# COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

#### TASK FORCE MEETING

February 15, 2007

# DECISION: REQUEST FOR PHASE II AUTHORIZATION AND APPROVAL OF PHASE II INCREMENT 1 FUNDING

#### For Decision:

The Task Force will consider requests for Phase II Authorization and Phase II Increment 1 funding based on the Technical Committee's recommendation. The Technical Committee reviewed and took public comment on December 6, 2006 on the twelve projects shown in the table, and Phase II authorization and recommends approval of Phase II Increment 1 funding for two projects to the Task Force within available FY07 funding (see table on next page). With approval of these two projects, and approval of the funding increases in prior agenda items, it is estimated that approximately \$22.0 million in Federal/non-Federal funding will still be available in the construction program. The Task Force will consider the Technical Committee's recommendation and make a final decision on Phase II authorization and approval of Phase II Increment 1 funding for FY07.

The projects in the table below will be individually discussed by the sponsoring agency, the Task Force and the general public as shown below:

- a) Overview of projects.
- b) Task Force questions and comments on projects.
- c) Public comments on projects (Comments should be limited to 1-2 minutes).

#### **Technical Committee Recommendation:**

The Technical Committee recommends Phase II Authorization and Phase II Increment 1 funding for BA-36, Dedicated Dredging on the Barataria Basin Landbridge- Fill Site 1, in the amount of \$15,231,142 and PO-33, Goose Point/Point Platte Marsh Creation, in the amount of \$18,989,923.

## CWPPRA, Phase II Approval Requests for December 2006/January 2007

Updated: 1 Dec 06

			Construction	Phase II Total	Phase II Incr 1	Acres Benefited	Prioritization	30% Design Review Meeting	95% Design Review Meeting
Proj No.	PPL	Project	Start	Estimate	Funding Rqst	20 Years	Score	Date	Date
BA-27c(3)	9	Barataria Basin Landbridge, Phase 3 - CU 7	Aug-07	\$25,765,121	\$21,538,790	180	45.55	20 Aug 03 (A)	2 Sep 04 (A)
AT-04	9	Castille Pass Channel Sediment Delivery	Jun-07	\$29,045,754	\$18,933,969	577	59.50	20 Jan 04 (A)	13 Oct 05 (A)
BA-36	11	Dedicated Dredging on Barataria Basin Landbridge - Fill Site 1	Aug-07	\$15,378,401	\$15,231,142	242	56.00	17 Dec 03 (A)	29 Jul 04 (A)
BA-30	9	East Grand Terre Island Restoration	Aug-07	\$34,393,708	\$33,881,341	335	60.00	26 May 05 (A)	30 Nov 05 (A)
TV-11b	9	Freshwater Bayou Bank Stab-Belle Isle Canal-Lock	Apr-07	\$28,571,202	\$25,676,625	241	39.50	27 Jun 02 (A)	22 Jan 04 (A)
TE-43	10	GIWW Bank Restoration of Critical Areas in Terrebonne - Segments 1, 2, 6	Aug-07	\$15,968,228	\$13,175,993	132	40.25	21 Jan 03 (A)	26 Aug 04 (A)
PO-33	13	Goose Point/Point Platte Marsh Creation	Jun-07	\$19,137,181	\$18,989,923	436	53.00	20 Jul 06 (A)	8 Nov 06 (A)
ME-21	11	Grand Lake Shoreline Protection - with Tebo Point	Aug-07	\$23,068,344	\$20,331,947	540	61.25	11 May 04 (A)	16 Aug 04 (A)
PO-32b	12	Lake Borgne & MRGO Shoreline Prot - MRGO Segment**	Apr-07	\$34,637,092	\$31,924,591	173	36.50	11 Aug 04 (A)	29 Mar 05 (A)
ME-18	10	Rockefeller Refuge	Jun-07	\$10,544,865	\$10,544,865	N/A	NA	28 Sep 04 (A)	20 Sep 05 (A)
TE-47	11	Ship Shoal: Whiskey West Flank Restoration	May-07	\$49,183,319	\$48,901,961	195	60.00	5 Oct 04 (A)	28 Sep 05 (A)
TE-39	9	South Lake DeCade - CU 1	Aug-07	\$3,171,215	\$2,221,045	202	74.95	19 Jul 04 (A)	2 Sep 04 (A)
	BA-27c(3)  AT-04  BA-36  BA-30  TV-11b  TE-43  PO-33  ME-21  PO-32b  ME-18  TE-47	BA-27c(3) 9  AT-04 9  BA-36 11  BA-30 9  TV-11b 9  TE-43 10  PO-33 13  ME-21 11  PO-32b 12  ME-18 10  TE-47 11	BA-27c(3) 9 Barataria Basin Landbridge, Phase 3 - CU 7  AT-04 9 Castille Pass Channel Sediment Delivery  BA-36 11 Dedicated Dredging on Barataria Basin Landbridge - Fill Site 1  BA-30 9 East Grand Terre Island Restoration  TV-11b 9 Freshwater Bayou Bank Stab-Belle Isle Canal-Lock  TE-43 10 GIWW Bank Restoration of Critical Areas in Terrebonne - Segments 1, 2, 6  PO-33 13 Goose Point/Point Platte Marsh Creation  ME-21 11 Grand Lake Shoreline Protection - with Tebo Point  PO-32b 12 Lake Borgne & MRGO Shoreline Prot - MRGO Segment**  ME-18 10 Rockefeller Refuge  TE-47 11 Ship Shoal: Whiskey West Flank Restoration	Proj No.PPLProjectStartBA-27c(3)9Barataria Basin Landbridge, Phase 3 - CU 7Aug-07AT-049Castille Pass Channel Sediment DeliveryJun-07BA-3611Dedicated Dredging on Barataria Basin Landbridge - Fill Site 1Aug-07BA-309East Grand Terre Island RestorationAug-07TV-11b9Freshwater Bayou Bank Stab-Belle Isle Canal-LockApr-07TE-4310GIWW Bank Restoration of Critical Areas in Terrebonne - Segments 1, 2, 6Aug-07PO-3313Goose Point/Point Platte Marsh CreationJun-07ME-2111Grand Lake Shoreline Protection - with Tebo PointAug-07PO-32b12Lake Borgne & MRGO Shoreline Prot - MRGO Segment**Apr-07ME-1810Rockefeller RefugeJun-07TE-4711Ship Shoal: Whiskey West Flank RestorationMay-07	Proj No.         PPL         Project         Construction Start         Total Estimate           BA-27c(3)         9         Barataria Basin Landbridge, Phase 3 - CU 7         Aug-07         \$25,765,121           AT-04         9         Castille Pass Channel Sediment Delivery         Jun-07         \$29,045,754           BA-36         11         Dedicated Dredging on Barataria Basin Landbridge - Fill Site 1         Aug-07         \$15,378,401           BA-30         9         East Grand Terre Island Restoration         Aug-07         \$34,393,708           TV-11b         9         Freshwater Bayou Bank Stab-Belle Isle Canal-Lock         Apr-07         \$28,571,202           TE-43         10         GIWW Bank Restoration of Critical Areas in Terrebonne - Segments 1, 2, 6         Aug-07         \$15,968,228           PO-33         13         Goose Point/Point Platte Marsh Creation         Jun-07         \$19,137,181           ME-21         11         Grand Lake Shoreline Protection - with Tebo Point         Aug-07         \$23,068,344           PO-32b         12         Lake Borgne & MRGO Shoreline Prot - MRGO Segment**         Apr-07         \$34,637,092           ME-18         10         Rockefeller Refuge         Jun-07         \$10,544,865           TE-47         11         Ship Shoal: Whiskey West Flank Rest	Proj No.         PPL         Project         Construction Start         Total Estimate         Incr 1 Funding Rqst           BA-27c(3)         9         Barataria Basin Landbridge, Phase 3 - CU 7         Aug-07         \$25,765,121         \$21,538,790           AT-04         9         Castille Pass Channel Sediment Delivery         Jun-07         \$29,045,754         \$18,933,969           BA-36         11         Dedicated Dredging on Barataria Basin Landbridge - Fill Site 1         Aug-07         \$15,378,401         \$15,231,142           BA-30         9         East Grand Terre Island Restoration         Aug-07         \$34,393,708         \$33,881,341           TV-11b         9         Freshwater Bayou Bank Stab-Belle Isle Canal-Lock         Apr-07         \$28,571,202         \$25,676,625           TE-43         10         GIWW Bank Restoration of Critical Areas in Terrebonne - Segments 1, 2, 6         Aug-07         \$15,968,228         \$13,175,993           PO-33         13         Goose Point/Point Platte Marsh Creation         Jun-07         \$19,137,181         \$18,989,923           ME-21         11         Grand Lake Shoreline Protection - with Tebo Point         Aug-07         \$34,637,092         \$31,924,591           ME-18         10         Rockefeller Refuge         Jun-07         \$49,183,319         \$48,901,961<	Proj No.         PPL         Project         Construction Start         Total Estimate         Incr 1 Funding Rgst         Benefited 20 Years           BA-27c(3)         9         Barataria Basin Landbridge, Phase 3 - CU 7         Aug-07         \$25,765,121         \$21,538,790         180           AT-04         9         Castille Pass Channel Sediment Delivery         Jun-07         \$29,045,754         \$18,933,969         577           BA-36         11         Dedicated Dredging on Barataria Basin Landbridge - Fill Site 1         Aug-07         \$15,378,401         \$15,231,142         242           BA-30         9         East Grand Terre Island Restoration         Aug-07         \$34,393,708         \$33,881,341         335           TV-11b         9         Freshwater Bayou Bank Stab-Belle Isle Canal-Lock         Apr-07         \$28,571,202         \$25,676,625         241           TE-43         10         GIWW Bank Restoration of Critical Areas in Terrebonne - Segments 1, 2, 6         Aug-07         \$15,968,228         \$13,175,993         132           PO-33         13         Goose Point/Point Platte Marsh Creation         Jun-07         \$19,137,181         \$18,989,923         436           ME-21         11         Grand Lake Shoreline Protection - with Tebo Point         Aug-07         \$34,637,092         \$31,924,5	Proj No.   PPL   Project   Project	Proj No.   PPL   Project   Construction Start   Estimate   Funding Rqst   20 Years   Prioritization   Review Meeting Date

\$288,864,430 \$261,352,192

<sup>\*\*</sup> Lake Borgne segment of the Lake Borgne & MRGO Shoreline Protection Project constructed under Corps MRGO O&M funding

<sup>(</sup>A) = Actual Date

<sup>(</sup>S) = Scheduled/Announced Date

<sup>(</sup>T) = Tentative Date (not yet announced)

## **CWPPRA Technical Committee Ranking for Phase II Approval**

PPL	Project No.	Project	COE	State	EPA	FWS	NMFS	NRCS	No. of Agency Votes	Sum of Weighted Score
9	BA-27c(3)	Barataria Basin Landbridge, Phase 3 - CU7	2			3		7	3	12
9	AT-04	Castille Pass Channel Sediment Delivery			5	2	3		3	10
11	BA-36	Dedicated Dredging on Bara Basin LB - Fill Site 1	6	7	3	7	5	5	6	33
9	BA-30	East Grand Terre Island Restoration		3	6	1	7		4	17
9	TV-11b	Freshwater Bayou Bank Stab-Belle Isle Canal-Lock	3	1				2	3	6
10	TE-43	GIWW Bank Restoration of Critical Areas in Terr - Segments 1,2,6	4	5	2			3	4	14
13	PO-33	Goose Point/Point Platte Marsh Creation	5	6	4	5	6		5	26
11	ME-21	Grand Lake Shoreline Protection	7	2		4	1	1	5	15
12	PO-32b	Lake Borgne & MRGO Shoreline Protection - MRGO Segment ONLY			1				1	1
10	ME-18	Rockefeller Refuge					2	4	2	6
11	TE-47	Ship Shoal: Whiskey West Flank Restoration		4	7		4		3	15
9	TE-39	South Lake DeCade - CU1	1	7	7	6	7	6	3	13

No. of votes: 7 7 7 7 7 7 7 8um of Votes: 28 28 28 28 28 28 28

#### The following voting process will be used to rank all projects under consideration for construction approval/Phase II Authorization:

- 1. Each agency represented in the Technical Committee will be provided one ballot for voting.
- 2. Each agency represented in the Technical Committee will cast weighted votes for 7 projects. All votes must be used.
- 3. Weighted scores will be assigned (7, 6, 5, 4, 3, 2, and 1). (7 highest ranked by agency...1 lowest).
- 4. Projects are ranked first by the number of agency votes received (to determine level of agency consensus/support for individual projects, and then by "Sum" on weighted score (on next page).
- 5. This ranking will be used by the Technical Committee as a "tool" to determine which projects will be recommended to the Task Force for funding, within available funds.

## **CWPPRA Technical Committee Ranking for Phase II Approval**

PPL	Project No.	Project	COE	State	EPA	FWS	NMFS	NRCS	No. of Agency Votes	Sum of Weighted Score	Phase II, Increment 1 Funding Request	Cumulative Phase II, Increment 1 Funding	Amt Remaining
11	BA-36	Dedicated Dredging on Bara Basin LB - Fill Site 1	6	7	3	7	5	5	6	33	\$15,231,142	\$15,231,142	\$40,991,876
13	PO-33	Goose Point/Point Platte Marsh Creation	5	6	4	5	6		5	26	\$18,989,923	\$34,221,065	, , ,
11	ME-21	Grand Lake Shoreline Protection	7	2		4	1	1	5	15	\$20,331,947	\$54,553,012	\$1,670,006
9	BA-30	East Grand Terre Island Restoration		3	6	1	7		4	17	\$33,881,341	\$88,434,353	-\$32,211,335
10	TE-43	GIWW Bank Restoration of Critical Areas in Terr - Segments 1,2,6	4	5	2			3	4	14	\$13,175,993	\$101,610,346	-\$45,387,328
11	TE-47	Ship Shoal: Whiskey West Flank Restoration		4	7		4		3	15	\$48,901,961	\$150,512,307	-\$94,289,289
9	TE-39	South Lake DeCade - CU1	1			6		6	3	13	\$2,221,045	\$152,733,352	-\$96,510,334
9	BA-27c(3)	Barataria Basin Landbridge, Phase 3 - CU7	2			3		7	3	12	\$21,538,790	\$174,272,142	-\$118,049,124
9	AT-04	Castille Pass Channel Sediment Delivery			5	2	3		3	10	\$18,933,969	\$193,206,111	-\$136,983,093
9	TV-11b	Freshwater Bayou Bank Stab-Belle Isle Canal-Lock	3	1				2	3	6	\$25,676,625	\$218,882,736	-\$162,659,718
10	ME-18	Rockefeller Refuge					2	4	2	6	\$10,544,865	\$229,427,601	-\$173,204,583
12	PO-32b	Lake Borgne & MRGO Shoreline Protection - MRGO Segment ONLY			1				1	1	\$31,924,591	\$261,352,192	-\$205,129,174

\$261,352,192

#### NOTES:

- Projects are sorted by: (1) Agency Support or "No. of Yes Votes" and (2) "Sum of Weighted Score"
- The "No. of Yes Votes" and the Sum of the Total Point Score will be used by the Technical Committee in formulating a recommendation to the Task Force within available funding.

#### RUN MACRO "sort" TO AUTOMATICALLY COMPLETE STEPS

- STEP 1: Information from "VOTE" sheet is automatically copied into "SORT-Final Vote".
- STEP 2: Sort columns A..P, descending, first by "No. of Yes Votes" (Column J) and second by "Sum of Point Score" (Column K).
- STEP 3: Once projects are sorted, add in formula to add funding requests cumulatively (Column M)

## CWPPRA - Prioritization Scores for Projects Not Funded for Construction

Dated: December 1, 2006

Prepared for December 6, 2006 Technical Committee Meeting

Prepared for December 6, 2006 Technical Committee Me	eung					(2)					Prioritiz	ation Scores	for each Criter	ria & Correspon	dina Weiaht		Total
						Total	(1)	Cost	Cost	Area of		Certainty			HGM Sediment	HGM Structure	Weighted
	Project			Lead	Project	Acres	Current	Per Acre	Effective	Need	ability		Sustainability		Input	and Function	Score
Project Name	Number	Pegion	DDI		Type	Benefited	Estimate	(\$/acre)	20%	15%	15%	10%	10%	10%	10%	10%	100%
1 Toject Name	Number	rtegion	112	Agency	Турс	Deficition	Lotimate	(ψ/ασισ)	2070	1070	1070	1070	1070	1070	1070	1070	10070
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	91.50
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
South Lake DeCade Freshwater Introduction - CU #1	TE-39	3	9	NRCS	SP	202	\$3.841.826	\$19,019	10	9.3	10	8	8	0	0	10	74.95
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
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
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
Penchant Basin Natural Resources Plan-Increment 1	TE-34	3	6	NRCS	HR	1.155	\$13.250.937	\$11.473	10	5.9	10	2	10	7	0	0	62.85
River Reintroduction into Maurepas Swamp	PO-29	1	11	EPA	RD	5,438	\$56,469,628	\$10,384	10	5.9	4	9	8	7	5	0	62.50
Grand Lake Shoreline Protection - with Tebo Point	ME-21	4	11	COE	SP	540	\$24,117,374	\$44,662	5	7.5	10	10	10	0	0	5	61.25
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
Ship Shoal: Whiskey Island West Flank Restoration	TE-49	3	11	EPA	BI	195	\$52.925.372	\$271,412	1	10	10	7	1	0	10	10	60.00
East Grand Terre Island Restoration	BA-30	2	9	NMFS	BI	335	\$36,705,731	\$109.569	1	10	10	7	6	0	5	10	60.00
Castille Pass Channel Sediment Delivery	AT-04	3	9	NMFS	RD	577	\$30,705,731	\$53,539	5	10	10	8	10	10	0	5	59.50
	CS-28	4	8	COE	MC	168	\$2,133,439	\$12,699	10	5	10	7	8	0	0	0	57.50
Sabine Refuge Marsh Creation - Cycle 5  Dedicated Dredging on Barataria Basin Landbridge-Fill	UG-28	4	0	COE	IVIC	100	क्∠, १७७,4७५	φ1∠,099	10	5	10	1	0	U	U	U	37.30
Site 1	BA-36	2	11	FWS	MC	242	\$15,842,343	\$65,464	2.5	10	10	7	4	0	0	10	56.00
Riverine Sand Mining/Scofield Island Restoration	BA-40	2	14	NMFS	BI	234	\$44.545.000		1	10	10	7	1	0	5	10	55.00
Brown Lake Hydrologic Restoration	CS-09a	4	2	NRCS	HR	282	\$3,154,472	\$11,186	10	5	7	5.1	8	3	0	0	54.10
Goose Point/Point Platte Marsh Creation	PO-33	1	13	FWS	MC	436	\$20,867,777	\$47,862	5	4	10	7	10	0	0	5	53.00
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
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
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
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
South Shore of The Pen Shoreline Protection and Marsh	BA-41	2	44	NDOO	SP/MC	440	047.544.000	0450.000	,	7.0	40	7.4	4	0	0	10	
Creation	BA-41	2	14	NRCS	SP/MC	116	\$17,514,000	\$150,983	1	7.9	10	7.4	4	U	U	10	50.25
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
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
Pass Chaland to Grand Bayou Pass Barrier Shoreline																	
Restoration	BA-35	2	11	NMFS	BI	262	\$30,217,567	\$115,334	1	9.3	7	7	1.4	0	5	10	49.85
Lake Boudreaux Freshwater Introduction	TE-32a	3	6	FWS	FD	603	\$14,450,063	\$23,964	7.5	7.5	7	5	6	2	0	0	49.75
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
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
Barataria Basin Landbridge - Phase 3 - CU 7	BA-27c	2	9	NRCS	SP	180	\$26,387,255	\$146,596	1	5.7	10	8	2	0	0	10	45.55
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
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
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
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
Grand Bayou Hydrologic Restoration	TE-10	3	5	FWS	HR	199	\$8,209,722	\$41,255	5	5.4	7	2	8	2	0	0	40.60
GIWW Bank Restoration of Critical Areas in Terrebonne -	TE-43	3	10	NRCS	SP	132	\$17,704,211	\$134.123	1	7.5	10	8	4	0	0	0	40.25
Segments 1, 2, 6		Ŭ	٠	111100	5	102	ψ17,701,211	Ψ101,120		7.0	10	ŭ	'	ŭ	ŭ	Ŭ	40.20
Freshwater Bayou Bank Stabilization - Belle Isle Canal to																	
Lock	TV-11b	3	9	COE	SP	241	\$30,070,170	\$124,772	1	3	10	10	8	0	0	0	39.50
Lake Borgne & MRGO Shoreline Protection-MRGO																	
segment	PO-32b	1	12	COE	SP	173	\$35,985,438	\$208,008	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
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
Rockefeller Refuge Gulf Shoreline Stabilization - CU1	ME-18	4	10	NMFS	SP		\$12,953,343										
(see note #7 below)	.VIL 10		-0		0.		Ç.2,000,040										
	<u> </u>			<u> </u>		<u> </u>		<u> </u>			<u> </u>	<u> </u>					

Prioritization Scores for 12-6-06 TC mtg: Scores

BA-27c(3)- Barataria Basin Landbridge, Phase 3 - CU 7

# Coastal Wetlands Planning, Protection and Restoration Act



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

# PHASE II APPROVAL OF CU7

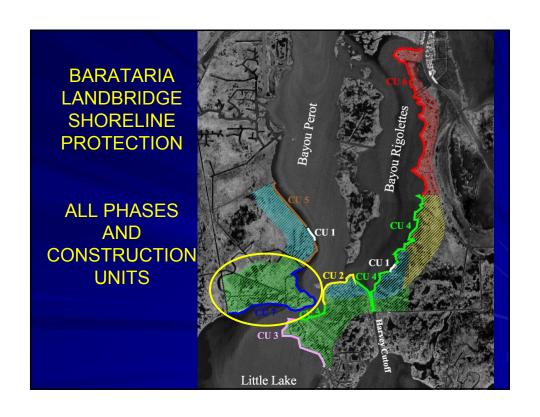
CWPPRA Technical Committee Meeting December 6, 2006

# 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 2005 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

# **Project Features**

22,800 feet of rock dike / 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: \$25,860,920

Fully Funded Phase II Increment 1: \$21,538790

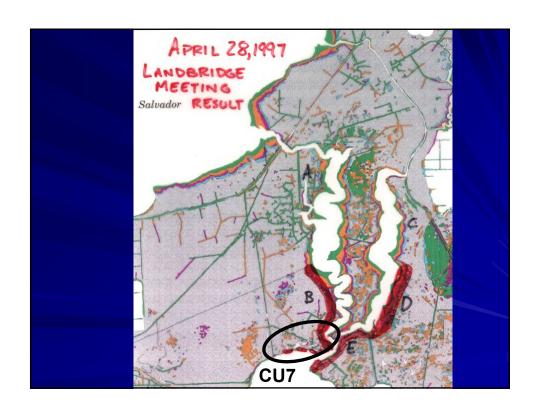
# BARATARIA LANDBRIDGE PHASES 1, 2, 3, & 4 (BA-27, BA-27c, BA-27d)

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	39,814,779	192%
Phase 4 (BA-27d) (CU6) 31,120 Feet	36,541,413	22,787,951	62%
TOTAL All Phases 114,770 Feet	74,801,539	93,484,079	125%

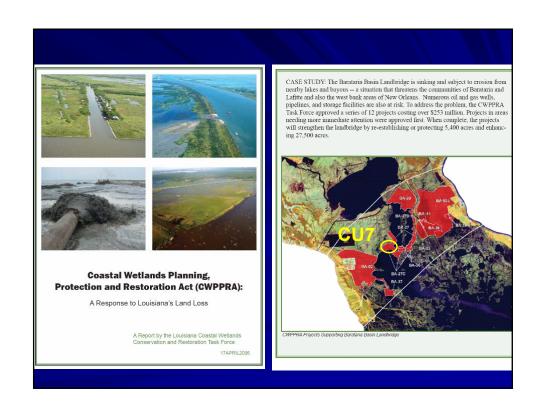
# BARATARIA LANDBRIDGE PHASES 1, 2, 3, & 4 (BA-27, BA-27c, BA-27d)

Year of Request	Phase II Total	Phase II Increment I
2004	\$14.7 M	\$12.1 M
2005	\$18.8 M	\$15.7 M
2006	\$25.9 M	\$21.5 M

While waiting for Phase II approval, the project cost has gone up by about 77%.









# Why Fund This Project Now? Consensus derived project Very high erosion rate Ready for construction for 3 years Funding delay has already raised the cost by 77% Part of widely touted Barataria Basin Landbridge America's Wetland Book CWPPRA Education Document December 2006 Watermarks

#### **United States Department of Agriculture**



Natural Resources Conservation Service 3737 Government Street Alexandria, Louisiana 71302

November 27, 2006

Mr. Troy Constance, Acting Chairman CWPPRA Technical Committee U.S. Army Corps of Engineers P.O. Box 60267 New Orleans, Louisiana 70160-0267

Dear Mr. Constance:

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 11.0 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 11.0 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):

Greg Breerwood, Chairman, Technical Committee Gerry Duszynski, DNR Technical Committee Member Mr. Troy Constance November 27, 2006 Page 2

> Darryl Clark, USFWS Technical Committee Member Rick Hartman, NMFS Technical Committee Member Sharon Parrish, EPA, Technical Committee Member Julie LeBlanc, P&E Subcommittee Chair Dan Llewellyn, DNR P&E Subcommittee Member Kevin Roy, USFWS P&E Subcommittee Member Rachel Sweeney, NMFS P&E Subcommittee Member Tim Landers, EPA P&E Subcommittee Member John Jurgensen, NRCS P&E Subcommittee Member Deetra Washington, GOCA Travis Creel, USCOE Contractor Quin Kinler, Project Manager, NRCS Ismail Merhi, Project Manager, LDNR Michael Trusclair, District Conservationist, NRCS Rachel Manuel, Design Engineer, NRCS Ronnie Faulkner, Design Engineer, NRCS Randolph Joseph, Jr., ASTC/FO, NRCS

# **Information Required for Phase Two Authorization Request**

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

November 27, 2006

# 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)	
Phase Two Monitoring	
Phase Two O&M	
Phase Two Other	
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 <u>Federal Register</u> 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 has been 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: <a href="mailto:ftp://ftp.dnr.state.la.us/pub/CED Project Management/NRCS/BA-27-CU7 BLB/Phase2Request TC2006-12-06">ftp://ftp.dnr.state.la.us/pub/CED Project Management/NRCS/BA-27-CU7 BLB/Phase2Request TC2006-12-06</a>.

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; 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.

By letter to Don Gohmert of NRCS, dated January 11, 2006, LDNR has certified that landrights are complete for CU7 (copy enclosed).

# 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

and 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 \$25,860,920. 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 \$25,765,121. The current fully-funded cost estimate for Phase II, Increment 1 of the BA-27c Construction Unit 7 is \$21,538,790.

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. By letter to Don Gohmert of NRCS, dated January 11, 2006, LDNR has certified that landrights are complete for CU7 (copy enclosed).
- 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. Copies of the Environmental Assessment and FONSI have been provided to the Technical Committee.
- 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, generated by the Economic Work Group, is \$26,387,255. The revised fully funded cost estimate for Phase II is \$25,860,920. The required spreadsheet is enclosed.
- N. Wetland Value Assessment. The Wetland Value Assessment was completed in August 1999, and all Task Force agencies were provided a copy. 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 22, 2006, and provided to 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

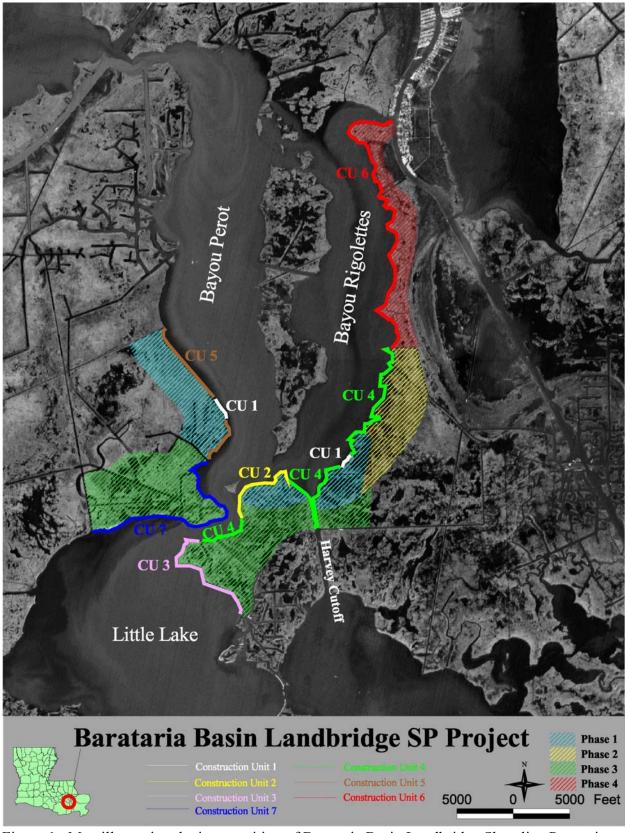


Figure 1. Map illustrating the juxtaposition of Barataria Basin Landbridge Shoreline Protection Project Phases and Construction Units.

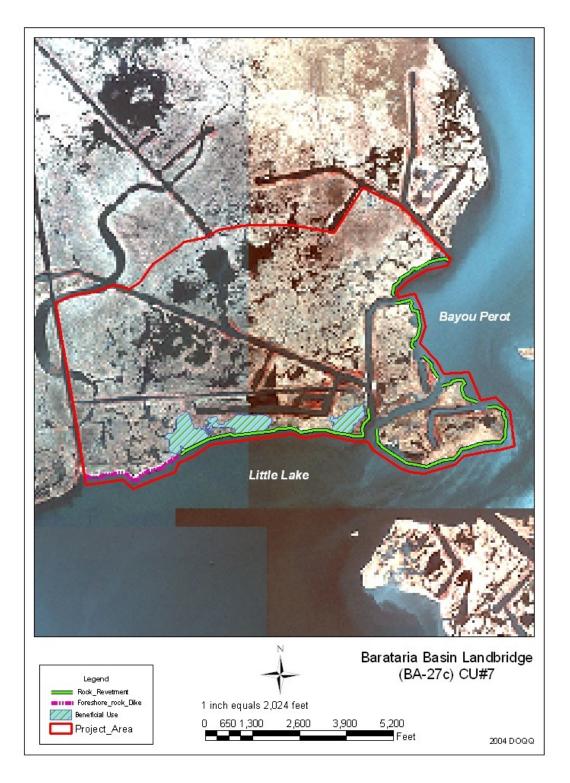


Figure 2. Map of Barataria Basin Landbridge Shoreline Protection Project Phase 3 Construction Unit 7, Lafourche Parish.



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

# **Technical Committee Meeting**

December 6, 2006 Baton Rouge, LA

# **Project Overview**

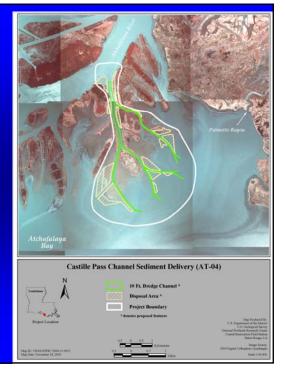
**Project Location:** Region 3, Atchafalaya Basin, St. Mary Parish Parish, Atchafalaya Delta.

**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 \$30,892,080 (Dec. 2005 = \$19,657,695)
- The Total Fully Funded Cost is has not changed significantly from what was originally projected while increasing created acres by 60%
- The Prioritization Score is: 59.5

# **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 SERC/Estuenine Hahitata & Chastal Fisheries Conten 646 Cajandomie B. dievend Lafayette, Lous anal 70500

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 9<sup>th</sup> 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 stillwater 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 vears.





# UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE SEFC/Estuarine Habitata & Oliastial Fisher as Conten 646 Cajuri Jome Billulevand Lafayette, Louslana 170500

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





# UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE SEFC/Estuarine Habitats & Crastal Fisher as Conten 646 Cajum tome 9: u evand Lafsyette, Lousland 70500

DECEMBER 1, 2006

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

Subject: Second Phase II Authorization Request for the Castille Pass Sediment Delivery (AT-04).

Dear Mr. Podany,

As the lead federal agency for the Castille Pass Sediment Delivery (AT-04) project the National Marine Fisheries Service (NMFS) hereby submit a second request for phase II authorization, in accordance with the CWPPRA Project Standard Operating Procedures (SOP) Manual. The initial request from the December 2005 Phase II request process is attached.

# 1.) Description of Phase I Project

A description of the Castille Pass Sediment Delivery Project 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 in January 2000, the project team was assembled with representatives from the NOAA and the LDNR. Contracts were awarded to prepare a hydrographic model. Engineering and design was contracted to BCG. A 30% design review meeting was held on January 20, 2005, which resulted in a letter November 21, 2005 from the LDNR concurring to proceed with final design. 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. Minor changes were made for East Pass, Natal Pass and Castille Pass alignments. Changes were made to the East Pass extension channel length, width, diking lengths and elevations and alignments prior to the 95% design meeting. The design revision considers only cast earthen dike construction for the channel and disposal area configurations. Because hydrologic modeling indicated no changes in the East Pass

flows, stages, sediment transport, or coves with or without a dam across the Southwest Branch at the mouth of East Pass, the dam was removed from the project. All NEPA documentation was completed and circulated November 23, 2005 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 LDNR confirm landrights with the state were completed in a letter dated December 11, 2005. The LDNR prepared the Ecological Review. A 95% design meeting was held October 13, 2005. No comments were made at the meeting, therefore no changes were made to the design.

# 3.) Description of the Phase II Candidate Project

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 project features have not changed since the 95% design meeting of October 13, 2005 where no comments were made or received. A revised WVA was prepared to incorporate the changes in benefits that occurred from changes made prior to the 95% design meeting.

C. A table containing the current project cost estimates is provided in enclosure 3-C.

# 4.) Checklist of phase II requirements

A. List of Goals and Strategies

- Facilitate natural sub-delta formation in the shallow water areas between East Pass and Four League Bay to build approximately 556 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 556 acres of marsh.
  - **B. Cost Sharing Statement**

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

C. Notification that landrights are finalized.

Landrights were secured prior to December 10, 2004 from the Louisiana Department of Wildlife and Fisheries (enclosure 4-C).

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. The LDNR letter of concurrence is included as enclosure 4-D.

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 concluding in a FONSI (enclosure 4-F).

G. Written summary of Ecological Review

# **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 interpolated as corresponding to +1.8 feet NAVD-88 using USACE CORPSCON for Windows, Version 5.11.08. The projected accretion within the three cove areas will be classified as subaqueous marsh.

This project is to be constructed in a river-mouth which may be classified as a dynamic area and as such, the impacting conditions (wind, wave, rain, and flow) will cause the channels, diking, and disposal areas to be in states of flux undergoing continuous changes. Thus, to sustain the integrity and effectiveness of this project, maintenance of project features will be required on average of every 6 years with dredging to re-establish dikes and dredging of shoals within the channels. This recommendation is based upon the observations made of the channel shoaling on the Big Island Mining (AT-03) project, which showed that a shoaling of channel bottoms to elevation from -3.0 feet to -5.0 feet NAVD-88 has occurred in six years (BCG 2005).

#### Recommendations

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 Castille Pass Channel Sediment Delivery (AT-04) project will likely achieve the desired ecological goals. It is recommended that this project progress toward construction authorization pending a favorable 95% Design Review.

H. Application for or Issuance of Public Notices for Permits

Submitted to the U.S. Army Corps of Engineers November 7, 2005.

#### I. HTRW

HTRW is not required for the project location.

#### J. Section 303

Section 303E approval was received July 12, 2005 from the Corps (enclosure 4-I).

# K. Overgrazing

A favorable overgrazing determination was received June 9, 2005 (enclosure 4-K).

# L. Fully funded cost

A revised fully-funded cost estimate of Phase II activities or economic analyses, based on the current Project design has been included as enclosure 3-C and summarized directly below.

- 1.) The specific Phase II funding request (construction cost estimate and three years of O&M) is \$20,780,294.
- 2.) The fully-funded 20-year cost estimate is \$30,892,080.

# M. WVA

A revision to the 1999 WVA was Re-drafted November 2, 2005 and accepted after revision by the Environmental Work Group (enclosure 4-M). In summary, the project area would contain 965 acres of emergent marsh after 20 years providing a net increase of 407 acres. The average annual habitat unit is 256 and the estimated annual cost \$7992.

#### N. Prioritization

	Cost Effectiveness	Area of Need	Implementability	Certainty of Benefits	Sustainablity	HGM Riverine Input	HGM Sediment Input	HGM Sturcute And Function
Score	10	0	10.5	7.6	10	7	0	5
Total	50.1							

Erik Zobrist, Ph. D.

NMFS Program Manager





# North American Waterfowl Management Plan



Gulf Coast Joint Venture

c/o National Wetlands Research Center 700 Cajundome Boulevard Lafayette, Louisiana 70506

January 18, 2007

Colonel Richard P. Wagenaar CWPPRA Task Force Chairman District Commander U.S. Army Corps of Engineers, New Orleans District P.O. Box 60267 New Orleans, Louisiana 70160-0267

Dear Col. Wagenaar,

The Gulf Coast Joint Venture (GCJV) is a partnership of federal, state, and private conservation organizations dedicated to delivery of bird habitat in the coastal portions of Alabama, Mississippi, Louisiana, and Texas. On behalf of the GCJV Management Board, I am writing to express support for the following three candidate projects under consideration for Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA) Phase II funding:

Castille Pass Channel Sediment Delivery (AT-04)
GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43)
Rockefeller Refuge (ME-18)

Louisiana's Gulf Coast wetlands are of continental importance to many species of migratory birds. Along with meeting the goals of CWPPRA to protect and restore important coastal wetland habitats, these three projects are expected to provide substantial benefits to priority bird species identified by the GCJV. These projects protect and/or improve wetland habitat that is of particular importance as foraging habitat for shorebirds and waterfowl.

The GCJV pursues projects through a variety of funding sources to accomplish conservation goals identified in plans for the Chenier Plain and Mississippi River Coastal Wetlands Initiative Areas. These GCJV Initiative Area Plans and the Coast 2050 Plan have many conservation strategies in common, and we see opportunities for GCJV partners to implement smaller projects intended to benefit waterfowl and other migratory birds that will complement larger CWPPRA projects designed to restore and enhance coastal wetland habitat.

The GCJV Management Board appreciates the opportunity to participate in the CWPPRA project evaluation process, and we look forward to future dialogue regarding potential integration of our Initiative Area Plan conservation efforts with those of CWPPRA.

Sincerely,

Jeff Raasch Chairperson

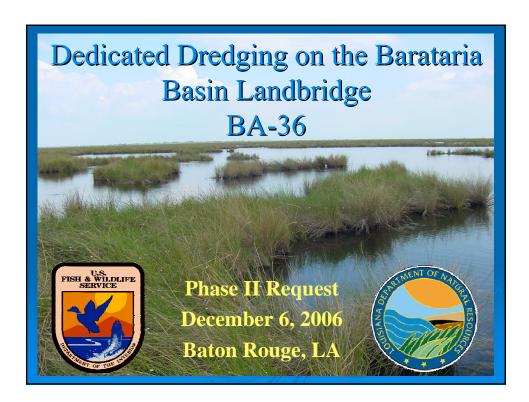
cc:

**CWPPRA** Task Force members

CWPPRA Technical Committee Acting Chair

GCJV Management Board

BA-36 - Dedicated Dredging on Barataria Basin Landbridge



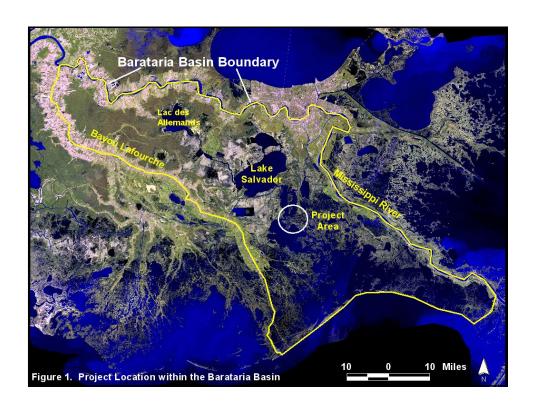
# **Project Overview**

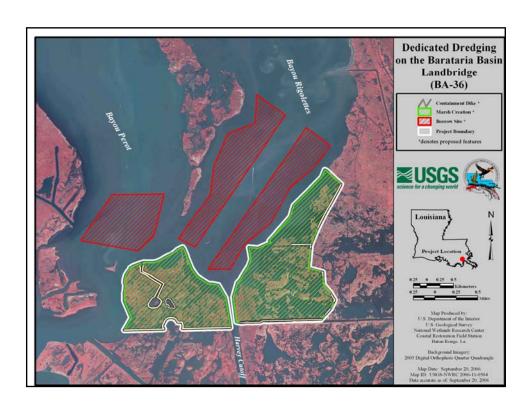
**Location:** Region 2, Barataria Basin, Jefferson Parish - 25 miles south of New Orleans and 6 miles south of Barataria/Lafitte

**Problem:** Over 25% of the wetlands in this mapping unit have been lost since 1932; loss rate exceeds -2.0%/yr in project area; subsidence, ponding, and shoreline erosion are the primary causes of loss

# **Goals:**

- 1) Re-create 504 acres of marsh in open water and degraded marsh habitats
- 2) Maintain 242 net acres at the end of the project life

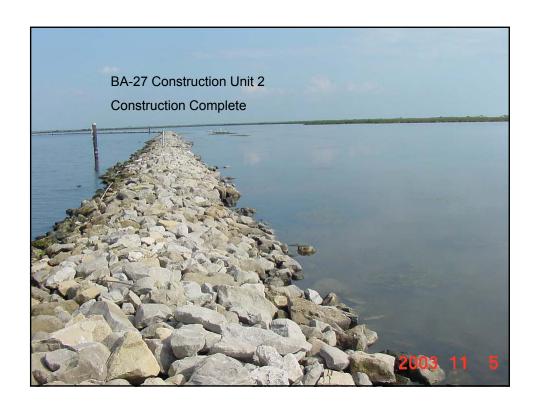




## **Project Features Overview**

- 504 acres of marsh creation/nourishment; Target height of fill material is +2.5-ft NAVD88
- Containment dikes constructed to +4.0-ft NAVD88 with a 4-ft crown width and 1(V):4(H) side slopes
- Borrow sites in Bayous Perot and Rigolettes dredged to a maximum bottom elevation of -10-ft NAVD88



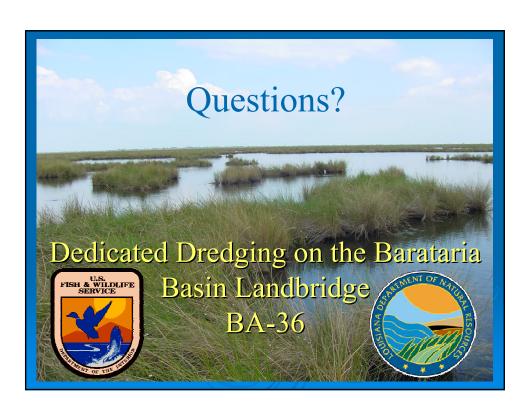


## **Project Benefits and Costs**

- In total, the project will benefit 504 acres of marsh and open water habitats; 242 net acres of marsh at the end of the 20-year project life
- Wetland Value Assessment 135 net Average Annual Habitat Units
- The Fully-Funded Cost is: \$15,842,343 Phase 2 Request is: \$15,231,142
- The Prioritization Score is: 56

## 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 marsh in the project area from shoreline erosion; however, interior marsh will continue to deteriorate from subsidence
- 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





## United States Department of the Interior

#### FISH AND WILDLIFE SERVICE 646 Cajundome Blvd. Suite 400 Lafayette, Louisiana 70506

November 28, 2006

Mr. Troy Constance, Acting Chairman CWPPRA Technical Committee U.S. Army Corps of Engineers, New Orleans District P.O. Box 60267 New Orleans, Louisiana 70160-0267

Dear Mr. Constance:

The U.S. Fish and Wildlife Service and Louisiana Department of Natural Resources would like to submit the Dedicated Dredging on the Barataria Basin Landbridge Project (BA-36) for Phase 2 approval. That project was approved for Phase 1 funding by the CWPPRA Task Force as part of the 11<sup>th</sup> Priority Project List. It should be noted that this request is only for a portion (Fill Site 1) of the total project. The enclosed packet includes all information required for a Phase 2 authorization request, per Section 6.j. of the CWPPRA Standard Operating Procedures manual. This Phase 2 authorization request is also being sent electronically to all CWPPRA Technical Committee and Planning and Evaluation Subcommittee members.

If you have any questions regarding this submittal, please contact Mr. Kevin Roy of this office at (337) 291-3120.

Sincerely,

/s/Russell C. Watson Supervisor Louisiana Field Office

**Enclosures** 

# 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 11<sup>th</sup> 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 shorelines of Bayous Perot and Rigolettes;
- 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 aerially 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 \$29,692,820. That figure included \$2,294,410 for Phase I and \$27,398,410 for Phase II. The cost breakdown for Phases I and II is presented in the following table.

Task Name	Phase I Costs	Phase II Costs
Engineering and Design	\$	
Land Rights	\$	
DNR Administration	\$	\$
FWS Administration	\$	\$
Monitoring	\$	\$
Corps Project Management	\$	\$
Construction		\$
Contingency		\$
Supervision and Inspection		\$
Operations and Maintenance		\$
Total	\$2,294,410	\$27,398,410

## Overview of Phase I Tasks, Process and Issues

The following tasks were completed during Phase I:

- 1) Interagency kickoff meeting and field trip
- 2) Final Cost Share Agreement executed between FWS and DNR
- 3) Preliminary landrights
- 4) Elevation surveys for the borrow areas, fill sites, and containment sites
- 5) Magnetometer survey
- 6) Geotechnical investigation of the borrow and fill sites
- 7) 30% design review
- 8) 95% design review
- 9) Ecological Review
- 10) Final Environmental Assessment
- 11) Final construction cost estimate
- 12) Corps Section 404 permit
- 13) Overgrazing determination
- 14) Cultural resources clearance
- 15) HTRW assessment
- 16) Section 303e approval

#### 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**

The BA-36 project has been previously submitted for Phase 2 funding in January 2005 and January 2006. Since that time, the Coastal Impact Assistance Program (CIAP) was authorized by Congress in 2005 and will provide an estimated \$540 million in federal funding to Louisiana and its coastal parishes during fiscal years 2007 through 2010. To obtain CIAP funds, the state must submit an acceptable Plan

of project proposals to the Secretary of the Interior. The Plan will identify projects to be supported with the funds that will go to the state and the coastal parishes at a 65/35 percent cost ratio.

A portion (Fill Site 2) of the BA-36 project was submitted by Jefferson Parish for inclusion within the State's Plan. Although the State's Plan has not yet been released, all indications are that this portion of the BA-36 project will be included in the Plan and eventually constructed with CIAP funds.

Therefore, this Phase 2 request is only for construction of Fill Site 1 of the BA-36 project. The project sponsors (USFWS and LDNR) are hopeful that the full project will be constructed using funding from both the CWPPRA and CIAP programs.

#### **Project Features**

Three areas within Bayous Perot and Rigolettes 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.

Fill Sites 1 (Figure 1) is comprised of mostly broken marsh and open water covering approximately 504 acres. 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.

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.

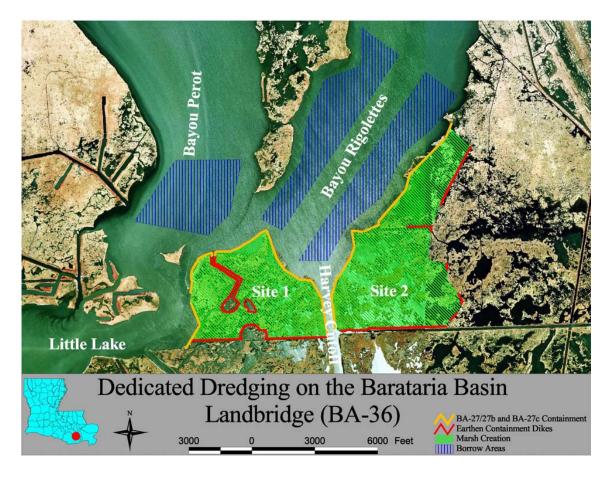


Figure 1 – Locations of Borrow and Fill Sites

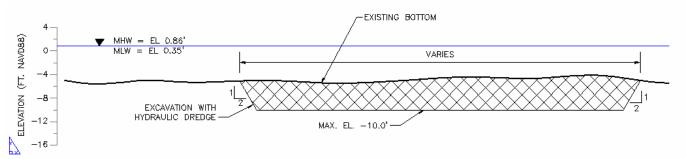


Figure 2 – Typical Cross Section of Borrow Areas

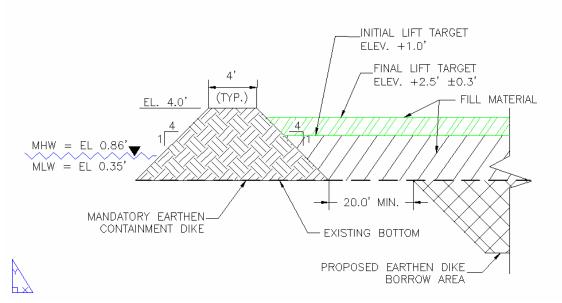


Figure 3 – Typical Cross Section of Mandatory Earthen Containment Dikes

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. 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.

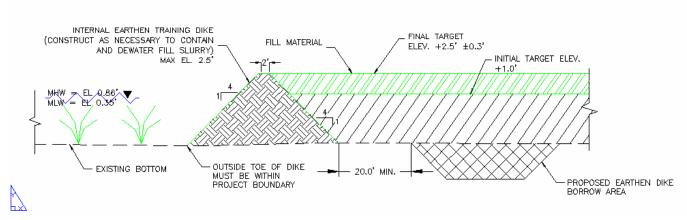


Figure 4 – Typical Cross Section of Internal Earthen Training Dikes

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 for the full project 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.

Benefits for constructing Fill Site 1 consist of 242 total net acres protected/created/restored over the project life. Net Average Annual Habitat Units total 135.

## 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, 5) dredging of tidal access channels omitted, and 6) containment dikes have been added around the entire perimeter of the project area so that shoreline protection features of the BA-27 project are no longer being used for containment of dredged material.

#### **Current Cost Estimate**

The revised fully-funded cost for Fill Site 1 prepared by the CWPPRA Economics Work Group is \$15,842,343.

## **Checklist of Phase Two Requirements**

#### A. List of Project Goals and Strategies.

The goals of the project are to: 1) create 504 acres of emergent marsh through the deposition of dredged material into open water and fragmented marsh and 2) provide a net benefit of 242 acres of 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 resuspension 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 \$15,231,142. The revised fully-funded cost of the project is \$15,842,343. 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 for the full project was prepared and reviewed by the Environmental Work Group. Benefits for Site 1, which totals 504 acres, include 242 net acres and 135 net average annual habitat units.

## 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 the Environmental and Engineering Workgroups.

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	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			56





## **Project Overview**

## **Project Location:**

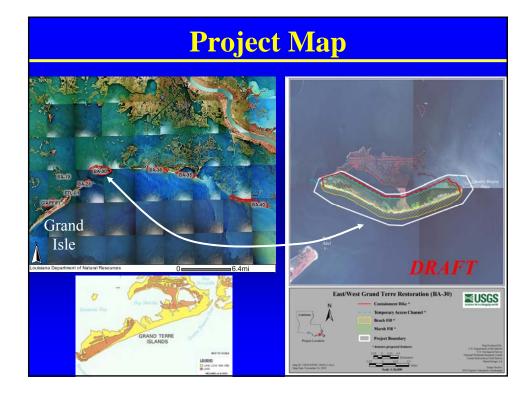
Region 2, Barataria Basin

## **Problem:**

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

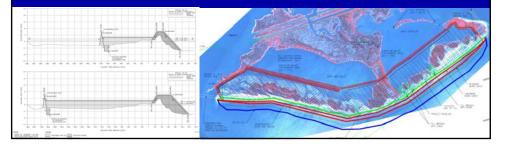
#### **Goals:**

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



## **Project Features Overview**

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



## **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: \$36,705,731
- Phase 2 increment 1 request is \$ 33,881,341

#### **Prioritization Score**

• 60

## **Project Comparison/Contrast**

The Present vs. PPL # 9

	Phase One	Current	% change
Fully funded cost (M)	\$ 18.2	\$ 36.7	201 %
TY 20 Net Acres	403	335	83 %
AAHU	177	268.9	151 %

#### Cost increase due to:

- 1) Project changes to increase dune and beach restoration to meet goal of maintaining shoreline integrity
- 2) Construction cost adjustments to reflect post-Katrina business climate and increase in construction contingency

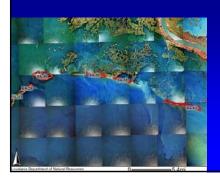
## **Project Need**

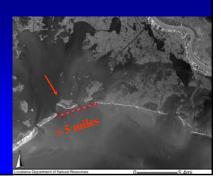
- Project conditions continue to deteriorate with permanent breaches in shoreline (shoreline erosion rates range from 20 to 80 feet/year (1996 to 2002)).
- Project costs expected to increase 15 20 %/year for the next two to three years

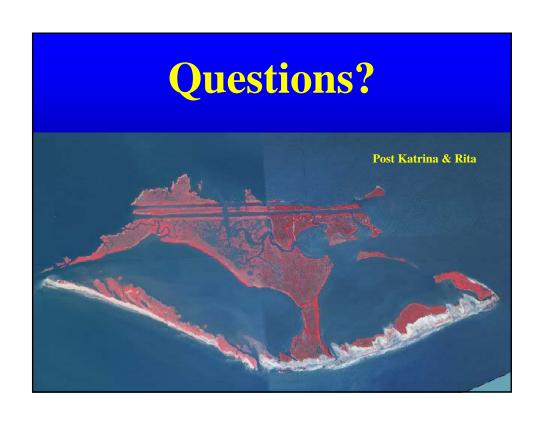


## **Project Need**

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







## 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	\$36.7 M
Phase II, Increment I Request	\$33.9 M
Net Acres at TY20	335
Average Annual Habitat Units	268.92

## 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. Additionally, project costs were updated in November 2006 to account for post-Katrina business climate adjustment.

#### 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.

## F. A draft of the Environmental Assessment of the Project

A draft EA was circulated to agencies for review in December 2005. With the exception of USFWS comments regarding designated critical habitat for piping plover, only minor comments were received. Pending receipt of construction approval, consultation with USFWS will be undertaken. Upon completion of the consultation, the EA will be finalized.

## 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 were submitted in December 2005. Issuance of regulatory approvals is pending consultation with USFWS regarding piping plover critical habitat located in the project area.

## 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

Complete.

## K. Overgrazing determination from the NRCS

Received October 7, 2005.

## L. Revised fully funded cost estimate

The revised fully funded cost estimate is \$36,705,731.

## M. A Wetland Value Assessment

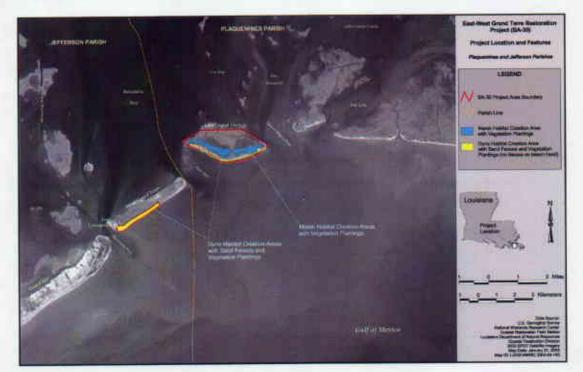
A revised Wetland Value Assessment was reviewed and approved by the ENG WG.

## 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
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



TV-11b - Freshwater Bayou Bank Stab-Belle Isle Canal-Lock

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



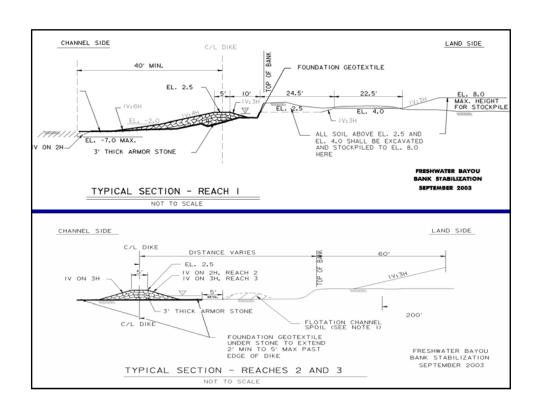
December 2006

## 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

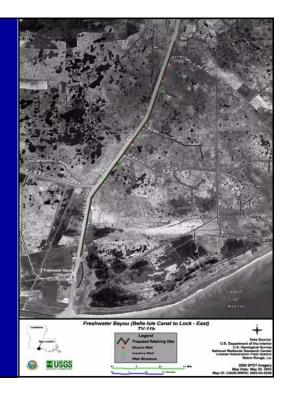
## Wetlands Loss Problems

- 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 \$30,070,170.





#### DEPARTMENT OF THE ARMY



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

ATTENTION OF:

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

21 November 2006

MEMORANDUM FOR Mr. Troy Constance, 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 9<sup>th</sup> 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. A copy of the project goals and strategies are included in enclosure A.

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. A copy of the draft cost sharing agreement is included in enclosure B.

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. A copy of the Real Estate Plan is included in enclosure C.

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. A copy of the letter is included in enclosure D.

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

A 95% design review was completed on 22 January 2004. A copy of the letter is included in enclosure E.

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. A copy of the draft Environmental Assessment is included in enclosure F.

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. A copy of the report can be found in enclosure G.

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. A copy of the signed 303(e) letter can be found in enclosure J.

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

An 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. A copy of the overgrazing determination letter provided by NRCS is included in enclosure K.

1. 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 November 2005 detailing a fully funded cost of \$ 30,070,170. A copy of the revised estimate is included in enclosure L.

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. A copy of the revised prioritization fact sheet based on the new cost estimate of Phase 2 activities has been included in enclosure N.

3. If you have any questions regarding this project please call Mr. Gregory Miller at (504) 862-2310 or Dr. Ken Duffy at (225) 342-4106.

GREGORY MILLER Project Manager Coastal Restoration Branch

TE-43 - GIWW Bank Restoration of Critical Areas in Terre

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

## **Technical Committee Meeting**

December 6, 2006

Baton Rouge, LA

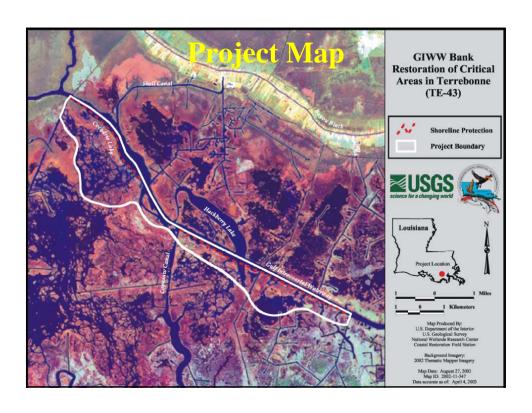
## **Project Overview**

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

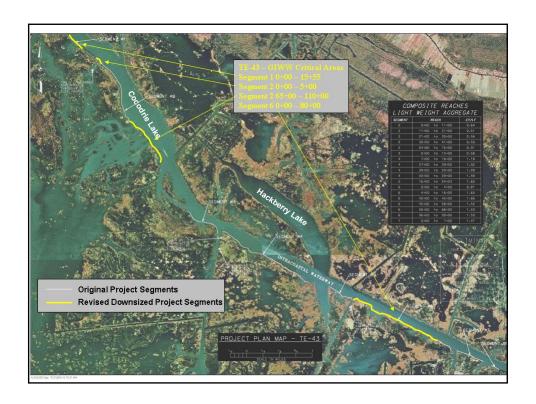
**Problem:** Deterioration of the southern bankline of the GIWW threatens fragile floating marshes of Penchant Basin and short-circuits freshwater conveyance to the east.

#### Goals:

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







### **Project Features Overview**

- Installation of approximately 14,555 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: 1,180 acres

• Net acres after 20 yrs: 132 acres

• Prioritization Score: 40.25

• Project Costs:

Fully Funded Phase II \$15,968,229
 Phase II, Increment 1 \$13,175,995
 Total Fully Funded \$17,704,212

### **Project Comparison/Contrast**

The Present vs. PPL # 10

- Original Phase II Funding vs Present Request:
  - •\$17,922,015 original
  - •\$15,968,228 present (reflects inflationary costs and adjustments to length and design of features)
- Changes in Project Features
  - •37,000 linear feet to 14,555 linear feet
- Changes in WVA Benefit area reduced from 3324 acres to 1,180 acres and the acres created/protected/restored from 366 acres to 132 acres. No change in Prioritization Score (40.25).

# Why Should You Fund this Project Now?

- •To improve the efficiency of Atchafalaya freshwater conveyance via the GIWW to eastern and southern marshes of the Terrebonne Basin that would benefit from increased flows of freshwater and nutrients.
- •To close major breaches and sustain GIWW bankline that eminently threatens to breach into adjacent floating marshes.

### **Questions?**



#### **United States Department of Agriculture**



Natural Resources Conservation Service 646 Cajundome Blvd., Suite 180 Lafayette, Louisiana 70506

November 27, 2006

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

Dear Mr. Constance:

RE: GIWW Bank Restoration of Critical Areas (TE-43)

Phase II Authorization Request

The Natural Resources Conservation Service (NRCS) and Louisiana Department of Natural Resources (LDNR) request Phase II authorization for the GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43). The project was authorized for Phase I as a part of Priority Project List 10 (PPL 10) in January 2001 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. Please be advised that the original Phase I candidate involved construction of 37,000 ft of bankline protection whereas this Phase II request has been revised to 15,000 ft (see Description of Phase II project in Enclosure 1 for details). Questions regarding this project may be referred to Ron Boustany at (337) 291-3067.

Sincerely,

Britt Paul Assistant State Conservationist/Water Resources

#### encl

cc (via email only):

Mr. Greg Breerwood, Chairman, Technical Committee Gerry Duszynski, DNR Technical Committee Member Darryl Clark, USFWS Technical Committee Member Rick Hartman, NMFS Technical Committee Member Sharon Parrish, EPA, Technical Committee Member Julie Leblanc, USACOE, P&E Subcommittee Dan Llewellyn, DNR P&E Subcommittee Member Kevin Roy, USFWS P&E Subcommittee Member Detra Washington, Governors Office Rachel Sweeney, NMFS P&E Subcommittee Member Tim Landers, EPA P&E Subcommittee Member John Jurgensen, NRCS P&E Subcommittee Member 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

### **Enclosure 1 Information Required in Phase II Authorization Request**

### GIWW BANK RESTORATION OF CRITICAL AREAS IN TERREBONNE (TE-43)

### **Description of Phase I Project**

The TE-43 GIWW Critical Areas project was approved relative to the 10<sup>th</sup> 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 (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.

At the time of Phase I approval, the fully-funded project cost was \$19,657,998. That figure included \$1,735,983 for Phase I and \$17,922,015 for Phase II. The original cost breakdown for Phases I and II is presented in the following table:

Task Name	Phase I Costs	Phase II Costs	
Engineering and Design	\$		
Land Rights	\$		
DNR Administration	\$	\$	
NRCS Administration	\$	\$	
Monitoring	\$	\$	
Corps Project Management	\$	\$	
Construction		\$	
Contingency		\$	
Supervision and Inspection		\$	
Operations and Maintenance		\$	
Total	\$1,735,983	\$17,922,015	

The original project fact sheet and map depicting the project boundary and project features is provided below.

October 2003



# 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

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



### Overview of Phase I Tasks, Process, and Issues

The following tasks were completed during Phase I:

- 1) Interagency kickoff meeting and field trip
- 2) Final Cost Share Agreement executed between NRCS and DNR
- 3) Preliminary landrights
- 4) Magnetometer survey
- 6) Geotechnical investigation of the proposed alignment
- 7) 30% design review
- 8) 95% design review
- 9) Draft Ecological Review
- 10) Draft Environmental Assessment
- 11) Final construction cost estimate
- 12) Section 404 Permit complete
- 13) Overgrazing determination from NRCS
- 14) Cultural resources clearance

#### **Geologic Information**

The predominant soil that occurs along the existing bankline of the GIWW is Aquents, Dredged, occasionally flooded. For the remainder of the project area, Kenner muck – very frequently flooded, makes up the majority of the soil type. Other soil types present within the project area are Fausse Clay – 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 has been approved by 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 has been 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**

The original candidate for Phase I authorization of TE-43 involved a near complete armoring of a section of the GIWW bankline (referred to as Area G) (Figure 1) totaling 37,000 feet where the bankline had deteriorated significantly and at some points breached into the adjacent floating marshes of the upper Penchant Basin. The two major breach areas are located at the NW and SE extents of the project area (Figure 2). In Fall 2005 and Spring 2006, NRCS and LDNR with the consent of Terrebonne Parish and a major landowner reevaluated the project. Based upon new USGS data and joint NRCS and LDNR field analysis, a revised downsized project was agreed upon that removed segments along intact banks and targeted only the two major breach areas within the project boundary (Figure 3). The purpose of the downsizing was to concentrate efforts on those critical areas where the bankline had breached or is imminently threatening to breach into adjacent fragile floating marshes. NRCS and LDNR criteria for downsizing required that the revised project not add any new areas to the project and would not significantly alter the overall project goals.

The final design of the project features are essentially unchanged from the original Phase I project with exception to the total length. The project contains shoreline protection by means of a hard shoreline structure. The Phase 0 approved length of the structure was approximately 37,000 feet whereas the length of the designed project that targets just the major breach areas is approximately 14,555 feet.

The work to be accomplished will consist of the installation of approximately 14,555 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 4 and 5 (typical and composite rock dike sections).

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.

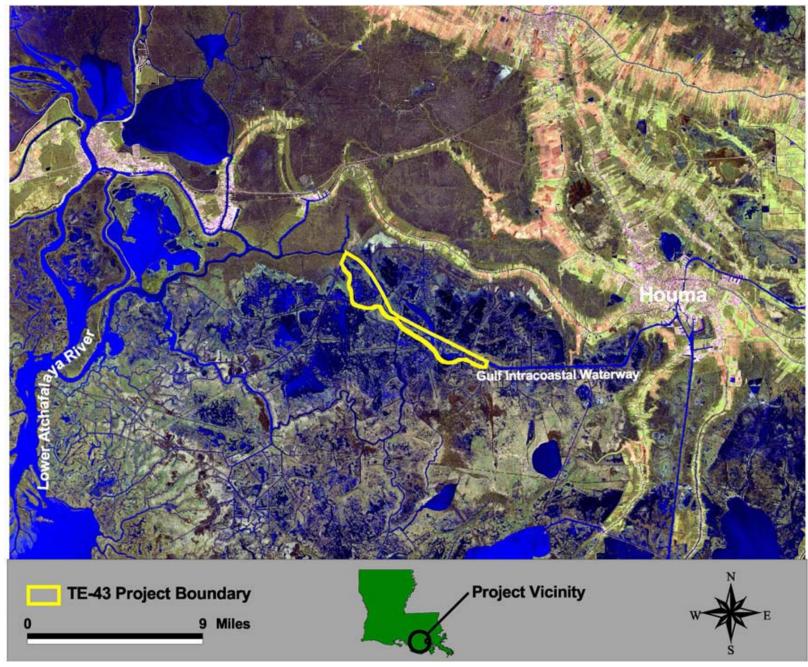


Figure 1. Vicinity map of original boundary of GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43).

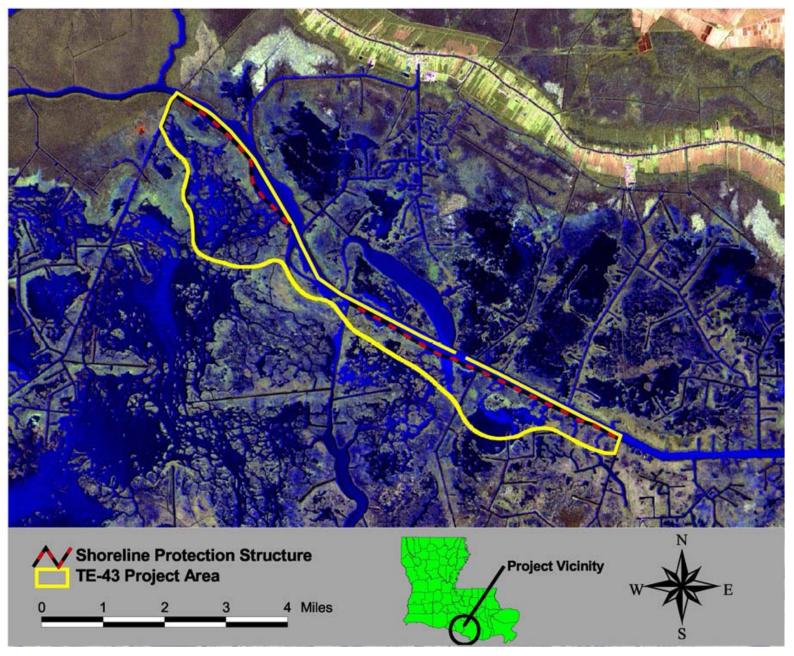


Figure 2. Expanded view of original project boundary of GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43) also indicating extent of shoreline protection coverage.

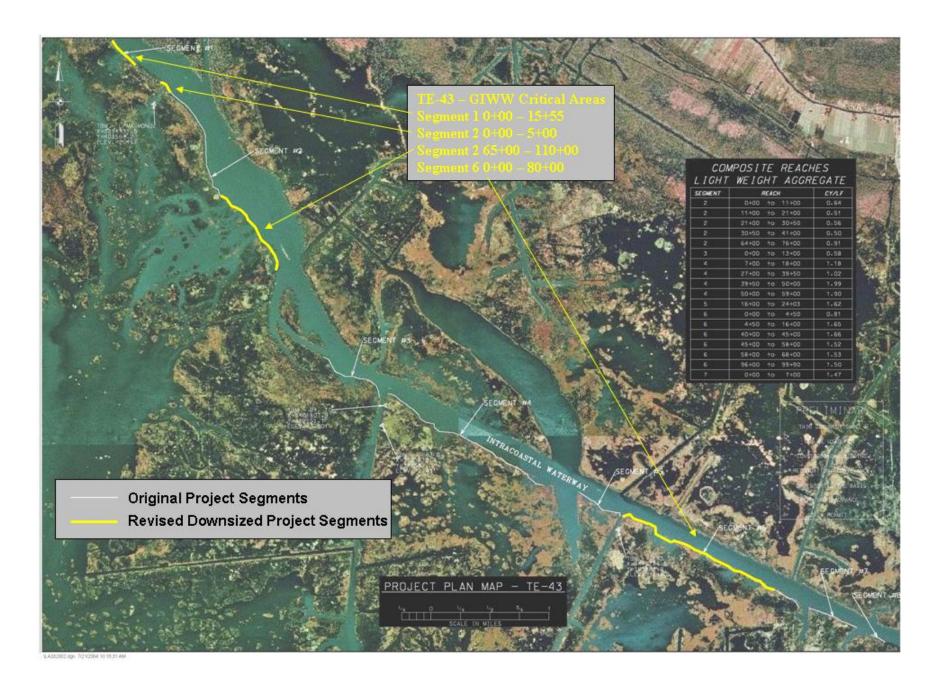
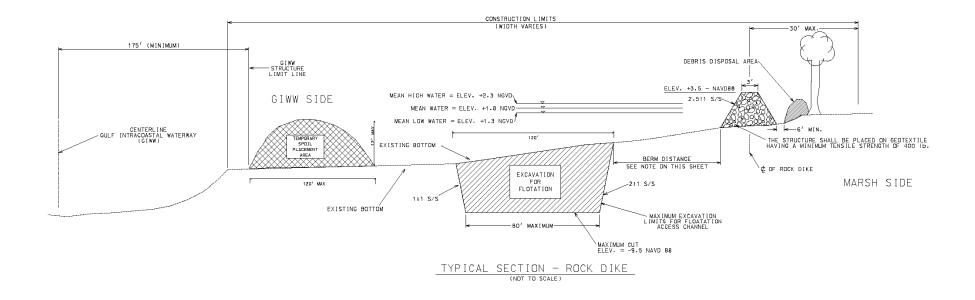


Figure 3. Original and Revised Project Segments on GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43).



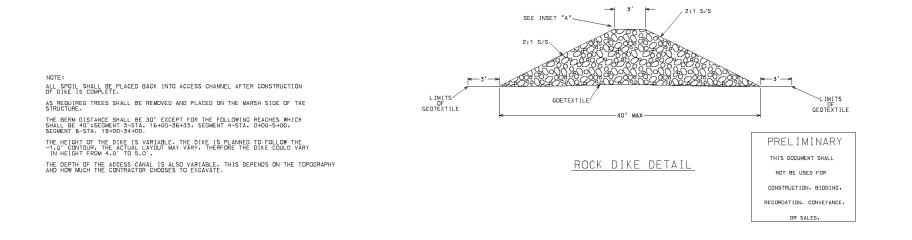


Figure 4 – Typical Rock Dike Section.

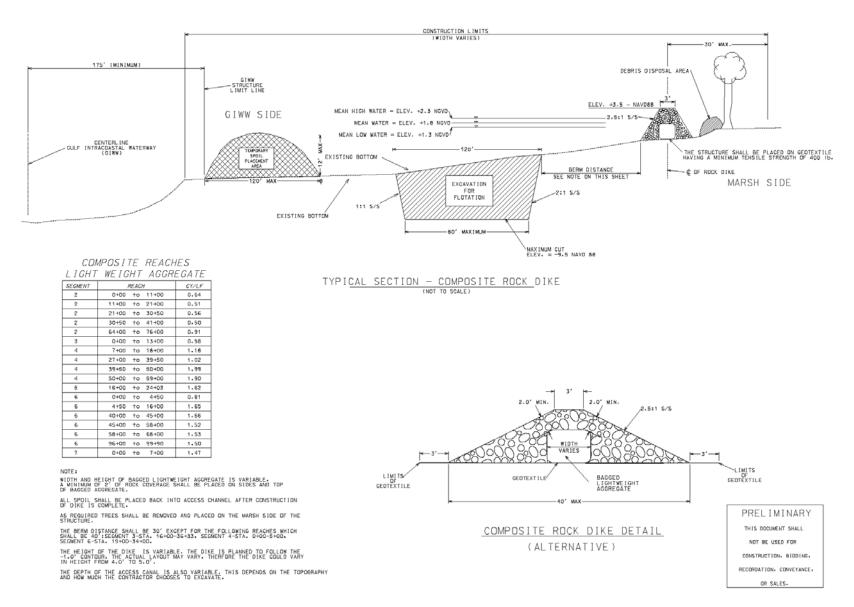


Figure 5 – Typical Composite Rock Dike Section.

### **Updated Assessment of Benefits**

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. The downsized project pro-rated benefit area is 1,180 acres (36% of original) for a net acres created/protected/restored of 132 acres at TY 20.

#### Modifications to the Phase I Project

The Phase 0 approved length of the structure was approximately 37,000 feet, whereas the length of the designed project has been reduced to approximately 14,555 feet and confined to the major bankline breach areas. The final design of the project structures are essentially unchanged from the original Phase I project with exception to the total bankline coverage of the project. The project contains shoreline protection by means of a hard shoreline structure.

#### **Current Cost Estimate**

The revised total fully-funded cost prepared by the CWPPRA Economics Work Group is \$17,704,212 (see fully funded cost spreadsheet). Phase I costs are unchanged from the original Phase I project budget (\$1,735,983). The total Phase II cost is estimated at \$15,968,229 and the Phase II-Increment 1 cost at \$13,175,995.

### **Final Project Fact Sheet**

November 27, 2006

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

**Coast 2050 Strategy** – Region 3 - #6 Stabilize navigation channel banks or cross sections for water conveyance.

**Project Location** – Region 3, Terrebonne Basin, Terrebonne Parish, south shore of GIWW.

**Problem** - 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.

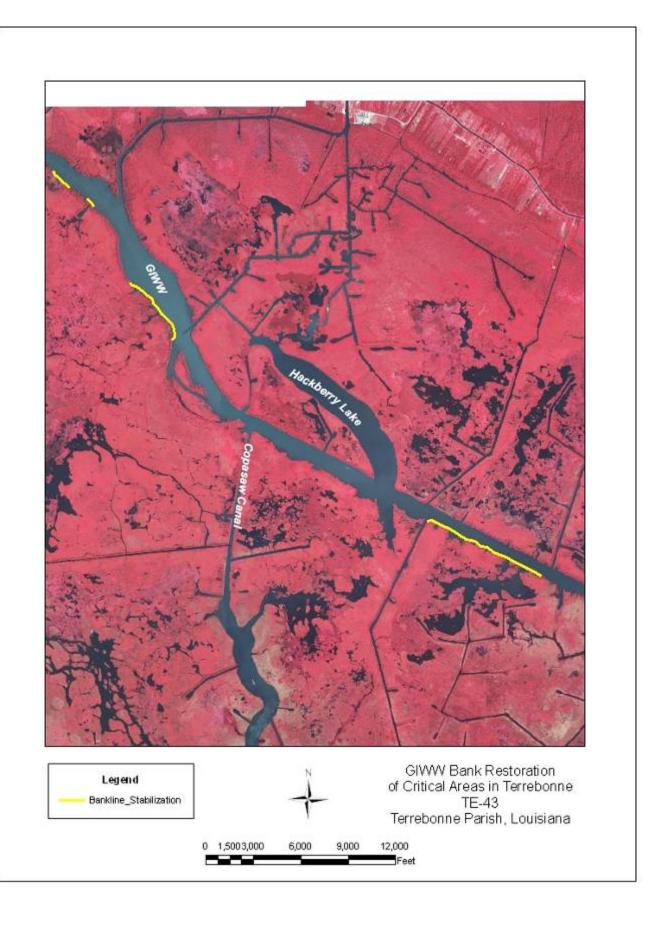
**Goals** - To enable the GIWW to function as a conveyance channel to direct Atchafalaya River freshwater flow to specific locations that would benefit from increased flows of fresh water and nutrients, and 2) To provide relief to marshes connected to the GIWW that are currently suffering from prolonged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

**Proposed Solution** - 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.

**Project Benefits** – The project would benefit approximately 1180 acres adjacent to the largest floating marsh complex in coastal Louisiana and a predicted net acres created/protected/restored of 132 acres at TY 20.

**Project Cost** – Total fully funded cost is \$17,704,212.

Sponsoring Agency and Contact – Natural Resources Conservation Service (NRCS) Ron Boustany, Project Manager, Lafayette, LA (337) 291-3067, ron.boustany@la.usda.gov



### **Enclosure 2 Checklist of Phase II 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 period of time after Phase 2 approval. By way of letter received Septemper 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.

Section 404 Permit has been received dated January 18, 2006. 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.

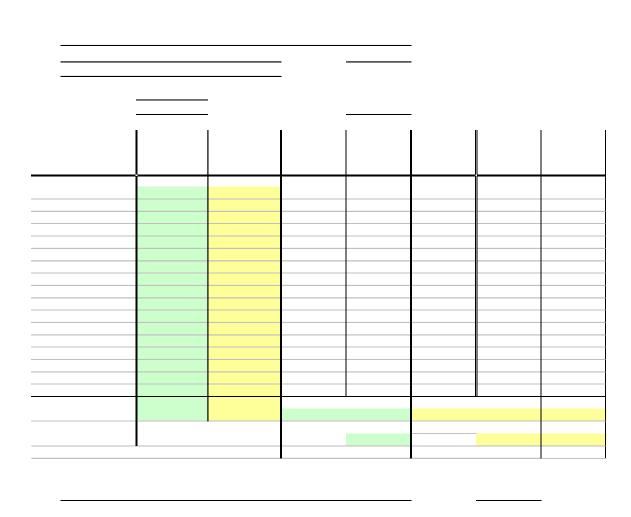
Section 303(e) approval was granted by the Corps via letter dated July 8, 2003.

### 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.

# 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 the below spreadsheet.

The specific Phase 2 funding request (updated construction estimate and three years of monitoring and O&M) is \$13,175,995. The revised total fully-funded cost of the project is \$17,704,212.



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

Because the change in the segment lengths did not significantly alter the objectives of the project, the WVA was revised to reflect pro-rated benefits with respect to the length of the project features. Therefore, the environmental benefits associated with this project are adjusted proportionally to the size. The original Phase I benefited project area was 3,324 acres and the net acres created/protected/restored at TY20 were 366 acres. The revised pro-rated benefit area is 1,180 acres (36% of original) and the net acres created/protected/restored is 132 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 agreed upon by all agencies:

Criteria	Score	Weight	Final Score
Cost Effectiveness	1.0	2	2
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



### North American Waterfowl Management Plan



Gulf Coast Joint Venture

c/o National Wetlands Research Center 700 Cajundome Boulevard Lafayette, Louisiana 70506

January 18, 2007

Colonel Richard P. Wagenaar CWPPRA Task Force Chairman District Commander U.S. Army Corps of Engineers, New Orleans District P.O. Box 60267 New Orleans, Louisiana 70160-0267

Dear Col. Wagenaar,

The Gulf Coast Joint Venture (GCJV) is a partnership of federal, state, and private conservation organizations dedicated to delivery of bird habitat in the coastal portions of Alabama, Mississippi, Louisiana, and Texas. On behalf of the GCJV Management Board, I am writing to express support for the following three candidate projects under consideration for Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA) Phase II funding:

Castille Pass Channel Sediment Delivery (AT-04)
GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43)
Rockefeller Refuge (ME-18)

Louisiana's Gulf Coast wetlands are of continental importance to many species of migratory birds. Along with meeting the goals of CWPPRA to protect and restore important coastal wetland habitats, these three projects are expected to provide substantial benefits to priority bird species identified by the GCJV. These projects protect and/or improve wetland habitat that is of particular importance as foraging habitat for shorebirds and waterfowl.

The GCJV pursues projects through a variety of funding sources to accomplish conservation goals identified in plans for the Chenier Plain and Mississippi River Coastal Wetlands Initiative Areas. These GCJV Initiative Area Plans and the Coast 2050 Plan have many conservation strategies in common, and we see opportunities for GCJV partners to implement smaller projects intended to benefit waterfowl and other migratory birds that will complement larger CWPPRA projects designed to restore and enhance coastal wetland habitat.

The GCJV Management Board appreciates the opportunity to participate in the CWPPRA project evaluation process, and we look forward to future dialogue regarding potential integration of our Initiative Area Plan conservation efforts with those of CWPPRA.

Sincerely,

Jeff Raasch Chairperson

cc:

**CWPPRA** Task Force members

CWPPRA Technical Committee Acting Chair

GCJV Management Board



# CWPPRA Goose Point/Point Platte Marsh Creation (PO-33) Phase II Request

### **Technical Committee Meeting**



December 6, 2006 Baton Rouge, LA



### **Project Overview**

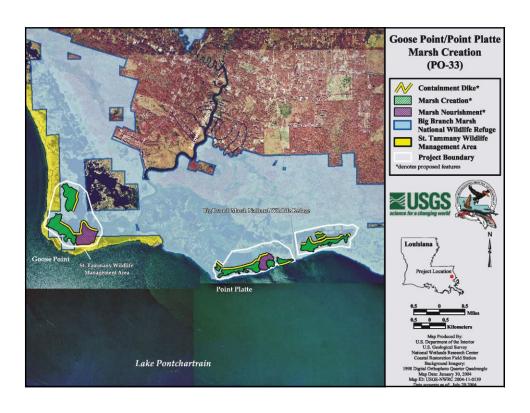
**Project Location:** Region 1, Pontchartrain Basin, St. Tammany Parish, north shore of Lake Pontchartrain

**Problem:** High loss rate (-3.1%/yr) from 1956-1978; historically intermediate and low-salinity brackish marsh; loss believed to be caused by ponding and saltwater intrusion; lake shoreline very narrow in some places and breached in several locations

#### Goals:

- 1) Re-create 566 acres of marsh in open water to restore the lake-rim function
  - 2) Maintain 436 net acres of marsh at the end of the project life





### **Project Features Overview**

- 566 acres of marsh creation/nourishment; 417 acres of open water and 149 acres of degraded marsh will be filled with dredged material
- Target height of +2.0-ft NAVD88 with a maximum fill height of +2.5-ft in marsh creation areas; fill height of +1.5-ft in marsh nourishment areas; average marsh elevation is +1.0-ft
- Containment dikes constructed to +3.5-ft with a 5-ft crown width and 1(V):3(H) side slopes
- Two borrow sites totaling 298 acres in Lake Pontchartrain; approximately 10-ft of dredging at each site





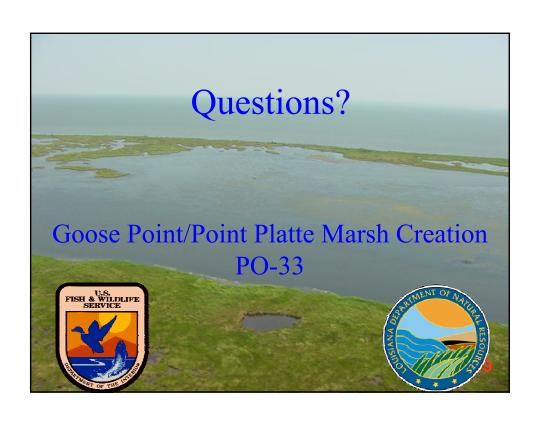


### **Project Benefits & Costs**

- In total, the project will benefit 1,384 acres of marsh and open water habitat; 436 net acres of marsh at the end of the 20-year project life
- Wetland Value Assessment: 297 Net AAHUs
- The Fully Funded Cost is: \$20,867,777
   Phase 2 Request is: \$18,989,923
- The Prioritization Score is: 53

### Why Should We Fund This Project Now?

- Numerous shoreline breaches currently exist; narrow shoreline rim in some locations
- This is the only project being considered for funding on the north shore of Lake Pontchartrain; this area experienced extensive loss from Hurricane Katrina
- Marshes along the north shore of Lake Pontchartrain are extremely important in reducing storm damage to towns of Lacombe and Slidell, infrastructure, etc.





### United States Department of the Interior

#### FISH AND WILDLIFE SERVICE 646 Cajundome Blvd. Suite 400 Lafayette, Louisiana 70506

November 29, 2006

Mr. Troy Constance, Acting Chairman CWPPRA Technical Committee U.S. Army Corps of Engineers, New Orleans District P.O. Box 60267 New Orleans, Louisiana 70160-0267

Dear Mr. Constance:

The U.S. Fish and Wildlife Service and Louisiana Department of Natural Resources would like to submit the Goose Point/Point Platte Marsh Creation Project (PO-33) for Phase 2 approval. That project was approved for Phase 1 funding by the CWPPRA Task Force as part of the 13<sup>th</sup> Priority Project List. The enclosed packet includes all information required for a Phase 2 authorization request, per Section 6.j. of the CWPPRA Standard Operating Procedures manual. This Phase 2 authorization request is also being sent to all CWPPRA Technical Committee and Planning and Evaluation Subcommittee members.

If you have any questions regarding this submittal, please contact Mr. Kevin Roy of this office at (337) 291-3120.

Sincerely,

/s/Russell C. Watson Supervisor Louisiana Field Office

Enclosures

#### Phase II Authorization Request Goose Point/Point Platte Marsh Creation PO-33

#### **Description of Phase I Project**

The PO-33 Project was approved for Phase I funding on the 13<sup>th</sup> Priority Project List. At the time of Phase I authorization, project features included:

- 1) Hydraulic dredging in Lake Pontchartrain to create 437 acres of marsh and nourish 114 acres of existing marsh (Figure 1). The target elevation for the fill material was 1.0 foot above average marsh elevation;
- 2) Earthen containment would be used where necessary around the project perimeter to contain dredged material. Depending on soil stability, containment dikes would be breached upon demobilization;
- 3) The marsh platform would be planted with appropriate vegetation.

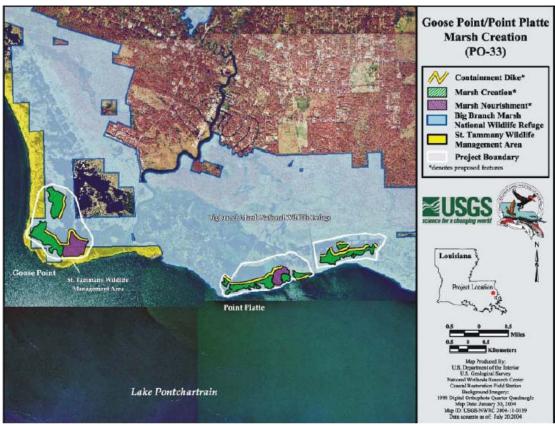


Figure 1. Project features at the time of Phase 1 approval.

Specific goals of the project were to: 1) create 437 acres of emergent marsh through the deposition of dredged material into open water areas and 2) nourish/enhance 114 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 1,384 acres and the net creation/restoration of 436 acres of marsh at the end of the project life.

At the time of Phase I approval, the fully-funded project cost was \$21,747,421. That figure included \$1,930,596 for Phase I and \$19,816,825 for Phase II. The cost breakdown for Phases I and II is presented in the following table.

Task Name	Phase I Costs	Phase II Costs		
Engineering and Design	\$1,241,993			
Land Rights	\$10,428			
DNR Administration	\$329,530	\$		
FWS Administration	\$347,528	\$		
Monitoring	\$0	\$		
Corps Project Management	\$1,387	\$		
Construction		\$		
Contingency		\$		
Supervision and Inspection		\$		
Operations and Maintenance		\$		
Total	\$1,930,596	\$19,816,825		

#### Overview of Phase I Tasks, Process and Issues

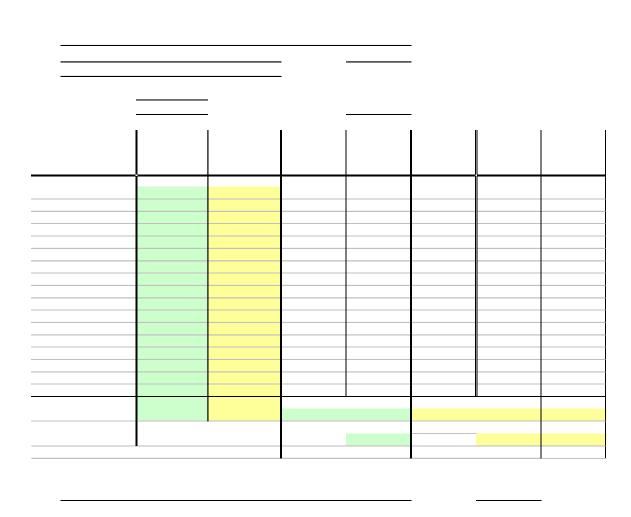
The following tasks were completed during Phase I:

- 1) Interagency kickoff meeting and field trip
- 2) Final Cost Share Agreement executed between FWS and DNR
- 3) Preliminary landrights
- 4) Elevation surveys for the borrow areas, fill sites, and containment sites
- 5) Magnetometer survey
- 6) Geotechnical investigation of the borrow and fill sites
- 7) 30% design review
- 8) 95% design review

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, based on the revised Project design and the specific Phase 2 funding request as outlined in the below spreadsheet.

The specific Phase 2 funding request (updated construction estimate and three years of monitoring and O&M) is \$13,175,995. The revised total fully-funded cost of the project is \$17,704,212.



#### **Description of the Phase II Candidate Project**

#### Project Features

Sediment will be hydraulically dredged in Lake Pontchartrain and pumped into open-water and fragmented marsh areas to create approximately 566 acres of marsh. Approximately 298 acres of water bottom in Lake Pontchartrain would be dredged to a maximum depth of -23 feet North American Vertical Datum of 1988 (NAVD 88; all following elevations are reported in NAVD 88). A magnetometer survey was conducted in the borrow area to identify pipelines and other hazards, and the proposed borrow areas have been configured to avoid those hazards.

To determine target elevations for the fill sites, consolidation settlement calculations and self-weight consolidation tests were run for borings taken within the fill sites and borrow areas. The purpose of those analyses was to determine a fill elevation that would be as close as possible to the existing marsh elevation after 20 years, and that would fall within the inter-tidal zone for the longest period of time. It was concluded that a target fill elevation of +2.0 feet would ultimately settle to an elevation of +0.80 feet and that a target fill elevation of +2.5 feet would ultimately settle to an elevation of +1.1 feet. Those values are extremely close to the existing marsh elevation (+1.0 feet) and fall within the intertidal zone (MHW=1.08 feet, MLW=0.48 feet), therefore a target fill elevation of +2.0 feet was selected with a maximum fill elevation of +2.5 feet. Subsequently, a target fill elevation of +1.5 feet was selected for the marsh nourishment sites, which include fragmented marsh, are relatively well contained by surrounding marsh, and are mainly intended as outfall for the marsh creation sites.

Containment dikes will be built to +3.5 feet with a 5-foot crown width and 1(V):3(H) side slopes. Containment dikes will be constructed with a bucket dredge using *in situ* material from within each fill site and the borrow area will be filled with hydraulically dredged material. It is anticipated that the containment dikes will subside and breach naturally to allow tidal connectivity and prevent ponding. Project features are shown in Figure 2.

#### **Updated Assessment of Benefits**

An updated assessment of benefits was not prepared for this project because the project scope has not significantly changed from the Phase 1 project.

#### Modifications to the Phase 1 Project

Final design features are essentially unchanged from the original Phase 1 project.

#### **Current Cost Estimate**

The revised fully-funded cost prepared by the CWPPRA Economics Work Group is \$20,867,777.

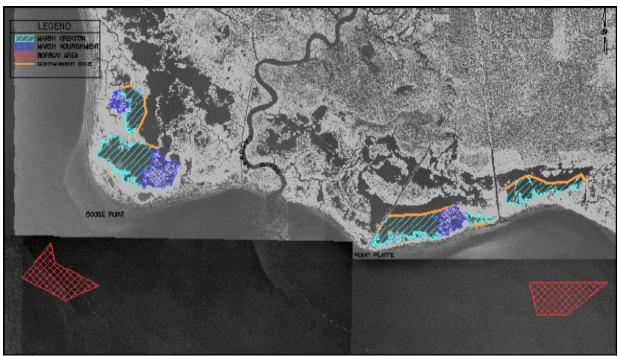


Figure 2. Project features.

#### **Checklist of Phase Two Requirements**

#### A. List of Project Goals and Strategies.

The goals of the project are to: 1) create 566 acres of emergent marsh through the deposition of dredged material into open water and fragmented marsh and 2) provide a net benefit of 436 acres of 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 May 14, 2004. 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 July 20, 2006, 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, 2006, 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 draft EA was issued for public comment on November 6, 2006.

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

The following paragraph is from the Recommendations section of the October 23, 2006 draft 95% Ecological Review:

Based on the evaluation of similar projects, a review of engineering principles, and an evaluation of the revised design report including comments received at the 30% Design Review meeting (held July 20, 2006), the LDNR project team feels that the conceptual design for the Goose Point/Point Platte Marsh Creation project would likely achieve the desired ecological goals for the majority of the 20-year project life and concurs that the current level of design warrants continued progress toward the Phase II funding request.

# 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 applied for a Section 404 permit from the Corps of Engineers.

# 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, pits or associated facilities. No resuspension of contaminants from sediment disturbance is expected.

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

Section 303(e) approval was received from the Corps via email on November 27, 2006.

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

An overgrazing determination was issued on January 24, 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 \$18,989,923. The revised fully-funded cost of the project is \$20,867,777. The revised budget sheets, with the anticipated schedule of expenditures, are provided in Attachment 1.

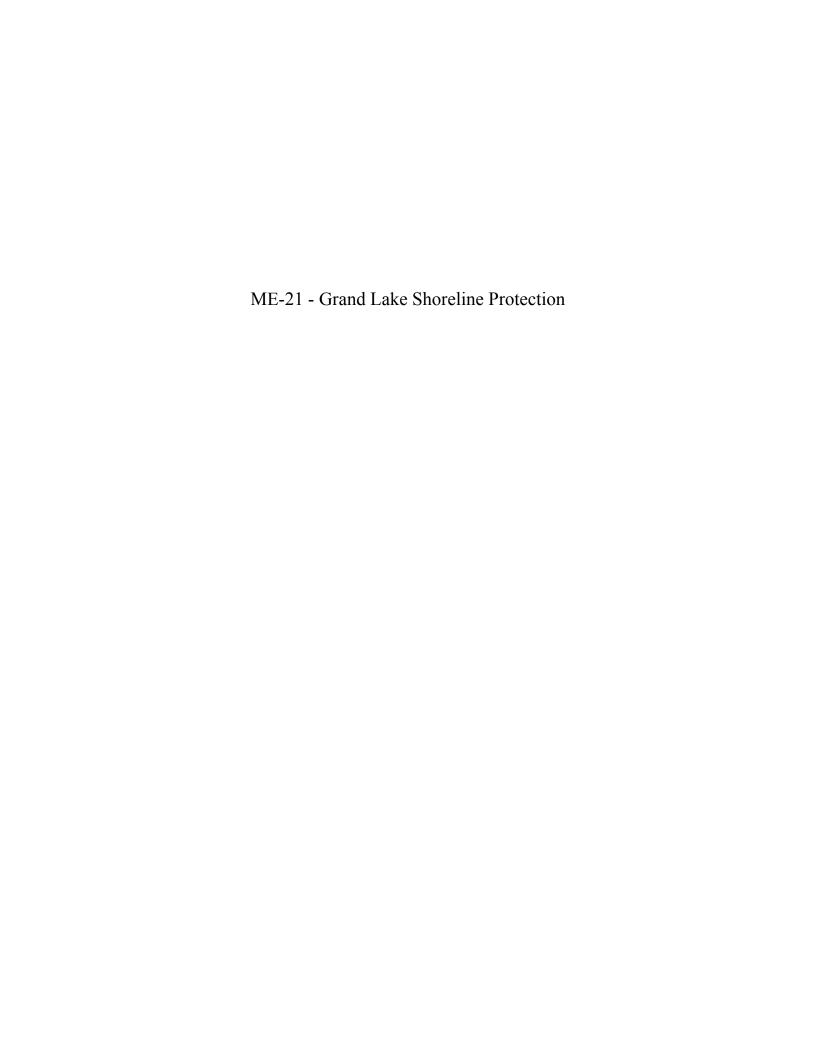
#### M. A Wetland Value Assessment, reviewed and approved by the Environmental Work Group.

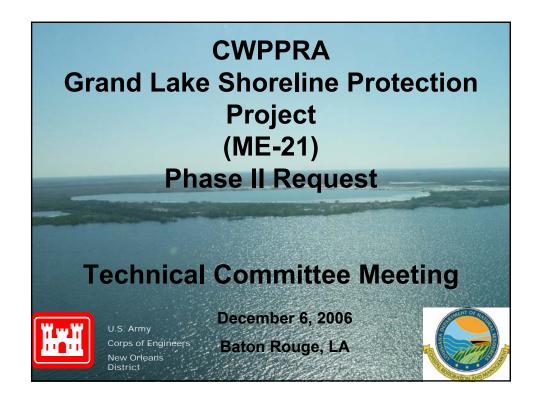
This project has not undergone a significant change in scope. Therefore, a revised Wetland Value Assessment was not prepared. Benefits for this project are the same as those at the time of Phase 1 approval.

# 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 the Environmental and Engineering Workgroups.

Criteria	Score	Weight	Final Score
Cost Effectiveness	5	2	10
Area of Need	4	1.5	6
Implementability	10	1.5	15
Certainty of Benefits	7	1	7
Sustainability of Benefits	10	1	10
HGM – Riverine Input	0	1	0
HGM – Sediment Input	0	1	0
HGM – Landscape Features	5	1	5
Total Score			53





# **Project Overview**

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

**Problem:** Shoreline erosion rates in this area vary from 11 to 32 feet per year according to a comparison of aerial photography from 1978/1979 and 1997/1998.

#### Goals:

- 1. Stop shoreline erosion from Superior Canal to Tebo Point.
- 2. Promote accretion between the breakwater and the shore.

# **Project Map**



# **Project Features Overview**

- ◆ Construct rock dike along 37,800 If of shoreline from Superior Canal to the mouth of Catfish Lake with a separable option to place 5,700 feet additional If around Tebo Point, to the west of the base project footprint.
- ♦ The rock dike would be situated along the −1.0-ft NAVD 88 contour in 2.0 ft to 3.0 ft of water. The crown would be constructed to elevation +3.0 NAVD88 and 4.0 ft. width. Front and back side-slopes of 1.0 ft vertical on 1.5 ft horizontal.

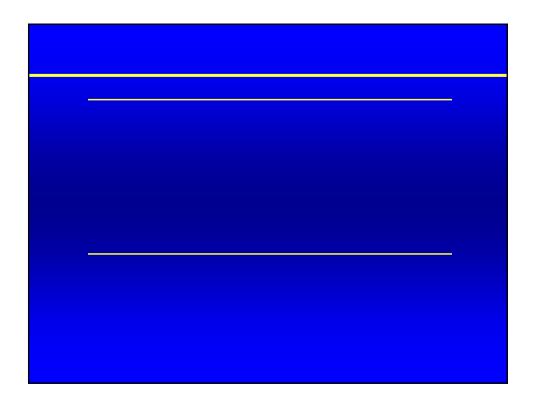


# Project Benefits & Costs • Project with Tebo Point extension: Benefits – 540 net acres Total fully funded cost - \$24,117,374. Prioritization Score – 61.25 • Project without Tebo Point extension: Benefits – 495 net acres Total fully funded cost - \$21,737,859. Prioritization Score – 61.25

# **Additional Project Benefits**

An additional 90 acres of marsh would be created behind the rock dike from beneficial use of floatation channel dredge material. These acres are not included in the reported net benefit acres for the project.





# Why Fund This Project Now?

- The shoreline is eroding an average 25 ft/yr
- Project ranks 2nd highest out of 12 prioritized projects
- •Land loss in Region IV (164 mi²) resulting from Hurricane Rita was more than 4.6 times the land loss in Region III resulting from Hurricane Rita, and 8.6 times the land loss in Region I (19 mi²) and 2 times the land loss in Region II (77 mi²) resulting from Hurricane Katrina.
- This is the only full project up for consideration in Region IV this funding cycle, Region IV, which has been neglected in the LCA near term plan.
- •No projects were funded for construction last year in Region IV





#### DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267
November 22, 2006

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

MEMORANDUM FOR: Mr. Troy Constance, 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, a summary of the benefits, and budget information as estimated for the project 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 USACE Engineering Division performed the engineering and design for the project. The project design considered an option to extend the project alignment around Tebo Point an additional 5,700 linear feet. 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. DNR concurred that the project should proceed with the extension contingent on an assessment of a cultural resources site near Tebo Point. All NEPA documentation was completed resulting in a final Environmental Assessment and a Finding of No Significant Impact (FONSI) dated 2 April 2004, with a supplemental EA issued for the 5,700 linear foot Tebo Point extension. 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 was 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 increased the rock dike length by approximately 5,700 lf (15.1%), the benefits by 45 net acres (+9.1%), and the total fully funded cost by \$2,379,515 (+10.9%).
- 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 the project is approved for Phase II funding and construction. A cost share agreement will be executed shortly after receiving Phase II approval and would not impact the construction schedule.
- 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 indicating their concurrence to proceed with the final design of the project. A copy of the letter of concurrence has been included as enclosure 4-D.
- 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) for the project was finalized and a copy of the signed FONSI, dated 2 April 2004, has been included as enclosure 4-F. A supplemental EA and FONSI, dated 1 March 2005, for the Tebo Point extension is also included.
- G. A copy of the Ecological Review completed by the LDNR has been included as enclosure 4-G.
- H. All permits and authorizations, including Water Quality Certificate, dated 23 January 2004, Coastal Zone Consistency, dated 11 March 2004. All Fish and Wildlife Coordination Act and Essential Fish Habitat requirements have been met and the LA State Historic Preservation Officer has concurred with a determination of no effect on historic properties.
- 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 current 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) Specific Phase II funding request (construction and three years of O&M): Grand Lake SP with Tebo Point extension: \$20,331,946 Grand Lake SP without extension: \$17,980,307
- 2) Fully-funded 20-year cost estimates:
  Grand Lake SP with Tebo Point extension: \$24,117,374
  Grand Lake SP without extension: \$21,737,859
- 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 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 20, 2006 has been included as enclosure 4-N.

If you have any questions regarding the subject project, please call Ms. Melanie Goodman at (504) 862-1940.

Melanie Goodman Project Manager Restoration Office

**Enclosures** 

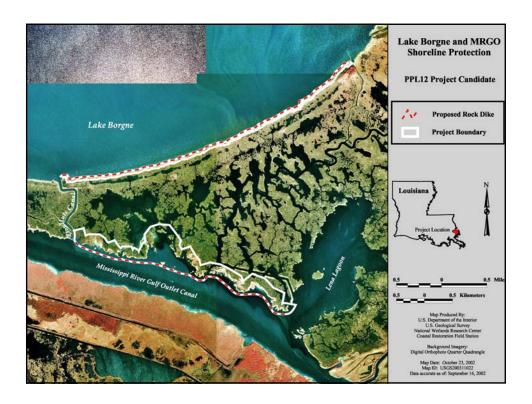
PO-32b - Lake Borgne & MRGO Shoreline Prot - MRGO\*\*

\*\* Lake Borgne segment of the Lake Borgne & MRGO Shoreline Protection Project constructed under Corps funding



# Project Background

- Authorized in January 2003 by Breaux Act (CWPPRA) Task Force on PPL12
- Originally two segments totaling ~32,750 linear feet of rock dike to stop shoreline erosion along the southern shoreline of Lake Borgne and the north bank of the Mississippi River Gulf Outlet
- Task Force directed that the projects be designed as separable reaches in Phase I
- USACE building Lake Borgne segment with hurricane recovery funds Congress provided in the 3<sup>rd</sup> Supplemental



# Wetlands Loss Problems

- The northern shoreline of the MRGO experiences high rates of erosion
- Rate has been estimated at 24ft/yr and higher in some places
- Due mainly to vessel wakes from the ship channel and bank sloughing

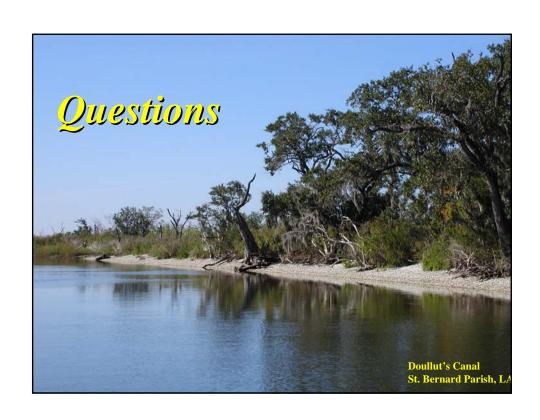
### **Benefits and Costs**

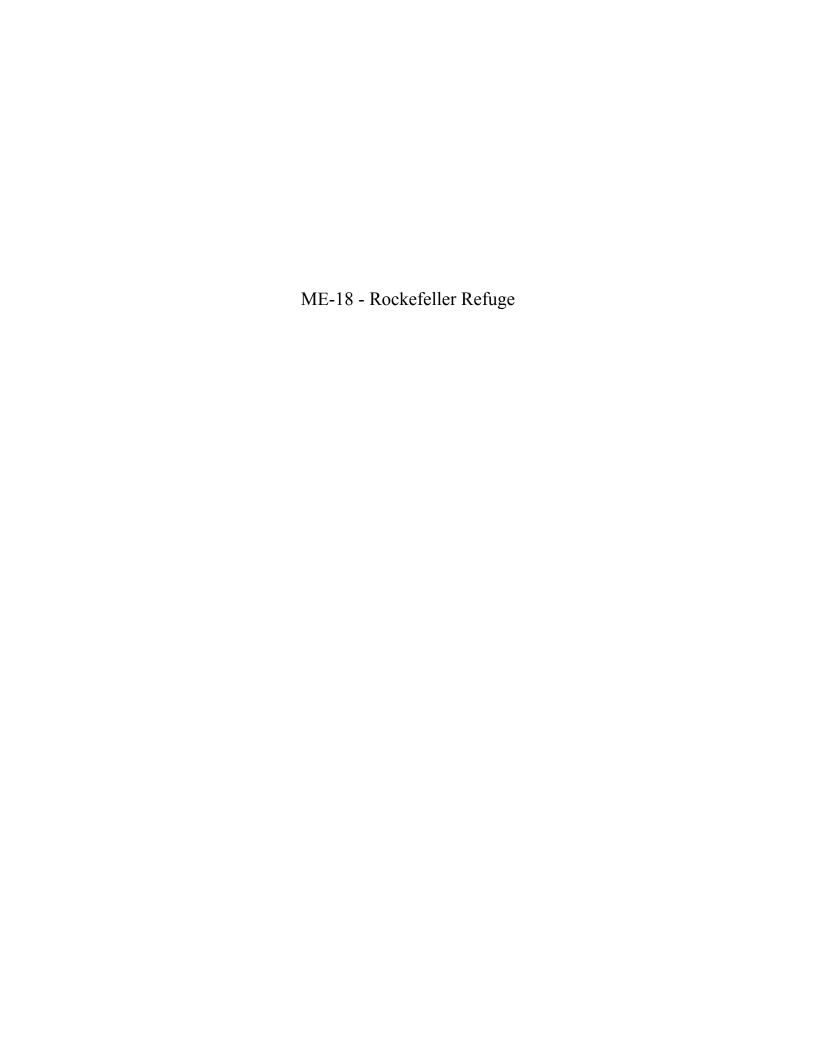
#### **MRGO** segment

- 14,360 ft offbank breakwater
- Crown of breakwater set at +5.0 ft high
- Protects 173 acres of brackish marsh
- Fully funded cost estimate \$35,985,438
- Phase II increment 1 request is \$31,924,591

# **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





# CWPPRA Rockefeller Gulf Shoreline Stabilization (ME-18) Phase II Request

# **Technical Committee Meeting**

December 5, 2006

Baton Rouge, LA

# **Project Overview**

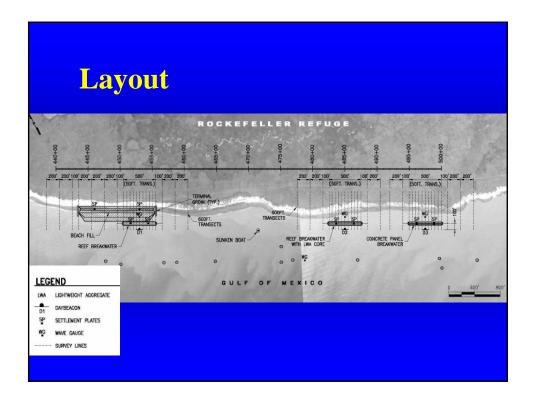
**Project Location:** Region 4, Calcasieu - Sabine Basin, Cameron Parish, Gulf shoreline between Joseph Harbor and Beach Prong.

**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**

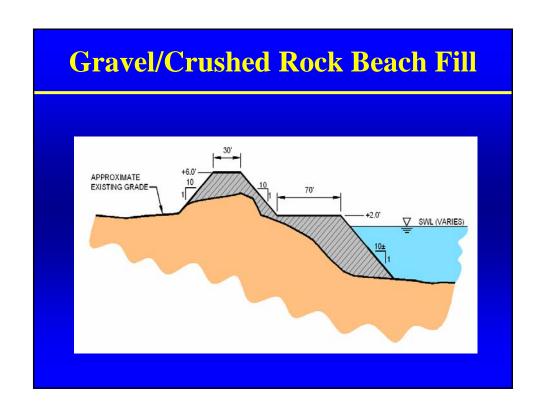
- Halt gulf shoreline retreat and direct marsh loss from Beach Prong to Joseph Harbor
- Protect Saline Marsh Habitat
- Enhance Fish and Wildlife Habitat

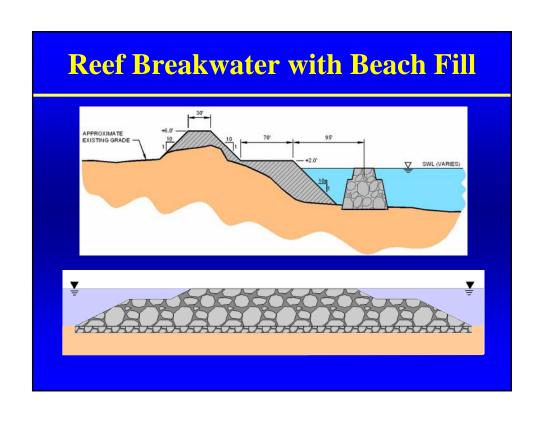
# Project Map Gulf of Mexico Rockefeller Refuge Gulf Shoreline Stabilization (ME-18) Limits of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Name of Ted Sections Shoreline Project Bondary \*\* denote proposed butters Paged Location Shoreline Project Bondary \*\* denote proposed butters Paged Location Shoreline Project Bondary \*\* denote proposed butters Paged Location Shoreline Project Bondary \*\* denote proposed butters Paged Location Shoreline Project Bondary \*\* denote proposed butters Paged Location Shoreline Project Bondary \*\* denote project B

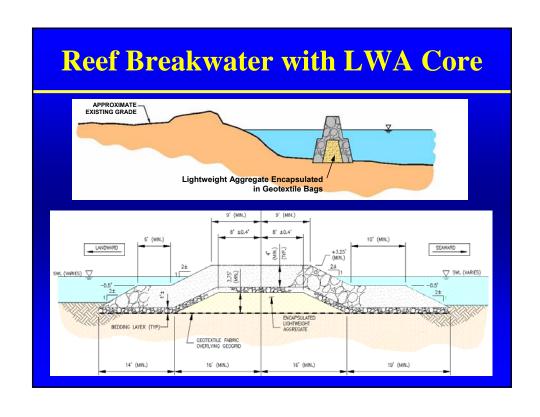


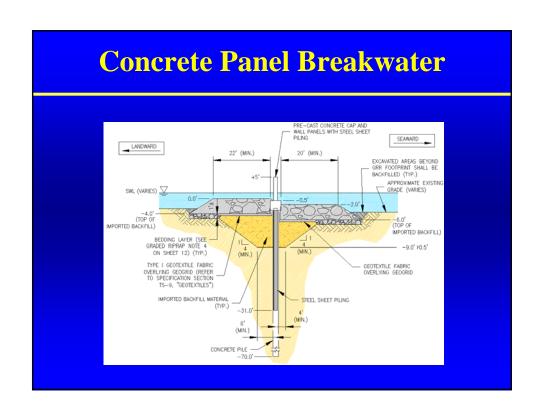
# **Project Features Overview**

- 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

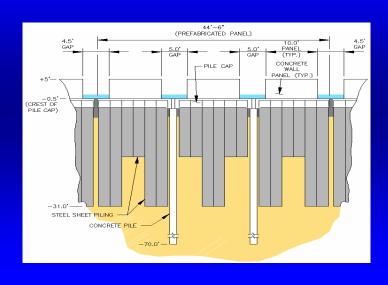








# **Concrete Panel Breakwater**



# **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 12% of the Original Project Costs, or \$12,953,343
- 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 Fisher as Center 646 Cajundome Boulevand Lafayette, Lousiana 70506

**DECH MBER 6, 2006** 

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

Subject: Second Phase II Authorization Request for Rockefeller Refuge Shoreline Stabilization (ME-18).

Dear Mr. Podany,

As the lead federal agency for the Rockefeller Refuge Shoreline Stabilization project the National Marine Fisheries Service (NMFS) herby submit a second request for phase II authorization, in accordance with the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Standard Operating Procedure (SOP) Manual. The initial request from December 2005 is attached.

1.) Description of Phase I 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 I Tasks, Process and Issues

Over 80 alternatives were considered during a feasibility study 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. Enclosure 2 contains the fact sheet, updated

		Phase I Fully Funded Cost	Phase 2 Fully	AAC/AAHU	AAHU	Acres Protected/
			Funded Cost			Created
ſ	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	Sustainablity	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

Erik Zobrist, Ph. D. NMFS Program

Manager



# UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

NATIONAL MARINE FISHERIES SERVICE SEFC/Estuanine Habitata & Chastal Fisheries Center 646 Cajurtuomie Shurevand Lafsyette, Lousiana 70500

#### **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 10<sup>th</sup> 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.



#### North American Waterfowl Management Plan



Gulf Coast Joint Venture

c/o National Wetlands Research Center 700 Cajundome Boulevard Lafayette, Louisiana 70506

January 18, 2007

Colonel Richard P. Wagenaar CWPPRA Task Force Chairman District Commander U.S. Army Corps of Engineers, New Orleans District P.O. Box 60267 New Orleans, Louisiana 70160-0267

Dear Col. Wagenaar,

The Gulf Coast Joint Venture (GCJV) is a partnership of federal, state, and private conservation organizations dedicated to delivery of bird habitat in the coastal portions of Alabama, Mississippi, Louisiana, and Texas. On behalf of the GCJV Management Board, I am writing to express support for the following three candidate projects under consideration for Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA) Phase II funding:

Castille Pass Channel Sediment Delivery (AT-04)
GIWW Bank Restoration of Critical Areas in Terrebonne (TE-43)
Rockefeller Refuge (ME-18)

Louisiana's Gulf Coast wetlands are of continental importance to many species of migratory birds. Along with meeting the goals of CWPPRA to protect and restore important coastal wetland habitats, these three projects are expected to provide substantial benefits to priority bird species identified by the GCJV. These projects protect and/or improve wetland habitat that is of particular importance as foraging habitat for shorebirds and waterfowl.

The GCJV pursues projects through a variety of funding sources to accomplish conservation goals identified in plans for the Chenier Plain and Mississippi River Coastal Wetlands Initiative Areas. These GCJV Initiative Area Plans and the Coast 2050 Plan have many conservation strategies in common, and we see opportunities for GCJV partners to implement smaller projects intended to benefit waterfowl and other migratory birds that will complement larger CWPPRA projects designed to restore and enhance coastal wetland habitat.

The GCJV Management Board appreciates the opportunity to participate in the CWPPRA project evaluation process, and we look forward to future dialogue regarding potential integration of our Initiative Area Plan conservation efforts with those of CWPPRA.

Sincerely,

Jeff Raasch Chairperson

cc:

**CWPPRA** Task Force members

CWPPRA Technical Committee Acting Chair

GCJV Management Board

TE-47- Ship Shoal: Whiskey West Flank Restoration

# CWPPRA Ship Shoal: Whiskey West Flank Restoration (TE-47) Phase II Request

### **Technical Committee Meeting**

December 6, 2006 New Orleans, LA

### **Project Overview**

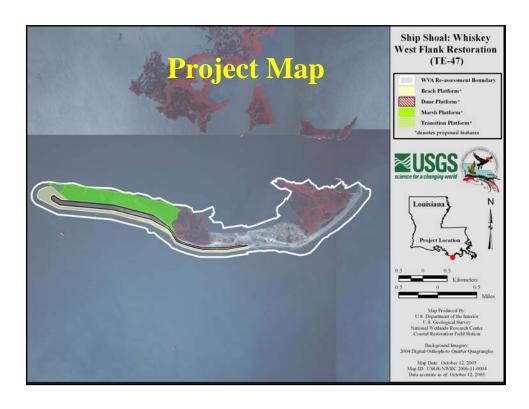
**Project Location:** Region 3 - Terrebonne Basin, Terrebonne Parish, west spit area Whiskey Island.

**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 • 203 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 withoutproject condition.
- The Fully Funded Cost for the project is: \$52,925,372
- 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	\$52,603,881	34.90%
Total Fully Funded Cost (millions)	\$39,302,900	\$52,925,372	34.70%

# 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





Brad Miller, Project Manager LA Dept. of Natural Resources (225) 342 - 4122

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733

November 21, 2006

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

### Dear Mr. Breerwood:

The Environmental Protection Agency (EPA) and the Louisiana Department of Natural Resources (LDNR) hereby resubmit our request for Phase 2 approval and funding of the Ship Shoal: Whiskey West Flank project (TE-47). The project was authorized by the Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA) Task Force to proceed with Phase 1, Engineering and Design on Priority Project List 11. A summary of information required for the Phase 2 Authorization Request including the Phase 2 Checklist is included in Enclosure A.

The project is substantively the same as submitted last year with the exception that the cost estimate has been updated to reflect current market conditions. EPA and LDNR re-surveyed the island in August 2006 to verify the validity of the current design. While the island has rolled back on itself slightly, the quantity of sediment needed for the design is still within design parameters.

As noted in last year's request, because project modeling indicated a difference in the project's estimated performance coupled with the increase in scope with the inclusion of the dune extension, EPA performed a revised Wetland Value Assessment (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	\$52,604,450	+34.9%
Total Fully Funded Cost (millions)	\$39,302,900	\$52,925,941	+33.8%

Also enclosed herein are the original Fact Sheet and Project Map, the revised Fact Sheet and Project Map, and, the revised Cost estimate spreadsheet required in Appendix C of the CWPPRA Standard Operating Procedures.

If you have any questions or need additional information, 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)

c: via electronic copies Mr. Troy Constance (Acting Chairman) Chief, Restoration Branch U.S. Army Corps of Engineers, New Orleans District Office of the Chief P.O. Box 60267 New Orleans, Louisiana 70160-0267

Mr. Darryl Clark Senior Field Biologist U.S. Fish and Wildlife Service 646 Cajundome Blvd. Suite 400 Lafayette, Louisiana 70506

Mr. Gerry Duszynski Acting Asst. Secretary Dept. of Natural Resources P.O. Box 44027, Capital Station Baton Rouge, Louisiana 70804-4027

Mr. Rick Hartman Fishery Biologist Chief, Baton Rouge Field Office National Oceanic and Atmospheric Administration National Marine Fisheries Service c/o Louisiana State University Baton Rouge, Louisiana 70803-7535

Ms. Sharon Parrish Acting Chief, Marine & Wetlands Section Environmental Protection Agency, Region VI Water Quality Protection Division (6WQ-EM) 1445 Ross Avenue Dallas, Texas 75202-2733

Mr. Britt Paul, P.E. Assistant State Conservationist/Water Resources Natural Resources Conservation Service 3737 Government Street Alexandria, Louisiana 71302 Ms. Julie Z. LeBlanc, P.E. Senior Project Manager U.S. Army Corps of Engineers, New Orleans District Planning & Project Management - Coastal Restoration Branch P.O. Box 60267 New Orleans, Louisiana 70160-0267

Mr. Kevin Roy Senior Field Biologist U.S. Fish and Wildlife Service 646 Cajundome Blvd. Suite 400 Lafayette, Louisiana 70506

Mr. Tim Landers CWPPRA Team Leader (Acting) Environmental Protection Agency, Region VI Water Quality Protection Division (6WQ-EMC) 1445 Ross Avenue Dallas, Texas 75202-2733

Mr. John Jurgensen, P.E. Civil Engineer Natural Resources Conservation Service 3737 Government Street Alexandria, Louisiana 71302

Mr. Dan Llewellyn Coastal Restoration Scientist Supervisor DNR/Coastal Restoration Division P.O. Box 44027, Capital Station Baton Rouge, Louisiana 70804-4027

Ms. Rachel Sweeney
Ecologist
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
c/o Louisiana State University
Baton Rouge, Louisiana 70803-7535

### **Enclosure**

**Phase 2 Authorization Information** 

(Appendix C of the SOP)

### PHASE 2 CHECKLIST

### **Phase 1 Project Description**

Phase 1 was authorized by the CWPPRA Task Force on January 16, 2002, as part of Priority Project List 11. The candidate project included mining and placing Ship Shoal sand from the Minerals Management Service (MMS) Block 88 by cutterhead or hopper dredge to rebuild the west flank of Whiskey Island, a distance of about 8-10 miles. The area to be restored included 57 acres of dunes, 7 feet high and 150 feet wide, 114 acres of supratidal habitat at 4 feet in elevation, 208 acres of intertidal habitat at a 2 foot elevation, and 8 acres of 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. The original Phase 1 fact sheet, map, fully funded cost estimate and Wetland Value Assessment (WVA) results are included in Enclosure 1.

### 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 NEPA documentation was completed with the issuance of a Finding of No Significant Impact dated December 1, 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 performed an aerial survey of the island after each event and re-surveyed the island in August 2006. While the storms disturbed the existing sediments, the quantities were not significantly affected. However, the cost estimates based on current market conditions have been revised.

### **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;
- 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. 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 3.

### **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). The landrights agreement between the Louisiana Department of Wildlife and Fisheries and the Louisiana Department of Natural Resources was sign and approved on October 26, 2005.
- 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.

The NEPA documentation was completed with the issuance of a "Finding of No Significant Impact" dated December 1, 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.

- <u>Answer</u>: The mash 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 out weighted 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. A Response is pending.

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.

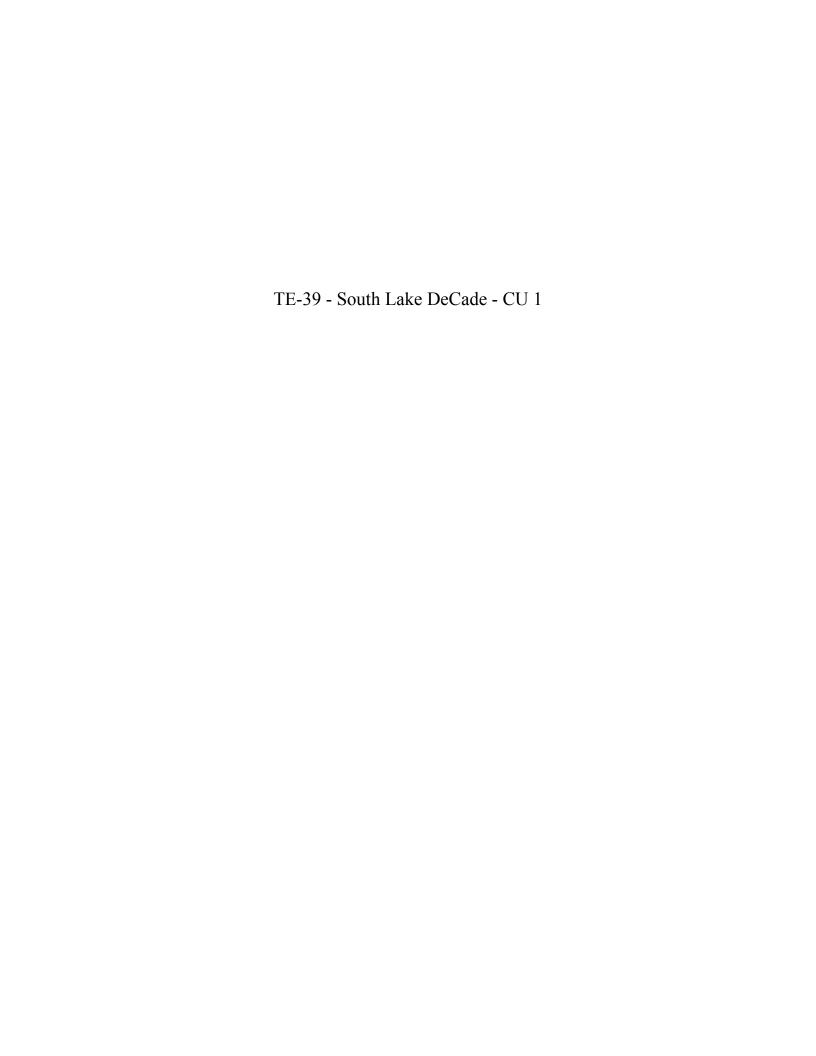
The island was re-surveyed in August 2006 and a revised cost estimate developed based on current conditions. The Fully Funded Cost (FFC) estimate was received from USACE on November 17, 2006. Attached as Enclosure 4L is the revised spreadsheet from Appendix C of the CWPPRA standard operating procedures (SOP). The revised estimate did not change the prioritization score.

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.



### Coastal Wetlands Planning, Protection and Restoration Act



### SOUTH LAKE DECADE FRESHWATER INTRODUCTION (TE-39)

### **Phase II Request**

Technical Committee Meeting

December 6, 2006

### **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.

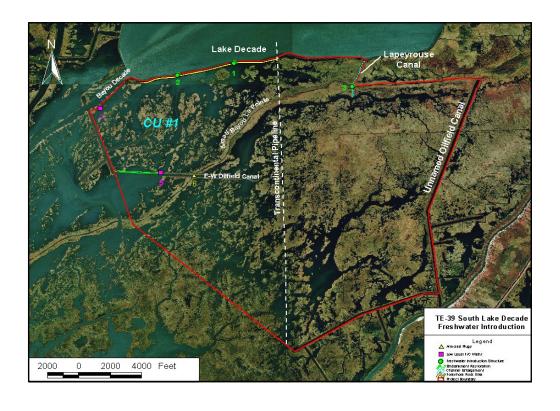
### Goals:

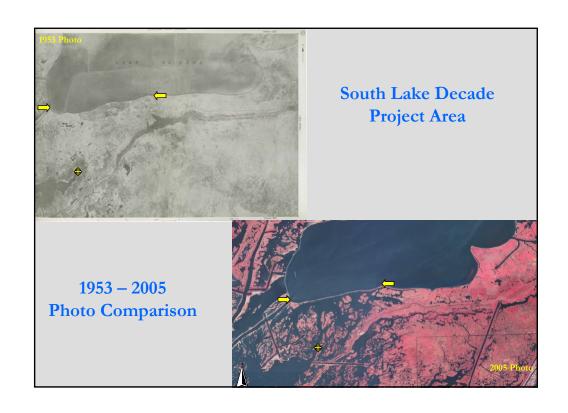
- 1) Reduce interior marsh loss rates.
- 2) Increase the occurrence and abundance of SAV's.

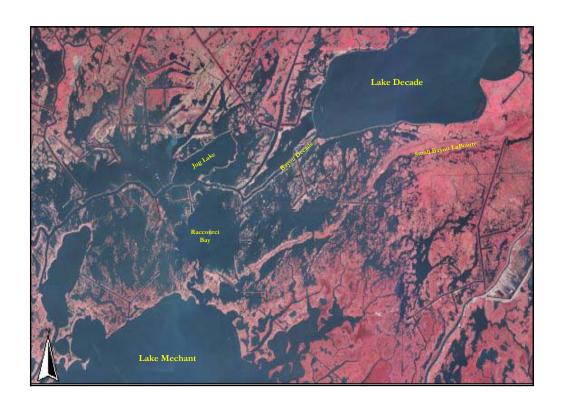
### **SOUTH LAKE DECADE – CU #1**

### 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**

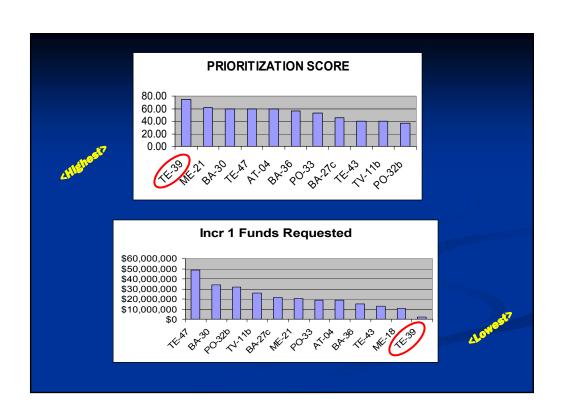
- The 8,700 LF of rock revetment will benefit 823 acres of intermediate/brackish marsh and 862 acres of open water (total 1685 ac.).
- Within the 20 year life of the project (@ TY20), interior marsh loss rates will be reduced and it's projected that 202 acres will be protected.
- The fully funded cost of the project is \$3,841,826. The Phase II request amount is \$2,221,042.
- The Prioritization Score is 74.95.

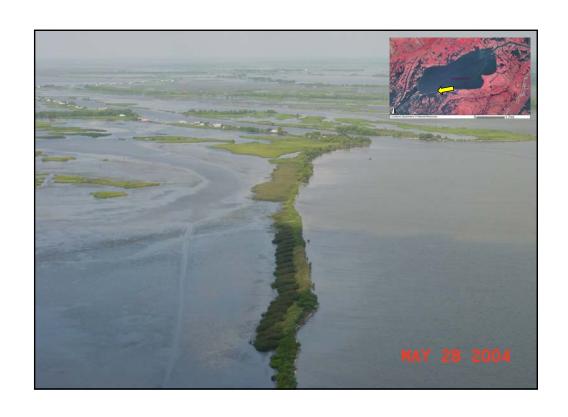
### **SOUTH LAKE DECADE – CU #1**

# Why Should this Project be Funded This Year?

- Rapid Loss of Fresh/Interm/Brackish Marsh
- Immediate Need
- Initial Attention to a Critically Eroding Area
- 100% Landowner Support
- Low Cost <\$2,221,042>
- High Prioritization Score <74.95>
- Ready for Implementation



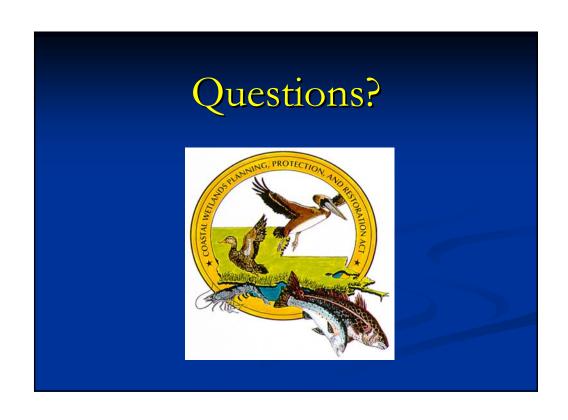












### **United States Department of Agriculture**



December 3, 2006

Mr. Troy Constance, Acting Chairman CWPPRA Technical Committee U.S. Army Corps of Engineers P.O. Box 60267 New Orleans, LA 70160-0267

Dear Mr. Constance:

RE: South Lake Decade Freshwater Introduction Project (TE-39)
Phase Two Authorization Request

Pursuant to Revision 11.0 of the CWPPRA Standard Operating Procedures (Section 6.j. and Appendix C), please find enclosed the Phase Two Authorization Request package. This request is for the construction of Construction Unit 1 (CU #1) of the South Lake Decade Freshwater Introduction Project (TE-39). This project was authorized in January 2000 under Priority Project List 9 (PPL9) by the Louisiana Coastal Wetlands Conservation Task Force under the authority of the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA).

If you or any members of the Planning and Evaluation Subcommittee, Technical Committee or Task Force have any questions regarding this matter, please contact Loland Broussard at (337) 291-3060.

Sincerely,

/s/ W. Britt Paul Assistant State Conservationist for Water Resources and Rural Development

**Enclosures** 

### **2006 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 9<sup>th</sup> 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 fully funded cost of the project at the time of Task Force approval was \$3,968,577. The estimated amount for Phase 1 costs was \$396,489 and for Phase II costs was \$3,572,088. Individual budget item costs are listed in the second column in the table on page 9.

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:

1

- (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 Construction Unit No. 1:

- 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) 404 and CUP Permits

### **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 the landowner (Apache Louisiana Minerals Inc.). The landowner has acknowledged 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.

A second 30% Design Review Meeting was held on July 19, 2004. DNR and attending federal agencies acknowledged their acceptance of NRCS's modeling assessments. Agency comments and NRCS responses, as a result of the 30% meeting are included in the 95% Design Report posted on LDNR's ftp server.

The 95% Design Review meeting for this candidate project was held on September 2, 2004. At this meeting, reviewing agencies had the opportunity to provide comments regarding the 95% Design Report and supporting documents that were posted on DNR's ftp server on August 19, 2004. No significant outstanding issues were identified at the meeting and only minor comments were made regarding Plans and Specifications in the Final Design Report.

NRCS consulted with DNR regarding the project changes made for CU #1 since the September 2004, 95% Design Review meeting. It was decided that another 95% Design Review meeting was not necessary due to the revisions made were only exclusions to the prior reviewed project. At NRCS's request, DNR has re-posted the 95% Design Report along with updated project plans and specifications at the following link:

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ftp://ftp.dnr.state.la.us/pub/CED%20Project%20Management/NRCS/TE-39-CU1%20SLD/Phase2Request%20TC2005-12-07/

### **Description of Phase II Candidate Project**

The Phase II candidate project consists of constructing an 8,700 linear foot shoreline protection feature along the southern bank of Lake Decade (Figure 2). This shoreline protection feature shall be a rock revetment that is built upon the existing embankment along the lake shoreline. The revetment shall have 2(H):1(V) side slopes and be built to an elevation of +3.5' NAVD88 with a minimum rock thickness of 2 feet. All rock used in this construction shall be ASTM 6092-97 R-300 gradation.

### Phase II Funding

Construction for this project is tentatively scheduled to commence in August 2007 and proceed for approximately 6 months. The estimated Phase II cost of the project at the 100% funding level is \$3,171,215. Individual budget item costs are listed in the seventh column in the table on page 9.

NRCS will formally request permission for Phase 2 approval and funding at the December 6, 2006 Technical Committee Meeting and subsequent approval from the Task Force at their January 31, 2007 meeting. The total 2006 funding request will be \$2,221,042. Individual budget item costs are listed in the eighth column in the table on page 9.

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### **Sponsoring Agency and Contact Person**

"USDA – Natural Resources Conservation Service"
Loland Broussard
Project Manager
646 Cajundome Blvd – Suite 180
Lafayette, LA 70506
(337) 291-3060 offc
(337) 291-3085 fax
Loland.broussard@la.usda.gov

"La. Department of Natural Resources" Ismail Merhi
Project Manager
P. O. Box 44027
Baton Rouge, LA 70804-4027
(225) 342-4127 offc
(225) 342-6801 fax
ismailm@dnr.state.la.us

### 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. A copy of the letter can be obtained by contacting one of the sponsoring agency persons listed on page 5.

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. A copy of the letter can be obtained by contacting one of the sponsoring agency persons listed on page 5. All written comments received from the 30% Design Review are addressed in the 95% Design Review Package posted on DNR's ftp server.

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### 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. A copy of the Final Environmental Assessment can be obtained by contacting one of the sponsoring agency personnel listed on page 5 of this package.

### 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, was submitted to LDNR-Coastal Management Division (CMD) for processing. A letter, dated January 19, 2006, was received from CMD stating the TE-39-1 Project was reviewed for consistency with the approved Louisiana Coastal Resources Program (LCRP) and complies. The COE 404 Permit was issued on July 17, 2006. The letter of consistency and 404 Permit are available upon request at the sponsoring agency offices listed on page 5.

# 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. A copy of the approval letter can be obtained by contacting one of the sponsoring agency personnel listed on page 5 of this package.

### 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.

REFER TO ATTACHED FILE "South Lake Decade\_PhII Revised\_30 Nov 2006.xls"

- 1) The specific Phase 2 funding request (updated Phase 2 costs, three years of Corps Administration and O&M) is \$2,221,042.
- 2) The current estimated fully funded cost for TE-39 CU #1 is \$3,841,825. This cost was provided by Bill Waits (EconWG) and Loland Broussard (EngWG), and confirmed by John Petitbone (EngWG Chairman) and Allan Hebert (EconWG Chairman) on November 17, 2006. 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 for the 2006 Phase II request was confirmed by the Economic Work Group on November 17th, therefore the Prioritization Fact Sheet dated 30 November 2005 was revised to reflect such cost.

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

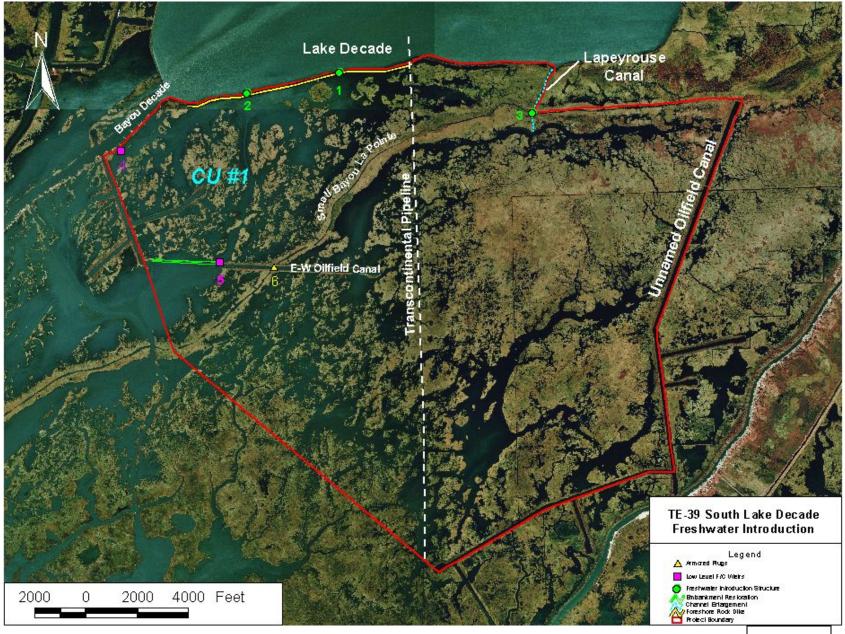


Figure 1

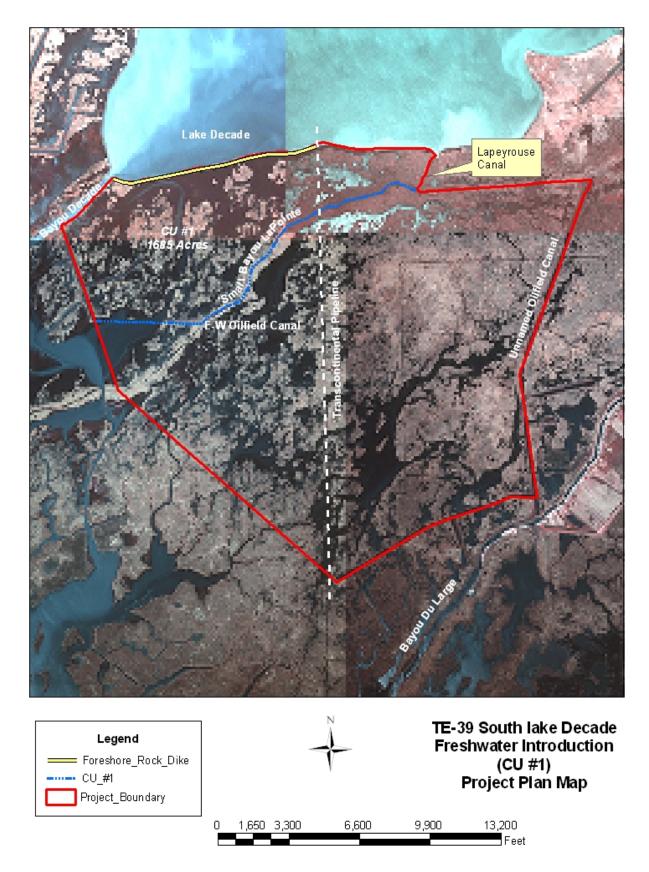


Figure 2

