish Council, do hereby certify

that the foregoing is a true and correct copy of a resolution adopted by the Assembled Council in Regular Session on January 26, 2005 at which meeting a quorum was present.

GIVEN UNDER MY OFFICIAL SIGNATURE AND SEAL OF OFFICE THIS 27th
DAY OF JANUARY, 2005.

A handwritten signature in black ink, appearing to read "Paul A. Labat", written over a horizontal line.

PAUL A. LABAT, COUNCIL CLERK
TERREBONNE PARISH COUNCIL



REGGIE P. DUPRE, JR.
District 20

P. O. Box 3893
Houma, Louisiana 70361
Telephone: (985) 876-9902
Fax: (985) 873-2016

STATE OF LOUISIANA
SENATE

COMMITTEES:

Senate & Governmental Affairs
Vice Chairman

Judiciary A

Revenue & Fiscal Affairs

Transportation, Highways &
Public Works

Special Committee on Coastal
Restoration & Flood Control
Chairman

January 31, 2005

TO WHOM IT MAY CONCERN:

Re: Proposed CWPPRA Projects
Terrebonne Basin

Please accept his letter as an expression of my support for the North Lost Lake and South Terrebonne Terracing Projects. These projects will be proposed and supported by the Terrebonne Parish Consolidated Government through the Coastal Zone Advisory Committee. The Terrebonne Parish Coastal Zone Advisory Committee reviewed several available projects and formed a consensus that these two projects presented the best opportunities to restore eroding marshlands within Terrebonne Parish.

Please give great consideration to accepting these projects as nominated and moving them through the CWPPRA process.

Sincerely,

A handwritten signature in black ink, appearing to read "Reggie P. Dupre, Jr.", written over a horizontal line.

Reggie P. Dupre, Jr.
State Senator
District 20



DON SCHWAB
PARISH PRESIDENT

OFFICE OF THE PARISH PRESIDENT
TERREBONNE PARISH CONSOLIDATED GOVERNMENT
P. O. Box 6097
HOUMA, LOUISIANA 70361



(985) 873-6401
FAX: (985) 873-6409

CWPPRA
Regional Planning Team
Region 3 - Terrebonne Basin

RE: Priority Project List 15

Ladies and Gentlemen,

Please allow this letter to document my support of the following two projects for inclusion in PPL15:

1. North Lost Lake Marsh Creation Project
2. South Terrebonne Parish Terracing Project

Both of these projects have also been recommended for approval recently by the Terrebonne Parish Coastal Zone and Restoration Committee; the Houma-Terrebonne Chamber of Commerce, and by unanimous support of the Terrebonne Parish Council.

We look forward to your favorable consideration of these important projects.

Sincerely,

A handwritten signature in cursive script that reads "Don Schwab".

Don Schwab
Parish President

cc: Peter Rhodes
Harold Lapeyre
Nolan Bergeron
Al Levron
James Miller



6133 Hwy. 311
Houma, LA 70360

Phone: (985)876-5600
Fax: (985)876-5611

www.houmachamber.com

February 1, 2005

Dear CWPPRA Nominating Committee,

The Houma Terrebonne Chamber of Commerce supports the recommendations of the Terrebonne Parish Coastal Zone Management and Restoration Advisory Committee in regard to the CWPPRA projects proposed for Terrebonne Parish.

The projects supported are in order of importance:

Project 1- North Lost Lake Marsh Creation Project

Project 2 – South Terrebonne Parish Terracing Project

Sincerely,

A handwritten signature in cursive script that reads "Kandy Theriot".

Kandy Theriot
President/CEO

Decision: Request for Construction Approval and Phase II Authorization for Projects on all PPL's

Agency	Project No.	PPL	Project Name	Construction Start Date	Phase II Incr. 1 Funding Request#	Phase II Total Cost	Acres Benefited Over 20 Years	Prioritization Score	30% Design Review Date	95% Design Review Date
NRCS	BA-27c(3)	9	Barataria Basin Landbridge, Phase 3 - CU 7	Jul-06	\$15,742,430	\$18,801,185	180	45.55	20-Aug-03	2 Sep 04
NMFS	AT-04	9	Castille Pass Channel Sediment Delivery	Jun-06	\$10,529,752	\$17,811,369	577	64.50	20-Jan-04	13 Oct 05
FWS	BA-36	11	Dedicated Dredging on Bara Basin LB	Aug-06	\$31,000,584	\$31,132,727	605	61	17-Dec-03	29 Jul 04
NMFS	BA-30	9	East Grand Terre Island Restoration	May-06	\$27,311,634	\$28,914,508	335	60	26-May-05	30 Nov 05
COE	TV-11b	9	Freshwater Bayou Bank Stab-Belle Isle Canal-Lock	Apr-06	\$14,204,558	\$16,257,501	241	42.5	27-Jun-02	22 Jan 04
NRCS	TE-43	10	GIWW Bank Restoration of Critical Areas in Terre	Aug-06	\$25,336,578	\$28,251,658	366	40.25	21-Jan-03	26 Aug 04
COE	ME-21	11	Grand Lake Shoreline Protection	Aug-06	\$14,198,931	\$16,202,094	540	66.25	11-May-04	16 Aug 04
COE	PO-32	12	Lake Borgne & MRGO Shoreline Prot - Total	Mar-06	\$30,708,143	\$37,809,365	266	43.05	11-Aug-04	29 Mar 05
COE	PO-32a	12	Lake Borgne & MRGO Shoreline Prot - Lake Borgne	Mar-06	\$13,799,702	\$16,434,334	93	44	11-Aug-04	29 Mar 05
COE	PO-32b	12	Lake Borgne & MRGO Shoreline Prot - MRGO	Mar-06	\$16,898,695	\$21,400,544	173	36.5	11-Aug-04	29 Mar 05
EPA	PO-30	10	Lake Borgne Shoreline Protection	Jun-06	\$16,622,590	\$17,044,540	165	41.5	18-Aug-05	29 Nov 05
NMFS	BA-35	11	Pass Chaland to Grand Bayou Pass	Apr-07	\$26,904,301	\$27,873,180	262	49.85	16-Sep-04	7 Nov 05
NMFS	ME-18	10	Rockefeller Refuge Gulf Shoreline Test Sections	Jul-06	\$7,625,145	\$7,625,145	NA	NA	28-Sep-04	20 Sep 05
EPA	TE-47	11	Ship Shoal: Whiskey West Flank Restoration	May-06	\$38,909,247	\$39,176,768	195	60	5-Oct-04	28 Sep 05
NRCS	TE-39	9	South Lake DeCade - CU 1	Aug-06	\$2,243,910	\$3,203,133	202	74.95	19-Jul-04	2 Sep 04
FWS	TE-46	11	West Lake Boudreaux	Aug-06	\$14,654,600	\$16,197,377	277	51.4	16-Jun-05	8 Nov 05

* Amount may change based upon updates to fully funded cost estimates.

CWPPRA, Prioritization Scores

Dated: December 6, 2005

Project Name	Project Number	Region	PPL	Lead Agency	Project Type	(2) Total Acres Benefited	(1) Current Estimate	Cost Per Acre (\$/acre)	Prioritization Scores for each Criteria & Corresponding Weight								Total Weighted Score 100%	Anticipated Date of Request For Construction Approval	Scheduled Construction Start	
									Cost Effective 20%	Area of Need 15%	Implementability 15%	Certainty of Benefits 10%	Sustainability 10%	HGM Riverine Input 10%	HGM Sediment Input 10%	HGM Structure and Function 10%				
Benneys Bay Sediment Diversion	MR-13	2	10	COE	RD	5,706	\$39,295,672	\$6,887	10	5	10	9	10	10	10	10	10	91.50	Jan-07	Mar-07
Delta-Building Diversion North of Fort St. Philip	BS-10	2	10	COE	RD	501	\$6,008,486	\$11,993	10	4.4	10	9	10	10	10	5	85.60	Jan-07	May-07	
South Lake DeCade Freshwater Introduction - CU #1	TE-39	3	9	NRCS	SP	202	\$3,698,744	\$18,311	10	9.3	10	8	8	0	0	10	74.95	Jan-06	Aug-06	
Small Freshwater Diversion to the NW Barataria Basin	BA-34	2	10	EPA	RD	941	\$13,340,508	\$14,177	10	7.5	10	9	8	4	5	0	72.25	Jan-07	Feb-07	
Spanish Pass Diversion	MR-14	2	13	COE	SD	433	\$13,927,800	\$32,166	7.5	5	4	9	10	10	10	0	67.50	Jan-07	May-07	
Grand Lake Shoreline Protection	ME-21	4	11	COE	SP	540	\$17,251,124	\$31,947	7.5	7.5	10	10	10	0	0	5	66.25	Jan-06	Aug-06	
Castille Pass Sediment Delivery	AT-04	3	9	NMFS	RD	577	\$19,657,695	\$34,069	7.5	1	10	8	10	10	0	5	64.50	Jan-06	Jun-06	
Opportunistic Use of Bonnet Carre Spillway	PO-26	1	9	COE	RD	177	\$1,084,080	\$6,125	10	4	10	9	10	4	0	0	64.00	Jan-07	May-07	
Penchant	TE-34	3	6	NRCS	HR	1,155	\$13,250,937	\$11,473	10	5.9	10	2	10	7	0	0	62.85	Oct-06	Feb-07	
River Reintroduction into Maurepas Swamp	PO-29	1	11	EPA	RD	5,438	\$56,469,628	\$10,384	10	5	4	9	8	7	5	0	62.50	Jan-08	Feb-08	
Dedicated Dredging on the Barataria Basin Landbridge	BA-36	2	11	FWS	MC	605	\$31,596,669	\$52,226	5	10	10	7	4	0	0	10	61.00	Jan-06	Aug-06	
Avoca Island Diversion & Land Building	TE-49	3	12	COE	RD	143	\$18,823,322	\$131,632	1	8	10	9	6	7	10	0	61.00	Jan-07	Jul-07	
Ship Shoal: Whiskey Island West Flank Restoration	TE-47	3	11	EPA	BI	195	\$42,918,821	\$220,097	1	10	10	7	1	0	10	10	60.00	Jan-06	May-06	
East Grand Terre Island Restoration	BA-30	2	9	NMFS	BI	335	\$31,226,531	\$93,214	1	10	10	7	6	0	5	10	60.00	Jan-06	May-06	
Sabine Refuge Marsh Creation - Cycle 5	CS-28	4	8	COE	MC	168	\$2,133,439	\$12,699	10	5	10	7	8	0	0	0	57.50	Jan-07	May-08	
Riverine Sand Mining/Scofield Island Restoration	BA-40	2	14	NMFS	BI	234	\$44,545,000	\$190,363	1	10	10	7	1	0	5	10	55.00	unscheduled	unscheduled	
Brown Lake	CS-09a	4	2	NRCS	HR	282	\$3,154,472	\$11,186	10	5	7	5.1	8	3	0	0	54.10	Oct-06	Feb-07	
Goose Point/Point Platte Marsh Creation	PO-33	1	13	FWS	MC	436	\$21,547,421	\$49,421	5	4	10	7	10	0	0	5	53.00	Jan-07	Mar-07	
Sabine Refuge Marsh Creation - Cycle 4	CS-28	4	8	COE	MC	163	\$3,630,831	\$22,275	7.5	5	10	7	8	0	0	0	52.50	Jan-07	May-07	
White Ditch Resurrection and Outfall Management	BS-12	2	14	NRCS	RD	189	\$14,845,000	\$78,545	2.5	3	10	9	10	4	5	0	52.50	Jan-08	Aug-08	
Mississippi River Sediment Trap	MR-12	2	11	COE	MC	1,190	\$52,180,839	\$43,849	5	5	10	7	2	0	10	0	51.50	Jan-07	Jul-07	
West Lake Boudreaux Shoreline Protection & MC	TE-46	3	11	FWS	SP	277	\$17,519,731	\$63,248	2.5	10	10	7.4	4	0	0	5	51.40	Jan-06	Aug-06	
Whiskey Island Backbarrier Marsh Creation	TE-50	3	13	EPA	BI	272	\$21,786,300	\$80,097	1	10	7	7	1	0	5	10	50.50	Jan-07	Apr-07	
South Shore of The Pen Shoreline Protection and Marsh	BA-41	2	14	NRCS	SP/MC	116	\$17,514,000	\$150,983	1	7.9	10	7.4	4	0	0	10	50.25	Jan-08	Aug-08	
South Grand Cheniere Hydrologic Restoration	ME-20	4	11	FWS	HR	440	\$19,930,316	\$45,296	5	5	10	6.7	8	3	0	0	50.20	Jan-07	Jun-07	
South Lake DeCade Freshwater Introduction - CU #2	TE-39	3	9	NRCS	FD	40	\$1,532,400	\$38,310	7.5	5	7	5	10	2	0	0	50.00	unscheduled	unscheduled	
Pass Chaland to Grand Bayou Pass	BA-35	2	11	NMFS	BI	262	\$30,217,567	\$115,334	1	9.3	7	7	5	1.4	0	10	49.85	Jan-06	Apr-07	
Lake Boudreaux	TE-32a	3	6	FWS	FD	603	\$14,450,063	\$23,964	7.5	7.5	7	5	6	2	0	0	49.75	Jan-08	May-08	
Bayou Dupont Sediment Delivery System	BA-39	2	12	EPA	MC	400	\$24,386,990	\$60,967	2.5	10	7	7	2	0	10	0	49.50	Jan-07	Sep-07	
Rockefeller Refuge Gulf Shoreline Stabilization (original)	ME-18	4	10	NMFS	SP	920	\$49,929,888	\$54,272	5	7.5	10	6	2	0	0	5	49.25	unscheduled	unscheduled	
Barataria Landbridge Phase 3 - CU 7	BA-27c	2	9	NRCS	SP	180	\$19,424,357	\$107,913	1	5.7	10	8	2	0	0	10	45.55	Jan-06	Jul-06	
Little Pecan Bayou Control Structure	ME-17	4	9	NRCS	HR	144	\$14,285,943	\$99,208	1	4	10	6	10	6	0	0	45.00	Jan-07	Aug-07	
Lake Borgne and MRGO Shore Protection-Lake Borgne	PO-32a	1	12	COE	SP	93	\$17,108,507	\$183,962	1	4	10	8	8	0	0	5	44.00			
Lake Borgne and MRGO Shore Protection	PO-32	1	12	COE	SP	266	\$39,157,710	\$147,209	1	4.7	10	8	6	0	0	5	43.05	Jan-06	Mar-06	
Freshwater Bayou Canal HR/SP - Belle Isle to Lock	TV-11b	3	9	COE	SP	241	\$17,756,469	\$73,678	2.5	3	10	10	8	0	0	0	42.50	Jan-06	Apr-06	
Bayou Sale Ridge Protection	TV-20	3	13	NRCS	SP	329	\$32,103,000	\$97,578	1	3	10	7.7	8	0	0	5	42.20	Jan-07	Aug-07	
Lake Borgne Shoreline Protection	PO-30	1	10	EPA	SP	165	\$18,707,551	\$113,379	1	5	10	8	4	0	0	5	41.50	Jan-06	Jun-06	
Grand Bayou	TE-10	3	5	FWS	HR	199	\$8,209,722	\$41,255	5	5.4	7	2	8	2	0	0	40.60	Oct-07	Mar-08	
GIWW Bank Restoration of Critical Areas in Terrebonne	TE-43	3	10	NRCS	SP	366	\$29,987,641	\$81,933	1	7.5	10	8	4	0	0	0	40.25	Jan-06	Aug-06	
Lake Borgne and MRGO Shore Protection-MRGO	PO-32b	1	12	COE	SP	173	\$22,074,716	\$127,600	1	5	10	8	4	0	0	0	36.50			
East Marsh Island Marsh Creation	TV-21	3	14	NRCS	MC	189	\$16,824,700	\$89,020	1	1	10	7	10	0	0	0	35.50	Jan-08	Aug-08	
Weeks Bay/Commercial Canal/GIWW SP	TV-19	3	9	COE	SP	278	\$30,027,305	\$108,012	1	4	4	7.2	4	0	0	5	30.20	unscheduled	unscheduled	
Rockefeller Refuge Gulf Shoreline Stabilization - Test Sections	ME-18	4	10	NMFS	SP		\$10,033,623											Jan-06	Jul-06	

Notes:

- Current estimate reflects fully-funded estimate for engineering and design, lands, project administration, construction, construction S&I, contingency, 20 years of O&M and 20 years of only project specific monitoring if applicable. Monitoring monies going to CRMS have been removed from the fully-funded estimate. This estimate is the baseline (at the 100% level) estimate.
- Total acres reflect total acres benefited at end of 20 year project.
- Bayou Lafourche was not prioritized because there is currently no construction estimate available.
- Complex projects not yet approved for Phase I were not prioritized.
- West Point al la Hache Outfall Management Project (BA 04c) was not prioritized because the project features are not known and project costs and benefits can, therefore, not be determined to apply criteria.
- When project scores were tied an additional sort by the score of the cost effectiveness criterion was run. When those were tied another sort was run based on the sum of the area of need and implementability criteria scores.
- All projects seeking Phase II or construction approval are highlighted.**
- The Rockefeller Refuge Gulf Shoreline Stabilization - Test Sections Project seeking approval is located at the bottom of the spreadsheet because it is a series of test sections and does not have a WVA associated with it; thus no prioritization score.
- The following projects did not allow at least 1 week of workgroup review and are not finalized to date: Pass Chaland(BA-35), East Grand Terre (BA-30), Lake Borgne and MRGO - separable elements (PO-32a & PO-32b).

Monnerjahn, Christopher J MVN

From: Monnerjahn, Christopher J MVN
Sent: Tuesday, December 06, 2005 7:27 PM
To: Monnerjahn, Christopher J MVN; Britt Paul @ NRCS; Chris Knotts @ DNR; Cole, Ryan S MVN-Contractor; Cynthia Duet with GOCA; Darryl Clark @ FWS; Gerry Duszynski @ DNR; Breerwood, Gregory E MVN; Jon Porthouse @ DNR; LeBlanc, Julie Z MVN; Kirk Rhinehart @ DNR; Rick Hartman @ NOAA; Sharon Parrish @ EPA; Podany, Thomas J MVN
Cc: Miller, Gregory B MVN; Charles "Will" Norman @ DNR; Daniel Llewellyn; John Jurgensen @ NRCS; Kevin Roy @ FWS; 'Pat Forbes @ GOCA'; 'Rachel Sweeney @ NOAA'; 'Wes McQuiddy @ EPA'
Subject: RE: Question on Voting Process for Lake Borgne and MRGO Shoreline Protection Project

Technical Committee,

Everyone has provided input on this issue. The results are as follows:

Option 1 (show 2 separate projects): No one supported.
Option 2 (show all 3 projects): Supported by NMFS, FWS, COE (3 in favor)
Option 3 (show 1 total project): Supported by DNR, NRCS (2 in favor)
New Option (show 1 project - Lake Borgne only): Supported by EPA (1 in favor)

Therefore the voting spreadsheet will show all 3 projects.

Thanks for getting back to me in this issue. Since many of you have left already for New Orleans, I will provide a hard copy of this email to you at the meeting for your reference.

Chris Monnerjahn

Acting CWPPRA Senior Project Manager

Coastal Restoration Branch

U.S.A.C.E., New Orleans District

Christopher.J.Monnerjahn@mvn02.usace.army.mil

Work: (504)862-2415 Cell: (504)214-7839

From: Monnerjahn, Christopher J MVN
Sent: Monday, December 05, 2005 6:34 PM
To: Britt Paul @ NRCS; Chris Knotts @ DNR; Cole, Ryan S MVN-Contractor; Cynthia Duet with GOCA; Darryl Clark @ FWS; Gerry Duszynski @ DNR; Breerwood, Gregory E MVN; Jon Porthouse @ DNR; LeBlanc, Julie Z MVN; Kirk Rhinehart @ DNR; Monnerjahn, Christopher J MVN; Rick Hartman @ NOAA; Sharon Parrish @ EPA; Podany, Thomas J MVN
Cc: Miller, Gregory B MVN; Charles "Will" Norman @ DNR; Daniel Llewellyn; John Jurgensen @ NRCS; Kevin Roy @ FWS; 'Pat Forbes @ GOCA'; 'Rachel Sweeney @ NOAA'; 'Wes McQuiddy @ EPA'
Subject: Question on Voting Process for Lake Borgne and MRGO Shoreline Protection Project

Technical Committee,

You may have noticed by now that the USACE's Lake Borgne and MRGO Shoreline Protection Project PO-32 shows up as 3 different projects on the spreadsheet. The reason it has been broken up is because when the project was approved for Phase 1 by the Task Force, the Task Force stipulated that the project should be designed as separable elements (MRGO and Lake Borgne). Greg Miller, the COE PM, for the project will discuss this in his presentation to the TC at the meeting. Previously when projects that could be broken up were broken up, CWPPRA asked the sponsoring Federal agency to specify which project they wanted the TC or TF to vote on. In the case of the Lake Borgne and MRGO Project, the COE did not think it was appropriate to specify which to vote on since the TF said they wanted to make that call.

How do you propose to handle this situation?

Option 1: Show on the ballot: 2 projects - Lake Borgne separate (PO-32a) and MRGO separate (PO-32b)
Option 2: Show on the ballot: All 3 projects: The TOTAL project and Lake Borgne separate (PO-32a) and MRGO

separate (PO-32b)

Option 3: Show on the ballot: 1 project: TOTAL

Please advise by noon tomorrow, Dec 6th.

Thanks,

Chris Monnerjahn

Acting CWPPRA Senior Project Manager

Coastal Restoration Branch

U.S.A.C.E., New Orleans District

Christopher.J.Monnerjahn@mvn02.usace.army.mil

Work: (504)862-2415 Cell: (504)214-7839

Barataria Basin Landbridge Shoreline Protection, Phase 3 – CU 7

BA-27c(3)

*Coastal Wetlands Planning,
Protection and Restoration Act*



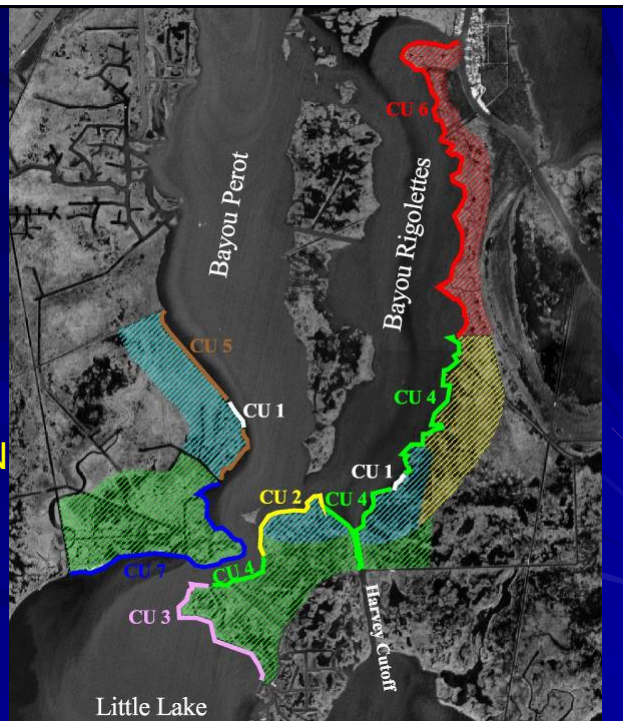
**BARATARIA LANDBRIDGE
SHORELINE PROTECTION
PROJECT PHASE 3 (BA-27c)**

**PHASE II APPROVAL OF
CU7**

*CWPPRA Technical Committee Meeting
December 7, 2005*

**BARATARIA
LANDBRIDGE
SHORELINE
PROTECTION**

**ALL PHASES
AND
CONSTRUCTION
UNITS**



BARATARIA LANDBRIDGE PHASE 3 (BA-27c) CONSTRUCTION UNIT 7

Project Location: Region 2, Barataria Basin, Lafourche Parish, west bank of Bayou Perot and north shore of Little Lake.

Problem: Shoreline erosion rates in this area vary from 5 to 30 feet per year. (Some areas lost about 75 feet as a result of recent storms.)

Goal: Reduce or eliminate shoreline erosion for about 22,800 feet along west bank of B. Perot and north shore of Little Lake.

BARATARIA LANDBRIDGE PHASE 3 (BA-27c) CONSTRUCTION UNIT 7



**BARATARIA LANDBRIDGE PHASE 3 (BA-27c)
CONSTRUCTION UNIT 7**

Project Features

2,450 feet of rock dike along the north shore of Little Lake.

20,358 feet of rock revetment along the along the west bank of Bayou Perot and the north shore of Little Lake.

Dike and revetment will have an elevation of 3.5 feet NAVD88, a top width of 4 feet, and side slopes of 3:1.

Five site-specific organism/drainage openings, ranging from 20 to 50 feet .

Beneficial Use of dredge material could result in creation of 38 acres of marsh.

**BARATARIA LANDBRIDGE PHASE 3 (BA-27c)
CONSTRUCTION UNIT 7**

Benefits and Cost

Total Area Benefited: 961 Acres

Net Acres after 20 years: 180 Acres

Prioritization Score: 45.55 Pts.

Fully Funded Phase II Total: \$18,801,185

Fully Funded Phase II Increment 1: \$15,742,430

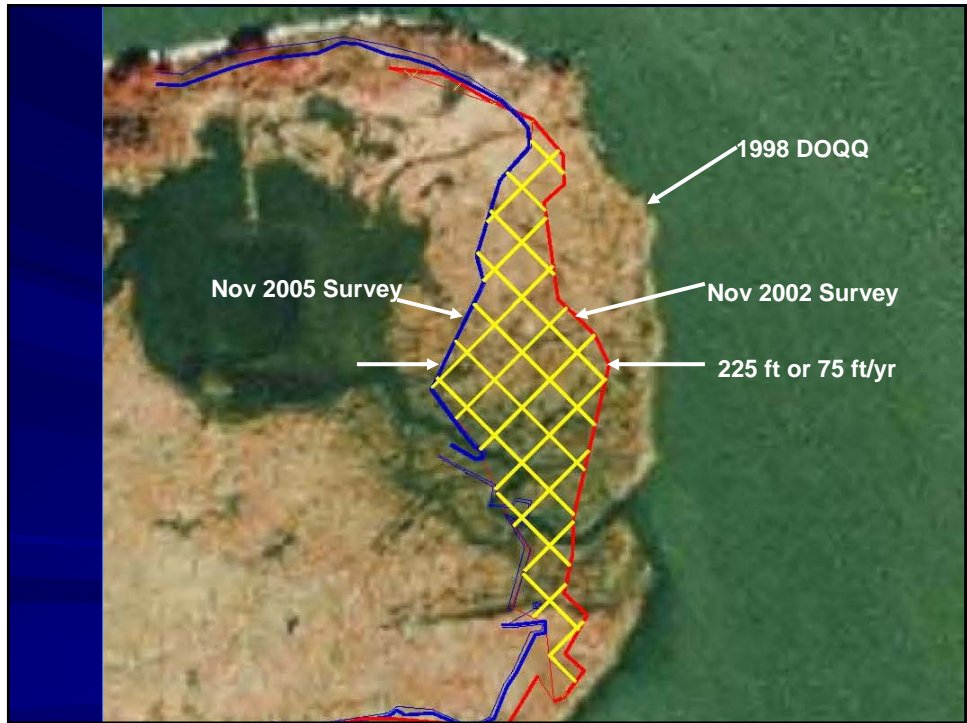
BARATARIA LANDBRIDGE PHASES 1, 2, 3, & 4 (BA-27, BA-27c, BA-27d)

Project Phase	Original Estimate	Current Estimate	Percent vs. Original
Phase 1 & 2 (BA-27) (CU1 + CU2 + part CU4 + CU5) 40,250 Feet	17,515,020	30,881,349	176%
Phase 3 (BA-27c) (CU3+part CU4 + CU7) 43,400 Feet	20,745,106	32,850,843	158%
Phase 4 (BA-27d) (CU6) 31,120 Feet	36,541,413	22,787,951	62%
TOTAL All Phases 114,770 Feet	74,801,539	86,520,143	116%

BARATARIA LANDBRIDGE PHASE 3 (BA-27c) CONSTRUCTION UNIT 7

Looking N along west bank of Bayou Perot, approx . Sta. 46 to Sta. 50





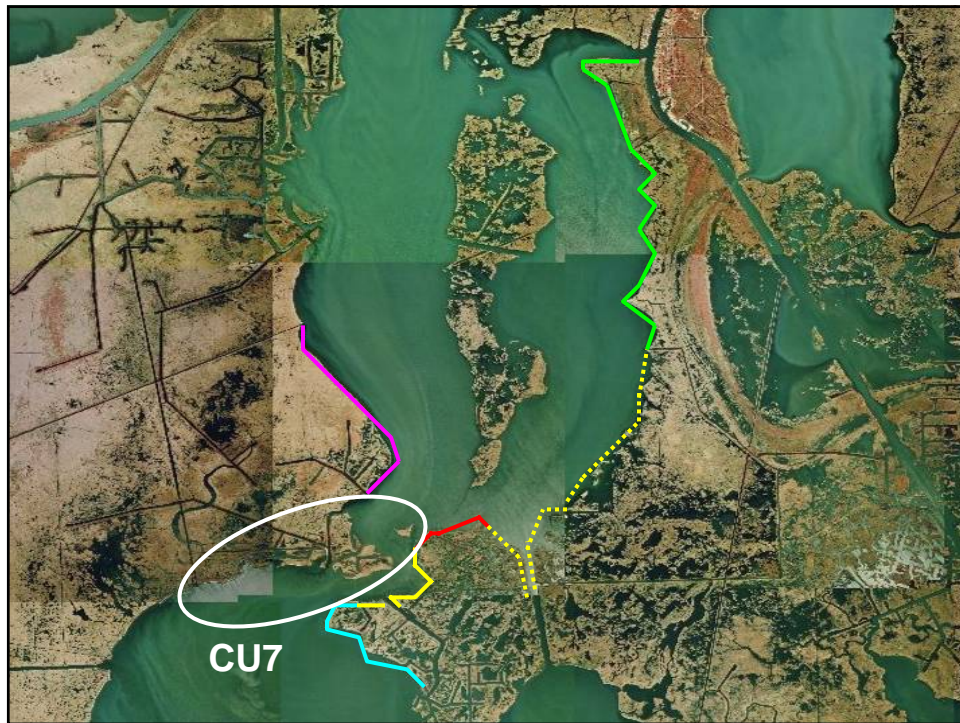
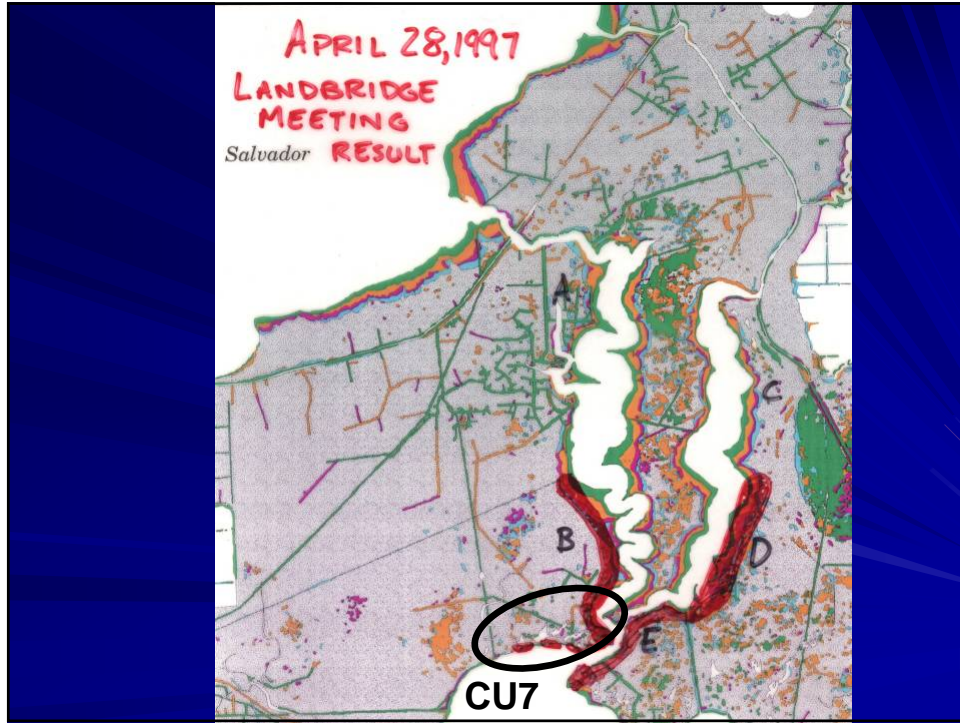
Hurricane-induced Shoreline Erosion in Central Barataria Basin, Louisiana,
Without vs. With Shoreline Protection Features

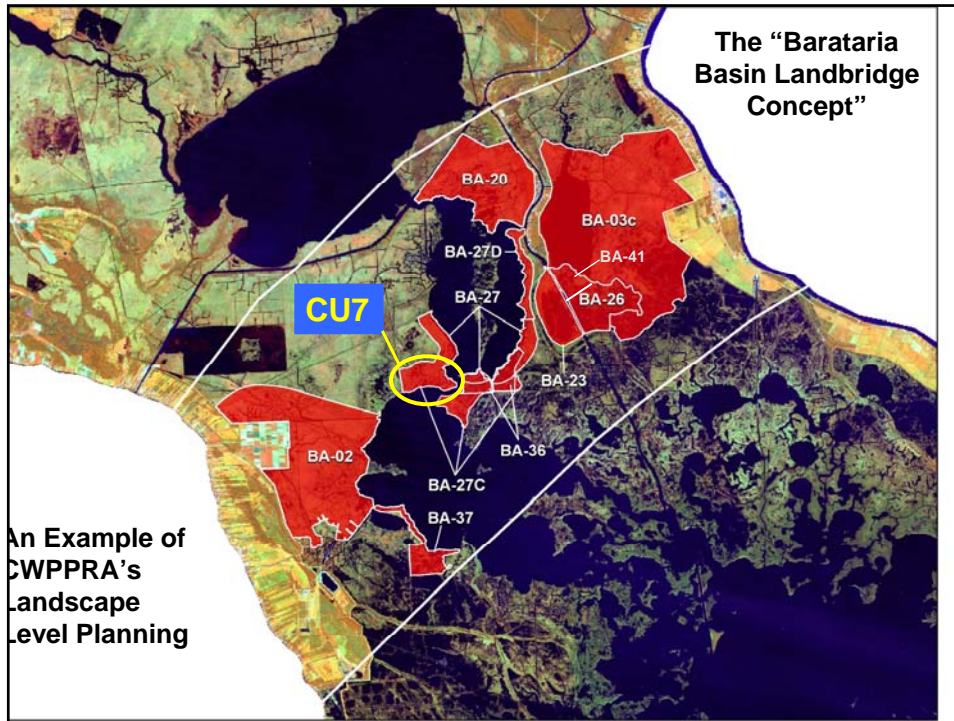


Significant shoreline erosion after Hurricane Katrina at South Shore of The Pen – protection feature not yet constructed. Note eroded marsh in foreground and deposited on remaining marsh



No shoreline erosion due to Hurricanes Katrina and Rita – protection feature part of Jonathan Davis Wetland Project (BA-20).





BARATARIA LANDBRIDGE PHASE 3 (BA-27c) CONSTRUCTION UNIT 7

Some reaches eroding at 75 feet per year.

**Local – State – Federal – Academic
consensus-derived solution.**

**CWPPRA's Case Study of
Landscape Level Planning**

United States Department of Agriculture



Natural Resources Conservation Service
3737 Government Street
Alexandria, Louisiana 71302

November 21, 2005

Mr. Tom Podany, Chair
CWPPRA Technical Committee
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Podany:

RE: Barataria Basin Landbridge Shoreline Protection Project Phase 3 (BA-27c)
Phase Two Authorization Request for Construction Unit 7

By this letter, the Natural Resources Conservation Service and the Louisiana Department of Natural Resources request Phase Two Authorization for the Barataria Basin Landbridge Shoreline Protection Project Phase 3 (BA-27c) Construction Unit 7, consisting of 22,811 feet of rock shoreline protection located on the north shore of Little Lake and the west bank of Bayou Perot in Lafourche Parish, Louisiana.

Pursuant to Revision 10.0 of the CWPPRA Standard Operating Procedures Appendix C, a document entitled "Information Required in Phase Two Authorization Request" is provided as Attachment A.

Pursuant to Revision 10.0 of the CWPPRA Standard Operating Procedures Appendix C, Section 6.j.(2), a project estimate and spending schedule based on the 5 budget subcategories is provided as Attachment B.

If you or any members of the Planning and Evaluation Subcommittee, Technical Committee or Task Force have any questions regarding this matter, please call Quin Kinler (225) 382-2047.

Sincerely,

Britt Paul
Assistant State Conservationist/Water Resources

cc (via email only):

Gerry Duszynski, DNR Technical Committee Member
Darryl Clark, USFWS Technical Committee Member

Mr. Tom Podany
November 18, 2005
Page 2

Rick Hartman, NMFS Technical Committee Member
Sharon Parrish, EPA, Technical Committee Member
Dan Llewellyn, DNR P&E Subcommittee Member
Kevin Roy, USFWS P&E Subcommittee Member
Rachel Sweeney, NMFS P&E Subcommittee Member
Wes McQuiddy, EPA P&E Subcommittee Member
John Jurgensen, NRCS P&E Subcommittee Member
Pat Forbes, GOCA
Cynthia Duet, GOCA
Quin Kinler, Project Manager, NRCS
Ismail Merhi, Project Manager, LDNR
Michael Trusclair, District Conservationist, NRCS
Ronnie Faulkner, Design Engineer, NRCS
Randolph Joseph, Jr., ASTC/FO, NRCS

ATTACHMENT A

Information Required for “Cash-flow” Phase Two Authorization Request

**Barataria Basin Landbridge Shoreline Protection Project Phase 3 (BA-27c)
Construction Unit 7**

November 21, 2005

Description of Phase One Project

The Barataria Basin Landbridge Shoreline Protection Project Phase 3 (BA-27c) as selected for Phase One consisted of 9,000 feet of shoreline protection along the north shore of Little Lake; 11,000 feet along the west bank of Bayou Perot; 6,000 feet along the northeast shore of Little Lake; 9,600 feet along the east bank of Bayou Perot; 2,700 feet along the west bank of Harvey Cutoff, and 2,700 feet along the east bank of Harvey Cutoff, for a total of 41,000 feet of shoreline protection. See Figure 1. The project was envisioned to include one or more of the following techniques: a) foreshore rock dike using a construction technique where the underlying organic substrate is displaced, b) foreshore rock dike using a construction technique which attempts to retain and compact the underlying organic substrate, c) foreshore rock dike with a lightweight core material, d) rock revetment, e) steel sheetpile structure, f) concrete sheetpile structure, and/or g) PVC sheetpile structure. The objective of the project was to reduce or eliminate shoreline erosion for those areas referenced above. Secondary benefits were envisioned to include maintenance, and increase extent, of submerged aquatic vegetation on the protected side of project features, where such features form protected coves. The WVA predicted that the project would prevent the loss of 264 acres of intermediate and brackish marsh and produce 101 Average Annual Habitat Units. At the time of Phase One approval, the cost estimate was as follows:

Phase One Engineering & Design	692,131
Phase One Easements & Land Rights	76,563
Phase One S&A	254,946
Phase One Monitoring	16,955
Total Phase One	1,040,595
Phase Two Construction (includes S&H)	13,860,064
Phase Two Monitoring	76,943
Phase Two O&M	5,748,325
Phase Two Other	19,179
Total Phase Two	19,704,511
Total Fully Funded Cost	20,745,106

Overview of Phase One Tasks, Process and Issues

Environmental Compliance Tasks.

The Barataria Basin Landbridge Shoreline Protection Project Phases 1, 2, and 3 (BA-27) Environmental Assessment was completed in February 2000. A Finding of No Significant Impact was published in the Federal Register on February 17, 2000.

The Section 404 permit was issued on December 10, 2002, with revised drawings being approved on February 26, 2004. CZM Consistency Determination was granted December 30, 2003. Water Quality Certification was granted January 30, 2004.

The Ecological Review for the entire Barataria Basin Landbridge Shoreline Protection Project was completed in August 2004. The reach of shoreline included in CU7 is addressed in the section referred to as CU5 because the previously defined CU5 was split into two parts; part was approved for Phase Two funding as “CU5” and part has been redefined as “CU7”.

Engineering Tasks.

The results of the Engineering Tasks are presented in the July 2004 Design Report for Barataria Basin Landbridge Shoreline Protection Project, Construction Unit 5 which can be found at: [ftp://ftp.dnr.state.la.us/pub/CED Project Management/NRCS/BA-27-CU7 BLB/Phase2Request TC2005-12-07](ftp://ftp.dnr.state.la.us/pub/CED%20Project%20Management/NRCS/BA-27-CU7%20BLB/Phase2Request%20TC2005-12-07) .

This design report covers the shoreline protection reach that has been already been approved for Phase Two funding as Construction Unit 5 (13,780 feet of concrete pile and panel wall) and the shoreline protection reach that is now referred to as Construction Unit 7 (22,811 feet of rock shoreline protection). Only two elements presented in the 2004 Design Report associated with the rock shoreline protection (now CU7) have changed: 1) the engineer’s estimate has been updated (\$14,209,638, including contingency); and 2) for the beneficial use areas, the maximum elevation of dredged material placement has been revised from +1.0 to +2.0 feet NAVD88.

Landrights Tasks.

CU7 involves four ownerships / tracts. Easements have been completely executed for three of those ownerships / tracts. For the fourth ownership / tract, five of six required signatures have been obtained; the primary landowner contact has indicated that the sixth signature is forthcoming. In a letter dated November 15, 2005, DNR stated, “At this time, no significant landrights acquisition problems are anticipated. Therefore, DNR is confident that landrights for the above referenced project will be finalized in a reasonable period of time after Phase Two Approval.”

Description of the Phase Two Candidate Project

The subject Phase Two Authorization Request is limited to about 22,811 feet of shoreline protection along the along the west bank of Bayou Perot and the northern shoreline of Little Lake. See Figure 2. The shoreline protection will consist of a rock dike and rock revetment, with an elevation of 3.5 feet NAVD88, a top width of 4 feet, and side slopes of 3:1. The dike revetment will be constructed of COE R-400 (rock specification) and will be underlain with a geotextile cloth. Five site-specific organism/drainage openings, ranging from 20 to 50 feet in width, will be incorporated; the openings will have a sill elevation of 2 feet below average tide. Approximately 36,500 feet of construction access channel, with a bottom elevation of -5.5 feet NAVD88 and bottom width of 80 feet, may be excavated. As available containment volume in existing ponds permit, excavated material will be used beneficially -- dredged material shall be placed in three shallow ponds along the north shore of Little Lake to a maximum elevation of +2.0 feet NAVD88; as much as 38 acres of marsh could be created.

The current fully-funded cost estimate for Phase II Total of the BA-27c Construction Unit 7 is \$19,424,357. However, because Monitoring and COE Management were approved in full when Construction Unit 3 was approved, the requested Phase II amount for BA-27c CU7 is \$18,801,185. The current fully-funded cost estimate for Phase II, Increment 1 of the BA-27c Construction Unit 7 is \$15,742,430.

There has been no significant change in project scope warranting revisions to the BA-27c project boundary, map, benefits, or fact sheets for the project as a whole. However, for the CU7 portion of BA-27c, the benefits include 180 net acres over 20 years. A "Prioritization Fact Sheet" for the CU5 portion of BA-27c was prepared, and it yielded a total prioritization score of 45.55.

Checklist of Phase Two Requirements

- A. List of Project Goals and Objectives. The objective of the BA-27c Construction Unit 7 is to reduce or eliminate shoreline erosion for approximately 22,811 feet of shoreline along the along the west bank of Bayou Perot and the northern shoreline of Little Lake,
- B. Cost Sharing Agreement for Phase One. The Cost Sharing Agreement for Phase One of the Barataria Landbridge Shoreline Protection Phase 3 Project (BA-27c) was executed between DNR and NRCS on July 25, 2000.
- C. Landrights Notification. In a letter dated November 15, 2005, DNR stated, "At this time, no significant landrights acquisition problems are anticipated. Therefore, DNR is confident that landrights for the above referenced project will be finalized in a reasonable period of time after Phase Two Approval."
- D. Favorable Preliminary Design Review. A favorable 30% Design Review for the work contained in this Construction Unit was conducted on August 20, 2003, and a summary of that review was distributed to the Technical Committee on October 14, 2003.
- E. Final Project Design Review. The 95% design review was conducted on September 2, 2004, with favorable results. A summary of that review, dated October 14, 2004, has been distributed to the Technical Committee.
- F. Environmental Assessment. The Barataria Basin Landbridge Shoreline Protection Project Phases 1, 2, and 3 (BA-27) Environmental Assessment was completed in February 2000.

- G. Findings of Ecological Review. The Ecological Review for the entire Barataria Basin Landbridge Shoreline Protection Project (Phases 1, 2, 3, and 4) was completed in August 2004. The reach of shoreline included in CU7 is addressed in the section referred to as CU5 because the previously defined CU5 was split into two parts; part was approved for Phase Two funding as “CU5” and part has been redefined as “CU7”. The Ecological Review recommended continued progress toward construction authorization pending a favorable 95% Design Review.
- H. Application / Public Notice for Permits. The Section 404 permit was issued on December 10, 2002, with revised drawings being approved on February 26, 2004. CZM Consistency Determination was granted December 30, 2003. Water Quality Certification was granted January 30, 2004.
- I. HTRW Assessment. NRCS procedures do not call for an HTRW assessment on this project.
- J. Section 303e Approval. Section 303e approval was granted by the Corps Real Estate Division on October 21, 2002.
- K. Overgrazing Determination. NRCS has determined that overgrazing is not, and is not anticipated to be, a problem in the project area.
- L. Revised fully funded cost estimate, approved by the Economic Work Group, is \$19,424,357. The required spreadsheet is provided at the end of this document.
- N. Wetland Value Assessment. The Wetland Value Assessment was completed in August 1999. A revised Wetland Value Assessment will not be performed because no significant change in project scope had occurred.
- M. Prioritization Criteria ranking score. The Prioritization Fact Sheet was updated November 18, 2005, after review by the Engineering and Environmental Work Groups.

Criteria	Score	Weight Factor	Contribution to Total Score
Cost Effectiveness	1	2	2
Area of Need, High Loss Area	5.7	1.5	8.55
Implementability	10	1.5	15
Certainty of Benefits	8	1	8
Sustainability of Benefits	2	1	2
Increasing riverine input	0	1	0
Increased sediment input	0	1	0
Maintaining landscape features	10	1	10
TOTAL SCORE			45.55

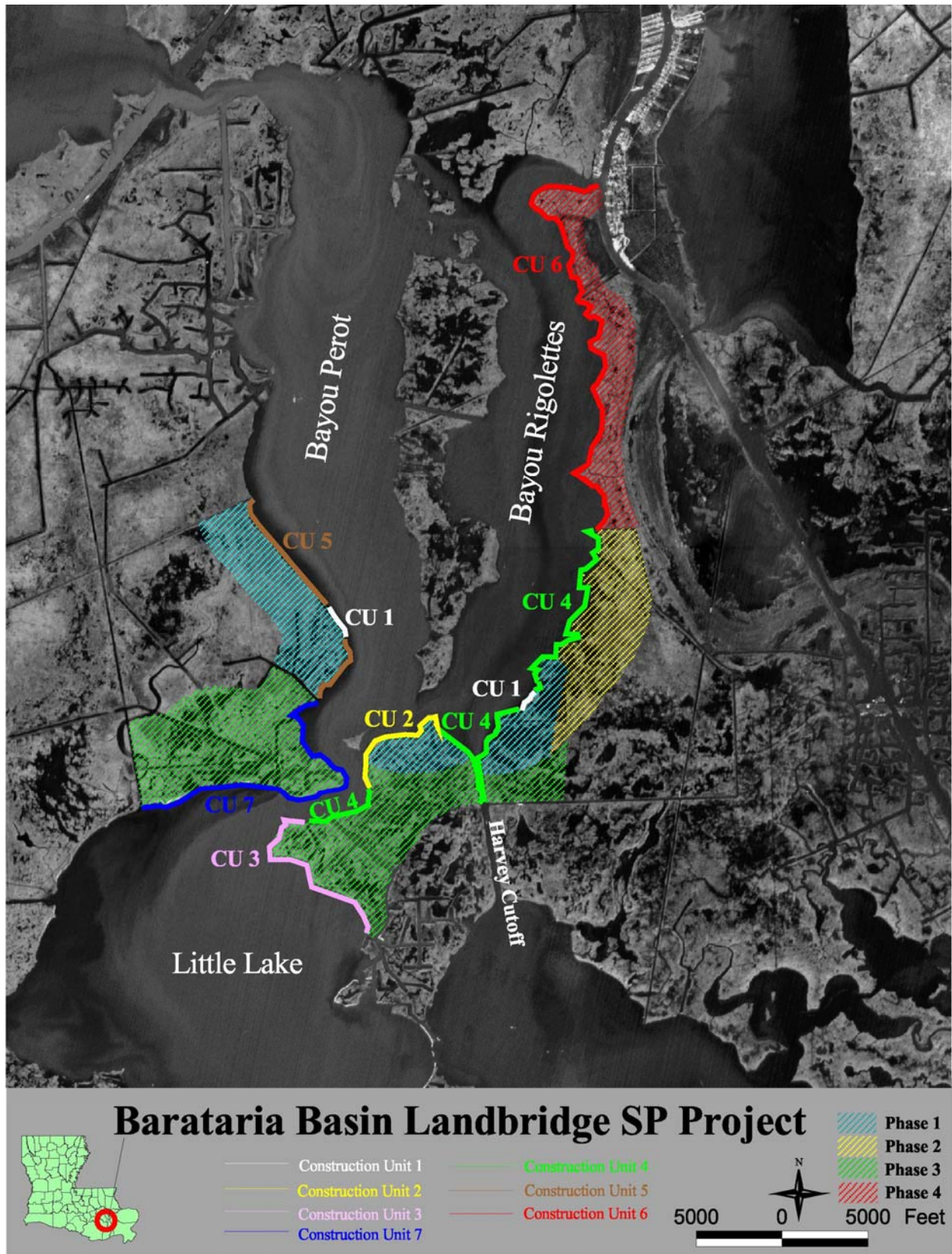


Figure 1. Map illustrating the juxtaposition of Barataria Basin Landbridge Shoreline Protection Project Phases and Construction Units.



Figure 2. Map Barataria Basin Landbridge Shoreline Protection Project Phase 3 Construction Unit 7, Lafourche Parish.

BARATARIA LANDBRIDGE PHASE 3 (BA-27) CONSTRUCTION UNIT 7
Spending Schedule by Budget Subcategory
18-Nov-05

Year	Subcategory A (see Note 1) Phase One E&D (incl. Lands, S&A, Mgt., etc)	Subcategory B (see Note 2) Phase One Pre-Constuction Monitoring	Subcategory C (see Note 3) Phase Two Construction (incl. S&A, S&I)	Subcategory D (see Note 4) Phase Two Post-Construction Monitoring	Subcategory E (see Note 5) Phase Two OMR&R
2006	229,395	12,392	2,210,571		
2007			13,528,696		
2008				0	1,318
2009				0	1,346
2010				0	1,374
2011				0	1,403
2012				0	1,437,998
2013				0	1,463
2014				0	1,494
2015				0	1,525
2016				0	1,557
2017				0	1,595,464
2018				0	1,623
2019				0	1,657
2020				0	1,692
2021				0	1,727
2022				0	1,764
2023				0	1,801
2024				0	1,839
2025				0	1,877
2026				0	1,917
2027				0	1,957
TOTAL			15,739,267		3,062,795

Notes

1. This value reflects the remaining balance of Subcategory A Phase 1 funds. It is anticipated that Phase 1 will be completed in 2006; after which the remaining funds can be deobligated.
2. This value reflects the remaining balance of Subcategory B Phase 1 funds. It is anticipated that Phase 1 will be completed in 2006; after which the remaining funds can be deobligated.
3. These values taken directly from Economic Data Sheets, November 2005. Values do not include COE Project Management because those costs were accounted for when BA-27c CU3 was approved.
4. All post-construction monitoring costs were accounted for when BA-27c CU3 was approved.
5. These values taken directly from Economic Data Sheets, November 2005. They represent the fully funded values derived from DNR's October 2005 O&M estimate.

Castille Pass Channel Sediment Delivery

AT-04

CWPPRA
Castille Pass Sediment Delivery
(AT-04)
Phase II Request

Technical Committee Meeting

December 7, 2005

New Orleans, LA

Project Overview

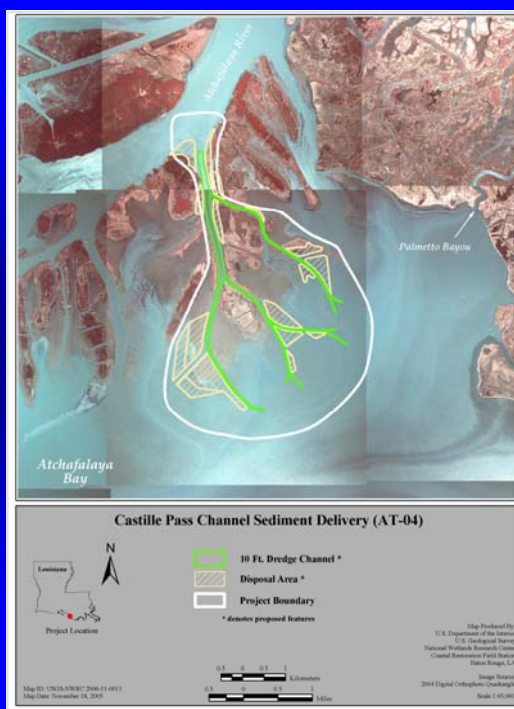
Project Location: Region 3 , Atchafalaya Basin, St. Mary Parish, Atchafalaya Delta.

Problem: Dredged spoil placement has restricted natural flow to the eastern delta which has substantially reduced natural marsh creation

Goals:

- Increase riverine flow into the eastern delta into Fourleague bay to promote natural marsh creation
- Initially create 150 acres of marsh (PPL9)
- Create 220 acres of marsh through maintenance activities (PPL9)

Project Map



Project Features Overview

- Hydraulically dredge 2.1 million cubic yards of material from Castille, East and Natal Passes to an elevation of -10.0 NAVD.
- Construct over 25,000 liner feet of containment dikes to varying elevations and widths.
- Initially create over 570 acres of intertidal marsh varying in elevation from +2.5 to +3.0 NAVD.

Project Benefits & Costs

- **Dredging activities will initially create over 500 acres of marsh with an additional 100+ acres created from maintenance events over 20 years. Anticipated long term (20yr) accretion from increased sediment transport to the project area will create approximately 200 acres**
- **The Total Fully Funded Cost is \$19,657,695**
- **The Total Fully Funded Cost is 38% lower than originally projected while increasing created acres by 60%**
- **The Prioritization Score is: 64.5**

Project Comparison/Contrast

The Present vs. PPL 9

Authorized Project – PPL 9

- Create a 10 ft deep, 400 ft wide channel 5 miles long extending southerly into Fourleague Bay.
- 150 acres created from initial construction
- 220 acres created from maintenance activities

Currently Proposed Project

- Dredge and extend Castille, East and Natal Channels, including bifurcation channels, in varying widths to elevation -10 NAVD.
- 500+ acres created from initial construction
- 100+ acres created from maintenance activities

Questions?



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE
SEFC/Estuarine Habitats & Coastal Fisheries Center
646 Cajundome Boulevard
Lafayette, Louisiana 70506

November 22, 2005

Mr. Tom Podany (Chairman)
CWPPRA Technical Committee
Assistant Chief of Planning, Programs and Projects Management
U.S. Army Engineer District, New Orleans
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Podany,

As the lead federal agency for the Castille Pass Sediment Delivery project authorized by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force on the 9th Project Priority List, the National Marine Fisheries Service (NMFS) is requesting, in accordance with CWPPRA's Standard Operating Procedure (SOP), approval to proceed with construction of this project.

At the Phase I approval meeting in January 2000 the project design consisted of dredging Castille Pass 400 feet wide by 10 feet deep (NGVD) extending it eastward towards Fourleague Bay ending near South Point for a total length of approximately 25,000 feet. This channel would have bifurcated several times to provide water and sediment delivery through four channels that were to be 160 feet wide by 10 feet deep totaling 21,500 feet. As designed, this effort was calculated to create 150 acres initially, and 370 acres after 20 years. As presented at the 95% design meeting, the project will now consist of improving four areas of the East Pass Delta Channel. The entrance to East Pass will be widened and the bottom ramped up to enhance diversion of fresh water and sediments from the Atchafalaya River into East Pass. The existing East Pass channel will be widened and deepened from the entrance to the Castille Pass bifurcation. The dredged material will be placed to create new emergent marsh. The existing Natal Channel branch channel will be extended and diked to direct the channel flows toward the southeast into bay bottoms to extend the Delta Lobe building process. The existing Castille Pass branch channel will be extended southeastward into the bay with diking placed to extend the Delta Lobe and build new marsh acreage. Extending the southeast branch exit channel toward the southeast will also reconfigure the mouth of East Pass. A complete dike will be placed along the southwestern channel bank to redirect flows into the shallow bay bottom to create a still-water cove area enhancing sediment deposition, eventually leading to the creation of emergent marsh in the newly created bay between Castille Pass and the East Pass extension. As presented, the proposed project is expected to create 570 acres of marsh initially, and an additional 150 acres after 20 years.





**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

NATIONAL MARINE FISHERIES SERVICE
SEFC/Estuarine Habitats & Coastal Fisheries Center
646 Cajundome Boulevard
Lafayette, Louisiana 70506

Attached please find the statement of local sponsor concurrence for construction approval request and brief description of the status of compliance with the various SOP requirements for construction approval. Please do not hesitate to contact me at 301-713-0174 if you have any questions regarding this matter.

Sincerely,

Erik Zobrist, Ph. D.
NMFS Program Manager

cc:

Julie Z. LeBlanc, USACE
Sharon Parrish, EPA
Wes McQuiddy, EPA
Britt Paul, NRCS
John Jurgensen, NRCS
Richard Hartman, NMFS
Rachel Sweeney, NMFS
Gerry M. Duszynski, DNR
Daniel Llewellyn, DNR
Maury Chatellier, DNR
Darryl Clark, USFWS
Kevin Roy, USFWS
Project File
NMFS, Galveston
Erik Zobrist, NMFS



**Castille Pass Sediment Delivery (AT-04) Phase II Funding Request
November 2005**

1.) Description of Phase One Project

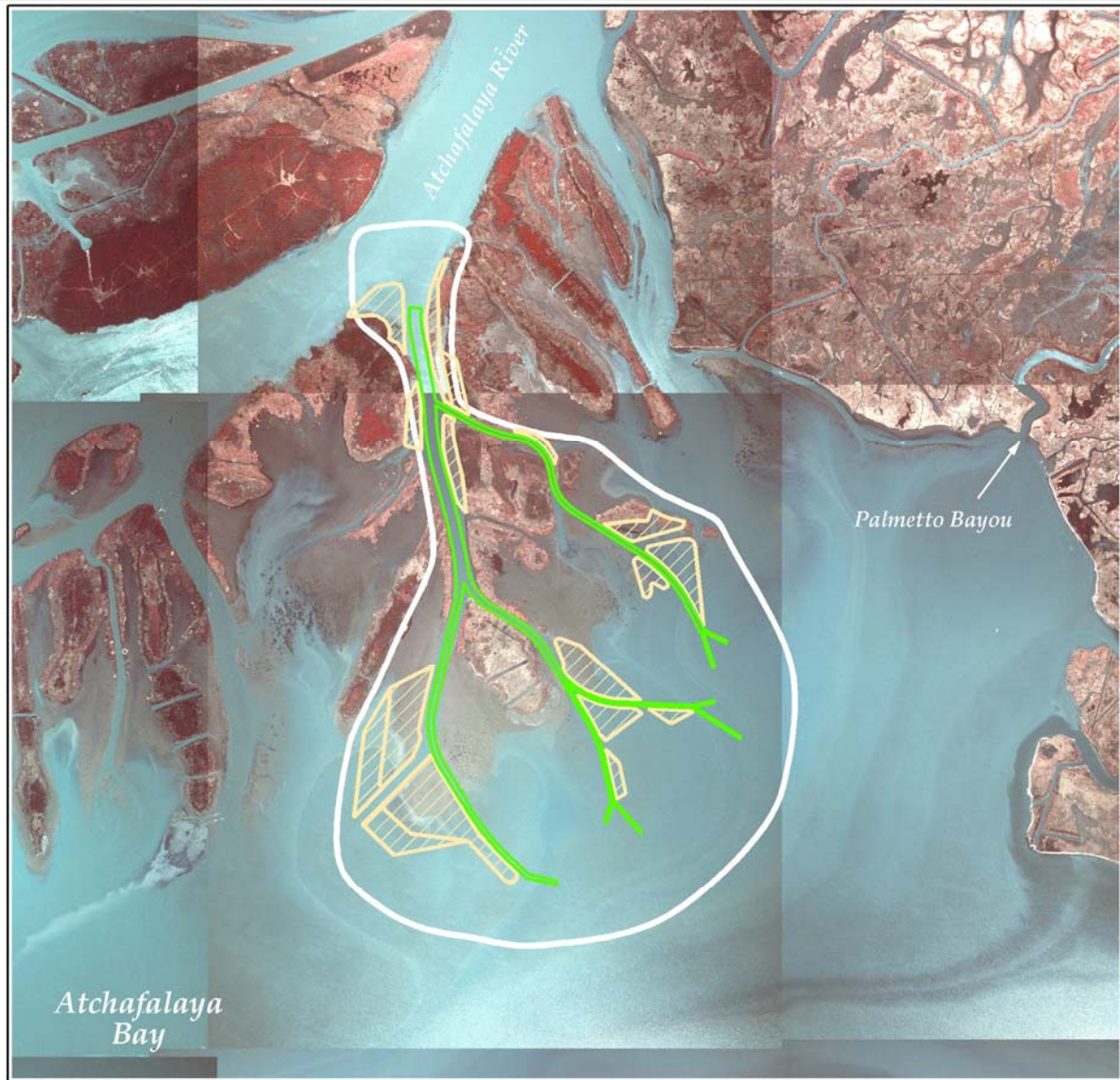
At the Phase I approval meeting in January 2000 the project design consisted of dredging Castille Pass 400 feet wide by 10 feet deep (NGVD) extending it eastward towards Fourleague Bay ending near South Point for a total length of approximately 25,000 feet. This channel would have bifurcated several times to provide water and sediment delivery through four channels that were to be 160 feet wide by 10 feet deep totaling 21,500 feet. As designed, this effort was calculated to create 150 acres initially, and 370 acres after 20 years. Fully funded construction costs were projected to be \$31,084,397 (anticipated costs of construction, O&M, monitoring, etc.)

2.) Overview of Phase One Tasks, Process and Issues

During design, issues incurred were concerns about hydrologic and sedimentation for navigation canals, concern over dredge disposal areas, retention dike materials, and blocking water flow. The revised 95% project configuration is based upon the following design considerations. Minor changes were made between the 30% design channel alignments for East Pass, Natal Pass and Castille Pass. The three cove area configurations created by the extensions of the East, Natal and Castille Passes remain unchanged from the 30% submittal report. Changes were made to the East Pass Extension channel length, width, diking lengths and elevations and alignments between the 30% and final design. The revised design considers only cast earthen dike construction for the channel and disposal area configurations. The computer model was re-run to compare the changes in the East Pass flows, stages and sediment transport, and the contiguous bay areas with and without a dam across the Southwest Branch at the mouth of East Pass. The model results indicated no significant flow or sediment transport benefits either with or without the dam across the Southwest Branch at the mouth of East Pass. As such, this dam was removed from the project.




Landrights were secured from the state without issue. A draft EA has been prepared and is currently being circulated without issue.

3.) Description of Phase Two Candidate Project
 Project Map:

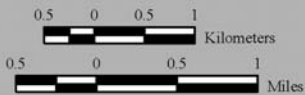


Castille Pass Channel Sediment Delivery (AT-04)



-  10 Ft. Dredge Channel *
-  Disposal Area *
-  Project Boundary

* denotes proposed features



Map ID: USGS-NWRC 2006-11-0011
 Map Date: November 18, 2005

Map Produced By:
 U.S. Department of the Interior
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station
 Baton Rouge, LA

Image Source:
 2004 Digital Orthophoto Quadrangle
 Scale 1:65,000

Project Features:

As presented at the 30% design meeting, the project will now consist of improving four areas of the East Pass Delta Channel. The entrance to East Pass will be widened and the bottom ramped up to enhance diversion of fresh water and sediments from the Atchafalaya River into East Pass. The existing East Pass channel will be widened and deepened from the entrance to the Castille Pass bifurcation. The dredged material will be placed to create new emergent marsh. The existing Natal Channel branch channel will be extended and diked to direct the channel flows toward the southeast into bay bottoms to extend the Delta Lobe building process. The existing Castille Pass branch channel will be extended southeastward into the bay with diking placed to extend the Delta Lobe and build new marsh acreage. The mouth of East Pass will also be reconfigured by extending the southeast branch exit channel toward the southeast. A dike will be placed along the southwestern channel bank to redirect flows into the shallow bay bottom to create a still-water cove area enhancing sediment deposition, eventually leading to the creation of emergent marsh in the newly created bay between Castille Pass and the East Pass extension.

The project is expected to create 570 acres of marsh initially, 106 acres during maintenance dredging, and an additional 227 acres after 20 years.

Estimated proposed project totally fully funded costs are \$19,667,162 as provided by the Economic Work Group.

FACT SHEET
November 20, 2005

Project Name and Number: Castille pass Channel Sediment Delivery (AT-04)
(Project Priority List 9)

Problem: Spoil dredged from the Atchafalaya River Channel has been placed east of the channel, thus restricting riverine flow into shallow water areas east of the channel, which has substantially reduced natural marsh creation. Without riverine replenishment, subsidence and wave erosion will increase deltaic marsh loss.

Goals : Increase the conveyance of silt laden river flows via East Pass and Castille Pass in the eastern area of the Atchafalaya Bay.

Project Status: The project has reached a 95% design status.

Proposed Solution: At the Phase I approval meeting in January 2000 the project design consisted of dredging Castille Pass 400 feet wide by 10 feet deep (NGVD) extending it eastward towards Fourleague Bay ending near South Point for a total length of approximately 25,000 feet. This channel would have bifurcated several times to provide water and sediment delivery through four channels that were to be 160 feet wide by 10 feet deep totaling 21,500 feet. As designed, this effort was calculated to create 150 acres initially, and 370 acres after 20 years. Fully funded construction costs were projected to be \$14,206,668. As presented at the 95% design meeting, the project will now consist of improving four areas of the East Pass Delta Channel. The entrance to East Pass will be widened and the bottom ramped up to enhance diversion of fresh water and sediments from the Atchafalaya River into East Pass. The existing East Pass channel will be widened and deepened from the entrance to the Castille Pass bifurcation. The dredged material will be placed to create new emergent marsh. The existing Natal Channel branch channel will be extended and diked to direct the channel flows toward the southeast into bay bottoms to extend the Delta Lobe building process. The existing Castille Pass branch channel will be extended southeastward into the bay with diking placed to extend the Delta Lobe and build new marsh acreage. The mouth of East Pass will also be reconfigured by extending the southeast branch exit channel toward the southeast. A complete dike will be placed along the southwestern channel bank to redirect flows into the shallow bay bottom to create a still-water cove area enhancing sediment deposition, eventually leading to the creation of emergent marsh in the newly created bay between Castille Pass and the East Pass extension. As presented, the proposed project is expected to create 507 acres of marsh initially, and an additional 106 acres after maintenance events over 20 years.

Issues: One pipeline passes through the channel alignment, which will be avoided during construction.

Estimated Costs and Benefits: Fully funded the cost is estimated to be \$19,667,162, which will create a total of 840 acres of wetland over 20-years.

4.) Checklist of phase Two requirements

A. List of Goals and Strategies

- Facilitate natural sub-delta formation in the shallow water areas between East Pass and Fourleague Bay to build approximately 577 acres of land over the 20-year project life.
- Create approximately 570 acres of emergent land suitable for establishment of marsh plant vegetation over the 20-year project life using dredged material.
- As a result of these goals, approximately 2,121 acres of marsh will exist in the project area at the end of the 20-year project life representing an approximate net gain of 577 acres of marsh.

B. Cost Sharing Statement

A cost sharing agreement was signed for Phase I costs October, 2000.

C. Notification that landrights will be finalized.

Landrights were secured October 12, 2004 from the Louisiana Department of Wildlife and Fisheries. A landrights status and outlook letter was received by LDNR on November 15, 2005 stating that no landrights acquisition problems are anticipated.

D. A favorable Preliminary Design Review

A preliminary Design Review was held January 20, 2005. Comments are discussed above in item #2 and #3, and are detailed in the 95% report.

E. Final Project Design Review

A favorable 95% design meeting was held October 13, 2005. No comments were made at the meeting, therefore no changes were made to the design.

F. Draft EA

A draft EA was circulated November 23, 2005. Comments are due December 30, 2005. No Significant issues are anticipated.

G. Written summary of ER

Castille Pass Channel Sediment Delivery (AT-04)

Ecological Review Summary

September 2005

Summary/Conclusions

The following four types of marshlands are expected to be created within the Castille Pass Channel Sediment Delivery project area:

1. Uplands - having an elevation greater than +3.0 feet NAVD-88.
2. Shrub/Scrub marsh - having an elevation range from +2.0 feet to +3.0 feet NAVD-88.
3. Intertidal marsh - having an elevation range from +0.75 feet to +2.0 feet NAVD-88.
4. Subaqueous marsh - having elevations at less than +0.75 feet NAVD-88.

The planned project diking will be mostly upland acreage with some shrub/scrub acreage along their slopes. The resulting elevation of the hydraulic material in the DAs post-shrinkage (20% anticipated in the first year) will be between +0.75 feet NAVD-88 to +2.0 feet NAVD-88, thereby falling in the intertidal marsh category. This approximates the Penland et al. (1996) conclusion that the maximum elevation for the establishment of intertidal marsh vegetation is +2.0 feet NGVD (~MSL) which can be

State of Louisiana



KATHLEEN BABINEAUX BLANCO
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

DEPARTMENT OF NATURAL RESOURCES OFFICE OF COASTAL RESTORATION AND MANAGEMENT

November 21, 2005

Dr. John Foret
National Marine Fisheries Service
Estuarine Habitats and Coastal Fisheries Center
646 Cajundome Blvd., Rm. 175
Lafayette, LA 70506

RE: 95% Design Review for Castille Pass Sediment Delivery
Statement of Local Sponsor Concurrence

Dear Dr. Foret:

The 95% Design Review Conference was held on October 13th, 2005 for the Castille Pass Sediment Delivery project. Based on our review of the project information compiled to date, and, in response to your letter of support for the project, we, as local sponsor, concur with the 95% Design Package. LDNR recommends that Phase II funds be requested from the CWPPRA Task Force at the next available opportunity.

In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence along with the revised project cost estimate to the Technical Committee and the Planning and Evaluation Subcommittee. We also request that our project manager, Maury Chatellier, be copied on that and other correspondence concerning this project.

Please do not hesitate to contact me if I may be of any assistance.

Sincerely,

Christopher P. Knotts, P.E.
Director

cc: William K. Rhinehart, CRD Administrator
John Hodnett, P.E., Engineer Manager
Luke E. LeBas, P.E., Engineer Manager
Maury Chatellier, P.E., Project Manager

Dedicated Dredging on Barataria Basin Landbridge

BA-36

Dedicated Dredging on the Barataria Basin Landbridge BA-36



Project Overview

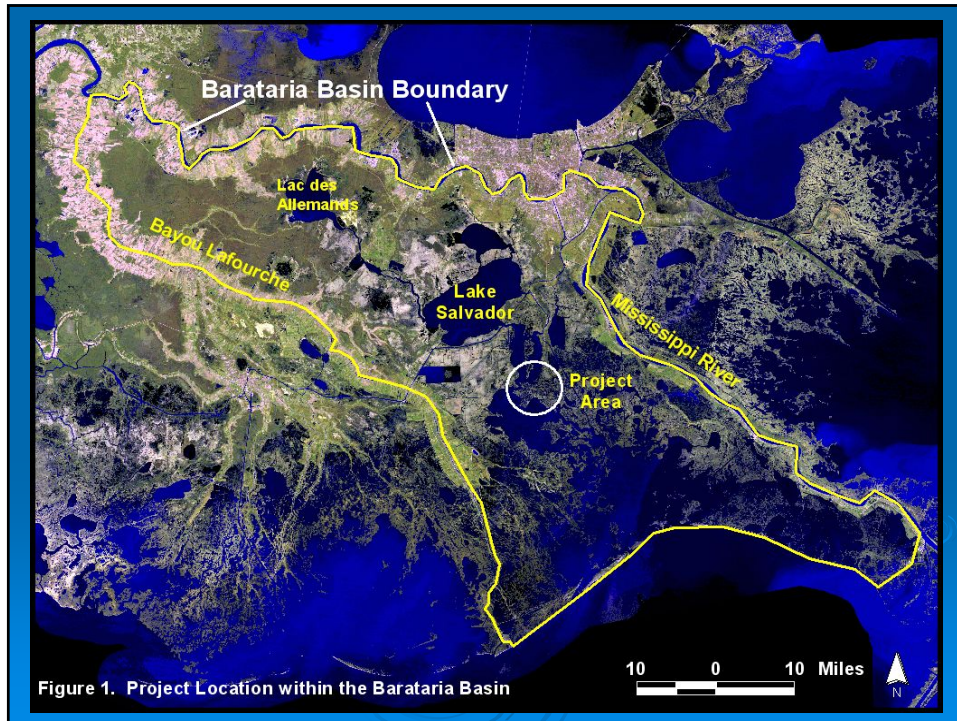
Location: Jefferson Parish - 25 miles south of New Orleans and 6 miles south of Barataria/Lafitte communities

Problem: Over 25% of the wetlands in this mapping unit have been lost since 1932; Loss rate exceeds 2%/yr in project area

Goals: Create 1,217 acres of marsh; maintain 995 acres by the end of the project life

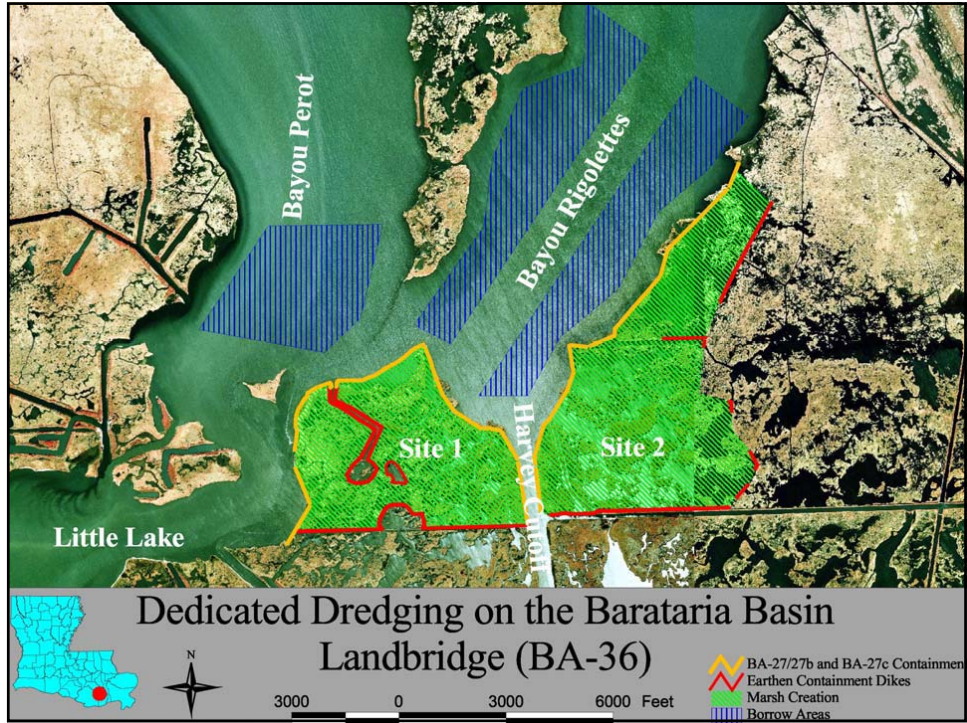
Benefits: Benefits 1,245 acres of marsh and open water habitats; Compared to without project, net gain of 605 acres of marsh

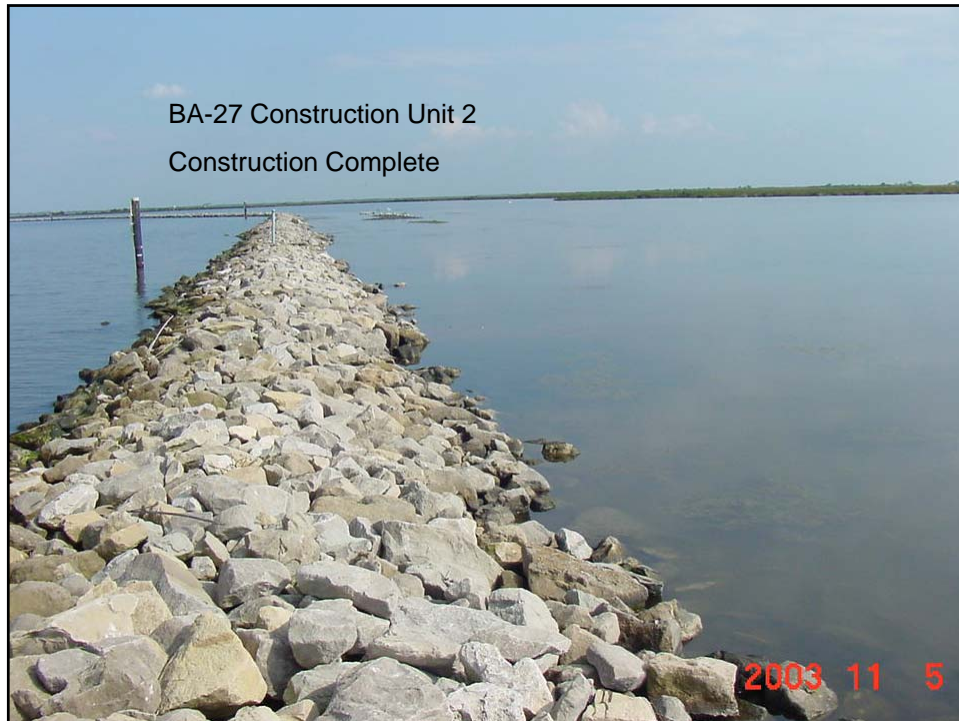
Cost: Fully funded cost of \$31,600,000



Project Features

- Hydraulically dredge sediments in Bayous Perot and Rigolettes to create 1,217 acres of marsh; target elevation is +2.5 ft NAVD88
- Earthen containment where necessary
- Shoreline protection features of BA-27 project will be utilized for containment along Bayous Perot and Rigolettes

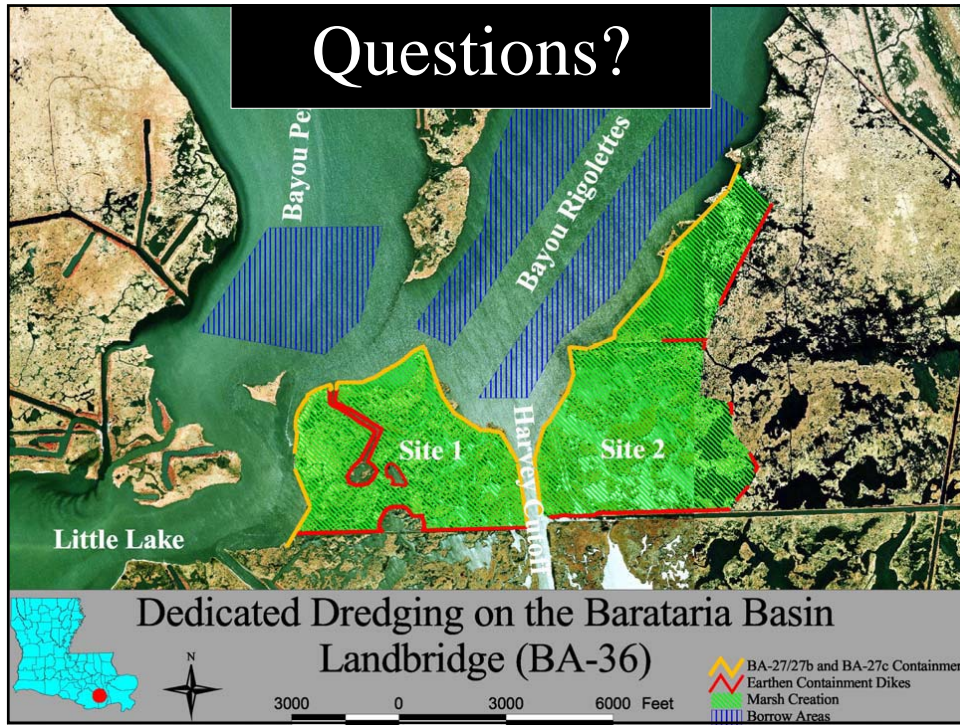




Why should we fund this project now?

- Restores one of the most deteriorated areas on the Barataria Basin Landbridge
- Shoreline protection (BA-27) will protect 268 acres of marsh in the project area; however, interior marsh will continue to deteriorate from subsidence
- Combined with the BA-27 project, 873 net acres of marsh will be protected in the project area
- Only 6 miles from unprotected communities of Lafitte and Barataria; Only 20 miles from New Orleans Westbank
- Continues commitment to protect the Barataria Basin Landbridge; 1 of 12 projects which work synergistically to provide landscape-level benefits

Questions?



Phase II Authorization Request

Dedicated Dredging on the Barataria Basin Landbridge

BA-36

Description of Phase I Project

The BA-36 Project was approved for Phase I funding on the 11th Priority Project List. At the time of Phase I authorization, project features included:

- 1) Hydraulic dredging in Bayous Perot and Rigolettes to create 780 acres of marsh and nourish 502 acres of existing marsh. The target elevation for the fill material was +2.3 ft NGVD;
- 2) Shoreline protection features associated with the Barataria Basin Landbridge Shoreline Protection Project (BA-27) would be used for containment along the Bayous Perot and Rigolettes shorelines;
- 3) Earthen containment would be used around the remainder of the project perimeter where fragmented marsh does not allow adequate containment. Depending on soil stability, containment dikes would be breached upon demobilization;
- 4) Upon demobilization, the marsh platform would be aurally seeded with a mixture of browntop millet, Japanese millet and/or other species to jumpstart vegetative colonization;
- 5) Tidal channels would be dredged after construction to allow tidal exchange to interior ponds.

Specific goals of the project were to: 1) create 780 acres of emergent marsh through the deposition of dredged material into open water areas and 2) nourish/enhance 502 acres of emergent marsh by adding a layer of sediment to the marsh surface.

The Wetland Value Assessment conducted for the Phase I project estimated a benefited area of 1,282 acres and the net creation/restoration of 564 acres of marsh at the end of the project life.

At the time of Phase I approval, the fully-funded project cost was \$29,692,777. That figure included \$2,294,410 for Phase I and \$27,398,367 for Phase II. The cost breakdown for Phases I and II is presented in the following table.

Engineering and Design Tasks

In order to facilitate the design of the borrow and fill areas, a hydrographic and topographic survey was performed in April and May, 2003 by SJB Group, Inc. and Coastal Engineering Consultants. A magnetometer survey was performed in April and May, 2003 by SJB Group, Inc. and Alpine Ocean Seismic Survey in order to locate existing pipelines and obstructions.

A total of 19 subsurface borings were drilled within the project area by Soil Testing Engineers, Inc. in April 2003. Existing data was also utilized from 14 subsurface borings by Dames and Moore, Inc. in 1999 and six subsurface borings by Soil Testing Engineers, Inc. in 2000. The soil samples were tested in the laboratory for classification, strength, and compressibility. Settlement consolidation, cut to fill ratios, and dewatering time were estimated for the proposed dikes and hydraulic fill. A cost-benefit analysis was performed on final fill elevations of +1.5, +2.0, +2.5, +3.0, and +3.5 ft NAVD88 (all following elevations in NAVD88) using the geotechnical analysis. Slope stability analyses were also performed for the proposed containment dikes.

Design meetings were held at the 30% (December 17, 2003) and 95% (July 29, 2004) levels.

Landrights, Cultural Resources, Environmental Compliance and Other Tasks

Preliminary landrights work has proceeded smoothly and no problems are anticipated in acquiring final landrights.

Two cultural resource sites are located within the project area. However, neither site is eligible for the National Register of Historic Places. The Louisiana Department of Culture, Recreation and Tourism and the Chitimacha Tribe of Louisiana have indicated no objections to project implementation.

The Corps of Engineers Section 404 permit was issued on April 6, 2005. The Louisiana Department of Natural Resources-Coastal Management Division has determined that the project is consistent with the Louisiana Coastal Resources Program and water quality certification has been issued by the Louisiana Department of Environmental Quality.

An overgrazing determination provided by the Natural Resources Conservation Service indicated that overgrazing is not a problem in the project area. An HTRW assessment conducted by the Lafayette Field Office of the U.S. Fish and Wildlife Service indicated that no HTRW materials should be encountered during project implementation.

A final Ecological Review is available and a final Environmental Assessment was issued on November 16, 2005.

Description of the Phase II Candidate Project

Project Features

Three areas within Bayous Perot and Rigolettes, designated as Borrow Sites 1, 2, and 3 (Attachment 1), were investigated as potential sources of earthen material to create marsh in Fill Sites 1 and 2 (Figure 1). The volume required for marsh creation and the cut to fill ratio regulated the size and shape of the borrow sites. The delineation of the 3 borrow sites was expanded to the greatest extent possible given the geographical (existing marsh) and structural constraints (pipelines) in order to reduce the effective depth of cut. Minimizing the depth of cut also minimizes the change in hydraulic gradient caused by dredging. As a result of calculations, a maximum depth of cut from an average mud level elevation of -6.0 ft to elevation -10.0 ft will achieve the required volume. The typical cross section detail is shown in Figure 2.

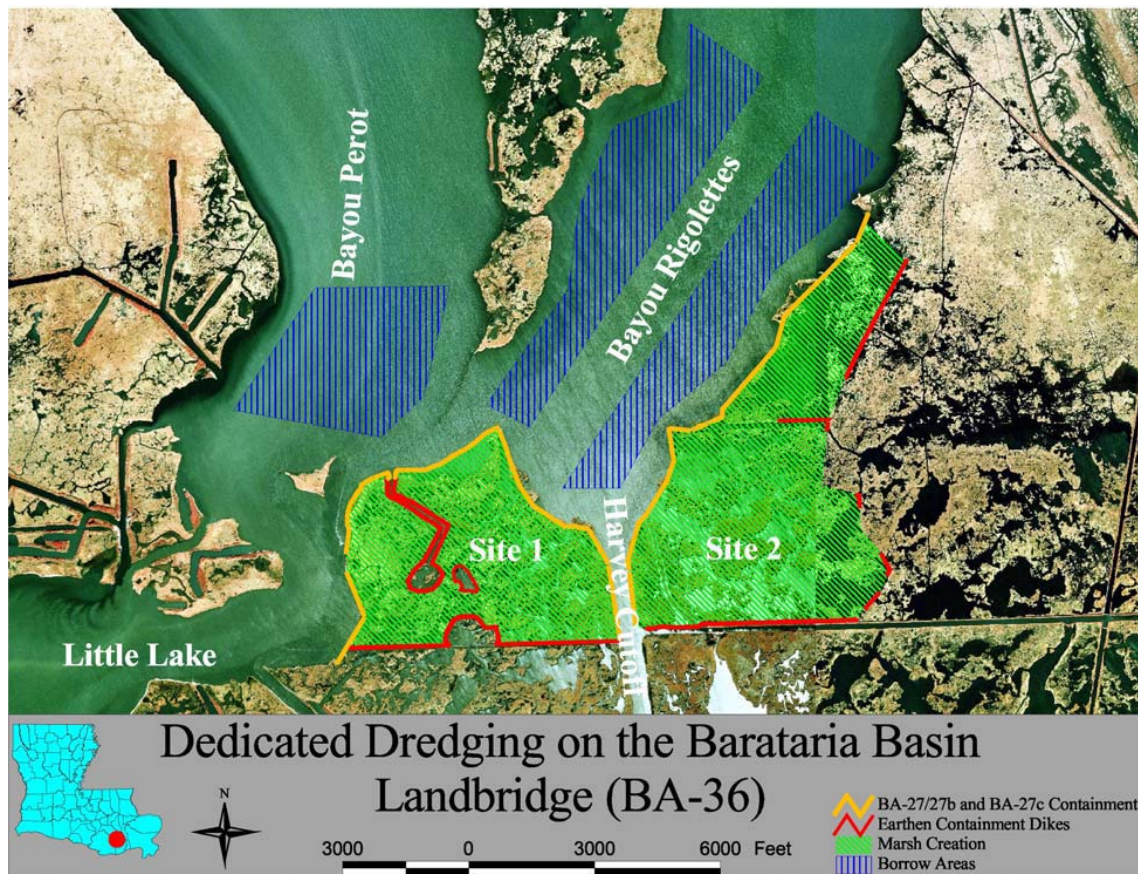


Figure 1 – Locations of Borrow and Fill Sites

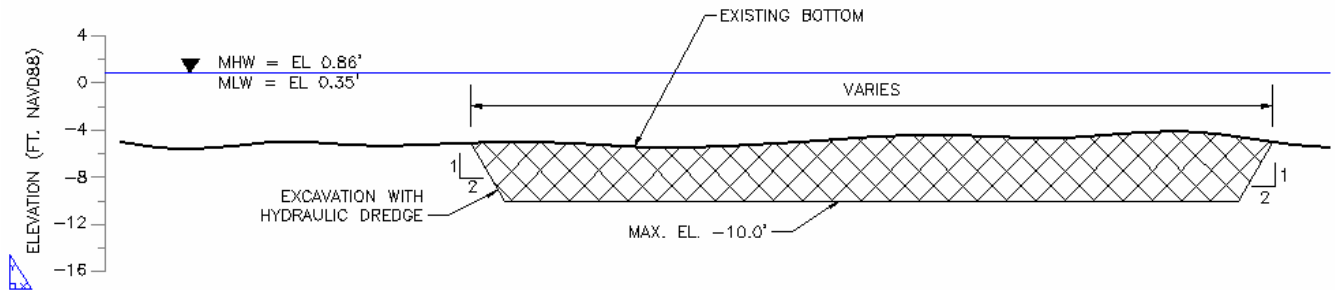


Figure 2 – Typical Cross Section of Borrow Areas

Fill Sites 1 and 2 (Figure 1) are comprised of mostly broken marsh and open water covering approximately 504 acres and 741 acres, respectively. A cost-benefit analysis was performed on final fill elevations of +1.5, +2.0, +2.5, +3.0, and +3.5 ft. Given a project design life of 20 years and an existing average marsh elevation of +1.0 ft, a target elevation of +2.5 ft was selected (Figure 3). Two construction lifts are proposed to enhance consolidation through improved dewatering and placement. The initial lift will be placed above mean high water at elevation +1.0 ft and must remain dewatered for a minimum of 30 days before more fill is added. The final lift will be placed to achieve the target elevation of +2.5 ft.

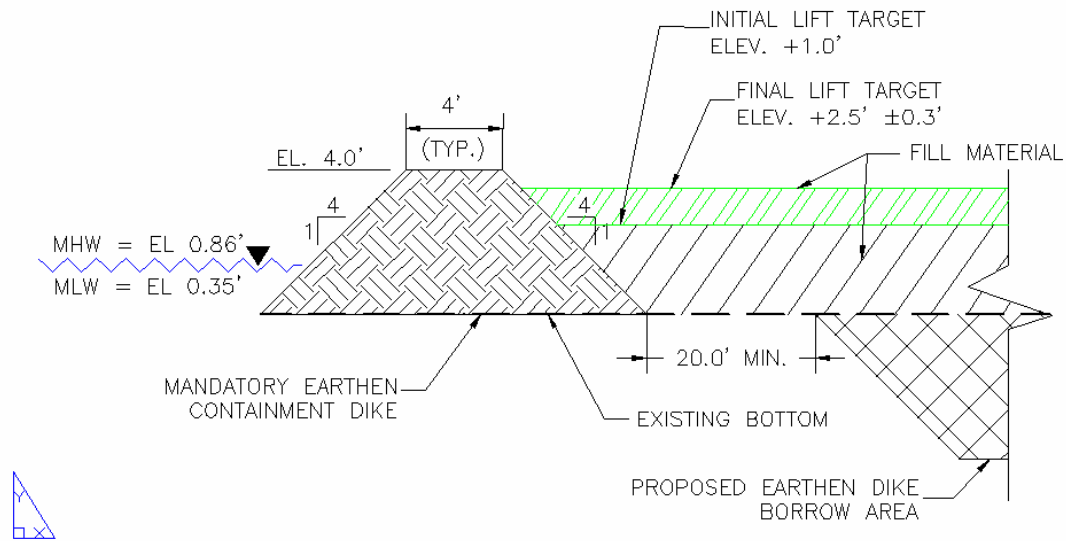


Figure 3 – Typical Cross Section of Mandatory Earthen Containment Dikes

In order to properly contain and dewater fill material, mandatory containment dikes are included in the design. Given a target fill elevation of +2.5 ft, the crown height of the containment dikes is set at +4.0 ft with side slopes of 4:1 (Figure 3). The containment dikes will tie into the NRCS rock dikes and concrete panels by overlapping the existing structures.

Internal earthen training dikes will be used in conjunction with the other containment structures to create containment cells in order to properly maintain and dewater the fill material. They will also

be utilized at all gaps and fish dips in the NRCS concrete panels. The training dikes will have 4:1 side slopes with a 2 ft wide crown set at the same target elevation as the fill (+2.5 ft) to ensure proper containment height and eliminate the need for future degrading (Figure 4). The location and alignment of the training dikes will be determined in the field by the construction contractor and pre-approved by the construction inspector.

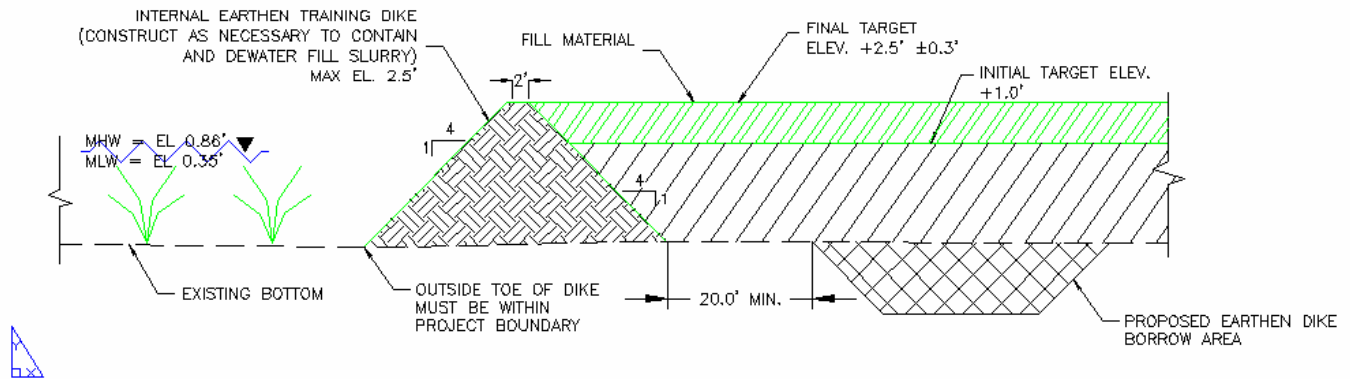


Figure 4 – Typical Cross Section of Internal Earthen Training Dikes

Three existing ponds and one canal within Fill Site 1 (Figure 1) will remain in their existing condition as requested by the landowner. Mandatory earthen containment dikes will be constructed around the perimeters of the ponds and canal.

Updated Assessment of Benefits

A revised Wetland Value Assessment was prepared and reviewed by the Environmental Work Group. The total project area decreased from 1,282 acres to 1,245 acres. Total Net Acres protected/created/restored by the project increased from 564 acres (Phase 1 project) to 605 acres (Phase 2 project). Net Average Annual Habitat Units decreased from 339 to 337.

Modifications to the Phase 1 Project

Final design features are essentially unchanged from the original Phase 1 project. The following changes are noteworthy: 1) additional containment dikes have been added at the landowner's request to retain three ponds in Fill Site 1, 2) additional containment dikes have been added at the landowner's request in Fill Site 2 along the southern boundary to prevent the filling of a small trenasse used for boat access to hunting sites, 3) marsh nourishment has been omitted as a project feature and fill heights (+2.5 ft) are the same throughout the project area, 4) aerial seeding of vegetation has been omitted as a project feature, and 5) dredging of tidal access channels omitted.

Current Cost Estimate

The revised fully-funded cost prepared by the CWPPRA Economics Work Group is \$31,596,669.

Checklist of Phase Two Requirements

A. List of Project Goals and Strategies.

The goals of the project are to: 1) create 1,217 acres of emergent marsh through the deposition of dredged material into open water and fragmented marsh and 2) maintain 995 acres of emergent marsh at the end of the 20-year project life.

B. A Statement that the Cost Sharing Agreement between the Lead Agency and the Local Sponsor has been executed for Phase I.

A Cost Share Agreement between the U.S. Fish and Wildlife Service and Louisiana Department of Natural Resources was executed on April 3, 2002. A draft amendment, authorizing construction, operation, maintenance, and monitoring, to the Cost Share Agreement has been prepared.

C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase 2 approval.

FWS has received verbal notification from DNR that landrights will be finalized in a relatively short time after Phase 2 approval.

D. A favorable Preliminary Design Review (30% Design Level). The Preliminary Design shall include completion of surveys, borings, geotechnical investigations, data analysis review, hydrologic data collection and analysis, modeling (if necessary), and development of preliminary designs.

A 30% design meeting was held on December 17, 2003, and resulted in favorable reviews of the project design with minor modifications. DNR and FWS agreed on the project design and to proceed with project implementation.

E. Final Project Design Review (95% Design Level). Upon completion of a favorable review of the preliminary design, the Project plans and specifications shall be developed and formalized to incorporate elements from the Preliminary Design and the Preliminary Design Review. Final Project Design Review (95%) must be successfully completed prior to seeking Technical Committee approval.

A 95% design meeting was held on July 29, 2004, and resulted in favorable reviews of the project design with minor modifications. DNR and FWS agreed on the project design and to proceed with project implementation.

F. A draft of the Environmental Assessment, as required under the National Environmental Policy Act must be submitted thirty days before the request for Phase 2 approval.

A final EA was issued on November 16, 2005

G. A written summary of the findings of the Ecological Review (See Appendix B).

The following paragraph is from the Recommendations section of the August 12, 2004 final Ecological Review:

Based on the investigation of similar restoration projects and a review of engineering principles, the LDNR project team feels that the proposed strategies of the Dedicated Dredging on the Barataria Basin Landbridge project will likely achieve the desired ecological goals for the majority of the 20 year project life. At this time, the Louisiana Department of Natural Resources, Coastal Restoration Division recommends that the Dedicated Dredging on the Barataria Basin Landbridge project be considered for CWPPRA Phase 2 authorization.

H. Application for and/or issuance of the public notices for permits. If a permit has not been received by the agency, a notice from the Corps of when the permit may be issued.

The FWS was issued a Section 404 permit from the Corps of Engineers on April 6, 2005.

I. A hazardous, toxic and radiological waste (HTRW) assessment, if required, has been prepared.

An HTRW assessment/contaminants screening was conducted by the FWS Lafayette Field Office's Environmental Contaminants Specialist. It was concluded that project implementation would not encounter any of the known wells or associated oil and gas facilities in the project area and that re-suspension of contaminants from sediment disturbance is not expected. Based on available information, further study is not warranted.

J. Section 303(e) approval from the Corps.

Section 303(e) approval was granted by the Corps via letter dated August 4, 2004.

K. Overgrazing determination from the NRCS (if necessary).

An overgrazing determination was issued on January 12, 2004 by the NRCS and indicated that overgrazing would not be a problem in the project area.

L. Revised cost estimate of Phase 2 activities, based on the revised Project design.

Funding/Budget information:

- 1.) - Specific Phase Two funding request (updated construction cost estimate, three years of monitoring and O&M, etc.)**
- 2.) - Fully funded, 20-year cost projection with anticipated schedule of expenditures**

The specific Phase 2 funding request (updated construction estimate and three years of monitoring and O&M) is \$31,000,584. The revised fully-funded cost of the project is \$31,596,669. The revised budget sheets, with the anticipated schedule of expenditures, are provided in Attachment 2.

M. A Wetland Value Assessment, reviewed and approved by the Environmental Work Group.

A revised Wetland Value Assessment was prepared and reviewed by the Environmental Work Group. The total project area was decreased from 1,282 acres to 1,245 acres. Total Net Acres protected/created/restored by the project increased from 564 acres (Phase 1 project) to 605 acres (Phase 2 project). Net Average Annual Habitat Units decreased from 339 to 337.

N. A breakdown of the Prioritization Criteria ranking score, finalized and agreed-upon by all agencies during the 95% design review.

The following Prioritization Criteria scores were reviewed and agreed upon by all agencies prior to the 95% design meeting.

Criteria	Score	Weight	Final Score
Cost Effectiveness	5	2	10
Area of Need	10	1.5	15
Implementability	10	1.5	15
Certainty of Benefits	7	1	7
Sustainability of Benefits	4	1	4
HGM – Riverine Input	0	1	0
HGM – Sediment Input	0	1	0
HGM – Landscape Features	10	1	10
Total Score			61

Attachment 1



- ### NOTES
1. MANDATORY CONTAINMENT DIKES TO BE IMPROVED AND/OR CONSTRUCTED TO ELEVATION +4.5 FT. SEE SHEETS 3 & 4 FOR LOCATIONS.
 2. INTERNAL TRAINING DIKES TO BE CONSTRUCTED TO ELEVATION +2.5 FT. AS NECESSARY TO PROPERLY CONTAIN AND DEWATER FILL MATERIAL.
 3. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

QUANTITIES

LOCATION OF SITE MATERIAL	VOLUME (CU YDS.)	AREA (ACRES)
BORROW SITE 1	1,866,773	286
BORROW SITE 2	3,432,841	364
BORROW SITE 3	3,497,561	337
BORROW TOTAL	8,797,175	987
FILL SITE 1	2,271,359	504
FILL SITE 2	3,605,186	742
MANDATORY CONTAINMENT DIKES	70,991	N/A
FILL TOTAL	5,947,536	1246

Note: The borrow volume was estimated using a 1.5:1 ratio to the required fill volume as specified in the geotechnical report.

LEGEND

- PROPOSED FILL AREA
- PROPOSED BORROW AREA
- PROPOSED PIPELINE
- EXISTING PIPELINE
- PROPOSED CONCRETE RETAINING WALL (BY NRCS)
- PROPOSED MANDATORY CONTAINMENT DIKE
- EXISTING ROCK WALL (BY NRCS)

APPLICATION BY: U.S. FISH AND WILDLIFE SERVICE 646 CAJUNDOME BLVD., SUITE 400 LAFALETTE, LA. 70506	LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL ENGINEERING DIVISION 617 NORTH 3RD STREET BATON ROUGE, LOUISIANA 70804	DESIGNED BY: SHANNON HAYNES, P.E. APPROVED BY: LUKE LEBAS, P.E.
DRAWN BY: SHANE FAUST	DEDICATED DREDGING ON THE BARATARIA BASIN LANDBRIDGE	FEDERAL PROJECT NUMBER: N/A
STATE PROJECT NUMBER: BA-36		SHEET 2 OF 11
DATE: MAY 2004		CONSTRUCTION AREA LOCATION

Attachment 2

East Grand Terre Island Restoration

BA-30

East Grand Terre Island (BA30) Technical Committee Meeting

December 7, 2005

New Orleans, LA



SEP 30



Project Overview

Project Location:

Region 2, Barataria Basin

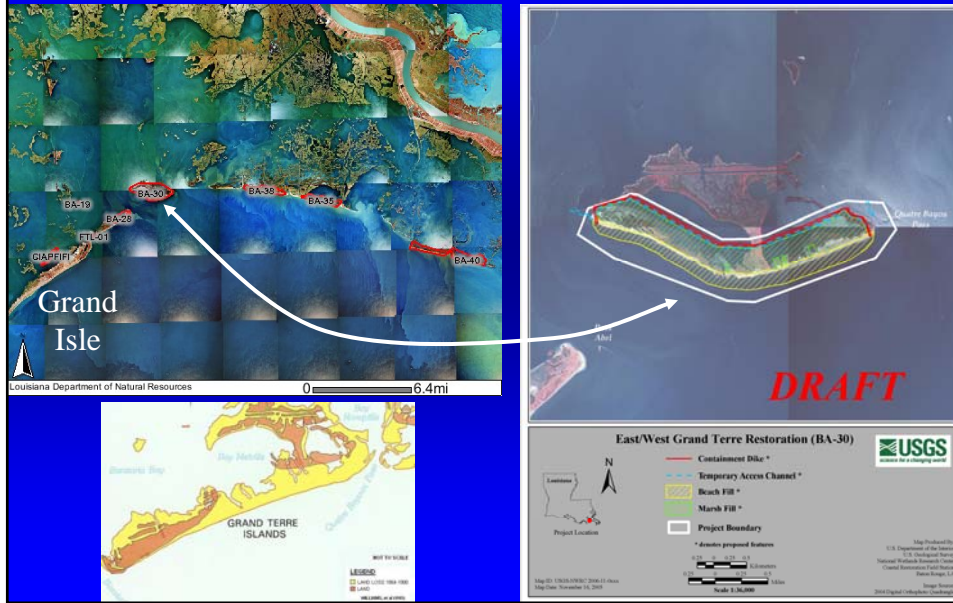
Problem:

On-going shoreline erosion has resulted in breaching of the barrier shoreline

Goals:

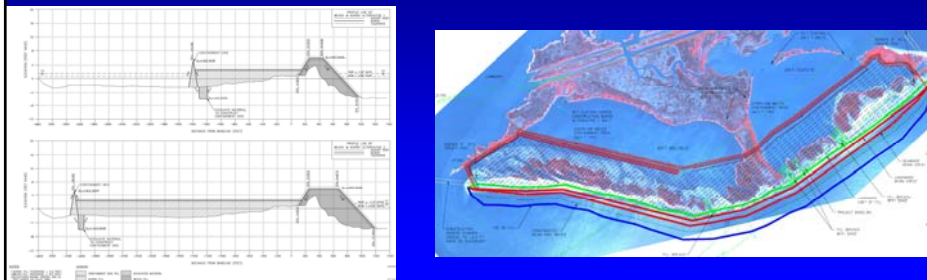
- 1) Restore beach and dune to prevent breaching and maintain shoreline integrity
- 2) Create and restore barrier island habitats

Project Map



Project Features Overview

- Restore 2.8 miles barrier shoreline through construction of +6 foot dune with advanced nourishment.
- Construction of a 450-acre marsh platform north of and contiguous to the beach and dune fill to provide foundation for continued shoreline rollover and retreat.



Project Benefits & Costs

Project benefits

- Create and restore about 620 acres of barrier island immediately post-construction
- Maintain 2.8 miles of eroding shoreline
- Provide 335 net acres at TY20

Project costs

- The Fully Funded Cost for the project is: \$31,226,531
- Phase 2 increment 1 request is \$ 27,311,634

Prioritization Score

- 60

Project Comparison/Contrast

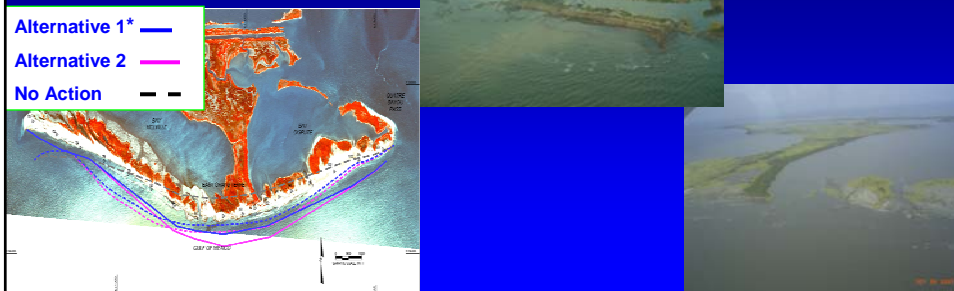
The Present vs. PPL #

	Phase One	Current	% change
Fully funded cost (M)	\$ 18.2	\$ 31.2	171 %
TY 20 Net Acres	403	335	83 %
AAHU	177	268.9	151 %

Project changed to increase dune and beach restoration to meet goal of maintaining shoreline integrity

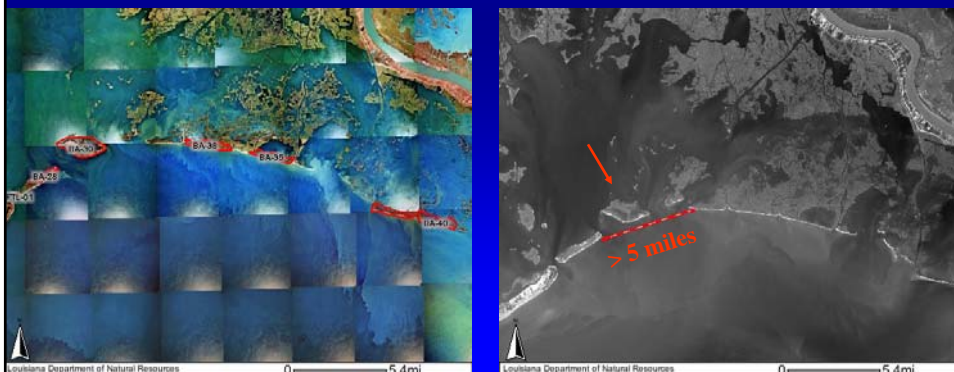
Project Need

- Project conditions continue to deteriorate with permanent breaches in shoreline (shoreline erosion rates range from 20 to 80 feet/year (1996 to 2002)).
- Project costs expected to increase 10 – 15%/year for the next two to three years

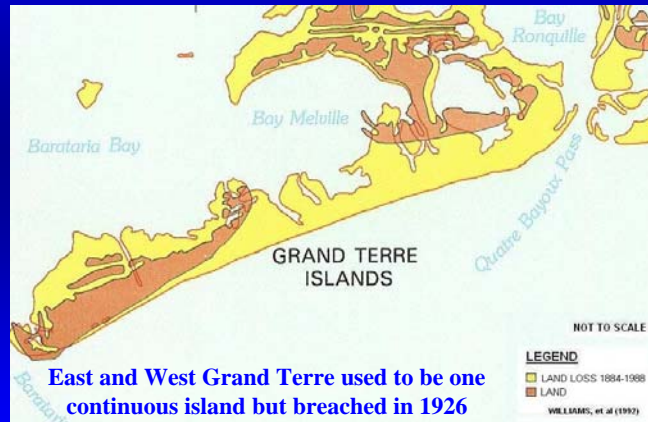


Project Need

- Project is one component of overall basin-wide effort to restore barrier shoreline (six projects in various stages)
- Continued deterioration will result in 5-mile opening directly between lower Barataria Bay and the Gulf of Mexico.



Questions?



East and West Grand Terre used to be one continuous island but breached in 1926

INFORMATION REQUIRED FOR PHASE II AUTHORIZATION REQUESTS

1. Description of Phase I Project

As authorized for Phase I in January 2000 (PPL 9) the project included restoration of 40 acres of beach and dune on the western portion of West Grand Terre, restoration of about 75 acres of beach and dune, and creation of about 212 acres of saline marsh on East Grand Terre Island (Figure 1). At the time of Phase I authorization, project goals were identified as 1) prevent breaching of the barrier shorelines through the 20-year project life, 2) protect existing structures on West Grand Terre island, and 3) achieve various acreage targets for dune, marsh, and other barrier island habitats.

A summary of Phase I project costs and benefits is provided below.

Fully Funded Total Project Cost	\$18.2 M
Net Acres at TY20	403
Average Annual Habitat Units	177

2. Overview of Phase I Tasks, Process and Issues

Phase I tasks included pre-design investigations (i.e., topographic and bathymetric surveys, geotechnical investigations), various engineering assessments of project alternatives, and completion of 95% level plans and specifications for the preferred alternative. Design analyses revealed that the majority of project goals for West Grand Terre would be met without action. Design analyses for East Grand Terre suggested that the original conceptual design would not provide enough beach and dune strength on East Grand Terre to meet the primary project objectives, and that more robust project design would be required. A change in project scope was approved by the Task Force to proceed to final design on the preferred alternative for East Grand Terre only.

Other Phase I activities included development of the landrights workplan, preliminary ownership report, and execution of appropriate servitudes and agreements, development and submission of permit application materials, and development of draft NEPA documents. The project sponsors determined that HTRW investigations were not required based on review of land use history and previous basin-wide assessments conducted by the Corps of Engineers.

3. Description of the Phase II Candidate Project

A. Project Features

The recommended plan includes beach and dune fill to address the severity of erosion along the gulf-front shoreline and to repair shoreline breaches (Figure 2). The beach and dune fill template is approximately 15,000 ft long with a 90-foot wide dune design section to +6 feet with 1:30 back- and 1:45 fore-slopes. Advanced fill is distributed non-uniformly to account for varying longshore transport rates along the island. The maximum constructed berm width is 195 feet. Total in place beach and dune fill volume is estimated at 1,576,650 cy. The recommended plan also includes a marsh platform in the southern portions of Bays Melville and Dispute with construction elevation of +2.3 feet. The required fill volume is approximately 1,732,000 cy. Construction of the project is expected to create or enhance 456 acres of marsh.

Long term project components include extensive vegetative plantings, replacement of sand fences, retention dike gapping, and project performance assessments throughout the project life.

B. Updated assessment of benefits and current cost estimates

Detailed costs are provided in attached budget spreadsheet.

Fully Funded Total Project Cost	\$31.2 M
Phase II, Increment I Request	\$27.3 M
Net Acres at TY20	335 *
Average Annual Habitat Units	268.92 *

* Pending final approval by ENV WG

C. In cases of substantial modifications to original conceptual design or costs, describe the specific changes both qualitatively and quantitatively

The project has changed since Phase I authorization to remove West Grand Terre from the current proposed project and increase project features on East Grand Terre resulting in a net increase in project cost from that estimated at the time of Phase I authorization. The Task Force approved a change in project scope at its July 27, 2005 meeting.

PHASE II CHECKLIST

A. List of Project Goals and Strategies

The goals of this project are to repair breaches and tidal inlets in the shoreline, reinforce the existing shoreline with sand and plug/repair the growing tidal inlets through the shoreline. The design approach is to maximize surface area per planform unit volume for island stabilization and dune, supratidal (i.e., swale), and intertidal marsh creation by preventing a breach (i.e., tidal inlet) with a 20-year or lesser storm event.

Project strategies identified in the Ecological Review are 1) construct 71 acres of dune platform to +6 feet NAVD-88, 82 acres of beach, and 432 acres of back barrier marsh on East Grand Terre, 2) place marsh creation material at an elevation of +2.3 feet NAVD-88 and allow it to settle and dewater down to the intertidal range, 3) utilize effective planting schemes and sand fencing to maximize vegetative coverage and survival along with providing increased dune stabilization, 4) create tidal ponds and creeks and ensure tidal exchange by degrading retention dikes that do not naturally degrade.

B. Cost Sharing Agreement

A cooperative agreement was executed between NOAA and LDNR for Phase I activities.

C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase 2 approval.

Ms. Helen Hoffpauir, CRD Land Manager, has notified the Technical Committee that “At this time, no land rights acquisition problems are anticipated. Therefore, DNR is confident that land rights for the above referenced project will be finalized in a reasonable period of time after Phase II Approval.”

D. A favorable Preliminary Design Review (30% Design Level).

A Preliminary Design review was held on May 26, 2005. A change in project scope was identified during the design review process. The Task Force concurred with the change in scope on July 27, 2005.

E. Final Project Design Review (95% Design Level)

The Final Design Review is scheduled for 30 November 2005.

G. Written summary of the findings of the Ecological Review

“Based on the current level of design, the proposed strategies of the East/West Grand Terre Islands Restoration project would achieve some ecological benefits and warrants proceeding towards Phase II funding. The LDNR maintains its concurrence with the selection of beach alternative 1 and marsh alternative 1 as an attempt to construct the most cost effective alternatives to restore EGT. The current level of design warrants continued progress towards Phase II funding.”

H. Application for and/or issuance of the public notices for permits

Permit applications are anticipated to be complete and submitted by 1 December 2005.

I. A hazardous, toxic and radiological waste (HTRW) assessment, if required

The project sponsors determined that HTRW investigations were not required based on review of land use history and previous basin-wide assessments conducted by the Corps of Engineers.

J. Section 303(e) approval

Under review by COE.

K. Overgrazing determination from the NRCS

Received October 7, 2005.

L. Revised fully funded cost estimate

The revised fully funded cost estimate is \$31,226,531.

M. A Wetland Value Assessment

A draft Wetland Value Assessment has been reviewed by the Workgroup. Minor comments were received, and the final WVA is under preparation and will include revisions in response to review comments.

N. Prioritization Criteria ranking score

A draft Prioritization has been developed and will be submitted for review by the Workgroups. Proposed scores are shown below and will be updated at Technical Committee meeting based on any revisions required by the Workgroups.

	Weighting	Score	Weighted Score
I. Cost-effectiveness	20%	1	2
II. Area of Need	15%	10	15
III. Implementability	15%	10	15
IV. Certainty of Benefits	10%	7	7
V. Sustainability of Benefits	10%	6	6
VI. Increased Riverine Input	10%	0	0
VII. Increased Sediment Input	10%	5	5
VII. Critical Landscape Features	10%	10	10
TOTAL			60

Figure 1: Phase I level Project Map

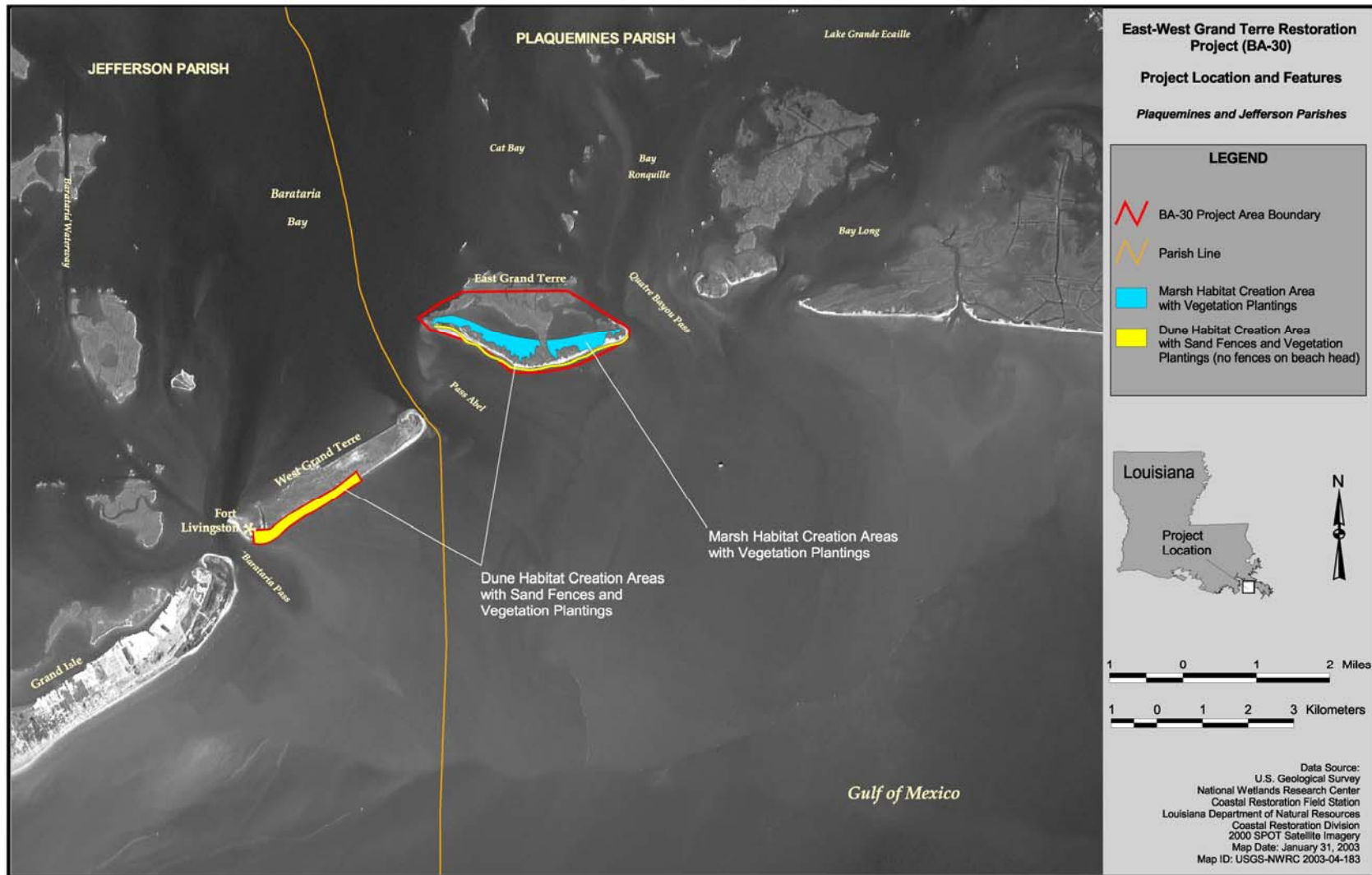
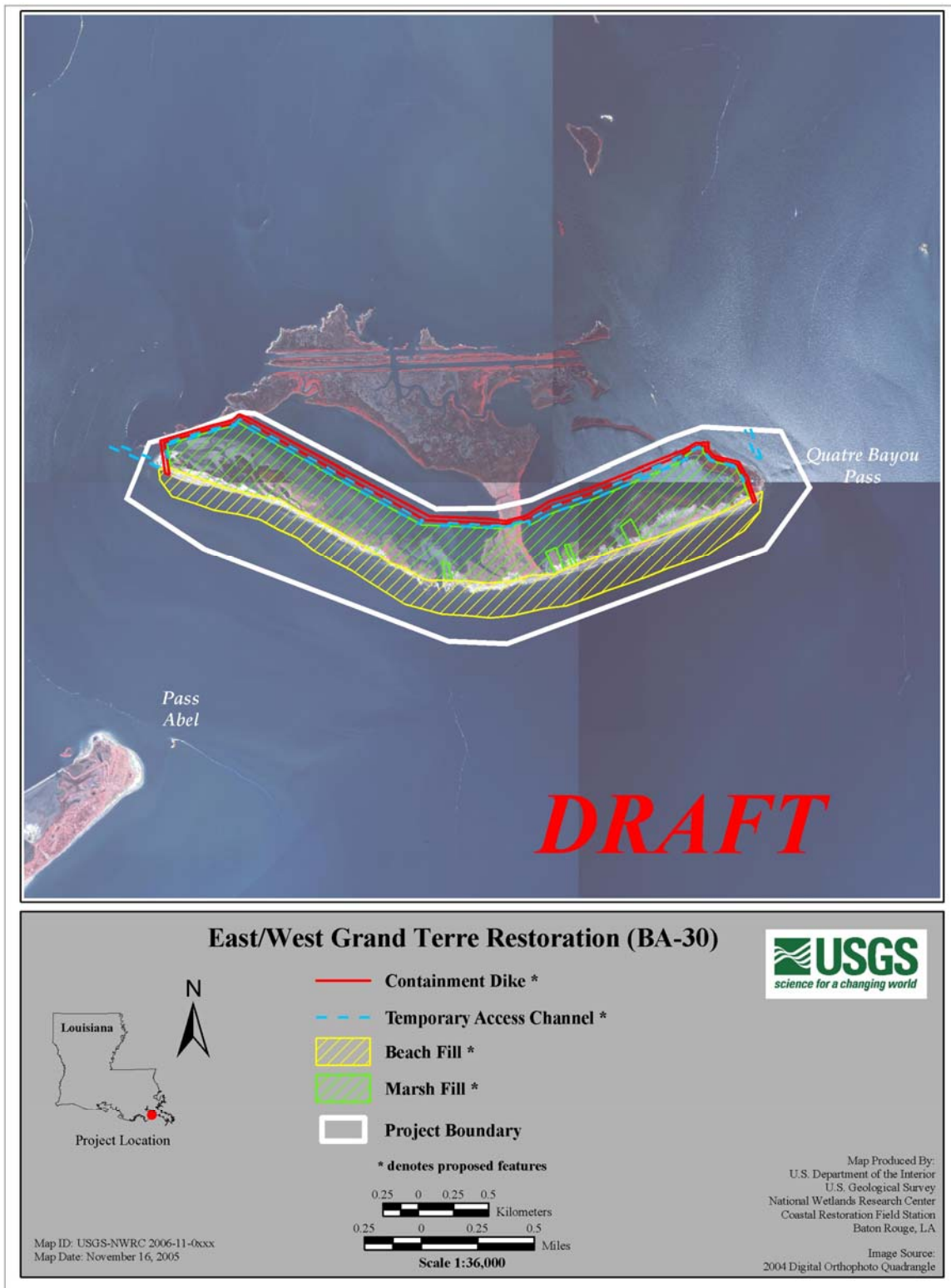


Figure 2: Phase II Project Feature and Boundary Map



Freshwater Bayou Bank Stabilization-Belle Isle Canal to Lock

TV-11b

**Freshwater Bayou Bank Stabilization
(Belle Isle Canal to Lock) (East) (TV-11b/XTV-27)
Vermilion Parish, Louisiana**



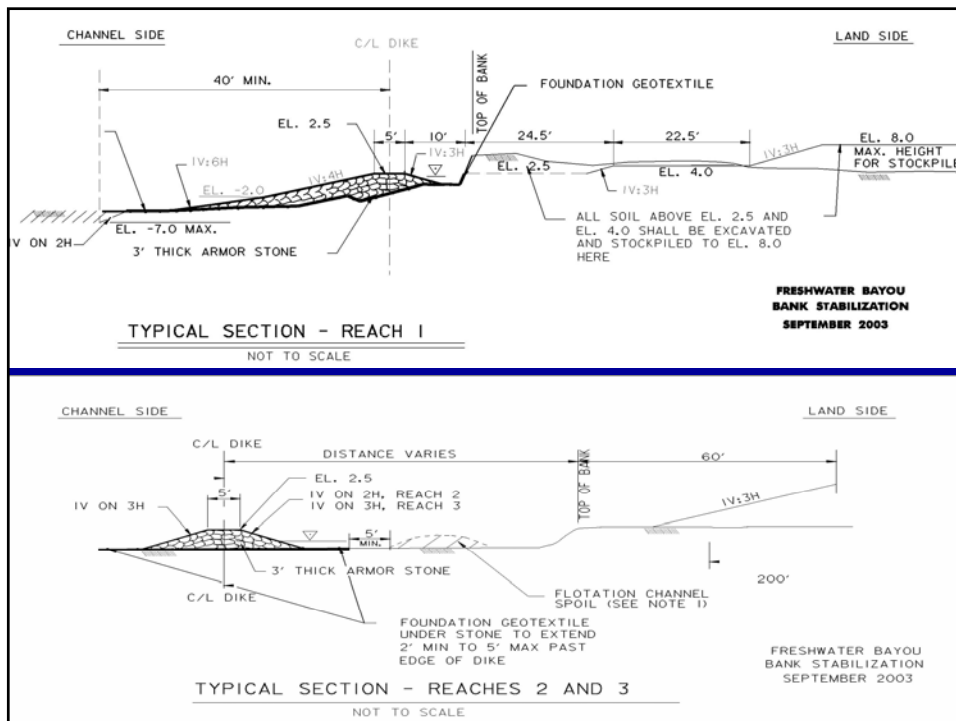
December 2005

Project Background

- Authorized in January 2000 by Breaux Act (CWPPRA) Task Force on PPL9
- ~40,000 linear feet of rock dike to stop shoreline erosion along Freshwater Bayou Canal from Belle Isle Bayou to the Lock
- Original project included hydrologic restoration features but those were dropped after initial review by the design team

Wetlands Loss Problems

- The banks of Freshwater Bayou Canal are rapidly eroding (-10ft/yr), due mainly to boat traffic.
- Breaches in the bankline allow boat wakes to push turbid, higher salinity waters into interior wetlands, causing marsh loss and decreasing SAV coverage.
- A large area of interior marsh in the northern portion of the project area is fragmenting and turning to open water, in part due to the breaches.



Benefits and Costs

- Rock dike will protect and benefit 241 acres of marsh over 20-years
- Project will extend shoreline protection from the lock to a completed state-only project (TV-11)
- Fully funded cost estimate is \$17,756,470.



Questions?





DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO

ATTENTION OF:

CEMVN-PM-C (1110-2-1150a)

28 November 2005

MEMORANDUM FOR Mr. Gregory Breerwood, Chairman, CWPPRA Technical Committee

SUBJECT: Construction Approval Request for Freshwater Bayou Bank Stabilization – Belle Isle Bayou to the Lock (TV-11b/XTV-27), Vermilion Parish, Louisiana.

1. As required by Section 6(j) of the CWPPRA Standard Operating Procedures Manual, the U.S. Army Corps of Engineers (USACE) and Louisiana Department of Natural Resources (LDNR) request approval to construct the subject project.

2. The original project approved on the 9th priority list included shoreline protection and hydrologic restoration components. The hydrologic restoration features were removed during the design phase (see item m for additional details about the removal of this feature). The following information summarizes completion of the tasks required prior to seeking authorization for project construction:

a. List of Project Goals and Strategies.

The goal of the project is to stop shoreline erosion along the east bank of Freshwater Bayou Canal between the Leland Bowman Lock and Belle Isle Bayou (approximately 40,000 feet) using a rock dike.

b. A Statement that the Cost Sharing Agreement between the Lead Agency and the Local Sponsor has been executed for Phase I.

A USACE legal opinion indicates that execution of a cost share agreement requires prior Task Force approval of construction. In line with this requirement, the agreement will be executed following Task Force action on the project.

c. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase 2 approval.

A Real Estate Plan has been completed. The plan outlines all of the necessary real estate instruments required to construct the project and identifies affected landowners. It is estimated that all necessary real estate instruments can be obtained within 90-days of construction approval.

- d. A favorable Preliminary Design Review (30% Design Level).

A 30% Design Review was held in Abbeville, Louisiana on June 27, 2003 and a memo documenting the completion of the design review was sent to the members of the Technical Committee. In addition, the Louisiana Department of Natural Resources provided a letter of support for proceeding with completion of the design of the project.

- e. Final Project Design Review (95% Design Level).

A 95% design review was completed on 22 January 2004.

- f. A draft of the Environmental Assessment of the Project, as required under the National Environmental Policy Act must be submitted thirty days before the request for approval.

A Draft Environmental Assessment was released for public comment in May 2002. A Finding of No Significant Impact was signed in November 2002 completing the National Environmental Policy Act compliance requirements.

- g. A written summary of the findings of the Ecological Review.

A final Ecological Review was distributed at the 95% Design Review meeting. A summary of the findings is found on page 7 and page 8 of the report.

- h. Application for and/or issuance of the public notices for permits.

The Corps of Engineers is not required to obtain a permit to construct this project. However, an Environmental Assessment was completed in November 2002 to cover all wetlands conservation and protection issues and other environmental considerations associated with construction and maintenance of the project.

- i. A HTRW assessment, if required, has been prepared.

An HTRW assessment was included in the Environmental Assessment completed in November 2002.

- j. Section 303(e) approval from the Corps.

Section 303(e) approval was provided in February 2004.

- k. Overgrazing determination from the NRCS (if necessary).

An overgrazing determination was provided by NRCS on 22 December 2003 and is included as part of the Real Estate Plan. The Natural Resources Conservation Service concluded that overgrazing is not a problem in the project area.

- l. Revised cost estimate of Phase 2 activities, based on the revised Project design.

The Economics Work Group prepared a fully funded estimate in January 2004. The estimate was updated in July 2005 and November 2005 detailing a fully funded cost of \$17,756,470.

- m. A revised Wetland Value Assessment must be prepared if, during the review of the preliminary NEPA documentation, three of the Task Force agencies determine that a significant change in project scope occurred.

Changes in project scope resulted in a reduction in the project area and environmental benefits. As a result, in accordance with standard operating procedures, the project development team coordinated revisions to the WVA with the Chairman of the CWPPRA Environmental Work Group. Project benefits were reduced to 74.26 Average Annual Habitat Units; a 70% reduction from the originally authorized project. However, the elimination of the water control structures also reduced the project construction costs and as a result the revised cost benefit ratio for the shoreline protection feature is not significantly different than the original estimate.

- n. A breakdown of the Prioritization Criteria ranking score, finalized and agreed-upon by all agencies during the 95% design review.

A revised Prioritization Criteria ranking score has been prepared and reviewed through the CWPPRA working groups. A prioritization fact sheet is included in the Final Design Report.

3. If you have any questions regarding this project please call Mr. Gregory Miller at 862-2310 or Dr. Ken Duffy at (225) 342-4106.

GREGORY MILLER
Project Manager
Coastal Restoration Branch

Description of Original Phase I Project Freshwater Bayou Canal Bank Stabilization (Belle Isle to Lock)

- Authority:** Coastal Wetlands Planning, Protection and Restoration Act
- Sponsors:** U.S. Army Corps of Engineers and LA Department of Natural Resources
- Location:** Vermilion Parish, LA.
- Problem:** The banks of Freshwater Bayou Canal are rapidly eroding, due mainly to boat traffic. In the project area, several breaches have developed in the bankline along the east side of the canal. These breaches allow boat wakes to push turbid, higher salinity waters into interior marsh, causing marsh loss and decreasing SAV coverage. A large area of interior marsh in the northern portion of the project area is fragmenting and turning to open water, in part due to the breaches.
- Features:** 1) A rock dike would be built along the eastern bank of Freshwater Bayou Canal, between Belle Isle Canal and Freshwater Bayou Lock, a distance of approximately 40,000-ft. The dike is designed to halt shoreline erosion along the east bank of the canal. Special features are being incorporated into the project design to allow estuarine organisms to access wetlands behind the dike. 2) Four water control structures would be built in the spoil banks of canals running along the eastern and southern boundary of the project area. The structures would be flap-gated variable crest weirs.
- Benefits:** Over 20-years, the project will benefit approximately 529 ac of wetlands.
- Cost:** The preliminary estimated cost to construct, maintain, and monitor this project is \$25.1 million.
- Contact:** For additional information contact Gregory Miller at (504) 862-2310.

Overview of Phase One Tasks, Process and Issues Freshwater Bayou Bank Stabilization (TV-11b)

Task Overview

The Corps of Engineers and the Louisiana Department of Natural Resources project delivery team developed a work plan to guide the project design efforts. The work plan called for identifying landowners in the area, obtaining right of entry permissions to conduct engineering data collection for design work including site surveys and geotechnical investigations. The engineering data was collected and analyzed to produce a recommended design template, alignment, and cost estimate for the proposed project. Environmental compliance actions were initiated in accordance with NEPA regulations and a draft Environmental Assessment was produced. A real estate plan was developed identifying project area landowners and the easements necessary for construction.

Final designs have been developed for approximately 40,000 linear feet of bank protection that is recommended for construction.

Issues

No significant issues arose during the Phase I design process. However, an incorrect conversion of initial survey elevations to the NAVD 88 datum resulted in design modifications between the preliminary and final design reviews.

Design Changes

A hydrologic restoration component of the project that was included in the original concept approved on the priority list has been dropped. The feature was removed because of lack of support from the local sponsor. In addition, three typical sections for rock dikes and bank paving will be used to protect the shoreline. These sections differ from the initial cross sections developed for the candidate project that was selected to the priority project list. Changing the cross sections resulted in increasing the amount of rock that will be required for construction. All of these design changes were reviewed by the Environmental Work Group and detailed in the project 30% and 95% design reviews.

**Freshwater Bayou Bank Stabilization
(Belle Isle Canal to Lock) (East) (XTV-27)
Vermilion Parish, Louisiana**

- Lead Agencies:** U.S. Army Corps of Engineers and State of Louisiana Department of Natural Resources
- Project Location:** This 241-acre project area is located in Vermilion Parish along the eastern shoreline of Freshwater Bayou Canal (FBC) between the Freshwater Bayou Lock and Belle Isle Canal.
- Project Purpose:** The banks of Freshwater Bayou Canal are rapidly eroding, due mainly to boat traffic. In the project area, several breaches have developed in the bankline along the east side of the canal. These breaches allow boat wakes to push turbid, higher salinity waters into interior marsh, causing marsh loss and decreasing SAV coverage. A large area of interior marsh in the northern portion of the project area is fragmenting and turning to open water, in part due to the breaches.
- Project Features:** A rock dike would be built along the eastern bank of Freshwater Bayou Canal, between Belle Isle Canal and Freshwater Bayou Lock, a distance of approximately 40,000-feet. The dike is designed to halt shoreline erosion along the east bank of the canal. Special features are being incorporated into the project design to allow estuarine organisms to access wetlands behind the rock dike. These special features will leave small gaps in the rock at infrequent intervals to allow natural water exchange behind the dike segments. Shoreline sections at the gap locations will be armored to prevent erosion into the adjacent bankline and marshes.
- Project Costs:** The estimated cost of the project, including real estate, environmental compliance, engineering and design, relocations, construction, monitoring, and O&M expenses, is \$17,756,470.
- Project Status:** The partnering agencies have completed a 30% design review and a 95% design review. The project schedule calls for seeking construction authorization from the CWPPRA Task Force at the winter 2006 meeting.
- Information:** Additional information on this project is available on the LACOAST.GOV website or may be obtained by contacting Gregory Miller at 504-862-2310 or via email at Gregory.B.Miller@mvn02.usace.army.mil.



**Freshwater Bayou (Belle Isle Canal to Lock - East)
TV-11b**



Legend

- Proposed Retaining Dike
- Shut-In Well
- Inactive Well
- Weir Structure



Data Source:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, La.

2000 SPOT Imagery
Map Date: May 30, 2003
Map ID: USGS-NWRC 2003-04-0248

GIWW Bank Restoration of Critical Areas in Terrebonne

TE-43

CWPPRA
GIWW Restoration of Critical Areas
(TE-43)
Phase II Request

Technical Committee Meeting

December 7, 2005

New Orleans, LA

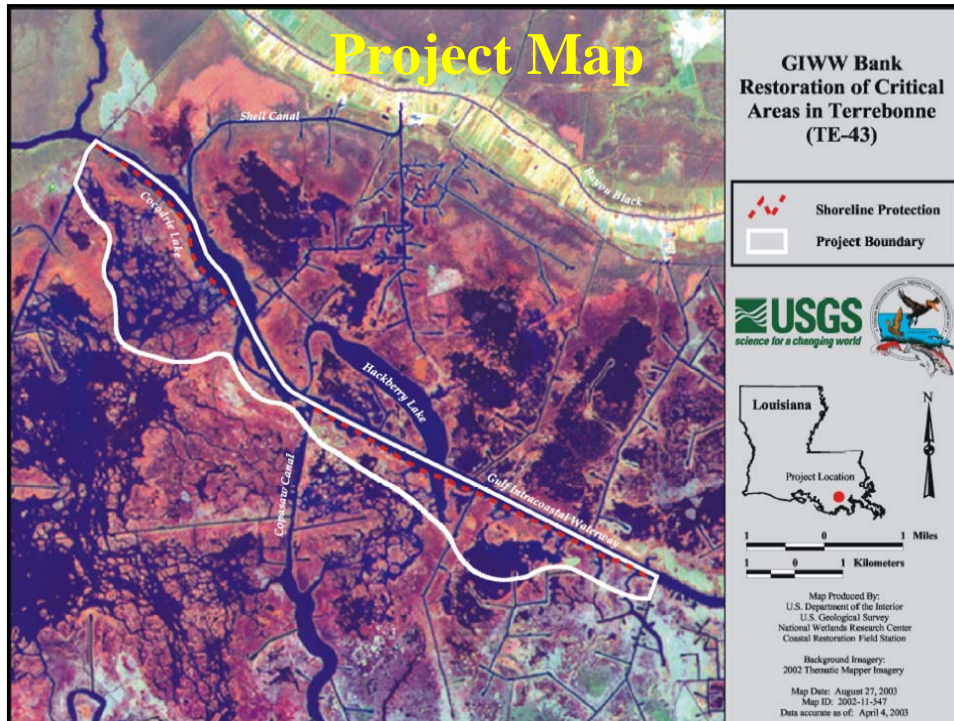
Project Overview

Project Location: Region 3, Terrebonne Basin, Terrebonne Parish, south bank of the GIWW from mile marker 80 to mile marker 70.

Problem: Deterioration of the southern bankline of the GIWW threatens fragile floating marshes of Penchant Basin and short-circuits freshwater conveyance to the east.

Goals:

- 1) Stop bankline erosion into the fragile floating marshes.
- 2) Maintain freshwater conveyance function of the GIWW.



Project Features Overview

- Installation of approximately 41,000 lf of shoreline protection along the southern bank of the GIWW by constructing a foreshore rock rip-rap dike and in places of poor soil bearing capacities using composite rock rip-rap with lightweight core aggregate.
- The foreshore rock dike will be situated along the -1.0-ft NAVD 88 contour in approximately 2.0 ft to 3.0 ft of water, stage dependant. The dike crown will be constructed to an elevation of +3.5 NAVD88 and have a width of 3.0 ft. The dike will have front and back side-slopes of 2.5:1.

Project Benefits & Costs

- **Total Area Benefitted:** 3,324 acres
- **Net acres after 20 yrs:** 366 acres
- **Prioritization Score:** 40.25
- **Project Costs:**
 - **Fully Funded Phase II** \$28,251,658
 - **Phase II, Increment 1** \$25,363,181
 - **Total Fully Funded** \$29,987,618

Project Comparison/Contrast

The Present vs. PPL # 10

- **Original Phase II Funding vs Present Request:**
 - \$17,921,887 original
 - \$28,251,658 present (reflects inflationary costs and adjustments to length and design of features)
- **Changes in Project Features**
 - 37,000 linear feet to 41,000 linear feet
- **Changes in WVA - none**

Why Should You Fund this Project Now?

- *Coast 2050 Region 3 #7: Stabilize banks of navigation channels for water conveyance. To enable the GIWW to function as a conveyance channel to extend Atchafalaya River freshwater influence to eastern and southern marshes of the Terrebonne Basin that would benefit from increased flows of freshwater and nutrients.*
- *Coast 2050 Region 3 #2: Lower water levels in upper Penchant marshes. To provide relief to floating marshes connected to the GIWW that are currently suffering from prolonged inundation and wave action while stopping shoreline erosion along the remaining bank of the GIWW.*

Questions?



United States Department of Agriculture



Natural Resources Conservation Service
3737 Government Street
Alexandria, Louisiana 71302

November 21, 2005

Mr. Tom Podany, Chair
CWPPRA Technical Committee
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Podany:

RE: GIWW Bank Restoration of Critical Areas (TE-43)
Phase Two Authorization Request

By this letter, the Natural Resources Conservation Service and the Louisiana Department of Natural Resources request Phase Two Authorization for the GIWW Bank Restoration of Critical Areas (TE-43), consisting of 41,000 feet of rock shoreline protection located on the southern bank of the Gulf Intracoastal Waterway (GIWW), beginning near mile marker 80 and ending near mile marker 70, in Terrebonne Parish, Louisiana.

Pursuant to Revision 10.0 of the CWPPRA Standard Operating Procedures Appendix C, a document entitled "Information Required in Phase Two Authorization Request" is enclosed.

If you or any members of the Planning and Evaluation Subcommittee, Technical Committee or Task Force have any questions regarding this matter, please contact Ron Boustany (337) 291-3067.

Sincerely,

Britt Paul
Assistant State Conservationist/Water Resources

encl

cc (via email only):

Gerry Duszynski, DNR Technical Committee Member
Darryl Clark, USFWS Technical Committee Member
Rick Hartman, NMFS Technical Committee Member
Sharon Parrish, EPA, Technical Committee Member
Dan Llewellyn, DNR P&E Subcommittee Member
Kevin Roy, USFWS P&E Subcommittee Member
Rachel Sweeney, NMFS P&E Subcommittee Member
Wes McQuiddy, EPA P&E Subcommittee Member

Mr. Tom Podany
November 18, 2005
Page 2

John Jurgensen, NRCS P&E Subcommittee Member
Pat Forbes, GOCA
Cynthia Duet, GOCA
Ron Boustany, Project Manager, NRCS
Ismail Merhi, Project Manager, LDNR
Michael Trusclair, District Conservationist, NRCS
Ronnie Faulkner, Design Engineer, NRCS
Randolph Joseph, Jr., ASTC/FO, NRCS

Information Required in Phase II Authorization Request

TE-43 GIWW BANK RESTORATION OF CRITICAL AREAS INCREMENT 1 – AREA ‘G’

Description of Phase I Project

The TE-43 GIWW Critical Areas project was approved relative to the 10th CWPPRA Priority Project List. The Natural Resources Conservation Service (NRCS) is the federal sponsor for this project. The objective of this project is to protect critically eroding portions of the southern bank of the Gulf Intracoastal Waterway (GIWW).

The Gulf Intracoastal Waterway (GIWW) Bankline Restoration Project is located in Terrebonne Parish approximately ten miles east of the Lower Atchafalaya River and ten miles southwest of Houma, Louisiana. The specific location proposed for the structures is the southern bank of the GIWW originating at a point close to mile marker 80 and terminating at a point close to mile marker 70.

In the past 20 years, as the efficiency of the Lower Atchafalaya River has decreased, Lake Verret subbasin flooding and Atchafalaya River flows via the GIWW have increased. Deterioration of fresh and intermediate wetlands, particularly the floating marsh, in the upper Penchant basin has been attributed to sustained elevated water levels. In addition, wave action from commercial and recreational traffic on the GIWW has caused floating marshes in some areas to become directly exposed to increased circulation through unnatural connections formed where channel banks have deteriorated.

The objective of the GIWW Bankline Restoration project is to protect critically eroding portions of the southern bank of the GIWW that act as an interface between the fragile fresh marshes and the turbulent high velocities that occur within the GIWW. Proposed measures include installing shoreline protection structures along the southern bank of the GIWW. The structures will provide protection to the banks of the GIWW, which have experienced severe erosion since the construction of the GIWW in the early 1950's.

The project goals were: 1) To enable the GIWW to function as a conveyance channel to direct Atchafalaya River freshwater flow to specific locations that would benefit from increased flows of fresh water and nutrients, and 2) To provide relief to marshes connected to the GIWW that are currently suffering from prolonged inundation and wave action while stopping shoreline erosion along the remaining bank of the GIWW.

The proposed solution is to restore critical lengths of deteriorated channel banks, and stabilize/armor selected critical lengths of deteriorated channel banks with hard shoreline stabilization materials.

The Wetland Value Assessment conducted for the Phase I project estimated a benefited area of 3,324 acres and the net acres created/protected/restored of 366 acres at TY20.

The original project fact sheet is provided on the following two pages.



GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43)

Project Status

Approved Date: 2001 **Project Area:** 3,324 acres
Approved Funds: \$2.2 M **Total Est. Cost:** \$19.7 M
Net Benefit After 20 Years: 366 acres
Status: Engineering and Design
Project Type: Shoreline Protection

Location

The project is located in the Terrebonne basin, in Terrebonne Parish, Louisiana.

Problems

In the past 20 years, as the efficiency of the Lower Atchafalaya River has decreased, Verrett subbasin flooding and Atchafalaya River flows via the Gulf Intracoastal Waterway (GIWW) have increased. Deterioration of fresh and intermediate wetlands, particularly of the floating marshes in the upper Penchant basin, has been attributed to sustained elevated water levels. In addition, floating marshes in some areas have become directly exposed to increased circulation through unnatural connections formed where channel banks deteriorated.

Conversely, losses in the central Terrebonne Parish marshes have been attributed to the elimination of riverine inflow coupled with subsidence and altered hydrology from canal dredging that facilitated saltwater intrusion. Increased flow of the GIWW and wave pulses from navigation traffic are causing additional breakup and loss of floating marshes in unprotected areas.

Restoration Strategy

This project will restore critical lengths of deteriorated channel banks and stabilize/armor selected critical lengths of deteriorated channel banks with hard shoreline stabilization materials.

Progress to Date

Geotechnical soils investigation report is complete. Soils in the area are very soft and fluid.

This project is on Priority Project List 10.



Large mats of floating freshwater marsh, such as this one, detach from their point of origin and enter the GIWW through large breaches in the existing shoreline.



Concrete "H" pile/panel structures, similar to this one, will be installed at locations within the project area where shoreline erosion is critical. Soils with high amounts of organic material, which have poor strength, necessitated the use of a structure such as this.

For more project information, please contact:



Federal Sponsor:
 Natural Resources Conservation Service
 Alexandria, LA
 (318) 473-7756



Local Sponsor:
 Louisiana Department of Natural Resources
 Baton Rouge, LA
 (225) 342-7308

GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43)

- Shoreline Protection
- Project Boundary



Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station

Background Imagery:
2002 Thematic Mapper Imagery

Map Date: August 27, 2003
Map ID: 2002-11-547
Data accurate as of: April 4, 2003



frequently flooded, Barbary muck – frequently flooded, Gramercy/Cancienne – silty clay loam, and Allemands muck – very frequently flooded (NRCS 2002, unpublished data).

The mudline at the boring locations varied from elevations 0.0 to -3.0 NAVD88 and was located from 1 foot to 4 feet below the water surface at the time of drilling.

The upper soils are typically highly organic, classifying as high plastic clays with organic matter, organic clays, or peats. In general, soft consistencies are not encountered until depths exceed 30 feet with some medium stiff consistencies occurring below approximately 60 feet.

Water contents ranged from 29 percent on a sample of silty sands to 1,004 percent on a sample of peat with approximately two thirds of the water contents exceeding 100 percent.

Liquid limits ranged from 34 on a sample of silty clays to 807 percent on a sample of peat. More than 97 percent of the liquid limits exceeded 50 percent, and approximately 82 percent of the liquid limits exceed 100 percent.

Plastic limits ranged from 20 on a sample of silty clays to 450 percent on a sample of organic clays. However, about 96 percent of the plastic limits were between 20 and 100 percent, and slightly more than 86 percent of the plastic limits were between 20 and 50 percent.

Plasticity indices ranged from non-plastic on a sample of peat to 557 percent on a sample of clays with peat seams and pockets with nearly 90 percent of the plasticity indices exceeding 50 percent and slightly more than 73 percent of the plasticity indices exceeding 100 percent.

Unconfined and triaxial compression tests yielded cohesions ranging from 22 lbs per sq ft to 603 lbs per sq ft, except for one unconfined compression test which yielded a cohesion value of 1,328 lbs per sq ft. Slightly more than 88 percent of the unconfined and triaxial compression tests yielded cohesions below 250 lbs per sq ft, which is the upper limit of a very soft consistency. Slightly more than 36 percent of the unconfined and triaxial compression tests yielded cohesions below 100 lbs per sq ft.

Field vane test performed generally in the upper soils yielded cohesions ranging from 37 lbs per sq ft to 268 lbs per sq ft with nearly 40 percent of the field vane tests yielding cohesions below 100 lbs per sq ft.

Hydrology and Hydraulics

The water levels in the watershed are influenced by tides and wind. The mean high water is 2.0' NAVD88. The mean low water is 0.5' NAVD88.

Engineering and Design Tasks

The Department of Natural Resources letter “RE: Generalized Guidelines for Coastal Structures Design Parameters” dated January 07, 2000, and its attachment “Design Guidelines for CWPPRA Shoreline Protection Structures” were used to determine the wave heights used to design the rock / rock composite dike. Under the guidelines set forth in the letter a still water elevation (SWE), a wave height, the height of the structure, and the wave forces must be determined. In an effort to be conservative, the SWE was set at the storm water elevation of +2.5 NAVD88. Concurrently, the average bottom elevation was determined to be approximately -1.5 NAVD88.

Minimum and maximum design wave heights are determined according to the guidelines, where the minimum wave height is equal to 2.0 feet unless this is greater than the water depth and the maximum wave height is 0.78 times the water depth. Therefore the minimum and maximum wave heights were set at 2.0 and 3.12 feet respectively.

A wind generated wave height was determined using a 70 mph wind. The maximum peak gust, 70 mph, was chosen out of a comparison of New Orleans, Lake Charles and Baton Rouge wind speeds, provided in NOAA's "Climatic Wind Data for the United States". The wave height for this wind speed was used as an input for the ACES program in which wind in shallow and deep open water conditions was determined. The shallow and deep open water wave conditions return wave heights of 1.44 and 1.67 feet respectively. Along with these wave heights, one other wave height was determined. This is the wave height due to boat traffic. Since most of the traffic in the GIWW is crew boats a wave height of 3.0 feet was used in accordance with the guidelines.

The minimum top elevation of the structure was determined to be 3.5 NAVD88 based on the ability of the structure to be overtopped, and the guidelines. The wave impact forces were determined by deciding if the maximum wave height is breaking or non-breaking. This is done using the Shore Protection Manual (SPM), Chapter 2, Section VI, Part 2. In this case, a wind duration of 2.0 seconds was used, which allowed for the determination of the deepwater wave steepness, 0.024. The deepwater wave steepness is used as an input into Figure 2-72 of the SPM in order to determine the breaker height index, which in turn is used to determine the breaking wave height, 3.0 feet. The breaking wave height was then used as an input in Equation 2-92 of the SPM in order to determine the depth of water that the breaking wave would break at, 4.59 feet. Since the depth of water at which the wave would break at is greater than the depth of water at the structure, the wave will break before it reaches the structure, and thus is not a concern in the design of the structure.

The geotechnical investigation provided the minimum slopes for a composite and a rock dike. With this information in combination with the settlements for each type of section, also provided in the geotechnical investigation, a determination of the most economic design method (rock / composite) was made on a per reach basis. The most economic method per reach was used as the determining factor for which sections of the dike would be composite rather than rock only. These determinations led to the specification of 2:1 (H:V) side slopes for the rock only sections and 2.5:1(H:V) side slopes for the composite sections, based on the minimum slopes provided by the geotechnical investigation.

With the maximum wave height, wave forces, and side slopes determined the size of the rock riprap was determined to be a Corps of Engineers R-1000 gradation. This was done using equation 7-117 from the SPM, with a stability coefficient of 2.2, and the two side slopes (2:1, 2.5:1) that were proposed for this structure. The top width of the structure was determined to be 3.0 feet using equation 7-120 of the SPM, with the median size of the gradation above.

A layer thickness for the composite sections of the structure had to be determined. This was accomplished using equations 7-123 and 7-124 of the SPM. The maximum thickness from these two equations was determined to be 1.6 feet. To be conservative a 2.0 foot layer thickness has been specified for the structure design.

Design meetings were held at the 30% (May 25, 2004) and 95% (August 26, 2004) levels.

Landrights, Cultural Resources, Environmental Compliance and Other Tasks

Preliminary landrights has proceeded smoothly and no problems are anticipated in acquiring final landrights.

No cultural resource sites are located within the project area.

Environmental concerns were considered in the planning and design of this project. A FONSI, Environmental Assessment, and Ecological Review Report have been completed. A Section 404 permit application has been submitted to the USACE. A Storm Water Pollution Prevention Plan has been developed for this project since the disturbed construction site is more than one (1) acre. A permit to dredge material for construction is being obtained by the local sponsors from the U.S. Corps of Engineers and the Louisiana Department of Natural Resources, Coastal Zone Management.

A draft Ecological Review is available and a final EA dated December, 2002 was developed after receiving comments on the draft EA, which was submitted for public comment in April, 2002.

Description of the Phase II Candidate Project

Project Features

Final design features are essentially unchanged from the original Phase I project. The project contains shoreline protection by means of a hard shoreline structure. However, the Phase 0 approved length of the structure was approximately 38,000 feet whereas the length of the Designed project is approximately 41,000 feet.

The work to be accomplished will consist of the installation of approximately 41,000 feet of shoreline protection along the southern shoreline of the GIWW by constructing a rock rip-rap dike and in places of poor soil bearing capacities constructing a composite rock rip-rap dike with a lightweight core aggregate as seen in Figures 1-3. For typical rock dike sections refer to Figures 4 and 5.

Previous projects involving similar bankline structures that have been successfully constructed along the GIWW and other similar type areas include Perry Ridge Shore Protection (CS-24), GIWW-Perry Ridge West Bank Stabilization (CS-30), Cameron Prairie NWR Shoreline Protection (ME-09), Freshwater Bayou Bank Stabilization (ME-13) and Freshwater Bayou Wetland Protection (ME-04). Additionally, the analysis and results included in the geotechnical investigations support the concept that a rock/rock composite structure is capable of being constructed, and establishes the required stable side slopes as well as expected settlements.

See 'Overview of Phase I Tasks' above.

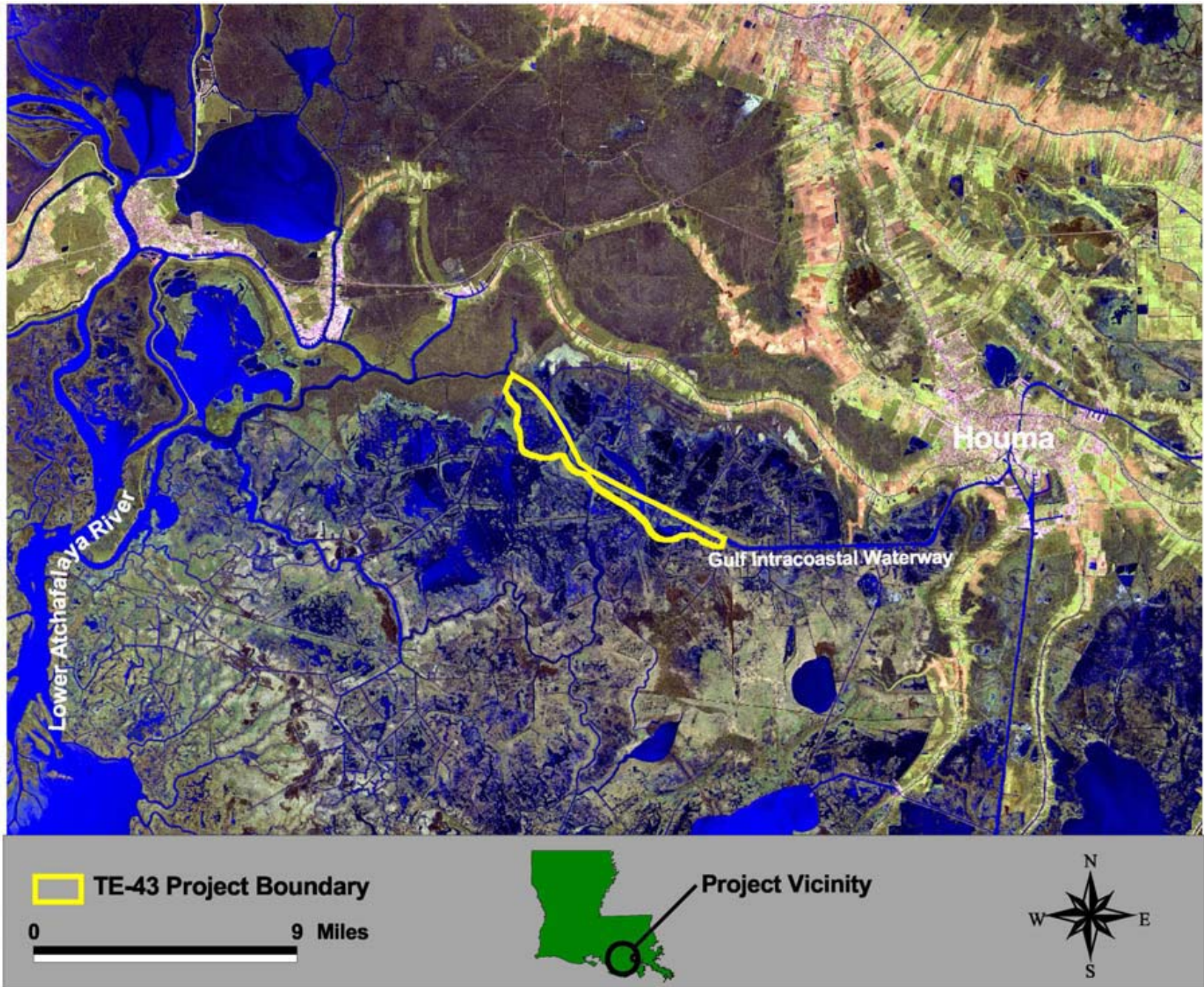


Figure 1. GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43).

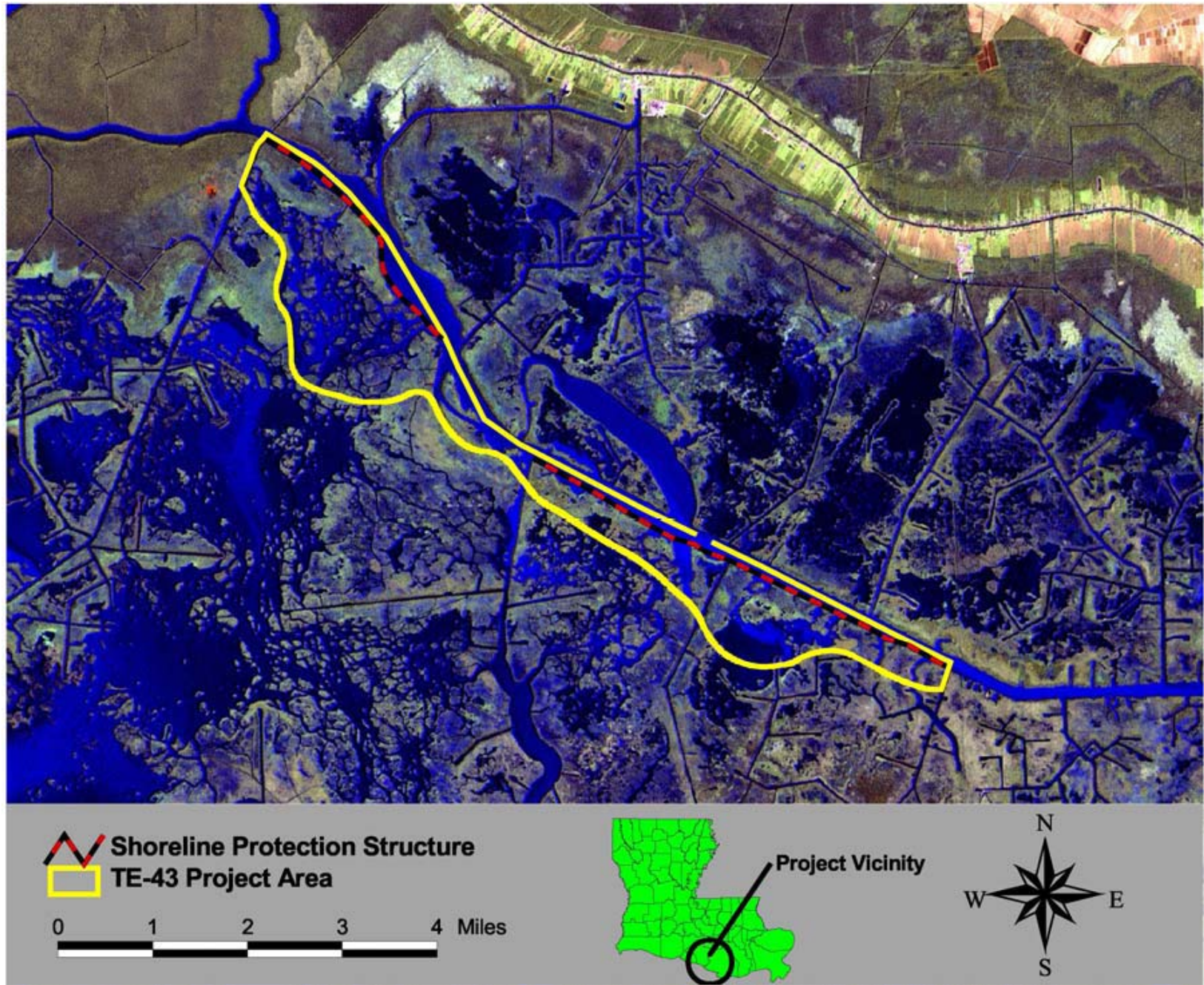
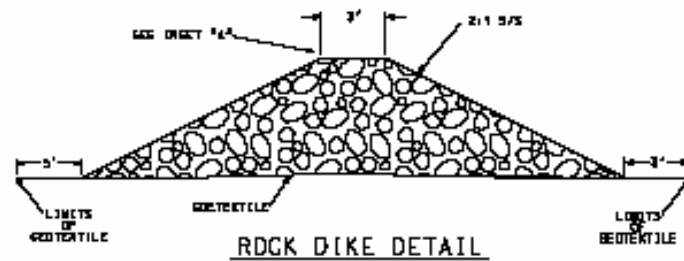
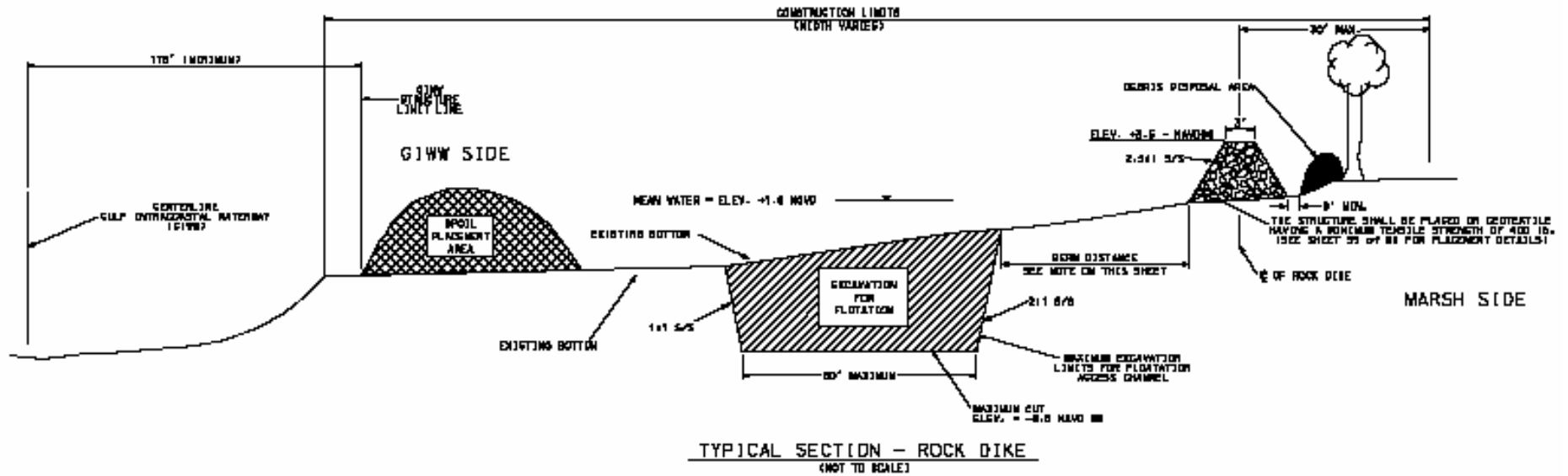
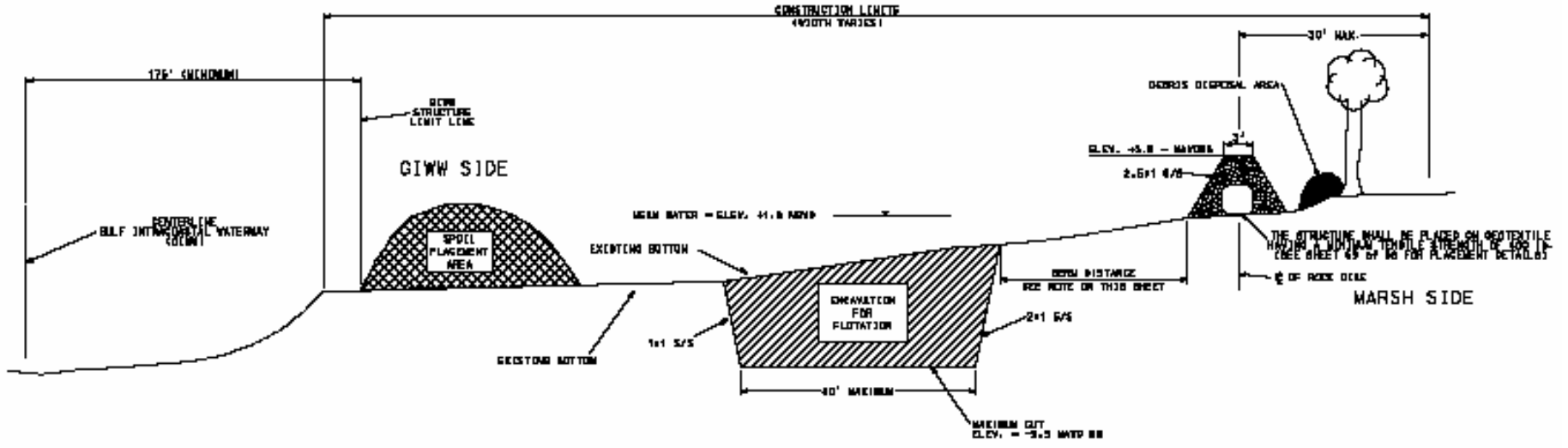


Figure 2. GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43).



NOTE:
 ALL SPOIL SHALL BE PLACED BACK INTO ACCESS CHANNEL AFTER CONSTRUCTION OF DIKE IS COMPLETE.
 AS REQUIRED TREES SHALL BE REMOVED AND PLACED ON THE MARSH SIDE OF THE STRUCTURE.
 THE ROW DISTANCE SHALL BE 30' EXCEPT FOR THE FOLLOWING REACHES WHICH SHALL BE 40': REIMENT 1-STA. 1+00-3+00; REIMENT 1-STA. 6+00-8+00; REIMENT 1-STA. 10+00-11+00.

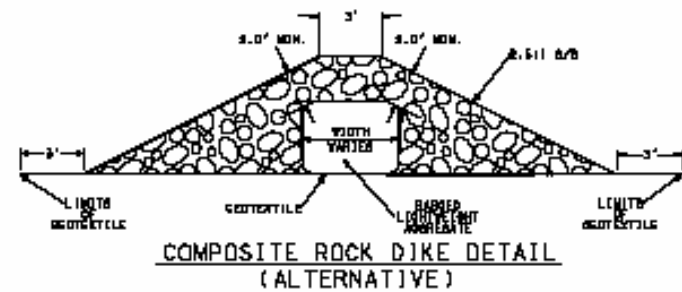
Figure 4 – Typical Rock Dike Section.



**COMPOSITE REACHES
LIGHT WEIGHT AGGREGATE**

SEGMENT	REACH	CY/LF
1	0+00 to 11+00	0.64
2	11+00 to 21+00	0.81
2	21+00 to 30+00	0.86
2	30+00 to 41+00	0.60
2	41+00 to 76+00	0.81
3	0+00 to 13+00	0.68
4	7+00 to 18+00	1.18
4	27+00 to 38+00	1.02
4	38+00 to 50+00	1.88
4	50+00 to 58+00	1.80
5	15+00 to 24+00	1.62
6	0+00 to 4+00	0.81
6	4+00 to 15+00	1.65
8	44+00 to 45+00	1.88
8	45+00 to 58+00	1.62
8	58+00 to 68+00	1.63
8	68+00 to 93+00	1.90
7	0+00 to 7+00	1.47

**TYPICAL SECTION - COMPOSITE ROCK DIKE
(NOT TO SCALE)**



NOTE:
 WIDTH AND HEIGHT OF BARBED LIMESTONE AGGREGATE TO VARY AS
 A FUNCTION OF ROCK COVERAGE SHALL BE PLACED ON SIDES AND TOP
 OF BARBED AGGREGATE.
 ALL SPILL SHALL BE PLACED BACK INTO ACCESS CHANNEL AFTER CONSTRUCTION
 OF DIKE IS COMPLETE.
 AS REQUIRED TREES SHALL BE REMOVED AND PLACED ON THE MARSH SIDE OF THE
 STRUCTURE.
 THE MINIMUM DISTANCE SHALL BE 30' EXCEPT FOR THE FOLLOWING REACHS WHICH
 SHALL BE 40' SEGMENT 3-STA. 1+00-3+00; SEGMENT 4-STA. 0+00-5+00;
 SEGMENT 8-STA. 18+00-24+00.

Figure 5 – Typical Composite Rock Dike Section.

Updated Assessment of Benefits

A revised Wetland Value Assessment was not required. The original WVA conducted for the Phase I project estimated a benefited area of 3,324 acres and the net acres created/protected/restored of 366 acres at TY20.

Modifications to the Phase I Project

Final design features are essentially unchanged from the original Phase I project. The project contains shoreline protection by means of a hard shoreline structure. However, the Phase 0 approved length of the structure was approximately 38,000 feet whereas the length of the designed project is approximately 41,000 feet.

Current Cost Estimate

The revised total fully-funded cost prepared by the CWPPRA Economics Work Group is **\$29,987,618** (see fully funded cost spreadsheet). Phase I costs are unchanged from the original Phase I project budget (\$1,735,960). The total Phase II cost is estimated at **\$28,251,658** and the Phase II-Increment 1 cost at **\$25,363,181**.

Checklist of Phase Two Requirements

TE-43 GIWW BANK RESTORATION OF CRITICAL AREAS INCREMENT 1 – AREA ‘G’

A. List of Project Goals and Strategies.

The project goals are: 1) To enable the GIWW to function as a conveyance channel to direct Atchafalaya River freshwater flow to specific locations that would benefit from increased flows of fresh water and nutrients, and 2) To provide relief to marshes connected to the GIWW that are currently suffering from prolonged inundation and wave action while stopping shoreline erosion along the remaining bank of the GIWW.

B. A Statement that the Cost Sharing Agreement between the Lead Agency and the Local Sponsor has been executed for Phase I.

A Cost Share Agreement between the Natural Resources Conservation Service and Louisiana Department of Natural Resources was executed on May 16, 2001. A draft amendment, authorizing construction, operation, maintenance, and monitoring, to the Cost Share Agreement has been prepared.

C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase 2 approval.

NRCS has requested the required letter from DNR relative to landrights being finalized in a relatively short time after Phase 2 approval. By way of letter received September 2, 2004, DNR stated that they anticipated no landrights acquisition problems with the project. At this time all landowners have indicated approval of project and signatures pending funding approval, and all pipeline companies have given consent.

D. A favorable Preliminary Design Review (30% Design Level). The Preliminary Design shall include completion of surveys, borings, geotechnical investigations, data analysis review, hydrologic data collection and analysis, modeling (if necessary), and development of preliminary designs.

A 30% design review meeting was held on May 25, 2004, and resulted in favorable reviews of the project design with minor modifications. DNR and NRCS agreed on the project design and agreed to proceed to the 95% design level and with project implementation.

E. Final Project Design Review (95% Design Level). Upon completion of a favorable review of the preliminary design, the Project plans and specifications shall be developed and formalized to incorporate elements from the Preliminary Design and the Preliminary Design Review. Final Project Design Review (95%) must be successfully completed prior to seeking Technical Committee approval.

A 95% design meeting was held on August 26, 2004, and resulted in favorable reviews of the

project design with no modifications and few comments. DNR and NRCS agreed on the project design and agreed to proceed with project implementation.

F. A draft of the Environmental Assessment of the Project, as required under the National Environmental Policy Act must be submitted thirty days before the request for Phase 2 approval.

A final EA dated December, 2002 was developed after receiving comments on the draft EA, which was submitted for public comment in April, 2002.

G. A written summary of the findings of the Ecological Review.

A favorable 95% Design Review was conducted on August 26, 2004. The following paragraph is from the Recommendations section of the August 2004 draft Ecological Review:

Based on information gathered from similar restoration projects, engineering designs, and related literature, the proposed strategies in the GIWW Bank Restoration of Critical Areas in Terrebonne project will likely achieve the desired goals provided Operation and Maintenance funds are available for structure rehabilitation. It is recommended that this project progress towards construction authorization pending a favorable 95% Design Review.

H. Application for and/or issuance of the public notices for permits. If a permit has not been received by the agency, a notice from the Corps of when the permit may be issued.

Application for Section 404 permit (USACOE) has been submitted, all comments addressed, and issuance is pending appropriate signatures. NRCS has received verbal notification that all requirements of the permit have been met. Water Quality Certification (LDEQ) has been granted via letter dated September 20, 2005. A letter notifying consistency with Louisiana Coastal Resources Program (LCRP) has been issued, dated December 7, 2004.

I. A hazardous, toxic and radiological waste (HTRW) assessment, if required, has been prepared.

NRCS procedures do not call for an HTRW assessment on this project.

J. Section 303(e) approval from the Corps.

Section 303(e) approval was granted by the Corps via letter dated July 8, 2003.

K. Overgrazing determination from the NRCS (if necessary).

NRCS has determined that overgrazing is not, and is not anticipated to be, a problem in the project area.

M. A revised Wetland Value Assessment, reviewed and approved by the Environmental Work Group.

Because the project features did not change significantly in extent or scope, no revised WVA was performed. Therefore, the environmental benefits associated with this project remain the same as were derived in the original WVA. The Phase I benefited project area is 3,324 acres and the net acres created/protected/restored at TY20 are 366 acres.

N. A breakdown of the Prioritization Criteria ranking score, finalized and agreed-upon by all agencies during the 95% design review.

The following Prioritization Criteria scores were submitted for reviewed by the Engineering and Environmental Work Groups and are pending agreement upon by all agencies:

Criteria	Score	Weight	Final Score
Cost Effectiveness	1.0	2	1
Area of Need	7.5	1.5	11.25
Implementability	10	1.5	15
Certainty of Benefits	8	1	8
Sustainability of Benefits	4	1	4
HGM – Riverine Input	0	1	0
HGM – Sediment Input	0	1	0
HGM – Landscape Features	0	1	0
Total Score			40.25

Grand Lake Shoreline Protection

ME-21

CWPPRA Grand Lake Shoreline Protection Project (ME-21) Phase II Request

Technical Committee Meeting



U.S. Army
Corps of Engineers
New Orleans District

December 7, 2005
New Orleans, LA



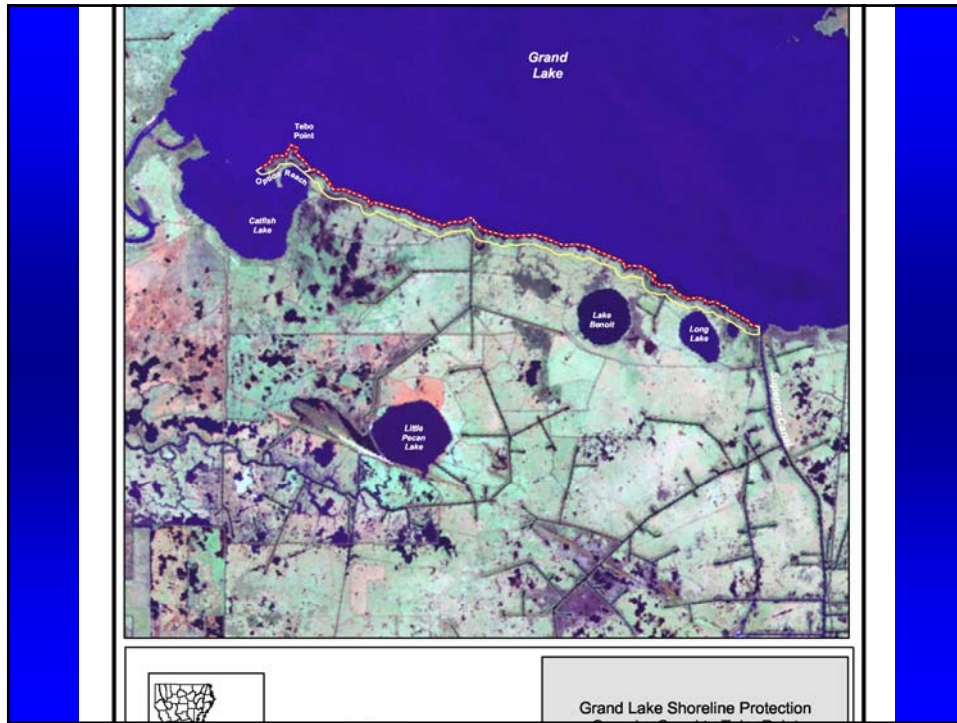
Project Overview

Project Location: Region 4, Mermentau Basin, Cameron Parish, south shore of Grand Lake.

Problem: According to a comparison of the 1978-79 aerial photography with 1997-98 photography, shoreline erosion rates in this area vary from 11 to 32 feet per year.

Goals:

- 1) stop shoreline erosion from Superior Canal to Tebo Point.
- 2) promote accretion between the breakwater and the shore.



Project Features Overview

- Construction of 37,800 lf of rock dike stretching from Superior Canal to the mouth of Catfish Lake with an option to place up to an additional 5,700 feet of dike around Tebo Point, to the west of the base project footprint.
- The rock dike will be situated along the -1.0-ft NAVD 88 contour in approximately 2.0 ft to 3.0 ft of water, stage dependant. The dike crown will be constructed to an elevation of +3.0 NAVD88 and have a width of 4.0 ft. The dike will have front and back side-slopes of 1 ft vertical on 1.5 ft horizontal.



Project Benefits & Costs

- **Project with Tebo Point extension:**
Benefits – 540 net acres
Total fully funded cost - \$17,251,124.
Prioritization Score – 66.25
- **Project without Tebo Point extension:**
Benefits – 495 net acres
Total fully funded cost - \$15,642,043.
Prioritization Score – 66.25

Project Benefits (continued)

- We are creating an additional 90 acres of marsh behind the rock dike as a result of using the flotation channel material beneficially that we did NOT claim credit for in the WVA.
- If you count the additional 90 acres of marsh created, then the project would protect/create approximately 630 acres of marsh.



Grand Lake Project Comparison/Contrast

The Present (with the Tebo Point ext.) vs. PPL 11

Item	Now	Then	Difference
Length:	43,500 LF	39,000 LF	+4,500 LF
Benefits:	540 net ac	495 net ac	+45 net ac
Cost:	\$17.2m	\$13.6m	+\$3.6m

Why Should You Fund This Project Now?

- **The shoreline is eroding at an avg. rate of 25 ft/yr**
- **It has the 2nd highest prioritization score out of the 14 projects.**
- **This is the only full project up for consideration in Region 4 this funding cycle and Region 4 has been neglected in the LCA – near term plan.**
- **Since Hurricane Rita the shoreline and marsh is in a very fragile state.**



Questions?



DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

CEMVN-PM-C (1110-2-1150a)

November 21, 2005

MEMORANDUM FOR: Mr. Greg Breerwood, Chair, CWPPRA Technical Committee

SUBJECT: Phase II Authorization Request for the Grand Lake Shoreline Protection Project (ME-21), Cameron Parish, LA

The U.S. Army Corps of Engineers (USACE) and Louisiana Department of Natural Resources (LDNR) request Phase II authorization for the Grand Lake Shoreline Protection Project (ME-21). The project was authorized for Phase I as a part of Priority Project List 11 (PPL 11) on January 16, 2002 by the Louisiana Coastal Wetlands Conservation and Restoration Task Force (Task Force) under the authority of the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA). This request is submitted in accordance with the CWPPRA Project Standard Operating Procedures (SOP) Manual.

1. Description of Phase I Project:

A description of the Grand Lake Shoreline Protection candidate project as selected for Phase I authorization is found in Enclosure 1. Enclosure 1 contains the original Fact Sheet and map depicting the project boundary and project features. It includes a description of the conceptual features of the project as authorized for Phase I, a summary of the benefits attributed to the Phase I project and project budget information as estimated at the time of Phase I authorization.

2. Overview of Phase I Tasks, Process and Issues

After receiving Phase I approval on January 16, 2002, the project delivery team (PDT) was assembled with representatives from the USACE and the LDNR. The PDT developed and submitted a work plan to accomplish Phase I activities to the P&E Subcommittee for their review. The PDT also conducted a kickoff meeting and site visit on June 26-27, 2002. Contracts were awarded to conduct hydrographic surveys, magnetometer surveys, and borings. The Engineering Division of the USACE performed the engineering and design for the project. A 30% design review meeting was held on May 11, 2004, which resulted in a letter from the LDNR concurring to proceed with final design. All NEPA documentation was completed resulting in a final Environmental Assessment and a Finding of No Significant Impact (FONSI). The Plans and Specifications were prepared and the Design Report finalized. The USACE Real Estate Division completed the official Real Estate Plan, which defines the real estate requirements in Phase II. The LDNR prepared the Ecological Review. A 95% Design Review Meeting was held on August 16, 2004. The Final Design Report including all supporting appendices were provided for the 95% Design Review Meeting.

3. Description of the Phase II Candidate Project

A. A description of the Grand Lake Shoreline Protection Phase II candidate project is found in Enclosure 3-A. Enclosure 3-A contains the current Fact Sheet and map depicting the project boundary and project features. It includes a detailed description of the features of the project, a summary of the benefits and project budget information.

B. The originally approved Grand Lake Shoreline Protection project started at Superior Canal and terminated at the beginning of Tebo Point. As a result of the Phase I analyses, the USACE and LDNR concluded that it would be beneficial to extend the project to include all of Tebo Point within the project design. This extension increases the rock dike length by approximately 5,700 lf, the benefits by 45 net acres (+9.1%), and the fully funded cost by \$1,609,081 (+10.3%).

C. A table comparing the project at the time of Phase I approval and the current project has been included as enclosure 3-C.

4. Checklist of Phase II requirements:

A. List of Project Goals and Strategies.

Goal #1: To stop shoreline erosion from Superior Canal to Tebo Point.

Goal #2: To promote accretion between the breakwater and the shore.

Coast 2050 Strategy: Regional #16 - Stabilize Grand and White Lakes' shorelines.

B. Since the Cost Sharing Agreement (CSA) between the USACE and the LDNR covers both Phase I and Phase II, it cannot be executed until Phase II approval is given on the day of the Task Force meeting. It will be executed shortly after receiving Phase II approval.

C. The USACE will finalize landrights in a short period of time after Phase II approval.

D. The USACE and the LDNR conducted a favorable 30% Design Review Meeting on May 11, 2004. As a part of that review, the Preliminary Design Report was provided for agency review and comment. The Preliminary Design Report included the results of the surveys, borings, geotechnical investigations, data analysis review, and the preliminary designs. The LDNR sent a letter dated May 12, 2004 that indicated their concurrence to proceed with the final design of the project.

E. The USACE and the LDNR conducted a favorable 95% Design Review Meeting on August 16, 2004. As a part of that review, the Project plans and specifications and the Final Design Report were provided for agency review and comment. The LDNR sent a letter dated August 30, 2004 that indicated their concurrence to proceed with the Phase II request for the project. A copy of the letter of concurrence has been included as enclosure 4-E.

F. The Environmental Assessment (EA) has been finalized and a copy of the signed FONSI for the project has been included as enclosure 4-F.

G. A copy of the Ecological Review completed by the LDNR has been included as

enclosure 4-G.

H. The application for and/or issuance of the public notices for permits is not applicable to this project. All permits were handled through the NEPA compliance process.

I. The hazardous, toxic and radiological waste (HTRW) assessment, was addressed in the EA.

J. A copy of the signed Section 303(e) approval from the USACE has been included as enclosure 4-J.

K. A copy of the Overgrazing determination from the Natural Resources Conservation Service (NRCS) has been included as enclosure 4-K. The letter indicates that there is no problem with overgrazing within the project area.

L. A revised fully-funded cost estimate of Phase II activities or economic analyses, based on the current Project design has been included as enclosure 4-L and summarized directly below.

Funding/Budget information:

1.) - The specific Phase II funding request (construction cost estimate and three years of O&M) are as follows:

Grand Lake SP with Tebo Point extension: \$14,198,931

Grand Lake SP without extension: \$12,589,850

2.) - The fully-funded 20-year cost estimates are as follows:

Grand Lake SP with Tebo Point extension: \$17,251,124

Grand Lake SP without extension: \$15,642,043

M. A revised Wetland Value Assessment (WVA) was not required for the original project limits because there was not a change in scope as defined by the CWPPRA SOP. A WVA for the Tebo Point extension option was prepared and reviewed by the Environmental Workgroup. The resulting benefits have been included in enclosure 3-A in the benefits write-up.

N. A summary of the breakdown of the Prioritization Criteria ranking score, finalized and agreed upon by all agencies prior to the 95% design review and updated with the current fully-funded cost estimate as of November 21, 2005 has been included as enclosure 4-N.

If you have any questions regarding the subject project, please call Mr. Chris Monnerjahn at (504) 862-2415.

Chris Monnerjahn
Project Manager
Coastal Restoration Branch

Enclosures

Enclosure 1

PPL11 FINAL PROJECT NOMINEE FACT SHEET

Nov 20, 01 pl11NovFS Grand Lake

ME-16-2 Grand Lake Shoreline Protection, from Superior Canal to Tebo Point

Coast 2050 Strategy - Regional #16 - Stabilize Grand and White Lakes shorelines.

Project Location - Region 4, Mermentau Basin, Cameron Parish, south shore of Grand Lake.

Problem -According to a comparison of the 1978-79 aerial photography with 1997-98 photography, shoreline erosion rates in this area vary from 11 to 32 feet per year.

Goals – 1) stop shoreline erosion from Superior Canal to Tebo Point. 2) promote accretion between the breakwater and the shore.

Proposed Solution - Approximately 39,000 feet of stone breakwater will be built in Grand Lake at the outer edge of the –2 foot contour from Superior Canal to Tebo Point. The crest elevation will be +2.0 feet NGVD; crest width 4 feet; front and back slopes 1:3; and stone size 650# maximum. Approximately 163,000 tons of riprap will be used. The stone will be placed on geotextile fabric that is 200 lb/inch. Gaps for fish access will be built every 1,000 feet. They will have a top width of 46 feet and extend to the lake bottom. They will be lined with a concrete apron. A flotation channel will be at least 35 feet from the centerline of the dike with a side slope of 1:4 and a depth of –6 feet. Material from the flotation canal will be cast inside the breakwater.

Project Benefits – The project would benefit 445 acres of fresh marsh and 717 acres of open water (total 1,162 acres). Shoreline loss would be prevented and some marsh would accrete south of the breakwater so at the end of 20 years, 495 acres of marsh would be protected/created.

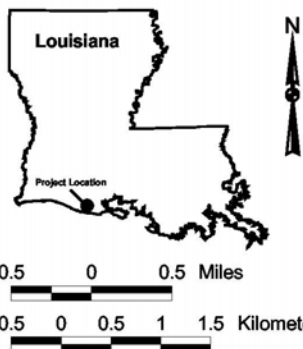
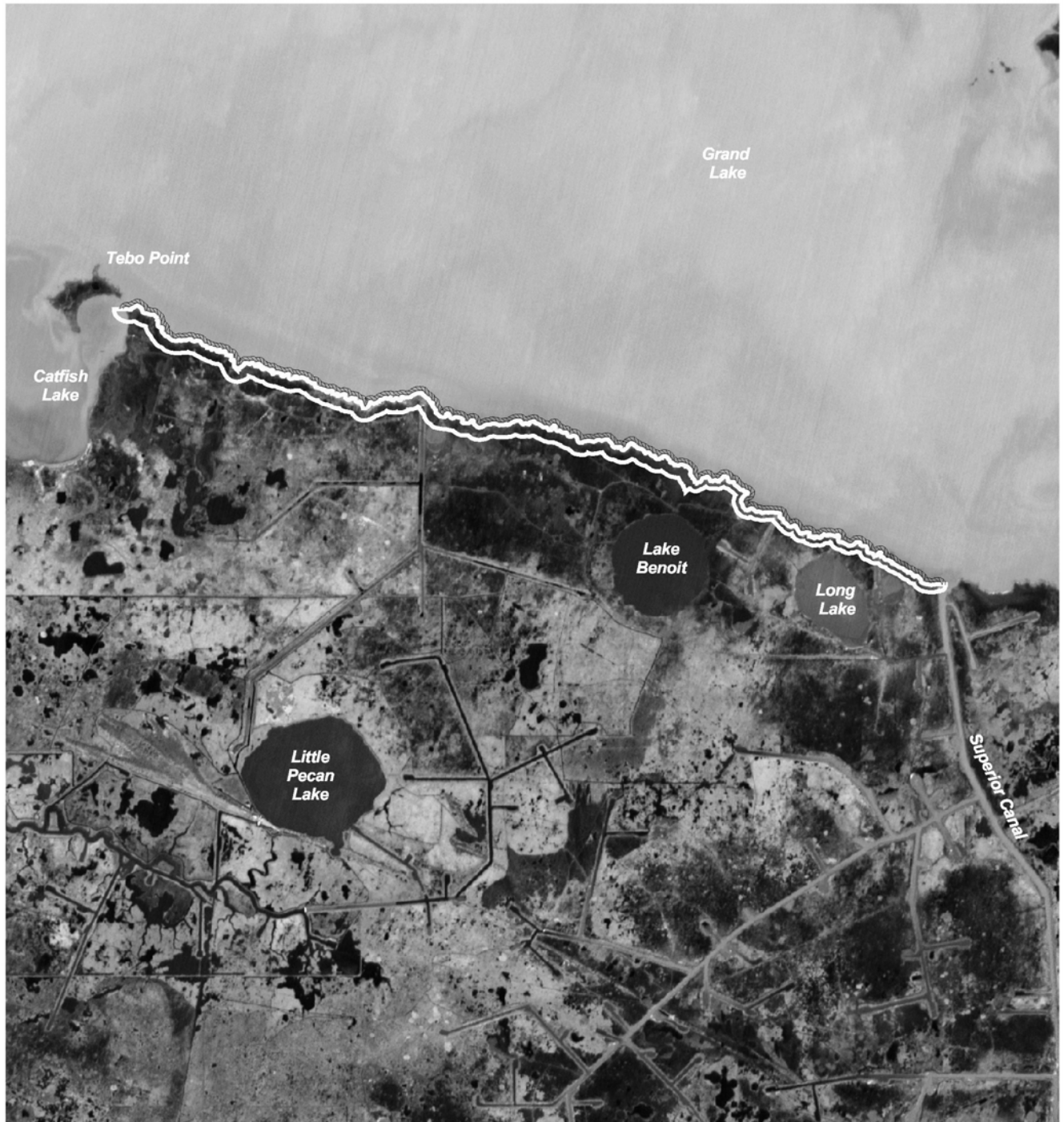
Preliminary Costs – The total fully funded cost is \$13,562,500. The fully funded first cost is \$9,559,700.



Risk/Uncertainty and Longevity/Sustainability – There will be a low degree of risk associated with this project because monitoring has indicated that breakwaters significantly reduce erosion. The project should continue providing benefits more than 20 years after construction because some rocks will be replaced at years 5 and 15.

Sponsoring Agency and contact Persons – Corps of Engineers

Sue Hawes, COE, 504 862-2518 suzanne.r.hawes@mvn02.usace.army.mil

Christopher Alfonso, 504 862-2401 christopher.d.alfonso@mvn02.usace.army.mil



 Project area
 Proposed Breakwater

Data Source:
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station

 LA Department of Natural Resources
 Coastal Restoration Division

 Map Date: November 16, 2001
 Map ID: 200204142
 Image Data:
 1990 SPOT Panchromatic Imagery

CWPPRA PPL11
 Region 4

**Grand Lake Shoreline Protection
 Superior Canal to Tebo Point
 (ME-16-2)**

Coastal Wetlands Conservation and Restoration Plan Grand Lake Shoreline Protection (ME-16-2)

Fully Funded Costs Total Fully Funded Costs **\$13,562,500** Amortized Costs **\$1,194,468**

Year	Fiscal Year	E&D	Land Rights	Federal S&A	LDNR S&A	Corps Proj. Man.	Monitoring	S&I	Contingency	Construction Costs	Total First Cost
Phase I											
6	0.969	2000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5	1.000	2001	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4	1.032	2002	\$381,668	\$36,120	\$87,892	\$87,892	\$684	\$13,835	\$0	\$0	\$608,091
2	1.065	2003	\$281,344	\$26,626	\$64,789	\$64,789	\$353	\$3,037	\$0	\$0	\$440,938
TOTAL			\$663,012	\$62,746	\$152,681	\$152,681	\$1,038	\$16,872	\$0	\$0	\$1,049,029
Phase II											
4	1.032	2002	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3	1.065	2003	\$0	\$0	\$72,857	\$49,475	\$353	\$0	\$44,934	\$493,735	\$1,974,942
2	1.099	2004	\$0	\$0	\$128,895	\$87,529	\$729	\$3,135	\$79,495	\$873,489	\$3,493,954
1	1.134	2005	\$0	\$0	\$33,255	\$22,582	\$752	\$3,235	\$20,510	\$225,360	\$901,440
TOTAL			\$0	\$0	\$235,007	\$159,586	\$1,834	\$6,370	\$144,939	\$1,592,584	\$6,370,336
Total Cost			\$663,000	\$62,700	\$387,700	\$312,300	\$2,900	\$23,200	\$144,900	\$1,592,600	\$6,370,300

Year	FY	Monitoring	O&M	Corps PM	Other
-1	1.171	2006	\$3,338	\$7,304	\$776
-2	1.208	2007	\$3,445	\$7,538	\$801
-3	1.247	2008	\$3,556	\$7,779	\$827
-4	1.287	2009	\$3,669	\$8,028	\$853
-5	1.328	2010	\$3,787	\$1,941,207	\$881
-6	1.370	2011	\$3,908	\$8,550	\$909
-7	1.414	2012	\$4,033	\$86,206	\$938
-8	1.459	2013	\$4,162	\$9,106	\$968
-9	1.506	2014	\$4,295	\$9,398	\$999
-10	1.554	2015	\$4,433	\$9,698	\$1,031
-11	1.604	2016	\$4,575	\$10,009	\$1,064
-12	1.655	2017	\$4,721	\$10,329	\$1,098
-13	1.708	2018	\$4,872	\$10,660	\$1,133
-14	1.763	2019	\$5,028	\$11,001	\$1,169
-15	1.819	2020	\$5,189	\$1,702,665	\$1,207
-16	1.878	2021	\$5,355	\$11,716	\$1,245
-17	1.938	2022	\$5,526	\$12,091	\$1,285
-18	2.000	2023	\$5,703	\$12,478	\$1,326
-19	2.064	2024	\$0	\$12,877	\$1,369
-20	2.130	2025	\$0	\$13,289	\$1,412
Total			\$79,600	\$3,901,900	\$21,300

	Phase I	Phase II	Ph II Incr 1	Ph II Balance
Engr & Des	\$663,012			
Lands	\$62,746			
Fed S&A	\$152,681	\$235,007	\$235,007	
LDNR S&A	\$152,681	\$159,586	\$159,586	
COE PM	\$1,038	\$1,834	\$1,834	
S&I		\$144,939	\$144,939	
Contg		\$1,592,584	\$1,592,584	
Const		\$6,370,336	\$6,370,336	
Monitoring	\$16,872	\$6,370	\$6,370	
Monitoring		\$79,594	\$10,339	\$69,255
O&M		\$3,901,931	\$22,622	\$3,879,309
COE PM		\$21,290	\$2,404	\$18,886
Total	\$1,049,029	\$12,513,472	\$8,546,023	\$3,967,449

Enclosure 3-A

FINAL PROJECT FACT SHEET

November 21, 2005

Project Name: Grand Lake Shoreline Protection, ME-21

Coast 2050 Strategy: Regional #16 - Stabilize Grand and White Lakes shorelines.

Project Location: Region 4, Mermentau Basin, Cameron Parish, south shore of Grand Lake.

Problem: According to a comparison of the 1978-79 aerial photography with 1997-98 photography, shoreline erosion rates in this area vary from 11 to 32 feet per year.

Goals: 1) stop shoreline erosion from Superior Canal to Tebo Point. 2) promote accretion between the breakwater and the shore.

Proposed Solution: The final design consists of constructing approximately 37,800 linear feet of rock dike stretching from Superior Canal to the mouth of Catfish Lake with an option to place up to an additional 5,700 feet of dike to the west of the base project footprint (option reach). The Technical Committee and Task Force will be given the option to fund the increased length. This fact sheet covers both funding alternatives up for consideration. The rock dike will be situated along the -1.0-ft NAVD 88 contour in approximately 2.0 feet to 3.0 feet of water, stage dependant. The dike crown will be constructed to an elevation of +3.0 NAVD88 (+/-0.25') and have a width of approximately 4.0 feet. The dike will have front and back side-slopes of 1.0-foot vertical on 1.5-foot horizontal. It will be constructed by placing 650# maximum stone on a layer of geotextile fabric. Gaps for fish access will be built at approximate 1,000-foot intervals. A flotation channel will be dredged parallel to and lake-ward of the rock dike, no closer than 45 feet from the centerline of the dike. The maximum allowable dredging depth for the flotation channel is -5.5 feet NAVD 88. All material from the flotation channel will be cast inside of the rock dike.

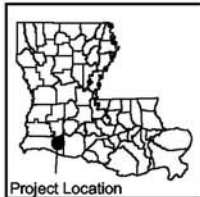
Project Benefits: The 37,800 lf of rock dike will benefit 445 acres of existing fresh marsh and 717 acres of open water (total 1,162 acres). Shoreline loss will be prevented and some marsh will accrete south of the breakwater so at the end of 20 years, 495 acres of marsh will be protected/created. The proposed extension around Tebo Point will benefit an additional 45 acres of fresh marsh and an additional 32 acres of open water. At the end of 20 years, an additional 45 acres will be protected/created.

Estimated Fully Funded Costs: The total fully funded cost of the project including the Tebo Point option is \$17,251,124. The total fully funded cost of the base reach is \$15,642,043.

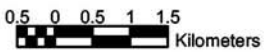
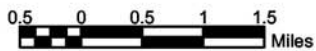
Risk/Uncertainty and Longevity/Sustainability: There will be a low degree of risk associated with this project because monitoring has indicated that breakwaters significantly reduce erosion. The project should continue providing benefits more than 20 years after construction because there is a scheduled maintenance event in year 3 and year 15.

Sponsoring Agency and Contact Persons:

Chris Monnerjahn, USACE PM, 504-862-2415, christopher.j.monnerjahn@mvn02.usace.army.mil
Kenneth Duffy, LDNR PM, 225-342-4106, kend@dnr.state.la.us



Project Location



Map Source:
 US Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station
 Baton Rouge, Louisiana

Image Source:
 2002 Thematic Mapper Satellite Imagery
 January 8, 2002

Map Date: July 29, 2004
 Map ID: USGS-NWRC 2004-11-0462

Grand Lake Shoreline Protection Superior Canal to Tebo Point (ME-21)

- - - - Proposed Rock Dike
- Project Boundary

Enclosure 3-C

Description of Changes From Phase I Approval

There are no changes to project scope from Phase I approval. An option to extend the original project is also up for consideration by the Technical Committee and Task Force.

Comparison to Current Project without extension:

Description	Project Info at the time of Phase 0 approval (PPL 11)	Project Info Currently (without Tebo Pt option)	Difference
Length:	~39,000 lf	37,800 lf	slightly different bc based on actual dike alignment
Placement Location:	@ -2' NGVD contour	@ -1.0' NAVD 88 contour	similar, just difference in datums.
Crest El.:	+2.0' NGVD	+3.0' NAVD88	similar, just difference in datums.
Crest Width:	4 ft	4 ft	
Side Slopes:	1V:3H	1V:1.5H	revised based on geotech info
Stone Size:	650# max	650# max	
Fish Dip Spaces:	every 1,000 lf	every 1,000 lf	
Project Benefits:	495 net acres	495 net acres	No change
Total Fully Funded Cost:	\$13,562,500	\$15,642,043	15.3%

Comparison to Current Project with Tebo Point extension:

Description	Project Info at the time of Phase 0 approval (PPL 11)	Project Info Currently (with Tebo Pt option)	Difference
Length:	~39,000 lf	43,500 lf	Increase of 4,500 lf
Placement Location:	@ -2' NGVD contour	@ -1.0' NAVD 88 contour	similar, just difference in datums.
Crest El.:	+2.0' NGVD	+3.0' NAVD88	similar, just difference in datums.
Crest Width:	4 ft	4 ft	
Side Slopes:	1V:3H	1V:1.5H	revised based on geotech info
Stone Size:	650# max	650# max	
Fish Dip Spaces:	every 1,000 lf	every 1,000 lf	
Project Benefits:	495 net acres	540 net acres	45 net acres more 9.09%
Total Fully Funded Cost:	\$13,562,500	\$17,251,124	27.2%

Enclosure 4-E

State of Louisiana



KATHLEEN BABINEAUX BLANCO
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL RESTORATION AND MANAGEMENT

August 30, 2004

Mr. John Saia
Deputy District Engineer for Project Management
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

Re: 95% Design Review for Grand Lake Shoreline Protection (ME-21)
Statement of Successful Completion

Dear Mr. Saia:

The 95% design review meeting was successfully completed on August 16, 2004 for the Grand Lake Shoreline Protection (ME-21) project. Based on our review of the Final Design Report, plans and specifications, the Ecological Review, and the environmental compliance documentation, as local sponsor, we concur to request permission from the Technical Committee to proceed to Phase II for this project.

In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward the items required in Appendix C -- Information Required in Phase II Authorization Requests to the CWPPRA Technical Committee for subsequent approval by the CWPPRA Task Force. We also request that our project manager, Kenneth Duffy, be copied on this and all other correspondence concerning this project.

Please do not hesitate to call if I may be of any assistance.

Sincerely,

Christopher P. Knotts, P.E.
Director

CPK:KCD:kcd

cc: John Hodnett, P.E., Engineer Manager
Luke LeBas, P.E., Engineer Manager
Kenneth Duffy, Ph.D., Project Manager
Amanda Phillips, P.E., Project Engineer

Enclosure 4-F



DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

Planning, Programs, and
Project Management Division
Environmental Planning
and Compliance Branch

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Grand Lake Shoreline Protection Project
Cameron Parish, Louisiana
EA # 380

Description of Proposed Action. The proposed action consists of building approximately 39,000 feet of stone breakwater along the south shore of Grand Lake in Cameron Parish, Louisiana. The breakwater will stretch westward from Superior Canal to the mouth of Catfish Lake, ending approximately 1,600 feet east of Tebo Point. This breakwater would be built at the outer edge of the 2-foot depth contour (estimated -1.2 ft North American Vertical Datum 1988 [NAVD 88] equivalent). Dimensions of the breakwater would be a crest elevation of +3.5 feet NAVD 88, a 4-foot crest width, and 1:5 front and back slopes. Stone size for the breakwater would be 650 pounds maximum (largest stones would be approximately 24 inches in diameter), and the dike would require approximately 185,000 tons of stones. The stones would be placed on geotextile separator fabric with a tensile strength of 3,600 pounds per linear foot. Gaps for fish access would be built approximately every 1,000 feet, would have a top width of 50 feet, and would extend to the lake bottom, with an approximate bottom width of 36 feet. A flotation channel for equipment access would be at least 45 feet from the centerline of the dike with side slopes of 1:2 and a depth of 5 feet. Material from the flotation canal would be cast inside the breakwater where feasible. Additional access dredging is likely to be required in the vicinity of the project site in order to allow rock transport from the Mermentau River to the project site. Controlling water depth would be 5 feet. Dredged material would be stockpiled adjacent to the required dredging location during construction, then returned to its pre-project location upon project completion. Shoreline loss would be prevented and some marsh would accrete south of the breakwater so at the end of 20 years, 495 acres of marsh would be protected and/or created.

Factors Considered in Determination. This office has assessed the impacts of the proposed action on significant resources, including Grand Lake, wetlands, fisheries, wildlife, essential fish habitat, endangered or threatened species, cultural resources, recreational resources, aesthetics, and air quality. No significant adverse impacts were identified for any of the significant resources. The risk of encountering HTRW is low. By a letter dated 7 May 2003, the U.S. Fish and Wildlife Service confirmed that the proposed action is not likely to adversely affect any endangered or threatened species. In a letter, dated 11 March 2004, the Louisiana Department of Natural Resources concurred with the determination that the proposed action is consistent, to the maximum extent practicable, with the Louisiana Coastal Resources Program (Coastal Zone Consistency #C20040024).

A Water Quality Certificate, (#030801-08 / AI 117263 / CER20030001) dated 23 January 2004 was received from the Louisiana Department of Environmental Quality. Review of the Section 404(b)(1) Public Notice was completed on 7 November 2003. The Section 404(b)(1) Evaluation was signed on 30 October 2003. In a letter dated 3 March 2004, the Louisiana State Historic Preservation Officer concurred with a recommendation of no effect on historic properties. This office has concurred with, or resolved, all Fish and Wildlife Coordination Act recommendations contained in a letter from the U.S. Fish and Wildlife Service, dated 13 February 2004. This office has concurred with, or resolved, all Essential Fish Habitat recommendations contained in a letter from NOAA Fisheries, dated 11 March 2004.

Environmental Design Commitments. No impacts have been identified that would require compensatory mitigation. The following commitments are an integral part of the proposed action:

1.) If the proposed action is changed significantly or is not implemented within one year, CEMVN will reinitiate coordination with the USFWS to ensure that the proposed action would not adversely affect any Federally listed threatened or endangered species, or their habitat. (USFWS CAR letter dated 13 February 2004)

2.) CEMVN is aware of cultural site 16CM33 on Tebo Point. As the Proposed Action will stop at the mouth of Catfish Lake, approximately 1,600 feet east of Tebo Point, the project should have no effect on this resource. If, during construction, evidence is found that portions of site 16CM33 is located within construction areas, then all construction in the affected areas must cease until an CEMVN-PM-RN archaeologist is notified and appropriate actions can be determined. Furthermore, if in the future, the breakwater would be extended around Tebo Point, then a supplemental EA, including further study of cultural resources, will be required. If any unrecorded cultural resources are determined to exist within the proposed project boundaries, then no work will proceed in the area containing these cultural resources until a CEMVN-PM-RN archeologist has been notified and final coordination with the SHPO and THPO has been completed. (SHPO coordination letter dated 3 March 2004)

3.) Approximately 32 acres of muddy and non-vegetated bottom, would be lost under the footprint of the breakwater; however, the stabilization and creation of approximately 495 acres (or 149 Average Annual Habitat Units) of more desirable freshwater marsh which provides important nursery habitat (essential fish habitat) would make up for this loss. (NOAA Fisheries coordination letter dated 9 February 2004)

Public Involvement. The proposed action has been coordinated with appropriate Federal, state, and local agencies and businesses, organizations, and individuals through distribution of Environmental Assessment # 380 (EA #380) for their review and comment.

Conclusion. This office has assessed the potential environmental impacts of the proposed action. Based on this assessment, and a review of the public comments made on EA #380 a determination has been made that the proposed action would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared.

2 APR 04

Date



Peter J. Rowan
Colonel, U.S. Army
District Engineer



DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF:

Planning, Programs, and
Project Management Division
Environmental Planning
and Compliance Branch

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

TEBO POINT SEGMENT GRAND LAKE SHORELINE PROTECTION PROJECT

CAMERON PARISH, LOUISIANA

SEA #380A

Description of Proposed Action. The U.S. Army Corps of Engineers, New Orleans District, proposes to continue the construction of a rock breakwater for approximately 5,700 feet, along the southern shore of Grand Lake from Catfish Lake around Tebo Point. The breakwater would be built at the outer edge of the -2 foot depth contour [estimated -1.2 ft North American Vertical Datum 1988 (NAVD 88) equivalent]. The crest would be +3.5 feet NAVD 88 elevation, and would have a 4-foot top width. The side slopes of the breakwater would be 1:1.5. The project would require approximately 18,000 tons of stones, with the largest stones being approximately 24-inches in diameter. The stones would be placed on geotextile fabric that is rated to 350 pounds per square inch. Gaps for fish access would be built approximately every 1,000 feet, would have a top width of 50 feet, and would extend to the lake bottom. Bottom width of the fish breaks would be approximately 36 feet, based on the 1:1.5 side slopes. A flotation channel would be at least 45 feet from the centerline of the breakwater with side slopes of 1:2. Maximum dredging depths would be limited to an elevation no lower than -5.5 feet NAVD 88. Material from the flotation canal would be cast inside the breakwater where feasible. Additional access dredging is likely to be required in the vicinity of the project site in order to allow stone transport from the Gulf Intracoastal Waterway and/or the Mermentau River to the project site. Controlling water depth would be -5.5 feet and materials would be stockpiled adjacent to the required dredge location during construction then returned to its pre-project location upon project completion. Shoreline loss would be prevented and some marsh would accrete south of the breakwater so at the end of 20 years, approximately 45 acres of marsh would be protected and/or created.

Factors Considered in Determination. This office has assessed the impacts of the proposed action on significant resources, including Grand Lake, wetlands, fisheries, wildlife, essential fish habitat, threatened or endangered species, cultural resources, recreation, and air quality. No significant adverse impacts were identified for any of the significant resources. The risk of encountering HTRW is low. No impacts were identified that would require compensatory mitigation. By letters dated September 15, 2004 and December 21, 2004, respectively, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service confirmed that the proposed

action is not likely to adversely affect any endangered or threatened species. In a letter dated February 22, 2005, the Louisiana Department of Natural Resources concurred with the determination that the proposed action is consistent, to the maximum extent practicable, with the Louisiana Coastal Resources Program (Coastal Zone Consistency #C20040024 as amended). A Water Quality Certificate (#30801-08 as amended), dated February 23, 2005 was received from the Louisiana Department of Environmental Quality. The Section 404(b)(1) evaluation was amended on October 21, 2004. In a letter dated February 11, 2005, the Louisiana State Historic Preservation Officer concurred with a recommendation of no effect on historic properties. This office has concurred with, or resolved, all Fish and Wildlife Coordination Act recommendations contained in a letter from the U.S. Fish and Wildlife Service, dated January 13, 2005. This office has concurred with, or resolved, all comments on the air quality impact analysis documented in the EA, which were contained in a letter from Louisiana Department of Environmental Quality, dated December 29, 2004. This office has concurred with, or resolved, all Essential Fish Habitat recommendations contained in a letter from the National Marine Fisheries Service, dated December 22, 2004.

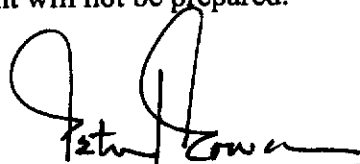
Environmental Design Commitments. The following commitments are an integral part of the proposed action

- 1.) If the proposed action is changed significantly or is not implemented within one year, CEMVN will reinstate coordination with the USFWS to ensure that the proposed action would not adversely affect any Federally listed threatened or endangered species, or their habitat. (USFWS letter dated January 13, 2005.)
- 2.) If, during construction, evidence is found that a portion of site 16CM33 is located within the construction area or if any unrecorded cultural resources are determined to exist within the proposed project boundaries, then all construction in the affected areas must cease until a CEMVN archaeologist is notified and final coordination with the SHPO and THPO has been completed. [CEMVN-PM-RN/SHPO Standard Operating Procedure]

Public Involvement. The proposed action has been coordinated with appropriate Federal, state, and local agencies and businesses, organizations, and individuals through distribution of Environmental Assessment # 330A (EA #380A) for their review and comment. EA#380A is attached hereto and made a part of this FONSI.

Conclusion. This office has assessed the potential environmental impacts of the proposed action. Based on this assessment, a review of the comments made on EA #380A, and the implementation of the environmental design commitments listed above, a determination has been made that the proposed action would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared.

1 MAR 05
Date


Peter J. Rowan
Colonel, U.S. Army
District Engineer

Enclosure 4-G

E C O L O G I C A L R E V I E W

Grand Lake Shoreline Protection

CWPPRA Priority Project List 11

(State No. ME-21)

August 31, 2004

Mark A. Stead
Restoration Technology Section
Coastal Restoration Division
Louisiana Department of Natural Resources

Ecological Review Grand Lake Shoreline Protection

In August 2000, the Louisiana Department of Natural Resources (LDNR) initiated the Ecological Review to improve the likelihood of restoration project success. This is a process whereby each restoration project's biotic benefits, goals, and strategies are evaluated prior to granting construction authorization. This evaluation utilizes environmental data and engineering information, as well as applicable scientific literature, to assess whether or not, and to what degree, the proposed project features will cause the desired ecological response.

I. Introduction

The proposed Grand Lake Shoreline Protection (ME-21) project is located in the Mermentau Basin in Cameron Parish, Louisiana. The project area encompasses the southern shore of Grand Lake from Superior Canal to the mouth of Catfish Lake and may include an optional structural increment that extends westward to Tebo Point (Figure 1). The total area of the Grand Lake Shoreline Protection project is approximately 1,162 acres and is primarily composed of fresh emergent marsh (445 acres) and open water (717 acres) habitats (USACE 2001). Approximately 37,800 feet of Grand Lake shoreline will be protected through the construction of a foreshore rock dike, with an option to protect 5,700 feet of shoreline around Tebo Point.

Coast 2050 identified elevated water levels and wave energy generated by strong frontal winds as the major factors contributing to the rapid erosion of the southern shore of Grand Lake [Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority (LCWCRTF&WCRA) 1999]. Erosion rates calculated by comparing aerial photographs from 1978-1979 to those taken in 1997-1998 revealed that 11 to 32 feet of shoreline was lost annually (USACE 2001). Construction of the foreshore rock dike will prevent the lake from breaching into adjacent open water areas (Lake Benoit and Long Lake) and will protect interior marsh, which without the structure, will be subjected to increased wave energy (LCWCRTF&WCRA 1999). The proposed strategy of protecting and stabilizing the southern shoreline of Grand Lake is supported by the *Coast 2050* Region 4 Ecosystem Strategies which promote the stability and protection of bay, lake, and gulf shorelines for the preservation of interior wetlands and the maintenance of favorable hydrologic conditions.

II. Goal Statement

- Stop erosion along approximately 37,800 linear feet of the southern bank of Grand Lake and as a result save 445 acres of interior emergent marsh that is expected to be lost over the 20 year project life.
- Increase submerged aquatic vegetation (SAV) coverage to 80% in the open water areas from a baseline of 10% over the 20 year project life.
- Create 50 acres of emergent marsh between the Grand Lake shoreline and the foreshore rock dike over the 20 year project life.
- Stop erosion along the shoreline of Tebo Point and as a result save 28 acres of emergent marsh that is expected to be lost over the 20 year project (optional goal).

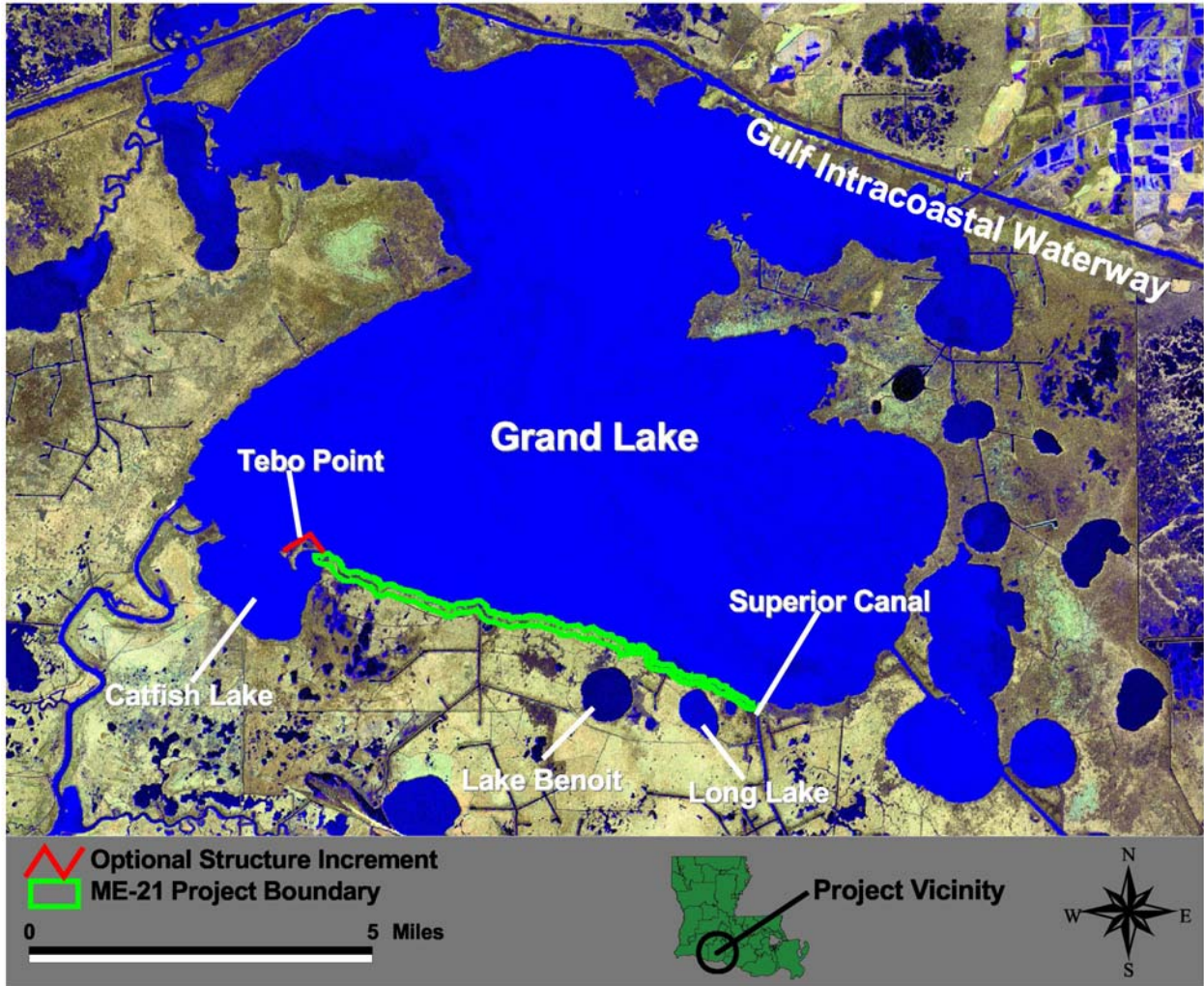


Figure 1. Grand Lake Shoreline Protection project area.

III. Strategy Statement

The project goals will be achieved through the construction of an approximately 37,800 foot foreshore rock dike along the southern shore of Grand Lake from Superior Canal to the mouth of Catfish Lake with the option of including an additional 5,700 feet of structure around Tebo Point.

IV. Strategy-Goal Relationship

The construction of a foreshore rock dike will stop erosion along the southern Grand Lake shoreline by dampening wind generated waves. The stabilization of the lake shoreline will in turn protect interior marsh from being exposed to wave energy. Marsh accretion is expected to occur behind the shoreline protection structure due to the occasional overwash of waves and subsequent deposition of sediment. Additional marsh creation benefits will be achieved through the strategic placement of dredged spoil from the digging of the flotation canals.

The construction of the foreshore rock dike is expected to increase the overall percentage of SAV coverage in the area behind the shoreline protection structure from 10% to 80%. SAV

habitat creation is expected to occur due to the reduction of turbidity in the shallow open water areas and the resulting increase in overall light penetration.

V. Project Feature Evaluation

A 37,800 foot foreshore rock dike will be constructed along the southern shore of Grand Lake 200 feet from the existing shoreline at the -1.0 NAVD-88 foot contour from Superior Canal to the mouth of Catfish Lake. In addition, an optional plan is in place to extend the structure an additional 5,700 feet westward around Tebo Point and continuing southwest to protect the entire island (Figure 1). The crest elevation of the rock dike structure will be built at an approximate height of $+3.0 \pm 0.25$ feet NAVD-88 (Figure 2). Settlement is expected to occur during construction. To offset this initial loss, the contractor will add rock material to the structure as needed to achieve the desired design height before demobilization. The breakwater will have front and back side-slopes of 1(V) on 1.5(H) and a crest width of 4 feet. All stone sizing will conform to standard 24 inch rock gradation placed on 200 pound/inch² geotextile fabric. Fish dips measuring 50 feet wide and lined with a layer of rock will be constructed every 1,000 feet to allow organism egress and ingress.

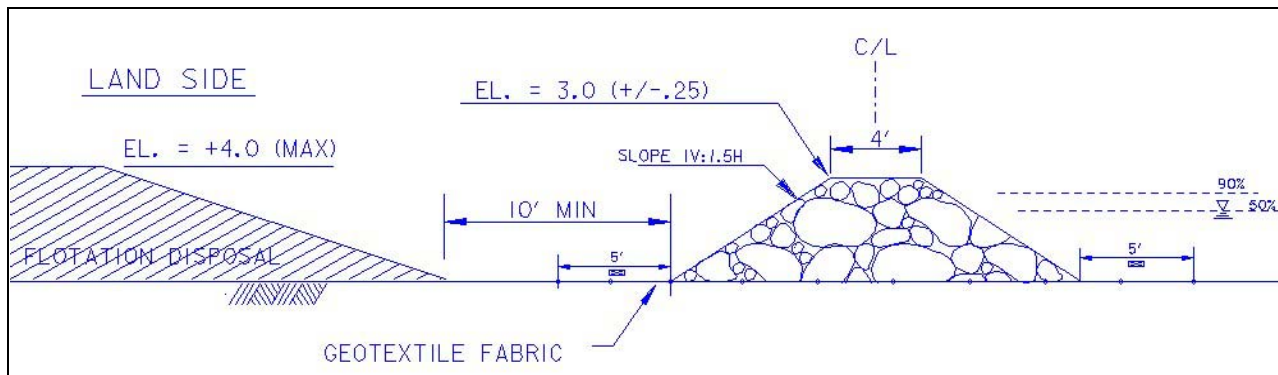


Figure 2: Typical dike section (USACE 2004).

Originally the crest elevation of the shoreline protection structure for the Grand Lake project was designed at +3.5 feet NAVD-88 which was calculated by adding the following three factors: mean water elevation, 90% wind setup, and 90% wave height. However, protecting against 90% of the wave height was considered a conservative estimation of the conditions in the Grand Lake project area. Project engineers felt that designing the rock dike to protect against ½ of the 90% wave height would reduce the cost and overall pressure on the soil foundation while still providing adequate shoreline protection. As a result, the current structure elevation design of +3.0 feet NAVD-88 was determined through the addition of the Grand Lake mean water level (+1.45 feet), 90% wind setup (0.50 feet), and ½ of the 90% wave height (0.85 feet). This design technique results in 0.2 feet of the rock dike remaining sub-aerial during storm conditions.

The geotechnical analysis (USACE 2003) revealed a relatively poor soil foundation in the project area. The soils near the southern bank of Grand Lake consist of soft and organic clays with occasional lenses of soft clay, silt, silty sand and occasional wood. Pleistocene deposits reside nine feet underneath the upper swampy marsh deposits and consist of interbedded, highly oxidized, stiff clays. The geotechnical analysis indicated that the foundation clays are over consolidated and little consolidation settlement is expected to occur (USACE 2003). After

construction, lateral spreading will cause settlement of approximately 1.76 feet with a second lift expected in three years to maintain a crest elevation of +3.25 NAVD-88. It is estimated that after the three year maintenance lift the structure will ultimately settle to a crest height of +2.56 feet NAVD-88 by year twenty. The initial placement elevation for a the Grand-White Lakes Landbridge Protection (ME-19) project, which is in the vicinity of the Grand Lake Shoreline Protection project, was built at an elevation of +2.5 NAVD-88.

According to the settlement consolidation curves, the structure elevation will fall below mean water level (+1.45 feet NAVD-88) two years post-construction, one full year before the scheduled maintenance lift planned for year three (Figure 3). It is conceivable that once submerged the foreshore rock dike will become somewhat less effective as a shoreline protection structure, and a possible threat to navigation. However, project team members determined that the benefits of the shoreline protection structure would not be significantly reduced in view of the fact that the structure would be submerged for a relatively short period of time. In addition, the dredged material placed on the landward side of the rock dike would offer further protection to the Grand Lake shoreline. To avoid possible threats to navigation, the structure will be adequately marked.

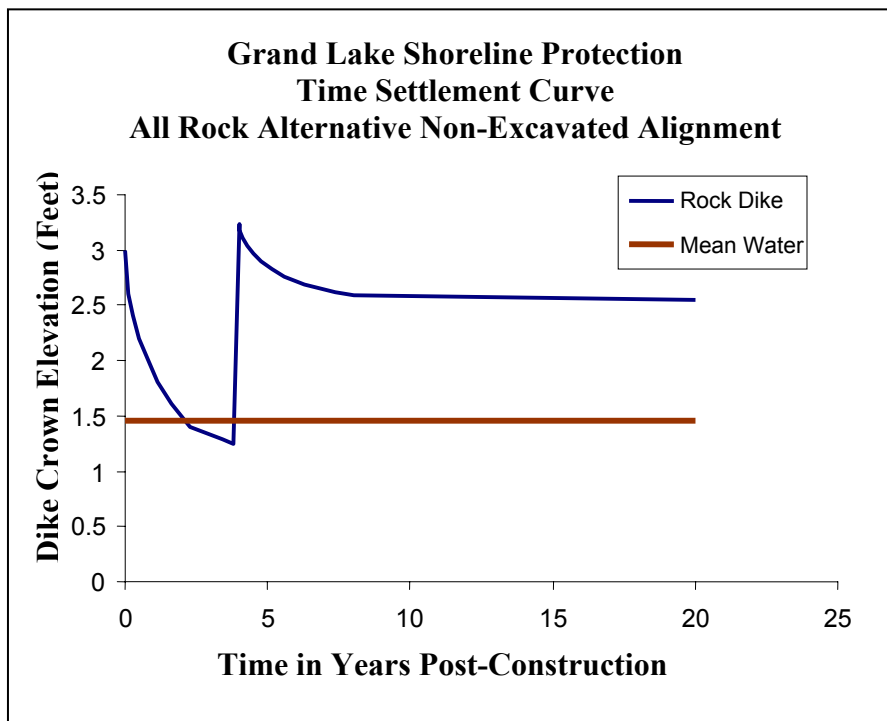


Figure 3. Time settlement curve for proposed Grand Lake foreshore rock dike after construction.

The need for a flotation canal to allow access for construction barges and equipment will produce a significant amount of dredged spoil. It is estimated that approximately 120 acres of fresh emergent marsh will be created through the beneficial use of the dredged material. Maximum allowable dredging depth of the flotation channel will be -5.0 feet NAVD-88. The spoil will be stacked at a target elevation of +3.0 feet NAVD-88 and at a maximum elevation of +4.0 feet NAVD-88. The material will be placed at a minimum of 10 feet landward from the toe

of the foreshore rock dike and 50 feet seaward of the shoreline. It is expected that the dredged spoil, through the dewatering and consolidation process, will settle to a final elevation of +1.5 to +1.9 feet NAVD-88 at year twenty. This elevation is considered optimal for healthy unbroken marsh and is consistent with the surrounding marsh elevation in the Grand Lake project areas (USACE 2004).

A possible cultural resource site (Indian midden mound) exists near the western most edge of Tebo Point. At the 30% Design Review meeting for the Grand Lake Shoreline Protection project, it was believed that dredging a flotation canal near Tebo Point could destroy valuable cultural artifacts. However, a recent United States Army Corps of Engineers archeological survey of the area determined that the footprint of the midden mound at Tebo point was not as large as originally estimated. As a result, the dredging of the flotation canal for placement of the rock material around the shoreline of Tebo Point would not likely endanger any cultural resources. Construction of the rock dike at the shoreline of Tebo Point would likely preserve any cultural resources from erosional forces while providing protection to the western flank of the Grand Lake shoreline (Figure 1). The placement of the shoreline protection structure around Tebo Point is considered optional since the increment was not included in the original project plans or Wetland Value Assessment. The decision to exercise any part of the option will be made by the Contracting Officer of Record, during construction, provided the Coastal Wetlands Conservation and Restoration Task Force approves the project to the maximum length.

VI. Assessment of Goal Attainability

Environmental data and scientific literature documenting the effects of the proposed project features in field application are evaluated below to assess whether or not, and to what degree the project features will the desired ecological response.

Armor Shoreline Protection

A number of projects using traditional shoreline protection structures have been implemented in Louisiana coastal areas to protect lake, bay, and navigational channel shorelines (Table 1). Published results of projects funded under CWPPRA and through the State of Louisiana that have used rock shoreline protection structures constructed in environments similar to the Grand Lake Shoreline Protection project are discussed below.

- The Boston Canal/Vermilion Bay Bank Protection (TV-09) project was designed to abate wind-driven wave erosion along Vermilion Bay and at the mouth of Boston Canal (Thibodeaux 1998). To accomplish that goal a 1,405 foot foreshore rock dike was constructed in 1995 at an elevation of +3.8 feet NGVD-29 along the bank of Boston Canal extending into Vermilion Bay. In 1997, two years after construction, the project was estimated to have protected 57.4 acres of marsh and 1.4 to 4.5 feet of sediment was deposited behind the breakwater while the reference area continued to erode. The rock breakwater at the mouth of Boston Canal was successful in stabilizing the shoreline (Thibodeaux 1998).
- Lake Salvador Shoreline Protection Demonstration (BA-15) project evaluated a series of shoreline protection measures at Lake Salvador, St. Charles Parish, Louisiana. Phase two of this project was conducted in 1998 and evaluated the effectiveness of a rock berm to protect the lake shoreline from higher energy wave erosion. Shoreline

surveys conducted behind the berm five months after construction indicated that the shoreline was still eroding. Subsequent surveys were not conducted due to poor weather conditions (LDNR 2000). The rock structure itself appears to be holding up well, showing little sign of deterioration and subsidence. The structure was designed to be constructed with a crest elevation of +4.0 feet NAVD-88. However, a 2002 survey of the rock dike determined that the average height of the structure was +2.51 feet NAVD-88. The average settlement of the structure, measured from 1998 to 2002, was approximately 0.29 feet. It was concluded that the rock dike was built to an inadequate crest elevation of +2.75 feet NAVD-88 (Darin Lee, LDNR, Personal Communications, July 19, 2002).

Table 1. Design Parameters of Constructed Shoreline Protection Projects (Sorted by Construction Date).

Project Name	Project Number	Region	Construction Date	Depth Contour (NAVD-88)	Length of Structure (feet)	Height	Distance From Shoreline (feet)
Blind Lake	N/A* (State)	4	1989	N/A	2,339	4.0 ft NAVD-88	70
Cameron Prairie National Wildlife Refuge Shoreline Protection	ME-09	4	1994	-1.0 ft	13,200	3.7 ft NAVD-88	0-50
The Freshwater Bayou Bank Protection	TV-11 (State)	3	1994	N/A	25,800	4.0 ft NAVD-88	N/A
Turtle Cove	PO-10 (State)	1	1994	N/A	1,640 (rock gabion)	3 ft (MWL)	300
Bayou Segnette	BA-16 (State)	2	1994,1998	N/A	6,800	3.0-5.0 ft NAVD-88	N/A
Boston Canal/Vermilion Bay Bank Protection	TV-09	3	1995	N/A	1,405	3.8 ft NGVD-29	N/A
Clear Marias Bank Protection	CS-22	4	1997	-1.2 ft	35,000	3.0 ft NGVD-29	0-50
Freshwater Bayou Wetlands Protection	ME-04	4	1998	-1.0 ft	28,000	4.0 ft NAVD-88	0-150
Freshwater Bayou Bank Stabilization	ME-13	4	1998	N/A	23,193	3.7-4.0 ft NAVD-88	N/A
Lake Salvador Shoreline Protection Demonstration	BA-15 Phase II	2	1998	-1.0 to 1.4 ft	8,000	Designed at 4.0 ft NAVD-88 built at 2.75 ft NAVD-88	100
Perry Ridge Shore Protection	CS-24	4	1999	N/A	12,000	3.7 to 4.0 ft NAVD-88	60
Jonathan Davis Wetland Protection	BA-20	2	2001	N/A	34,000	3.5 ft NAVD-88	N/A
Bayou Chevee Shoreline Protection	PO-22	1	2001	N/A	5,690	3.5 ft NGVD-29	300

*N/A indicates that information was not available.

- Intracoastal Waterway Bank Stabilization and Cutgrass Planting project at Blind Lake was a state only wetland restoration project constructed to prevent the Gulf Intracoastal Waterway (GIWW) and Sweet Lake from coalescing with Blind Lake (LDNR 1992). A limestone foreshore rock dike built at an elevation of +4.0 feet

NGVD-29 was placed 70 feet from the edge of the main channel along 2,339 feet of bank on a six-inch layer of shell and filter cloth. Large stones were used to prevent movement of rocks and to allow sediments and organisms passage. In 1991, two years after project completion an average increase in elevation of 0.32 feet in the area behind the dike was observed along transects from the deposition of suspended sediments. Data indicate that the project was successful in protecting the shoreline at Blind Lake and maintaining the hydrology of the Cameron-Creole watershed.

- The Turtle Cove Shoreline Protection (PO-10) was initiated in 1993 to protect a narrow strip of land in the Manchac Wildlife Management Area which separates Lake Pontchartrain from an area known as “the Prairie” (O’Neil and Snedden 1999). Wind induced waves contributed to a shoreline erosion rate of 12.5 feet per year. A 1,642 foot rock filled gabion was constructed 300 feet from shore at an elevation of 3 feet above mean water level with the goal of reducing erosion and increasing sediment accretion behind the structure. Post construction surveys conducted during the period of October 1994 to December 1997 revealed that the shoreline had prograded at a rate of 3.47 feet per year in the project area. The rate of sediment accretion, as determined from elevation surveys conducted in January 1996 and January 1997, was 0.26 feet per year.

The soils in The Prairie and Turtle Cove area consist of Allemands-Carlin peat which is described as highly erodible organic peat and muck soils (USDA 1972). Due to the weak and compressible nature of the subsurface soils, the gabions settled 0.59 feet in just over two years (October 1994 to January 1997) (O’Neil and Snedden 1999). Also, five years after construction the rock filled gabion structure exhibited numerous breaches and required extensive maintenance (LDNR 1999).

There are also several examples of successful projects involving the use of shoreline protection to stop erosion along navigation channel banks.

- The Freshwater Bayou Wetlands Protection (ME-04) project is positioned on the western bank of Freshwater Bayou Canal across from the proposed TV-11b project (Vincent et al. 1999). Construction of this project was initiated in January 1995 and includes construction of water control structures and a 28,000 linear foot foreshore rock dike designed with a crown elevation of +4.0 feet NAVD-88. Penland et al. (1990) estimated relatively low rates of subsidence and sea level rise, at 0.13 inches per year. Analysis of initial monitoring data suggests that the rock dike reduced wave-induced shoreline erosion after construction. The average rate of shore progradation between June 1995 and July 1996 was measured at 2.2 feet per year while the reference area continued to erode at an average rate of 6.7 feet per year (Raynie and Visser 2002). In contrast, between March 1998 and May 2001, the protected shoreline eroded an average of 2.6 feet per year while the reference area eroded at an average of 10.0 feet per year (Raynie and Visser 2002). Substandard recycled construction material and inadequate funds for maintenance of the structure, which were not disbursed in a timely manner, are believed to be the reason for the increase in erosion rates in the project area (Raynie and Visser 2002).

- The Cameron Prairie National Wildlife Refuge Shoreline Protection (ME-09) project, constructed in 1994, is located in north-central Cameron Parish and includes 350 acres of freshwater wetlands (Barrilleaux and Clark 2002). A 13,200-foot rock breakwater was constructed at an elevation of +3.7 feet NAVD-88, 50 feet from (and parallel to) the northern shore of the GIWW to prevent wave action from eroding the bank and breaching into the interior marsh. Aerial photography and survey points were used to monitor any changes in land to water ratio and shoreline position. Three years after construction results indicate that the project area shoreline advanced 9.8 ± 7.1 feet per year while the reference area retreated 4.1 ± 3.1 feet per year. A two-sample t-test revealed a significant difference was detected between the shoreline change rate and the project reference areas ($P < 0.001$).
- The Clear Marais Bank Protection (CS-22) project was constructed in 1997 at an elevation of +3.0 feet NGVD-29 to prevent breaches in the GIWW shoreline and subsequent erosion of the interior marsh while preventing saltwater intrusion (Miller Draft Report 2001). Approximately 35,000 linear feet of rip-rap was placed 50 feet from the northern shoreline of the GIWW. Results indicate that the foreshore rock dike has been effective in preventing erosion of the GIWW shoreline. A net gain of 13 feet per year occurred behind the rock structure while the reference area continued to erode (Raynie and Visser 2002).

Submerged Aquatic Vegetation

Submerged Aquatic Vegetation plays a crucial role in the littoral zone of aquatic ecosystems (Wetzel 1983). Submerged Aquatic Vegetation dissipates the energy of wind and wave action, reduces the amount of bottom sediment resuspension, serves as effective traps for inorganic and organic particulates, and provides suitable forage for ducks, invertebrates and larval fish (Spence 1982, Foote and Kadlec 1988, Lodge 1991). It is widely understood that the limiting factor controlling the recovery of SAV in lakes is light attenuation (Sager et al. 1998). Submerged aquatic vegetation habitat creation is expected to occur behind the shoreline protection structure in White Lake due to the reduction of turbidity in the shallow open water areas and the resulting increase in overall light penetration.

Summary/Conclusions

Projects such as TV-09, BA-15, CS-22 and ME-09, that were designed to an adequate elevation and located in areas with relatively good soil foundations, were successful in reducing erosion and promoting accretion due to occasional overwash of waves and subsequent deposition of sediment. However, ME-04 and PO-10 were not as successful over the long term due to poor soil foundations, improper design, the use of substandard materials, and/or inadequate maintenance funds.

According to the geotechnical report (USACE 2004) the soil foundation in the Grand Lake Shoreline Protection project area is considered poor. In an effort to reduce the overall pressure on the soil foundation, the structure will initially be built at an elevation of +3.0 feet NAVD-88. A maintenance lift, which will raise the structure elevation to an approximate height of +3.25 feet NAVD-88, is expected three years post-construction. There is some concern that two years after initial construction the structure will sink below mean water level (+1.45 ft

NAVD-88), one year prior to the scheduled maintenance lift (year three). However, the structure will be submerged for a relatively short period of time before the scheduled lift at year three is implemented and it was determined by the project team that the benefits of the project would not be significantly reduced. In addition, the dredged spoil placed landward of the structure during construction will offer additional protection to the Grand Lake shoreline.

VII 95% Design Review Recommendations

Based on information gathered from similar restoration projects, engineering designs and related literature, the proposed strategies in the Grand Lake Shore Protection project will likely achieve the desired goals. At this time, the Louisiana Department of Natural Resources, Coastal Restoration Division recommends that the Grand Lake Shoreline Protection project be considered for CWPPRA Phase 2 authorization.

This document reflects the current project design as of the 95% Design Review meeting, incorporates all comments and recommendations received following the meeting, and is current as of August 31, 2004.

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Enclosure 4-J

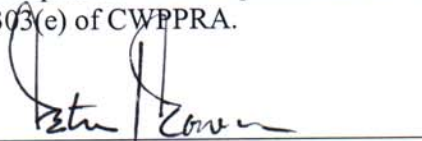
SECTION 303(e) DETERMINATION, CWPPRA

Project: Grand Lake Shoreline Protection Project, Cameron Parish, Louisiana

In accordance with section 303(e) of the Coastal Wetlands Planning, Protection and Planning Act, it has been determined that appropriate land rights will be acquired for construction, operation and maintenance of the project, subject to such terms and conditions as necessary to ensure that wetlands restored, enhanced or managed through this project will be administered for the long-term conservation of the lands and waters and the dependent fish and wildlife population. The proposed real estate rights to be acquired are legally sufficient and meet the long-term conservation objectives discussed above.

By letter dated July 6, 2004, Mr. W. Britt Paul of the Natural Resources Conservation Service advised that overgrazing does not occur on project lands or lands affected thereby, nor does he see the potential for grazing. If overgrazing should occur in the future, a grazing plan must be established for the project.

Accordingly, by the authority delegated to me by the Secretary of the Army, and given compliance with the provisions set forth above, I approve the project in accordance with Section 303(e) of CWPPRA.



Peter J. Rowan
Colonel, U.S. Army
District Engineer

Date: 17 Aug 04

Enclosure 4-K



Natural Resources Conservation Service
3737 Government Street
Alexandria, LA 71302

July 6, 2004

Mr. Chris Monnerjahn
U.S. Army Corps of Engineers
New Orleans District
Planning and Project Management
Coastal Restoration Branch
P.O. Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Monnerjahn:

RE: Grand Lake Shoreline Protection (ME-21)

I am in receipt of your request for an overgrazing determination for the Grand Lake Shoreline Protection (ME-21). I contacted our local district conservationist and our state resource conservationist to discuss the grazing in the project area. Currently, livestock are not grazing in the area nor do we see a potential for grazing once the project is installed. Therefore, it is our opinion that overgrazing is not a problem in this project area. If you have any questions, please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Britt Paul".

W. Britt Paul
Assistant State Conservationist
for Water Resources and Rural Development

cc: Bruce Lehto, Area Conservationist, NRCS, Leesville, Louisiana
Charles Starkovich, District Conservationist, NRCS, Lake Charles, Louisiana
Kevin Blomquist, State Grazing Lands Specialist, NRCS, Alexandria, Louisiana
John Jurgensen, Civil Engineer, NRCS, Alexandria, Louisiana

Enclosure 4-N

Weighting per Criteria:

Grand Lake SP without extension:

Total Prioritization Score: 66.25

CRITERION		Weight	Score	Weighted Score
I	Cost-Effectiveness	2.0	7.5	15
II	Area of Need	1.5	7.5	11.25
III	Implementability	1.5	10	15
IV	Certainty of Benefits	1.0	10	10
V	Sustainability	1.0	10	10
VI	HGM Riverine Input	1.0	0	0
VII	HGM Sediment Input	1.0	0	0
VIII	HGM Structure and Function	1.0	5	5
TOTAL				66.25

Grand Lake SP with extension:

Total Prioritization Score: 66.25

CRITERION		Weight	Score	Weighted Score
I	Cost-Effectiveness	2.0	7.5	15
II	Area of Need	1.5	7.5	11.25
III	Implementability	1.5	10	15
IV	Certainty of Benefits	1.0	10	10
V	Sustainability	1.0	10	10
VI	HGM Riverine Input	1.0	0	0
VII	HGM Sediment Input	1.0	0	0
VIII	HGM Structure and Function	1.0	5	5
TOTAL				66.25

Preparers of Fact Sheet

Chris Monnerjahn, USACE PM, 504-862-2415, christopher.j.monnerjahn@mvn02.usace.army.mil

Kenneth Duffy, LDNR PM, 225-342-4106, kend@dnr.state.la.us

References

None cited

Lake Borgne & MRGO Shoreline Protection

PO-32



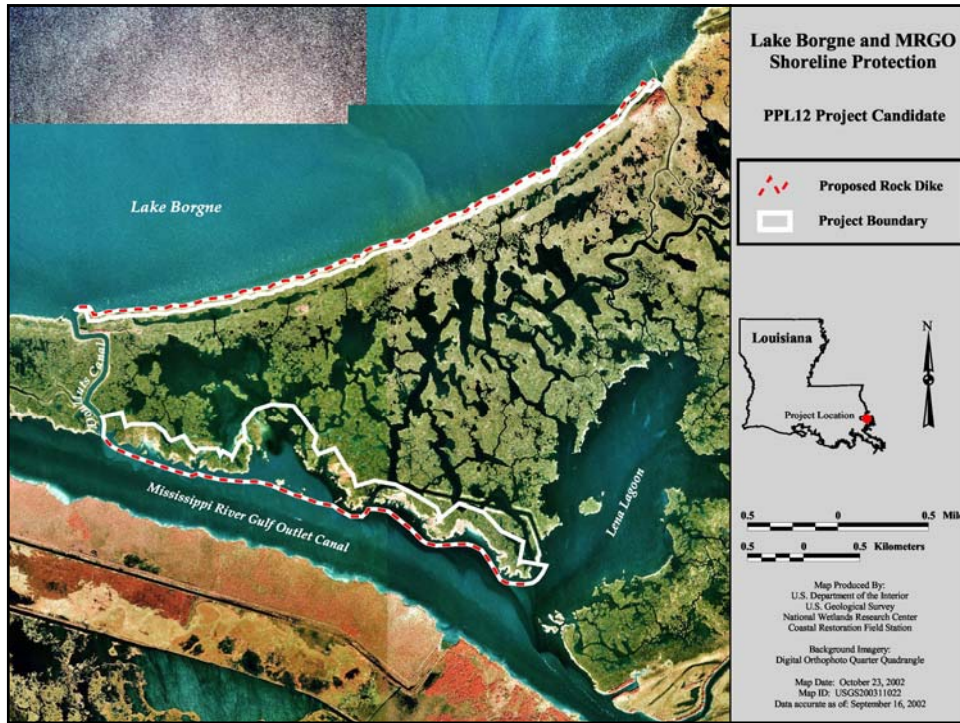
**Lake Borgne and MRGO
Shoreline Protection (PO-32)
St. Bernard Parish, Louisiana**

PHASE II AUTHORIZATION REQUEST

**CWPPRA Technical Committee
Meeting
December 2005**

Project Background

- Authorized in January 2003 by Breaux Act (CWPPRA) Task Force on PPL12
- Two segments totaling ~32,750 linear feet of rock dike to stop shoreline erosion along the southern shoreline of Lake Borgne and the northern shoreline of the Mississippi River Gulf Outlet
- Task Force directed that the projects be designed as separable reaches in Phase I



Wetlands Loss Problems

- The shoreline of Lake Borgne is eroding (-10ft/yr), due mainly to wind driven waves associated with winter frontal passage and tropical storms and hurricanes
- The northern shoreline of the MRGO experiences high rates of erosion (24ft/yr) due mainly to vessel wakes from the ship channel and bank sloughing

Benefits and Costs

Lake Borgne segment

- 18,820 ft offshore breakwater at +5.0 ft high crown
- Protects 93 acres of lake shoreline brackish marsh
- Fully funded cost estimate \$17,108,065

MRGO segment

- 14,360 ft offbank breakwater at +5.0 ft high crown
- Protects 173 acres of lake shoreline brackish marsh
- Fully funded cost estimate \$22,074,716

Combined reaches

- Protects 266 acres of marsh separating lake and MRGO
- Fully funded cost estimate \$39,182,781

Project Considerations

- Combined project would prevent erosion of a critical marsh peninsula separating Lake Borgne and the MRGO
- Area fell directly within the eye path of hurricane Katrina
- Area of marsh protected fronts the community of Hopedale and properties along roadway near channel, cultural resources midden, and oak ridge

Questions



Doullut's Canal
St. Bernard Parish, LA



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO

ATTENTION OF:

CEMVN-PM-C (1110-2-1150a)

5 December 2005

MEMORANDUM FOR Mr. Gregory Breerwood, Chairman, CWPPRA Technical Committee

SUBJECT: Construction Approval Request for Lake Borgne-MRGO Shoreline Protection Project (PO-32), St. Bernard Parish, Louisiana.

1. As required by Section 6(j) of the CWPPRA Standard Operating Procedures Manual, the U.S. Army Corps of Engineers (USACE) and Louisiana Department of Natural Resources (LDNR) request approval to construct the subject project.
2. The original project approved on the 12th priority list included shoreline protection along south shore of Lake Borgne between Doullut's Canal and Jahncke's Ditch and the north bank of the MRGO between Doullut's Canal and Lena Lagoon. During approval of the 12th priority project list the Task Force requested that the two project reaches be designed as separable elements. A summary of the features, costs, and benefits of each reach and the combined project is provided in the table below:

Project	Feature(s)	Benefits	Cost
Lake Borgne Shoreline Protection	18,820' breakwater	93 acres	\$15,787,051
MRGO Shoreline Protection	14,360' breakwater	173 acres	\$19,524,000
Lake Borgne-MRGO Shoreline Protection	33,180' breakwater(s)	266 acres	\$35,311,051

The following information summarizes completion of the tasks required prior to seeking authorization for project construction:

- a. List of Project Goals and Strategies.

The goal of the project is to stop shoreline erosion along 18,820 feet of Lake Borgne and 14,360 feet of the MRGO using rock breakwaters.

- b. A Statement that the Cost Sharing Agreement between the Lead Agency and the Local Sponsor has been executed for Phase I.

A USACE legal opinion indicates that execution of a cost share agreement requires prior Task Force approval of construction. In line with this requirement, the agreement will be executed following Task Force action on the project.

- c. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase 2 approval.

A Real Estate Plan has been completed. The plan outlines all of the necessary real estate instruments required to construct the project and identifies affected landowners. It is estimated that all necessary real estate instruments can be obtained within 90-days of construction approval.

d. A favorable Preliminary Design Review (30% Design Level).

A 30% Design Review was held in New Orleans, Louisiana on August 25, 2004 and a memo documenting the completion of the design review was sent to the members of the Technical Committee. The Louisiana Department of Natural Resources provided a letter of support for proceeding with completion of the design of the project.

e. Final Project Design Review (95% Design Level).

A 95% design review was completed on 29 March 2005.

f. A draft of the Environmental Assessment of the project, as required under the National Environmental Policy Act must be submitted thirty days before the request for approval.

A Draft Environmental Assessment was released for public comment in June 2004. A Finding of No Significant Impact was signed in December 2004 completing the National Environmental Policy Act compliance requirements.

g. A written summary of the findings of the Ecological Review.

A final Ecological Review was distributed at the 95% Design Review meeting. A summary of the findings is found on page 15 of the report.

h. Application for and/or issuance of the public notices for permits.

The Corps of Engineers is not required to obtain a permit to construct this project. However, an Environmental Assessment was completed in December 2004 to cover all wetlands conservation and protection issues and other environmental considerations associated with construction and maintenance of the project. The EA was distributed for public review and comment and the Corps responded to all comments received from government agencies and the public.

i. An HTRW assessment, if required, has been prepared.

An HTRW assessment was included in the Environmental Assessment completed in December 2004.

j. Section 303(e) approval from the Corps.

Section 303(e) approval was provided on 5 October 2004.

- k. Overgrazing determination from the NRCS (if necessary).

An overgrazing determination was provided by NRCS on 7 June 2004 and is included as part of the Real Estate Plan. The Natural Resources Conservation Service concluded that overgrazing is not a problem in the project area.

- l. Revised cost estimate of Phase 2 activities, based on the revised Project design.

The Economics Work Group prepared a fully funded estimate in August 2004 and the estimate was updated in March 2005 and November 2005. The estimates are available for the combined project and the individual reaches.

- m. A revised Wetland Value Assessment must be prepared if, during the review of the preliminary NEPA documentation, three of the Task Force agencies determine that a significant change in project scope occurred.

No changes were made to the project features, scope, area or benefits during Phase I.

- n. A breakdown of the Prioritization Criteria ranking score, finalized and agreed-upon by all agencies during the 95% design review.

A revised Prioritization Criteria ranking score has been prepared and reviewed through the CWPPRA working groups. A prioritization fact sheet is included in the Final Design Report for each reach and the combined project.

3. If you have any questions regarding this project please call Mr. Gregory Miller at 862-2310 or Dr. Ken Duffy at (225) 342-4106.

GREGORY MILLER
Project Manager
Coastal Restoration Branch

Enclosure (3)

Phase 2 request item #1

Lake Borgne and MRGO Shoreline Protection (R1-3)

Coast 2050 Strategies

- maintain Lake Borgne shoreline integrity
- stabilize the entire north bank of the MRGO

Project Location

Region 1, Pontchartrain Basin. St. Bernard Parish. Along the Lake Borgne shoreline between Doullut's Canal and Jahncke's Ditch and along the north bank of the Mississippi River Gulf Outlet between Doullut's Canal and Lena Lagoon.

Problem

Shoreline erosion rates along Lake Borgne were estimated at 9 ft/yr along Lake Borgne and 24 ft/yr along the MRGO.

Goals

This project would help preserve marsh between Lake Borgne and the MRGO by preventing shoreline erosion.

Proposed Solutions

Two features will be constructed. 1) An 18,500 linear foot rock dike along the Lake Borgne shoreline from Doullut's Canal to Jahncke's Ditch. The dike will be 4 feet high, with a 5-foot crown and side slopes of 1V on 2H. 2) A 14,250 linear foot rock dike along the north bank of the MRGO from Doullut's Canal to Lena Lagoon. The dike will be 6 feet high, with a 5-foot crown and side slopes of 1V on 1.25H. Both dikes will have a 3-foot layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile. Any flotation channel needed will be excavated with the spoil being placed behind the rock dikes. Fish dips will be constructed so as to allow organism and water exchange.

Project Benefits

The project would benefit about 465 acres of estuarine marsh. Approximately 266 acres of marsh would be created/protected over the 20-year project life.

Risk/Uncertainty and Longevity/Sustainability

There is a low degree of risk associated with this project because rocks are effective at stopping shoreline erosion. The project should continue providing benefits 20-30 years after construction because adequate O&M funds are budgeted.

Project Costs

The estimated total fully funded cost is \$25,062,900.

Sponsoring Agency and Contact Persons

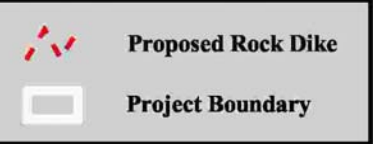
Gregory Miller, Corps of Engineers, (504) 862-2310

Chris Monnerjahn, Corps of Engineers, (504) 862-2415



Lake Borgne and MRGO Shoreline Protection

PPL12 Project Candidate



0.5 0 0.5 Miles

0.5 0 0.5 Kilometers

Map Produced By:
 U.S. Department of the Interior
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station

Background Imagery:
 Digital Orthophoto Quarter Quadrangle

Map Date: October 23, 2002
 Map ID: USGS200311022
 Data accurate as of: September 16, 2002

Overview of Phase One Tasks, Process and Issues Lake Borgne – MRGO Shoreline Protection (PO-32)

The Corps of Engineers and the Louisiana Department of Natural Resources project delivery team developed a work plan to guide the project design efforts. The work plan called for identifying landowners in the area, obtaining right of entry permissions to conduct engineering data collection for design work, surveying the sites, drilling to obtain soil samples for geotechnical investigations, analyzing the engineering data, and producing a recommended design template, alignment, and cost estimate for the proposed breakwaters.

Initial attempts to secure right of entry permissions from all of the project area landowners were not fully successful. To accommodate this situation and to maintain the project design schedule, adjustments to the data collection effort were required and the Corps of Engineers modified the survey and geotechnical scopes of work to avoid work in the areas that lacked necessary permissions. Subsequently full right of entry permissions were obtained through cooperation with the Port of New Orleans to conduct engineering data collection for the project design work. Topographic and bathymetric surveys were collected throughout both sites to assist in developing the preliminary project designs. Subsurface drilling operations were performed to obtain thirteen soil samples for geotechnical investigations.

Preliminary designs have been developed for two restoration project features that are recommended for construction.

- The first feature is an 18,820 linear foot rock breakwater to be located along the southern Lake Borgne shoreline from Doullut's Canal to Jahncke's Ditch. The dike would be located along the -2.0 foot NAVD88 contour in approximately 2.5 – 3.5 feet of water, stage dependent. The breakwater along Lake Borgne will be set at an elevation of +4.0 ft. NAVD 88, with a 5-foot crown width and side slopes of 1V on 2H. The breakwater will have a 3-foot layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile fabric.
- The second feature recommended is a 14,360 linear foot rock breakwater to be located along the north bank of the MRGO from Doullut's Canal to Lena Lagoon. The dike would be located along the -2.0 to -5.3 foot NAVD88 contour in approximately 2.5 – 3.5 feet of water, stage dependent. The breakwater along the MRGO will be set at an elevation of +5.0 ft after the third lift, with a 5-foot crown and side slopes of 1V on 2H. The breakwater will have a 3-foot layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile fabric.

Any flotation channels needed to access the construction sites would be excavated using a barge-mounted bucket dredge. All of the dredged spoil from the flotation channels will be placed between the rock breakwaters and the shorelines to create wetlands.

Along the MRGO dike there are two lined fish dips. These fish dips will be built with a bottom width of 20 feet, and will be lined completely with a single layer of armor stone, placed at a top elevation -2.0 NAVD88. There are also two fish access openings at natural tidal channels along the shoreline.

Construction of the two proposed rock dikes would benefit over 465 acres of marsh. Approximately 266 acres of marsh would be protected over 20-years by preventing shoreline erosion. No changes in design features or locations over the originally approved project are proposed as a result of completing this design milestone. However, the total fully funded cost of the project has increased an estimated 40%.

Lake Borgne and MRGO Shoreline Protection (PO-32)

Coast 2050 Strategies

- maintain Lake Borgne shoreline integrity
- stabilize the entire north bank of the MRGO

Project Location

Region 1, Pontchartrain Basin. St. Bernard Parish. Along the Lake Borgne shoreline between Doullut's Canal and Jahncke's Ditch and along the north bank of the Mississippi River Gulf Outlet between Doullut's Canal and Lena Lagoon.

Problem

Shoreline erosion rates along Lake Borgne were estimated at 9 ft/yr along Lake Borgne and 24 ft/yr along the MRGO.

Goals

This project would help preserve marsh between Lake Borgne and the MRGO by preventing shoreline erosion.

Proposed Solutions

Two features will be constructed. 1) An 18,820 linear foot rock dike along the Lake Borgne shoreline from Doullut's Canal to Jahncke's Ditch. The dike will be built to a final elevation of +5.0 ft NAVD88, with a 5-foot crown and side slopes of 1V on 2H. 2) A 14,360 linear foot rock dike along the north bank of the MRGO from Doullut's Canal to Lena Lagoon. The dike will be built to a final elevation of +5.0 ft NAVD88, with a 5-foot crown and side slopes of 1V on 2H. Both dikes will have a 3-foot layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile. Any flotation channel needed will be excavated with the spoil being placed behind the rock dikes. Fish dips will be constructed along the MRGO segment to allow organism and water exchange.

Project Benefits

The project would benefit about 465 acres of estuarine marsh. Approximately 266 acres of marsh would be created/protected over the 20-year project life.

Risk/Uncertainty and Longevity/Sustainability

There is a low degree of risk associated with this project because rocks are effective at stopping shoreline erosion. The project should continue providing benefits 20-30 years after construction because adequate O&M funds are budgeted.

Project Costs

The estimated total fully funded cost is \$35,311,624.

Sponsoring Agency and Contact Persons

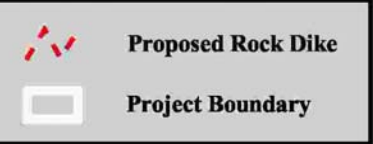
Gregory Miller, Corps of Engineers, (504) 862-2310

Ken Duffy, LA Department of Natural Resources, (225) 342-4106



Lake Borgne and MRGO Shoreline Protection

PPL12 Project Candidate



0.5 0 0.5 Miles

0.5 0 0.5 Kilometers

Map Produced By:
 U.S. Department of the Interior
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station

Background Imagery:
 Digital Orthophoto Quarter Quadrangle

Map Date: October 23, 2002
 Map ID: USGS200311022
 Data accurate as of: September 16, 2002

PRIORITIZATION FACT SHEET
Lake Borgne - MRGO Shoreline Protection (PO-32)
Lake Borgne Segment
Revised December 5, 2005

Project Name and Number

This 12th priority list project is called Lake Borgne - MRGO Shoreline Protection (PO-32). This fact sheet covers only the Lake Borgne segment of the project.

Goals

Prevent shoreline and wetlands erosion through the construction of a rock breakwater along the shorelines of Lake Borgne and the Mississippi River Gulf Outlet.

Proposed Solution

An 18,820 linear foot rock dike along the Lake Borgne shoreline from Doullut's Canal to Jahncke's Ditch. The dike will be constructed to a final height of +5 feet NAVD88, with a 5-foot crown and side slopes of 1V on 2H. The dike will have a 3-foot layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile. Any flotation channel needed will be excavated with the spoil being placed behind the rock dike. Gaps in the dike may be constructed to allow organism and water exchange.

Proposed Prioritization Criteria Scores and Justification

I. Cost Effectiveness (cost/net acre)

The total fully funded project cost estimate is \$15,787,051. The project will create-protect-restore 93 acres at TY20. The cost per net acre is \$169,753. ($\$15,787,051 \div 93 \text{ acres} = \$169,753/\text{acre}$)

Based upon these numbers, the project should receive 1 point for this criterion.

II. Area of Need, High Loss Area

- The Lake Borgne segment has a shoreline erosion rate of 9 feet per year. Based upon the prioritization criteria, this loss rate is considered low for this basin.

Based upon these numbers, the project should receive 4.0 points for this criterion.

III. Implementability

There are no major, unaccounted, impediments to implementing this project. Adequate funds are provided in the cost estimate for operations and maintenance costs. No oyster leases exist near the Lake Borgne segment.

PO-32 Ph2 request item #4o

Based upon this information, the project has no obvious issues affecting implementability and should receive 10 points for this criterion.

IV. Certainty of Benefits

This project will build a shoreline protection dike in the deltaic plain.

Based upon the proposed plan and location, the project should receive 8 points for this criterion.

V. Sustainability of Benefits

This project proposes to employ a total of 18,820 feet of rock dike to prevent shoreline erosion. Under the assumptions of the prioritization procedures, the full project benefits are expected to continue until the next anticipated maintenance cycle. For this project, maintenance events are scheduled in years 3 and 15 and based upon that schedule another maintenance event would be required in year 25 following construction. Between TY 26 – TY 30, the dikes will prevent 50% of the shoreline erosion.

Erosion rates are translated into annual lost acres as follows:

Area A

TY	% Effective	Feet Lost Per Year	Acres Lost Per Year
20	100%	0	0.00
21	100%	0	0.00
22	100%	0	0.00
23	100%	0	0.00
24	100%	0	0.00
25	100%	0	0.00
26	50%	4.5	1.91
27	50%	4.5	1.91
28	50%	4.5	1.91
29	50%	4.5	1.91
30	50%	4.5	1.91
Totals:		22.5	9.55

Using these shoreline erosion rates and assumptions, the acres of marsh in the project area will decrease 5.5% (9.55 acres/ 173acres=.055) between TY26 – TY30.

Based upon the percent change in project area wetland acres from TY20 –TY30, the project should receive 8 points for this criterion.

VI. HGM Riverine Input (Increasing riverine input in the deltaic plain or freshwater input and saltwater penetration limiting in the Chenier plain)

This project will not affect freshwater inflow or salinity.

Based upon the prioritization process, the project should receive 0 points for this criterion.

VII. HGM Sediment Input (Increased sediment input)

This project will not increase sediment input over that presently occurring.

Based upon the prioritization process, the project should receive 0 points for this criterion.

VIII. HGM Structure and Function (Maintaining landscape features critical to a sustainable ecosystem structure and function)

This project will protect critical features of the Lake Borgne shoreline for at least the 20-year life of the project.

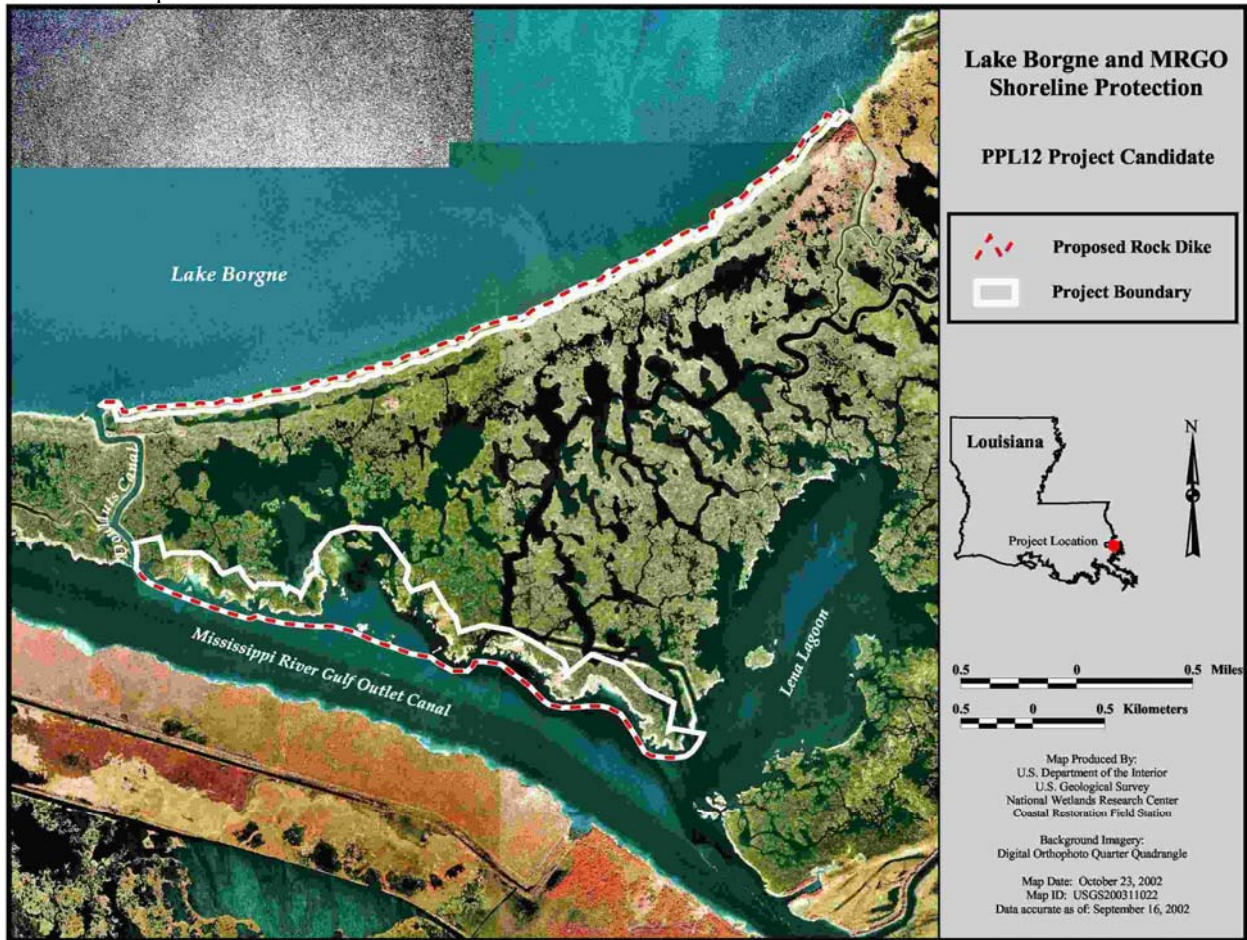
Based upon the restoration technique, the project should receive 5 points for this criterion.

Weighted Prioritization Score

$$(1*2.0)+(4.0*1.5)+ (10*1.5)+ (8*1.0)+ (8*1.0)+ (0*1.0)+ (0*1.0)+ (5*1.0) = 44 \text{ points}$$

Preparers of Fact Sheet

Gregory Miller, Corps of Engineers, (504) 862-2310, gregory.b.miller@mvn02.usace.army.mil
Ken Duffy, LA Dept. of Natural Resources, (225) 342-4106, kend@dnr.state.la.us



PRIORITIZATION FACT SHEET
Lake Borgne - MRGO Shoreline Protection (PO-32)
MRGO Shoreline Segment
Revised December 5, 2005

Project Name and Number

This 12th priority list project is called Lake Borgne - MRGO Shoreline Protection (PO-32). This fact sheet covers only the Mississippi River Gulf Outlet (MRGO) segment of the project.

Goals

Prevent shoreline and wetlands erosion through the construction of a rock breakwater along the shoreline of the MRGO.

Proposed Solution

A 14,360 linear foot rock dike along the north bank of the MRGO from Doullut's Canal to Lena Lagoon. The dike will be constructed to a final height of +5 feet NAVD88, with a 5-foot crown and side slopes of 1V on 2H. The dike will have a 3-foot layer of armor stone placed on top of a crushed stone core resting on a layer of geotextile. Any flotation channel needed will be excavated with the spoil being placed behind the rock dikes. Gaps in the dike may be constructed to allow organism and water exchange and all natural tidal channels will be left open.

Proposed Prioritization Criteria Scores and Justification

I. Cost Effectiveness (cost/net acre)

The total fully funded project cost estimate is \$19,524,000. The project will create-protect-restore 173 acres at TY20. The cost per net acre is \$112,855. ($\$19,524,000 \div 173 \text{ acres} = \$112,855/\text{acre}$)

Based upon these numbers, the project should receive 1 point for this criterion.

II. Area of Need, High Loss Area

- The MRGO segment has a shoreline erosion rate of 24 feet per year. Based upon the prioritization criteria, this loss rate is considered medium for this basin and would receive a score of 5.0 points.

Based upon these numbers, the project should receive 5.0 points for this criterion.

III. Implementability

There are no major, unaccounted, impediments to implementing this project. Adequate funds are provided in the cost estimate for operations and maintenance costs. Oyster leases exist near the MRGO segment but those leases are being acquired through the PO-30 project. In addition, while

PO-32 Ph2 request item #4o

leases are present, there are no direct or indirect impacts anticipated from construction or O&M activities associated with the rock dike.

Based upon this information, the project has no obvious issues affecting implementability and should receive 10 points for this criterion.

IV. Certainty of Benefits

This project will build a shoreline protection dike in the deltaic plain.

Based upon the proposed plan and location, the project should receive 8 points for this criterion.

V. Sustainability of Benefits

This project proposes to employ a total of 14,360 feet of rock dikes to prevent shoreline erosion. Under the assumptions of the prioritization procedures, the full project benefits are expected to continue until the next anticipated maintenance cycle. For this project, maintenance events are scheduled in years 2, 7, and 15 and based upon that schedule another maintenance event would be required in year 24 following construction. Between TY 24 – TY 30, the dikes will prevent 50% of the shoreline erosion.

Erosion rates are translated into annual lost acres as follows:

MRGO Shoreline Segment

TY	% Effective	Feet Lost Per Year	Acres Lost Per Year
20	100%	0	0.00
21	100%	0	0.00
22	100%	0	0.00
23	100%	0	0.00
24	50%	12	3.93
25	50%	12	3.93
26	50%	12	3.93
27	50%	12	3.93
28	50%	12	3.93
29	50%	12	3.93
30	50%	12	3.93
Totals:		84	27.51

PO-32 Ph2 request item #4o

Using these shoreline erosion rates and assumptions, the acres of marsh in the project area will decrease 15.9% (27.51 acres/173acres=.159) between TY20 – TY30.

Based upon the percent change in project area wetland acres from TY20 –TY30, the project should receive 4 points for this criterion.

VI. HGM Riverine Input (Increasing riverine input in the deltaic plain or freshwater input and saltwater penetration limiting in the Chenier plain)

This project will not affect freshwater inflow or salinity.

Based upon the prioritization process, the project should receive 0 points for this criterion.

VII. HGM Sediment Input (Increased sediment input)

This project will not increase sediment input over that presently occurring.

Based upon the prioritization process, the project should receive 0 points for this criterion.

VIII. HGM Structure and Function (Maintaining landscape features critical to a sustainable ecosystem structure and function)

This project will not protect critical features along the MRGO shoreline.

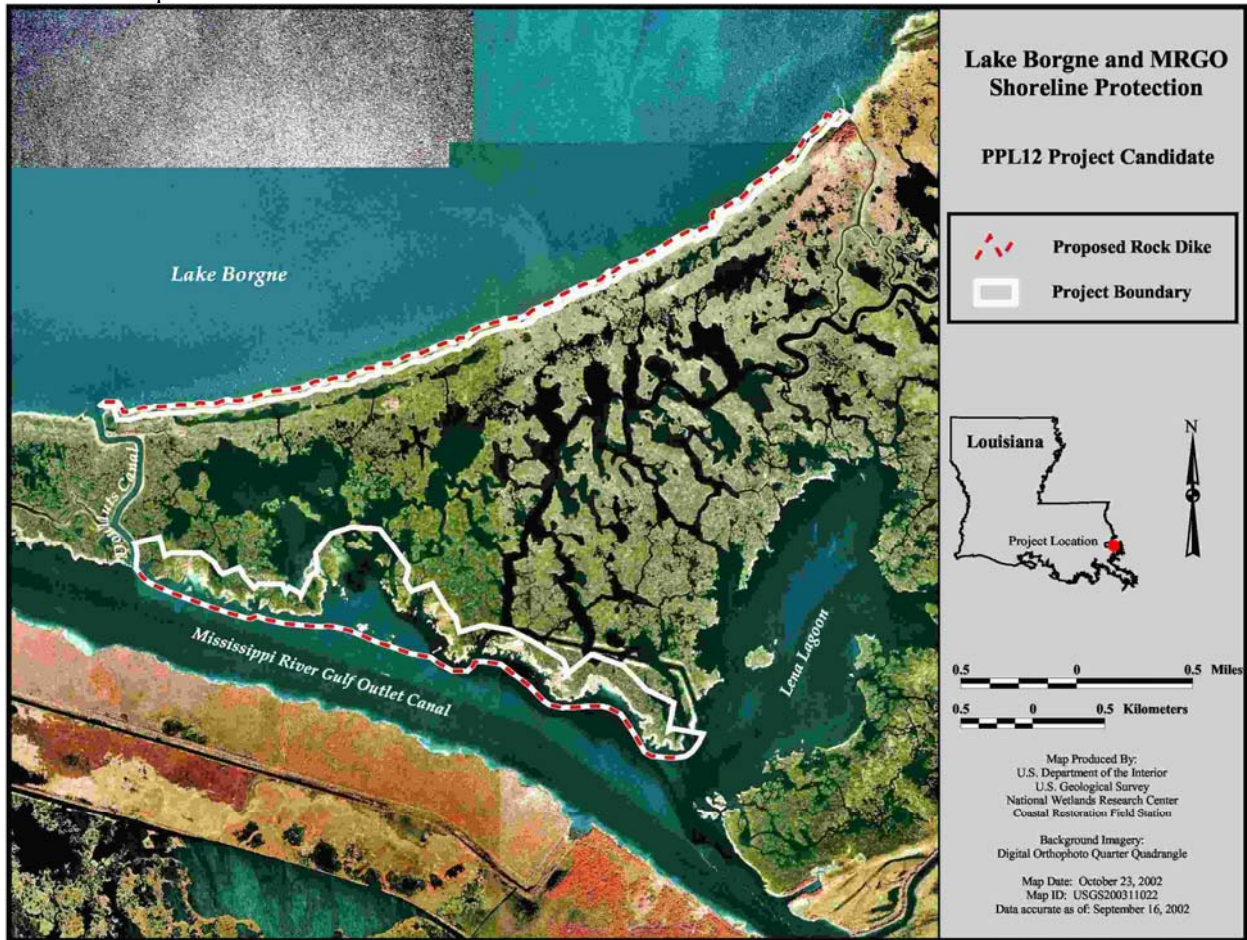
Based upon the restoration technique, the project should receive 0 points for this criterion.

Weighted Prioritization Score

$(1*2.0)+(5*1.5)+ (10*1.5)+ (8*1.0)+ (4*1.0)+ (0*1.0)+ (0*1.0)+ (0*1.0) = 36.5$ points

Preparers of Fact Sheet

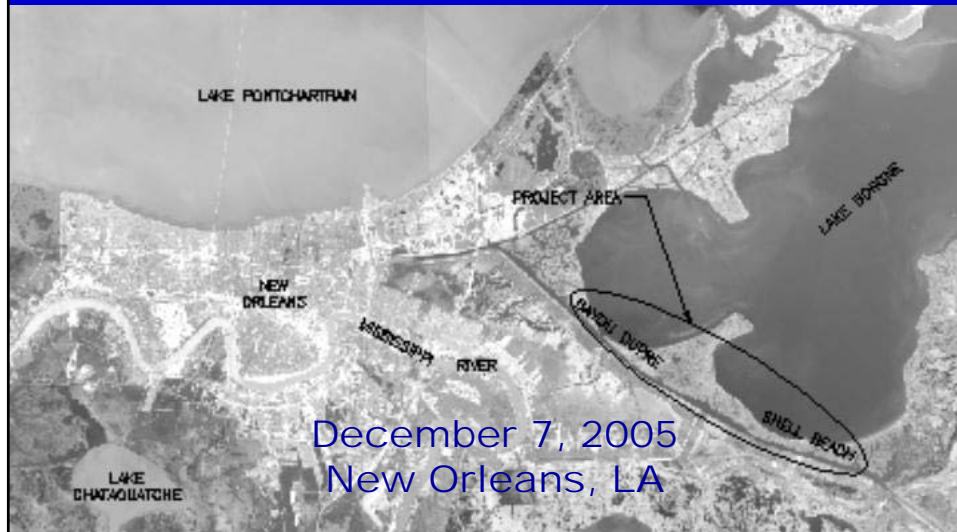
Gregory Miller, Corps of Engineers, (504) 862-2310, gregory.b.miller@mvn02.usace.army.mil
Ken Duffy, LA Dept. of Natural Resources, (225) 342-4106, kend@dnr.state.la.us



Lake Borgne Shoreline Protection

PO-30

Lake Borgne Shoreline Protection Project (PO-30) Phase II Request Technical Committee Meeting



PO-30 Project Overview

Project Location: Region 1, Lake Pontchartrain Basin, St. Bernard Parish, Bayou Dupre and Old Shell Beach

Problem: Shoreline erosion rates range from 5 to 9 feet per year, narrow strip of marsh is all that separates Lake Borgne from MRGO.

Project Goals/Objectives:

- 1) halt Lake Borgne shoreline retreat/marsh loss in the vicinity of Shell Beach and Bayou Dupre
- 2) protect approximately 165 acres of emergent marsh
- 3) Prevent further coalescence of the lake and MRGO
- 4) re-establish a sustainable lake rim



PO-30 Project Features Overview

Bayou Dupre - Onshore Rock Dike

- 6,643 feet to the west of Bayou Dupre (+4 NAVD88)
- 4,418 feet to the southeast of Bayou Dupre (+4 NAVD88)

Bayou Dupre - Steel Sheet Pile

- back to back structure
- tying USACE MRGO stone to new construction (+2.5 NAVD88)

Shell Beach - Onshore Rock Dike

- 17,000 feet from Fort Bayou to Douletts Canal (+3 NAVD88)
- End-on construction around former naval facility

PO-30 Project Benefits & Costs

- Rock dike will benefit 165 acres of fresh marsh
- Shoreline loss will be prevented
- Fully funded cost is \$ 18,707,551
- Maintenance anticipated in year 1 (select segments)
- Next maintenance event anticipated 30 yrs post-construction

PO-30 Project Comparison/Contrast

The Present

PO-30 (combined projects)

- Continuous rock breakwater onshore from Doulluts Canal to Fort Bayou (Shell Beach).
- A continuous rock breakwater onshore from approximately 6,643 feet west and 4,418 feet east of Bayou Dupre with a back to back steel sheetpile structure tying the proposed rock structures into the existing offshore USACE rock breakwater along MRGO
- 165 acres

vs. PPL 10 and PPL 11

Shell Beach (PO-30) PPL 10

- Segmented stone breakwaters, 400 feet long at 2 foot contour protecting 3,100 feet of shoreline from Doulluts Canal to Fort Bayou
- 229 acres

Bayou Dupre (PO-31) PPL 11

- Continuous nearshore rock breakwaters at the 5 foot contour, built to elevation of +3 NAVD 88, 1.2 miles to the east and 1.6 miles to the west of Bayou Dupre
- 83 acres

Why Should You Fund this Project Now?

- Without intervention MRGO and Lake Borgne will coalesce
- Prevent further degradation of marsh/habitat
- Narrow marsh rim protects Shell Beach, Yscloskey and Hopedale from lake wave energies/storm surge
- Future marsh creation/beneficial use opportunities

Martello's Castle - *Before*





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

December 5, 2005

Mr. Greg Breerwood, P.E.
Deputy District Engineer
U.S. Army Corps of Engineers, New Orleans District
Office of the Chief
P.O. Box 60267
New Orleans, Louisiana 70160-0267

RE: Lake Borgne Shoreline Protection (PO-30) Project
Request for Phase II (construction) funding

Dear Mr. Breerwood:

The Environmental Protection Agency (EPA), together with the Louisiana Department of Natural Resources (LDNR), hereby request approval to begin construction of the Lake Borgne Shoreline Protection (PO-30) project. This project consists of two segments, Shell Beach and Bayou Dupre, which were authorized January 2001 and 2002 by the Louisiana Coastal Wetlands Conservation and Restoration Task Force (Task Force) under the authority of the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). The Task Force combined the two projects in April 2002. This request is submitted in accordance with the CWPPRA Project Standard Operating Procedures Manual.

Enclosed please find the various SOP requirements for construction (Phase II) funding request and approval. If you have any questions or need additional information about this project, please contact Ms. Patricia A. Taylor, P.E., (6WQ-EMC), EPA Project Manager, at (214) 665-6403 or the above address.

Sincerely,

A handwritten signature in black ink, appearing to read "WK Honker".

William K. Honker
Deputy Director
Water Quality Protection Division

Enclosures

cc: (next two pages)

cc:

Tom Podany, Chairman
CWPPRA Technical Committee
Assistant Chief of Planning, Programs and Projects Management
U.S. Army Corps of Engineers, New Orleans District
P.O. Box 60267
New Orleans, LA 70160-0267

Gerry M. Duszynski
Acting Assistant Secretary
Department of Natural Resources
P.O. Box 44027, Capital Station
Baton Rouge, LA 70804-4027

Sharon Parrish
Chief, Marine & Wetlands Section, 6WQ-EM
Environmental Protection Agency, Region 6
1445 Ross Avenue
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Britt Paul, P.E.
Assistant State Conservationist/Water Resources
Natural Resources Conservation Service
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Alexandria, LA 71302

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Chief, Baton Rouge Field Office
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
c/o Louisiana State University
Baton Rouge, LA 70803-7535

Darryl Clark, Senior Field Biologist
U.S. Fish and Wildlife Service
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Senior Project Manager
Planning & Project Management – Coastal Restoration
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New Orleans, LA 70160-0267

Daniel Llewellyn
Coastal Restoration Scientist Supervisor
Louisiana Department of Natural Resources, Coastal Restoration Division
P.O. Box 44027, Capital Station
Baton Rouge, LA 70804-4027

Wes McQuiddy,
CWPPRA Team Leader, 6WQ-EMC
Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

John Jurgensen, P.E., Civil Engineer
Natural Resources Conservation Service
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Alexandria, LA 71302

Rachel Sweeney, Ecologist
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
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John Hodnett, P.E., Engineering Manager,
Coastal Engineering Division, Project Management Section
Louisiana Department of Natural Resources
P.O. Box 44027, Capital Station
Baton Rouge, LA 70804-4027

Chris Williams, P.E., Project Manager
Coastal Engineering Division, Project Management Section
Louisiana Department of Natural Resources
P.O. Box 44027, Capital Station
Baton Rouge, LA 70804-4027

Checklist of Phase II Requirements:

i. The project goals and objectives are:

- halt Lake Borgne shoreline retreat and associated marsh loss in the vicinity of Shell Beach and Bayou Dupre;
- protect approximately 165 acres of emergent marsh from direct loss due to Lake Borgne shoreline retreat from Doulluts Canal to Fort Bayou, and on the Lake Borgne shorelines northwest and southeast of Bayou Dupre;
- prevent further coalescence of the lake and MRGO; and
- reestablish a sustainable lake rim.

ii. A cooperative agreement between EPA Region 6 and the State of Louisiana Department of Natural Resources was initially executed in July 2001 then revised August 2001, February 2002 and June 2002. The agreement remains in full force and effect.

iii. Land rights for the project have been secured by DNR. There are a total of 27 property owners and 26 have signed the real estate agreements. One owner could not be located after a diligent search by DNR.

iv. A favorable 30% design review was held on Thursday, August 18, 2005 in Baton Rouge. Attendees included representatives from four of the five CWPPRA federal agencies; Governor's Office of Coastal Activities; State of Louisiana, Division of Archaeology; Chitimacha Tribe of Louisiana; St. Bernard parish officials; and other interested parties. All attendee comments and questions were addressed during the meeting. No additional comments were received.

v. A favorable 95% design review was held on Tuesday, November 29, 2005 in Baton Rouge. Representatives from one of the five CWPPRA federal agencies and State of Louisiana, Division of Archaeology were present. All questions and comments were resolved during the meeting. No additional comments were received.

vi. An Environmental Assessment (EA) was prepared and A Finding of No Significant Impact (FNSI) was signed by EPA on December 1, 2005. A notice was published on December 1, 2005 and the FNSI/EA was distributed for interagency and other interested parties review and comment. We anticipate a favorable review within 30 days.

vii. The Louisiana Department of Natural Resources, Restoration Technology Section has reviewed the project and prepared an Ecological Review dated November 8, 2005. The review concurred the project should achieve the goal of stopping shoreline erosion and recommends the project progress towards Phase II (construction) funding.

viii. A 404 permit will be required and St. Bernard parish will be the permit holder. The permit drawings have been prepared and the St. Bernard parish is expected to sign the permit on December 6, 2005.

ix. Construction remnants of the former naval facility at Shell Beach are within the project

footprint. This property was an anti-aircraft gunnery range used during World War II and the USACE Fort Worth District identifies this property as an eligible Formerly Used Defense Site (FUDS). According to the FUDS 2002 Properties list maintained by the USACE, no hazardous potential was found at this officially closed site. As an added precaution in order to identify potentially live ordinance, a separate magnetometer survey was performed in 2005 along the immediate shoreline. One hundred and twenty-one anomalies were detected by the survey. Individual ordinance, if present, was masked by the magnetic inflections of existing large-scale structures. End on construction will be used in this area in order to avoid the submerged construction debris and provide an added measure of safety.

x. This project is consistent with the requirements of Section 303(e) of CWPPRA. The Commander of the USACE New Orleans District granted section 303e approval on June 19, 2003.

xi. There are currently no livestock grazing in the area and no potential for grazing once the project is installed. An overgrazing determination was received from the United States Department of Agriculture, Natural Resources Conservation Service letter dated September 27, 2002.

xii. A revised fully funded cost estimate of \$18,707,551 has been reviewed and approved by the economic work group. The original baseline Phase II cost estimate was \$21,118,840 and this project is less than 100% of the original total estimated budget.

xiii A revised Wetland Value Assessment was prepared and reviewed by the CWPPRA Environmental Work Group. All comments were resolved and a completed WVA was provided to Mr. Kevin Roy, Environmental Work Group Chairman for archiving on November 18, 2005.

xiv. A revised prioritization score of 38.0 was reviewed and approved by the CWPPRA Engineering and Environmental Work Groups in November 2005. This score is less than the original score of 42.0.

FACT SHEET
December 2005

Project Name and Number: Lake Borgne Shoreline Protection (PO-30) Project
(Project Priority List 10)

Problem: The project is intended to maintain the integrity of the narrow strip of marsh that separates Lake Borgne from the Mississippi River Gulf Outlet (MRGO). This narrow marsh rim along the south Lake Borgne shoreline protects the communities of Shell Beach, Yscloskey, and Hopedale from direct exposure to lake wave energies and storm surge.

Goals and Objectives:

- Halt Lake Borgne shoreline retreat and associated marsh loss in the vicinity of Shell Beach and Bayou Dupre;
- Protect approximately 165 acres of emergent marsh from direct loss due to Lake Borgne shoreline retreat from Doulluts Canal to Fort Bayou, and on the Lake Borgne shorelines northwest and southeast of Bayou Dupre;
- Prevent further coalescence of the lake and MRGO; and
- Re-establish a sustainable lake rim.

Project Status: The Lake Borgne Shoreline Protection Project has completed Phase 1, engineering and design.

Proposed Solution: The project entails placing a nearly continuous onshore rock breakwater along the designated shoreline sections of Lake Borgne at Bayou Dupre and Shell Beach. At the mouth of Bayou Dupre, maintenance dredging within the MRGO has created an unnatural water depth. Therefore, a sheetpile structure will tie the proposed shoreline breakwater into the existing offshore USACE rock breakwater along the MRGO.



Issues: The MRGO, constructed in 1963, has drastically changed the landscape of the St. Bernard Parish wetlands not only by its large footprint, which eliminated thousands of acres of wetlands, but also by altering salinity and tidal regimes. The MRGO, with its direct connection to the Gulf of Mexico, brings high salinity water and increased tidal amplitudes (astronomic and meteorological “tide”; also storm surge) far into interior wetlands. In the Shell Beach area, the marshes separating the MRGO from Lake Borgne are broken by many ponds and are eroding from both the lakeside and the ship channel side. In addition these marshes appear to be breaking up due to increased water movement via the MRGO, and possibly subsidence. Lake Borgne shoreline retreat rates at Shell Beach are estimated at 5-7 ft per yr, and 7-9 ft per year at Bayou Dupre.

Estimated Costs and Benefits: The fully funded cost is estimated to be \$18,707,551.

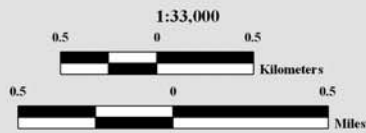


Lake Borgne Shoreline Protection (PO-30)



-  Shoreline Protection *
-  Project Boundary

* denotes proposed features



Map ID: USGS-NWRC 2006-11-0015
 Map Date: November 21, 2005

Map Produced By:
 U.S. Department of the Interior
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station
 Baton Rouge, LA

Image Source:
 2004 Digital Orthophoto Quarter Quadrangles

State of Louisiana



KATHLEEN BABINEAUX BLANCO
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL RESTORATION AND MANAGEMENT

December 2, 2005

Mr. Wes McQuiddy
Team Leader
Marine and Wetlands Section (6WQ-EM)
Environmental Protection Agency
1445 Ross Avenue
Dallas, TX 75202

Via Facsimile

(214) 665-6689

Re: 95% Design Review for Lake Borgne Shoreline Protection, (PO-30)
Statement of Local Sponsor Concurrence

Dear Mr. McQuiddy:

We are in receipt of your December 1, 2005 letter regarding the captioned project. In that letter you indicated that EPA has concluded the project is still viable and is recommending the advancement of the project to construction.

Based on our review of the technical information compiled to date, the Ecological Review, the preliminary land ownership investigation, and the preliminary designs, we, as local sponsor, are in concurrence with proceeding to construction. In accordance with the CWPPRA Project Standard Operating Procedures manual, we request that you forward this letter of concurrence along with the revised project cost estimate to the Technical Committee and the Planning and Evaluation Subcommittee.

Please do not hesitate to call if I may be of any assistance.

Sincerely,

Christopher P. Knotts, P. E.
Director

CPK:LCW:dpg

cc: William K. Rhinehart, CRD Administrator
John Hodnett, P.E., Engineer Manager
Chris Williams, P.E., Project Manager
Luke Le Bas, P.E., Engineer Manager

Pass Chaland to Grand Bayou Pass

BA-35

Pass Chaland to Grand Bayou Pass (BA35) Technical Committee Meeting

December 7, 2005
New Orleans, LA



Project Overview

Project Location:

Region 2, Barataria Basin, Barataria Barrier Shoreline mapping unit, immediately west of Shell Island

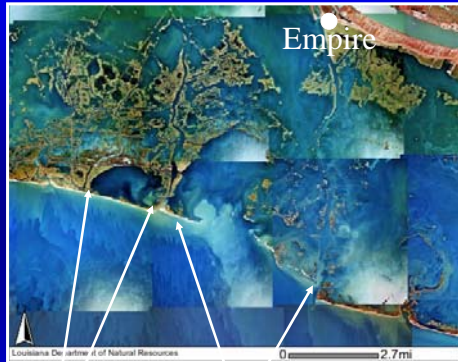
Problem:

On-going shoreline erosion has resulted in breaching of the barrier shoreline

Goals:

- 1) Restore beach and dune to prevent breaching and maintain shoreline integrity
- 2) Create and restore barrier island habitats

Project Map



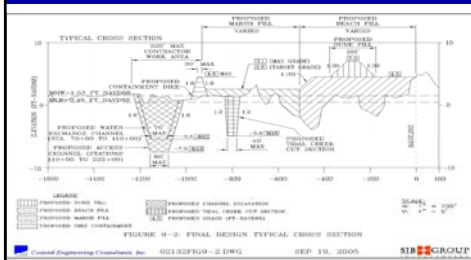
BA-35

Shell Island



Project Features Overview

- Restore 2.6 miles barrier shoreline through construction of + 7 foot dune with 5 foot beach berm.
- Construct 371-acre marsh platform north of and contiguous to the beach and dune fill to provide foundation for continued shoreline rollover and retreat.



Project Benefits & Costs

Project benefits

- Create and restore 524 acres of barrier island immediately post-construction
- Maintain 2.6 miles of critically eroding shoreline
- Provide 262 net acres at TY20

Project costs

- The Fully Funded Cost for the project is: \$30,217,567
- Phase II, Increment 1 request is \$ 26,904,301

Prioritization Score

- 49.7

Project Comparison/Contrast

The Present vs. PPL #

	Phase One	Current	% change
Fully funded cost (M)	\$ 19.0	\$ 30.2	159 %
TY 20 Net Acres	161	262	163 %
AAHU	88.43	pending	pending

Project changed to include dune and beach restoration which are required to meet goal of maintaining shoreline integrity

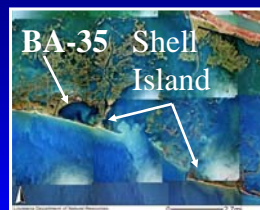
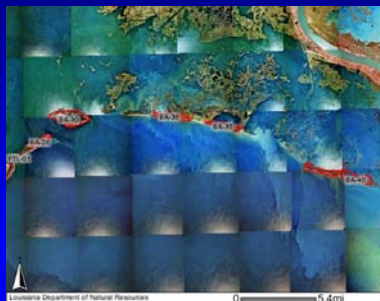
Project Need

- Project conditions deteriorating – project costs increasing and rate of increase will escalate rapidly
- Project won't be feasible for a CWPPRA-scale solution within a few years



Project Need

- Project is one component of overall basin-wide effort to restore barrier shoreline (six projects in various stages)
- Prevent Shell Island from becoming three miles wide
- Critical defensive strategy - maintain existing landforms



Questions?



INFORMATION REQUIRED IN PHASE II AUTHORIZATION REQUESTS

1. Description of Phase I Project

As authorized for Phase I, the proposed project included creation of a 1,000-foot wide marsh platform directly behind the rim of the Bay Joe Wise shoreline to maintain shoreline integrity, prevent breaching and provide wetland benefits (Figure 1). A summary of project costs and benefits is provided below.

Fully Funded Total Project Cost	\$19 M
Net Acres at TY1	226
Net Acres at TY20	161
Average Annual Habitat Units	88.43

2. Overview of Phase I Tasks, Process and Issues

Phase I tasks included pre-design investigations (i.e., bathymetric and topographic surveys, geotechnical investigations), various engineering assessments of project alternatives, and completion of 95% level plans and specifications for the preferred alternative. Design analyses revealed that the conceptual project features identified at Phase I authorization (construction of only a marsh platform) would not meet the primary project objectives and additional project features (beach and dune restoration) would be required to meet the project objectives. A change in project scope was approved by the Task Force to proceed to final design on the preferred alternative.

Other Phase I activities included development of the landrights workplan, preliminary ownership report, and execution of appropriate servitudes and agreements; development and submission of permit application materials; cultural resource surveys and assessment; and development of draft NEPA documents. The project sponsors determined that HTRW investigations were not required based on review of land use history and previous basin-wide assessments conducted by the Corps of Engineers.

3. Description of the Phase II Candidate Project

A. Project Features

The proposed project includes 14,000 feet of beach and dune fill to address erosion along the gulf-front shoreline and fill multiple breaches that have occurred due to recent storm and hurricane damage (Figure 2). Beach fill volumes have been increased based on post-2005 storm information. The required beach fill volume is 1,234,080 cy. The beach and dune construction template includes a 50- to 130-foot wide dune crest at +7 feet with 1:30 back- and fore-slopes. The beach construction template also includes a 4.5 foot berm with an average width of 350 feet and a maximum width of over 600 feet. The beach and dune template will be constructed immediately landward of any existing beach rim to minimize losses during construction.

The recommended plan also includes a marsh platform approximately 8,000-foot long, 920-foot wide marsh platform north of and contiguous to the beach and dune fill. The construction elevation is +2.6 feet based on site-specific marsh elevation surveys and geotechnical analyses to achieve a settled intertidal elevation of about +1.8 feet at TY3. The surface area of the proposed marsh platform is approximately 270 acres. The required fill volume is approximately 1.67 M cy.

Other features of the recommended plan include construction of a water exchange channel to maintain the current flow-way and circulation patterns between Pass Chaland and Bay Joe Wise, pre-excavation of about 4,000 feet of pre-excavated primary tidal creeks (five acres), and installation of settlement plates, warning signs and sand fencing.

Long term project components include extensive vegetative plantings, replacement of sand fences, retention dike gapping, and project performance assessments throughout the project life.

B. Updated assessment of benefits and current cost estimates

Fully Funded Total Project Cost	\$30.2 M
Phase II, Increment I Request	\$26.9 M
Net Acres at TY20	262 *
Average Annual Habitat Units	*

* Pending final approval by ENV WG

C. In cases of substantial modifications to original conceptual design or costs, describe the specific changes both qualitatively and quantitatively

Design analyses revealed that the conceptual project features identified at Phase I authorization (construction of only a marsh platform) would not meet the primary project objectives. Beach and dune features were determined to be required to meet the project objectives, thus increasing the anticipated project cost by more than 25%. The Task Force approved change in project scope to proceed to final design on the preferred alternative.

PHASE II CHECKLIST

A. List of Project Goals and Strategies

The goals of this project are to repair breaches and tidal inlets in the shoreline, reinforce the existing shoreline with sand and plug/repair the growing tidal inlets through the shoreline. The design approach is to maximize surface area per planform unit volume for island stabilization and dune, supratidal (i.e., swale), and intertidal marsh creation by preventing a breach (i.e., tidal inlet) with a 20-year or lesser storm event.

Project strategies identified in the Ecological Review are 1) deposit dredged marsh compatible material into the back-bay area at elevation +2.6 feet NAVD-88 and 1000 feet wide, 2) construct a dune with an elevation of +7.0 feet NAVD-88 and a crest width of 50 feet, 3) use a phased planting approach to identify optimal planting conditions prior to vegetation establishment through vegetation plantings, and 4) Create tidal features to promote tidal exchange (i.e., degrade containment dikes) post-construction.

B. Cost Sharing Agreement

A cooperative agreement was executed between NOAA and LDNR for Phase I activities.

C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase II approval.

Ms. Helen Hoffpauir, CRD Land Manager, has notified the Technical Committee that “At this time, no land rights acquisition problems are anticipated. Therefore, DNR is confident that land rights for the above referenced project will be finalized in a reasonable period of time after Phase II Approval.”

D. A favorable Preliminary Design Review (30% Design Level).

A Preliminary Design review was held on October 12, 2004. A change in project scope was identified during the design review process. The Task Force concurred with the change in scope on February 17, 2005.

E. Final Project Design Review (95% Design Level)

A Final Design Review was held on November 7, 2005. Project sponsors concurred with moving forward to Phase II request.

G. Written summary of the findings of the Ecological Review

“Based on the investigations of similar restoration projects and a review of

engineering principles, the proposed strategies of the Chaland Pass to Grand Bayou Pass Barrier Shoreline Restoration project will likely achieve most of the desired ecological goals. The current level of design warrants continued progress towards Phase II funding.”

H. Application for and/or issuance of the public notices for permits

A pre-application meeting was held on May 17, 2005, and permit applications were submitted to COE, LDNR, and LDEQ on November 15, 2005.

I. A hazardous, toxic and radiological waste (HTRW) assessment, if required

The project sponsors determined that HTRW investigations were not required based on review of land use history and previous basin-wide assessments conducted by the Corps of Engineers.

J. Section 303(e) approval

Under review by COE.

K. Overgrazing determination from the NRCS

Received October 7, 2005.

L. Revised fully funded cost estimate

The revised fully funded cost estimate is \$30,217,567.

M. A Wetland Value Assessment

A draft Wetland Value Assessment has been reviewed by the Workgroup. Minor comments were received, and the final WVA is under preparation and will include revisions in response to review comments.

N. Prioritization Criteria ranking score

A draft Prioritization has been developed and will be submitted for review by the Workgroups. Proposed scores are as follows (will be updated at Technical Committee meeting based on any revisions required by the Workgroups).

Criteria	Weighting	Score	Weighted Score
I. Cost-effectiveness	20%	1	2
II. Area of Need	15%	9.25	13.875
III. Implementability	15%	7	10.5
IV. Certainty of Benefits	10%	7	7
V. Sustainability of Benefits	10%	1.4	1.4
VI. Increased Riverine Input	10%	0	0
VII. Increased Sediment Input	10%	5	5
VII. Critical Landscape Features	10%	10	10
TOTAL			49.775

Figure 1: Phase I level Project Map

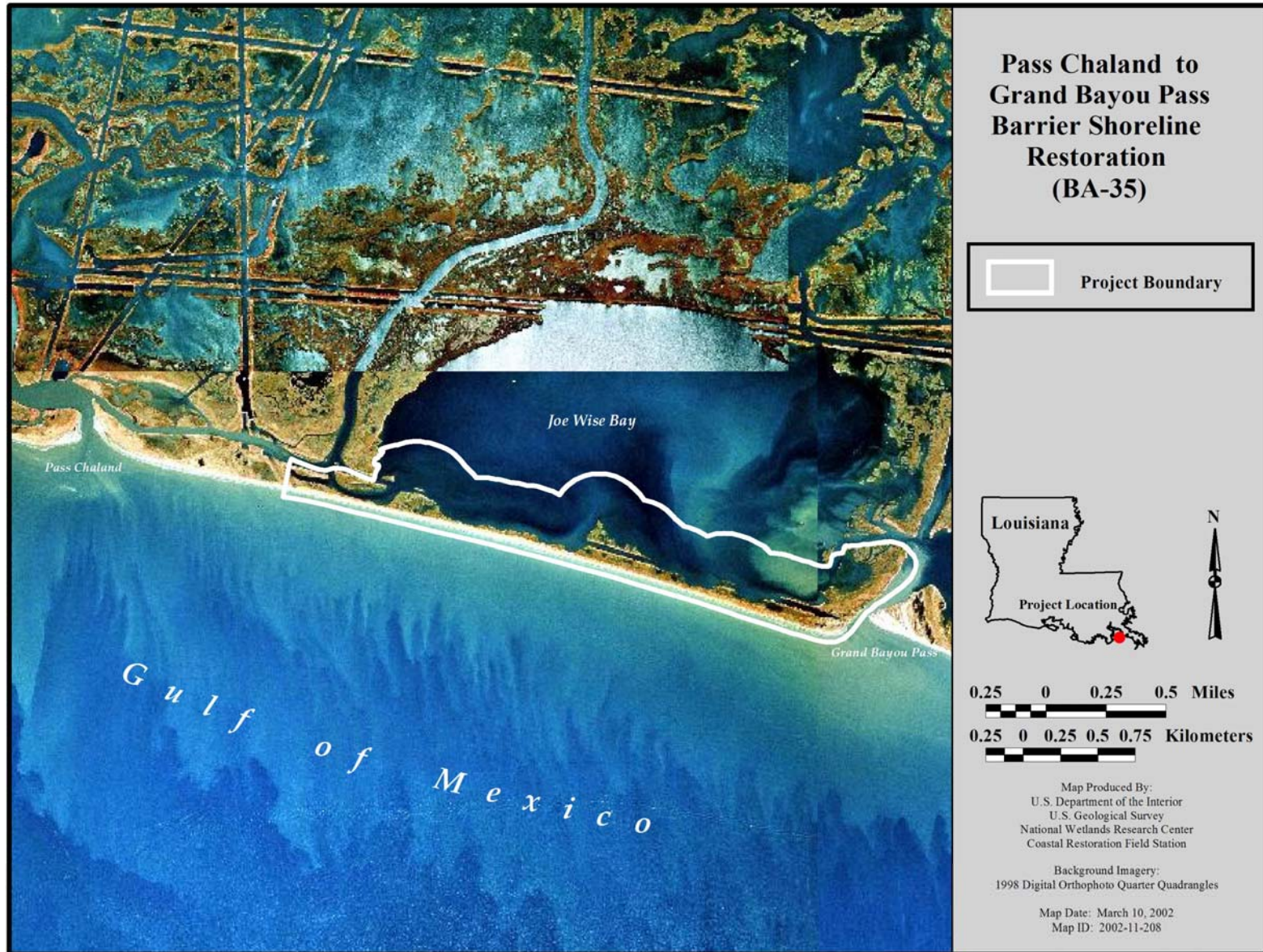


Figure 2: Phase II Project Feature and Boundary Map



**Rockefeller Gulf Shoreline Stabilization
Test Sections**

ME-18

CWPPRA
Rockefeller Gulf Shoreline Stabilization
(ME-18)
Phase II Request

Technical Committee Meeting

December 7, 2005

New Orleans, LA

Project Overview

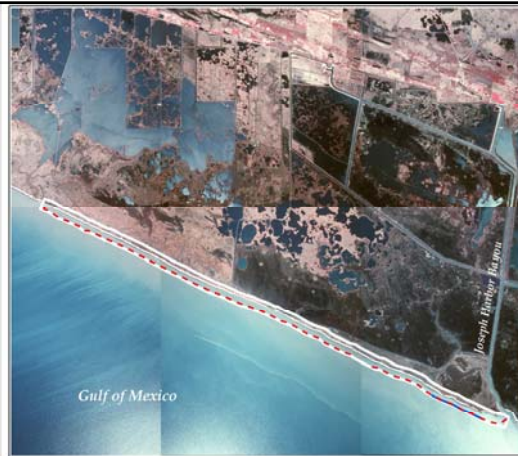
Project Location: Region 4, Calcasieu - Sabine Basin, Cameron Parish, Gulf shoreline between Joseph Harbor and Beach Prong.

Problem: Shoreline erosion rates within the project area vary from 30 to 40 feet per year, with areas near the eastern end of the project approaching 100 feet per year.

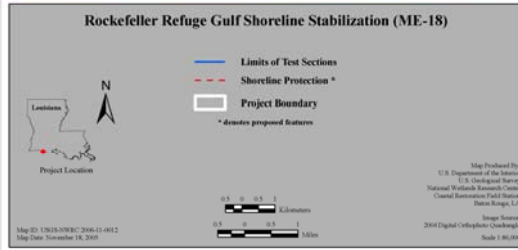
Project Goals

- Halt gulf shoreline retreat and direct marsh loss from Beach Prong to Joseph Harbor
- Protect Saline Marsh Habitat
- Enhance Fish and Wildlife Habitat

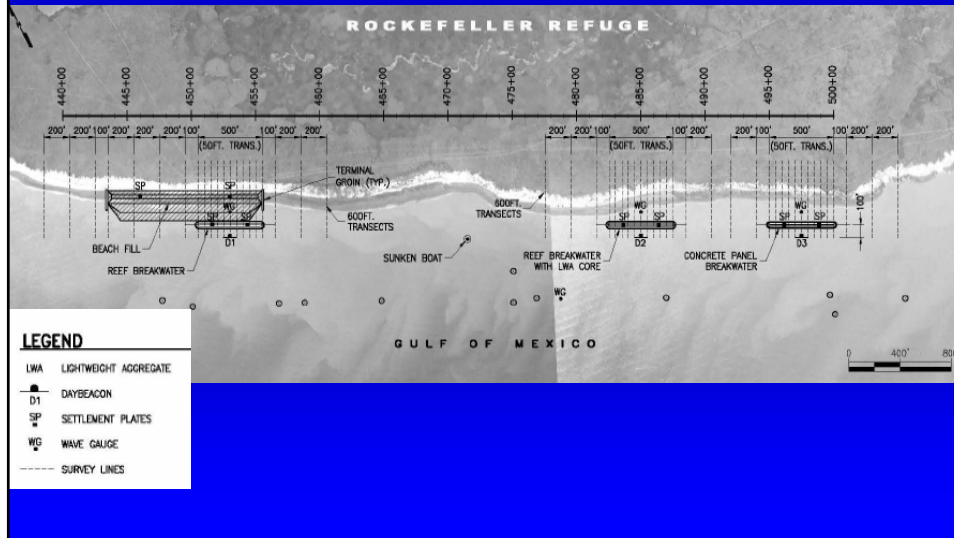
Project Map



Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)



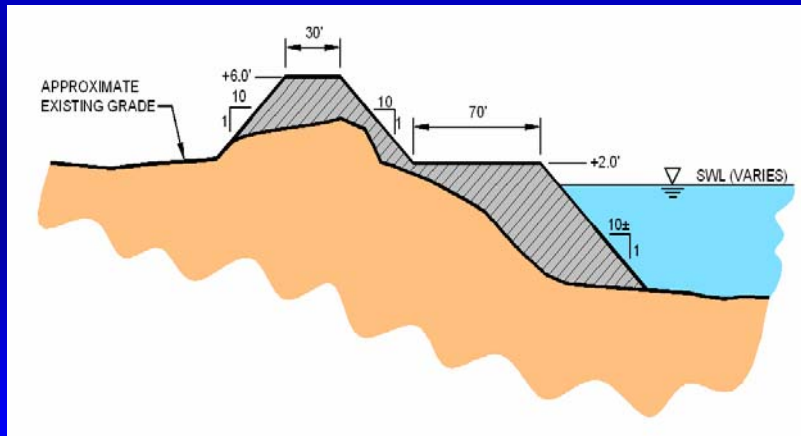
Layout



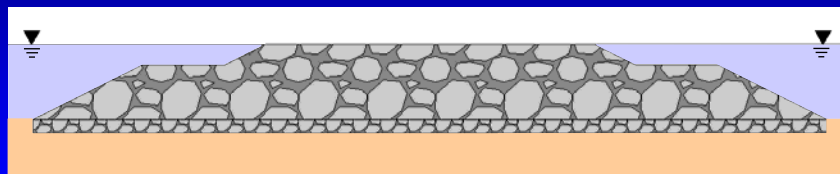
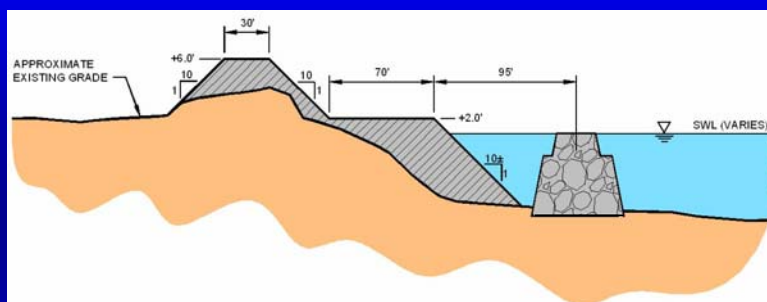
Project Features Overview

- Construct and monitor four (4) test sections to determine their constructability, wave attenuation characteristics and the associated shoreline response to each section. The test sections are:
 - Gravel/Crushed Rock Beach Fill
 - Reef Breakwater with Beach Fill
 - Reef Breakwater with Light Weight Aggregate Core
 - Concrete Panel Breakwater

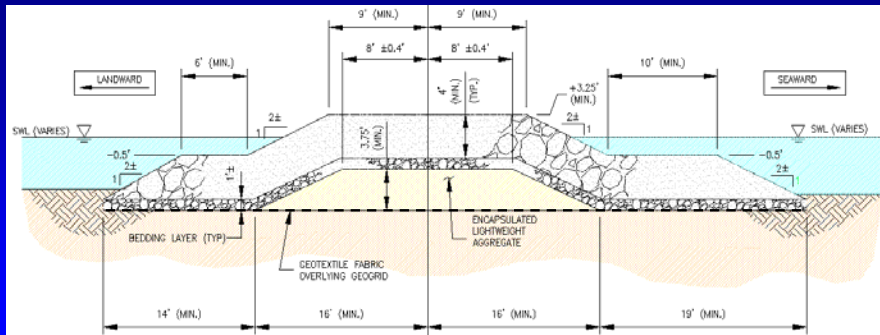
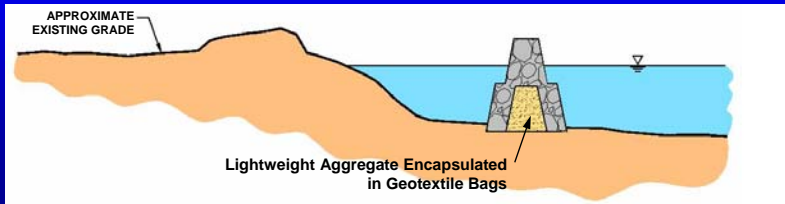
Gravel/Crushed Rock Beach Fill



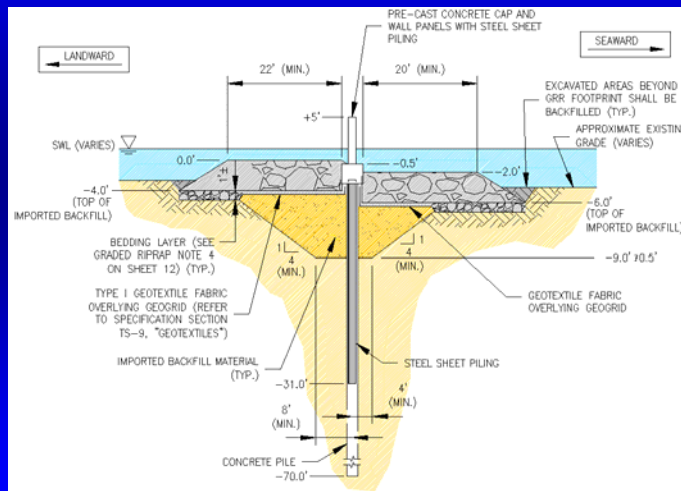
Reef Breakwater with Beach Fill



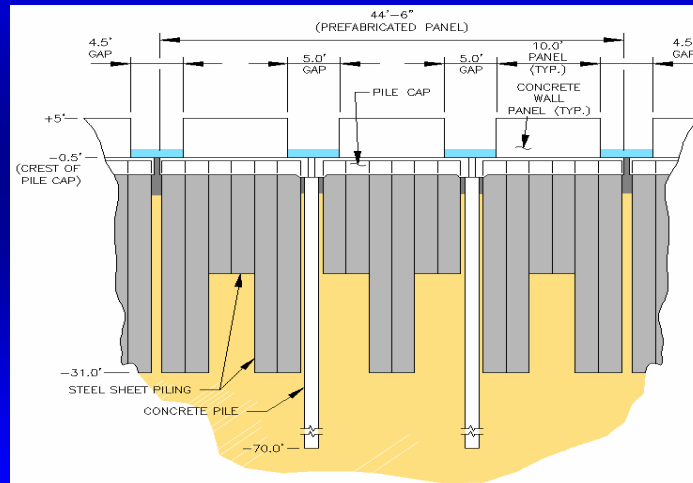
Reef Breakwater with LWA Core



Concrete Panel Breakwater



Concrete Panel Breakwater



Project Benefits & Costs

- Given the lack of proven design alternatives available for the conditions at Rockefeller Refuge, the analysis of test sections is the only viable option. The performance of these test sections will allow the Project Team to select one alternative for implementation over the full 9.2 mile project .
- The Fully Funded Cost of the Proposed Test Sections is approximately 10% of the Original Project Costs, or \$10,033,623
- The Prioritization Score is: 49.25

Project Comparison/Contrast

The Present vs. PPL #10

Authorized Project - PPL 10

- **Single 9.2 mile continuous nearshore rock breakwater placed approximately 400' offshore at the -5' contour**

Currently Proposed Project

- **Construct four (4) Test Sections to determine a preferred alternative for implementation over the entire project length**

Questions?



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE
SEFC/Estuarine Habitats & Coastal Fisheries Center
646 Cajundome Boulevard
Lafayette, Louisiana 70506

November 22, 2005

Mr. Tom Podany (Chairman)
CWPPRA Technical Committee
Assistant Chief of Planning, Programs and Projects Management
U.S. Army Engineer District, New Orleans
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Podany,

As the lead federal agency for the Rockefeller Refuge Shoreline Stabilization project authorized by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force on the 10th Project Priority List, the National Marine Fisheries Service (NMFS) is requesting, in accordance with CWPPRA's Standard Operating Procedure (SOP), approval to proceed with construction of this project.

This project was authorized for the protection of an estimated 9.2 mile stretch of shoreline at Rockefeller State Wildlife Refuge. Shoreline loss at Rockefeller averages 39 feet/yr, making the acreage lost every week equivalent to that of a football field. Project costs were originally estimated to be 96 million (100% funding). A feasibility study reviewed over 80 design alternatives based on their ability to (1) prevent beach erosion for up to Category 1 hurricane conditions, which were estimated to have a return frequency of about 10 years at the project site (2) be designed, constructed, monitored, and maintained over a 20-year design life for under \$50,000,000, and (3) where practicable, remain stable for more severe storm conditions up to a 100-year event. A key conclusion from the geotechnical investigation is that the subsurface consists of very soft clay to a depth of approximately 40 ft, which eliminated most conventional shoreline protection alternatives due to bearing capacity and settlement issues. This, coupled with budget limitations of the CWPPRA program, made finding viable alternatives that met these goals extremely challenging. Numerous alternatives were considered, both conventional and unconventional.

Given the unique challenges provided at the Rockefeller Refuge shoreline, questions remained on constructability, design, and performance of restoration features that would meet the project goals. At the February 17, 2005 Task Force meeting, a project change in scope to pursue the development of test sections was approved. Therefore, four final alternatives were selected for consideration in a prototype test program at the Refuge that would help predict their potential for success if installed for the full 9.2 mile project. The test installations would allow detailed evaluation and comparison of each alternative in terms of constructability, ability to deal with the soft soils, wave attenuation, shoreline response, maintenance requirements, cost, and aesthetics.





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE
SEFC/Estuarine Habitats & Coastal Fisheries Center
646 Cajundome Boulevard
Lafayette, Louisiana 70506

Attached please find the statement of local sponsor concurrence for construction approval request and brief description of the status of compliance with the various SOP requirements for construction approval. Please do not hesitate to contact me at 301-713-0174 if you have any questions regarding this matter.

Sincerely,

Erik Zobrist, Ph. D.
NMFS Program Manager

cc:

Julie Z. LeBlanc, USACE
Sharon Parrish, EPA
Wes McQuiddy, EPA
Britt Paul, NRCS
John Jurgensen, NRCS
Richard Hartman, NMFS
Rachel Sweeney, NMFS
Gerry M. Duszynski, DNR
Daniel Llewellyn, DNR
Maury Chatellier, DNR
Darryl Clark USFWS
Kevin Roy, USFWS
Project File
NMFS, Galveston
Erik Zobrist, NMFS



Rockefeller Refuge Shoreline Stabilization (ME-18) Phase II Funding Request
November 2005

1.) Description of Phase One Project

This project was authorized under the Coastal Wetland Planning Protection and Restoration Act (CWPPRA) Project Priority List 10 for the protection of an estimated 9.2 mile stretch of shoreline at Rockefeller State Wildlife Refuge. Shoreline loss at Rockefeller averages 39 feet/yr, equivalent to the loss of marsh the size of a football field every week. Project costs were originally estimated to be 96 million (100% funding).

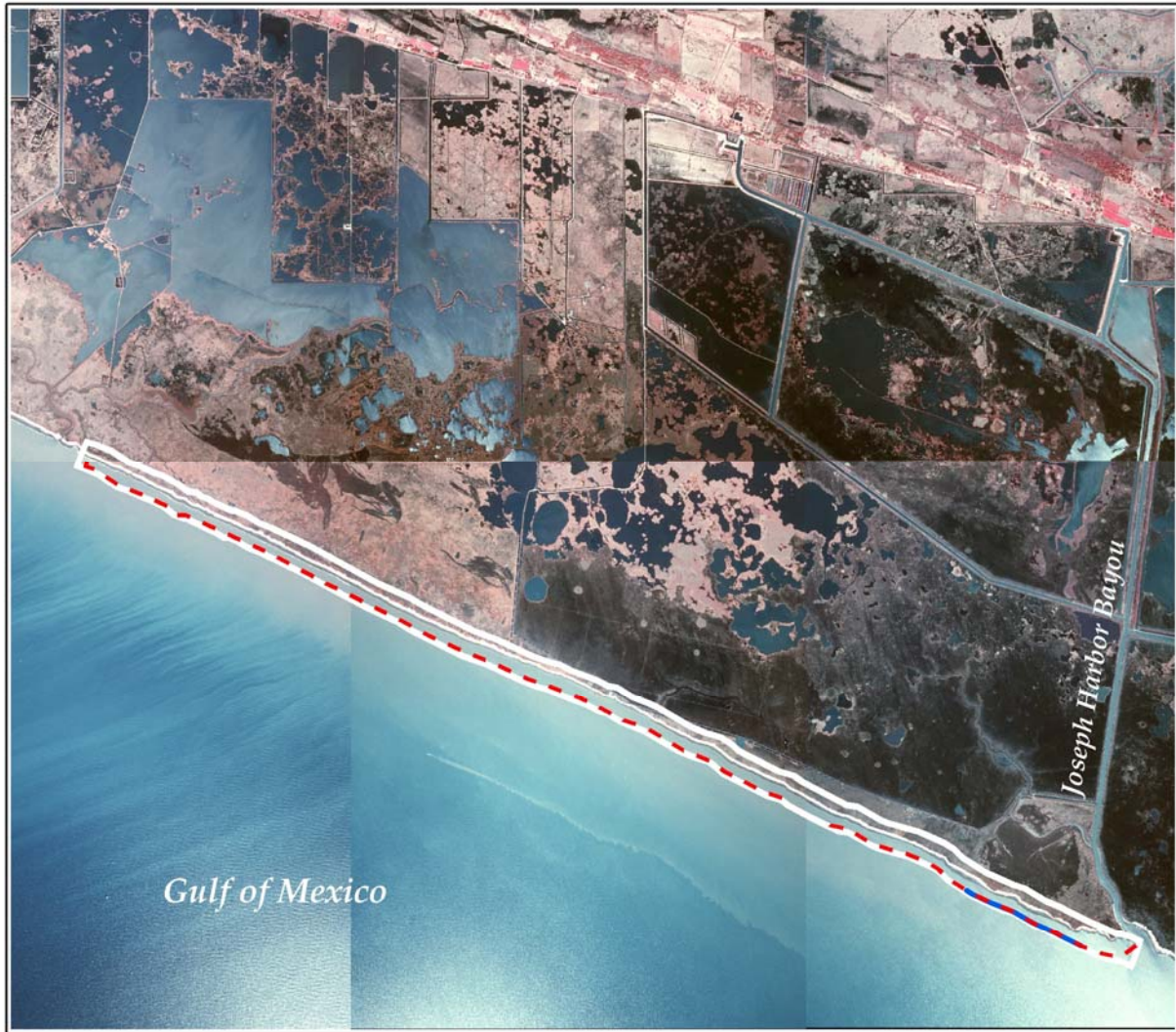
2.) Overview of Phase One Tasks, Process and Issues

Over 80 alternatives were considered based on their ability to (1) prevent beach erosion for up to Category 1 hurricane conditions, estimated to have a return frequency of about 10 years at the project site, (2) be designed, constructed, monitored, and maintained over a 20-year design life for under \$50 million, and (3) where practicable, remain stable for more severe storm conditions up to a 100-year event. A key conclusion from the geotechnical investigation is that the subsurface consists of very soft clay to a depth of approximately 40 ft, which eliminated most conventional shoreline protection alternatives due to bearing capacity and settlement issues. This, coupled with budget limitations of the CWPPRA program, made finding viable alternatives that met these goals extremely challenging. Numerous alternatives were considered, both conventional and unconventional.

Given the unique challenges provided at the Rockefeller Refuge shoreline, questions remained on constructability, design, and performance of restoration features that would meet the project goals. At the February 17, 2005 Task Force meeting, a project change in scope to pursue the development of test sections was approved. Therefore, four final alternatives were selected for consideration in a prototype test program at the Refuge that would help predict their potential for success if installed for the full 9.2 mile project. The test installations would allow detailed evaluation and comparison of each alternative in terms of constructability, ability to deal with the soft soils, wave attenuation, shoreline response, maintenance requirements, cost, and aesthetics.

Landrights were secured from the state without issue. A draft EA has been prepared and is currently being circulated.


3.) Description of Phase Two Candidate Project




Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)



- Limits of Test Sections
 - - - Shoreline Protection *
 - Project Boundary
- * denotes proposed features

0.5 0 0.5 1
 Kilometers

0.5 0 0.5 1
 Miles

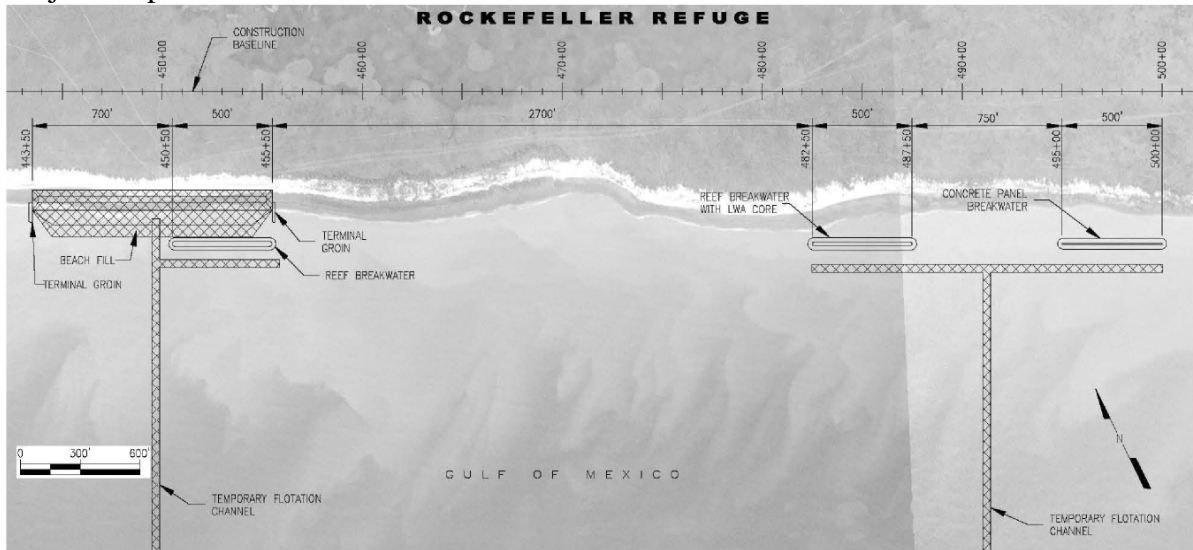
Map ID: USGS-NWRC 2006-11-0012
 Map Date: November 18, 2005

Map Produced By:
 U.S. Department of the Interior
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station
 Baton Rouge, LA

Image Source:
 2004 Digital Orthophoto Quadrangle

Scale 1:86,000

Project Map:

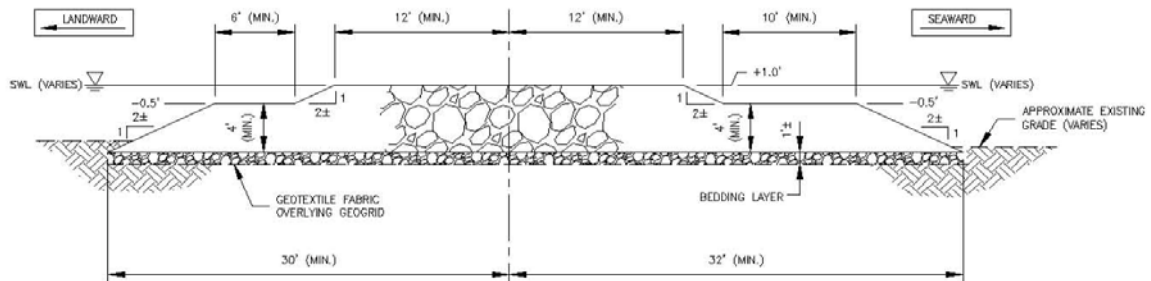


Project Features:

Construction of prototype test installations for four alternatives is proposed, as described in #2 above. Evaluation of the test installations will serve as the basis for implementation of the full 9.2 mile project based on constructability, ability to deal with the soft soils, wave attenuation, shoreline response, cost, maintenance requirements, and aesthetics.

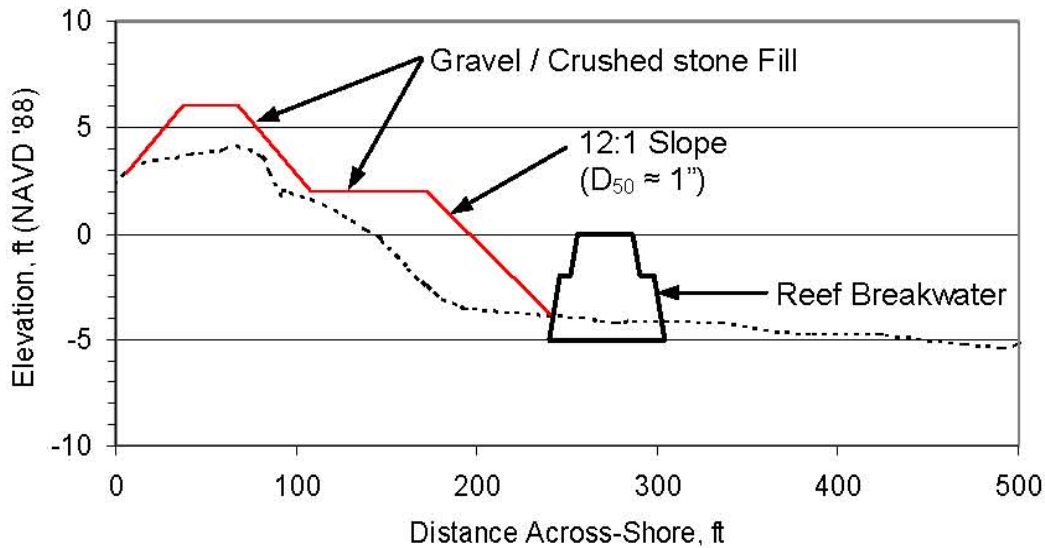
The location of the testing program was selected to be at the eastern end of the 9.2-mile project area a minimum of 2,000 ft from Joseph Harbor. The proposed layout for the testing program affects a total of 0.56 miles along the shoreline.

–The Beach Fill with Gravel/Crushed Stone (G/CS) section consists of adding gravel/crushed stone (G/CS) to the existing soft clay shoreline.



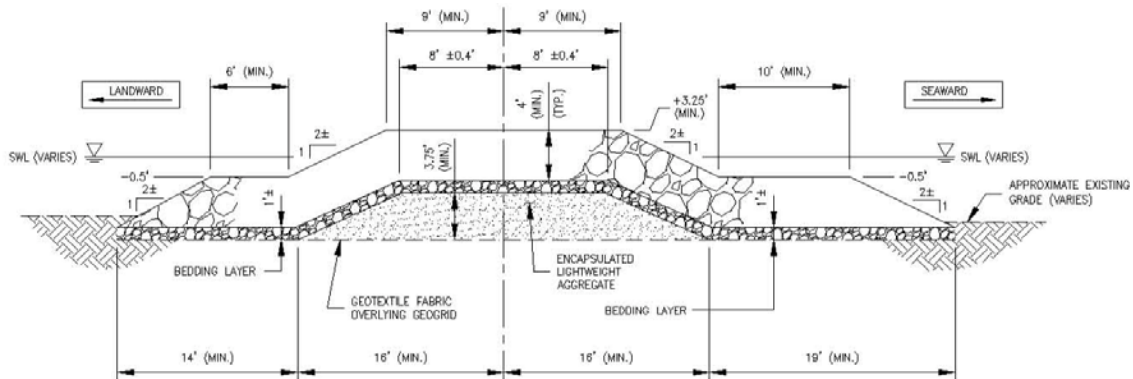
Typical Section of a Reef Breakwater

- The Reef Breakwater with G/CS Beach Fill consists of constructing a reef breakwater conjunction with a landward G/CS beach fill. The two beach fill alternatives would be joined to create a continuous 1,200 ft fill test section with a terminal groin at each end. The reef breakwater would be located within the eastern 500 ft of the fill area, with the remaining 700 ft being unprotected fill that comprises the Beach Fill with G/CS test section.



Typical Section of Reef Breakwater with G/CS Beach Fill Alternative

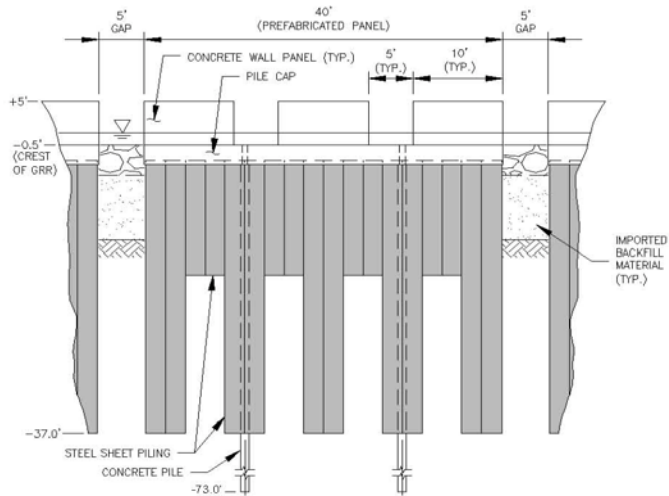
-The Reef Breakwater with LWA consists of constructing a reef breakwater with a LWA core replacing the rock core of the structure with an encapsulated lightweight expanded shale or clay product that is almost neutrally buoyant, decreasing the bearing pressure and allowing greater crest elevations and increased wave attenuation.



Typical Section of Reef Breakwater with LWA Core Alternative

-The Concrete Panel Breakwater consists of the construction of a concrete panel breakwater with a pre-cast concrete cap on steel sheet piles in contiguous panels approximately 40 feet long.

The Concrete Panel Breakwater and the Reef Breakwater with G/CS Beach Fill would be constructed in 500 ft sections, with a 750 ft open water buffer between them. The test sections will be constructed 2,700 ft to the east of the beach fill alternative test sections to provide a buffer.



Typical Elevation of Concrete Panel Breakwater Alternative

FACT SHEET
November 20, 2005

Project Name and Number: Rockefeller Refuge Shoreline Stabilization (ME-18)
(Project Priority List 10)

Problem: The average long-term coastal erosion rate in the project area is estimated to be 30.9 feet/year. Recent land loss rates are estimated at 50 feet/year (57 acres/year). Storms can create short-term rates that are much larger than this. For example, in 1998, Tropical Storm Frances caused an estimated 60-65 feet of erosion along this stretch during a four-day period according to anecdotal information. Intertidal marshes are among the most productive ecosystems on earth and their rapid disappearance may significantly impact the economy of South Louisiana. Action is needed to provide immediate protection to existing wetlands.

Goals: Halt Gulf shoreline retreat and direct marsh loss, protect saline marsh habitat, and enhance fish and wildlife habitat

Project Status: The project has reached a 95% design status.

Proposed Solution: Evaluate four alternatives to compare how each alternative performs in terms of constructability, ability to deal with the soft soils, wave attenuation, shoreline response, maintenance requirements, cost, and aesthetics. The four test sections are: (1) Beach Fill with gravel/crushed stone, (2) Reef Breakwater with sand or gravel/crushed rock beach fill, (3) Reef Breakwater with light weight aggregate (LWA) core, and (4) Concrete Panel Breakwater.

Issues: The poor soil conditions and low bearing capacity severely limit the type of shoreline protection able to be constructed to provide the desired level of shoreline protection. Over 80 alternatives, and variations of alternatives, were considered for construction. Most alternatives were determined to be non-feasible for one or more of the following reasons: design parameters, constructability, cost, poor performance, unproven design for Gulf application, not effective for longer wave periods of open coast, unproven design, subject to debris punctures and deflation, soil load, and reflection over rock. Hence, the construction of test sections.

Estimated Costs and Benefits: Fully funded the cost is estimated to be \$10,003,623.

4.) Checklist of phase Two requirements

A. List of Goals and Strategies

The primary goal of this project is to (1) halt Gulf shoreline retreat and direct marsh loss from Beach Prong to Joseph Harbor. Additional goals are (2) to protect saline marsh habitat, and (3) enhance fish and wildlife habitat.

The proposed strategy is to construct prototypes of four alternatives to identify what technique would successfully accomplish the project goals across the western Gulf coast.

B. Cost Sharing Statement

A cost sharing agreement was signed for Phase I costs September 2001.

C. Notification that landrights will be finalized.

Landrights were secured from the Louisiana Department of Wildlife and Fisheries July 5, 2001. A certification letter was received August 17, 2001.

D. Preliminary Design Review

A favorable preliminary Design Review was held September 23, 2004.

E. Final Project Design Review

A favorable 95% design meeting was held September 20, 2005.

F. Draft EA

A draft EA was circulated November 23, 2005. Comments are due December 30, 2005. No significant issues are anticipated.

G. Written summary of ER

Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)

Ecological Review Summary

July 6, 2005

Summary/Conclusions

Soils found along the Louisiana coast are typically extremely soft, organic, silt-clays which are subject to high rates of erosion. These soils possess very poor load-bearing capacities and consequently are poor substrates for construction of rock dikes typically used in shoreline protection efforts (Howard et al. 1984). Therefore, it is important to test the effectiveness of alternative hard-structure techniques in protecting vulnerable shorelines. It should be noted that both the CS-01b and TE-29 projects were successful in part due to the availability of a source of sediment. However, conditions are different for this project; there is a lack of availability of sediment supply at the Rockefeller Wildlife Refuge site. Therefore, in the sediment-lean environment, any potential for longshore transport of sediment is not feasible. Consequently, there is no projection that any accretion of sediment will occur behind the various test shoreline protection structures. The design and layout of the test sections appear to be acceptable. In the Lake Salvador Shore Protection Demonstration project, the treatments were not randomly placed along the shoreline, and their close proximity to one another resulted in noticeable treatment interactions. As a result, statistical testing of the data was not possible and definitive conclusions regarding the treatments' influence on shoreline erosion rates could not be drawn. For the Rockefeller Refuge Gulf Shoreline Stabilization project test sections reviewed in this document, Shiner Moseley and Associates, Inc. (2005) considered wave diffraction for spacing of the breakwater alternatives, and estimated that a breakwater spacing that exceeds five times the wavelength will allow the breakwaters to function independently of each other. In addition, the excessive distance from the shoreline that led to the reduced effectiveness on past projects has been addressed in this project. Consideration was given to knowledge that to prevent any potential wave regeneration between the breakwater and the shoreline, a fetch of 200 feet or less would effectively limit the erosive waves that could harm an un-vegetated shoreline (Shiner Moseley and Associates, Inc. 2005). Random variability in local geological conditions may affect the test results more than would any differences among the competing designs. Without replication (building more than one of each design) the relative effectiveness of the designs is essentially unknowable. Monitoring a control area, although worthwhile, does not improve this data gap. Recent aerial surveys show that shoreline erosion rates vary by more than fifteen feet per year over short distances in the vicinity of the test area (Shiner Moseley and Associates, Inc. 2005). The geotechnical survey reports spatial variability in the mechanical properties of the soils that may affect subsidence more than would the differences in breakwater construction (Shiner Moseley and Associates, Inc. 2005). Therefore, limitations exist in interpreting the results of data obtained from monitoring the test sections of this endeavor.

Recommendations

Based on the evaluation of the conceptual design and confidence in goal attainability for Rockefeller Refuge Gulf Shoreline Stabilization, the project appears to be acceptable to proceed toward construction authorization pending a favorable 95% Design Review.

H. Application for or Issuance of Public Notices for Permits

The permit application was submitted to the U.S. Army Corps of Engineers November 3, 2005.

I. HTRW

HTRW is not required for the project location.

J. Section 303

Section 303E approval was received September 5, 2003 from the Corps.

K. Overgrazing

A favorable overgrazing determination was received December 13, 2001.

L. Fully funded cost

See attached worksheet.

M. WVA

	Phase I Fully Funded Cost	Phase 2 Fully Funded Cost	AAC/AAHU	AAHU	Acres Protected/ Created
ORIGINAL	\$1,929,888	\$94,058,750	\$22,799	344	920 ac

Based on the opinion of the Environmental Working Group and Engineering Working Group, no revision of the WVA was made.

N. Prioritization

	Cost Effectiveness	Area of Need	Implementability	Certainty of Benefits	Sustainability	HGM Riverine Input	HGM Sediment Input	HGM Sturcute And Function
Score	10	11.25	15	6	2	0	0	5
Total	49.25							

Based on the opinion of the Environmental Working Group and Engineering Working Group, no revision in Prioritization was made.

State of Louisiana



RECEIVED

OCT 24 2005

NMFS, LAFAYETTE

SCOTT A. ANGELLE
SECRETARY

KATHLEEN BABINEAUX BLANCO
GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL RESTORATION AND MANAGEMENT

October 20, 2005

Dr. John Foret
National Marine Fisheries Service
Estuarine Habitats and Coastal Fisheries Center
646 Cajun Dome Blvd, Rm. 175
Lafayette, LA 70506

Re: 95% Design Review for Rockefeller Refuge Gulf Shoreline Stabilization
Statement of Local Sponsor Concurrence

Dear Dr. Foret:

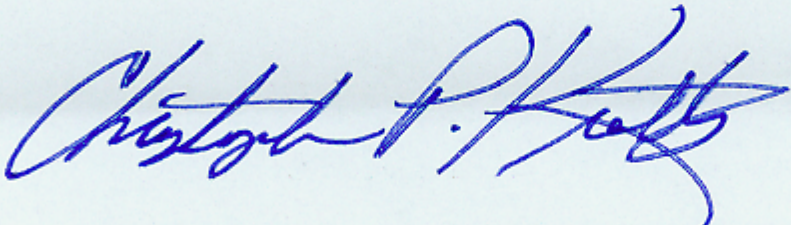
The 95% Design Review Conference was held on September 20th, 2005 for the Rockefeller Refuge Gulf Shoreline Stabilization project. Based on our review of the project information compiled to date, and, in response to your letter of support for the project, we, as local sponsor, concur with the 95% Design Package. LDNR recommends that Phase II funds be requested from the CWPPRA Task Force at the next available opportunity.

This request reflects the construction and monitoring of the designed test sections as documented in the Final Design Report. At the end of the prescribed monitoring period, the success of the individual test sections will be evaluated and a decision made whether to continue with a comprehensive design for the entire project limits.

In accordance with the CWPPRA Project Standard Operating Procedures Manual, we request that you forward this letter of concurrence along with the revised project cost estimate to the Technical Committee and the Planning and Evaluation Subcommittee. We also request that our project manager, Maury Chatellier, be copied on that and other correspondence concerning this project.

Please do not hesitate to contact me if I may be of any assistance.

Sincerely,



Christopher P. Knotts, P.E.
Director

Cc: William K. Rhinehart, CRD Administrator
John Hodnett, P.E., Engineer Manager
Luke E. LeBas, P.E., Engineer Manager
Maury Chatellier, P.E., Project Manager
DNR Project Team
Project File ME-18

Ship Shoal: Whiskey West Flank Restoration

TE-47

CWPPRA
Ship Shoal: Whiskey West Flank
Restoration (TE-47)
Phase II Request

Technical Committee Meeting

December 7, 2005

New Orleans, LA

Project Overview

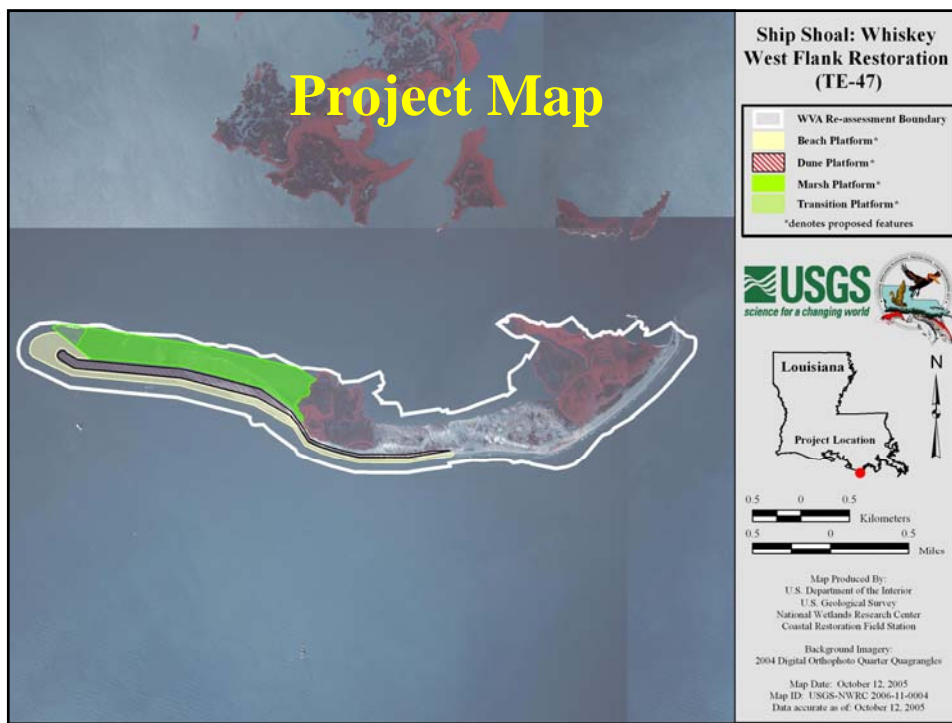
Project Location: Region 3 - Terrebonne Basin, Terrebonne Parish, west spit area Whiskey Island.

Problem: The Isles Dernieres Chain, which has been considered one of the most rapidly deteriorating barrier shorelines in the U.S., is losing its structural framework functions for the coastal/estuarine ecosystem including storm buffering capacity and protection for inland bays, estuary and wetlands, human populations and infrastructure. Whiskey Island changes from 1978 to 1988 include loss of 31.1 acres per year.

Project Overview (cont.)

Goals:

- **Demonstrate feasibility of mining Ship Shoal**
- **Restore the integrity of the West Flank**
- **Add offshore sediment**
- **Rebuild the natural structural framework**
- **Create a continuous protective barrier**
- **Reduce wave energies**
- **Strengthen the long-shore sediment transport**
- **Provide sustainable barrier island habitat, and**
- **Restore roughly 500 acres of barrier island**



Project Features Overview

West Flank –

- 415 Acres of intertidal, supratidal, and dune habitat
- 134 Acres of subtidal habitat.

Project Extension -

- 85 Acres of intertidal, supratidal, and dune habitat
- 69 Acres of subtidal habitat



Total Acreage -

- 500 Acres of intertidal, supratidal, and dune habitat
- 203 Acres of subtidal habitat
- 3.85 million cubic yards of sand, in place

Project Benefits & Costs

- **Benefits include evaluation of the feasibility of using Ship Shoal sand for coastal restoration as well as, adding sediment to the longshore transport system. The project would benefit a total of 703 acres of barrier island and shallow water habitat. At the end of 20 years, there would be a net of 195 acres of island over the without-project condition.**
- **The Fully Funded Cost for the project is: \$42,919,000**
- **The Prioritization Score is: 60.**

Project Comparison/Contrast

The Present vs. PPL # 11

Ship Shoal: Whiskey West Flank (TE-47)

	Phase 1 Authorization	Current Phase 2	Percent Difference
Net Acres	182	195	7.10%
AAHUs	191	269	40.80%
Fully Funded First Cost	\$38,985,100	\$42,613,143	9.30%
Total Fully Funded Cost	\$39,302,900	\$42,918,821	9.20%

Why Should You Fund this Project Now?

- Barrier Islands are first line of defense against storm surge
- Determine the feasibility of mining Ship Shoal for future restoration projects
- Potential use of Ship Shoal Sand for levee base material
- Rapidly changing shoreline of the Isle Dernieres
- Infuses new sediment into system
- Limited Plans and Specifications shelf life

Questions?



Brad Crawford, P.E.
US Environmental
Protection Agency
(214) 665 - 7255



Chris Williams, P.E.
LA Dept. of Natural
Resources
(225) 342 - 7549

Overview of Phase 1 Tasks, Process and Issues

LDNR contracted with the company of DMJM Harris for the Engineering and Design (E&D). DMJM Harris conducted the following tasks:

- Delineated a borrow area on Ship Shoal by conducting a geophysical investigation.
- Surveyed the project area.
- Applied the appropriate modeling to optimize the cross section and to ensure the project does not have a negative impact on adjacent areas.
- Developed project Plans, Specifications, Permit Drawings and Design Report.

Compliance with the National Environmental Policy Act (NEPA) is being addressed in two separate tracks. To address potential impacts to the dredging borrow site, the MMS completed an Environmental Assessment (EA) dated April 2004 addressing both this project and the Morganza to the Gulf Levee project. That EA included information regarding cultural resources obtained from the remote sensing survey completed by EPA in December 2003. NEPA compliance regarding the island fill site is being addressed in a separate EA developed by EPA. The Draft EA was posted along with the 95% E&D documents, and the final Draft EA has been routed for signature and is expected to be published in the Federal Register in November 2005. LDNR and EPA investigated the potential for cultural resource areas and determined there are not any in the delineated borrow area or the project footprint.

The project site was affected by hurricanes Katrina and Rita in 2005. EPA and LDNR surveyed the island via aerial flights after each event and LDNR is scheduled to perform a ground survey of the project area in November 2005. It is not expected that the hurricanes have significantly affected the project site, hence, revisions to the plans/quantities are not expected to be necessary. Aerial views of the project area, both before Katrina and post Rita, are shown in Enclosure E.

Description of the Phase 2 Project

The overall project objectives as enumerated in the 95% E&D report are:

- Demonstrate the feasibility of moving Ship Shoal sand to the Isles Dernieres for future restoration projects;
- Restore the integrity of the West Flank of Whiskey Island to retain its structural function;
- Add offshore sediment to the West Flank of Whiskey Island from Ship Shoal to increase sediment supply and strengthen island formation;
- Rebuild the natural structural framework within the coastal ecosystem to provide for separation of the gulf and the estuary;
- Create a continuous protective barrier for back bays and inland marshes;
- Reduce wave energies thereby helping to reduce land loss;
- Strengthen the longshore transport system of sediment for continuous island building;
- Provide a unique and sustainable barrier island habitat for numerous biological species; and,
- Restore roughly 500 acres of barrier island habitat on the island's West Flank.

The proposed restoration template would restore the west flank of Whiskey Island through the direct creation of approximately 415 acres of new intertidal, supratidal, and dune habitat plus 134 acres of subtidal habitat. Once the project data was gathered and computer models developed, we realized the project may concentrate over-wash toward existing marsh. We therefore decided to extend the dune feature to protect this existing marsh. The project extension to the east will create approximately 85 acres of additional new intertidal, supratidal, and dune habitat plus 69 acres of additional subtidal habitat.

Therefore, the total acreage created for the preferred alternative (Alternate "B" Extended) will be 500 acres of new intertidal, supratidal, and dune habitat plus 203 acres of subtidal habitat. Sheets "4 of 24" and "5 of 24" in Enclosure C show the project plan view and typical cross section for the West Flank, and Sheet "6 of 24" shows the typical cross section of the dune extension. The estimated volume of sand needed, based on fill volume, is 3.85 million cubic yards. A revised fact sheet and project map are included in Enclosure D.

Because project modeling indicated a significant difference in project estimated performance and the increase in scope with the inclusion of the dune extension, EPA performed a revised WVA using the information obtained thru the E&D process. A summary of the project benefits and cost, both Phase 1 and Phase 2, are as follows:

	Phase 1 Authorization	Current Phase 2	Percent Difference
Net Acres	182	195	+7.1%
AAHUs	191	269	+40.8%
Fully Funded First Cost (millions)	\$38,985,100	\$42,613,143	+9.3%
Total Fully Funded Cost (millions)	\$39,302,900	\$42,918,821	+9.2%

The Checklist of Phase 2 requirements is provided in Enclosure A. If you have any questions, please contact Brad Crawford, P.E., at (214) 665-7255.

Sincerely,



William K. Honker, P.E.
Deputy Director
Water Quality Protection Division

Enclosures:

cc: (See next Page)

cc:

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Enclosure A

Phase 2 Checklist

PHASE 2 CHECKLIST

A. List of Project Goals and Strategies.

- *Demonstrate the feasibility of moving Ship Shoal sands to the Isles Dernieres for future restoration projects;*
- *Restore the integrity of the West Flank of Whiskey Island to retain its structural function;*
- *Add offshore sediment to the West Flank of Whiskey Island from Ship Shoal to increase sediment supply and strengthen island formation;*
- *Rebuild the natural structural framework within the coastal ecosystem to provide for separation of the gulf and the estuary;*
- *Create a continuous protective barrier for back bays and inland marshes;*
- *Reduce wave energies thereby helping to reduce land loss;*
- *Strengthen the longshore transport system of sediment for continuous island building;*
- *Provide a unique and sustainable barrier island habitat for numerous biological species; and,*
- *Restore roughly 400 acres of barrier island habitat into the island's West Flank*

B. A Statement that the Cost Sharing Agreement between the Lead Agency and the Local Sponsor has been executed for Phase I.

EPA and the LDNR entered into a cooperative agreement effective January 27, 2003, and revised on February 25, 2004.

C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase 2 approval.

The project property is owned by the State of Louisiana and is managed by the Louisiana Department of Wildlife and Fisheries (LDWF). LDNR and LDWF have negotiated a landrights contract and have agreed on the language. We are currently waiting for the documents to be signed, which has been delayed due to Hurricanes Katrina and Rita.

D. A favorable Preliminary Design Review (30% Design Level). The Preliminary Design shall include completion of surveys, borings, geotechnical investigations, data analysis review, hydrologic data collection and analysis, modeling (if necessary), and development of preliminary designs.

The 30% E&D review was held in LDNR offices on November 8, 2004. In an email dated January 12, 2005, EPA and LDNR informed the Technical Committee of the results of the 30% E&D and our intent to move forward with the project.

E. Final Project Design Review (95% Design Level). Upon completion of a favorable review of the preliminary design, the Project plans and specifications shall be developed and formalized to incorporate elements from the Preliminary Design and the Preliminary Design Review. Final Project Design Review (95%) must be successfully completed prior to seeking Technical Committee approval.

The 95% E&D review was held in LDNR offices on September 28, 2005. The 95%

concurrence letter from LDNR was transmitted to the Technical Committee and P&E Subcommittee on October 25, 2005.

- F. A draft of the Environmental Assessment of the Project, as required under the National Environmental Policy Act must be submitted thirty days before the request for Phase 2 approval.

Preliminary Draft EA was provided for Agency review prior to the 95% E&D meeting. The final draft EA has been routed for concurrence and signature and is expected to be published in the Federal Register no later than November 2005.

- G. A written summary of the findings of the Ecological Review.

The final ER was posted as required prior to the 95% Design review. The document stated the following:

Based on information gathered from similar restoration projects, engineering designs and related literature, the proposed strategies in the Ship Shoal: Whiskey West Flank Restoration project will likely achieve all of the desired goals. It is therefore recommended that this project progress towards construction following a favorable 95% Design Review. However, prior to construction the following needs to be addressed.

It is believed that the sandy material used to create the back barrier marsh component will experience minimal settlement and consolidation over the life of the project. However, a settlement analysis may be useful to determine how long the restored area will remain at the intertidal target elevation range of 1.0-2.0 feet NAVD-88.

- *Answer: The marsh construction elevation ranges from +2' NAVD 88 to a +1' NAVD. Instantaneous settlement of this high quality sand will occur prior to construction being complete. If the material settles beyond the range of marsh elevation more material can be placed to offset this settlement. Other barrier island processes such as island rollover and cross shore sediment transport will far out weigh settlement of the underlying materials. The question concerning settlement was raised after the field data was collected. The design team did not feel the cost to remobilize equipment outweighed the benefits from the data. Permitting and regulations prevent LDNR from constructing marsh platforms at significantly higher elevations than +2' in the anticipation of settlement of the underlying materials. Also, with no money for maintenance or re-nourishment, settlement of the marsh can not be addressed once it settles out of the healthy marsh range. Based on the quality of material being placed, and the minimal amount of material being placed (less than 2' on average) the design team did not feel a geotechnical investigation on the marsh platform was warranted.*

- H. Application for and/or issuance of the public notices for permits. If a permit has not been received by the agency, a notice from the Corps of when the permit may be issued.

The LDWF will be the permit holder and LDNR will act as their agent. The permit has been sent for processing and should be approved within 3 months.

- I. A hazardous, toxic and radiological waste (HTRW) assessment, if required, has been prepared.

An HTRW survey was not required.

- J. Section 303(e) approval from the Corps.

EPA sent the approval request along with the appropriate documentation to the USACE in a letter dated October 17, 2005.

- K. Overgrazing determination from the NRCS (if necessary).

In a letter dated August 26, 2005, NRCS concluded that overgrazing is not of concern in this area.

- L. Revised cost estimate of Phase 2 activities, based on the revised Project design.

The Fully Funded Cost (FFC) estimate was received from USACE on October 21, 2005. The final FFC estimate was transmitted to the TC and P&E on October 25, 2005.

- M. A Wetland Value Assessment reviewed and approved by the Environmental Work Group.

A revised WVA was completed by EPA and reviewed by the Environmental Work Group. As a result of that effort, EPA received revised benefit numbers from the chairman of the Environmental Work Group in an email dated August 25, 2005.

- N. A breakdown of the Prioritization Criteria ranking score, finalized and agreed upon by all agencies during the 95% design review.

A revised draft Prioritization Criterion ranking fact sheet and score was provided to the Engineering and Environmental Workgroups for review on October 5, 2005, less the fully funded cost information which had not yet been returned from the Economic Workgroup. The FFC estimate was received on October 21, 2005, and the Prioritization Fact Sheet was finalized and transmitted to the TC and P&E on October 25, 2005.

Enclosure B

Ship Shoal/Whiskey West Flank (TE-47)

**Phase 1 - Fact Sheet, Map,
Fully Funded Cost Estimate, and WVA**



11TH PRIORITY PROJECT LIST REPORT

PREPARED BY:

LOUISIANA COASTAL WETLANDS CONSERVATION AND RESTORATION
TASK FORCE

JULY 2003

Project Name - Ship Shoal: Whiskey West Flank Restoration

Coast 2050 Strategy - Regional Ecosystem Strategy #14: Restore and maintain the Isles Dernieres barrier island chain.

Project Location - Region 3 - Terrebonne Basin, Terrebonne Parish, west spit area Whiskey Island.

Problem - The Isles Dernieres Chain, which has been considered one of the most rapidly deteriorating barrier shorelines in the U.S., is losing its structural framework functions for the coastal/estuarine ecosystem including storm buffering capacity and protection for inland bays, estuary and wetlands, human populations and infrastructure. Chain breakup has resulted from both major storm actions and from loss of nourishing sediment from the natural system due to human alterations. Whiskey Island changes from 1978 to 1988 include loss of 31.1 acres per year.

Goals - 1) restore the integrity of the west flank of Whiskey Island to retain its structural function to the coastal/estuary ecosystem; 2) add new offshore prime quality sediment into the west flank; 3) initially restore approximately 387 acres of barrier island habitat to the western flank.

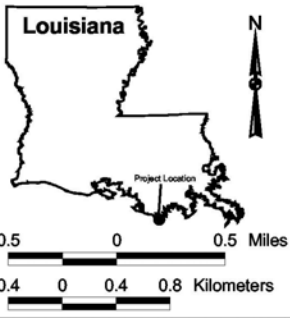
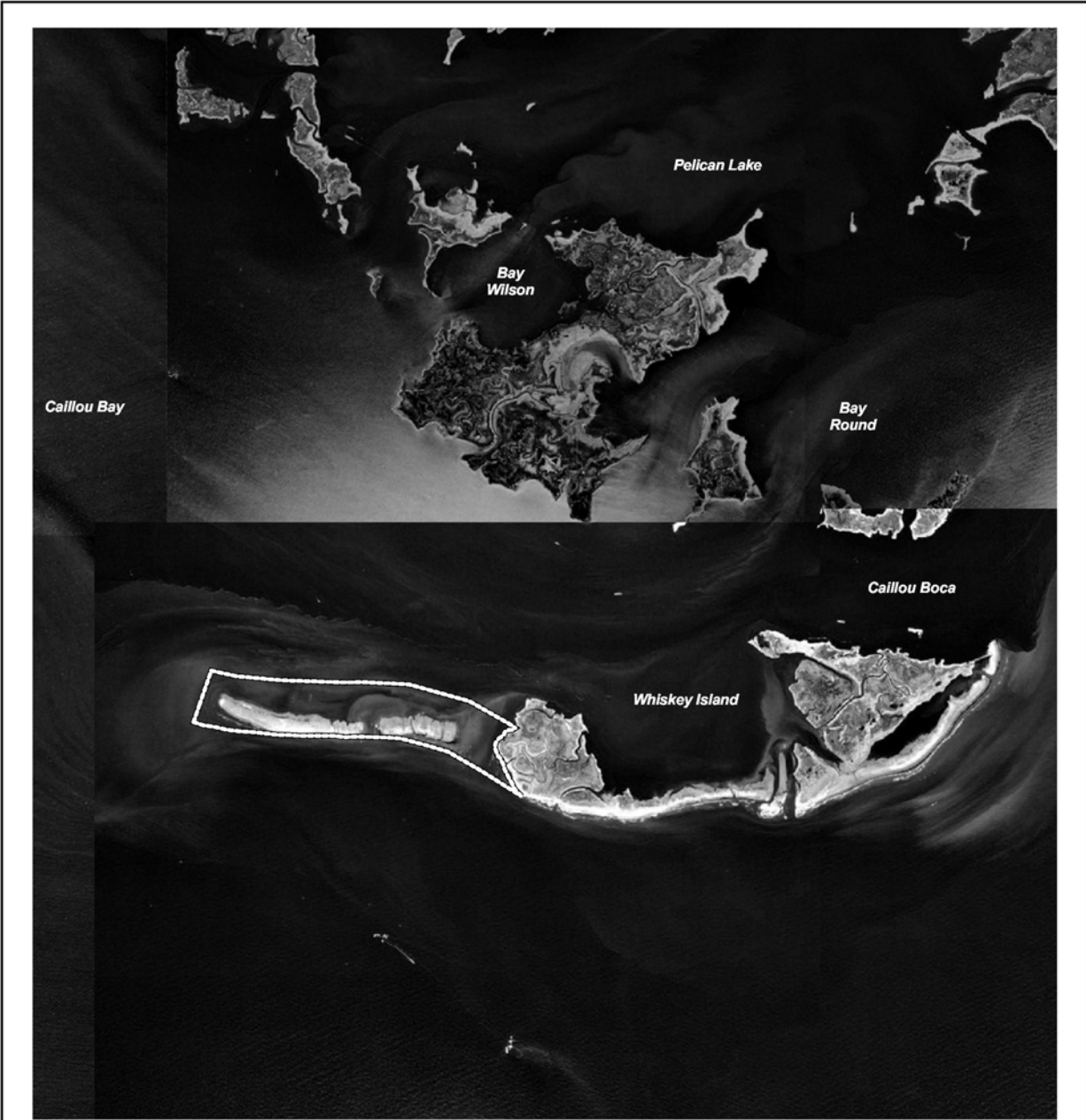
Proposed Solution - The project entails mining and placing Ship Shoal sand from the Minerals Management Service Block 88 by cutterhead or hopper dredge to rebuild the west flank of Whiskey Island, a distance of about 8 miles. The area to be restored includes 57 acres of dunes 7 feet high and 150 feet wide, 114 acres supratidal habitat at 4 feet in elevation, 208 acres intertidal habitat at a 2-foot elevation, and 8 acres subtidal habitat from 0 to minus 1.5 feet in elevation. All areas would be planted and sand fencing placed to trap wind-blown sediment.

Project Benefits - Benefits include prevention of loss of sediment from the system into deeper Gulf waters or into bayside deeper water. The project would benefit a total of 398 acres of barrier island and shallow water. At the end of 20 years, there would be a net of 182 acres of island over the without-project condition.

Project Costs - The fully funded first cost is \$38,985,100 and the total fully funded cost is \$39,302,900.

Risk/Uncertainty and Longevity/Sustainability - There is a moderate degree of risk associated with this project due to greater storm effects in this area of the coast and difficulty in engineering and construction. Benefits should continue for more than 20 years due to the high quality and compatibility of Ship Shoal sand.

Sponsoring Agency/Contact Persons - U.S. Environmental Protection Agency
Jeanene Peckham (225) 389-0736; peckham.jeanene@epa.gov
Wes Mcquiddy (214) 665-6722; mcquiddy.david@epa.gov
Brad Crawford (214) 665-7255; crawford.brad@epa.gov



 Project area

Data Source:
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Field Station

LA Department of Natural Resources
 Coastal Restoration Division

Map Date: November 15, 2001
 Map ID: 200204138

Image Data:
 1998 Digital Orthophoto Quarter Quads (DOQQS)

CWPPRA PPL11
 Region 3

**Whiskey Island West Flank Extension
 (TE-14-1b)**

WETLAND VALUE ASSESSMENT

Benefits Summary Sheet

Project Ship Shoal: West Flank Restoration

The WVA for this project includes 1 area. Total benefits for this project are as follows:

<u>Area</u>	<u>AAHUs</u>
A	191

TOTAL BENEFITS =	191	AAHUS
-------------------------	------------	--------------

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Barrier Island

Project: Ship Shoal: Whiskey Pass Closure and Whiskey Island West Flank
West Flank Area

Condition: Future Without Project

Variable		TY 0		TY 1		TY 10	
		Value	SI	Value	SI	Value	SI
V1a	% Dune	0	0.10	0	0.10	0	0.10
V1b	% Dune Vegetated	0	0.10	0	0.10	0	0.10
V2a	% Supratidal	47	0.90	47	0.90	47	0.90
V2b	% Supratidal Vegetated	5	0.17	5	0.17	30	0.49
V3a	% Intertidal	53	1.00	53	1.00	53	1.00
V3b	% Intertidal Vegetated	5	0.18	5	0.18	20	0.40
V4	% Subtidal	59	1.00	58	1.00	47	1.00
V5	% Woody Cover	0	0.10	0	0.10	0	0.10
V6	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.40	% 100	0.40	% 100	0.40
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI = 0.525		HSI = 0.525		HSI = 0.564	

Project..... Ship Shoal: Whiskey Pass Closure and Whiskey Island West Flank
FWOP

Variable		TY 11		TY 20		TY	
		Value	SI	Value	SI	Value	SI
V1a	% Dune	0	0.10	0	0.10		
V1b	% Dune Vegetated	0	0.10	0	0.10		
V2a	% Supratidal	47	0.90	47	0.90		
V2b	% Supratidal Vegetated	27	0.45	5	0.17		
V3a	% Intertidal	53	1.00	53	1.00		
V3b	% Intertidal Vegetated	18	0.37	5	0.18		
V4	% Subtidal	48	1.00	63	1.00		
V5	% Woody Cover	0	0.10	0	0.10		
V6	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.40	% 100	0.40	%	
V7	Beach/surf Zone	1	1.00	1	1.00		
		HSI = 0.559		HSI = 0.525		HSI =	

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Barrier Island

Project: Ship Shoal: Whiskey Pass Closure and Whiskey Island West Flank
Area A

Condition: Future Without Project

Variable		TY 0		TY 1		TY 3	
		Value	SI	Value	SI	Value	SI
V1a	% Dune	0	0.10	15	1.00	15	1.00
V1b	% Dune Vegetated	0	0.10	25	0.48	60	1.00
V2a	% Supratidal	47	0.90	30	1.00	30	1.00
V2b	% Supratidal Vegetated	5	0.17	25	0.43	70	1.00
V3a	% Intertidal	53	1.00	55	1.00	55	1.00
V3b	% Intertidal Vegetated	5	0.18	25	0.48	60	1.00
V4	% Subtidal	59	1.00	5	0.33	5	0.33
V5	% Woody Cover	0	0.10	5	0.55	5	0.55
V6	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.40	% 100	0.60	% 100	0.60
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI = 0.525		HSI = 0.754		HSI = 0.861	

Project..... Ship Shoal: Whiskey Pass Closure and Whiskey Island West Flank
FWP

Variable		TY 5		TY 10		TY 11	
		Value	SI	Value	SI	Value	SI
V1a	% Dune	15	1.00	15	1.00	15	1.00
V1b	% Dune Vegetated	65	1.00	70	1.00	70	1.00
V2a	% Supratidal	30	1.00	29	1.00	29	1.00
V2b	% Supratidal Vegetated	75	1.00	50	0.75	70	1.00
V3a	% Intertidal	55	1.00	56	1.00	56	1.00
V3b	% Intertidal Vegetated	65	1.00	60	1.00	70	1.00
V4	% Subtidal	5	0.33	5	0.33	5	0.33
V5	% Woody Cover	10	1.00	10	1.00	10	1.00
V6	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 20 80	0.68	% 50 50	0.90	% 50 50	0.90
V7	Beach/surf Zone	1	1.00	1	1.00	1	1.00
		HSI = 0.918		HSI = 0.939		HSI = 0.951	

Project.....
FWP

Variable		TY 20		TY		TY	
		Value	SI	Value	SI	Value	SI
V1a	% Dune	13	1.00				
V1b	% Dune Vegetated	60	1.00				
V2a	% Supratidal	27	1.00				
V2b	% Supratidal Vegetated	60	0.88				
V3a	% Intertidal	60	1.00				
V3b	% Intertidal Vegetated	65	1.00				
V4	% Subtidal	6	0.37				
V5	% Woody Cover	10	1.00				
V6	Interspersion Class 1 Class 2 Class 3 Class 4 Class 5	% 100	0.80	%		%	
V7	Beach/surf Zone	1	1.00				
		HSI = 0.933		HSI =		HSI =	

AAHU CALCULATION

Project: Ship Shoal: Whiskey Pass Closure and Whiskey Island West Flank
West Flank Area

Future Without Project		x HSI	Total HUs	Cumulative HUs
TY	Acres			
0	242	0.525	127.08	
1	246	0.525	129.18	128.13
10	280	0.564	157.89	1289.82
11	276	0.559	154.26	156.07
20	234	0.525	122.88	1245.01
			AAHUs = 140.95	

Future With Project		x HSI	Total HUs	Cumulative HUs
TY	Acres			
0	242	0.525	127.08	
1	398	0.754	299.99	207.59
3	387	0.861	333.30	633.69
5	379	0.918	348.02	681.47
10	372	0.939	349.22	1743.20
11	369	0.951	351.01	350.12
20	345	0.933	321.71	3026.58
			AAHUs 332.13	

NET CHANGE IN AAHU'S DUE TO PROJECT	
A. Future With Project AAHUs =	332.13
B. Future Without Project AAHUs =	140.95
Net Change (FWP - FWOP) =	191.18

Enclosure C

Ship Shoal/Whiskey West Flank (TE-47)

Plan View/Typical Cross-sections

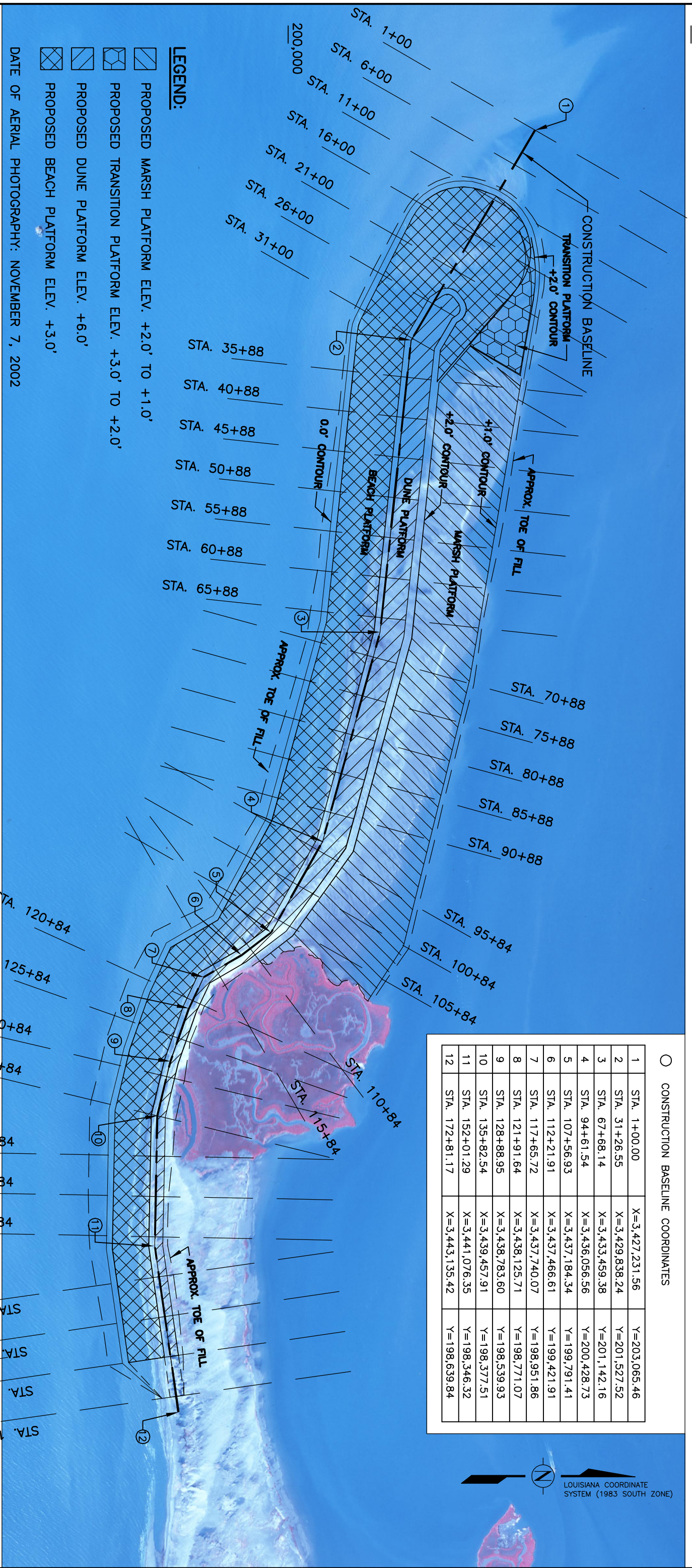
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3,430,000





3,435,000

3,440,000

3,445,000



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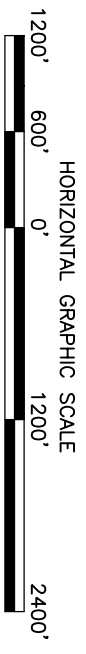
-  PROPOSED MARSH PLATFORM ELEV. +2.0' TO +1.0'
-  PROPOSED TRANSITION PLATFORM ELEV. +3.0' TO +2.0'
-  PROPOSED DUNE PLATFORM ELEV. +6.0'
-  PROPOSED BEACH PLATFORM ELEV. +3.0'


DATE OF AERIAL PHOTOGRAPHY: NOVEMBER 7, 2002

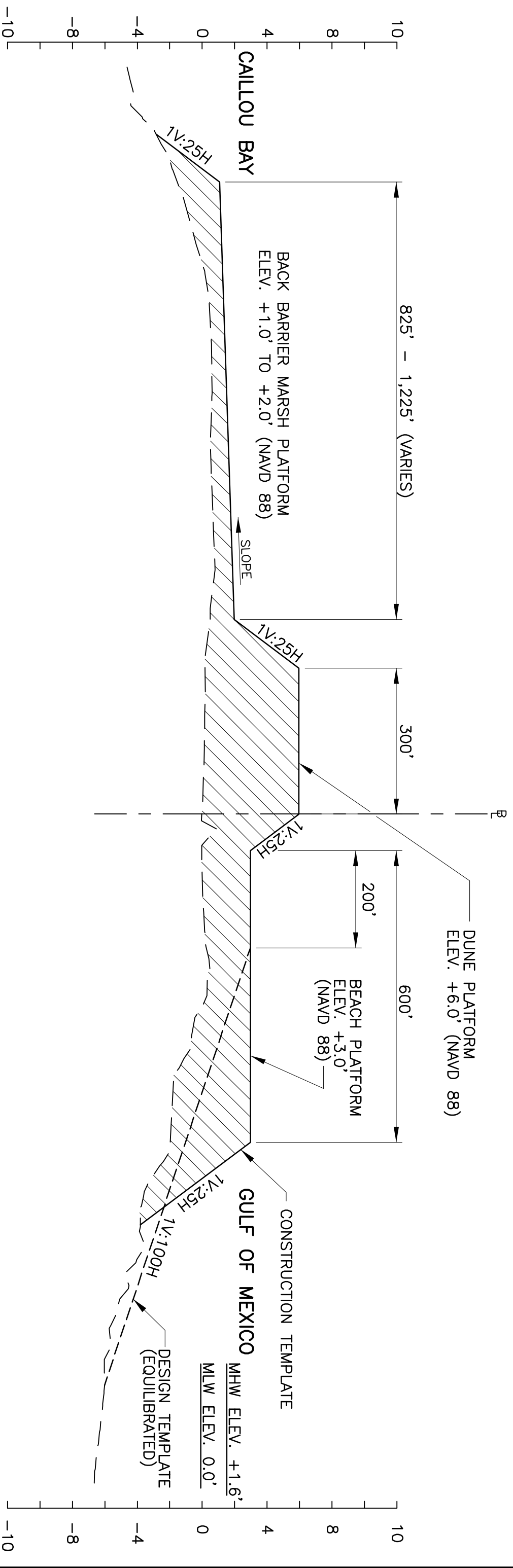
NOTE: CROSS-SECTION PROFILES ARE TYPICALLY SPACED AT 500' INTERVALS.

○ CONSTRUCTION BASELINE COORDINATES

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3	STA. 67+68.14	X=3,433,459.38	Y=201,142.16
4	STA. 94+61.54	X=3,436,056.56	Y=200,428.73
5	STA. 107+56.93	X=3,437,184.34	Y=199,791.41
6	STA. 112+21.91	X=3,437,466.61	Y=199,421.91
7	STA. 117+65.72	X=3,437,740.07	Y=198,951.86
8	STA. 121+91.64	X=3,438,125.71	Y=198,771.07
9	STA. 128+88.95	X=3,438,783.60	Y=198,539.93
10	STA. 135+82.54	X=3,439,457.91	Y=198,377.51
11	STA. 152+01.29	X=3,441,076.35	Y=198,346.32
12	STA. 172+81.17	X=3,443,135.42	Y=198,639.84

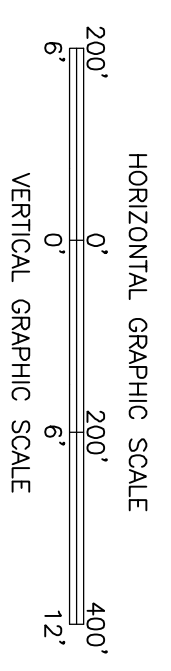


REV.	DATE	DESCRIPTION	BY	 1555 POYDRAS ST., SUITE 1860 NEW ORLEANS, LOUISIANA 70112 PHONE: (504) 529-4533 FAX: (504) 522-2085	DESIGNED BY: J. LOUP APPROVED BY: PRELIMINARY	SHIP SHOAL - WHISKEY ISLAND WEST FLANK RESTORATION STATE PROJECT NUMBER: TE-47 FEDERAL PROJECT NUMBER: TE-47	PROJECT LAYOUT DATE: APRIL 2005 SHEET 4 OF 24
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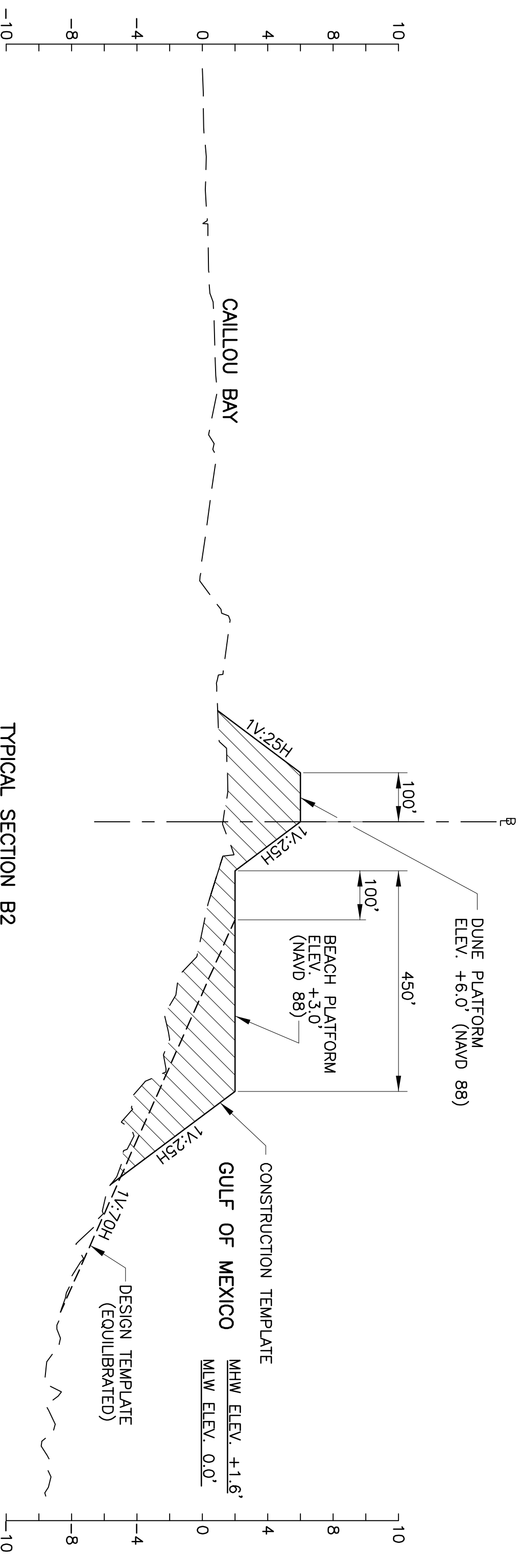
TYPICAL SECTION B1
 STA. 35+88 TO STA. 94+62

- LEGEND**
- CONSTRUCTION TEMPLATE
 - DESIGN TEMPLATE
 - - - EXISTING PROFILE
 - PROPOSED FILL




REV.	DATE	DESCRIPTION	BY

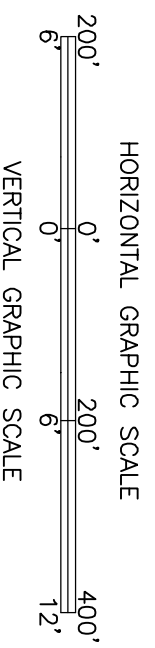
		SHIP SHOAL - WHISKEY ISLAND WEST FLANK RESTORATION	
1555 POYDRAS STREET, SUITE 1860 NEW ORLEANS, LOUISIANA 70112 PHONE: (504) 529-4533 FAX: (504) 522-2085		STATE PROJECT NUMBER: TE - 47 FEDERAL PROJECT NUMBER: TE - 47	
DRAWN BY: J. SCHEXNAVYDER DESIGNED BY: J. LOUP		APPROVED BY: PRELIMINARY	
TYPICAL SECTION B1		DATE: APRIL 2005	
SHEET 5 OF 24		SHEET 5 OF 24	




TYPICAL SECTION B2
STA. 112+22 TO STA. 165+84

LEGEND

- CONSTRUCTION TEMPLATE
- DESIGN TEMPLATE
- EXISTING PROFILE
-  PROPOSED FILL



REV.	DATE	DESCRIPTION	BY

		SHIP SHOAL - WHISKEY ISLAND WEST FLANK RESTORATION	
1555 POYDRAS STREET, SUITE 1860 NEW ORLEANS, LOUISIANA 70112		STATE PROJECT NUMBER: TE - 47	
PHONE: (504) 529-4533 FAX: (504) 522-2085		FEDERAL PROJECT NUMBER: TE - 47	
DRAWN BY: J. SCHEXNAVYDER		DESIGNED BY: J. LOUP	
APPROVED BY:		PRELIMINARY	
SHEET 6 OF 24		DATE: APRIL 2005	

Enclosure D

Ship Shoal/Whiskey West Flank (TE-47)

Revised Fact Sheet and Map / Fully Funded Cost Estimate

Ship Shoal: Whiskey West Flank Restoration

**Eleventh Priority Project List
of the
Coastal Wetlands Planning, Protection and Restoration Act**



Proposed by

U.S. Environmental Protection Agency

and

LA Department of Natural Resources

Contacts: Brad Crawford - US EPA - (214) 665-7255

Kenneth Teague - US EPA - (214) 665-6687

Chris Williams - LDNR - (225) 342-7549

Project Name - Ship Shoal: Whiskey West Flank Restoration

Coast 2050 Strategy - Regional Ecosystem Strategy #14: Restore and maintain the Isles Dernieres barrier island chain.

Project Location - Region 3 - Terrebonne Basin, Terrebonne Parish, west spit area Whiskey Island.

Problem - The Isles Dernieres Chain, which has been considered one of the most rapidly deteriorating barrier shorelines in the U.S., is losing its structural framework functions for the coastal/estuarine ecosystem including storm buffering capacity and protection for inland bays, estuary and wetlands, human populations and infrastructure. Chain break up has resulted from both major storm actions and from loss of nourishing sediment from the natural system due to human alterations. Whiskey Island changes from 1978 to 1988 include loss of 31.1 acres per year.

Goals - 1) Demonstrate the feasibility of moving Ship Shoal sands to the Isles Dernieres for future restoration projects; 2) Restore the integrity of the West Flank of Whiskey Island to retain its structural function; 3) Add offshore sediment to the West Flank of Whiskey Island from Ship Shoal to increase sediment supply and strengthen island formation; 4) Rebuild the natural structural framework within the coastal ecosystem to provide for separation of the gulf and the estuary; 5) Create a continuous protective barrier for back bays and inland marshes; 6) Reduce wave energies thereby helping to reduce land loss; 7) Strengthen the long shore transport system of sediment for continuous island building; 8) Provide a unique and sustainable barrier island habitat for numerous biological species; and, 9) Restore roughly 500 acres of barrier island habitat into the island's West Flank.

Proposed Solution - The proposed conceptual restoration template would restore the west flank of Whiskey Island through the direct creation of approximately 415 acres of new intertidal, supratidal, and dune habitat plus 134 acres of subtidal habitat. In order to control flow training effects on the western most existing marsh lobe, the project footprint includes an extension the dune feature eastward. The project extension to the east would create approximately 85 acres of additional new intertidal, supratidal, and dune habitat plus 69 acres of additional subtidal habitat. Therefore, the total acreage created for the preferred alternate (Alternate "B"-Extended) would be 500 acres of new intertidal, supratidal, and dune habitat plus 203 acres of subtidal habitat.

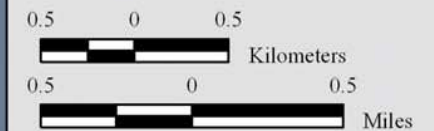
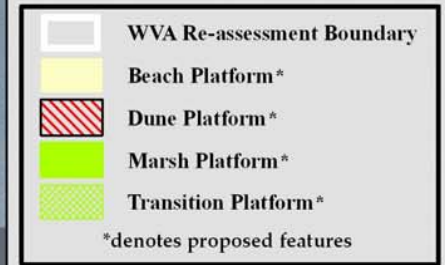
Project Benefits - Benefits include evaluation of the feasibility of using Ship Shoal sand for coastal restoration as well as, adding sediment to the longshore transport system. The project would benefit a total of 703 acres of barrier island and shallow water. At the end of 20 years, there would be a net of 195 acres of island over the without-project condition.

Project Costs - The fully funded first cost is \$42,613,143 and the total fully funded cost is \$42,918,421.

Risk/Uncertainty and Longevity/Sustainability - There is a moderate degree of risk associated with this project due to greater storm effects in this area of the coast and difficulty in construction. Benefits should continue for more than 20 years due to the high quality and compatibility of Ship Shoal sand.

Sponsoring Agency/Contact Persons - U.S. Environmental Protection Agency
Brad Crawford, P.E., (214) 665-7255; crawford.brad@epa.gov
Kenneth Teague (214) 665-6687; teague.kenneth@epa.gov
Chris Williams P.E. (225)342-7549

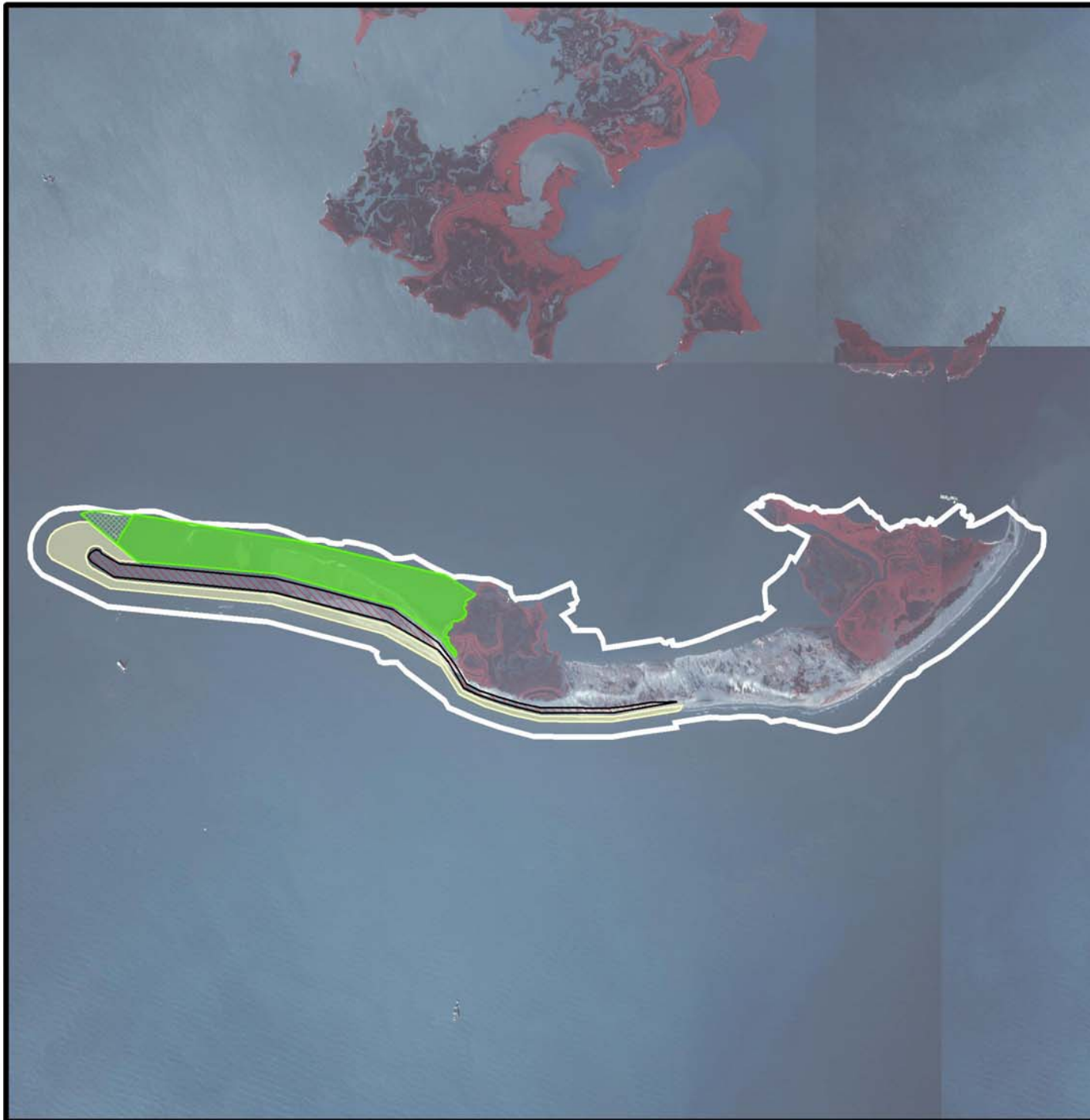
Ship Shoal: Whiskey West Flank Restoration (TE-47)



Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station

Background Imagery:
2004 Digital Orthophoto Quarter Quagranges

Map Date: October 12, 2005
Map ID: USGS-NWRC 2006-11-0004
Data accurate as of: October 12, 2005



Enclosure E

Aerial Photos of Whiskey West Flank

Pre-Katrina



Post Rita



South Lake DeCade – CU 1

TE-39

*Coastal Wetlands Planning,
Protection and Restoration Act*



**SOUTH LAKE DECADE
FRESHWATER INTRODUCTION
(TE-39)**

Phase II Request

*Technical Committee Meeting
December 7, 2005*

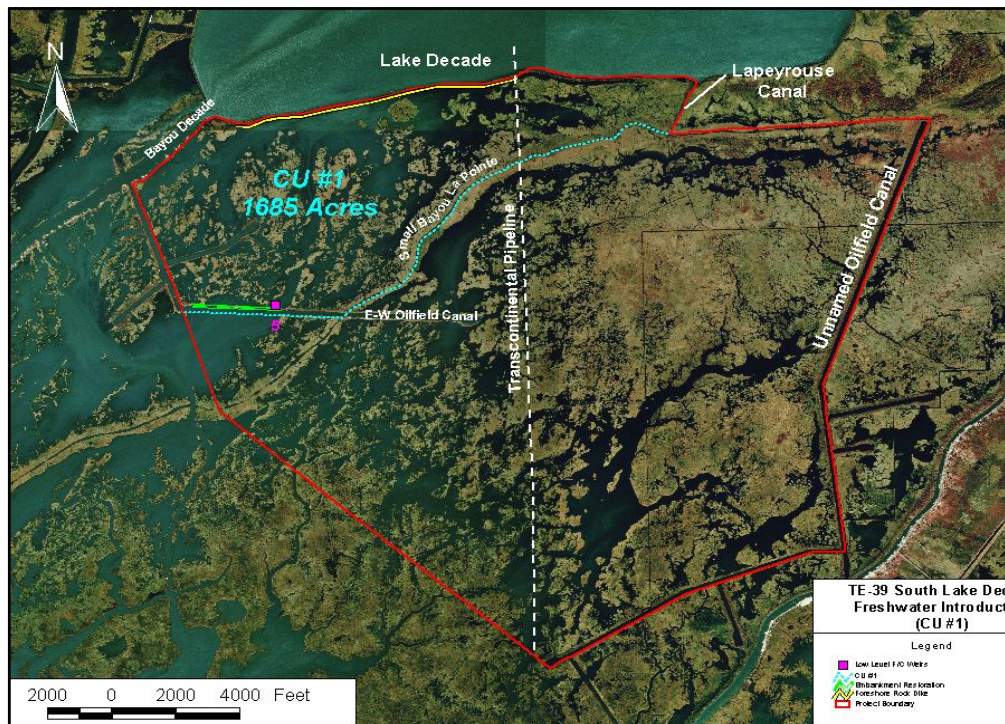
Project Overview

Project Location: Region 3, Terrebonne Basin, Terrebonne Parish, south shore of Lake Decade.

Problem: Interior marshes have suffered dramatic losses of emergent vegetation and currently consists of fragmented wetlands surrounded by open water areas. Shoreline erosion along the south shore of Lake Decade threatens to breach the existing levee that separates the lake from degraded marshes.

Goals:

- 1) Reduce interior marsh loss rates.
- 2) Increase the occurrence and abundance of SAV's.



SOUTH LAKE DECADE – CU #1

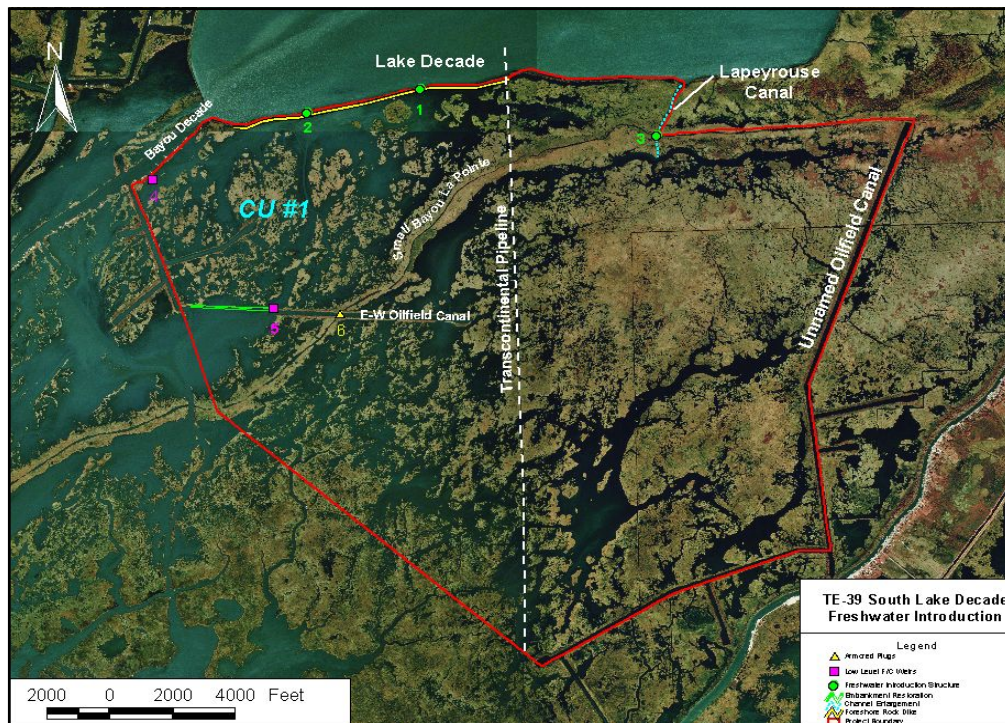
PROJECT FEATURES

- Construction of 8,700 LF of Shoreline Rock Revetment along the south existing embankment of Lake Decade from the Transcontinental Pipeline crossing extending westward to the mouth of Bayou Decade.
- The revetment will have a crest elevation of (+)3.5 ft. NAVD88, blanket width of 2 feet, 2:1 side slope, and an average height of 4 feet.

SOUTH LAKE DECADE – CU #1

Project Benefits & Costs

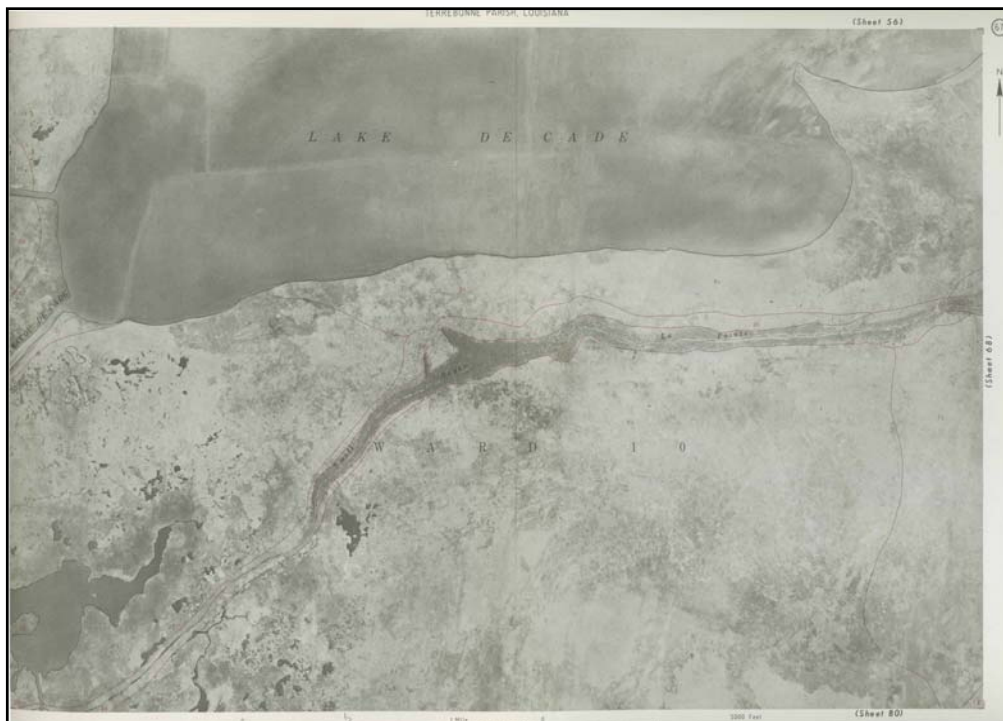
- The 8,700 LF of rock revetment will benefit 823 acres of intermediate/brackish marsh and 862 acres of open water (total 1685 ac.).
- Within the 20 year life of the project (@ TY20), interior marsh loss rates will be reduced and it's projected that 202 acres will be protected.
- The fully funded cost of the project is \$3,698,744. The Phase II request amount is \$2,243,910.
- The Prioritization Score is 74.95.



SOUTH LAKE DECADE – CU #1

Why Should this Project be Funded Now?

- Low Cost \$2,243,910
- Initial Attention to Critical Area
- High Prioritization Score <74.95>
- 100% Landowner Support
- Rapid Loss of Fresh/Intermediate Marsh
- Immediate Need





Questions?



2005 Phase II Authorization Request

South Lake Decade Freshwater Introduction Project (TE-39) Construction Unit 1

Description of Phase I Project

The South Lake Decade Freshwater Introduction Project (TE-39) was approved for Phase 1 funding by the CWPPRA Task Force on the 9th Priority Project List. This project is located in Terrebonne Parish, Louisiana, within the Terrebonne Hydrologic Basin, approximately ten miles southeast of the community of Theriot. The project is bordered on the north by the southern bank of Lake Decade and Small Bayou LaPointe ridge, to the east and southeast by an unnamed oilfield location canal, on the south and southwest by undifferentiated marsh, and to the west by an unnamed north - south oilfield canal and Bayou Decade. The purpose of the project is to reduce current interior marsh loss rates and increase the occurrence and abundance of submerged aquatic vegetation (SAV).

The proposed project, as selected for Phase I authorization, featured the construction of 5,200 linear feet of shoreline protection along the southern bank of Lake Decade, the installation of a freshwater introduction structure in the southern bank of Lake Decade, and removal of an existing weir in Lapeyrouse Canal. The Wetland Value Assessment (WVA) benefits attributed to these features were a net increase of 201 acres by the end of the 20 year project life.

The total project budget at the time of Phase 1 approval is as follows:

Budget Item	Phase 1 Costs	Phase II Costs
Engineering & Design	217,296	
Land Rights	51,008	
Federal S&A	74,487	
LDNR S&A	37,244	
Corps Project Management	1,947	19,179
Supervision & Inspection		53,354
Contingency		384,686
Construction		1,538,742
Monitoring	71,346	740,757
O&M		778,531
Total	453,328	3,515,249

Total Fully Funded Cost **\$ 3,968,577**

Total Fully Funded Cost (125%) **\$ 4,960,721**

During the Phase I planning process, NRCS conducted several field trips with an interdisciplinary team of technical specialists to survey, evaluate, and collect data on vegetative marsh types, emergent/submergent vegetative communities and predominance of each, wildlife usage and habitat conditions, hydrologic conditions, and other physical and biological parameters. As a result of this planning effort, the revision of and addition to initial project features were identified (refer to Figure 1). The current proposed features for the TE-39 Project are as follows:

- (A) 3 Multi-gated Diversion Structures on south perimeter of Lake Decade;
- (B) Approximately 8,700 ft. of rock revetment along south shoreline of Lake Decade;
- (C) Enlargement of Lapeyrouse Canal from Lake Decade southward to interior open water areas;
- (D) Approximately 2,900 ft. of oilfield canal embankment restoration;
- (E) Installation of 2 low-level rock weirs;
- (F) Installation of 1 armored plug closure;
- (G) Vegetative protection.

Overview of Phase I Tasks, Process and Issues

It was proposed by NRCS and approved by the Engineering & Environmental Workgroups and Technical Committee (26 Mar 2003) to separate the TE-39 Project into two “independent” construction units. The purpose was to accelerate the E&D timetable on those project components requiring less planning and design effort. Construction Unit No. 1 (CU #1) involves the shoreline protection component of the project and Construction Unit No. 2 (CU #2) will encompass the remaining freshwater introduction and outfall management features.

To-date the following tasks have been completed for the Phase 1 portion of this project:

- 1) Plan of Work
- 2) Cost Share Agreement between NRCS and DNR
- 3) Cultural Resources & Oyster Investigations & Assessment
- 4) Landrights Work Plan
- 5) Prioritization Evaluation
- 6) Plan/Environmental Assessment & FONSI
- 7) Section 303(e) Approval
- 8) NRCS Overgrazing Determination
- 9) Draft Ecological Review
- 10) Design Surveys – NRCS
- 11) Geotechnical Investigation, Analysis, & Report
- 12) 30% Design Review
- 13) Draft Construction Plans & Specifications
- 14) Current Construction Cost Estimate
- 15) 95% Design Review
- 16) Permit Applications

Engineering and Design Tasks

Design surveys were completed by NRCS Construction Survey Crews and are included in the 95% Design Report posted on LDNR's ftp server at the following link:

<ftp://ftp.dnr.state.la.us/pub/CED%20Project%20Management/NRCS/TE-39-CU1%20SLD/Phase2Request%20TC2005-12-07/>

The surveys were completed using Ashtech Z-Extreme Dual Frequency Receivers operating in RTK (Real-Time Kinematic) mode. The survey occupied DNR benchmark "TE-39-SM-A" for control. Design survey cross sections were taken at approximately 200' intervals along the proposed earthen embankment and at 250' intervals along the lake rim of the project area. From the survey data, an alignment was developed for the revetment and embankment. The survey cross sections, survey profiles, and proposed alignment were used for calculating quantities.

Initial pipeline investigations have been initiated with known pipeline companies as shown on the design drawings. Refer to the Design Drawings and LDNR Landrights Memo in the 95% Design Report for established pipeline information.

Geotechnical investigation and analyses have been performed. The geotechnical reports are included in the 95% Design Report. The initial geotechnical report (August 2001) prepared by Soil Testing Engineers, Inc. (STE) contains all boring and soils analysis along with predicted settlement and stability for the proposed project features. A supplemental report (May 2004) was provided by Burns Cooley Dennis, Inc. (BCD) with respect to additional settlement and stability analysis on a rock/lightweight aggregate weir section for the proposed fixed crested weir and rock revetment on the earthen embankment.

Evaluation of the two reports cited above resulted in a design decision to utilize the proposed armored earthen embankment to configure the geometry of a proposed weir section with a solid rock over flow section. A consideration given in the selection of the proposed weir design was that the structure could be easily modified in the event an O&M contingency plan must be implemented. The plan would be put in effect if the monitoring of interior wetland conditions showed progressive land loss and deterioration due to increased water levels.

The shoreline protection feature for the south bank of Lake Decade was changed to a foreshore dike during phase 1 planning and was analyzed in the STE report. However, after conducting additional site visits to the project area, an observation was made that the foundation area of the existing earthen embankment is pre-consolidated from the many years of direct loading applied by the embankment. Therefore, a revetment of the existing embankment was chosen as the preferred approach for shoreline protection.

Hydrologic and hydraulic calculations were performed by NRCS to insure that the proposed embankment restoration and weir project features would not adversely affect the marsh interior within construction unit number 1 (CU #1). A conservative approach was taken in the calculations. Only existing significant hydraulic conveyance openings within the system were used to compute discharge. The discharge area of the proposed weir was neglected. The calculations confirm that the existing additional openings along the perimeter of the marsh interior would adequately convey selected storm event capacities. Conversely, it was also determined that the discharge capacity of the weir alone is sufficient to provide adequate drainage for the identified watershed.

30% Design Review Meetings were held on September 17, 2003, and July 19, 2004. NRCS received a letter from LDNR, dated August 2, 2004, stating they concur with proceeding with the

design of the project to the 95% design level. A 95% Design Review Meeting was held on September 2, 2004. No outstanding engineering issues were identified and minor comments were made regarding supporting data included in the 95% Design Report.

On October 13, 2004 the CWPPRA Task Force held their first annual funding cycle meeting to select projects for Phase 2 funding. The TE-39-1 South Lake Decade Project was submitted for funding consideration but was not selected. However, the TE-44 North Lake Mechant Project, sponsored by USFWS and serves as a southwest extension of the TE-39 Project, was selected for Phase 2 funding. It's anticipated that the TE-44 Project will have a synergistic effect in abating salinity and tidally induced problems that have direct impact to the CU #1 project area. The two lower structural components in CU #1 (i.e. weir & embankment restoration) were targeted to prohibit the same problems as stated above. As such, NRCS, DNR and landowner representatives have agreed to remove the two lower components from 2005 Phase 2 approval consideration for CU #1. These structural measures however, will remain as components of the project due to their "potential" need as outfall management features for construction unit no. 2.

Supplemental Tasks

Preliminary landrights have been executed with all landowners (2). Both landowners have acknowledged their intent to sign necessary documents once the project has obtained Phase II Task Force approval. Landrights with affected utilities and pipelines are proceeding without interruption and are expected to be finalized in the near future. LDNR has determined that no oyster seed grounds or leases will be affected by project implementation.

A review of the Louisiana Department of Culture, Recreation & Tourism, Office of Cultural Development files indicated that two (2) cultural resource sites are located within the boundaries of the TE-39 Project. Both of the sites are described as shell middens experiencing deterioration due to many of the same impacts causing marsh loss (i.e. wave wash, scouring, subsidence, and physical disturbance from canal dredging). A letter, dated May 24, 2001, was received from the Louisiana Department of Culture, Recreation & Tourism stating that, due to the nature of this project the sites will not be affected, therefore they have no objections to its implementation.

Comments relative to other significant task items are addressed in the attached "Checklist of Phase Two Requirements".

Construction Unit No. 1 Project Issues

At the September 17, 2004, 30% Design Review Meeting, concerns were raised and post-meeting comments were received regarding the negative hydrologic impact the proposed embankment restoration and low level weir may have on affected wetlands (i.e. increased water levels). NRCS conducted an engineering survey of the CU #1 area which identified existing perimeter boundary conditions and normal marsh elevations within the interior. An onsite field trip was held on October 22, 2003, with various agency personnel to visually survey the perimeter and interior conditions of the area. NRCS conducted hydrologic and hydraulic mathematical modeling assessments on the proposed project features in question based on collected survey data. Results of these assessments indicated that discharge removal rates of the CU #1 area, with the proposed features in place, would not cause impoundment conditions that would in turn negatively impact emergent wetland vegetation.

Checklist of Phase II Requirements

South Lake Decade Freshwater Introduction (TE-39) CU# 1

A. List of Project Goals and Strategies.

The goals of this project are to reduce interior marsh loss rates and increase the occurrence and abundance of submerged aquatic vegetation (SAV). The strategy proposed to accomplish these goals is the construction of a rock revetment along the south shoreline of Lake Decade.

B. A statement that the Cost Sharing Agreement between the Lead Agency and Local Sponsor has been Executed for Phase I.

A Cost Sharing Agreement has been executed between NRCS (NRCS Agreement No. CWPPRA-00-01) and DNR (DNR Agreement No. 2511-01-02), dated July 25, 2000.

C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase II approval.

LDNR-CRD Land Manager sent a letter to the Chairman of the Planning and Evaluation Subcommittee, dated September 2, 2004, which stated substantial progress had been made regarding landrights acquisition, that no significant landrights acquisition problems are anticipated, and that DNR is confident that landrights will be finalized in a reasonable period of time after Phase Two Approval.

NRCS re-confirmed the above with LDNR Landrights Section via email correspondence on November 9, 2005.

D. A favorable Preliminary Design Review (30% Design Level).

A 30% Design Review meeting was held on September 17, 2003. Issues were raised by DNR and some federal agencies concerning the hydrologic impact that the proposed project measures may have on interior wetlands. NRCS addressed these issues by conducting hydrologic and hydraulic mathematical modeling assessments which concluded no negative impacts are anticipated as a result of project construction. A second 30% Design Review Meeting was held on July 19, 2004, in which DNR and participating agencies concurred with NRCS's assessments. Concurrence to proceed with project designs to the 95% level was received by DNR in a letter dated August 2, 2004. All written comments received from the 30% Design Review are addressed in the 95% Design Review Package posted on DNR's ftp server.

E. Final Project Design Review (95% Design Level).

A 95% Design Review Meeting was held on September 2, 2004. No substantial outstanding issues were identified and minor comments were made regarding supporting data to the Final Design Report. In 2005, NRCS revised the project plans, specifications,

and construction cost estimate to reflect recent project changes. Revised data and the 95% Design Report are available on DNR's ftp server.

F. A draft of the Environmental Assessment of the Project, as required under the National Environmental Policy Act, must be submitted two weeks before the Technical Committee meeting at which Phase 2 approval is requested.

A Final Environmental Assessment of the TE-39 Project was released for public review on June 2001. The Final EA was developed after comments were received and incorporated in the draft Environmental Assessment which was submitted for interagency review in April 2001. A Finding of No Significant Impact (FONSI) was published in the Federal Register on July 25, 2001, and in the local newspaper on July 31, 2001. No comments were received regarding the FONSI.

G. A written summary of the findings of the Ecological Review.

A draft Ecological Review, submitted August 2004, stated that the "proposed strategies of the South Lake Decade Freshwater Introduction - CU 1 Project will likely achieve the desired ecological goals." A revised draft Ecological Review was submitted in August 2005, in which Section VII – Recommendations of the report concluded "At this time, the level of design of the project's physical effects and confidence in goal attainability warrant continued progress toward construction authorization (pending a second favorable 95% Design Review meeting, if required)".

H. Application for and/or issuance of the public notices for permits.

A Joint Permit Application with appropriate attachments, dated November 4, 2005, has been submitted to LDNR-Coastal Management Division for processing.

I. A hazardous, toxic and radiological waste (HTRW) assessment, if required, has been prepared.

NRCS has determined that an HTRW assessment is not required.

J. Section 303(e) approval from the Corps.

Section 303e approval was granted by the Corps Real Estate Division on August 4, 2004.

K. Overgrazing determination from the NRCS (if necessary).

NRCS has determined that overgrazing is not a problem within the project area, nor is there future potential for such problem.

L. Revised fully funded cost estimate, approved by the Economic Work Group, based on the revised Project design and the specific Phase 2 funding request as outlined in below spreadsheet.

- 1) The specific Phase 2 funding request (updated Phase 2 costs, three years of Corps Administration and O&M) is \$2,243,910.
- 2) The current estimated fully funded cost for TE-39 CU #1 is \$3,698,740. This cost was provided by Bill Waits, EcoWG, and confirmed by the Economic Work Group on November 18, 2005. The revised fully funded budget spreadsheets, with the anticipated schedule of expenditures, are provided as an attachment.

M. A Wetland Value Assessment, reviewed and approved by the Environmental Work Group.

A Wetland Value Assessment (WVA) was specifically prepared for the CU #1 portion of the TE-39 South Lake Decade Project on March 20, 2003. A revised WVA was not necessary at the 30% or 95% level of review because no changes were made in project features that would have resulted in a change in projected project benefits.

Due to the removal of 2 structural components from CU #1 in 2005, NRCS revised the 2003 Wetland Value Assessment (WVA) accordingly. The result was a reduction in net acreage from 207 to 202 acres. Kevin Roy, Environmental Workgroup (EnvWG) Chairman, assisted in the re-assessment and determined the WVA revisions were minor enough to negate a review by the EnvWG. A copy of the revised WVA is available upon request by contacting the NRCS Lafayette Water Resources office at (337)291-3060.

N. A breakdown of the Prioritization Criteria ranking score, finalized and agreed upon by all agencies during the 95% review.

A revised Prioritization Fact Sheet was submitted to CWPPRA agencies for review on November 4, 2005. Based on comments received, no corrections to the submitted fact sheet were made. A final fully funded cost was confirmed by the Economic Work Group on November 18th, therefore the Prioritization Fact Sheet dated 18 November 2005 is considered final.

Listed below are current prioritization criterion and associated scores for the TE-39 CU #1 Project:

Criteria	Score	Weight	Final Score
Cost Effectiveness	10	2	20
Area of Need	9.3	1.5	13.95
Implementability	10	1.5	15
Certainty of Benefits	8	1	8
Sustainability of Benefits	8	1	8
HGM – Riverine Input	0	1	0
HGM – Sediment Input	0	1	0
HGM – Landscape Features	10	1	10
Total Score			74.95

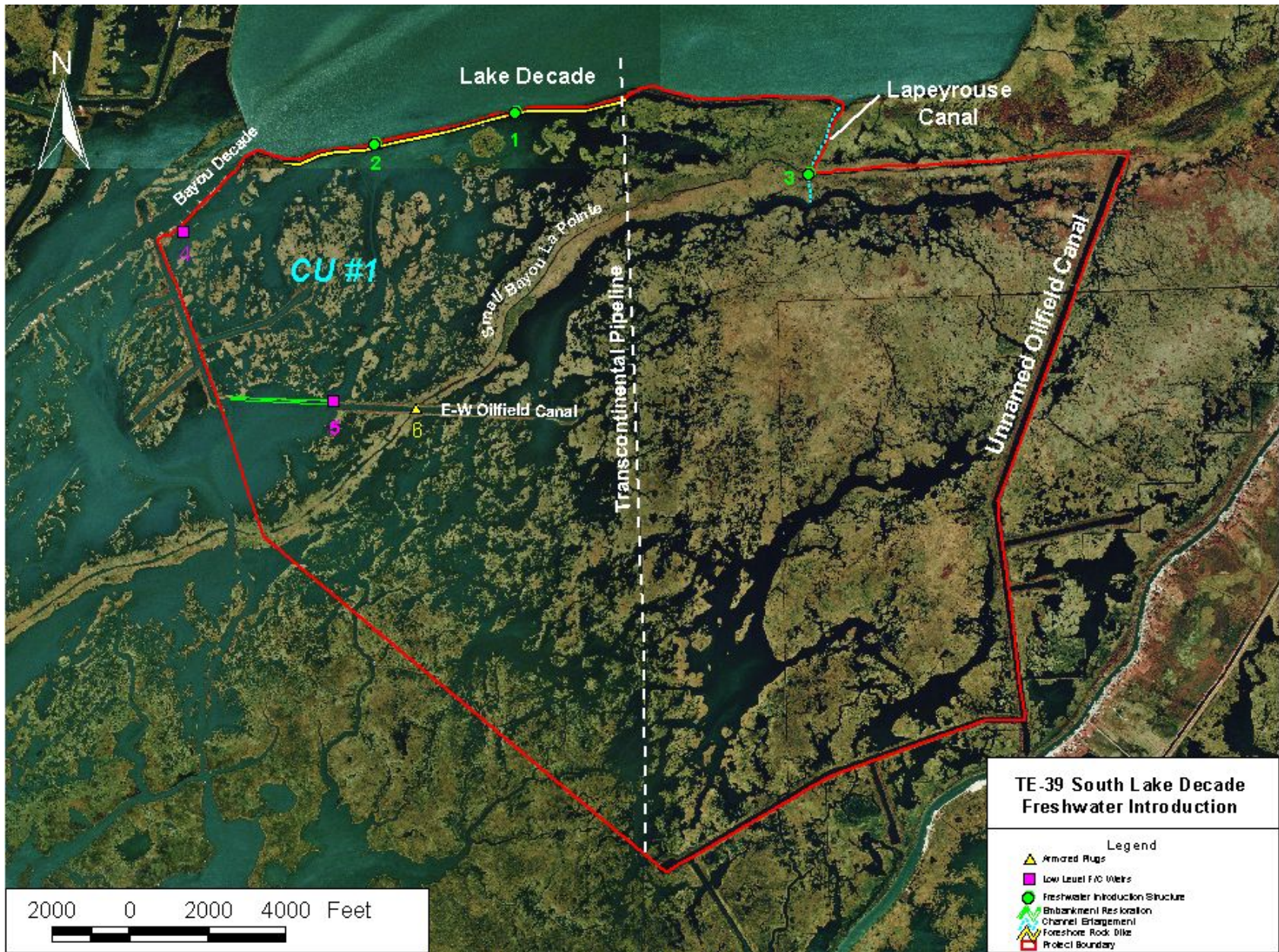
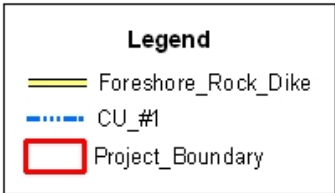
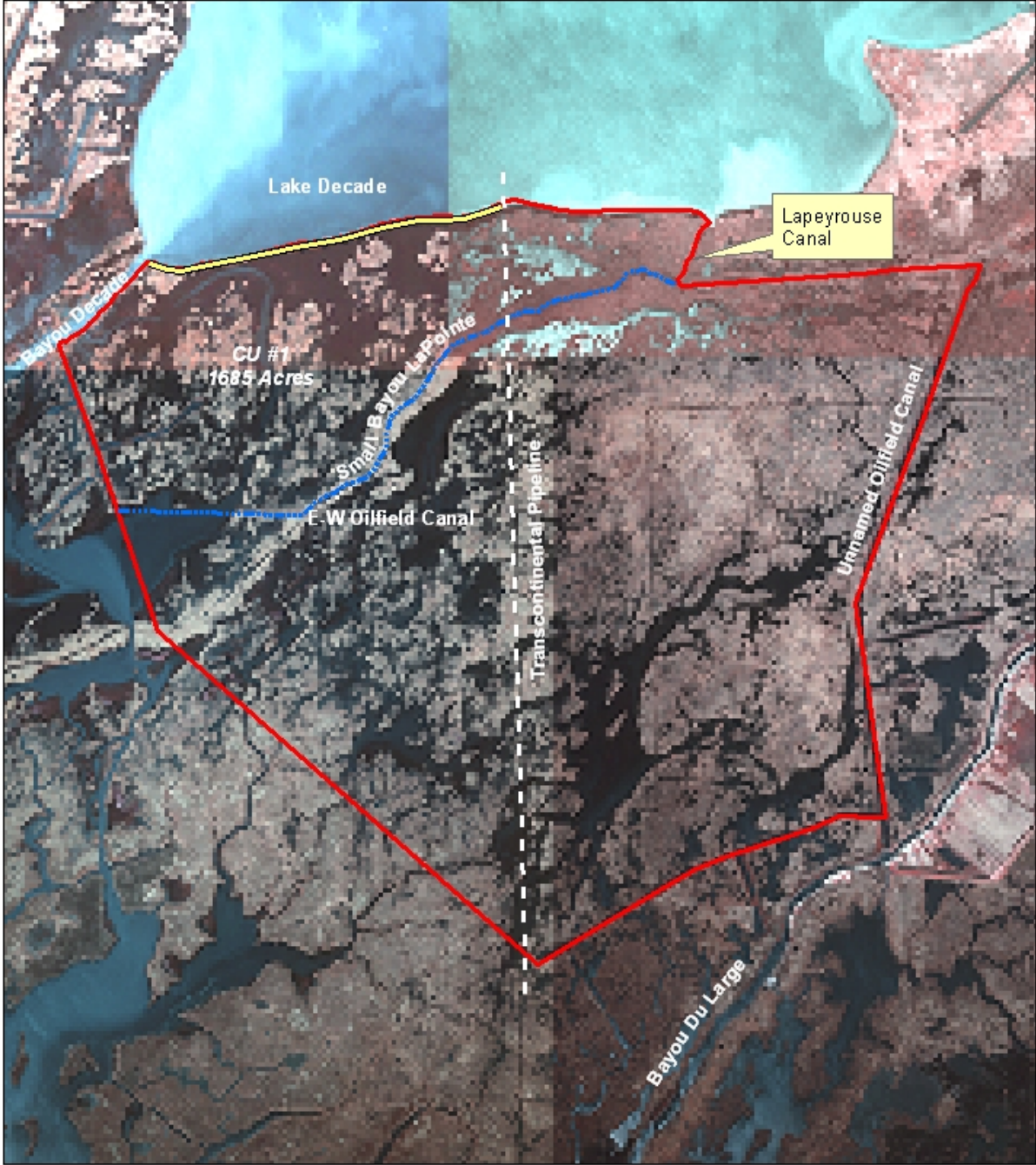


Figure 1



**TE-39 South lake Decade
Freshwater Introduction
(CU #1)
Project Plan Map**



Figure 2

From: Broussard, Loland - Lafayette, LA [Loland.Broussard@la.usda.gov]

Sent: Saturday, November 19, 2005 3:35 PM

To: Paul, Britt - Alexandria, LA; Darryl_Clark@fws.gov; KirkR@dnr.state.la.us; richard.hartman@noaa.gov; mcquiddy.david@epa.gov; peckham.jeanene@epa.gov; Jurgensen, John - Alexandria, LA; LeBlanc, Julie Z MVN; rachel.sweeney@noaa.gov; parrish.sharon@epa.gov; gerryd@dnr.state.la.us; chrisk@dnr.state.la.us; kevin_roy@fws.gov; Daniell@dnr.state.la.us; Monnerjahn, Christopher J MVN

Cc: Browning, Gay B MVN; Kinler, Quin - Baton Rouge, LA; Faulkner, Ronnie - Alexandria, LA; ismailm@dnr.state.la.us; Boustany, Ron - Lafayette, LA; Broussard, Loland - Lafayette, LA

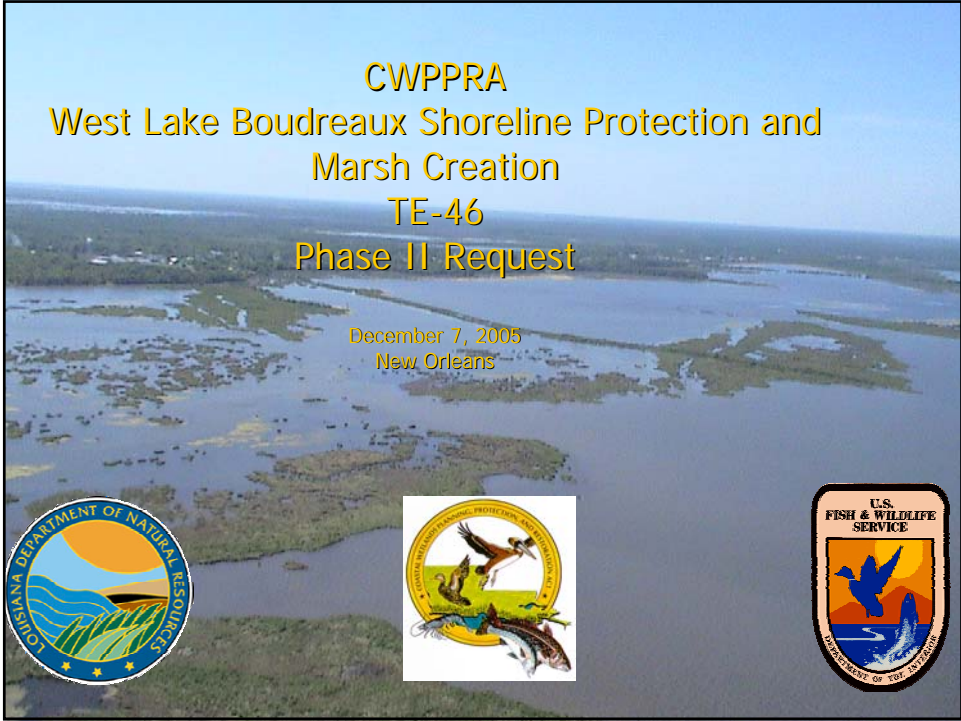
Subject: TE-39 South Lake Decade Phase II Authorization Request
CWPPRA Technical Committee and P&E Subcommittee Members:

Attached is information relative to Phase II approval request for the TE-39 South Lake Decade Project. An authorization request, Phase II Checklist, and revised budget spreadsheets are included. Please contact me if you have any questions regarding the provided material or in need of additional information.

Loland Broussard
Natural Resources Conservation Service
646 Cajundome Blvd - Suite 180
Lafayette, LA 70506
(337) 291-3060
(337) 291-3085 fax

West Lake Boudreaux Shoreline Protection and Marsh Creation

TE-46



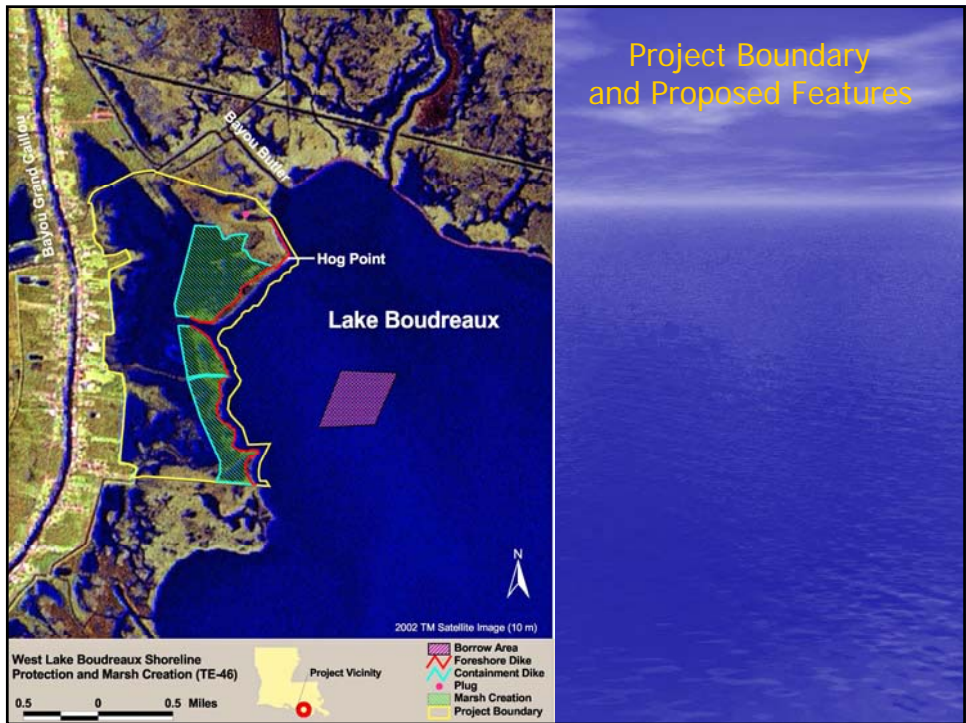
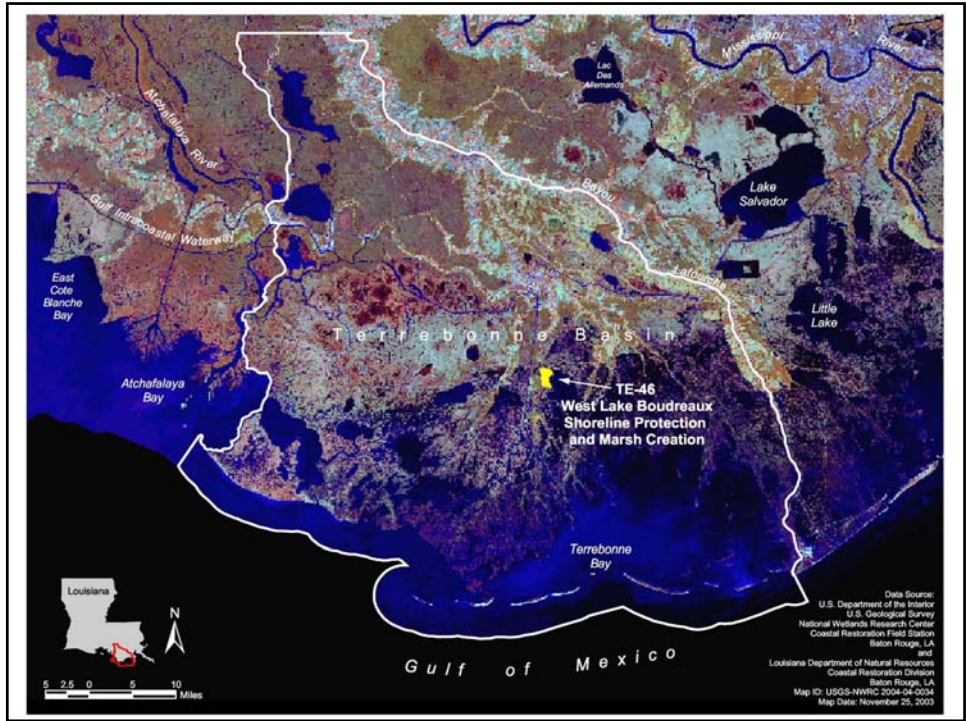
CWPPRA
West Lake Boudreaux Shoreline Protection and
Marsh Creation
TE-46
Phase II Request

December 7, 2005
New Orleans



TE-46 PROJECT OVERVIEW

- **Project Location:** Region 3, Terrebonne Basin, Terrebonne Parish, north western shoreline of Lake Boudreaux.
- **Problem:** High erosion rates (42ft/yr) due to wind-driven waves and high water. Historical lake rim gone, exposing the interior organic soils to wave action. Continued shoreline loss will convert highly productive interior marsh and shallow open water areas to less productive open lake habitat. Shoreline and interior marsh is continuing to break up at an alarming rate.
- **Project Goals:**
 - 1) Stop shoreline erosion along approximately 13,000 linear feet of the western shoreline of Lake Boudreaux.
 - 2) Create 286 acres of marsh via hydraulic dredging.



Project Features Overview

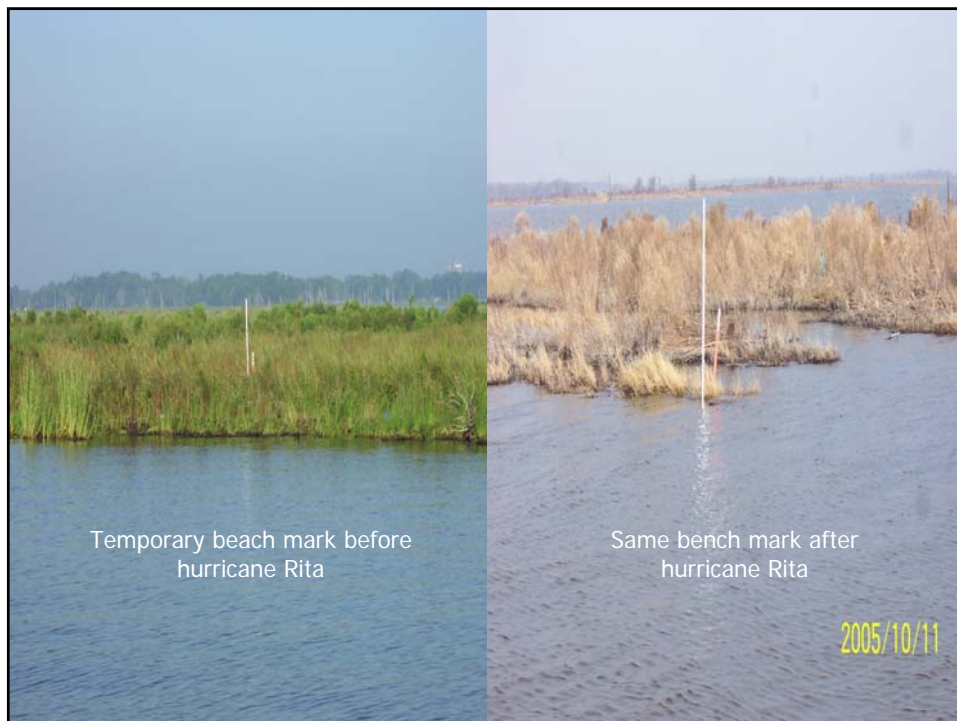
- **Earthen Plug:** repair existing (breached) earthen levee.
- **Foreshore Rock Dike:** approximately 13,000 linear feet set at an elevation of +3.5 ft NAVD 88 with a 3.0 ft top width.
- **Earthen Containment Dikes:** constructed to an elevation of +6.0 ft NAVD 88 with 3:1 side slopes with geotextile reinforcement.
- **Marsh Creation:** northern section 157 ac, central section 46 ac, southern section 81 ac. Fill height of +3.7 ft NAVD 88 will yield marsh in a desirable elevation range throughout most of the project life.
- **Borrow area for Marsh Creation:** average depth of cut below the existing lake bottom is approximately 15.0 ft, which equates to an elevation of -20ft NAVD 88.

Project Benefits & Costs

- Approximately 13,000 linear feet of Lake Boudreaux's western shoreline will be protected with a foreshore rock dike.
- 286 acres of emergent marsh will be created by pumping sediment from the lake by means of a hydraulic dredge. This design will produce marsh in a desirable elevation range for most the 20 year project life.
- Fully Funded Cost for the project is: **\$17,596,322**
- Prioritization Score for this project is: **51.4**

Why Should You Fund this Project Now?

- Stop shoreline erosion.
- Create 286 acres of emergent marsh.
- Offers storm buffer for the Boudreaux community levee.
- Protects Hwy 57, a hurricane evacuation route.
- With the small amount of marsh left for protection, it may not last another hurricane season.
- A picture is worth a thousand words.



QUESTIONS?



Temporary bench mark
before Hurricane Rita

Same bench mark
after Hurricane Rita

2005/10/11

Phase II Authorization Request
West Lake Boudreaux Shoreline Protection and Marsh Creation
TE-46

Description of Phase I Project

The TE-46 Project was approved for Phase I funding on the 11th Priority Project List. At that time of Phase I authorization, project features included:

- 1) Construct 11,644 linear feet of shoreline protection in two sections along the western shoreline of Lake Boudreaux. A gap, approximately 100 ft wide, would be left open for fish access.
- 2) Hydraulically dredge lake-bottom sediments to create 124 acres of marsh.
 - a. Construct 4,000 linear feet of earthen containment dike.
 - b. Construct 6 earthen plugs for containment of dredge material.
- 3) Construct one earthen plug to reduce water exchange.
- 4) Enlarge existing openings or create new openings in the pumping station canal spoil bank to facilitate water exchange between the north and south ponds.

Specific goals of the project were to: 1) Halt erosion of the west Lake Boudreaux shoreline, 2) protect 80 acres of emergent marsh and 300 acres of submerged aquatic vegetation, and 3) create 124 acres of emergent marsh along the shoreline and interior marsh sites through deposition of dredged material.

The Wetland Value Assessment conducted for the Phase I project estimated a benefited area of 1,177 acres and the net creation/restoration of 145 acres of marsh at the end of the project life.

At the time of Phase I approval, the fully-funded cost was \$14,896,471. That figure included \$1,322,354 for Phase I and \$11,699,628 for Phase II. The cost breakdown for Phases I and II is presented in the following table.

magnetometer survey was conducted in June, 2004 by PENSCO and C & C Technology order to locate existing pipelines and obstructions.

A geotechnical investigation was conducted in the May 2003, by Burns, Cooley, Dennis, Inc. A total of 20 undisturbed subsurface soil borings were conducted to investigate subsurface soil conditions for the marsh creation areas and shoreline protection areas. Additionally, 23 undisturbed soil borings were taken within the potential borrow site. Soil samples were tested in the laboratory for classification, strength, and compressibility. Settlement consolidation curves were developed for fill elevations of +2.0, +2.5, +3.0, +3.5, +4.0, and +4.5 NAVD 88 (all following elevations in NAVD 88). Rock dike (shoreline protection) stability and earthen containment dike stability tests were also conducted.

An addendum to the May 2003, geotechnical investigation was conducted in October 2005 at the request of the LDNR. This report documented the slope stability analysis for the rock dike and containment levee and the laboratory testing and analyses performed on the composite sample no. 2, settling column test. This test also further defined the dredged material volumes and their associated heights.

Design meetings were held at the 30% (June 16, 2005) and 95% (November 8, 2005) levels.

Landrights, Cultural Resources, Environmental Compliance and Other Task

Preliminary landrights has proceeded smoothly despite having to aquired landrights for 306 landowners. DNR has made initial contact with all landowners and has acquired landrights for 280 of the 306 landowners (92%). There has been only one landowner that does not want to participate in the project. Design plans have been altered to accommodate this landowner without diminishing the projects benefits and goals.

There are no cultural resource sites located with the project area. The Louisiana Department of Culture, Recreation and Tourism have indicated no objections to project implementation.

Application of the Corps 404 permit was submitted on November 7, 2005 along with a consistency determination by the Louisiana Department of Natural Resources-Coastal Management Division and water quality certification by the Louisiana Department of Environmental Quality.

An overgrazing determination provided by the Natural Resource Conservation Service indicated that overgrazing was not a problem in the project area. An HTRW assessment conducted by the Lafayette Field Office of the U.S. Fish and Wildlife Service indicated that no HTRW materials should be encountered during project implementation.

A final Ecological Review is available and a draft Environmental Assessment was issued on November 16, 2005.

Description of the Phase II Candidate Project

Project Features

The designated borrow site would be hydraulically dredged to a depth of -20 feet to create approximately 286 acres of emergent intertidal marsh in three marsh creation sites (Figure 1). Each site would be completely enclosed within earthen containment dikes. A cost-benefit analysis was performed on sediment elevations (elevation of fill material at TY1) and their corresponding elevation at TY20 (at the end of the project life). Given that the budget was for dredging 975,000 cyds, height constraints associated with the containment dikes, and an existing marsh elevation of between +0.9 and +1.3 ft, a target sediment elevation of +3.70 +/- 0.3 was selected (Table 1). This elevation would allow the created marsh to be intertidal from TY2 to TY20.

Table 1. Model runs of sediment elevations and volumes associated with marsh creation.

In Situ Volume (yds³)	Sediment Elevation (ft.)	Elevation at TY20 (ft.)
800,000	3.13	0.76
950,000	3.56	0.89
1,000,000	3.70	0.98
1,100,000	3.98	1.08
1,200,000	4.25	1.17
1,300,000	4.52	1.28
1,315,000	4.56	1.30
1,320,000	4.57	1.31
1,350,000	4.65	1.34
1,500,000	5.04	1.60

All earthen containment dikes would be built to an elevation of +6.0 with the material used for construction of those dikes being excavated from within the marsh creation sites (Figure 2). All of these containment dikes would be completely degraded at the earliest practicable time (3 to 5 years). Material for those containment dikes located adjacent to and parallel to the foreshore rock dike, would be excavated from the floatation canal. Those containment dikes would not be degraded.

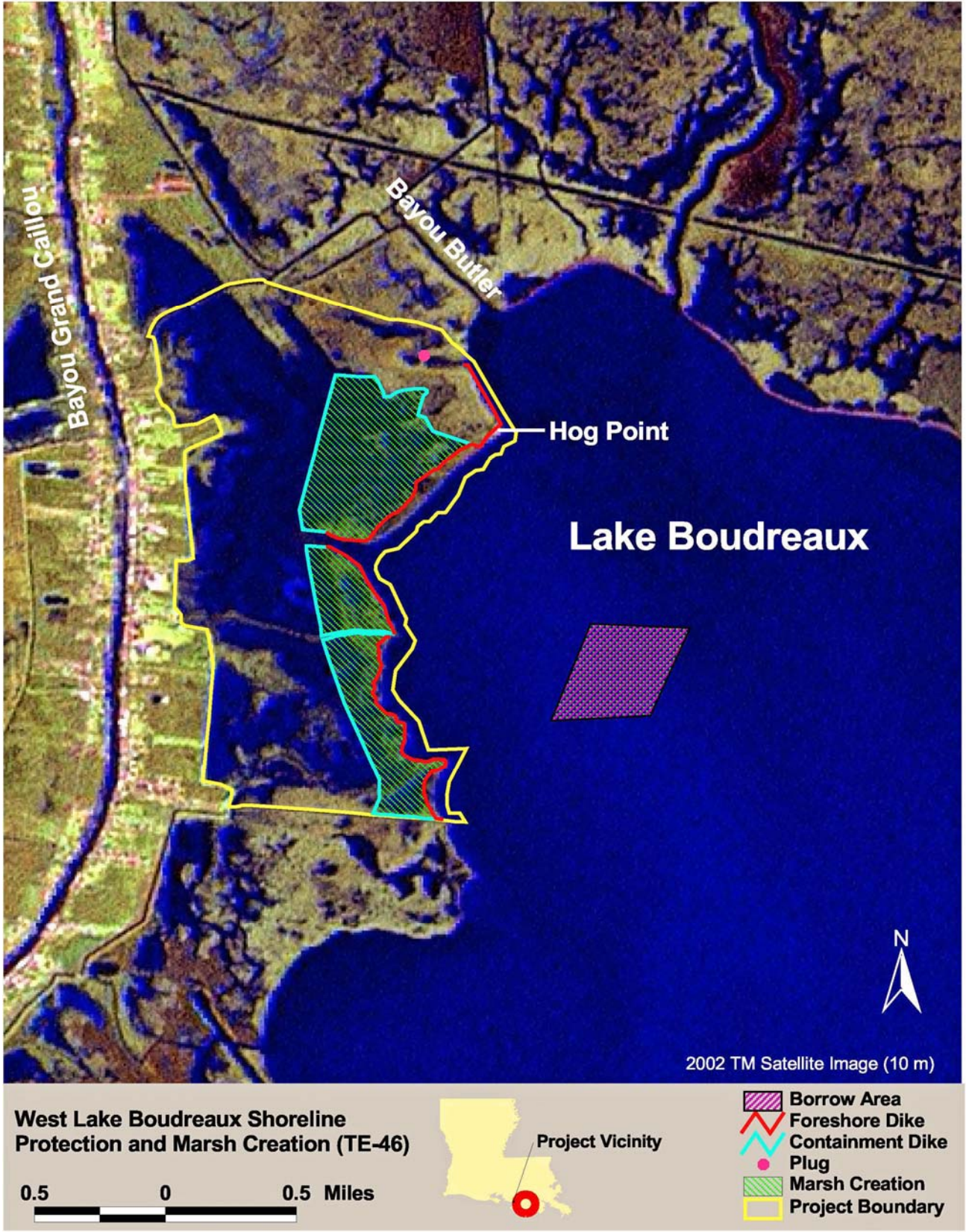


Figure 1. Project Features

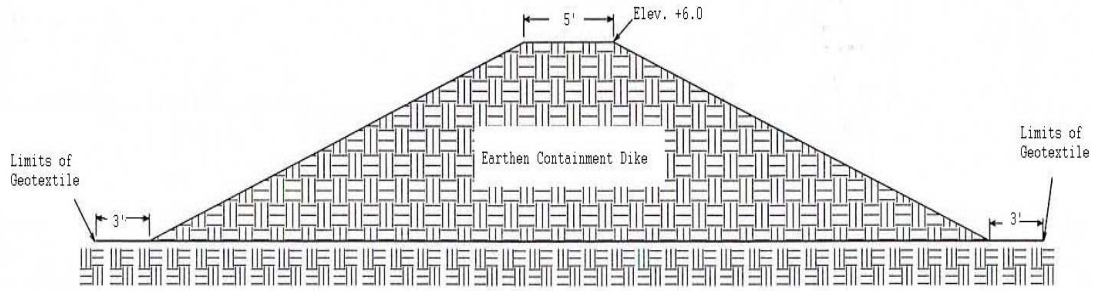


Figure 2. Earthen Containment Dike

Approximately 13,000 feet of shoreline protection, consisting of a rock foreshore dike, would be placed along the western shoreline of Lake Boudreaux from just north of Hog Point south to Hog Point Canal (Figure 1). Shoreline protection would consist of rock stacked to a height of +3.5 ft. (Figure 3). An opening within the rock dike approximately 100 feet wide would be left open for fish access between the northern and central sections. A second site would also be left open between the central and southern sections to accommodate an uncooperative landowner.

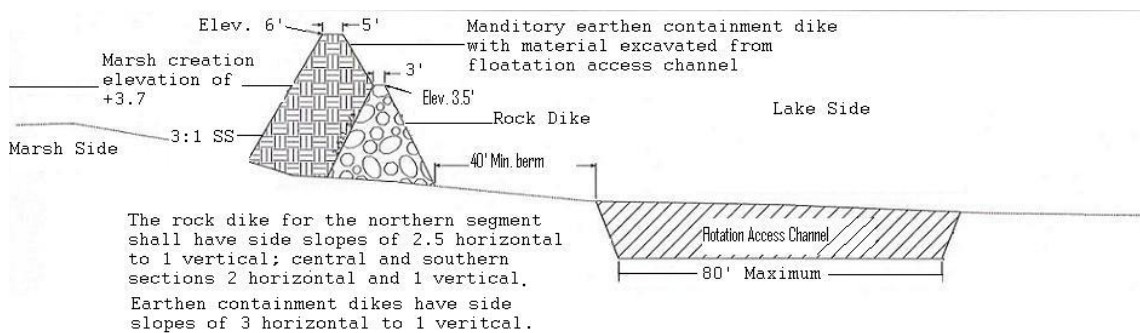


Figure 3 – Typical Cross Section of Earthen Containment Dikes and Rock Dikes

A pump station canal separates the interior open-water areas into northern and southern sections. Several openings in the canal spoil bank would be enlarged as needed to facilitate better water circulation and exchange of materials between the two ponds. At the northern project boundary, there is an oil field canal with a large breach in the spoil bank. This breach would be closed with an earthen plug (Figures 4 and 5). This would serve to reduce direct exchange of water with Lake Boudreaux and the northwestern interior marshes and help retain fresher interior water. Water from Lake Boudreaux would still exchange with the interior marsh indirectly from canals and trenasses located north and south of the project area and directly through the fish opening and the pump station canal.

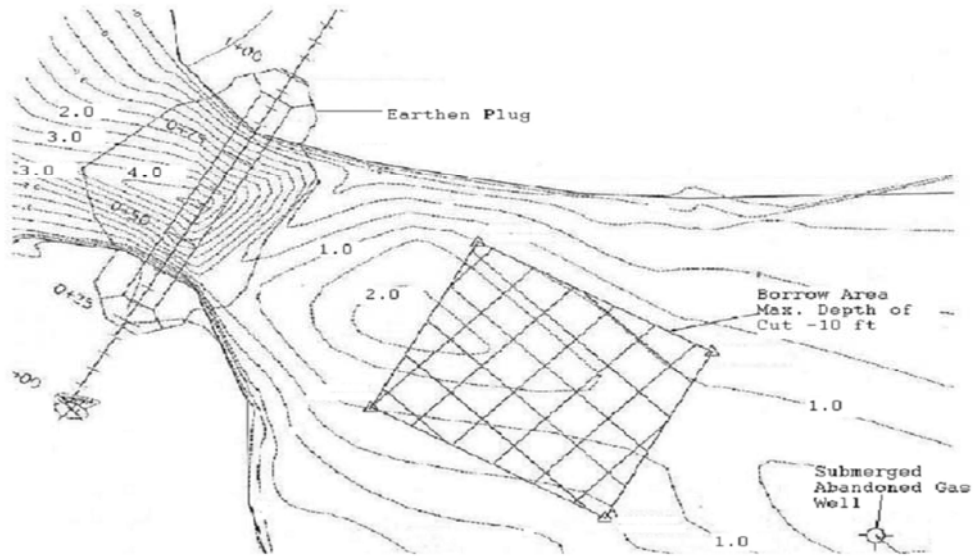


Figure 4. Site Plan of Earthen Plug with Borrow Area

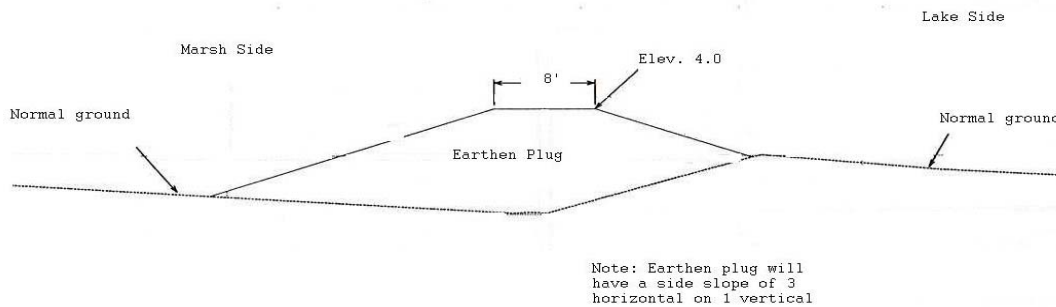


Figure 5. Cross Section of Earthen Plug

Updated Assessment of Benefits

A revised Wetland Value Assessment was prepared and reviewed by the Environmental Work Group. The total project area increased from 1,177 acres to 1,207 acres. Total Net Acres protected/created by the project increased from 145 acres to 277 acres. Net Average Annual Habitat Units increased from 84 to 129.

Modifications to the Phase I Project

Final design features are essentially unchanged from the original Phase 1 project. The following changes are noteworthy; 1) 1 of 4 marsh creation sites was eliminated, but there is an overall increase in acreage of created marsh (124 to 286 acres), 2) vegetative planting and earthen plugs for containment have been omitted as a project feature.

Current Cost Estimates

The revised fully-funded cost prepared by the CWPPRA Economics Work Group is \$17,596,322 (Attachment I).

Checklist of Phase Two Requirements

A. List of Project Goals and Strategies.

The goals of the project are to: 1) halt erosion for approximately 13,000 ft. along the western shoreline of Lake Boudreaux, 2) create 286 acres of emergent marsh through the deposition of dredged material into open water and fragmented marsh along the southwestern shoreline of Lake Boudreaux.

B. A Statement that the Cost Sharing Agreement between the Lead Agency and the Local Sponsor has been executed for Phase I.

A Cost Share Agreement between the U.S. Fish and Wildlife Service and Louisiana Department of Natural Resources was executed on April 3, 2002. A draft amendment, authorizing construction, operation, maintenance, and monitoring, to the Cost Share Agreement has been prepared.

C. Notification from the State or the Corps that landrights will be finalized in a short period of time after Phase 2 approval.

FWS has received verbal notification from DNR that landrights will be finalized in a relatively short time after Phase 2 approval.

D. A favorable Preliminary Design Review (30% Design Level). The Preliminary Design shall include completion of surveys, borings, geotechnical investigations, data analysis review, hydrologic data collection and analysis, modeling (if necessary), and development of preliminary designs.

A 30% design meeting was held on June 16, 2005, and resulted in favorable reviews of the project design with minor modifications. DNR and FWS agreed on the project design and to proceed with project implementation.

E. Final Project Design Review (95% Design Level). Upon completion of a favorable review of the preliminary design, the Project plans and specifications shall be developed and formalized to incorporate elements from the Preliminary Design and the Preliminary Design Review. Final Project Design Review (95%) must be successfully completed prior to seeking Technical Committee approval.

A 95% design meeting was held on November 8, 2005, and resulted in favorable reviews of the project design with some modifications. DNR and FWS agreed on the project design and to proceed with project implementation.

F. A draft of the Environmental Assessment, as required under the National Environmental Policy Act must be submitted thirty days before the request for Phase 2 approval.

A draft EA was issued on November 16, 2005.

G. A written summary of the findings of the Ecological Review (See Appendix B).

The following paragraph is from the Recommendations section of the August 12, 2004 final Ecological Review:

Based on the evaluation of available ecological, geophysical, and engineering information, in addition to the investigation of similar restoration projects, the proposed strategies of the West Lake Boudreaux Shoreline Projection and Marsh Creation project will likely achieve the desired ecological goals. It is recommended that this project progress towards construction authorization.

H. Application for and/or issuance of the public notices for permits. If a permit has not been received by the agency, a notice from the Corps of when the permit may be issued.

The FWS has submitted an application for a Section 404 permit from the Corps of Engineers on November 7, 2005.

I. A hazardous, toxic and radiological waste (HTRW) assessment, if required, has been prepared.

An HTRW assessment/contaminants screening was conducted by the FWS Lafayette Field Office's Environmental Contaminants Specialist. It was concluded that project implementation would not encounter any of the known wells or associated oil and gas facilities in the project area and that re-suspension of contaminants from sediment disturbance is not expected. Based on available information, further study is not warranted.

J. Section 303(e) approval from the Corps.

The FWS has submitted to the Corps of Engineers an application for Section 303(e) approval on November 21, 2005.

K. Overgrazing determination from the NRCS (if necessary).

An overgrazing determination was issued on November 10, 2005 by the NRCS and indicated that overgrazing would not be a problem in the project area.

L. Revised cost estimate of Phase 2 activities, based on the revised Project design.

Funding/Budget information:

- 1.) - Specific Phase Two funding request (updated construction cost estimate, three years of monitoring and O&M, etc.)**
- 2.) - Fully funded, 20-year cost projection with anticipated schedule of expenditures**

The specific Phase 2 funding request (updated construction estimate and three years of monitoring and O&M) is \$15,915,330. The revised fully-funded cost of the project is

\$17,596,323. The revised budget sheets, with the anticipated schedule of expenditures, are provided in Attachment 1.

M. A Wetland Value Assessment, reviewed and approved by the Environmental Work Group.

A revised Wetland Value Assessment was prepared and reviewed by the Environmental Work Group. The total project area was increased from 1,177 acres to 1,207 acres. Total Net Acres protected/created/restored by the project increased from 145 acres (Phase 1 project) to 277 acres (Phase 2 project). Net Average Annual Habitat Units decreased from 84 to 129.

N. A breakdown of the Prioritization Criteria ranking score, finalized and agreed-upon by all agencies during the 95% design review.

The following Prioritization Criteria scores were reviewed and agreed upon by all agencies.

Criteria	Score	Weight	Final Score
Cost Effectiveness	2.5	2	5
Area of Need	10	1.5	15
Implementability	10	1.5	15
Certainty of Benefits	7.4	1	7.4
Sustainability of Benefits	4	1	4
HGM – Riverine Input	0	1	0
HGM – Sediment Input	0	1	0
HGM – Landscape Features	5	1	5
Total Score			51.4

Attachment I

Additional Agenda Items

Announcement: PPL 16 Regional Planning Team Meetings

January 10, 2006	Region IV Planning Team Meeting (Abbeville)
January 11, 2006	Region III Planning Team Meeting (Morgan City)
January 12, 2006	Regions I and II Planning Team Meetings (New Orleans)
February 1, 2006	Coast-wide RPT Voting Meeting (Baton Rouge)

Date of Upcoming Task Force Meeting

The winter Task Force meeting will be held January 26, 2005 at the U.S. Army Corps of Engineers office in New Orleans, LA.

Dates of Future Program Meetings (Podany)

2006

January 25, 2006	9:30 a.m.	Task Force	New Orleans
March 15, 2006	9:30 a.m.	Technical Committee	New Orleans
April 12, 2006	9:30 a.m.	Task Force	Lafayette
June 14, 2006	9:30 a.m.	Technical Committee	Baton Rouge
July 12, 2006	9:30 a.m.	Task Force	New Orleans
August 30, 2006	7:00 p.m.	PPL 16 Public Meeting	Abbeville
August 31, 2006	7:00 p.m.	PPL 16 Public Meeting	New Orleans
September 13, 2006	9:30 a.m.	Technical Committee	New Orleans
October 18, 2006	9:30 a.m.	Task Force	New Orleans
December 6, 2006	9:30 a.m.	Technical Committee	Baton Rouge

2007

January 31, 2007	9:30 a.m.	Task Force	Baton Rouge
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