Breaux Act

COASTAL WETLANDS, PLANNING, PROTECTION AND RESTORATION ACT

Task Force Meeting

OCTOBER 13, 2004

Baton Rouge, Louisiana

BREAUX ACT

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT TASK FORCE MEETING

AGENDA

October 13, 2004 9:30 a.m.
LA Department of Wildlife and Fisheries -- Louisiana Room
2000 Quail Dr., Baton Rouge, La.

Documentation of Task Force and Technical Committee meetings may be found at:
http://www.mvn.usace.army.mil/pd/cwppra_mission.htm or
http://lacoast.gov/reports/program/index.asp

Tab Number **Agenda Item**

1. Meeting Initiation: 9:30 a.m. to 9:40 a.m.

a. Introduction of Task Force members or alternates.
b. Opening remarks of Task Force members.

2. Adoption of Minutes from August 18, 2004 Task Force Meeting: 9:40 a.m. to 9:45 a.m.

3. Status of Breaux Act Program Funds and Projects (Browning): 9:45 a.m. to 9:55 a.m.
Ms. Gay Browning will discuss the construction program and status of the CWPPRA accounts.

4. Decision: FY05 Planning Budget and FY05 Public Outreach Committee Budget Approval (Saia/Wilson) 9:55 to 10:10 a.m.

a) The Technical Committee recommends a FY05 Planning Budget for the upcoming fiscal year in the amount of $4,738,129.

b) The CWPPRA Public Outreach Committee will present the FY05 Public Outreach Committee Budget to the Task Force and request approval of $437,900 for the 2005 Outreach Committee Budget.

5. Decision: Recommendation to Restrict Phase II Budget Requests for Projects Already Approved for Phase II But Not Yet Under Construction to a Cap of 100% (Including Contingency) (Saia) 10:10 a.m. to 10:20 a.m. Due to the limited available CWPPRA funds for ongoing approved Phase I and II CWPPRA projects, it is recommended that the 125% cap be lowered to 100% to avoid developing a negative "un-programmed" balance in the CWPPRA program budget and to allow the Corps of Engineers to better estimate available funds in the program. The Technical Committee recommends the Task Force restrict Phase II budget requests for projects already approved for Phase II but not yet under construction to a cap of 100%.

6. Decision/Discussion:

a) Discussion and Decision Regarding Future Operation and Maintenance (O&M) Funding for Non-Cash Flow Projects that have Depleted Their 20-Year O&M Budget (Rowan) 10:20 a.m. to 10:30 a.m.

Option 1: Consider requests of remaining 20-year O&M funding on a non-cash flow basis for individual projects, as funds are needed

Option 2: Consider requests of 3-year incremental funding of O&M funding on a cash flow basis for individual projects, as funds are needed.

b) **Consider Requests for Operation and Maintenance (O&M) Funding Increases on Priority Project Lists (PPL) 1-8 (Saia) 10:30 a.m. to 10:40 a.m.** The Task Force will consider the request for O&M cost increases for projects on PPL's 1-8, in the amount of $935,000. The Technical Committee recommends to the Task Force an increase of $935,000 in O&M funding.

7. **Decision: Request for Funding for Administrative Costs for those Projects Beyond Increment 1 Funding (Saia) 10:4 0 a.m. to 10:45 a.m. (Saia)** The U.S. Army Corps of Engineers is requesting $21,915 funding approval for administrative costs for those projects beyond Increment 1 funding. The Technical Committee recommends to the Task Force approval of $21,915 for funding for administrative costs.

8. **Decision: Request for FY08 Coastwide Reference Monitoring System (CRMS)-Wetlands Monitoring Funds and Project Specific Monitoring Funds for Projects on PPLs 9-13 (Saia) 10:45 a.m. to 10:55 a.m.** Following a presentation on the status/progress of CRMS over the past year by Mr. Rick Raynie, the following requests will be discussed by the Task Force:

a) project specific monitoring funding beyond the first 3-years for projects on PPL's 9-11 (in order to maintain a 3-year rolling amount of funding) in the amount of $91,563.
b) CRMS FY08 monitoring request in the amount of $532,000.

The Technical Committee recommends to the Task Force approval of $91,563 for project specific monitoring and $532,000 for FY08 CRMS.

9. **Decision: Request for Re-allocation of Funds for Construction Unit 4 for the Barataria Basin Landbridge Shoreline Protection, Phases 1 and 2 (BA-27) (Saia) 10:55 a.m. to 11:10 a.m.** BA-27 is a non-cash flow project. The Natural Resources Conservation Service and the LA Department of Natural Resources are seeking a re-allocation of $1,510,563 of the existing remaining BA-27 budget to the BA-27 portion of Construction Unit 4. This amount is an increase above 125% of the approved amount for the BA-27 portion of Construction Unit 4. The Technical Committee recommends to the Task Force approval to re-allocate $1,510,563 for BA-27.

10. **Decision: Request for Construction Approval and Phase II Authorization for Projects on all PPL's (Saia) 11:10 a.m. to Noon and 1:3 0 p.m. to 4:10 p.m.** The Task Force will consider requests for construction approval and Phase II approval for projects on all PPL's. The Technical Committee reviewed and took public comment on September 9, 2004 on the twelve projects shown in the table, and recommends approval of four projects and one demonstration project to the Task Force within available FY05 funding (see table). With approval of these five projects, it is estimated that approximately $24.6 million in Federal funding may still be available for additional funding approvals for FY05. The Task Force will consider the Technical Committee's recommendation and make a final decision on construction authorization or funding approval for FY05.

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) Agency presentation on individual projects
b) Task Force questions and comments on individual projects
c) Public comments on individual projects (Comments are requested to be limited to 3 minutes)

Recommended Approval by Technical Committee	Agency	Proj No.	PPL	Project	Constr Start	Phase II, Incr 1 Funding Request	Phase II Total Cost	Acres over 20 years	Prioritization Scores	Priorization "Rank"	30% Design Review Meeting Date	95% Design Review Meeting Date
X	NRCS	BA-27	8	Barataria Basin Landbridge, Ph 1&2 - CU 5*	Jun-05	$7,441,870	$7,441,870	721	77.25	1	20 Aug 03 (A)	2 Sept 04(A)
	NRCS	BA-27c	9	Barataria Basin Landbridge, Ph 3 - CU 5	Jun-05	$12,069,203	$14,074,159	180	45.55	8	20 Aug 03 (A)	2 Sep 04 (A)
	COE	TV-11b	9	Freshwater Bayou Bank Stabilization - Belle Isle Bayou to Lock	Jan-05	$13,827,382	$15,697,763	241	42.50	10	27 Jun 02 (A)	22 Jan 04 (A)
X	FWS	ME-16	9	Freshwater Introduction South of Hwy 82	Jun-05	$4,323,846	$5,444,187	296	57.35	6	14 May 03 (A)	11 Aug 04 (A)
	NRCS	TE-39	9	South Lake DeCade - CU 1	Jun-05	$2,511,857	$3,431,285	207	73.45	2	19 Jul 04 (A)	2 Sep 04 (A)
	NRCS	TE-43	10	GIWW Bank Rest of Critical Areas in Terre	Jun-05	$20,434,224	$23,641,525	366	43.25	9	14 May 03 (A)	26 Aug 04 (A)
	FWS	TE-44(2)	10	North Lake Mechant - CU 2	Feb-05	$27,400,960	$29,344,846	553	53.10	7	7 May 03 (A)	12 Aug 04 (A)
	FWS	BA-36	11	Dedicated Dredging on Barataria Basin LB	Jun-06	$33,730,712	$33,855,606	605	61.00	5	17 Dec 03 (A)	29 Jul 04 (A)
	COE	ME-21	11	Grand Lake Shoreline Protection	Jan-05	$12,404,517	$14,155,779	540	66.25	4	14 May 04 (A)	16 Aug 04 (A)
X	NRCS	TE-48	11	Raccoon Island Shoreline Protection, Ph A (CU1)	Jun-05	$6,451,765	$6,781,037	16	42.00	11	19 Jul 04 (A)	2 Sep 04 (A)
X	COE	ME-22	12	South White Lake	Jan-05	$14,122,834	$18,085,844	844	66.40	3	30 Jun 04 (A)	3 Sep 04 (A)
X	COE	LA-06	13	Shoreline Protection Foundation Improvements Demo **	Jan-05	NA	NA	NA	NA	NA	NA	NA
					TOTAL:	$154,719,170	$171,953,901					

* An increase of $7,441,870 is needed for this non-cash flow project. Total Phase II cost is $10,035,500.
** The sponsors are seeking construction approval for this demo, which will be constructed in conjunction with South White Lake SP Project

11. Announcement: PPL 14 Public Meetings (LeBlanc) 4:10 p.m. to 4:15 p.m. Public meetings will be held in November to present the results of the PPL14 candidate project evaluations. The meetings are scheduled as follows:

November 17, 2004 7:00 p.m. Vermilion Parish Police Jury Courthouse Bldg, Abbeville, LA

November 18, 2004 7:00 p.m. U.S. Army Corps of Engineers (DARM - A) New Orleans, LA

12. Due to the length of the meeting the Task Force deferred Item 12 until next Task Force meeting.
Report: Public Outreach Committee Annual Report (Bodin) 4:15 p.m. to 4:30 p.m. Ms. Bodin will present the Public Outreach Committee's Annual Report.

13. Due to the length of the meeting the Task Force deferred Item 13 until next Task Force meeting. It was requested that relevant documents for this item be sent by email to the Task Force and Technical Committee as soon as possible.

Report: Preliminary Damage Assessment from Hurricane Ivan (Broussard/Burkholder) 4:30 p.m. to 4:40 p.m.

14. Additional Agenda Items 4:40 p.m. to 4:45 p.m.

15. Request for Public Comments 4:45 p.m. to 4:50 p.m.

16. Announcement: Date and Location of the Next Task Force Meeting (LeBlanc) 4:45 p.m. to 4:50 p.m. The next meeting of the Task Force is scheduled for 9:30 a.m., January 26, 2005 in New Orleans, Louisiana.

17. Proposed Dates of Future Program Meetings (LeBlanc) 4:50 p.m. to 4:55 p.m. Several schedules changes are proposed for the CWPPRA program in 2005 to better accommodate the 2006 funding approval process. Changes are indicated below from the previously announced schedule.

**** Schedule or location changes***

December 16, 2004	9:30 a.m.	Technical Committee	New Orleans
January 26, 2005	9:30 a.m.	Task Force	New Orleans
March 16, 2005	9:30 a.m.	Technical Committee	New Orleans
April 13, 2005	9:30 a.m.	Task Force	Lafayette
****June 15, 2005***	9:30 a.m.	Technical Committee	Baton Rouge
****July 13, 2005***	9:30 a.m.	Task Force	New Orleans
August 30, 2005	7:00 p.m.	PPL 15 Public Meeting	Abbeville
August 31, 2005	7:00 p.m.	PPL 15 Public Meeting	New Orleans
*September 14, 2005	9:30 a.m.	Technical Committee	***New Orleans***
*October 19, 2005	9:30 a.m.	Task Force	***New Orleans***
*December 7, 2005	9:30 a.m.	Technical Committee	***Baton Rouge***
*January 25, 2006	9:30 a.m.	Task Force	***Baton Rouge***

Proposed New Schedule

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

Adjourn

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TASK FORCE MEETING

October 13, 2004

REQUEST FOR CONSTRUCTION APPROVAL AND PHASE II AUTHORIZATION FOR PROJECTS ON ALL PPL'S

For Presentation

Recommended Approval by Technical Committee	Agency	Proj No.	PPL	Project	Constr Start	Phase II, Incr 1 Funding Request	Phase II Total Cost	Acres over 20 years	Prioritization Scores	Priorization "Rank"	30% Design Review Meeting Date	95% Design Review Meeting Date
X	NRCS	BA-27	8	Barataria Basin Landbridge, Ph 1&2 - CU 5*	Jun-05	$7,441,870	$7,441,870	721	77.25	1	20 Aug 03 (A)	2 Sept 04(A)
	NRCS	BA-27c	9	Barataria Basin Landbridge, Ph 3 - CU 5	Jun-05	$12,069,203	$14,074,159	180	45.55	8	20 Aug 03 (A)	2 Sep 04 (A)
	COE	TV-11b	9	Freshwater Bayou Bank Stabilization - Belle Isle Bayou to Lock	Jan-05	$13,827,382	$15,697,763	241	42.50	10	27 Jun 02 (A)	22 Jan 04 (A)
X	FWS	ME-16	9	Freshwater Introduction South of Hwy 82	Jun-05	$4,323,846	$5,444,187	296	57.35	6	14 May 03 (A)	11 Aug 04 (A)
	NRCS	TE-39	9	South Lake DeCade - CU 1	Jun-05	$2,511,857	$3,431,285	207	73.45	2	19 Jul 04 (A)	2 Sep 04 (A)
	NRCS	TE-43	10	GIWW Bank Rest of Critical Areas in Terre	Jun-05	$20,434,224	$23,641,525	366	43.25	9	14 May 03 (A)	26 Aug 04 (A)
	FWS	TE-44(2)	10	North Lake Mechant - CU 2	Feb-05	$27,400,960	$29,344,846	553	53.10	7	7 May 03 (A)	12 Aug 04 (A)
	FWS	BA-36	11	Dedicated Dredging on Barataria Basin LB	Jun-06	$33,730,712	$33,855,606	605	61.00	5	17 Dec 03 (A)	29 Jul 04 (A)
	COE	ME-21	11	Grand Lake Shoreline Protection	Jan-05	$12,404,517	$14,155,779	540	66.25	4	14 May 04 (A)	16 Aug 04 (A)
X	NRCS	TE-48	11	Raccoon Island Shoreline Protection, Ph A (CU1)	Jun-05	$6,451,765	$6,781,037	16	42.00	11	19 Jul 04 (A)	2 Sep 04 (A)
X	COE	ME-22	12	South White Lake	Jan-05	$14,122,834	$18,085,844	844	66.40	3	30 Jun 04 (A)	3 Sep 04 (A)
X	COE	LA-06	13	Shoreline Protection Foundation Improvements Demo **	Jan-05	NA	NA	NA	NA	NA	NA	NA
					TOTAL:	$154,719,170	$171,953,901					

* An increase of $7,441,870 is needed for this non-cash flow project. Total Phase II cost is $10,035,500.

** The sponsors are seeking construction approval for this demo, which will be constructed in conjunction with South White Lake SP Project

For Decision

After agency presentations and public comment the Task Force will consider requests for Phase II approval of projects on PPL's 9-13.

Technical Committee Recommendation

The Technical Committee recommends $32,340,315 Phase II increment 1 funding and construction approval (including federal & local sponsor share) for the five projects indicated in the table above.

Project	Approval Type	Funding Recommendation
South White Lake Shoreline Protection	Phase II	$14,122,834
Shoreline Protection Foundation Improvement Demo	Construction Approval	N/A
Barataria Basin Landbridge PH 1&2 CU5	Phase II	$7,441,870
Raccoon Island Shoreline Protection, Ph A (CU1)	Phase II	$6,451,765
Freshwater Introduction south of Hwy 82	Phase II	$4,323,846
	TOTAL	$32,340,315

Available Program Funds (Construction Program)	Total Amount	Federal Portion 85%	13-Oct-04 Fed Balance
Available "Unencumbered" Balance (as of 13 Oct 04)		$3,510,112.00	$3,510,112.00
Anticipated Funding into Construction Program, FY05		$57,421,000.00	$60,931,112.00
PPL14, Phase I Setaside		$0.00	$60,931,112.00
Agenda Item #6: O&M Funding Increases on PPLs 1-8		$0.00	$60,931,112.00
Agenda Item #7: Corps Administrative Costs		$0.00	$60,931,112.00
Agenda Item #8: Project-Specific Monitoring Funds for PPLs 9-13		$0.00	$60,931,112.00
Agenda Item #8: CRMS-Wetlands FY08 Monitoring Request		$0.00	$60,931,112.00
Total Available "Unencumbered" Balance assuming all above Technical Committee recommendations are approved by the Task Force			$60,931,112.00

Purpose of Funding Request/ Project Name	Phase II - Incr. 1 Requested Amt.	Federal Portion 85%	Remaining Fed Balance	TF Approve?
Barataria Basin Landbridge, Phases 1 & 2 - Constr Unit 5	$7,441,870.00	$6,325,589.50	$0.00	
Barataria Basin Landbridge, Phase 3 - Constr Unit 5	$12,069,203.00	$10,258,822.55	$0.00	
Freshwater Bayou Bank Stabilization - Belle Isle Bayou to Lock	$13,827,382.00	$11,753,274.70	$0.00	
Freshwater Introduction South of Hwy 82	$4,323,846.00	$3,675,269.10	$0.00	
South Lake DeCade - Construction Unit 1	$2,511,857.00	$2,135,078.45	$0.00	
GIWW Bank Restoration of Critical Areas in Terrebonne	$20,434,224.00	$17,369,090.40	$0.00	
North Lake Mechant - Constr Unit 2 (original, as presented to Tech Comm)	$32,340,040.00	$27,489,034.00	$0.00	
North Lake Mechant - Constr Unit 2 (revised after Tech Comm mtg)	$27,400,960.00	$23,290,816.00	$0.00	
Dedicated Dredging on the Barataria Basin Landbridge	$33,730,712.00	$28,671,105.20	$0.00	
Grand Lake Shoreline Protection	$12,404,517.00	$10,543,839.45	$0.00	
Raccoon Island Shoreline Protection (updated 29 Sep 04)	$6,451,765.00	$5,484,000.25	$0.00	
South White Lake Shoreline Protection	$14,122,834.00	$12,004,408.90	$0.00	
Shoreline Protection Foundation Improvement Demo (non-cash flow)	$0.00	$0.00	$0.00	
TOTAL (including original N. Lake Mechant project cost only)	$159,658,250.00	$135,709,512.50	$60,931,112.00	

NOTE: Projects show in blue are included in Technical Committee's recommendation

Available Program Funds (Construction Program)	Total Amount	Federal Portion 85%	13-Oct-04 Fed Balance
Available "Unencumbered" Balance (as of 13 Oct 04)		$3,510,112.00	$3,510,112.00
Anticipated Funding into Construction Program, FY05		$57,421,000.00	$60,931,112.00
PPL14, Phase I Setaside	$9,000,000.00	$7,650,000.00	$53,281,112.00
Agenda Item #6: O&M Funding Increases on PPLs 1-8	$935,000.00	$794,750.00	$52,486,362.00
Agenda Item #7: Corps Administrative Costs	$21,915.00	$18,627.75	$52,467,734.25
Agenda Item #8: Project-Specific Monitoring Funds for PPLs 9-13	$91,563.00	$77,828.55	$52,389,905.70
Agenda Item #8: CRMS-Wetlands FY08 Monitoring Request	$532,000.00	$452,200.00	$51,937,705.70
Total Available "Unencumbered" Balance assuming all above Technical Committee recommendations are approved by the Task Force			**$51,937,705.70**

Purpose of Funding Request/ Project Name	Phase II - Incr. 1 Requested Amt.	Federal Portion 85%	Remaining Fed Balance	TF Approve?
Barataria Basin Landbridge, Phases 1 & 2 - Constr Unit 5	$7,441,870.00	$6,325,589.50	$6,325,589.50	yes
Barataria Basin Landbridge, Phase 3 - Constr Unit 5	$12,069,203.00	$10,258,822.55	$0.00	
Freshwater Bayou Bank Stabilization - Belle Isle Bayou to Lock	$13,827,382.00	$11,753,274.70	$0.00	
Freshwater Introduction South of Hwy 82	$4,323,846.00	$3,675,269.10	$3,675,269.10	yes
South Lake DeCade - Construction Unit 1	$2,511,857.00	$2,135,078.45	$0.00	
GIWW Bank Restoration of Critical Areas in Terrebonne	$20,434,224.00	$17,369,090.40	$0.00	
North Lake Mechant - Constr Unit 2 (original, as presented to Tech Comm)	$32,340,040.00	$27,489,034.00	$0.00	
North Lake Mechant - Constr Unit 2 (revised after Tech Comm mtg)	$27,400,960.00	$23,290,816.00	$23,290,816.00	yes
Dedicated Dredging on the Barataria Basin Landbridge	$33,730,712.00	$28,671,105.20	$0.00	
Grand Lake Shoreline Protection	$12,404,517.00	$10,543,839.45	$0.00	
Raccoon Island Shoreline Protection (updated 29 Sep 04)	$6,451,765.00	$5,484,000.25	$5,484,000.25	yes
South White Lake Shoreline Protection	$14,122,834.00	$12,004,408.90	$12,004,408.90	yes
Shoreline Protection Foundation Improvement Demo (non-cash flow)	$0.00	$0.00	$0.00	yes
TOTAL (including original N. Lake Mechant project cost only)	$159,658,250.00	$135,709,512.50	$1,157,621.95	

NOTE: Projects show in blue are included in Technical Committee's recommendation

CWPPRA, Prioritization Scores

Dated: October 12, 2004

Project Name	Project Number	Region	PPL	Lead Agency	Project Type	(2) Total Acres Benefited	(1) Current Estimate	Cost Per Acre ($/acre)	Prioritization Scores for each Criteria & Corresponding Weight: Cost Effective 20%	Area of Need 15%	Implement-ability 15%	Certainty of Benefits 10%	Sustainability 10%	HGM Riverine Input 10%	HGM Sediment Input 10%	HGM Structure and Function 10%	**Total Weighted Score 100%**	**Anticipated Date of Request For Construction Approval**	**Scheduled Construction Start**
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**	Oct-05	Jan-06
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**	Oct-05	Jan-06
Barataria Landbridge Phases 1 & 2 - CU 5	BA-27	2	8	NRCS	SP	721	$10,941,900	$15,176	10	9.5	10	8	10	0	0	10	**77.25**	Oct-04	Jun-05
South Lake DeCade Freshwater Introduction - CU #1	TE-39	3	9	NRCS	SP	207	$3,923,388	$18,954	10	9.3	10	6.5	8	0	0	10	**73.45**	Oct-04	Jun-05
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**	Oct-06	Feb-07
Spanish Pass Diversion	MR-14	2	13	COE	SD	433	$13,927,800	$32,166	7.5	5	4	9	10	10	10	0	**67.50**	Oct-06	Jan-07
South White Lake Shore Protection	ME-22	4	12	COE	SP	844	$19,673,929	$23,310	7.5	6	10	9.4	8	0	0	10	**66.40**	Oct-04	Jan-05
Grand Lake Shoreline Protection	ME-21	4	11	COE	SP	540	$15,204,809	$28,157	7.5	7.5	10	10	10	0	0	5	**66.25**	Oct-04	Jan-05
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**	Oct-05	Dec-05
Penchant	TE-34	3	6	NRCS	HR	1,155	$13,250,937	$11,473	10	5.9	10	2	10	7	0	0	**62.85**	Sep-05	Mar-06
River Reintroduction into Maurepas Swamp	PO-29	1	11	EPA	RD	5,438	$56,469,628	$10,384	10	5	4	9	8	7	5	0	**62.50**	Oct-06	Nov-06
East/West Grand Terre Islands Restoration	BA-30	2	9	NMFS	BI	403	$18,203,486	$45,170	5	8.9	10	7	1	0	5	10	**61.35**	Oct-05	Apr-06
Dedicated Dredging on the Barataria Basin Landbridge	BA-36	2	11	FWS	MC	605	$35,850,071	$59,256	5	10	10	7	4	0	0	10	**61.00**	Oct-04	Jan-06
Avoca Island Diversion & Land Building	TE-49	3	12	COE	RD	143	$18,823,322	$131,632	1	8	10	9	6	7	10	0	**61.00**	Oct-05	Jan-06
North Lake Mechant - CU 2 (revised)	TE-44	3	10	FWS	MC	521	$30,725,534	$58,974	5	7.4	10	5.8	6	0	0	10	**57.90**	Oct-04	Feb-05
Sabine Refuge Marsh Creation - Cycle 5	CS-28	4	8	COE	MC	168	$2,133,439	$12,699	10	5	10	7	8	0	0	0	**57.50**	Oct-06	May-08
Ship Shoal: Whiskey Island West Flank Restoration	TE-47	3	11	EPA	BI	182	$39,302,916	$215,950	1	6.3	10	7	4	0	10	10	**57.45**	Oct-05	Mar-06
Freshwater Introduction South of Highway 82	ME-16	4	9	FWS	FD	296	$6,051,325	$20,444	7.5	4.1	10	5.2	10	6	0	0	**57.35**	Oct-04	Jun-05
Pass Chaland to Grand Bayou Pass	BA-35	2	11	NMFS	BI	161	$19,001,430	$118,021	1	10	10	7	1	0	5	10	**55.00**	Oct-05	Apr-06
Brown Lake	CS-09a	4	2	NRCS	HR	282	$3,154,472	$11,186	10	5	7	5.1	8	3	0	0	**54.10**	Oct-05	Mar-06
North Lake Mechant - CU 2 (original)	TE-44	3	10	FWS	MC	553	$36,164,616	$65,397	2.5	7.4	10	6	6	0	0	10	**53.10**	Oct-04	Feb-05
Goose Point/Point Platte Marsh Creation	PO-33	1	13	FWS	MC	436	$21,547,421	$49,421	5	4	10	7	10	0	0	5	**53.00**	Oct-06	Mar-07
Sabine Refuge Marsh Creation - Cycle 4	CS-28	4	8	COE	MC	163	$3,630,831	$22,275	7.5	5	10	7	8	0	0	0	**52.50**	Oct-06	May-07
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**	Oct-05	Jan-06
Whiskey Island Backbarrier Marsh Creation	TE-50	3	13	EPA	BI	272	$21,786,300	$80,097	1	10	7	7	1	0	5	10	**50.50**	Oct-05	Apr-06
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**	Oct-05	unscheduled
Castille Pass Sediment Delivery	AT-04	3	9	NMFS	RD	589	$30,785,603	$52,268	5	0	7	7.7	10	7	0	5	**50.20**	Oct-05	Apr-06
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**	Oct-06	Mar-07
Lake Boudreaux	TE-32a	3	6	FWS	FD	603	$14,450,063	$23,964	7.5	7.5	7	5	6	2	0	0	**49.75**	Jun-05	Sep-05
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**	Oct-05	Nov-05
Rockefeller Refuge Gulf Shoreline Stabilization	ME-18	4	10	NMFS	SP	920	$49,929,888	$54,272	5	7.5	10	6	2	0	0	5	**49.25**	Oct-05	Apr-06
West Lake Boudreaux Shoreline Protection & MC	TE-46	3	11	FWS	SP	145	$14,387,505	$99,224	1	9.2	10	7.6	4	0	0	5	**47.40**	Oct-05	Mar-06
Barataria Landbridge Phase 3 - CU 5	BA-27c	2	9	NRCS	SP	180	$14,711,572	$81,731	1	5.7	10	8	2	0	0	10	**45.55**	Oct-04	Jun-05
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**	Oct-06	Mar-07
GIWW Bank Restoration of Critical Areas in Terrebonne	TE-43	3	10	NRCS	SP	366	$25,377,525	$69,338	2.5	7.5	10	8	4	0	0	0	**43.25**	Oct-04	Jun-05
Lake Borgne and MRGO Shore Protection	PO-32	1	12	COE	SP	266	$24,979,633	$93,908	1	4.7	10	8	6	0	0	5	**43.05**	Oct-05	Jan-06
Freshwater Bayou Canal HR/SP - Belle Isle to Lock	TV-11b	3	9	COE	SP	241	$16,703,276	$69,308	2.5	3	10	10	8	0	0	0	**42.50**	Oct-04	Jan-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**	Oct-06	Mar-07
Raccoon Island Breakwaters - Phase A (CU 1)	TE-48	3	11	NRCS	BI	16	$7,797,791	$487,362	1	6	10	5	1	0	0	10	**42.00**	Oct-04	Jun-05
Lake Borgne Shoreline Protection	PO-30	1	10	EPA	SP	167	$21,030,130	$125,929	1	5	10	8	4	0	0	5	**41.50**	Oct-05	Jun-06
Grand Bayou	TE-10	3	5	FWS	HR	199	$8,209,722	$41,255	5	5.4	7	2	8	2	0	0	**40.60**	Oct-06	Jan-07
Weeks Bay/Commercial Canal/GIWW SP	TV-19	3	9	COE	SP	278	$30,027,305	$108,012	1	4	4	7.2	4	0	0	5	**30.20**	unscheduled	unscheduled

Notes:

1. Current estimate reflects fully-funded estimate for engineering and design, lands, project administration, construction, construction S&I, contingency, 20 years of O&M and 20 years of only project specific monitoring if applicable. Monitoring monies going to CRMS have been removed from the fully-funded estimate. This estimate is the baseline (at the 100% level) estimate.
2. Total acres reflect total acres benefited at end of 20 year project.
3. Bayou Lafourche was not prioritized because there is currently no construction estimate available.
4. Complex projects not yet approved for Phase I were not prioritized.
5. West Point al la Hache Outfall Management Project (BA 04c) was not prioritized because the project features are not known and project costs and benefits can, therefore, not be determined to apply criteria.
6. When project scores were tied an additional sort by the score of the cost effectiveness criterion was run. When those were tied another sort was run based on the sum of the area of need and implementablity criteria scores.
7. **All projects seeking Phase II or construction approval are highlighted.**
8. North Lake Mechant appears twice on the spreadsheet. It appears once as it was originally proposed to the Techncial Committee on Sept. 9, 2004 and it appears a second time as it was revised for the Task Force on October 13, 2004.

9-Sep-04

CWPPRA Technical Committee Ranking for Construction Approval/Phase II Authorization (PPLs 1-13)

PPL	Project No.	Project	COE	DNR	EPA	FWS	NMFS	NRCS	No. of "Yes" votes (# of weighted scores >= "6")	Sum of Weighted Score
8	BA-27	Barataria Basin Landbridge, Ph 1&2 - CU 5	8	7	9	10	9	9	6	52
9	BA-27c	Barataria Basin Landbridge, Ph 3 - CU 5	3	5	2	2	3	1	0	16
9	TV-11b	Freshwater Bayou Bank Stabilization - Belle Isle Bayou to Lock	7	8	4	1	4	4	2	28
9	ME-16	Freshwater Introduction South of Hwy 82	6	3	11	7	7	8	5	42
9	TE-39	South Lake DeCade - CU 1	5	2	5	6	1	10	2	29
10	TE-43	GIWW Bank Rest of Critical Areas in Terre	2	4	7	4	6	7	3	30
10	TE-44(2)	North Lake Mechant - CU 2	4	11	3	11	11	5	3	45
11	BA-36	Dedicated Dredging on Barataria Basin LB	1	1	6	5	2	2	1	17
11	ME-21	Grand Lake Shoreline Protection	11	6	8	3	5	3	3	36
11	TE-48	Raccoon Island Shoreline Protection	9	10	1	9	8	11	5	48
12 & 13	ME-22 & LA-06	South White Lake Shoreline Protection AND Shoreline Protection Foundation Improvements Demonstration*	10	9	10	8	10	6	6	53
		No. of votes:	11	11	11	11	11	11		
"Yes" votes shown in yellow		Sum of Votes:	66	66	66	66	66	66		

* NOTE: South White Lake SP project has been combined with the Shoreline Protection Foundation Improvements Demo because the demo was designed to be constructed in conjunction with the South White Lake project. If the S White Lake project is recommended by the Technical Committee for Phase II funding approval, the Corps/LDNR will concurrently request a recommendation of construction authorization for the demonstration project (funds are already set-aside as demos are treated like non-cash flow projects). The Demo project is not being considered separately because demos do not receive a prioritization scoring and thus do not lend themselves to "ranking".

The following voting process will be used to rank all projects under consideration for construction approval/Phase II Authorization (PPLs 1-13):

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 ALL projects. All votes must be used.
3. A weighted score will be assigned (11, 10, 9, 8, 7, 6, 5, 4, 3, 2, and 1). (11 highest ranked by agency…1 lowest).
4. The top 6 weighted projects (weighted scores of 11, 10, 9, 8, 7, and 6) will be considered "Yes" votes by individual agencies. This will be used to determine overall agency support for individual projects.
5. "Yes" votes (weighted scores of >= "6") are shown in yellow in the spreadsheet so that "Yes" votes can be seen.
6. Projects are ranked first by the number "Yes" votes received (to determine level of agency consensus/support for individual projects, and then by "Sum" on weighted score (on next page).
7. 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 FY05 funds.

9-Sep-04

CWPPRA Technical Committee Ranking for Construction Approval/Phase II Authorization (PPLs 1-13)

PPL	Prioject No.	Project	COE	DNR	EPA	FWS	NMFS	NRCS	No. of "Yes" votes (# of weighted scores >= "6")	Sum of Weighted Score	Phase II, Increment 1 Funding Request	Federal share (85%) of Phase II, Increment 1 Funding Request	Cumulative Federal Share of Phase II, Increment 1 Funding	Prioritization Score	Prioritization "Rank" (out of projects under consideration)	Acres after 20 years	Constr Start Date
12 & 13	ME-22 & LA-06	South White Lake SP AND SP Foundation Improvements Demo*	10	9	10	8	10	6	6	53	$14,122,834	$12,004,409	$12,004,409	66.40	3	844	Jan-05
8	BA-27	Barataria Basin Landbridge, Ph 1&2 - CU 5	8	7	9	10	9	9	6	52	$7,441,870	$6,325,590	$18,329,998	77.25	1	721	Jun-05
11	TE-48	Raccoon Island Shoreline Protection	9	10	1	9	8	11	5	48	$6,447,282	$5,480,190	$23,810,188	42.00	11	16	Jun-05
9	ME-16	Freshwater Introduction South of Hwy 82	6	3	11	7	7	8	5	42	$4,323,846	$3,675,269	$27,485,457	57.35	6	296	Jun-05
10	TE-44(2)	North Lake Mechant - CU 2	4	11	3	11	11	5	3	45	$32,340,040	$27,489,034	$54,974,491	53.10	7	553	Feb-05
11	ME-21	Grand Lake Shoreline Protection	11	6	8	3	5	3	3	36	$12,404,517	$10,543,839	$65,518,331	66.25	4	540	Jan-05
10	TE-43	GIWW Bank Rest of Critical Areas in Terre	2	4	7	4	6	7	3	30	$20,434,224	$17,369,090	$82,887,421	43.25	9	366	Jun-05
9	TE-39	South Lake DeCade - CU 1	5	2	5	6	1	10	2	29	$2,511,857	$2,135,078	$85,022,500	73.45	2	207	Jun-05
9	TV-11b	Freshwater Bayou Bank Stabilization - Belle Isle Bayou to Lock	7	8	4	1	4	4	2	28	$13,827,382	$11,753,275	$96,775,774	42.50	10	241	Jan-05
11	BA-36	Dedicated Dredging on Barataria Basin LB	1	1	6	5	2	2	1	17	$33,730,712	$28,671,105	$125,446,879	61.00	5	605	Jun-06
9	BA-27c	Barataria Basin Landbridge, Ph 3 - CU 5	3	5	2	2	3	1	0	16	$12,069,203	$10,258,823	$135,705,702	45.55	8	180	Jun-05
											$159,653,767	$135,705,702					

"Yes" votes shown in yellow

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 FY05 funding.

* NOTE: South White Lake SP project has been combined with the Shoreline Protection Foundation Improvements Demo because the demo was designed to be constructed in conjunction with the South White Lake project. If the S White Lake project is recommended by the Technical Committee for Phase II funding approval, the Corps/LDNR will concurrently request a recommendation of construction authorization for the demonstration project (funds are already set-aside as demos are treated like non-cash flow projects). The Demo project is not being considered separately because demos do not receive a prioritization scoring and thus do not lend themselves to "ranking".

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
3737 Government Street
Alexandria, LA 71302

September 8, 2004

Ms. Julie LeBlanc, Chairman
CWPPRA Planning and Evaluation Subcommittee
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Ms. LeBlanc:

RE: Barataria Basin Landbridge Shoreline Protection Project Phases 1and 2 (BA-27)
Construction Approval Request for BA-27 portion of CU5 and BA-27 Cost Increase

Barataria Basin Landbridge Shoreline Protection Project Phases 1and 2 (BA-27) is being constructed via a series of Construction Units (CUs). See attached map (Attachment A).

CU1 (test sections) and **CU2** (6,400 feet of rock shoreline protection) have been completed.

CU4 was authorized for construction in January 2003. It is anticipated that the construction contract would be advertised in October 2004.

The BA-27 portion of **CU5** (13,800 feet of concrete pile and panel wall) would complete BA-27 (Phases 1 and 2) in its entirety. Due to significant increase in the cost of fuel, steel and concrete during that past two years, the cost estimate has gone up considerably since the 30% Design Review. NRCS requests construction approval of the BA-27 portion of CU5 for the estimated amount of $10,035,500, to be funded using the existing remaining BA-27 budget ($2,593,630) plus a BA-27 funding increase of $7,441,870 above the current maximum authorized total project cost for BA-27.

The effect of this requested cost increase, as well as the effect of the requested CU4 cost increase and a potential future increase to the Operation and Maintenance budget, on the currently approved maximum total project cost for the entirety of BA-27 is illustrated in the attached updated cost estimate spreadsheet (Attachment B).

Attachment C consists of a document entitled "Information Required for 'Non-cash-flow' Task Force Construction Approval Request" for Barataria Basin Landbridge Shoreline Protection Project Phases 1and 2 (BA-27) Construction Unit 5. This document was prepared pursuant to CWPPRA Standard Operating Procedures (Section 6.i.).

If you or any members of the Planning and Evaluation Subcommittee, Technical Committee or Task Force have any questions regarding this matter, please call me at (318) 473-7756.

Sincerely,

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

Enclosures

cc: John Saia, Technical Committee Chair, USACE, New Orleans, Louisiana
Darryl Clark, Technical Committee Member, USFWS, Lafayette, Louisiana
Rick Hartman, Technical Committee Member, NMFS, Baton Rouge, Louisiana
Sharon Parrish, Technical Committee Member, EPA, Dallas, Texas
Phil Pittman, P&E Subcommittee Member, LDNR/CRD, Baton Rouge, Louisiana
Martha Segura, P&E Subcommittee Member, USFWS, Lafayette, Louisiana
Rachel Sweeney, P&E Subcommittee Member, NMFS, Baton Rouge, Louisiana
Wes McQuiddy, P&E Subcommittee Member, EPA, Dallas, Texas
John Jurgensen, P&E Subcommittee Member, NRCS, Alexandria, Louisiana
Pat Forbes, Governor's Office of Coastal Activities, Baton Rouge, Louisiana
Cynthia Duet, Governor's Office of Coastal Activities, Baton Rouge, Louisiana
Gerry Duszynski, Assistant Secretary, LDNR/OCRM, Baton Rouge, Louisiana
Quin Kinler, Project Manager, NRCS, Baton Rouge, Louisiana
Ismail Merhi, Project Manager, LDNR, Baton Rouge, Louisiana
Allen Bolotte, District Conservationist, NRCS, Boutte, Louisiana
Cherie Lafleur, Design Engineer, NRCS, Alexandria, Louisiana
Randolph Joseph, Jr., Area Conservationist, NRCS, Lafayette, Louisiana

and amended on October 4, 2002, to reflect revised Monitoring and Operation and Maintenance costs.

NEPA, Environmental and Cultural Resources Requirements. The Barataria Basin Landbridge Shoreline Protection Project Phases 1, 2, and 3 (BA-27) Environmental Assessment was completed in February 2000. A Finding of No Significant Impact was published in the Federal Register on February 17, 2000. The Section 404 permit was granted on May 31, 2000, and modified on June 18, 2001. Coastal Zone Consistency was granted on March 23, 2000, and modified on May 8, 2001.

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

Estimate of project expenditures by State fiscal year by project funding category. Required spreadsheet is provided as Attachment D.

Prioritization Score. The Final "Prioritization Fact Sheet" for the BA-27 portion of CU5 only was completed and distributed on September 7, 2004. The Prioritization Score is 77.25.

PRIORITIZATION FACT SHEET
FINAL
September 7, 2004

Project Name and Number
Barataria Landbridge Shoreline Protection Project Construction Unit 5 (BA-27 portion: PPL7&8)

Goals
Reduce or eliminate shoreline erosion along 13,780 feet of the west bank of Bayou Perot and the north shore of Little Lake, Lafourche Parish, Louisiana.

Proposed Solution
The Barataria Landbridge Shoreline Protection Project Phases 1 and 2 (BA-27) portion of Construction Unit 5 consists of 13,780 feet of concrete pile and panel wall. Selection of this technique was based on geotechnical investigations, implementation of the "test sections", and implementation of Construction Units 2 and 3., this construction unit will entail use of a for the BA-27 portion (13,780 feet) and rock riprap shoreline protection for the BA-27c portion (22,811 feet). 75 feet of openings for organism and water exchange will be distributed over a number of sites, plus there will be a 10-foot opening at each Point of Intersection in the wall.

Maintenance is scheduled at TY7 and TY14 and would consist of minor structure repair and/or wall replacement (estimated at 2.5% of wall for each cycle. From TY20 to TY30, only a small degree of concrete panel degradation (slips, chips, or cracks) is anticipated. Such degradation is not expected to compromise the ability of the concrete panels to serve as a breakwater.

Proposed Prioritization Criteria Scores and Justification

Cost Effectiveness (cost/net acre)

The current fully-fund total cost estimate for the BA-27 Portion of CU5 as calculated by the Economic Work Group (September 7, 2004) is 11,696,000.

Net acres are taken from Phase 1 WVA Area A = 721

11,696,000/ 721 net acres = $16,222/net acre or **10 points**

Area of Need, High Loss Area

The BA-27 portion of Construction Unit 5 area contains 650 acres experiencing an average erosion rate of greater than 25 feet per year and 70 acres that has an internal loss rate of 0.18% per year.

.9 X 10 + .10 X 5 = **9.5 points**

Implementability

The project/CU has no obvious issues affecting implementability. **10 points**

Certainty of Benefits

As an inland shoreline protection project in the deltaic plain, this project /CU receives **8 points**.

Sustainability of Benefits

For the BA-27 portion of CU5 (13,780 feet), project maintenance is scheduled at TY7 and TY14 and consists of minor concrete structure repair and rock replenishment. The next maintenance could be expected at TY21. With use of concrete pile and panel wall, the project is expected to achieve 100% protection of net acres through TY 20 and 90% protection of net acres for TY 21 through TY 30. The weighted average FWOP erosion rate for BA-27 portion is 94.7 feet/year.

TY	% Effective	Feet Lost Per Year	Acres Lost Per Year
20	100%	0	0.00
21	90%	9.47	3.0
22	90%	9.47	3.0
23	90%	9.47	3.0
24	90%	9.47	3.0
25	90%	9.47	3.0
26	90%	9.47	3.0
27	90%	9.47	3.0
28	90%	9.47	3.0
29	90%	9.47	3.0
30	90%	9.47	3.0
Totals:		94.7	30.0

30 acres lost / 721 net acres at TY20 X 100 = 4.16 % or **10 points**.

Increasing riverine input in the deltaic plain or freshwater input and saltwater penetration limiting in the Chenier plain

The project will not result in increases in riverine flows. **0 points**

Increased sediment input

The project will not increase sediment input over that presently occurring. **0 points**

Maintaining landscape features critical to a sustainable ecosystem structure and function

The upper portion of the Barataria Basin is largely a freshwater-dominated system of natural levee ridges, baldcypress - water tupelo swamps, and fresh marsh habitats. The lower portion of the basin is dominated by marine/tidal processes, with barrier islands, saline marshes, brackish marshes, tidal channels, and large bays and lakes. Historically, small meandering Bayous Perot and Rigolettes, and the longer, narrower Bayou Dupont-Bayou Barataria-Bayou Villars channels provided limited hydrologic connection between the upper and lower basin. The hydrologic connections between upper and lower basin are much greater today due to the Barataria Bay Waterway, Bayou Segnette Waterway, Harvey Cutoff, and the substantial erosion and interior marsh loss along and between the now-enlarged Bayou Perot and Bayou Rigolettes. Fortunately, there still exists a landmass, albeit deteriorating, that extends southwest to northeast across the basin, roughly between Lake Salvador and Little Lake; this landmass is the "Barataria Basin Landbridge". The Barataria Basin Landbridge Shoreline Protection Project represents the consensus of a local-state-federal-academic work group as to what measures should be implemented first in addressing this critical area of the Barataria Basin. **10 points**

TOTAL SCORE

(10*2.0)+(9.5*1.5)+(10*1.5)+(8*1.0)+(10*1.0)+(0*1.0)+(0*1.0)+(10*1.0) = 77.25

Preparer of Fact Sheet

Quin Kinler, NRCS
225-382-2047
quin.kinler@la.usda.gov

References

Burns, Colley, and Dennis. 2003. BA-27, BA-27c Supplementary and BA-27d Geotechnical Investigation Report, Jefferson and Lafourche Parishes, Louisiana. Prepared for USDA Natural Resources Conservation Service.

Coastal Wetlands Planning, Protection, and Restoration Act Environmental Work Group. 1997. Barataria Landbridge Shoreline Protection Project Phase 1 project information package. 12pp.

Coastal Wetlands Planning, Protection, and Restoration Act Environmental Work Group. 1999. Barataria Landbridge Shoreline Protection Project Phase 3 project information package. 22pp.

Dames and Moore Group. 1995. Geotechnical Investigation Report Land Bridge (BA-27) and Jonathan Davis (BA-20) Projects, Jefferson and Lafourche Parishes, Louisiana. Prepared for USDA Natural Resources Conservation Service. 15pp plus Appendices.

Soil Testing Engineers, Inc. 2000. Report of Geotechnical Investigation NRCS-14-LA-00 Barataria Bay Landbridge Project Phase III, Lafourche and Jefferson Parishes, Louisiana. Prepared for USDA Natural Resources Conservation Service. 6pp plus Appendices.

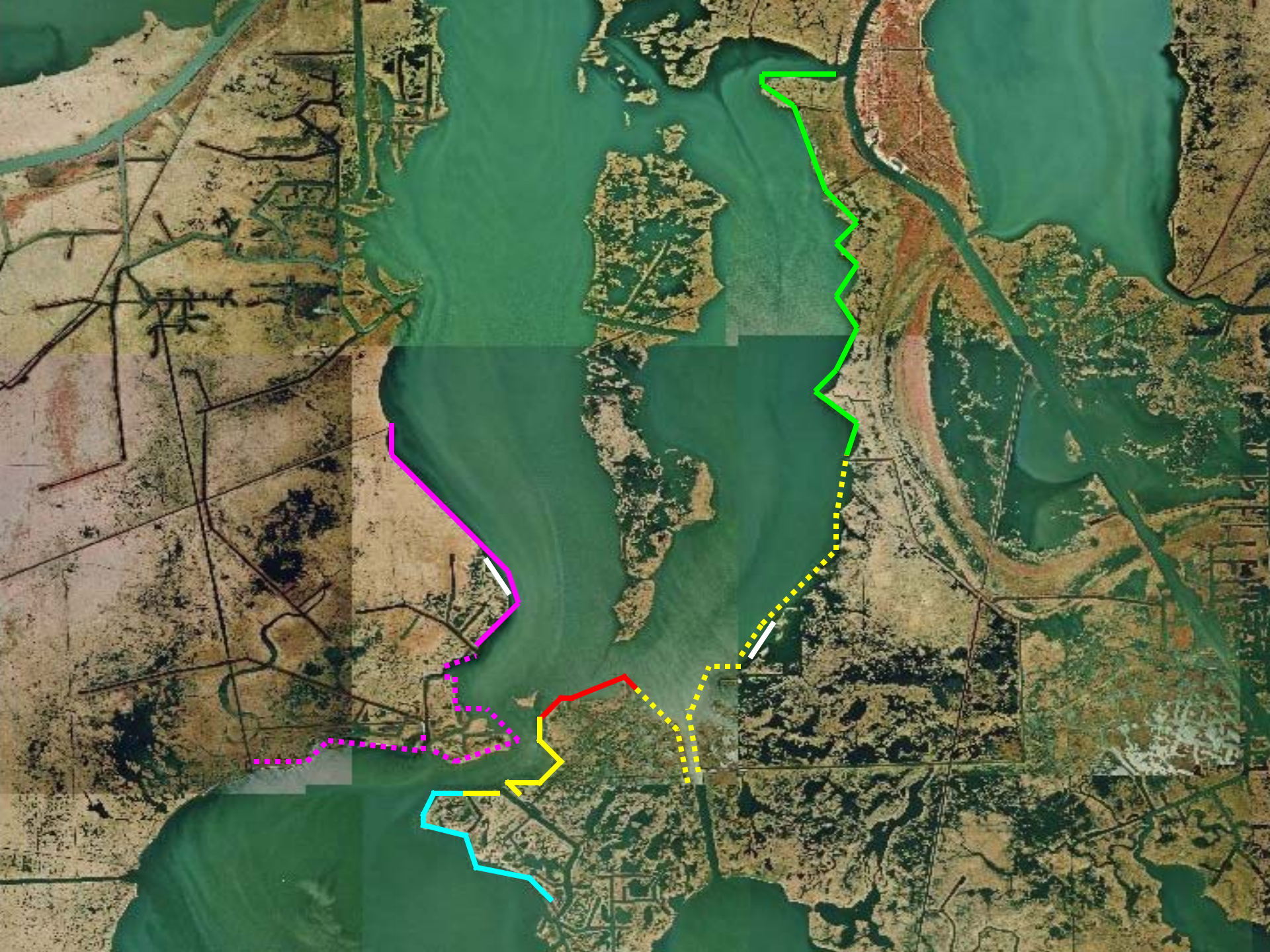
USDA NRCS. 2000. Project Plan and Environmental Assessment for Barataria Basin Landbridge Shoreline Protection Project Phases 1, 2, and 3 (BA-27), Jefferson and Lafourche Parishes, Louisiana. 29pp plus Appendices.

Coastal Wetlands Planning, Protection and Restoration Act

BARATARIA LANDBRIDGE SHORELINE PROTECTION PROJECT PHASES 1&2 (BA-27)

CU5 APPROVAL & COST INCREASE

CWPPRA Task Force Meeting
October 13, 2004




Construction Unit 5 Phases 1& 2 Portion
Concrete Pile and Panel Wall

BARATARIA LANDBRIDGE PHASES 1&2 (BA-27) CONSTRUCTION UNIT 5

Length of Shoreline	13,780 feet
Erosion Rate	114 ft /yr for 77% 30 ft/yr for 23%
Net Acres	721
Prioritization Score	77.25

BARATARIA LANDBRIDGE

United States Department of Agriculture

NRCS
Natural Resources Conservation Service
3737 Government Street
Alexandria, Louisiana 71302

September 8, 2004

Ms. Julie LeBlanc, Chairman
CWPPRA Planning and Evaluation Subcommittee
U.S. Army Corps of Engineers
Planning, Programs, and Project Management Division
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Ms. LeBlanc:

RE: Barataria Basin Landbridge Shoreline Protection Project Phase 3 (BA-27c)
"Cash-Flow" Phase Two Authorization Request for BA-27c Portion of CU5

This package constitutes the NRCS Phase Two Authorization Request for the Barataria Basin Landbridge Shoreline Protection Project Phase 3 (BA-27c) Portion of Construction Unit 5, consisting of 22,811 feet of shoreline protection located on the west bank of Bayou Perot in Lafourche. See Attachment A map.

Attachment B provides a complete summary of currently **estimated** total project cost for the entirety of BA-27c.

The total Phase II cost for the BA-27c portion of CU 5 is $14,074,159 and the Phase II Increment 1 cost is $12069,203.

Pursuant to Revision 9.0 of the CWPPRA Standard Operating Procedures (Section 6.j. and Appendix C), a document entitled "Information Required in Phase Two Authorization Request" is provided as Attachment C.

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,

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

Enclosures

cc: John Saia, Technical Committee Chair, USACE, New Orleans, Louisiana
Darryl Clark, Technical Committee Member, USFWS, Lafayette, Louisiana
Rick Hartman, Technical Committee Member, NMFS, Baton Rouge, Louisiana
Sharon Parrish, Technical Committee Member, EPA, Dallas, Texas
Phil Pittman, P&E Subcommittee Member, LDNR/CRD, Baton Rouge, Louisiana
Martha Segura, P&E Subcommittee Member, USFWS, Lafayette, Louisiana
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Allen Bolotte, District Conservationist, NRCS, Boutte, Louisiana
Cherie Lafleur, Design Engineer, NRCS, Alexandria, Louisiana
Randolph Joseph, Jr., Area Conservationist, NRCS, Lafayette, Louisiana

Overview of Phase One Tasks, Process and Issues

Environmental Compliance Tasks.

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

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

The Ecological Review for the entire Barataria Basin Landbridge Shoreline Protection Project, with specific reference to Construction Unit 5, has been drafted (August 2004). The draft Ecological Review recommends approval subject to a favorable 95% design review. A 95% design review was conducted on September 2, 2004, with favorable results.

Engineering Tasks.

The results of the Engineering Tasks are presented in the Design Report for Barataria Basin Landbridge Shoreline Protection Project, Construction Unit 5, which can be found at:

ftp://ftp.dnr.state.la.us/pub/CED%20Project%20Management/NRCS/BA-27%20CU%205%20Barataria%20Landbridge/BLB%20CU%205%2095%25%20Doc/

Landrights Tasks.

Preliminary ownership reports and title reports have been completed. With the exception of one surface landowner, all have executed easements. The remaining owner has provided written intention to execute an easement once the CU receives funding for construction. All pipeline companies have been identified and contacted; draft agreements have distributed and are presently being negotiated.

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 Attachment A. 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 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, will be excavated. Excavated material will be deposited

P. Spreadsheet with the categorical breakdown for Phase II costs. The base form of this spreadsheet has been modified to illustrate all **"approved"** and herein requested costs for all BA-27c construction units. The total Phase I and Phase II costs for all construction units on this spreadsheet is $26,917,349. This total differs slightly from that referenced above because it uses the "approved" cost for BA-27c CU3 versus the actual cost, and it uses the 100% cost for BA-27c CU4 versus the 125% cost.

PRIORITIZATION FACT SHEET

FINAL

September 7, 2004

Project Name and Number

Barataria Landbridge Shoreline Protection Project Construction Unit 5 (BA-27c: PPL9)

Goals

Reduce or eliminate shoreline erosion along 22,811 feet of the west bank of Bayou Perot and the north shore of Little Lake, Lafourche Parish, Louisiana.

Proposed Solution

The Barataria Landbridge Shoreline Protection Project Phase 3 (BA-27c) portion of Construction Unit 5 consists of 22,811 feet of rock riprap shoreline protection. Selection of this technique was based on geotechnical investigations, implementation of the "test sections", and implementation of Construction Units 2 and 3. Five site-specific openings, ranging in size from 20 feet to 50 feet, will be incorporated to provide organism and water exchange.

Maintenance is scheduled at TY5 and TY10 and consists of rock replenishment.

Proposed Prioritization Criteria Scores and Justification

Cost Effectiveness (cost/net acre)

The current fully-fund total cost estimate for the BA-27c Portion of CU5 as calculated by the Economic Work Group (September 7, 2004) is 14,711,000.

Net acres are taken from BA-27c (Phase 3) WVA Areas 1, 2a, and 2b = 180 net acres.

14,711,000/180 net acres = $81,727/net acre or **1 point**

Area of Need, High Loss Area

The BA-27 portion of Construction Unit 5 area contains 111 acres experiencing an average erosion rate of greater than 25 feet per year, 63 acres experiencing an average erosion rate between 10 and 25 feet per year, 6 acres experiencing an average erosion rate of less than 10 feet per year, and 781 acres that has an internal loss rate of 0.18% per year.

.11 X 10 + .07 X 7.5 + .01 X 5 + .81 X 5 = **5.7points**

Implementability

The project/CU has no obvious issues affecting implementability. **10 points**

Certainty of Benefits

As an inland shoreline protection project in the deltaic plain, this project /CU receives **8 points**.

Sustainability of Benefits

For the BA-27c portion (22,811 feet), project maintenance is scheduled at TY5 and TY10 and consists of rock replenishment. The next maintenance could be expected at TY21. With use of rock shoreline protection, the project is expected to achieve 100% protection of net acres through TY 20 and 50% protection of net acres for TY 21 through TY 30. The weighted average FWOP erosion rate for BA-27c portion is 19.7 feet/year.

TY	% Effective	Feet Lost Per Year	Acres Lost Per Year
20	100%	0	0.00
21	50%	9.85	5.16
22	50%	9.85	5.16
23	50%	9.85	5.16
24	50%	9.85	5.16
25	50%	9.85	5.16
26	50%	9.85	5.16
27	50%	9.85	5.16
28	50%	9.85	5.16
29	50%	9.85	5.16
30	50%	9.85	5.16
Totals:		98.5	51.6

51.6/180 net acres at TY20 X 100 = 28.7 % or **2 points**.

Increasing riverine input in the deltaic plain or freshwater input and saltwater penetration limiting in the Chenier plain

The project will not result in increases in riverine flows. **0 points**

Increased sediment input

The project will not increase sediment input over that presently occurring. **0 points**

Maintaining landscape features critical to a sustainable ecosystem structure and function

The upper portion of the Barataria Basin is largely a freshwater-dominated system of natural levee ridges, baldcypress - water tupelo swamps, and fresh marsh habitats. The lower portion of the basin is dominated by marine/tidal processes, with barrier islands, saline marshes, brackish marshes, tidal channels, and large bays and lakes. Historically, small meandering Bayous Perot and Rigolettes, and the longer, narrower Bayou Dupont-

Bayou Barataria-Bayou Villars channels provided limited hydrologic connection between the upper and lower basin. The hydrologic connections between upper and lower basin are much greater today due to the Barataria Bay Waterway, Bayou Segnette Waterway, Harvey Cutoff, and the substantial erosion and interior marsh loss along and between the now-enlarged Bayou Perot and Bayou Rigolettes. Fortunately, there still exists a landmass, albeit deteriorating, that extends southwest to northeast across the basin, roughly between Lake Salvador and Little Lake; this landmass is the "Barataria Basin Landbridge". The Barataria Basin Landbridge Shoreline Protection Project represents the consensus of a local-state-federal-academic work group as to what measures should be implemented first in addressing this critical area of the Barataria Basin. **10 points**

TOTAL SCORE

(1*2.0)+(5.7*1.5)+(10*1.5)+(8*1.0)+(2*1.0)+(0*1.0)+(0*1.0)+(10*1.0) = 45.5

Preparer of Fact Sheet

Quin Kinler, NRCS
225-382-2047
quin.kinler@la.usda.gov

References

Burns, Colley, and Dennis. 2003. BA-27, BA-27c Supplementary and BA-27d Geotechnical Investigation Report, Jefferson and Lafourche Parishes, Louisiana. Prepared for USDA Natural Resources Conservation Service.

Coastal Wetlands Planning, Protection, and Restoration Act Environmental Work Group. 1997. Barataria Landbridge Shoreline Protection Project Phase 1 project information package. 12pp.

Coastal Wetlands Planning, Protection, and Restoration Act Environmental Work Group. 1999. Barataria Landbridge Shoreline Protection Project Phase 3 project information package. 22pp.

Dames and Moore Group. 1995. Geotechnical Investigation Report Land Bridge (BA-27) and Jonathan Davis (BA-20) Projects, Jefferson and Lafourche Parishes, Louisiana. Prepared for USDA Natural Resources Conservation Service. 15pp plus Appendices.

Soil Testing Engineers, Inc. 2000. Report of Geotechnical Investigation NRCS-14-LA-00 Barataria Bay Landbridge Project Phase III, Lafourche and Jefferson Parishes, Louisiana. Prepared for USDA Natural Resources Conservation Service. 6pp plus Appendices.

USDA NRCS. 2000. Project Plan and Environmental Assessment for Barataria Basin Landbridge Shoreline Protection Project Phases 1, 2, and 3 (BA-27), Jefferson and Lafourche Parishes, Louisiana. 29pp plus Appendices.

October 2003

Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c)

Project Status

Approved Date: 2000
Cost: $20.8 million
Project Area: 2,480 acres
Status: Construction
Net Benefit After 20 Years: 264 acres
Project Type: Shoreline Protection

Location

The project is located along the west bank of Bayou Perot and the north shoreline of Little Lake in Lafourche Parish and along the east bank of Bayou Perot and the east and west banks of Harvey Cutoff in Jefferson Parish, Louisiana.

Problems

The Barataria Landbridge is a critical land form that retards marine tidal forces which, among other things, threaten the upper Barataria basin. The highly organic soils in the project area are particularly susceptible to shoreline erosion. With increased tidal action, erosion rates in the project area range up to about 75 feet/year. With continued erosion, the landbridge function will be lost in the near future.

Restoration Strategy

This project encompasses about 41,000 feet of shoreline protection. About 20,000 feet of protection will be along the west bank of Bayou Perot and the north shore of Little Lake in Lafourche Parish. In Jefferson Parish, about 15,000 feet of the protection will be along the east bank of Bayou Perot and about 3,000 feet along each bank of the Harvey Cutoff.

Progress to Date

Approximately 11,000 feet of shoreline protection will be completed in 2003. The remainder will go to construction by 2004.

This project is on Priority Project List 9.

Protection will be provided to a total of 41,000 feet of shoreline in order to preserve the effectiveness of these areas in preventing marsh loss.

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

Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c)

Shoreline Protection *

Project Boundary

* denotes proposed features

USGS science for a changing world

Louisiana

Project Location

N

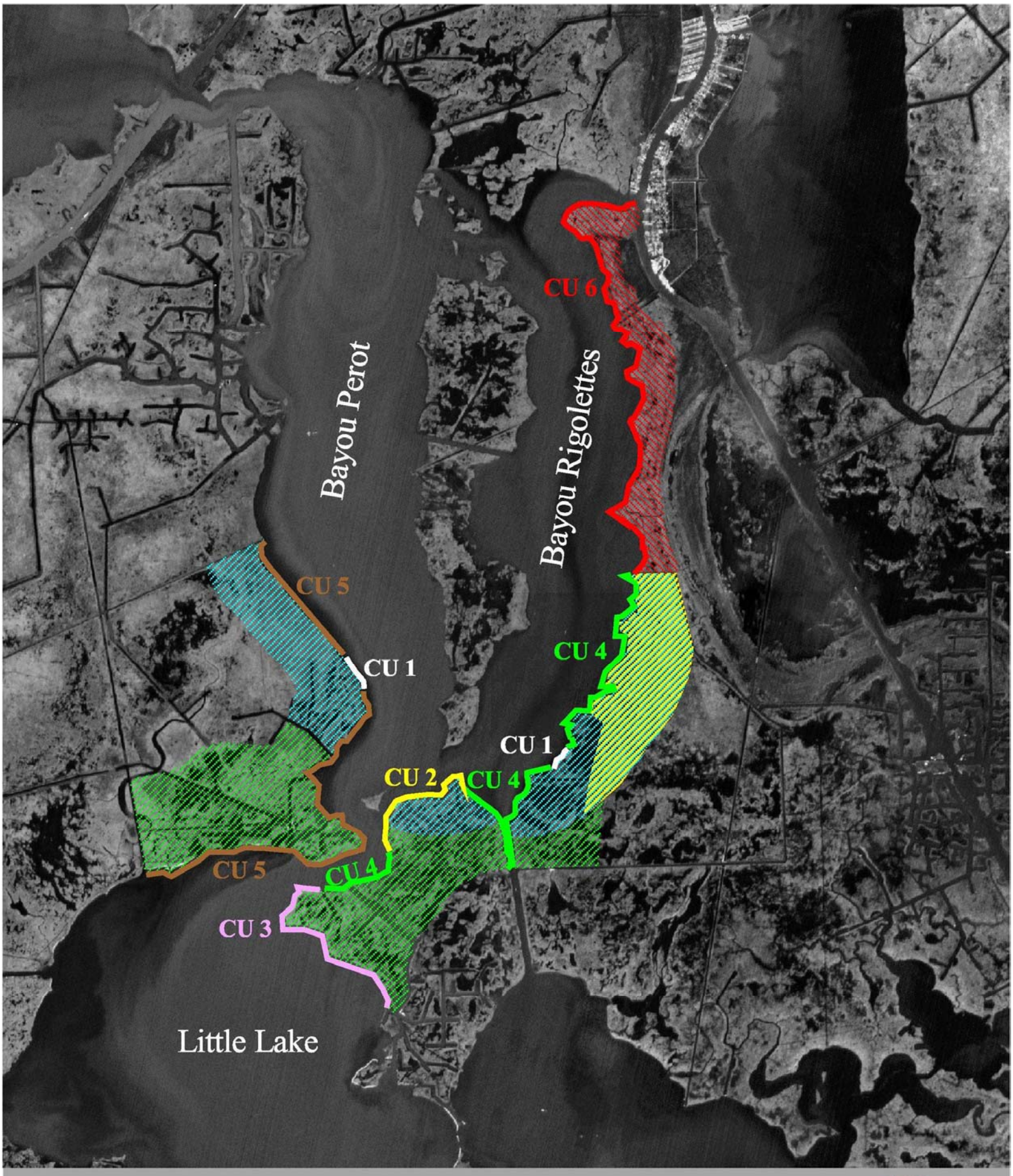
0.5 0 0.5 1 Miles

0.5 0 0.5 1 Kilometers

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

Background Imagery:
1998 Digital Orthophoto Quarter Quadrangle

Map Date: August 25, 2003
Map ID: USGS-NWRC 2003-11-104
Data accurate as of: April 03, 2003



Barataria Basin Land Bridge SP Project

Construction Unit 1
Construction Unit 2
Construction Unit 3
Construction Unit 4
Construction Unit 5
Construction Unit 6

Phase 1
Phase 2
Phase 3
Phase 4

N

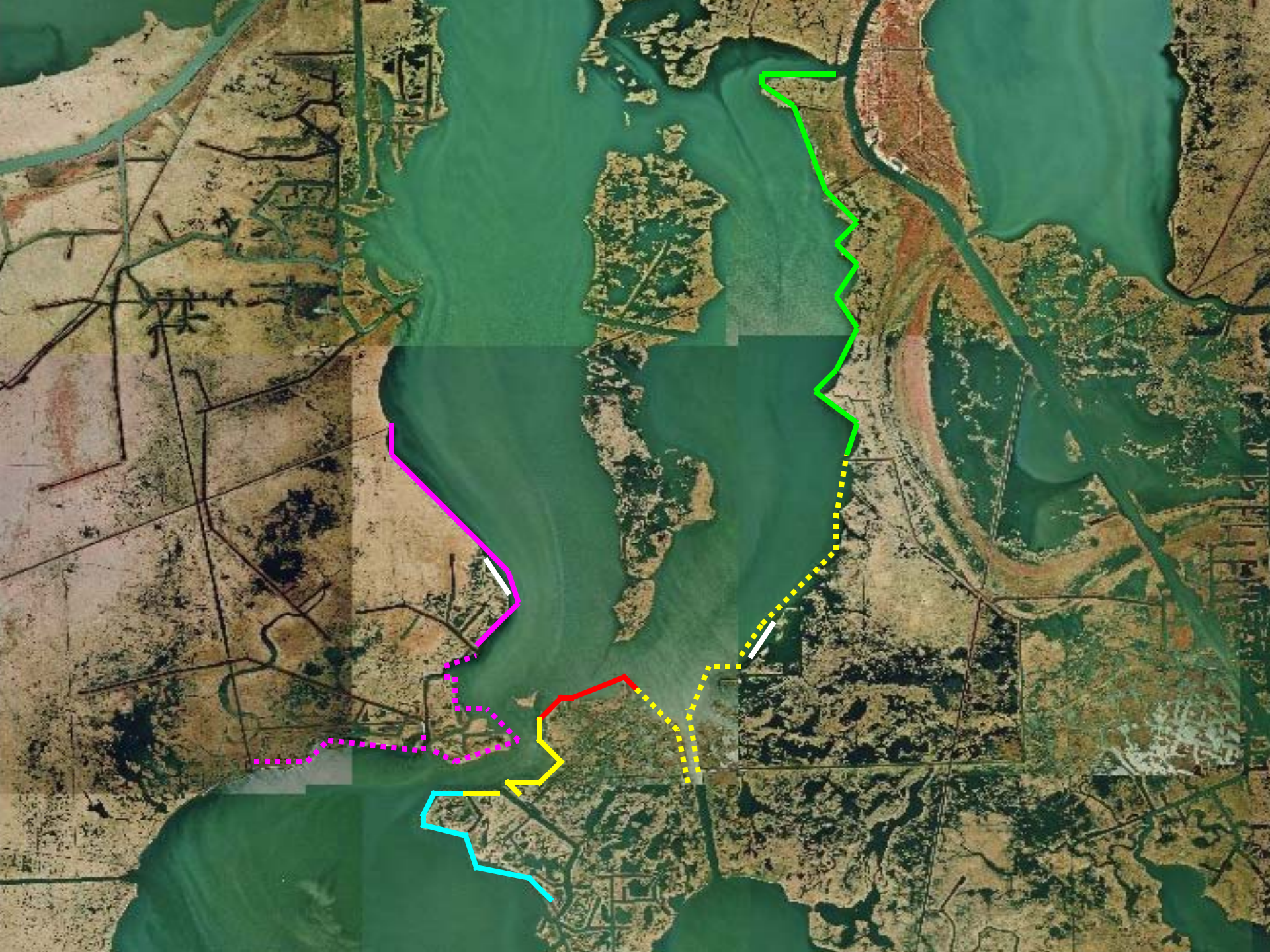
5000 0 5000 Feet

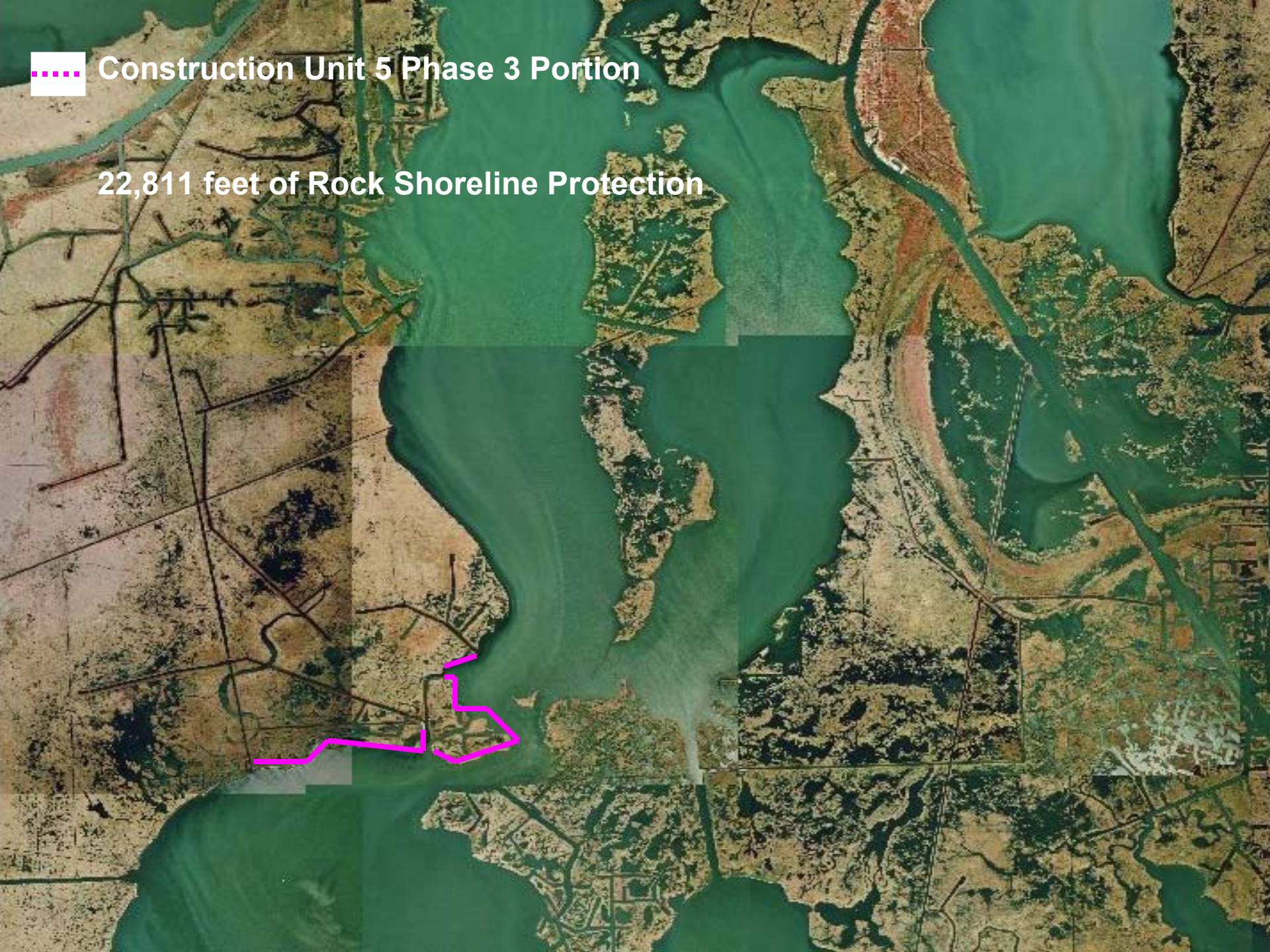
Coastal Wetlands Planning, Protection and Restoration Act

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

PHASE II APPROVAL OF CU5

CWPPRA Task Force Meeting
October 13, 2004




Construction Unit 5 Phase 3 Portion
22,811 feet of Rock Shoreline Protection

BARATARIA LANDBRIDGE PHASE 3 (BA-27c) CONSTRUCTION UNIT 5

Length of Shoreline	22,811 feet
Erosion Rate	30 ft/yr for 40% 15 ft/yr for 46% 5 ft/yr for 14%
Net Acres	180
Prioritization Score	45.55

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

REPLY TO

ATTENTION OF:

CEMVN-PM-C (1110-2-1150a) 31 August 2004

MEMORANDUM FOR Mr. John Saia, Chairman, CWPPRA technical Committee

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

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

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

a. List of Project Goals and Strategies.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Economics Work Group prepared a fully funded estimate in January 2004.

m. Estimate of project expenditures by state fiscal year subdivided by funding category.

See attached spreadsheet.

n. 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.

o. 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 fact sheet is included in the Final Design Report.

p. Submit a spreadsheet with the categorical breakdown for Phase 2.

See attached spreadsheet.

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

Gregory Miller

GREGORY MILLER
Project Manager
Coastal Restoration Branch

Enclosures (2)

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

Authority: Coastal Wetlands Planning, Protection and Restoration Act

Sponsors: U.S. Army Corps of Engineers and LA Department of Natural Resources

Location: Vermilion Parish, LA.

Problem: The banks of Freshwater Bayou Canal are rapidly eroding, due mainly to boat traffic. In the project area, several breaches have developed in the bankline along the east side of the canal. These breaches allow boat wakes to push turbid, higher salinity waters into interior marsh, causing marsh loss and decreasing SAV coverage. A large area of interior marsh in the northern portion of the project area is fragmenting and turning to open water, in part due to the breaches.

Features: 1) A rock dike would be built along the eastern bank of Freshwater Bayou Canal, between Belle Isle Canal and Freshwater Bayou Lock, a distance of approximately 40,000-ft. The dike is designed to halt shoreline erosion along the east bank of the canal. Special features are being incorporated into the project design to allow estuarine organisms to access wetlands behind the dike. 2) Four water control structures would be built in the spoil banks of canals running along the eastern and southern boundary of the project area. The structures would be flap-gated variable crest weirs.

Benefits: Over 20-years, the project will benefit approximately 529 ac of wetlands.

Cost: The preliminary estimated cost to construct, maintain, and monitor this project is $25.1 million.

Contact: For additional information contact Gregory Miller at (504) 862-2310.

Freshwater Bayou Bank Stabilization (TV-11b)

Project Goals and Strategies

Goal Statement

The overall goals of this project are to:

• Achieve a 7-fold increase in emergent marsh acreage in Area A, compared to without project predictions, by the end of the 20-year project life (Figure 1); and,

• Reduce the rate of marsh loss by 15% in Area B over the 20-year project life (Figure 1).

Strategy Statement

The project goals will be achieved through the implementation of the following strategies/project features:

• construction of a large conveyance channel through the levee of the Mississippi River

• construction of bifurcation channels (divisions of the main conveyance channel) every five years

• construction of Sediment Retention Enhancement Devices down-stream from the crevasse cut

• beneficial placement of dredged material from conveyance channel construction within the project area

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

Lead Agencies: U.S. Army Corps of Engineers and State of Louisiana Department of Natural Resources

Project Location: This 241-acre project area is located in Vermilion Parish along the eastern shoreline of Freshwater Bayou Canal (FBC) between the Freshwater Bayou Lock and Belle Isle Canal.

Project Purpose: The banks of Freshwater Bayou Canal are rapidly eroding, due mainly to boat traffic. In the project area, several breaches have developed in the bankline along the east side of the canal. These breaches allow boat wakes to push turbid, higher salinity waters into interior marsh, causing marsh loss and decreasing SAV coverage. A large area of interior marsh in the northern portion of the project area is fragmenting and turning to open water, in part due to the breaches.

Project Features: A rock dike would be built along the eastern bank of Freshwater Bayou Canal, between Belle Isle Canal and Freshwater Bayou Lock, a distance of approximately 40,000-feet. The dike is designed to halt shoreline erosion along the east bank of the canal. Special features are being incorporated into the project design to allow estuarine organisms to access wetlands behind the rock dike. These special features will leave small gaps in the rock at infrequent intervals to allow natural water exchange behind the dike segments. Shoreline sections at the gap locations will be armored to prevent erosion into the adjacent bankline and marshes.

Project Costs: The estimated cost of the project, including real estate, environmental compliance, engineering and design, relocations, construction, monitoring, and O&M expenses, is $16,703,300.

Project Status: The partnering agencies have completed a 30% design review and a 95% design review. The project schedule calls for seeking construction authorization from the CWPPRA Task Force at the fall 2004 meeting.

Information: Additional information on this project is available on the LACOAST.GOV website or may be obtained by contacting Gregory Miller at 504-862-2310 or via email at Gregory.B.Miller@mvn02.usace.army.mil.

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

REPLY TO
ATTENTION OF:

CEMVN-PM-C (1110-2-1150a) 30 July 2002

MEMORANDUM FOR Mr. John Saia, Chairman, CWPPRA Technical Committee

SUBJECT: Completion of 30% Design Review Milestone for Freshwater Bayou Bank Stabilization and Hydrologic Restoration (East) Belle Isle to Lock (XTV-27)

1. As required by Section 6(e)(1) of the CWPPRA Standard Operating Procedures Manual, the U.S. Army Corps of Engineers (USACE) and Louisiana Department of Natural Resources (LDNR) conducted a Preliminary 30% Design Review Conference for the subject project. The meeting was held at the LDNR field office in Abbeville, Louisiana on 27 June 2002, and included participants representing the sponsoring CWPPRA agencies and interested land owners (see enclosed summary).

2. The following Phase I tasks were covered during the design review.

a. Geotechnical Investigations. Borings were completed at the project site in August 2001 and a stability analysis produced using that field data was incorporated into the draft plans. The engineering team is continuing to review the geotechnical information and recommendations regarding elements of the project design to address settlement predictions and factors of safety are forthcoming. The USACE design team will coordinate their recommendations with LDNR engineering and management staff.

b. Surveys. A field crew surveyed the project area and survey information was reviewed to resolve anomalies and to verify the vertical datum. Survey plots have been incorporated into the project drawings.

c. Design update. The USACE and LDNR team members coordinated proposed rock dike sections for the project early in the design alternative development stage. Both engineering staffs are satisfied with the design cross sections. The LDNR staff provided comments on the draft drawings and the suggested changes will be reviewed and incorporated into the revised drawings as appropriate. In addition, a detailed discussion occurred regarding the design of organism access points along the rock dike. Several outlets along Freshwater Bayou will be left open to allow navigation and water flow. Participants suggested additional modifications to the design that will be considered by the engineering team. Finally, one original project feature, the water control structures influencing Area B, were removed from the design at the request of the local sponsor.

d. Cost Estimate. The project construction cost estimate has been revised to reflect the reduction in project scope and changes in the design cross-sections and resulting rock quantity estimates. The revised construction cost estimate is $8.6 million. This estimate does not include operations and maintenance costs. Fully funded project costs will be developed in coordination with the local sponsor pending the completion of design work.

e. Draft Environmental Assessment (EA). A draft EA has been completed and was distributed to the project team on 16 May 2002. The draft EA will be distributed for public review and comment in August 2002.

f. Wetland Valuation Assessment (WVA) Revisions. Changes in project scope resulted in a reduction in the project area and environmental benefits. As a result, in accordance with program 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 is not significantly different than the original estimate.

g. Draft Ecological Review. A draft Ecological Review was distributed at the meeting and review comments were requested. The Ecological Review will be modified to reflect the change in project scope, boundary and environmental benefits.

h. Land Rights Work Plan. A preliminary land rights work plan has been developed and a final Real Estate Plan is scheduled for completion in September 2002. USACE and LDNR real estate staffs have developed a close working relationship with the primary land owner in the project area and have been working together to identify pipeline owners and other in-holdings along the project right-of-way.

i. Cost Share Agreement. The USACE and LDNR are continuing to negotiate a model cost share agreement for Phase I activities of cash flow managed projects. The current schedule calls for completion of staff level negotiations in August 2002 with subsequent submittal for approval from both USACE and LDNR executive offices. Completion of executive level review of the model agreement is anticipated in March 2003. Development and completion of the project specific agreement is scheduled for June 2003 if no additional delays occur. As illustrated, the delays in completing the cost share negotiations and the mandatory executive level review time frames are dictating the Phase I completion schedule and will result in missing the January 2003 timeframe for requesting Phase II authorization from the Task Force.

3. The local sponsor has expressed support for continuing Phase I design activities and supports completion of the remaining tasks up to the 95% Design Review (see attached letter). The following remaining Phase 1 tasks were identified and completion schedules and lead responsibilities were assigned.

TASK	**SCHEDULE**	**ORGANIZATION**
Complete Ecological Review	August 2002	LDNR
Complete NEPA	August 2002	USACE
Value Engineering Study	September 2002	USACE
Real Estate Plan	September 2002	USACE
Design thru 95%	October 2002	USACE
95% Design Review	November 2002	USACE/LDNR
Cost Share Agreement	June 2003	USACE/LDNR
Confirm Phase 1 requirements	July 2003	USACE/LDNR
Phase 2 request to Technical Committee	July 2003	USACE/LDNR
Phase 2 request to Task Force	July 2003	USACE/LDNR

4. If you have any questions regarding the completion of this Phase I milestone, please call Mr. Gregory Miller at 862-2310.

GREGORY MILLER
Project Manager
Coastal Restoration Branch

Enclosure

CF:
Podany (PPPMD)
Leblanc PM-C)
Laborde (ED-GE)
Schmidt de la Fuente (LDNR)
Juneau (LDNR)
Bodin (USFWS)
Good (LDNR)
Hartman (NMFS)
Hill (EPA)
Paul (NRCS)

PM-C

State of Louisiana

KATHLEEN BABINEAUX BLANCO
GOVERNOR

SCOTT A. ANGELLE
SECRETARY

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL RESTORATION AND MANAGEMENT

May 11, 2004

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

Re: 95% Design Review for Freshwater Bayou Canal Shoreline Protection – Belle Island to Lock (TV-11b)
Statement of Successful Completion

Dear Mr. Saia:

The 95% design review meeting was successfully completed on January 22, 2004 for the Freshwater Bayou Canal Shoreline Protection – Belle Island to Lock (TV-11b) project. Based on our review of the Final Design Report, plans and specifications, the Ecological Review, and the environmental compliance documentation, as local sponsor, we concur to request permission from the Technical Committee to proceed to Phase II for this project.

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

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

Sincerely,

Christopher P. Knotts, P.E.
Director

cc: David Burkholder, P.E., Engineer Manager
Kenneth Duffy, Ph.D., Project Manager
Shannon Dupont, P.E., Project Engineer

CPK:KCD:kcd

COASTAL ENGINEERING DIVISION
P. O. BOX 44027 • BATON ROUGE, LA 70804-4027 • 617 N. THIRD STREET • 10TH FLOOR • BATON ROUGE, LA 70802
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E C O L O G I C A L R E V I E W

Freshwater Bayou Bank Stabilization (Belle Isle to Lock)
CWPPRA Priority Project List 9
(State No. TV-11b)

January 2004

Agaha Y. Brass and Kyle F. Balkum
Restoration Technology Section
Coastal Restoration Division
Louisiana Department of Natural Resources

Draft – January 2004

ECOLOGICAL REVIEW

Freshwater Bayou Bank Stabilization (Belle Isle to Lock)

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

I. Introduction:

The Freshwater Bayou Canal, constructed between 1965 and 1967, provides major shipping access from the Gulf of Mexico to Intracoastal City on the Gulf Intracoastal Waterway (GIWW). In 1968, a lock was built at the southern-most end of the inland reach of the navigation channel near the Gulf of Mexico to control the intrusion of saltwater into Freshwater Bayou Canal. It is opened only to allow access for shipping traffic and to alleviate elevated water levels caused by periodic heavy rains. Between 1979 and 1986, approximately 300,000 tons of cargo were transported along the Freshwater Bayou Canal [United States Army Corps of Engineers (USACE) 1989], demonstrating the importance of this highly used channel.

The purpose of the proposed Freshwater Bayou Bank Stabilization (Belle Isle to Lock), TV-11b project is to stop shoreline erosion along the east bank of Freshwater Bayou Canal in Vermilion Parish, Louisiana. Between 1968 and 1992, the Freshwater Bayou Canal shoreline eroded at an average rate of 12.5 feet per year (Brown and Root 1992). Monitoring data, collected from shoreline reference stations as part of the Freshwater Bayou Wetland Protection (ME-04) project indicated that the shoreline eroded at an average of 6.69 feet per year between 1995 and 1996, and 11.15 feet per year between 1996 and 1998 (Vincent et al. 2000a). Ongoing LDNR monitoring efforts have indicated that from 1995 to 1998 the eastern shoreline of Freshwater Bayou Canal eroded at an average rate of 9.17 feet/year (Vincent et al. 2000a). Continued shoreline erosion, caused by vessel wakes, has breached the spoil bank in many areas, subjecting interior marshes to increased water salinities, wave energies, and tidal scour. Tidal scour has eroded organic soils of interior marshes, resulting in emergent vegetation loss within the project area (Vincent et al. 2000b).

The Freshwater Bayou Bank Stabilization project involves the construction of a foreshore rock dike along the east bank of Freshwater Bayou Canal. The project encompasses 11,000 acres of intermediate and brackish marsh and extends approximately 39,330 feet from the Freshwater Bayou Lock north to Belle Isle Bayou (Figure 1). It is anticipated that this strategy will stop erosion in this area, and reduce deterioration of interior marshes. *Coast 2050*, Louisiana's guiding document for the restoration of a sustainable coastal ecosystem, identifies the stabilization of major navigation channels as both a "Coastwide Common Strategy" and a "Regional Ecosystem Strategy" which will reduce future wetland loss (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority 1998).

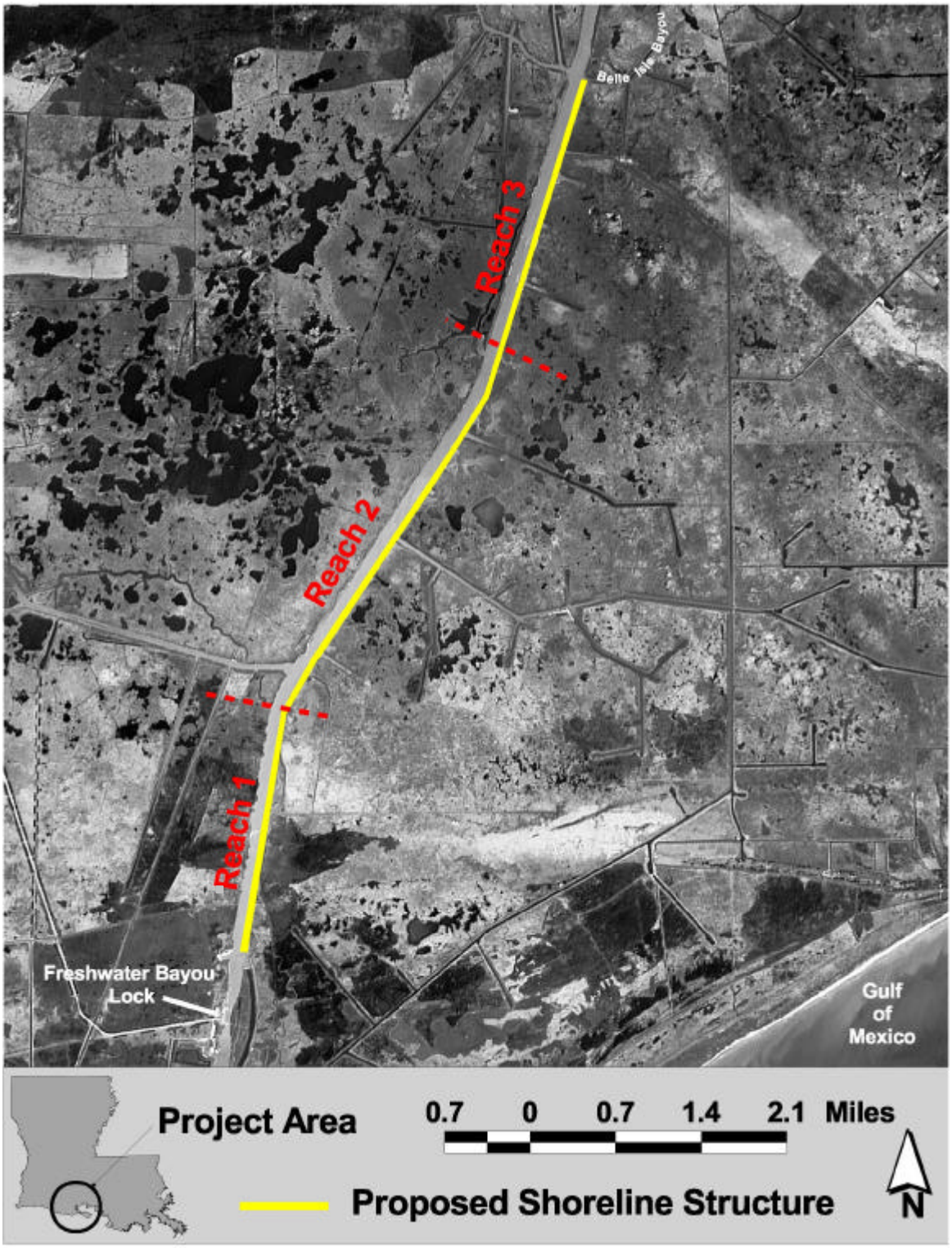


Figure 1: Freshwater Bayou Bank Stabilization (Belle Isle to Lock) project area.

II. Goal Statement:

The goal of this project is to stop shoreline erosion along the east bank of Freshwater Bayou Canal from the Freshwater Bayou Lock to Belle Isle Bayou.

III. Strategy Statement:

The project goal will be achieved through the construction of a foreshore rock dike along a 39,330-foot stretch of Freshwater Bayou Canal from Freshwater Bayou Lock to Belle Isle Bayou.

IV. Strategy-Goal Relationship:

Construction of a foreshore rock dike will restore the integrity of the Freshwater Bayou Canal bank which has continued to erode and breach into the marsh to the east of the project area. The proposed permeable barrier will dissipate wave energy, and effectively halt shoreline/bankline erosion.

V. Project Feature Evaluation:

A geotechnical investigation was performed to assess the native soil's ability to withstand the designed weight of the proposed rock structure. Based on the results of this analysis, it was determined that the project area contained three distinct soil reaches which required the design of three separate shoreline protection features for each reach (Figure 1). Below is a summary of a geotechnical investigation that describes the settlement and slope stability suggestions associated with the different types of proposed project features. The accepted measure of a slope's stability is its "safety factor" or minimum factor of safety (FSmin), which is the ratio of the forces or moments tending to prevent failure (soil strength, primarily) to those that cause failure [soil and surcharge weights plus seepage forces, primarily (Soil Testing Engineers, Inc. 2001)]. The recommended safety factor that should be adhered to for rock structures built in this project area is a FSmin = 1.20. Table 1 summarizes the stability analyses for the three project reaches at +3.5 feet NAVD-88. Table 2 summarizes predictions of long-term structure settlement along the three reaches.

The general design for Reach 1 [the southernmost region (Station 40+10 to Station 163+60)] will include an onshore dike with 1 vertical (V) on 3 horizontal (H) side slopes for the land and channel sides of the reach. A 1V on 18H channel side berm is required for stability at locations where the mud line dips below -2 feet NAVD-88. This berm will act as a counterbalance against slope stability failure. At these locations, the adjacent top bank will be degraded to +2.5 feet NAVD-88. As currently designed the structure along Reach 1 meets the minimum factor of safety (Table 1). Reach 2 (centrally located between Reaches 1 and 3) of the project area (from Station 163+60 to Station 354+40) met the required factors of safety and soil stability requirements necessary for a successful structure. The rock dike was designed using slopes of 1V on 3H for the channel side and 1V on 2H for the bank side. Reach 3 [the northernmost reach (Station 358+19 to Station 469+77)] will have side slopes of 1V on 3H on both sides. Reach 3 will also contain an embedment berm to act as a counterbalance in certain areas of the reach. The embedment berm will be placed behind the primary structure built to +1.4 feet NAVD-88 with 1V on 2H side slopes. The geotechnical investigation determined that geotextile reinforcement and embedment berm are required to achieve the minimum factor of safety (Table1).

Table 1. Description of Safety Factors for Proposed Project Features (USACE 2003a)

Reach Number	Minimum Factor of Safety for Extreme Low Water Elevation -4	Minimum Factor of Safety for Average Low Water Elevation -2.3
1 Bank Paving	1.20	(see note below)
2 Rock Dike	1.34	(see note below)
	1.33	(see note below)
3 Rock Dike	0.88*	(see note below)
	0.88**	(see note below)
	0.94***	(see note below)
	0.94****	(see note below)

* Geotextile reinforcement (tensile strength 300 #/in at 5% strain) required for FSmin = 1.20 for extreme low water case and embedment is insufficient, a berm must be added.

** Geotextile reinforcement (tensile strength 300 #/in at 5% strain) and embedment berm are required for FSmin = 1.20 for extreme low water case.

*** Reduced composite excludes the following sections: Sta.354+41, 358+19, 365+75, 408+08, 418+90, 422+50, 438+35, and 457+77. Geotextile reinforcement (tensile strength 240 #/in at 5% strain) required for FSmin = 1.20 for extreme low water case and embedment is sufficient FSmin = 1.20.

**** Geotextile reinforcement (tensile strength 320 #/in at 5% strain) required for FSmin = 1.20 for extreme low water case and embedment is sufficient FSmin = 1.20.

Note: For re-design at grade Elevation +3.5, only controlling cases were analyzed.

Table 2. Long-term structure settlement predicted for the 20-year project life (USACE 2002 and USACE 2003b).

Reach	Baseline Stations	20 Year Settlement	Ultimate Long Term Settlement
1	Station 40+10 to Station 163+60	6 inches	12 inches
2	Station 163+60 to Station 354+40	2 to 7 inches	7 to 12.5 inches
3	Station 354+40 to Station 469+78	1.5 to 5.5 inches	4.5 to 8 inches

All of the stone structures will be underlain by geotextile fabric and built to an elevation of +3.5 feet NAVD-88 with crown widths of 5 feet. The aforementioned geotextile fabric will be used to reduce potential stability failure and construction settlement. Material excavated from the floatation channel (dredged for access to the project area) will be beneficially placed between the dike and the existing shoreline no higher than the top of the adjacent rock dike.

A total of 13 proposed pipeline and canal openings along the rock dike's length will also serve as fisheries access points. The gaps at pipeline crossings are 100 feet wide (50 feet on each side of the pipeline). Gaps at canals and natural creeks vary in width depending upon the site. The rock dike terminus, created by each opening, will be built to the same side slopes and elevation as the rest of the dike within each respective reach; however, the crown widths at those positions will be wider (7 feet).

VI. Assessment of Goal Attainability:

Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) shoreline protection projects similar to Freshwater Bayou Bank Stabilization (Belle Isle to Lock), have been implemented on Freshwater Bayou (Figure 2) and other navigation canals as a means of protecting those banks from further erosive elements. Monitoring results and anecdotal information from these projects indicate that shoreline protection measures have been effective at preventing or reducing further erosion.

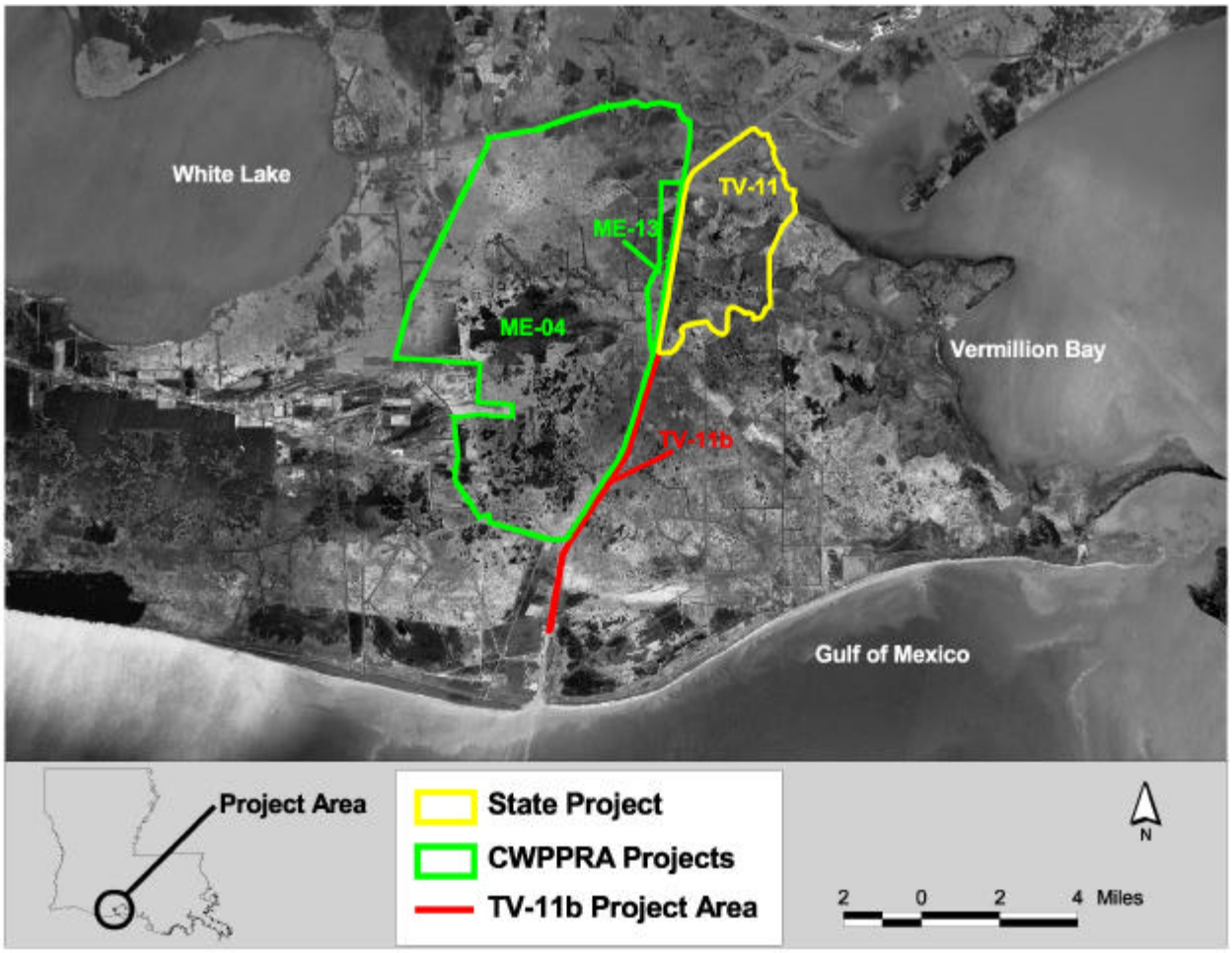


Figure 2: Freshwater Bayou Bank Stabilization (Belle Isle to Lock) and other CWPPRA and State projects along Freshwater Bayou Canal.

Projects on Freshwater Bayou Canal:

? Freshwater Bayou Wetlands Protection (ME-04) is a CWPPRA project located on the

western bank of Freshwater Bayou Canal directly across from the proposed TV-11b project (Figure 2). This project was initiated in January 1995 and included the construction of water control structures and a 28,000 linear foot foreshore rock dike at +4.0 feet NAVD-88. The rates of subsidence and sea level rise in the project area were estimated to be relatively low, 0.13 inches per year and 0.25 inches per year, respectively (Penland et al. 1989). Although monitoring efforts are still ongoing, data analyses suggest that the rock dike significantly reduced wave-induced shoreline erosion after construction. Between June 1995 and July 1996, the shoreline behind the constructed dike actually prograded at an average rate of 2.17 feet per year while the reference area eroded at a rate of 6.69 feet per year (Raynie and Visser 2002). Between August 1996 and February 1998, the protected shoreline continued to prograde at an average rate of 0.89 feet per year as the reference area eroded at an average rate of 11.15 feet per year (Raynie and Visser 2002). However, between March 1998 and May 2001, the protected shoreline eroded an average of 2.62 feet per year while the reference area eroded an average of 9.99 feet per year (Raynie and Visser 2002). The steady decrease in the effectiveness of the project features over time is due in large part to the "substandard nature of the original construction material used, and the logistics of implementing a cost-effective maintenance lift to the structure" (Raynie and Visser 2002).

? Freshwater Bayou Bank Stabilization (ME-13), located in Vermilion Parish on the west bank of Freshwater Bayou Canal, is directly opposite from the TV-11 state project and northwest of the proposed TV-11b project (Figure 2). The main cause of wetland loss in the ME-13 project area is boat wake-induced shoreline erosion of the canal spoil banks and organic soils of the interior marsh (USACE and LDNR 1994). A 23,193 linear foot continuous rock dike, built to an elevation of +3.7 to +4.0 feet NAVD-88, was installed parallel to the western shoreline in 1998 to address this loss. Pre-construction data at the ME-13 reference areas on the east bank indicate that the canal eroded at an average rate of 6.54 feet per year between April 1995 and July 1996 (Vincent and Sun 1997). Post-construction data collected from July 1998 through July 2003 revealed that the shoreline behind the constructed rock dike prograded on average 0.84 feet per year (Vincent 2003). During the same period, the unprotected reference areas eroded on average 11.94 feet per year (Vincent 2003).

? The Freshwater Bayou Bank Protection (TV-11) state project, constructed in 1994, is located on the east bank of Freshwater Bayou Canal, immediately north of the proposed TV-11b project and consists of 25,800 linear feet of shoreline protection constructed at +4.0 feet NAVD-88 (Figure 2). Due to manpower deficiencies and budgetary constraints, little monitoring information exists for this project; therefore, no specific conclusions can be drawn regarding the performance of the breakwaters. The lack of post-construction aerial photography precludes any definitive analysis of shoreline movement and changes in land to water ratios within the project area (LDNR 1996).

CWPPRA Projects on other Navigation Channels:

- The Cameron Prairie National Wildlife Refuge Shoreline Protection (ME-09) project was designed to protect 247 acres of marsh by preventing further widening of the GIWW. The shoreline erosion rate was estimated to be 2.5 feet per year prior to project construction in 1994 (United States Fish and Wildlife Service 1991). Since construction of the 13,200 linear foot rock dike (built to an initial elevation of +3.7 feet NAVD-88), shoreline erosion in the project area has been halted, and the shoreline behind the structure has prograded. From 1995 to 2000, the shoreline within the project area prograded an average of 9.8 feet per year (Barrilleaux and Clark 2002). Meanwhile, the reference areas continued to erode at an average rate of 4.1 feet per year (Barrilleaux and Clark 2002). In addition, 3.03 acres of vegetated wetland were created behind the rock dike on the navigation channel, indicating that low sediment availability does not prohibit wetland creation (Courville 1997).

- The Clear Marias Bank Protection (CS-22) project in Cameron Parish is similar to the proposed TV-11b project. It is located along the north bank of the GIWW between the Alkali Ditch and Goose Lake. Pre-construction shoreline erosion rates along the northern shoreline of the GIWW were 3.9 feet per year (USDA 1994). Erosion rates along the southern shoreline were 16.0 feet per year (National Marine Fisheries Service 1996). In March of 1997, a 35,000 foot limestone breakwater, built to an elevation of +3.0 feet NGVD-29, was completed from the northern bank of the GIWW to prevent continued erosion of the management levee and the encroachment of the GIWW into the project area (LDNR 1998b). Post-construction shoreline data collected in 1997 and 2000 indicated that the total project area shoreline had prograded 12.99 feet per year Miller 2001). The reference area for the same time intervals eroded 20.52 feet (Miller 2001).

- Perry Ridge Shore Protection (CS-24) and GIWW-Perry Ridge West Bank Stabilization (CS-30) projects were constructed in 1999 and 2001, respectively, along the northern bank of the GIWW in Cameron Parish. Both projects involved the construction of rock dikes to elevations of +3.7 to +4.0 feet NAVD-88 to prevent further shoreline erosion, but recent construction has precluded a definitive evaluation of project features. However, field observations indicate that the rock dike has halted shoreline erosion within the CS-24 project area (LDNR 2002).

VII. Summary and Conclusions:

The goal of the proposed Freshwater Bayou Bank Stabilization (TV-11b) project is to stop shoreline erosion along the east bank of Freshwater Bayou Canal from Freshwater Bayou Lock north to Belle Isle Bayou. The geotechnical investigation of the TV-11b project area concluded that soil characteristics within Reach 2 met all the soil stability requirements necessary for the construction of a foreshore dike. However, the data indicted that soil characteristics along Reaches 1 and 3 were not stable enough to support the initially proposed dike structure. Therefore, the designs were modified to incorporate an onshore pavement structure for Reach 1 and the use of both embedment berms and

geotextile reinforcement for Reach 3. These project modifications will improve structure stability.

Data collected from constructed shoreline protection projects along Freshwater Bayou Canal and the GIWW indicate that foreshore rock dikes are successful at stopping and/or reducing shoreline erosion rates. The decreasing effectiveness of the ME-04 project features, located on the opposite bank from TV-11b, reinforces the need for the appropriate rock gradation for use in dike construction.

Recommendations:

Based on the investigation of similar restoration projects and a review of engineering principles, the proposed strategies of the Freshwater Bayou Bank Stabilization (TV-11b) project will likely achieve the desired goal of stopping shoreline erosion. At this time, the level of design of the project's physical effects warrant continued progress toward construction pending a favorable 95% Design Review and resolution of the following issue:

- The Operations and Maintenance budget should be significant enough to provide for a maintenance lift to the structure should the dike's integrity be compromised.

References

Barrilleaux, T. C. and N. Clark. 2002. Comprehensive Report No. 2, for the period July 28, 1997 to August 2, 2001: Cameron Prairie Refuge Protection ME-09 (ME-09). Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 15 pp.

Brown & Root, Inc. 1992. Conceptual Engineering Report for Freshwater Bayou Canal Bank Stabilization, Vermilion Parish, Louisiana. Prepared for Department of Natural Resources, Coastal Restoration Division. Belle Chase, Louisiana. 26 pp.

Courville, C. J. 1997. Cameron Prairie Refuge Protection (ME-09): Three-Year Comprehensive Monitoring Report. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 13 pp.

Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority. 1998. Coast 2050: Toward a Sustainable Coastal Louisiana. Louisiana Department of Natural Resources. Baton Rouge, Louisiana. 161 pp.

Louisiana Department of Natural Resources. 1996. Freshwater Bayou Bank Protection (TV-11) Progress Report No. 1. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 5 pp.

Louisiana Department of Natural Resources. 1998a. Freshwater Bayou Wetlands (ME-04) Phase 1: Progress Report No. 4. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 6 pp.

Louisiana Department of Natural Resources. 1998b. Clear Marias (CS-22): Progress Report No. 1. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 15 pp.

Louisiana Department of Natural Resources. 2002. CS-24 Perry Ridge Shore Protection Summary Data and Graphics. May 2001 (Updated 12/30/02). Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 16 pp.

Miller, C. M. 2001. Clear Marias Shoreline Protection (CS-22) Three-Year Comprehensive Monitoring Report for the period March 01, 1997 to March 31, 2001. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 16 pp. plus appendices.

National Marine Fisheries Service. 1996. Black Bayou Hydrologic Restoration(XCS-48, CS-5a/12), Wetland Value Assessment. Baton Rouge, Louisiana. 17 pp.

Penland, S. K., E. Ramsey, R. A. McBride, T. F. Moslow, and K. A. Westphal. 1989. Relative Sea Level Rise and Subsidence in Louisiana and the Gulf of Mexico. Coastal Geology Technical Report No. 3. Louisiana Geological Society. Baton Rouge, Louisiana. 108 pp.

Raynie, R. C., J. M. Visser. 2002. CWPPRA Adaptive Management Review Final Report. Prepared for CWPPRA Planning and Evaluation Subcommittee, Technical Committee, and Task Force. Baton Rouge, Louisiana. 47 pp. plus appendices.

Soil Testing Engineers, Inc. 2001. Report of geotechnical investigation South Lake DeCade Project (TE-39) Freshwater Introduction Project, task order IV, Terrebonne Parish, Louisiana: for United States Department of Agriculture, Natural Resources Conservation Service, Alexandria, La. 6 pp. plus Appendices.

United States Army Corps of Engineers. 1989. Water Resources Development in Louisiana. U. S. Department of the Army, Lower Mississippi River Valley Division, Corps of Engineers. Vicksburg, Mississippi.

United States Army Corps of Engineers. 2002. Supplemental data sheets: CWPPRA Freshwater Bayou Foreshore Protection, XTV-27. Vermilion, Parish.

United States Army Corps of Engineers. 2003a. Soil Report Addendum: Freshwater Bayou Bank Stabilization and Hydrologic Restoration (East) Belle Isle Bayou to Freshwater Bayou Lock. Federal Project #XTV-27 and State Project #TV-11b, Vermilion, Parish.

United States Army Corps of Engineers. 2003b. Final Design Report: Freshwater Bayou Bank Stabilization East from Belle Isle Bayou to the Lock. Federal Project #XTV-27 and State Project #TV-11b, Vermilion, Parish. December 2003.

United States Fish and Wildlife Service. 1991. Cameron Prairie National Wildlife Refuge Erosion Protection and Marsh Management Design Memorandum: U. S. Fish and Wildlife Service, Cameron Prairie National Wildlife Refuge. Gibbstown, Louisiana.

United States Army Corps of Engineers and Louisiana Department of Natural Resources. 1994. Freshwater Bayou Canal Bank Stabilization (XME-29). Candidate Project Information Sheet for Wetland Value Assessment. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 16 pp.

United States Department of Agriculture. 1994. Perry Ridge Shoreline Protection (CS-24). Wetland Value Assessment. United States Department of Agriculture. Soil Conservation Service. Alexandria, Louisiana. 5 pp.

Vincent, K. A., B. Sun. 1997. Freshwater Bayou Wetlands (ME-04): Phase 1, Progress Report No. 3. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 6 pp.

Vincent, K. A., L. T. Aucoin, N. S. Clark. 2000a. Freshwater Bayou Wetlands (ME-04) Phase 1: Progress Report No. 5. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 6 pp.

Vincent, K. A., M. Horton, A. MacInnes. 2000b. Freshwater Bayou Canal Bank Stabilization (ME-13): Progress Report No. 1. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 15 pp.

Vincent, K. A. 2003. ME-13 Freshwater Bayou Bank Stabilization Summary Data and Graphics. Louisiana Department of Natural Resources, Coastal Restoration Division. Baton Rouge, Louisiana. 38 pp.

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

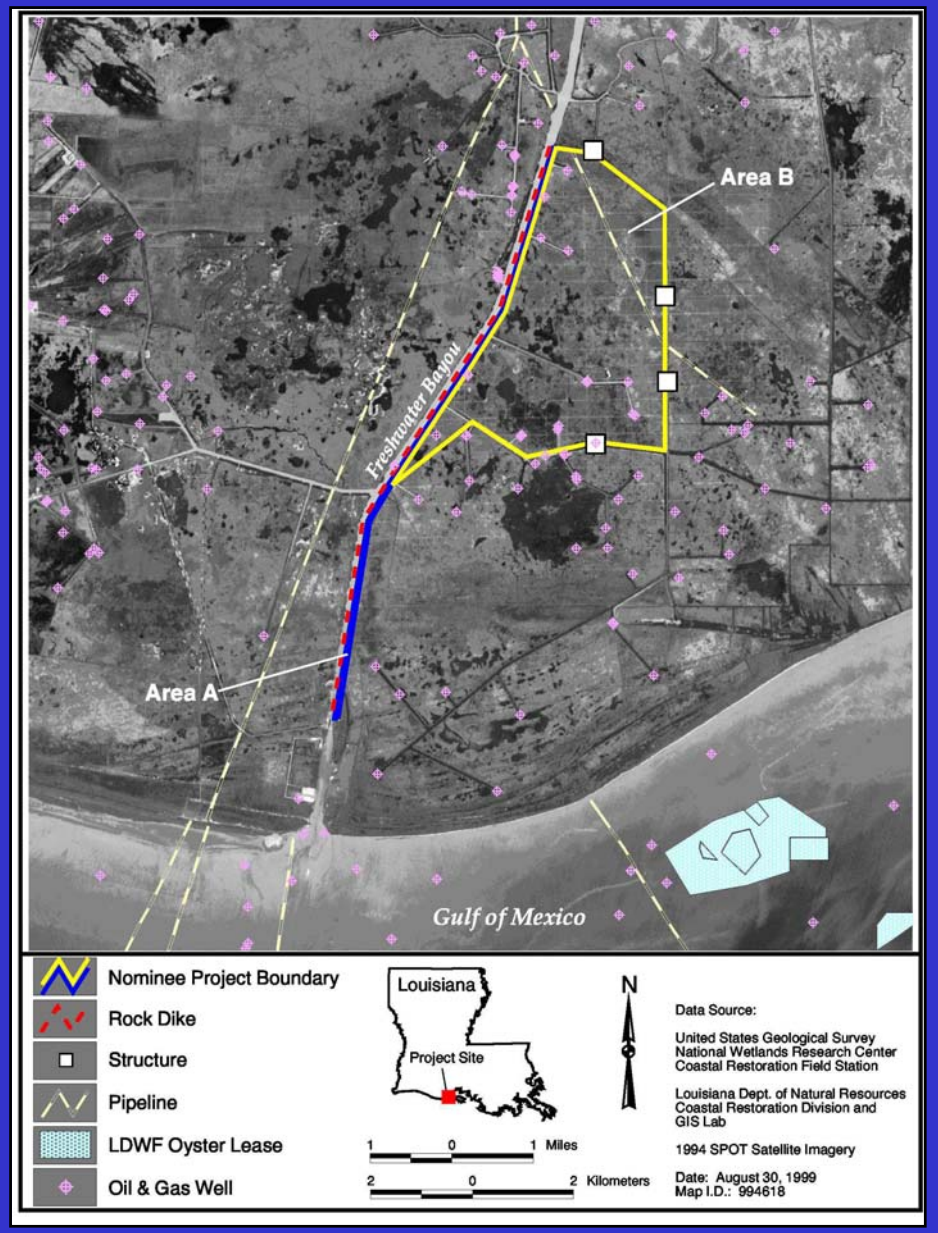
Overview of Presentation

- Project Background
- Current Design Information
- Project Costs

Project Background

- Authorized in January 2000 by Breaux Act (CWPPRA) Task Force for the 9th Priority Project List
- Phase I funding of $1.003 million provided for engineering and design, environmental compliance, real estate planning, and project management (spent $1.005 million).
- Problem: Wake-induced erosion of 12.5 ft/yr
- Initial study proposed ~40,000 linear feet of rock dike to stop shoreline erosion along Freshwater Bayou Canal from the Leland-Bowman Lock to Belle Isle Bayou as well as some hydrologic restoration features. These were later dropped from the project.

XTV-27/TV-11b Freshwater Bayou Shoreline Stabilization Project Area



Erosion in Project Area

Current Design

- About 40,000 ft of linear rock dike
- Built to +3.5 NAVD88, at -1.0 ft NAVD88 contour (~2.0-2.5 ft water depth)
- 5 ft wide crown, with 1v:3h slopes on the channel side, and 1v:2h or 1v:3h on land side, depending on the reach.
- 36-inch stone gradation (2,200 lbs max)

Project Costs

- Cost estimate
  - First cost ~$13.8 million
  - Fully funded ~$15.7 million
- Benefits (241 acres; $69,308/acre)
- Prioritization Score: 42.50

Phase II Authorization Request
Freshwater Introduction South of LA Highway 82
ME-16

Description of Phase I Project

The Freshwater Introduction South of LA Highway 82 Project was approved for Phase I funding by the CWPPRA Task Force on the 9th Priority Project List. At the time of Phase I authorization, project features included:

Project Features

A. Fresh Water Introduction Canal Enlargement-

1. Widen and deepen the existing trenasse and borrow ditch north of Highway 82 (from 8 feet-wide X 1 ft deep to 20 feet-wide X 4 feet-deep X 12,500 feet-long; 16,600 cu. yds.). 2. Widen and deepen the Grand Volle Canal north of Highway 82 (from existing 10 feet-wide X 2 feet-deep to 20 feet-wide X 4 feet-deep X 13,000 feet-long; 47,250 cu. yds), and, 3. Widen and deepen the Unit 14 Canal north of Highway 82 (from existing 10 feet-wide X 2 feet-deep to 20 feet-wide X 4 feet-deep X 13,000 feet-long; 47,250 cu. yds).

B. Fresh Water Introduction Structures -

1. Install six, 48 inch-diameter culverts with flapgates and stop logs in the boundary line canal. 2. Install 2 or 3 - 10 feet-high X 10 feet-wide flapgates at the Big and Little Bayou Constance radial arm gate structures. One existing radial arm gate may remain without a flapgate. 3. Install four, 48 inch-diameter culverts with flapgates and stop logs at Dyson Bayou. 4. Install four, 48 inch-diameter culverts with flapgates and stop logs at Cop Cop Bayou, and, 5. Install four sets of three, 48 inch-diameter culverts with flapgates and stop logs at four sites along the boundary line canal south of Unit 14.

C. Terraces -

Construct and vegetate 150 - 200 feet X 200 feet terrace cells (93,333 cu. yd. total) with 10 foot-wide crowns, 46 foot-wide bases on 6:1 side slopes in the open water of Area B west of Unit 14. Terraces will be vegetated with marsh hay cordgrass sprigs (*Spartina patens*) on the terrace crowns (12,000 plants; 2 rows; 5-foot centers) and bullwhip and/or giant cutgrass (24,000 gallon containers; 5-foot centers) on each side slope (Attachment 1).

Project goals.

Specific project goals were to: 1) restore 54 acres of emergent intermediate marsh in Area B

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 and bathymetric surveys for the channel enlargements, terrace placement and structure placement sites.
5) Geotechnical investigation of terrace borrow and fill sites
6) 30% Design Review
7) 95% Design Review
8) Draft Ecological Review
9) Draft Environmental Assessment (in review by Regional Office)
10) Final construction cost estimate
11) Applications for permits
12) Overgrazing determination from NRCS
13) Cultural resources clearance
14) HTRW assessment

Engineering and Design Tasks

In order to facilitate the design of the terrace borrow and fill areas, a hydrographic and topographic survey was performed in April and May, 2003 by Lonnie Harper and Associates. Soil borings and parameters from the field and laboratory were performed in May 2004 by Professional Service Industries, Inc. (Geotechnical Engineering Report Proposed Earthen Terraces for the Freshwater Introduction South of Highway 82 Project, ME-16, Vermilion Parish, Louisiana). The results of soil geotechnical testing and analysis were used to determine the structural integrity of the proposed earthen terraces. Analyses were performed by evaluating soil bearing capacity, global slope stability and consolidation settlement for the proposed terraces. A total of 4 soil borings to depths of 25 feet were drilled. That soil testing recommended staged construction and placement of a geotextile fabric at the mud line prior to construction to improve stability and bearing capacity. That soil analysis also predicted a soil settlement of 10, 12 and 14 inches for terrace crown elevations of + 3, + 4 and + 5 feet respectively, with 50% of the settlement occurring shortly after construction.

A hydrologic report entitled, "Estimate of the Water Level Gradient across LA Highway 82 in the Grand and White Lake Basin," stated that a water level gradient of 0.5 to 0.75 feet occurs about 75% of the time north to south of LA Highway 82 (Swenson 1999).

Fenstermaker and Associates conducted a 1-Dimensional Hydrodynamic modeling study of the conceptual and Preferred Alternative project components. That report predicted Preferred Alternative monthly salinity reductions for project target areas, for the April 2002 to October 10, 2002 modeling period (Fenstermaker and Associates 2003).

Table 2: Salinity Difference Ranges for the Freshwater Introduction South of LA Highway 82 Project Target Areas Predicted by the Mike 11 1-Dimensional

Hydrodynamic Model.

Area/Month	April	May	June	July	August	Septem ber	October (10 days)
Area A (Big Constance Bayou to Rollover Bayou)	- 1 to - 4	- 1 to - 4	0 to - 3	- 1 to -4 or -5	- 1 to - 5	-1 to - 5	- 1 to - 5
Area A (west of Big Constance Bayou)	0 to - 1	0 to - 1	0 to -1	+ 1 to - 1	0 to - 1	0 to -1	0 to - 1
Area B (west of Unit 14)	- 1 to - 2	+ 2 to - 1	+ 4 to 0	0 to - 2	-1 to -3	1 to -1	- 1 to - 3
Area C (east of Unit 14)	- 1	- 1 to - 3	- 1 to - 3	- 1 to - 3	- 1 to - 4	- 1 to - 3	+ 1 to - 2

[Salinity changes are represented in parts per thousand (ppt); continuous recorder salinity data from April to October 2002 was used; values presented were interpreted from salinity contour maps (Attachment 2).]

The model analysis of predicted project salinity differences indicated the following: 1) the Area A salinity reduction benefited area extended east of the original project boundary from Flat Lake to Rollover Bayou; 2) salinity reductions for Target Area A ranged from - 1 to - 5 ppt; 3) the model predicted only a small (approximately - 1 ppt) Preferred Alternative salinity reduction in the western portion of Area A south of Unit 6; and, 4) monthly average salinity reductions ranged from + 4 to - 3 ppt for Area B and from + 1 to - 4 ppt for Area C. Thus, the hydrodynamic model results predicted that the Preferred Alternative could flow sufficient fresh water southward to significantly reduce target-area marsh salinities from 1 to 5 ppt (Fenstermaker and Associates 2003).

Design meetings were held at the 30% (May 14, 2003) and 95% (August 11, 2004) levels. A revised fully-funded cost estimate has been prepared by the CWPPRA Economics Work Group (Attachment 3).

Landrights, Cultural Resources, Environmental Compliance and Other Tasks

Final landrights agreements have been acquired from area landowners by LDNR.

The State Historic Preservation Officer of the Louisiana Department of Culture, Recreation and Tourism, on August 17, 2004, indicated that no known archaeological sites or historic properties would be affected by this project.

The Corps of Engineers Section 404 permit application was placed on Public Notice on June 18, 2004. A favorable Coastal Zone Consistency Determination was received by the

Louisiana Department of Natural Resources-Coastal Management Division on June 3, 2004. A Water Quality Certification was received on August 11, 2004, from the Louisiana Department of Environmental Quality.

An overgrazing determination was provided by the Natural Resources Conservation Service on December 1, 2003, indicating 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 draft Ecological Review is available and a draft Environmental Assessment will be released for public comment at least 30 days before the October 13, 2004 Task Force meeting.

Description of the Phase II Candidate Project

Project Features

The revised Phase II LA Highway 82 candidate project consists of enlargement of existing channels north and south of LA Highway 82, installing water control structures to facilitate the movement of freshwater and nutrients from the Grand-White Lake area in the Mermentau Lakes subbasin southward, and the construction of vegetated earthen terraces to protect and restore marshes in the Chenier subbasin. The project would include the installation and maintenance of the following features as shown on Figure 1.

Project components include:

I. Components that move freshwater from White Lake across LA Highway 82: 1) enlarge the trenasse (boat trail) connecting the Superior Canal to the east-west oil and gas canal to the LA Highway 82 northern borrow canal (20-foot bottom width, 4-foot depth, 3:1 side slope, and top width of 44 feet); and, 2) connect the Grand Volle Ditch to Grand Volle Lake of White Lake and enlarge it from Grand Volle Lake to and south of LA Highway 82 (4-foot bottom width, 4-foot depth, 3:1 side slope, and top width of 28 feet (Figure 1).

II. Components that move freshwater from LA Highway 82 to target marshes south of that highway: 1) Remove the plug at the Rockefeller Refuge Boundary Line Canal east of Superior Canal and adjacent to Unit 13; 2) Modify the Little Constance Bayou structure by installing three 10-foot by 10-foot flap gates on the south side, with stop logs on the northern (Unit 6) side to allow fresh water to flow when conditions permit; 3) Install the New Dyson Bayou water control structure consisting of four, 48-inch diameter culverts with stop logs on the north side and flap gates on the south side located approximately 1,000 feet north of Dyson Bayou; 4) Install the New Cop Cop Bayou water control structure consisting of four, 48-inch diameter culverts with stop logs on north side and flap gates on the south side adjacent to the existing Cop-Cop Bayou control structure; and, 5) Install water control structures consisting of three, 48-inch

diameter culverts with stop logs on north side and flap gates on the south side, at each of Sites 10 and 12, in the Boundary Line Levee between Rockefeller Refuge's Units 6 and 14 (Figure 1).

III. Marsh Restoration through Earthen Terraces: 1) Construct and re-vegetate approximately 26,000 linear feet by 24-foot-wide duck-wing shaped earthen terraces in open-water between Rockefeller Refuge's Units 6 and 14 to restore about 14 acres of marsh in shallow open-water (Figure 1).

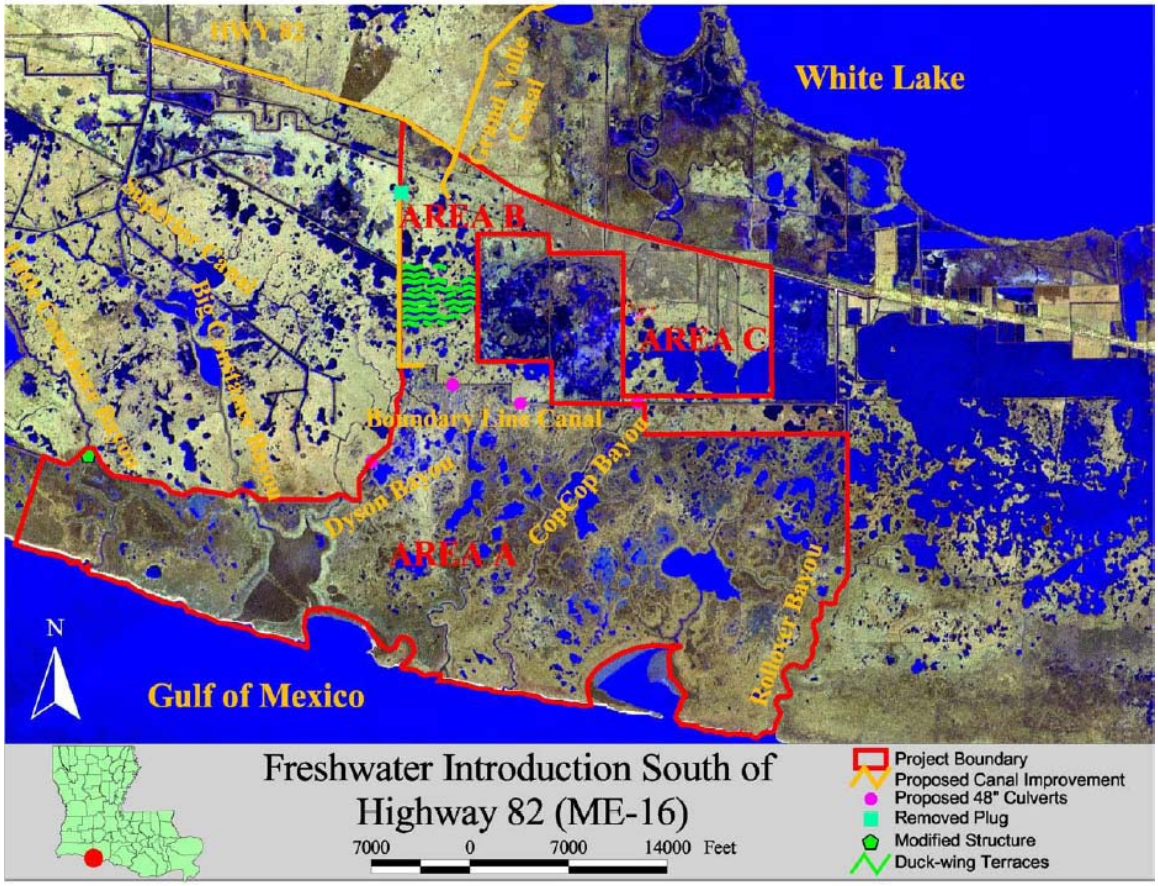


Figure 1 – Freshwater Introduction South of LA Highway 82 Project Features

Updated Assessment of Benefits

A revised Wetland Value Assessment was prepared and reviewed by the Environmental Work Group. The total project area was increased from 19,998 acres to 24,874 acres (4,876 acre increase) due to the results of the 1-D hydrodynamic model (Fenstermaker and Associates 2003). Total Net Acres protected/created/restored by the project increased from 296 acres (Phase 1 project) to 323 acres (Phase 2 project). Net Average Annual Habitat Units increased from 553 to 690 AAHUs.

Modifications to the Phase 1 Project

The final design followed the conceptual Phase 1 project design with the following exceptions. The following structural project feature changes (structures and channel enlargements) were made as a result of the 1-D hydrodynamic modeling results (Fenstermaker and Associates 2003): 1) removal of the Unit 14 (Doland-Miller) Canal enlargement because the modeling indicated that sufficient freshwater would flow southward with other project features; 2) enlargement of the Grand Volle Ditch south of LA Highway 82 to flow more freshwater southward; 3) removal of 2 of the originally planned 4 sets of three, 48-inch diameter culvert water control structures planned for the Boundary Line Canal (The model indicated that sufficient water would flow through 2 vs the 4 structures at this location.); 4) removal of the Big Constance water control structure retrofitting (The model indicated that not much water is currently flowing through that structure); 5) removal of the Boundary Line Canal plug vs placement of 6, 48-inch diameter flapgated culverts (The plug removal would increase freshwater movement southward down that canal over the initially planned culverts.); and, 6) the terrace design was changed from the original checkerboard design to a 26,000-linear-foot duck-wing design.

Current Cost Estimate

The revised fully-funded cost is $6,051,325. The Phase 1 costs are unchanged from the original Phase 1 project budget. Phase 2 costs have been revised and are displayed in Table 3. The revised Phase 2 costs represents a $161,132 (3.1%) increase from the original Phase 1 estimate and represents a 2.8% increase over the original Phase 1 fully funded cost estimate.

Checklist of Phase Two Requirements
Freshwater Introduction South of LA Highway 82
ME-16

A. List of Project Goals and Strategies.

The goals of the project are to: 1) restore 14 acres of emergent intermediate marsh in Area B via vegetated earthen terraces, 2) protect 309 acres of emergent intermediate and brackish and saline marsh, and 3) enhance 24,874 acres of emergent marshes at the end of the 20-year project life via the introduction of freshwater southward across LA Highway 82 to project target marshes.

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 September 12, 2000. A draft amendment, authorizing construction, operation, maintenance, and monitoring, to the Cost Share Agreement will be prepared after Phase 2 approval.

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

FWS received formal notification, on May 10, 2004, from DNR that landrights have been finalized.

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 May 14, 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 August 11, 2004, and resulted in favorable reviews of the project design with minor modifications. DNR and FWS agreed on the project final design

and 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 draft EA will be submitted for public comment at least 30 days prior to the October 13, 2004, Task Force meeting.

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 2004 draft Ecological Review submitted at the 95% Design Review Meeting:

Based on the investigation of similar restoration projects, a review of engineering principles of the hydrodynamic model output, and other data analyses, the LDNR project team feels that the proposed strategies of the Freshwater Introduction South of Highway 82 project will likely achieve the desired ecological goals for the majority of the 20-year project life. The level of design of the project's physical effects warrant continued progress toward 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.

The FWS applied for a Section 404 permit from the Corps of Engineers, a state Coastal Zone Consistency determination from DNR, and a Water Quality Certification from LDEQ. The Section 404 permit application was placed on Public Notice on June 18, 2004. A Section 404 permit is expected to be granted by the end of November 2004. The revised state Coastal Zone Consistency determination was issued by DNR on June 3, 2004. A DEQ Water Quality Certification was received on August 11, 2004.

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. 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 May 6, 2004.

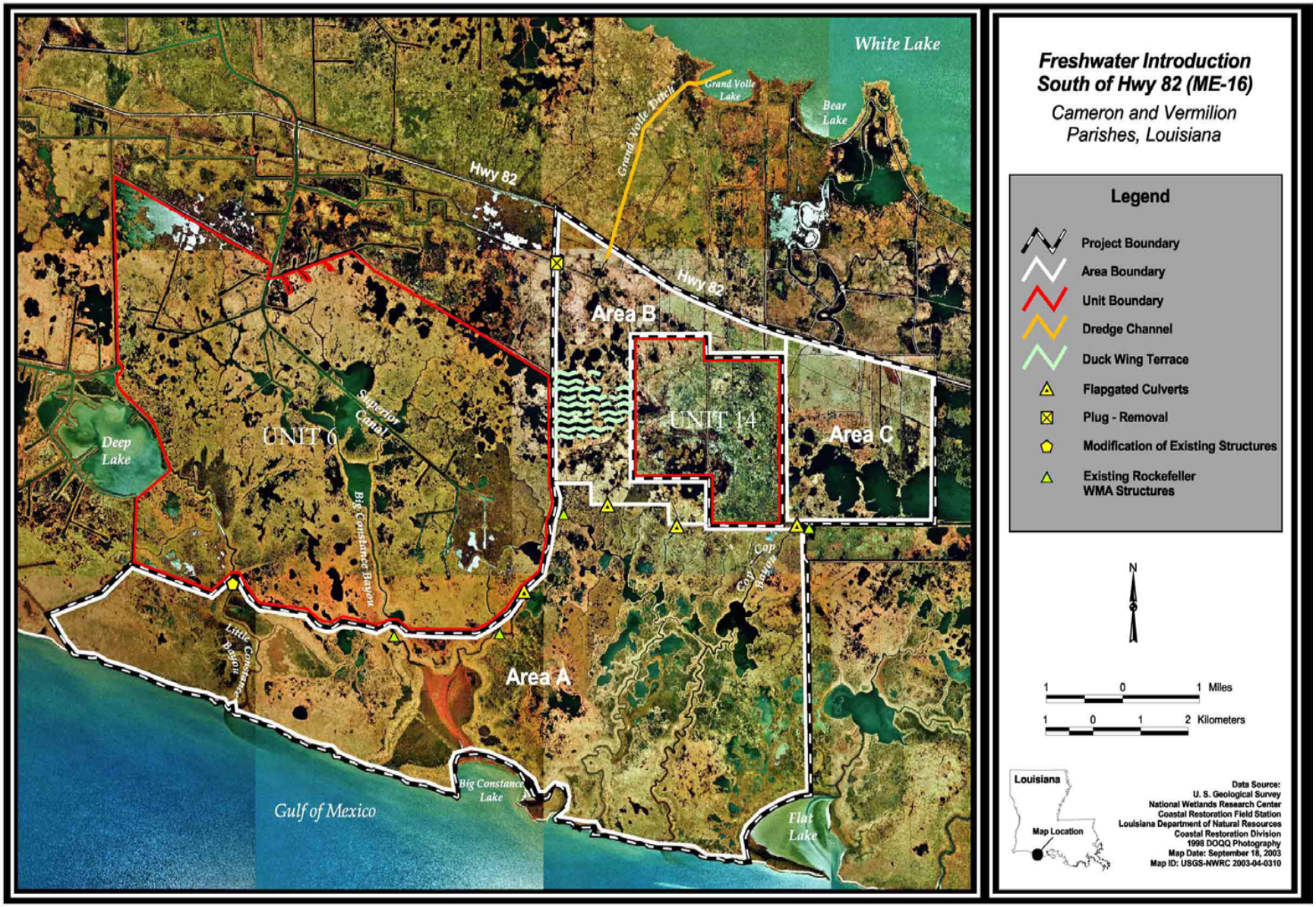
N. A revised Wetland Value Assessment must be prepared if, during the review of the preliminary NEPA documentation, three of the Task Force agencies determine that a significant change in project scope occurred.

A revised Wetland Value Assessment was prepared and reviewed by the Environmental Work Group. The total project area was increased from 19,998 acres to 24,874 acres (increase of 4,876 acres). Total Net Acres protected/created/restored by the project increased from 296 acres (Phase 1 project) to 323 acres (Phase 2 project). Net Average Annual Habitat Units increased from 553 to 690 AAHUs.

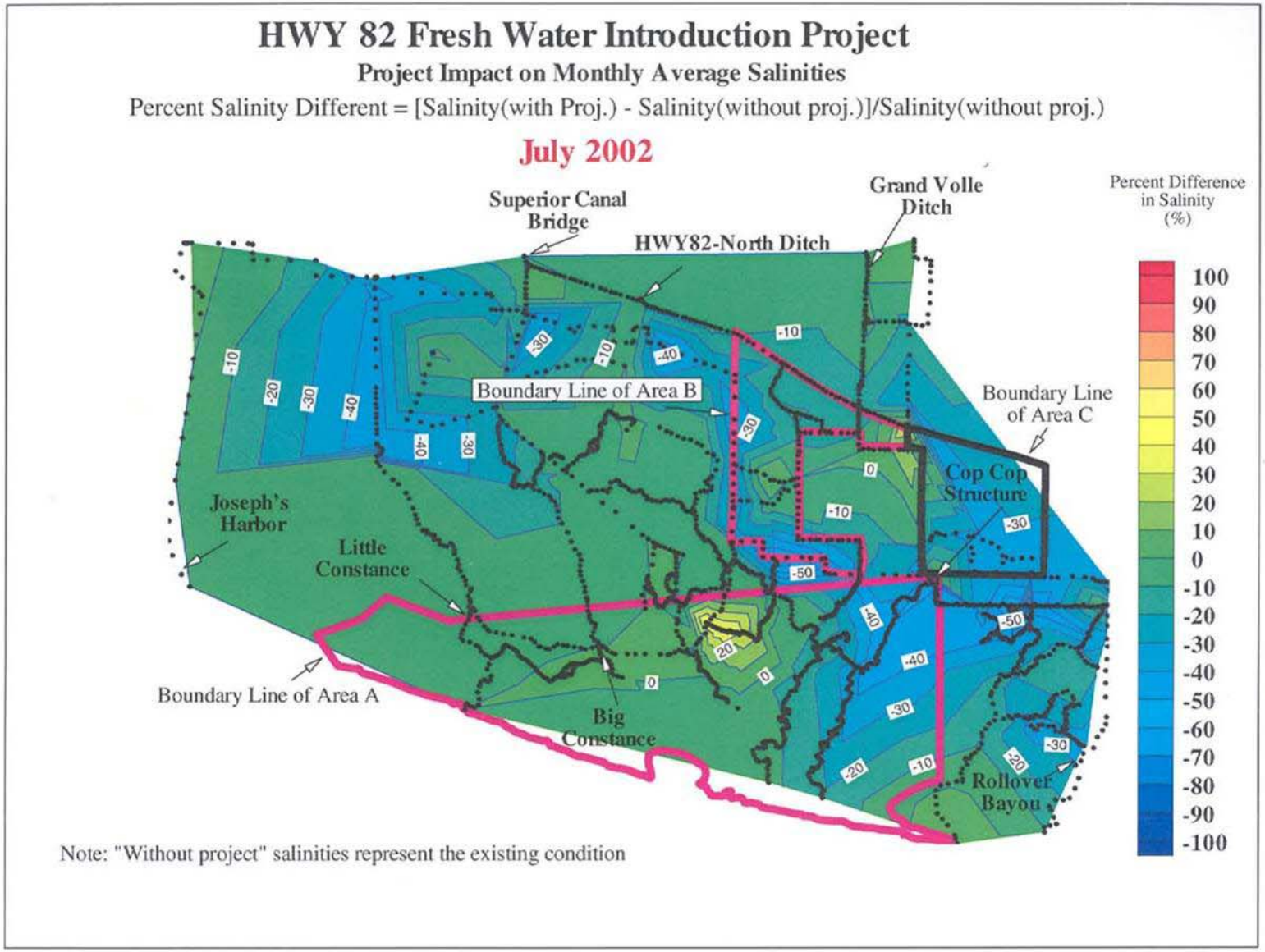
O. A breakdown of the Prioritization Criteria ranking score, finalized and agreed-upon by all agencies during the 95% design review.

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

Criteria	Score	Weight	Final Score
Cost Effectiveness	10	2	20
Area of Need	4.08	1.5	6.12
Implementability	10	1.5	15
Certainty of Benefits	5.13	1	5.13
Sustainability of Benefits	10	1	10
HGM – Riverine Input	6	1	6
HGM – Sediment Input	0	1	0
HGM – Landscape Features	10	1	10
Total Score			**62.25**



Attachment 1. General Features of the Original Phase 1 Freshwater Introduction South of LA Highway 82 Project.



Attachment 2: 1-Dimentional Hydrodynamic Modeling Results
Showing Hwy 82 Project (ME-16) Average Salinity Reductions for July 2002

Freshwater Introduction South of Highway 82 Project ME-16

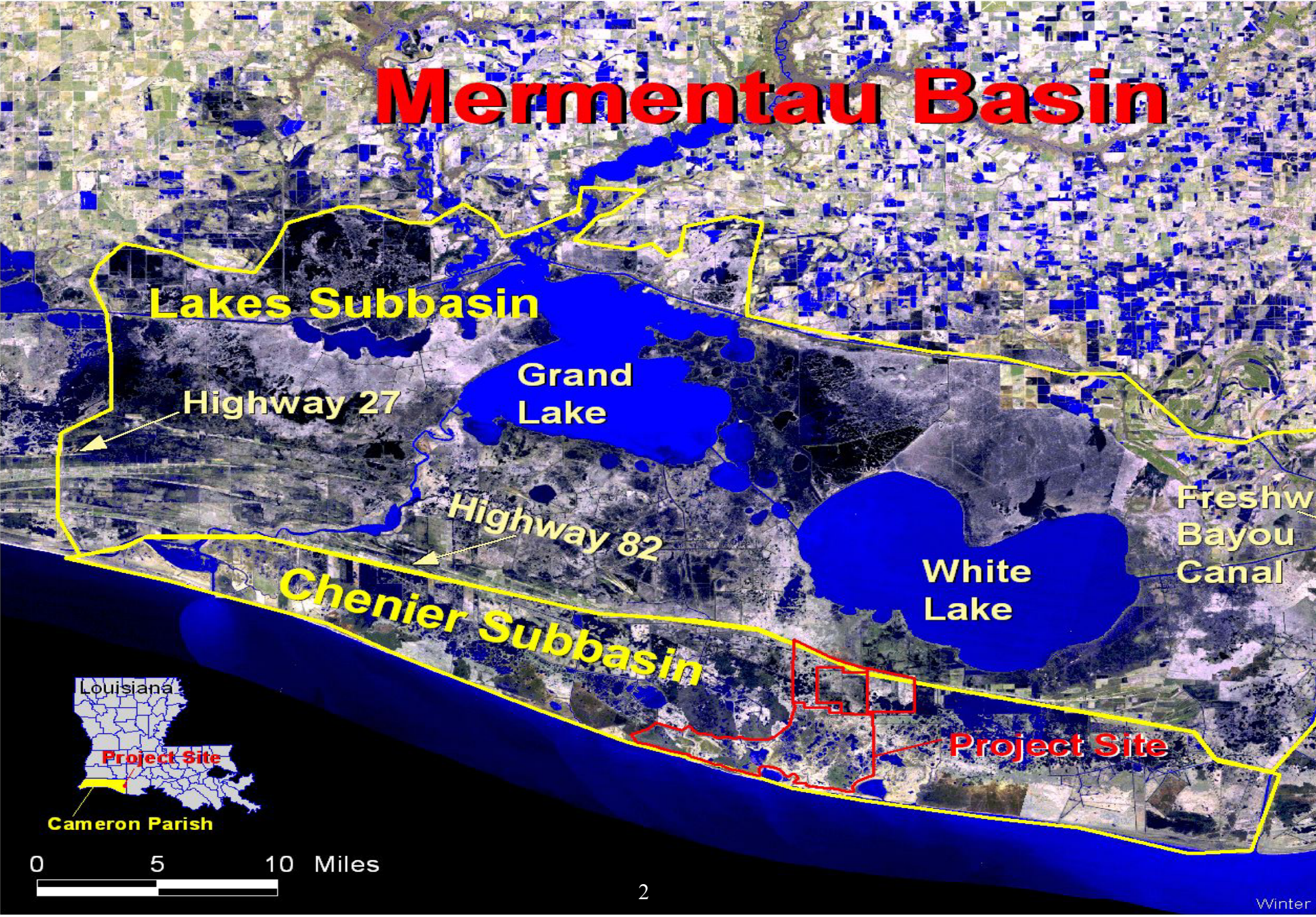


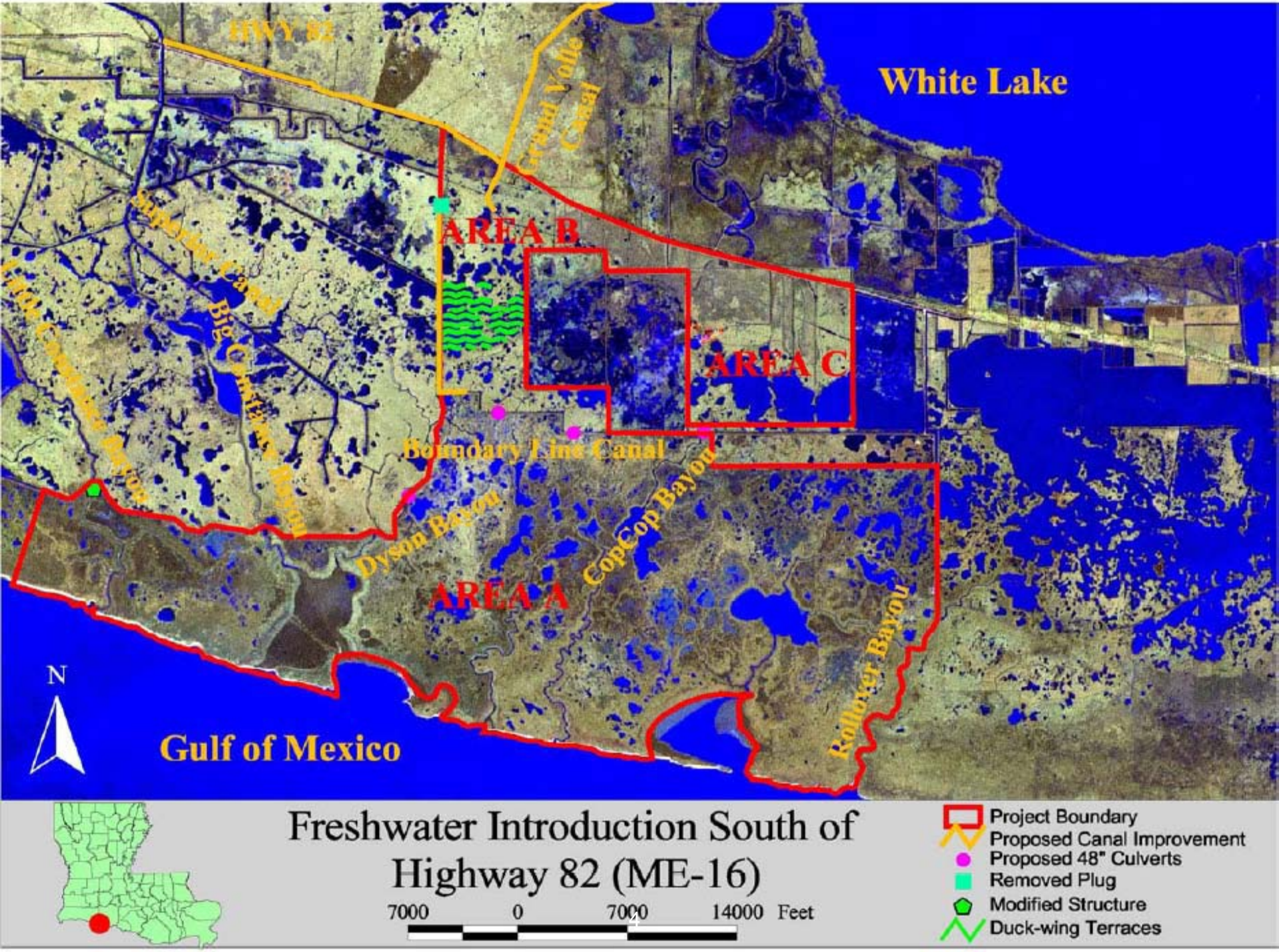
Figure 1. Mermentau Basin including Lakes and Chenier Subbasins.

Hwy 82 Project Area Problems

- Increased land loss (average loss of 0.38%/yr from 1932 to 1990; recent range 0.16%/yr to 0.56%/yr) due to increased salinities caused by reduced freshwater flow (22% loss from 1932 to 1990)
- North–South freshwater flow reduced by Hwy 82 embankment, levees, and canals
- Salinities range from 1 to 28 ppt in brackish marsh
- Problem/Solution - Increased water levels in Mermentau Lakes Subbasin due to impoundment (average of 0.5 ft above marsh level) provides freshwater reservoir

Hwy 82 (ME-16) Project Features

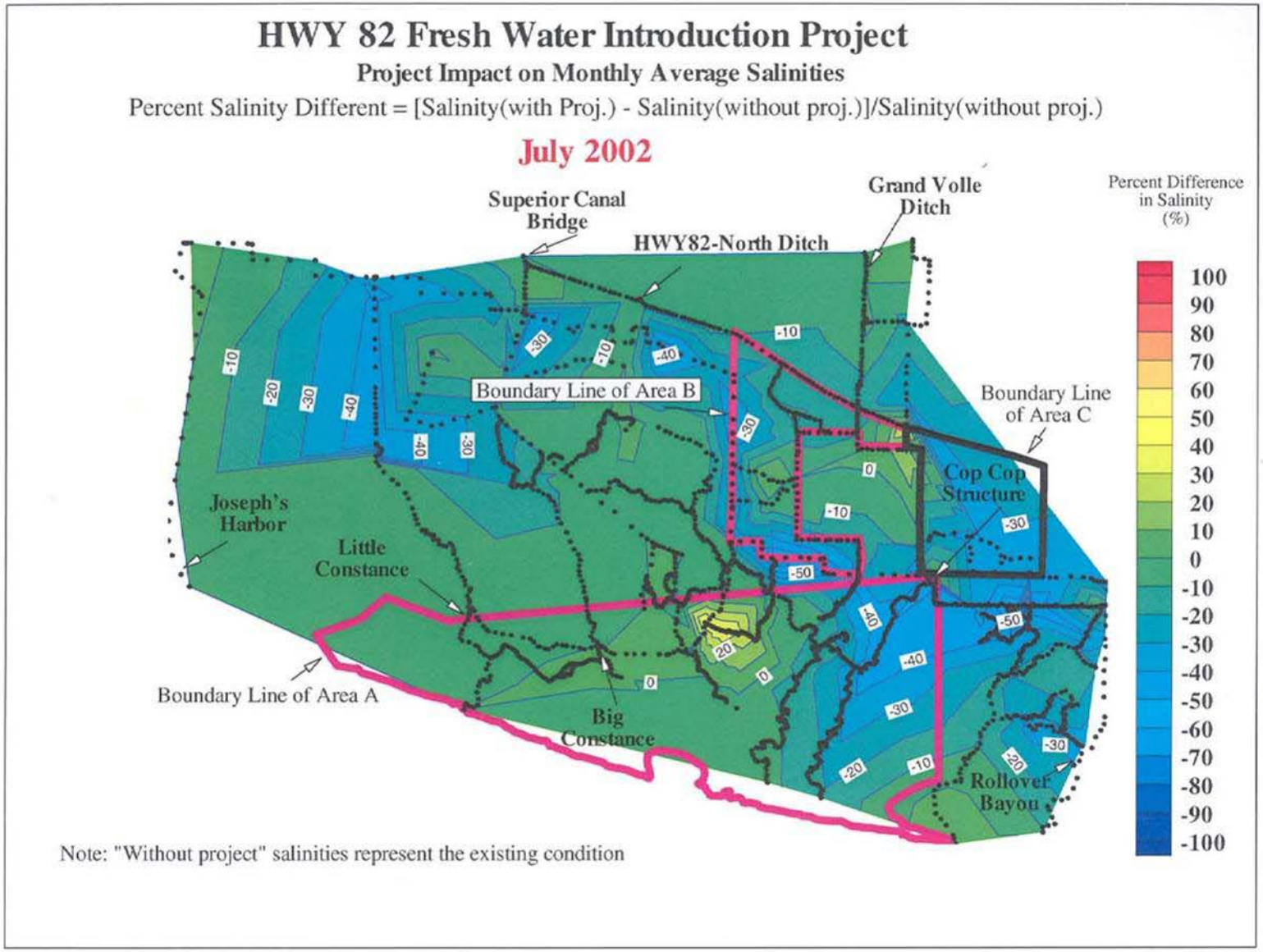
- Enlargement of existing channels (5.6 miles) north & south of LA Highway 82 (Grand Volle Ditch, Hwy 82 Borrow, Boundary Line Canal).
- Install 4 freshwater inflow structures (3, or 4, 48" diameter culverts each), remove one plug, and modify one large radial arm gate structure, to facilitate the movement of freshwater southward from the Mermentau Lakes subbasin.
- Construct 26,000 linear-feet (4.9 miles) of duck-wing vegetated earthen terraces to protect and restore marshes in the Chenier subbasin



Freshwater Introduction South of Highway 82 (ME-16)

Brackish and Saline Marsh (Area A) Looking south to the Gulf

Hwy 82 Project Intermediate Marshes (Area B)
Location of Duck-Wing Terraces
(northward toward White Lake)



1-Dimentional Hydrodynamic Modeling Results Showing Hwy 82 Project (ME-16) Average Salinity Reductions for July 2002

Hwy 82 Project Benefits and Statement of Project Need

- Project will return part of the Chenier Subbasin to its natural function as an estuary by moving freshwater southward to marshes artificially starved of freshwater.
- Project supports a major Region 4 Coast 2050 Regional Strategy to: "Move water from north to south across Highway 82 …"
- Hydrodynamic Model predicts significant project related salinity reductions of from 0% to 60% (from 0 ppt to 5 ppt)
- 296 net-acres protected and restored (282 ac protected, 14 ac restored); 553 Average Annual Habitat Units (AAHUs); Prioritization Score = 57.4.
- Significantly benefits Rockefeller State Wildlife Refuge and Game Preserve and adjacent lands; a premiere refuge for Louisiana wildlife and fisheries.
- Project is cost effective - $21,700/net-acre benefited.
- Located within the Mermentau Basin where cost-effective coastal restoration over larger areas is still possible.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