

CWPPRA

Coastal Wetlands Planning, Protection and Restoration Act



Technical Committee Meeting

September 11, 2013

Baton Rouge, Louisiana



ATTENDANCE RECORD



DATE(S) September 11, 2013 9:30 A.M.	SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION State Library of Louisiana Seminar Center (1st floor) 701 North 4th Street Baton Rouge, LA
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PURPOSE	MEETING OF THE CWPPRA TECHNICAL COMMITTEE
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PARTICIPANT REGISTER*		
NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER
Edmond Mouton	LDWF	(337) 373-0032
Jennifer Manuel	LDWF	"
Michael McKimble	PPG	504 912-5973
Cole Kuckstutz	CWPPRA MEDIA SPECIALIST	(337) 266-8542
Darryl Clark	US FWS	337-291-3111
Kevin Roy	US FWS	337-291-3120
Bill Boshaert	CPRA	504-280-4063
Erin Putsch	CPRA	504-280-4061
John P. Curale	CPRA	985-447-0993
BRYAN GOSMAN	CPRA	504-280-1000
Chris Allen	"	225-342-4736
Stuart Brown	CPRA	225-342-4596
KARIM BELHANTAJI	CPRA	225 342-4123
Brian Haase	CPRA	225-342-1475
Jammie Goulet	CPRA	225-342-4119
Laurel Coleman	CPRT	337 721-3645
Dona Weisbach	CPRA	337 482 0688
Maggie Hawkins	CPRA	337 482 0697
Leigh Anne Sharp	CPRA	337 482 0659
John Troutman	CPRA	504 280 4068
Brian Perez	CH2M HILL	225-663-5202
Mike Roadreux	CH2M HILL	225-663-5184

* If you wish to be furnished a copy of the attendance record, please indicate so next to your name.



ATTENDANCE RECORD



DATE(S) September 11, 2013 9:30 A.M.	SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION State Library of Louisiana Seminar Center (1 st floor) 701 North 4 th Street Baton Rouge, LA
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PURPOSE: MEETING OF THE CWPPRA TECHNICAL COMMITTEE

PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER
Brooks Paul	NRCS	888-473-7756
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ANDREW BEALL	CPRA	(225)342-4550
Michelle Fizelee	USGS	(225) 578-7480
Charles Jasser	LSU	225 578-6375
Kate Spear	USGS	337-266-8645
Laura Carnes	GEC	225-612-4216
Gray Dusztowski	CH Fenstermaker	225-344-6701
Nic Matherne	Terrebonne Parish Govt	985-873-6899
Nedra Davis	ATKINS	225 333 8234
Scott Wilson	USGS	337 266 8644
Bryan Kemp	Gulf CPRA	225 665 2925
Juli Henry	LSU	" "
Susan Testroet-Bergeon	CWPPRA Outreach	337-266-8623

CWPPRA

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT TECHNICAL COMMITTEE MEETING

AGENDA

September 11, 2013, 9:30 a.m.

Location:

State Library of Louisiana
Seminar Center (1st Floor)
701 North 4th Street
Baton Rouge, Louisiana

Documentation of Technical Committee meetings (including minutes, attendance records, PowerPoint Presentations, and meeting binders) may be found at:

<http://www.mvn.usace.army.mil/Missions/Environmental/CWPPRA.aspx>

Tab Number

Agenda Item

1. **Meeting Initiation 9:30 a.m. to 9:40 a.m.**
 - a. Introduction of Technical Committee or Alternates
 - b. Opening remarks of Technical Committee Members
 - c. Request for Agenda Changes/Additional Agenda Items/Adoption of Agenda
2. **Report: Status of Breaux Act Program Funds and Projects (Susan Mabry, USACE) 9:40 a.m. to 9:55 a.m.** Ms. Susan Mabry will provide an overview of the status of CWPPRA accounts and available funding in the Planning and Construction Programs.
3. **Report: Request approved by Technical Committee Electronic Vote to Approve a New Method for CRMS Land/Water Analyses (Brad Inman, USACE) 9:55 a.m. to 10:00 a.m.** The CRMS program is continually evaluating the methods, cost effectiveness, and scientific defensibility of products and monitoring activities conducted within the program. The Monitoring Work Group and P&E Subcommittee recommended a new method: automated classification with minimal data improvements via manual delineation. This new method would represent a savings of over \$300,000. The Technical Committee approved the request via electronic vote on July 30, 2013.
4. **Report/Decision: Status of Unconstructed Projects (Brad Inman, USACE) 10:00 a.m. to 10:20 a.m.** The P&E Subcommittee will report on the status of unconstructed CWPPRA projects as well as projects recommended for deauthorization, inactivation, or transfer.
 - a. Unconstructed projects recommended by the project team to deauthorize:
 - Bayou Sale Shoreline Protection (TV-20), NRCS
 - Bertrandville Siphon (BS-18), EPA
 - b. Unconstructed project requested by the P&E Subcommittee to transfer:

- River Reintroduction into Maurepas Swamp (PO-20), EPA – recommended transfer to CPRA
- c. Unconstructed projects requested by the P&E Subcommittee to inactivate:
- Ship Shoal: Whiskey West Flank Restoration (TE-47), EPA
 - Venice Ponds Marsh Creation & Crevasses (MR-15), EPA
- 5. Report: Coastwide Reference Monitoring System (CRMS) Report (Dona Weifenbach, USGS) 10:20 a.m. to 10:35 a.m.** Ms. Dona Weifenbach will present a report on CRMS.
- 6. Decision: Annual Request for Incremental Funding for FY16 Administrative Costs for Cash Flow Projects (Susan Mabry, USACE) 10:35 a.m. to 10:40 a.m.** The U.S. Army Corps of Engineers will request funding approval in the amount of \$26,834 for administrative costs for cash flow projects beyond Increment 1. The Technical Committee will consider and vote to make a recommendation to the Task Force on the request for funds.
- 7. Decision: Request for Funding for the CWPPRA Program’s Technical Services (Michelle Fischer, USGS) 10:40 a.m. to 10:45 a.m.** The U.S. Geological Survey (USGS) and CPRA are requesting funding for technical services for the CWPPRA program in the amount of \$171,410. The Technical Committee will consider and vote to make a recommendation to the Task Force to approve the request for funding for technical services in the amount of \$171,410.
- 8. Decision: Request for Monitoring Incremental Funding and Budget Increases (Chris Allen, CPRA) 10:45 a.m. to 11:05 a.m.** The Technical Committee will consider and vote to make a recommendation to the Task Force to approve requests for total FY16 incremental funding in the amount of \$10,008,316.
- a. PPL 9+ Projects requesting approval for FY16 incremental funding in the total amount of \$639,283 for the following projects:
- Grand Lake-White Lake Landbridge Protection (ME-19), PPL 10, USFWS
Incremental funding amount: \$29,000
 - Coastwide Planting Project (LA-39), PPL 20, NRCS
Incremental funding amount: \$76,686
 - Coastwide Nutria Control Program (LA-03b), PPL 11, NRCS
Incremental Funding amount: \$96,109
 - Barataria Basin Landbridge Shoreline Protection (BA-27c), PPL 9, NRCS
Incremental funding amount: \$8,648
 - Pass Chalard to Grand Bayou Pass (Bay Joe Wise) Barrier Shoreline Restoration (BA-35), PPL 11, NMFS
Incremental funding amount: \$102,738
 - Dedicated Dredging on the Barataria Basin Landbridge (BA-36), PPL 11, USFWS
Incremental funding amount: \$88,179
 - Pelican Island and Pass La Mer to Chalard Pass Restoration (BA-38), PPL 11, NMFS
Incremental funding amount: \$147,657
 - Lake Hermitage Marsh Creation (BA-42), PPL 15, USFWS
Incremental funding amount: \$31,027
 - Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS

- Incremental funding amount: \$16,736
- Timbalier Island Dune & Marsh Creation (TE-40), PPL 9, EPA
Incremental funding amount: \$13,297
- Four Mile Canal Terracing and Sediment Trapping (TV-18), PPL 9, NMFS
Incremental funding amount: \$29,206
- b. PPL 1-8 Project requesting approval for FY16 incremental funding in the total amount of \$135,501:
 - East Mud Lake Marsh Management (CS-20), PPL 2, NRCS
Incremental funding amount: \$130,071
 - Naomi Outfall Project (BA-03c), PPL 5, NRCS
Incremental funding amount: \$5,430
- c. PPL 1-8 Projects requesting approval for a budget increase and incremental funding:
 - Vermilion River Cutoff Bank Protection (TV-03), PPL 1, USACE
Funding increase amount: \$24,492
Incremental funding amount: \$24,492
- d. Coastwide Reference Monitoring System (CRMS) requesting approval for FY16 incremental funding in the total amount of \$9,209,040:
 - Incremental funding (FY13 – FY15): \$9,209,040

9. Decision: Request for Operation and Maintenance (O&M) Incremental Funding and Budget Increases (Chris Allen, CPRA) 11:05 a.m. to 11:25 a.m. The Technical Committee will consider and vote to make a recommendation to the Task Force to approve requests for total FY16 incremental funding in the amount of \$5,903,032 and O&M budget increases totaling \$1,754,749.

- a. PPL 9+ Projects requesting approval for FY16 incremental funding in the total amount of \$3,359,605 for the following projects:
 - Little Lake Shoreline Protection/ Dedicated Dredging Near Round Lake (BA-37), PPL 11, NMFS
Incremental funding amount (FY16) (O&M and State Insp.): \$12,253
Incremental funding amount (Federal S&A): \$1,604
 - Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c), PPL 9, NRCS
Incremental funding amount \$5,882
 - North Lake Mechant Landbridge Restoration (TE-44), PPL 10, USFWS
Incremental funding amount: \$95,367
 - West Lake Boudreaux Shoreline Protection and Marsh Creation (TE-46), PPL 11, USFWS
Incremental funding amount: \$15,801
 - GIWW - Perry Ridge West Bank Stabilization (CS-30), PPL 9, NRCS
Incremental funding amount: \$413,252
 - South White Lake Shoreline Protection (ME-22), PPL 12, USACE
Incremental funding amount: \$11,871
Incremental funding amount (Federal S&A): \$3,957
 - Lake Borgne Shoreline Protection (PO-30), PPL 10, EPA
Incremental funding amount (FY16) (O&M and State Insp.): \$88,400
Incremental funding amount (Federal S&A): \$1,180

- Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS
Incremental funding amount (FY16): \$5,666
 - Pass Chalard to Grand Bayou Pass Barrier Shoreline Protection (BA-35), PPL 11, NMFS
Incremental funding amount (FY16) (O&M and State Insp.): \$224,790
Incremental funding amount (Federal S&A): \$4,178
 - Pelican Island and Pass La Mer to Chalard Pass Restoration (BA-38), PPL 11, NMFS
Incremental funding amount (FY16) (O&M and State Insp.): \$142,707
Incremental funding amount (Federal S&A): \$10,861
 - Mississippi River Sediment Delivery System Bayou Dupont (BA-39), PPL 12, EPA
Incremental funding amount (FY16) (O&M and State Insp.): \$3,726
Incremental funding amount (Federal S&A): \$3,726
 - Goose Pt., Pt. Platte Marsh Creation (PO-33), PPL 13, USFWS
Incremental funding amount (FY16) (O&M and State Insp.): \$3,650
Incremental funding amount (Federal S&A): \$3,399
 - Coastwide Nutria Control Program (LA-03b), PPL 11, NRCS
Incremental funding amount (FY16): \$2,307,335
- b. PPL 1-8 Projects requesting approval for FY16 incremental funding in the amount of \$850,544 for the following projects:
- Point Au Fer Canal Plugs (TE-22), PPL2, NMFS
Incremental funding amount (FY16) (O&M and State Insp.): \$14,127
Incremental funding amount (Federal S&A): \$2,430
 - Lake Chapeau Sediment Input and Hydrologic Restoration, Point Au Fer Island (TE-26), PPL 6, NMFS
Incremental funding amount (FY16) (O&M and State Insp.): \$13,904
Incremental funding amount (Federal S&A): \$2,459
 - Brady Canal Hydrologic Restoration (TE-28), PPL 3, NRCS
Incremental funding amount: \$172,706
 - West Belle Pass Headland Restoration (TE-23), PPL 2, USACE
Incremental funding amount: \$42,111
 - Cameron-Creole Maintenance (CS-04a), PPL 3, NRCS
Incremental funding amount: \$248,439
 - East Mud Lake Marsh Management (CS-20), PPL 2, NRCS
Incremental funding amount: \$38,877
 - Highway 384 Hydrologic Restoration (CS-21), PPL 2, NRCS
Incremental funding amount: \$171,450
 - Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully (CS-23), PPL 3, USFWS
Incremental funding amount: \$144,041
- c. PPL 1-8 Project requesting approval for an O&M budget increase of \$1,754,749 and FY16 incremental funding in the amount of \$1,692,883:
- GIWW to Clovelly Hydrologic Restoration (BA-02), PPL 1, NRCS
Budget Increase amount: \$1,754,749
Incremental Funding amount: \$1,692,883

10. Additional Agenda Items (Tom Holden, USACE) 11:25 a.m. to 11:30 a.m.

11. Request for Public Comments (Tom Holden, USACE) 11:30 a.m. to 11:35 a.m.

12. Announcement: Dates of Upcoming CWPPRA Program Meeting (Brad Inman, USACE) 11:35 a.m. to 11:40 a.m. The Task Force Meeting will be held October 17, 2013 at 9:30 a.m. at the U.S. Army Corps of Engineers, 7400 Leake Avenue, New Orleans, Louisiana in the District Assembly Room (DARM).

13. Announcement: Date of Upcoming CWPPRA Dedication Event (Brad Inman, USACE) 11:40 a.m. to 11:45 a.m. The CWPPRA Dedication Ceremony will be held on October 18, 2013 to celebrate the progress on CWPPRA projects in southeastern Louisiana. The ceremony will begin at 10:00 a.m. at ConocoPhillips, 806 Bayou Black Drive, Houma, Louisiana.

14. Announcement: Scheduled Dates of Future Program Meetings (Brad Inman, USACE) 11:45 a.m. to 11:50 a.m.

2013			
October 17, 2013	9:30 a.m.	Task Force	New Orleans
November 13, 2013	7:00 p.m.	PPL 23 Public Comment Meeting	Baton Rouge
December 12, 2013	9:30 a.m.	Technical Committee Meeting	Baton Rouge

15. Decision: Adjourn

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

MEETING INITIATION

- a. Introduction of Technical Committee or Alternates
- b. Opening remarks of Technical Committee Members
- c. Request for Agenda Changes/Additional Agenda Items/Adoption of Agenda

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

STATUS OF CWPPRA PROGRAM FUNDS AND PROJECTS

For Report:

Ms. Susan Mabry will provide an overview of the status of CWPPRA accounts and available funding in the Planning and Construction Programs.

Construction Program Funding Requests: Tech Committee Recommendation, 11 September 2013

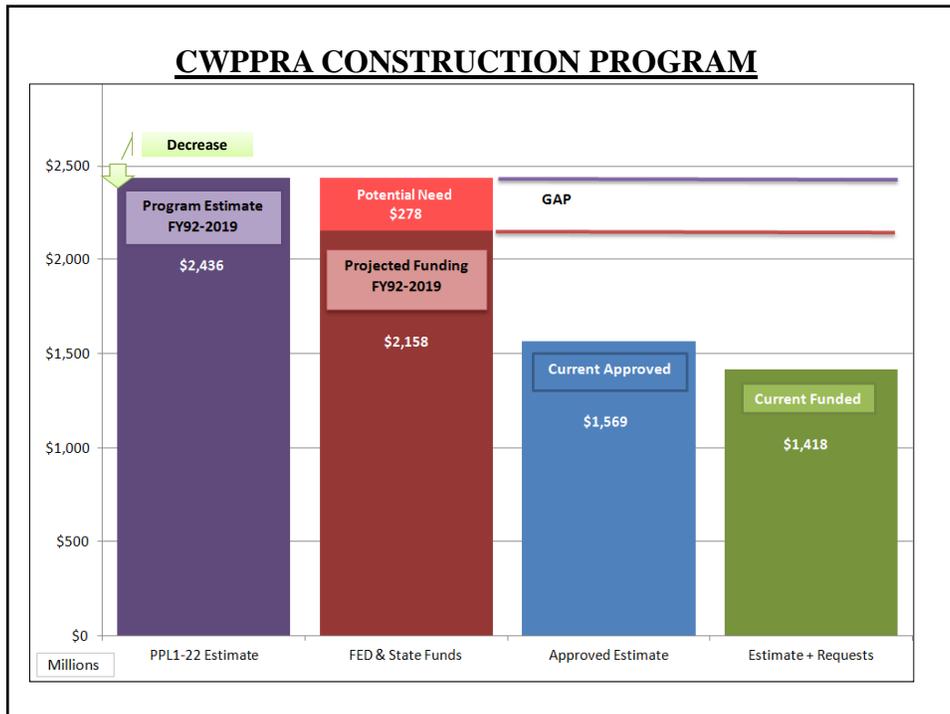
	Program Estimate	TC	FUNDING	TC	Fed	Non-Fed
1. Funds Available:						
Program Estimate / Funding Allowance FY92 - FY13 (Fed and Sponsor)	\$2,510,361,172		\$1,405,371,936		\$1,189,151,894	\$216,220,042
Approved Rockefeller/Lac des Allemands Swamp Scope Change	(74,419,500)					
Approved Funded Estimate PPL 1-22			(1,417,950,984)		(1,198,042,298)	(219,908,686)
Projected FY14 Funds to receive (11% reduction due to sequestration)			\$80,961,889		\$68,817,606	\$12,144,283
Total Program / Funds Available:	\$2,435,941,672		\$68,382,842		\$59,927,202	\$8,455,640
2. Agenda Item 6: COE Long-Term Admin, FY16 Incremental Funding Approval Request Recommendation:						
Barataria Basin Landbridge Shoreline Protection, Phase 4 (BA-27d), PPL 11, NRCS			\$1,064		\$904	\$160
Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c), PPL 9, NRCS			\$1,396		\$1,187	\$209
Little Lake Shoreline Protection/ Dedicated Dredging (BA-37), PPL 11, NMFS			\$1,097		\$932	\$165
North Lake Mechant Landbridge Restoration (TE-44), PPL 10, USFWS			\$828		\$704	\$124
West Lake Boudreaux Shoreline Protection & Marsh Creat (TE-46), PPL 11, USFWS			\$908		\$772	\$136
GIWW - Perry Ridge West Bank Stabilization (CS-30), PPL 9, NRCS			\$1,056		\$898	\$158
South White Lake Shoreline Protection (ME-22), PPL 12, USACE			\$1,285		\$1,092	\$193
Lake Borgne Shoreline Protection (PO-30), PPL 10, EPA			\$1,704		\$1,448	\$256
Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS			\$2,099		\$1,784	\$315
Pass Chaland to Grand Bayou Pass Barrier Shoreline Prot (BA-35), PPL 11, NMFS			\$908		\$772	\$136
Pelican Island and Pass La Mer to Chaland Pass Restoration (BA-38), PPL 11, NMFS			\$1,590		\$1,352	\$239
Mississippi River Sediment Delivery System Bayou Dupont (BA-39), PPL 12, EPA			\$1,752		\$1,489	\$263
Goose Pt., Pt. Platte Marsh Creation (PO-33), PPL 13, USFWS			\$1,744		\$1,482	\$262
Coastwide Nutria Control Program (LA-03b), PPL 11, NRCS			\$2,161		\$1,837	\$324
Point Au Fer Canal Plugs (TE-22), PPL 2, NMFS			\$1,349		\$1,147	\$202
Lake Chapeau Sediment Input and Hydrologic Restoration (TE-26), PPL 6, NMFS			\$1,544		\$1,312	\$232
Brady Canal Hydrologic Restoration (TE-28), PPL 3, NRCS			\$1,349		\$1,214	\$135
Replace Sabine Refuge Water Control Struct. & Hog Island (CS-23), PPL 3, USFWS			\$1,000		\$850	\$150
Coastwide Reference Monitoring System (CRMS) -Wetlands			\$2,000		\$1,700	\$300
Total	\$0		\$26,834		\$22,876	\$3,958
3. Agenda Item 7: Request for Funding for the CWPPRA Program's Technical Services:						
CWPPRA Program's Technical Services, USGS and CPRA	\$171,410		\$171,410		\$145,699	\$25,712
Total	\$171,410		\$171,410		\$145,699	\$25,712
4. Agenda Item 8a: Monitoring - PPL 9+ Projects, FY16 Incremental Funding Approval Request Recommendation:						
Grand Lake-White Lake Landbridge Protection (ME-19), PPL 10, USFWS			\$29,000		\$24,650	\$4,350
Coastwide Planting Project (LA-39), PPL 20, NRCS			\$76,686		\$65,183	\$11,503
Coastwide Nutria Control Program (LA-03b), PPL 11, NRCS			\$96,109		\$81,693	\$14,416
Barataria Basin Landbridge Shoreline Protection (BA27c), PPL 9, NRCS			\$8,648		\$7,351	\$1,297
Pass Chaland to Grand Bayou Pass Barrier Shoreline Rest (BA-35), PPL 11, NMFS			\$102,738		\$87,327	\$15,411
Dedicated Dredging on the Barataria Basin Landbridge (BA-36), PPL 11, USFWS			\$88,179		\$74,952	\$13,227
Pelican Island and Pass La Mer to Chaland Pass Restoration (BA-38), PPL 11, NMFS			\$147,657		\$125,508	\$22,149
Lake Hermitage Marsh Creation (BA-42), PPL 15, USFWS			\$31,027		\$26,373	\$4,654
Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS			\$16,736		\$14,226	\$2,510
Four Mile Canal Terracing and Sediment Trapping (TV-18), PPL 9, NMFS			\$29,206		\$24,825	\$4,381
Timbalier Island Dune & Marsh Creation (TE-40), PPL 9, EPA			\$13,297		\$11,302	\$1,995
Total	\$0		\$639,283		\$543,391	\$95,892

Construction Program Funding Requests: Tech Committee Recommendation, 11 September 2013

	Program Estimate	TC	FUNDING	TC	Fed	Non-Fed
5. Agenda Item 8b: Monitoring - PPL 1-8 Projects, FY16 Incremental Funding Approval Request Recommendation:						
East Mud Lake Marsh Management (CS-20), PPL 2, NRCS			\$130,071		\$110,560	\$19,511
Naomi Outfall Project (BA-03c), PPL 5, NRCS			\$5,430		\$4,887	\$543
Total	\$0		\$135,501		\$115,447	\$20,054
6. Agenda Item 8c: Monitoring . PPL 1-8 Projects, FY16 Budget increase & incremental funding Approval Request Recommendation:						
Vermilion River Cutoff Bank Protection (TV-03), PPL 1, USACE	\$24,492		\$24,492		\$20,818	\$3,674
Total	\$24,492		\$24,492		\$20,818	\$3,674
7. Agenda Item 8d: Monitoring - CRMS-Wetlands Project, FY13-FY15 Incremental Funding Approval Request Recommendation:						
Coastwide Reference Monitoring System (CRMS)	\$9,209,040		\$9,209,040		\$7,827,684	\$1,381,356
Total	\$9,209,040		\$9,209,040		\$7,827,684	\$1,381,356
8. Agenda Item 9a: O&M - PPL 9+ Projects, FY16 Incremental Funding Approval Request Recommendation:						
Little Lake Shoreline Protection (BA-37), PPL 11, NMFS			\$13,857		\$11,778	\$2,079
Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c), PPL 9, NRCS			\$5,882		\$5,000	\$882
North Lake Mechant Landbridge Restoration (TE-44), PPL 10, USFWS			\$95,367		\$81,062	\$14,305
West Lake Boudreaux Shoreline Protection and MC (TE-46), PPL 11, USFWS			\$15,801		\$13,431	\$2,370
GIWW - Perry Ridge West Bank Stabilization (CS-30), PPL 9, NRCS			\$413,252		\$351,264	\$61,988
South White Lake Shoreline Protection (ME-22), PPL 12, USACE			\$15,828		\$13,454	\$2,374
Lake Borgne Shoreline Protection (PO-30), PPL 10, EPA			\$89,580		\$76,143	\$13,437
Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS			\$5,666		\$4,816	\$850
Pass Chalard to Grand Bayou Pass Barrier SP (BA-35), PPL 11, NMFS			\$228,968		\$194,623	\$34,345
Pelican Island and Pass La Mer to Chalard Pass Rest (BA-38), PPL 11, NMFS			\$153,568		\$130,533	\$23,035
Mississippi River Sediment Delivery System Bayou Dupont (BA-39), PPL 12, EPA			\$7,452		\$6,334	\$1,118
Goose Pt., Pt. Platte Marsh Creation (PO-33), PPL 13, USFWS			\$7,049		\$5,992	\$1,057
Coastwide Nutria Control Program (LA-03b), PPL 11, NRCS			\$2,307,335		\$1,961,235	\$346,100
Total	\$0		\$3,359,605		\$2,855,664	\$503,941
9. Agenda Item 9b: O&M - PPL 1-8 Projects, FY16 Incremental Funding Approval Request Recommendation:						
Point Au Fer Canal Plugs (TE-22), PPL 2, NMFS			\$16,557		\$14,073	\$2,484
Lake Chapeau Sediment Input and Hydrologic (TE-26), PPL 6, NMFS			\$16,363		\$13,909	\$2,454
Brady Canal Hydrologic Restoration (TE-28), PPL 3, NRCS			\$172,706		\$146,800	\$25,906
West Belle Pass Headland Restoration (TE-23), PPL 2, USACE			\$42,111		\$35,794	\$6,317
Cameron-Creole Maintenance (CS-04a), PPL 3, NRCS			\$248,439		\$211,173	\$37,266
East Mud Lake Marsh Management (CS-20), PPL 2, NRCS			\$38,877		\$33,045	\$5,832
Highway 384 Hydrologic Restoration (CS-21), PPL 2, NRCS			\$171,450		\$145,733	\$25,718
Replace Sabine Refuge Water Control Structures (CS-23), PPL 3, USFWS			\$144,041		\$122,435	\$21,606
Total	\$0		\$850,544		\$722,962	\$127,582
10. Agenda Item 9c: O&M - PPL 1-8 Projects, Budget Increase and FY16 Incremental Funding Approval Request Recommendation:						
GIWW to Clovelly Hydrologic Restoration (BA-02), PPL 1, NRCS	\$1,754,749		\$1,692,883		\$1,438,951	\$253,932
Total	\$1,754,749		\$1,692,883		\$1,438,951	\$253,932
(1) Funds Available for September 2013 Recommendations						
	\$2,435,941,672		\$68,382,842			
(6, 7, 8, 9, 10) Proposed September 2013 Recommendations						
	\$1,950,651		\$16,109,592			
Program Amount/Available Funds Surplus/Shortage						
	\$2,437,892,323		\$52,273,250			

Status of Breaux Act Program Funds and Projects

Susan M. Mabry



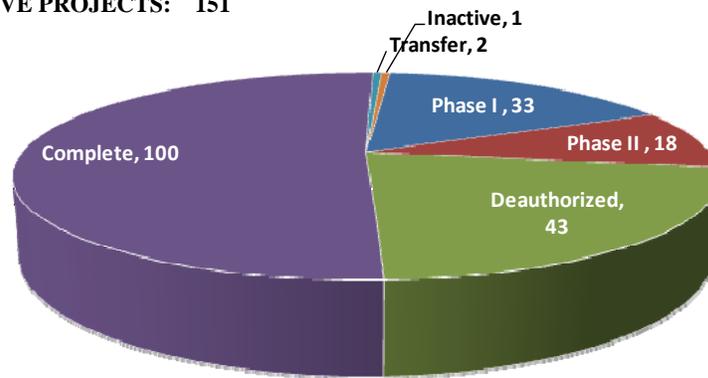
Construction Program Funding Requests: Tech Committee Recommendation, 11 September 2013						
	Program Estimate	TC	FUNDING	TC	Fed	Non-Fed
1. Funds Available:						
Program Estimate / Funding Allowance FY02 - FY13 (Fed and Sponsor)	\$2,510,361,172		\$1,405,371,936		\$1,089,151,894	\$216,230,642
Approved Reclamation Act des Allemands Swamp Slope Change	(14,419,200)					
Approved Funded Estimate PPL 1-22			(1,417,950,964)		(1,139,842,298)	(219,209,688)
Projected FY14 Funds to receive (1% reduction due to sequestration)			\$60,961,889		\$68,817,606	\$12,144,283
Total Program / Funds Available:	\$2,435,941,672		\$68,382,842		\$59,927,202	\$8,455,645
2. Agenda Item 6: COE Long-Term Admin, FY16 Incremental Funding Approval Request Recommendation:						
Barataria Basin Landridge Shoreline Protection, Phase 4 (BA-27B), PPL 11, NRC-S			\$1,064		\$904	\$160
Barataria Basin Landridge Shoreline Protection, Phase 3 (BA-27C), PPL 9, NRC-S			\$1,396		\$1,187	\$209
Lake Lake Shoreline Protection/Dedicated Dredging (BA-37), PPL 11, NMFS			\$1,007		\$952	\$165
North Lake Mechant Landridge Restoration (TE-44), PPL 10, USFWS			\$928		\$704	\$124
West Lake Boudreaux Shoreline Protection & Marsh Creat (TE-46), PPL 11, USFWS			\$928		\$772	\$156
GNWW - Perry Ridge West Bank Stabilization (CS-30), PPL 9, NRC-S			\$1,056		\$908	\$148
South White Lake Shoreline Protection (ME-22), PPL 12, USACE			\$1,295		\$1,092	\$203
Lake Borgne Shoreline Protection (PD-30), PPL 10, EPA			\$1,204		\$1,448	\$208
Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS			\$2,000		\$1,784	\$316
Pass Chaland to Grand Bayou Pass Barrier Shoreline Rest (BA-36), PPL 11, NMFS			\$908		\$772	\$136
Pelican Island and Pass La Mer to Chaland Pass Rest (BA-38), PPL 11, NMFS			\$1,030		\$1,352	\$293
Mississippi River Sediment Delivery System Bayou Dupont (BA-39), PPL 12, EPA			\$1,752		\$1,485	\$267
Goose Pt. Ph. Plate Marsh Creation (PD-33), PPL 13, USFWS			\$1,744		\$1,570	\$174
Coastwide Nuisance Control Program (LA-03b), PPL 11, NRC-S			\$2,161		\$1,837	\$324
Point Au Fer Canal Plug (TE-22), PPL 2, NMFS			\$1,349		\$1,147	\$202
Lake Chapreau Sediment Input and Hydrologic Restoration (TE-26), PPL 6, NMFS			\$1,544		\$1,312	\$232
Brady Canal Hydrologic Restoration (TE-28), PPL 3, NRC-S			\$1,349		\$1,012	\$337
Replace Sabine Refugue Water Control Struct & Hog Island (CS-23), PPL 3, USFWS			\$1,000		\$850	\$150
Coastwide Reference Monitoring System (CRMS) Wetlands			\$2,000		\$2,700	\$200
Total	\$0		\$48,834		\$32,791	\$4,673
3. Agenda Item 7: Request for Funding for the CWPRA Program's Technical Services:						
CWPRA Program's Technical Services, USGS and CPRA	\$171,410		\$171,410		\$145,699	\$25,712
Total	\$171,410		\$171,410		\$145,699	\$25,712
4. Agenda Item 8a: Monitoring - PPL 9a Projects, FY16 Incremental Funding Approval Request Recommendation:						
Grand Lake-White Lake Landridge Protection (ME-19), PPL 10, USFWS			\$23,000		\$24,650	\$4,350
Coastwide Planning Project (LA-33), PPL 20, NRC-S			\$76,686		\$65,183	\$11,503
Coastwide Nuisance Control Program (LA-03b), PPL 11, NRC-S			\$95,109		\$81,695	\$13,414
Barataria Basin Landridge Shoreline Protection (BA27C), PPL 9, NRC-S			\$9,648		\$7,351	\$1,297
Pass Chaland to Grand Bayou Pass Barrier Shoreline Rest (BA-36), PPL 11, NMFS			\$102,738		\$87,327	\$15,411
Dedicated Dredging on the Barataria Basin Landridge (BA-36), PPL 11, USFWS			\$88,179		\$74,950	\$13,227
Pelican Island and Pass La Mer to Chaland Pass Rest (BA-38), PPL 11, NMFS			\$147,657		\$125,508	\$22,149
Lake Hermitage Marsh Creation (BA-42), PPL 15, USFWS			\$31,027		\$26,374	\$4,654
Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS			\$19,736		\$14,228	\$5,508
Four Mile Canal Scurving and Sediment Trapping (TV-16), PPL 9, NMFS			\$29,206		\$24,625	\$4,581
Timberland Dune & Marsh Creation (TE-40), PPL 9, EPA			\$13,297		\$11,300	\$1,997
Total	\$0		\$839,283		\$643,393	\$195,691

5. Agenda Item 8b: Monitoring - PPL 1-8 Projects, FY16 Incremental Funding Approval Request Recommendation:						
East Mud Lake Marsh Management (CS-20), PPL 2, NRC-S			\$130,071		\$117,264	\$12,807
Narrow Outlet Project (BA-03), PPL 5, NRC-S			\$5,430		\$4,987	\$543
Total	\$0		\$135,501		\$122,251	\$13,250
6. Agenda Item 8c: Monitoring - PPL 1-8 Projects, FY16 Budget Increase & Incremental Funding Approval Request Recommendation:						
Vermilion River Clodf Bank Protection (TV-03), PPL 1, USACE			\$24,492		\$20,818	\$3,674
Total	\$24,492		\$24,492		\$20,818	\$3,674
7. Agenda Item 8d: Monitoring - CRMS-Wetlands Project, FY13-FY15 Incremental Funding Approval Request Recommendation:						
Coastwide Reference Monitoring System (CRMS)	\$9,209,040		\$9,209,040		\$7,827,684	\$1,381,356
Total	\$9,209,040		\$9,209,040		\$7,827,684	\$1,381,356
8. Agenda Item 9a: O&M - PPL 9a Projects, FY16 Incremental Funding Approval Request Recommendation:						
Lake Lake Shoreline Protection (BA-37), PPL 11, NMFS			\$13,857		\$11,778	\$2,079
Barataria Basin Landridge Shoreline Protection, Phase 3 (BA-27C), PPL 9, NRC-S			\$5,892		\$5,000	\$892
North Lake Mechant Landridge Restoration (TE-44), PPL 10, USFWS			\$95,367		\$81,062	\$14,305
West Lake Boudreaux Shoreline Protection and MC (TE-46), PPL 11, USFWS			\$15,801		\$13,431	\$2,370
GNWW - Perry Ridge West Bank Stabilization (CS-30), PPL 9, NRC-S			\$413,232		\$351,264	\$61,968
South White Lake Shoreline Protection (ME-22), PPL 12, USACE			\$15,828		\$13,454	\$2,374
Lake Borgne Shoreline Protection (PD-30), PPL 10, EPA			\$993,591		\$756,143	\$13,347
Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS			\$5,695		\$4,816	\$879
Pass Chaland to Grand Bayou Pass Barrier SP (BA-36), PPL 11, NMFS			\$228,969		\$194,623	\$34,346
Pelican Island and Pass La Mer to Chaland Pass Rest (BA-38), PPL 11, NMFS			\$153,995		\$130,533	\$23,462
Mississippi River Sediment Delivery System Bayou Dupont (BA-39), PPL 12, EPA			\$7,462		\$6,334	\$1,118
Goose Pt. Ph. Plate Marsh Creation (PD-33), PPL 13, USFWS			\$7,049		\$5,992	\$1,057
Coastwide Nuisance Control Program (LA-03b), PPL 11, NRC-S			\$2,307,335		\$1,961,235	\$346,100
Total	\$0		\$4,199,695		\$3,535,664	\$663,941
9. Agenda Item 9b: O&M - PPL 1-8 Projects, FY16 Incremental Funding Approval Request Recommendation:						
Point Au Fer Canal Plug (TE-22), PPL 2, NMFS			\$16,557		\$14,073	\$2,484
Lake Chapreau Sediment Input and Hydrologic (TE-26), PPL 6, NMFS			\$16,363		\$13,909	\$2,454
Brady Canal Hydrologic Restoration (TE-28), PPL 3, NRC-S			\$172,708		\$146,800	\$25,908
West Belle Pass Headland Restoration (TE-23), PPL 2, USACE			\$42,111		\$35,794	\$6,317
Cameron Creole Maintenance (CS-04), PPL 3, NRC-S			\$248,439		\$211,173	\$37,266
East Mud Lake Marsh Management (CS-20), PPL 2, NRC-S			\$38,877		\$33,045	\$5,832
Highway 384 Hydrologic Restoration (CS-21), PPL 2, NRC-S			\$171,450		\$154,305	\$17,145
Replace Sabine Refugue Water Control Structures (CS-23), PPL 3, USFWS			\$144,041		\$122,435	\$21,606
Total	\$0		\$850,544		\$731,535	\$119,009
10. Agenda Item 9c: O&M - PPL 1-8 Projects, Budget Increase and FY16 Incremental Funding Approval Request Recommendation:						
GNWW in Cavalry Hydrologic Restoration (BA-02), PPL 1, NRC-S			\$1,754,749		\$1,692,883	\$61,866
Total	\$1,754,749		\$1,692,883		\$1,438,861	\$253,022
(1.) Funds Available for September 2013 Recommendations						
	\$2,435,941,672		\$68,382,842			
(6, 7, 8, 9, 10) Proposed September 2013 Recommendations						
	\$11,159,691		\$16,909,592			
Program Amount/Available Funds Surplus/Shortage	\$2,447,101,363		\$81,472,250			

CWPPRA PROJECT STATUS

TOTAL CWPPRA PROJECTS: 196

ACTIVE PROJECTS: 151



COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

**REQUEST APPROVED BY TECHNICAL COMMITTEE ELECTRONIC VOTE TO
APPROVE A NEW METHOD FOR CRMS LAND/WATER ANALYSES**

For Report:

The CRMS program is continually evaluating the methods, cost effectiveness, and scientific defensibility of products and monitoring activities conducted within the program. The Monitoring Work Group and P&E Subcommittee recommended a new method: automated classification with minimal data improvements via manual delineation. This new method would represent a savings of over \$300,000. The Technical Committee approved the request via electronic vote on July 30, 2013.

Murry, Allison N CONTRACTOR @ MVN

From: Murry, Allison N CONTRACTOR @ MVN
Sent: Tuesday, July 30, 2013 12:38 PM
To: 'Bren Haase'; 'britt.paul@la.usda.gov'; 'Darryl Clark'; 'Holden, Thomas A MVN'; 'Karen McCormick (McCormick.Karen@epamail.epa.gov)'; 'Richard.Hartman@noaa.gov'
Cc: 'Dona Weifenbach'; Inman, Brad L MVN; 'Rachel Sweeney - NOAA Federal'; 'Cecelia Linder - NOAA Federal'; 'Jurgensen, John - NRCS, Alexandria, LA'; 'Roy, Kevin'; 'Chris Allen (CPRA)'; 'Chavarria, Adrian'
Subject: RE: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Technical Committee,

Thank you for your quick responses. We have an electronic vote concurrence to approve Option 2.

While it has been approved, Rick did have the following question:

"Had we gone with any of the other options, would the CRMS program had to request a budget increase? If the answer is no, obviously there should be a return of some funds to the program..."

Thanks,
Allison

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

From: Murry, Allison N CONTRACTOR @ MVN
Sent: Tuesday, July 30, 2013 10:16 AM
To: 'Bren Haase'; 'britt.paul@la.usda.gov'; 'Darryl Clark'; 'Holden, Thomas A MVN'; 'Karen McCormick (McCormick.Karen@epamail.epa.gov)'; 'Richard.Hartman@noaa.gov'
Cc: 'Dona Weifenbach'; Inman, Brad L MVN; 'Rachel Sweeney - NOAA Federal'; 'Cecelia Linder - NOAA Federal'; 'Jurgensen, John - NRCS, Alexandria, LA'; 'Roy, Kevin'; 'Chris Allen (CPRA)'; 'Chavarria, Adrian'
Subject: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Technical Committee,

Please see the following message from Dona Weifenbach, co-chair of the Monitoring Work Group (MWG), requesting an electronic vote to approve the MWG and P&E Subcommittee's recommended Option 2 regarding a new method for CRMS land/water analyses. Please review the below and attached, and provide your concurrence, non-concurrence, and/or comments via email by Thursday, August 1.

--

The CRMS program is continually evaluating the methods, cost effectiveness, and scientific defensibility of products and monitoring activities conducted within the program. On June 21, 2013, the CWPPRA MWG met to discuss the wetland change analyses currently performed by USGS for 2012 CRMS photography. The historically high cost of these analyses, long duration before

a final product is delivered, and the technological advances since CWPPRA's inception provided the impetus for this evaluation of methodology as well as cost effectiveness. USGS provided a first draft of the methods document prior to the meeting. The group provided comments and requested additional information, now included in the version attached. The document outlines three options for land/water classifications at differing costs, accuracies, and delivery times. I will present a brief synopsis of each method, the cost and schedule of final products.

Option 1: Manual Delineation Intensive Method, currently used by USGS: \$497,945; Begin Fall 2013 - December 30, 2015.

Most rigorous and accurate delineation method, and able to resolve complex features, also most costly and time consuming.

[RECOMMENDED] Option 2: Automated Classification with Minimal Data Improvements via Manual Delineation: \$176,515; Begin August 1, 2013 - May 30, 2014

Least expensive and most time efficient option. Land/water classification is largely automated with very limited amounts of data improvement by an image analyst. This option will result in a reduction in accuracy particularly in areas with shadows, floating aquatic vegetation, and areas along the land/water transition.

Option 3: Automated classification with Moderate Data Improvement via Manual Delineation: \$355,493; Begin Fall 2013, - June 20, 2015

This method was recommended by USGS for the 2012 analysis. This option uses the same automation proposed in Option 2 but with moderate level of data improvement by image analysts.

Each of the MWG members discussed the options within their agencies and reconvened for a conference call Monday, July 22, when the group voted unanimously to select Option 2. Voting members include Aaron Hoff (EPA), John Foret (NFMS), Nathan Dayan (USACE), Robert Dubois (USFWS), Troy Mallach (NRCs), and Dona Weifenbach (CPRA). It is MWG's decision that USGS begin this work on the 2012 CRMS photography August 1. Since this technical decision does not change the CRMS program scope nor increase program budgets, Dona proposes that it is accomplished by email.

Thank you,
Allison Murry
CWPPRA Program
USACE New Orleans
Tel: 504.862.2075

Classification: UNCLASSIFIED
Caveats: NONE



United States Department of the Interior
U.S. GEOLOGICAL SURVEY
NATIONAL WETLANDS RESEARCH CENTER
c/o Livestock Show Office, Parker Coliseum, LSU
Baton Rouge, LA 70803

July 8, 2013

Coastwide Reference Monitoring System (CRMS) High Resolution Land/Water Monitoring Proposal

Background:

In 2003, the Louisiana Coastal Protection and Restoration Authority (CPRA) and the U.S. Geological Survey (USGS) received approval from the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force to implement the Coastwide Reference Monitoring System (CRMS) as a mechanism to monitor and evaluate the effectiveness of CWPPRA projects at the project, region, and coastwide levels. The CRMS network provides data for a variety of user groups, including resource managers, academics, landowners, and researchers.

One of the parameters of most interest to many stakeholders is wetland change. Louisiana currently experiences more wetland loss than all other states in the contiguous United States combined with an average rate of wetland loss of 42.9 km² per year (Couvillion et al., 2011). As such, documenting the trajectories of wetland change, as well as the success of restoration activities, is vital to the CRMS monitoring program. Wetland change monitoring can be aided considerably with the use of remotely sensed data. Remotely sensed land/water analyses provide a cost-effective and accurate means of inventorying current conditions and monitoring change, especially for large areas in which field investigations would prove logistically or fiscally restrictive.

The CRMS program conducts both moderate-spatial resolution, high-temporal frequency wetland change monitoring, as well as high-spatial resolution monitoring at less-frequent time intervals. The high-spatial resolution monitoring is typically conducted using high-resolution (1-meter) aerial imagery. Thus far, two time periods (2005 and 2008) have been characterized from this high resolution data. The goal of this analysis is to monitor land/water composition and changes in those compositions over time using these new methodologies. The datasets created as a part of this effort will also offer a mechanism for data-driven decision support for planning and management.

In this document, we will present three options for methodologies to conduct the 2012 land/water classifications. The process utilized in previous classifications (Option 1) involves extensive manual delineation of land and water areas. This process represents the most rigorous and accurate method for classification, however, due to the user-intensive nature of the method, it is the most costly. New techniques, which will be discussed in options 2 and 3, are now available that may enable the creation of these datasets at a considerable cost and time savings to the program, but will likely represent a slight reduction in accuracy of the datasets. The trade-offs inherent in the three options are discussed so that managers can decide what level of effort and accuracy is necessary to fit their needs.

Study Area

The study area for land/water monitoring will include the one kilometer boundaries of each of the 391 CRMS sites.

Imagery

Aerial imagery will consist of Color Infrared (CIR) aerial photography. The imagery was flown in the Fall of 2012.

Methodologies:

We propose to conduct land/water classifications for all 391 sites of the Coastwide Reference Monitoring System (CRMS). Color-infrared (CIR) aerial photography flown as part of the CRMS program in Fall 2012 will be utilized for these classifications. The classifications created for this time period will add to previous datasets (2005, 2008) conducted in earlier phases of CRMS monitoring efforts.

Specific aspects of the three methodological options are discussed in further detail below:

Option 1: Manual Delineation Intensive Methodology

Imagery Acquisition and Processing

The DOQQs generated for these projects are created using Intergraph's Z/I Imaging Digital Mapping Camera (DMC) technology. Unlike traditional analog photography, this imagery is delivered completely rectified and divided into USGS Digital Ortho Quarter Quads. This technology allows for the creation of a four band digital image: Band 1 = Red, Band 2 = Green, Band 3 = Blue, Band 4 = Near infrared. In addition to these 4 bands, NWRC creates a 5th band to include in the classification process called Normalized Difference Vegetation Index (NDVI). $NDVI = (IR-R) / (IR+R)$.

Land-Water Classification

The land-water classification is derived from color infrared digital imagery. An Unsupervised Classification is performed using Leica's ERDAS Imagine software. When performing the Unsupervised Classification process, Maximum Iterations are set to 30 and the Convergence Threshold at .980. Depending on the color balance, tone and other aspects of the photography, the number of classes is set between 25 and 50. If it is determined that the Maximum Iterations are reached before the Convergence Threshold is achieved, Maximum Iterations will be increased to ensure the Convergence Threshold is achieved. The procedure results in a thematic raster image with 25 - 50 different classes based upon the range of pixel values. These individual classes are then determined to be either land or water based upon photography. Ancillary data sets from 1998 through 2011 are used to help classify areas that may be difficult to identify. The file is then manually edited by a highly trained Geographic Information Systems (GIS) Specialist to correct any misclassified pixels. The finished classification is recoded into the two classes, Land and Water. All areas characterized by emergent vegetation, wetland forest, scrub-shrub, or uplands are classified as land, while open water, aquatics and mud flats are classified as water. Occasionally a third class, Flooded Lands, has been used when hurricanes or severe environmental impacts have imposed special mapping characteristics where habitats may be in a transitional stage.

Masking

As an aid to the Unsupervised Classification, a masking technique for improving spectral image classification is used. Masking is the process of specifying areas that are to be excluded in the classification in order to reduce spectral confusion. The more discrete the information classes in the spectral data, the more reliable and accurate the data will be. Confusion comes into play when different habitat types have similar spectral values. Examples include: the effect of shadows, sun glint, various water colors, floating aquatics, and image color variations due to time of acquisition and post processing. After running the automated classification, these previous examples will have pixels that are located in both the land and water categories. To reduce confusion, a "Mask" is created that will better isolate the land and water categories. When using a "Mask" to classify water, all areas of land are removed, and when using a "Mask" to classify land, all areas of water are removed. This makes the area of interest more discrete and reliable by removing spectral values in a particular classification process.

Quality Control

After completion, the GIS Specialist will perform a Quality Assurance self-check of their work. In addition, a second GIS Specialist will perform a final in-house Quality Control, assuring accuracy and data integrity. The final in house Quality Control also review all ancillary data including all available dates of imagery for the

project area to ensure consistency of land-water classification for each time period. Difficult areas that remain in question are referred to a photointerpreter for final review. After the NWRC has completed our QA/QC protocols, the data will be sent to the customer for their review and comments. The customer has field experience of the project areas and can give critical feedback on the accuracy of the data. If changes are suggested, NWRC will review the area in question and incorporate all data to make changes if necessary. After all reviews and questions are answered, the final data product is then ready for map production and submitted to an online distribution source.

Data Information

For each land-water project, an individual progress files containing pertinent information to the land water classification. Such information details particular high or low water levels, the presence of aquatics, flooded lands, recent passing of storms or severe storms that may result in standing water, fire (burns), recent excavations or depositions of materials, imagery artifacts, registration issues, boundary changes, and special classification categories. This information helps the classifier understand the nature of a previous classification plus aids in classification of the current years photography.

Consistency

Project areas that have been mapped previously (2005 and 2008) by NWRC are referred back to, ensuring that spatially equivalent land-water classifications have been mapped consistently for each mapping date, with consideration for actual change. When assessing change or mapping trends, it is important to have datasets that are classified accurately to properly represent findings. For land-water classifications, if water bodies are classified in one year and wrongly classified in the following year, results will show incorrect change due to classification error. By verifying that both classified data sets being compared are spatially accurate this will ensure the reliability of the data. NWRC makes every attempt to develop consistent data sets that can be used for analysis or input for models with a high level of confidence. Every available date of imagery for the given project area is also referenced to assist in the classification process. In addition, NWRC also takes great effort to reduce data inconsistencies and maintain sound and spatially accurate data. When making comparisons or showing trends, these protocols help maintain the integrity of the data and minimize inaccurate results.

Review

Completed land-water classifications go through a 3 stage process to ensure accuracy and data quality. The classified data, and/or map of classified data, are reviewed by personnel who have knowledge of the project landscape and can verify accuracy. Any discrepancies or questions about the classification are submitted to NWRC by email and/or by making edit markings on actual classified map. All classification concerns are reviewed and changes are made if deemed necessary. An email discussing the way in which NWRC addressed each concern is sent back to reviewer for their files. In addition to the external classification review, USGS requires two internal independent peer reviews of the maps as well as methods in which the land-water classification was derived. Upon completion of the land-water methods review, the reviewer will submit his comments or suggestion back for consideration. After reviewer's comments are received, a response is given, for each comment, in the form of an official reconciliation document. Reviewer's comments are addressed individually stating how NWRC responded to these questions.

Option 2: Automated Classification with *Minimal* Data Improvement via Manual Delineation

Training Data

One of the greatest requirements for classification is adequate reference data for training the classification. Training data must be representative, both spatially and spectrally, as well as accurate to adequately train the classifier. The lack of reliable training data is often one of the greatest limiting factors to the accuracy of classifications.

This classification effort will utilize previous land/water datasets created from multiple sources as training data. A technique known as Change Vector Analysis (to be described in a later section) is utilized to eliminate areas in which a change has been observed between the time the training data was collected and the date of the classification. Change vector analysis ensures that areas of change will not be utilized as training data for the later date of classification.

Pre-processing

All of the images will be clipped to the 1 km CRMS site boundaries to remove as much of the surrounding environment as possible. This is done to remove areas which are not part of the classification analysis, and accompanying sources of noise or complexity contained within those areas. This lessens the chance of the classifier incorporating confusing patterns introduced by non-interest areas of the image.

Land/Water Analysis

Upon compilation and pre-processing of the data to-be-classified, the first step in the methodology consists of the calculation of multiple indices derived from the original bands of the CIR imagery. The main objective of this first level of analysis is to provide the artificial neural network classifier as much information as possible upon which to base later classification of land/water.

One index which has been developed to exploit these differences is the modified Normalized Difference Water Index (mNDWI). In general, this index is described by the following equation:

$$\text{mNDWI} = (\text{Vis}(\text{green}) - \text{VNIR}) / (\text{Vis}(\text{green}) + \text{VNIR})$$

This index has been found to be particularly adept at separating land and water features. The mNDWI has been shown to be capable of revealing subtle features of water more efficiently than other bands and indices.

Therefore, this index, in addition to the original bands of the CIR imagery, will be provided to the classifier in later steps.

Another index which can prove informative with regard to the vegetation present in an image is the Normalized Difference Vegetation Index (NDVI). In general, this index is described by the following equation:

$$\text{NDVI} = (\text{Vis}(\text{red}) - \text{VNIR}) / (\text{Vis}(\text{red}) + \text{VNIR})$$

One particularly difficult aspect of creating land/water classifications in coastal Louisiana results from the common occurrence of floating aquatic vegetation (FAV) in the area. Spectrally, these areas can appear to be very similar to land, but certain indices can provide helpful hints that enable one to distinguish between this unique category and normal land. The NDVI in conjunction with the mNDWI can provide the classifier useful information regarding FAV. These areas will be recognized as FAV, either by the automated classifier or by image analysts during the 'Data Improvements' stage and will be recoded back to a water category.

Classifier - Decision Tree

There are numerous algorithms and methodologies for classifying remotely sensed imagery. Decision tree classifiers are non-parametric, can accommodate both continuous and nominal data, generate interpretable classification rules, and are fast to train and often as accurate as, or even slightly more accurate than many other classifiers (Homer et al. 2004).

One such program is See5© software from RuleQuest Research. This software has been successfully utilized to perform land/water classifications in complex environments in the past. This methodology utilizes an artificial neural network to recognize patterns that differentiate one class from another in the training data, and then exploits those patterns to build rule-sets for classifying the remainder of the image. Following construction of the decision-tree, the classification proceeds by subjecting each independent variable (spectral bands and indices) to the rule-sets developed for categorizing each pixel into a land/water type. As this methodology is

highly automated, it can reduce the time and effort involved in land/water classification and subsequently reduce the cost of such efforts.

To decrease the likelihood of classification error introduced by abnormalities in the training data, three different random subsets of training data will be taken. Classification can be run with each of the 3 training subsets, and the majority land/water class will be taken for each pixel. This step reduces noise in the data.

Data Improvements

Results of the initial automated classification often contain noise and inaccuracies that an automated process simply could not recognize. Though automated processes can recognize complex patterns and represent a significant time and cost savings, sometimes there is no substitute for an experienced image analyst. Humans are capable of recognizing patterns that the automated processes occasionally cannot. As such, image analysts who are skilled with land/water classification will review and edit the initial automated output. Areas of inaccuracy can be identified and final corrections made to the classified image by the analyst.

Accuracy Assessment

Accuracy assessments will be conducted on the resulting land/water type classifications. Accuracy assessments will utilize user-specified “truth” at randomly selected points. This step is vital in determining the utility of (and confidence which can be placed in) the product. Accuracy assessment data will be contained within the metadata of each dataset. This is additional information beyond what is provided in Option 1.

Review

Completed land-water classifications will go through the 3 stage process to ensure accuracy and data quality as described in Option 1.

Option 3: Automated Classification with *Moderate* Data Improvement via Manual Delineation

This option represents a hybrid approach of Options 1 and 2.

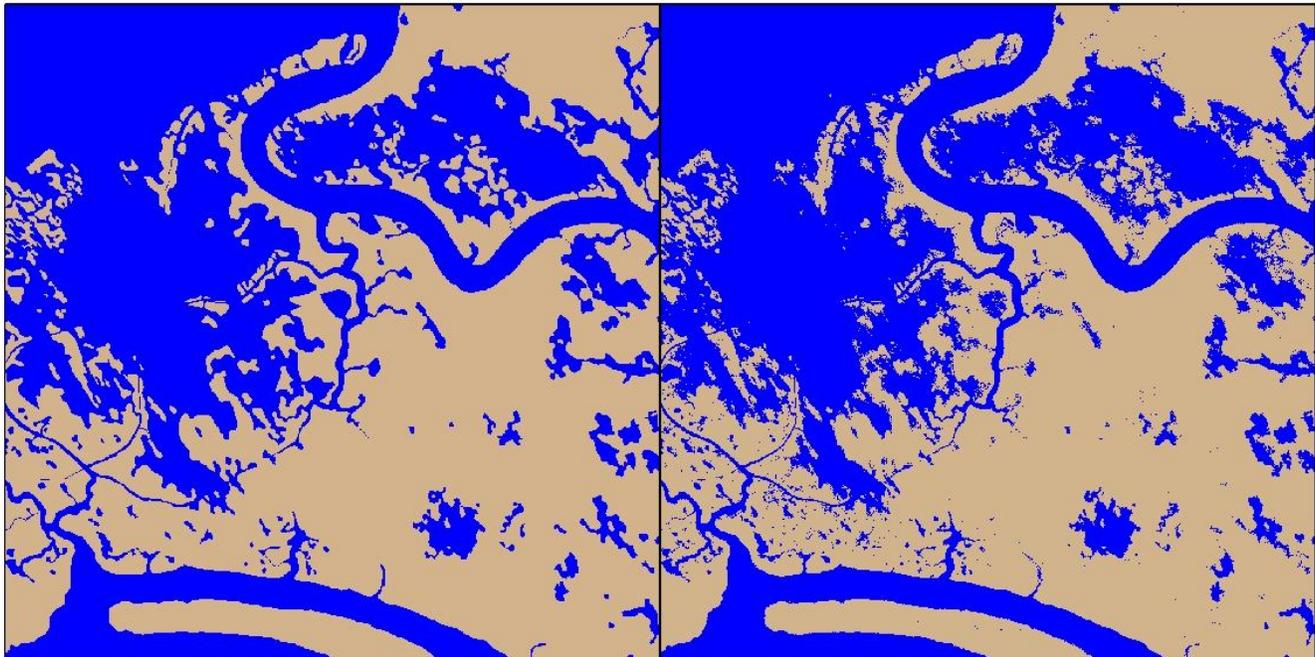
Comparison of Methodological Options:

As the methodology presented in Option 2 relies more heavily on automation than Options 1 and 3, tests on six CRMS sites were conducted to examine the potential reduction in accuracy and other trade-offs inherent to the methodology proposed in Option 2. A range of site conditions exist within the six test sites (i.e, 1km² area dominated by land, 1km² dominated by water, large amounts of FAV contained within 1km², numerous interior marsh ponds). The results of these tests were compared to the 2008 classifications created using the manual delineation method. Option 3 is not illustrated but is assumed to represent an intermediate to the two methodologies tested. The findings of these analyses are detailed in Figures 1-6 below:

CRMS0002 - 2008 Land/Water Classification Comparisons

Manual Delineation

Automated Processes - User Editing

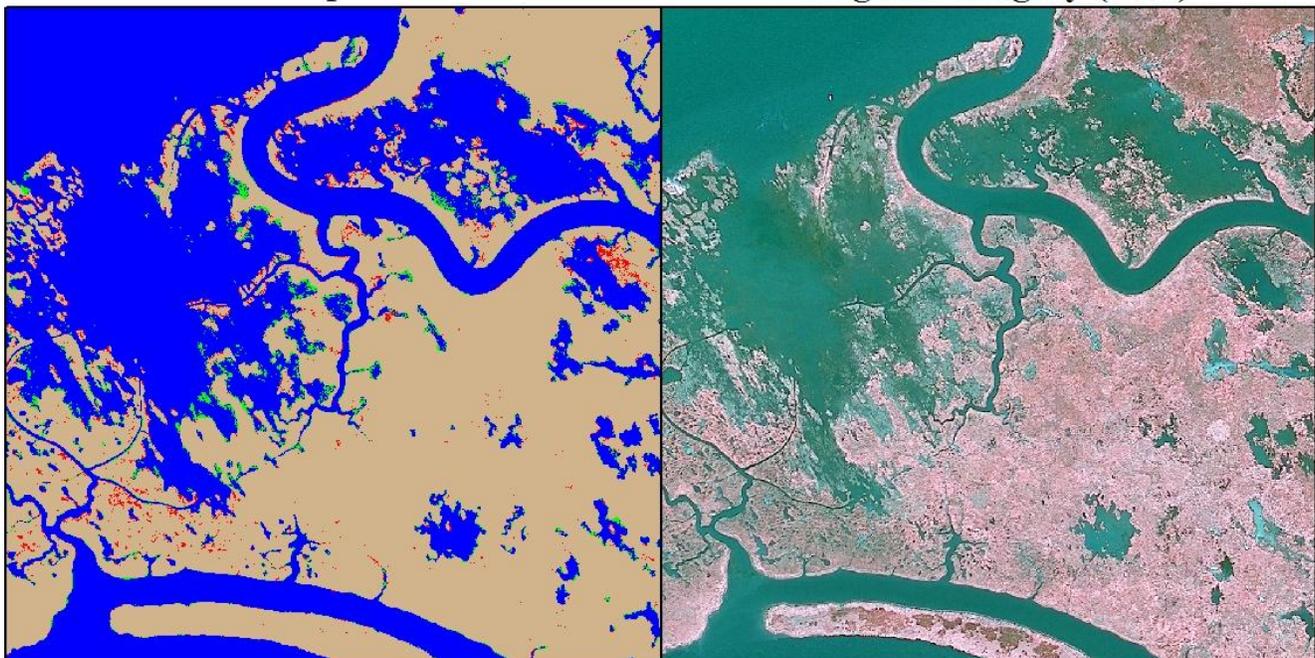


Land Water L/W: 52.5% / 47.5%

Land Water L/W: 53.1% / 46.9%

Comparison

Original Imagery (CIR)



Methods Agree - Land
 Methods Agree - Water
 Methods Disagree - Automated calling more water
 Methods Disagree - Automated calling more land

Category	Pixels
Land - Agree	511186
Water - Agree	455015
Automated method calling more water	15072
Automated method calling more land	20728
Percentage of pixels which agree	96.43%
Percentage of pixels which disagree	3.57%

Figure 1. Illustration of the land/water classification products at CRMS0002 created by two methodologies: Manual Delineation Intensive Methodology (Option 1) versus Automated Classification with *Minimal* Data Improvement via Manual Delineation (Option 2).

CRMS0128 - 2008 Land/Water Classification Comparisons

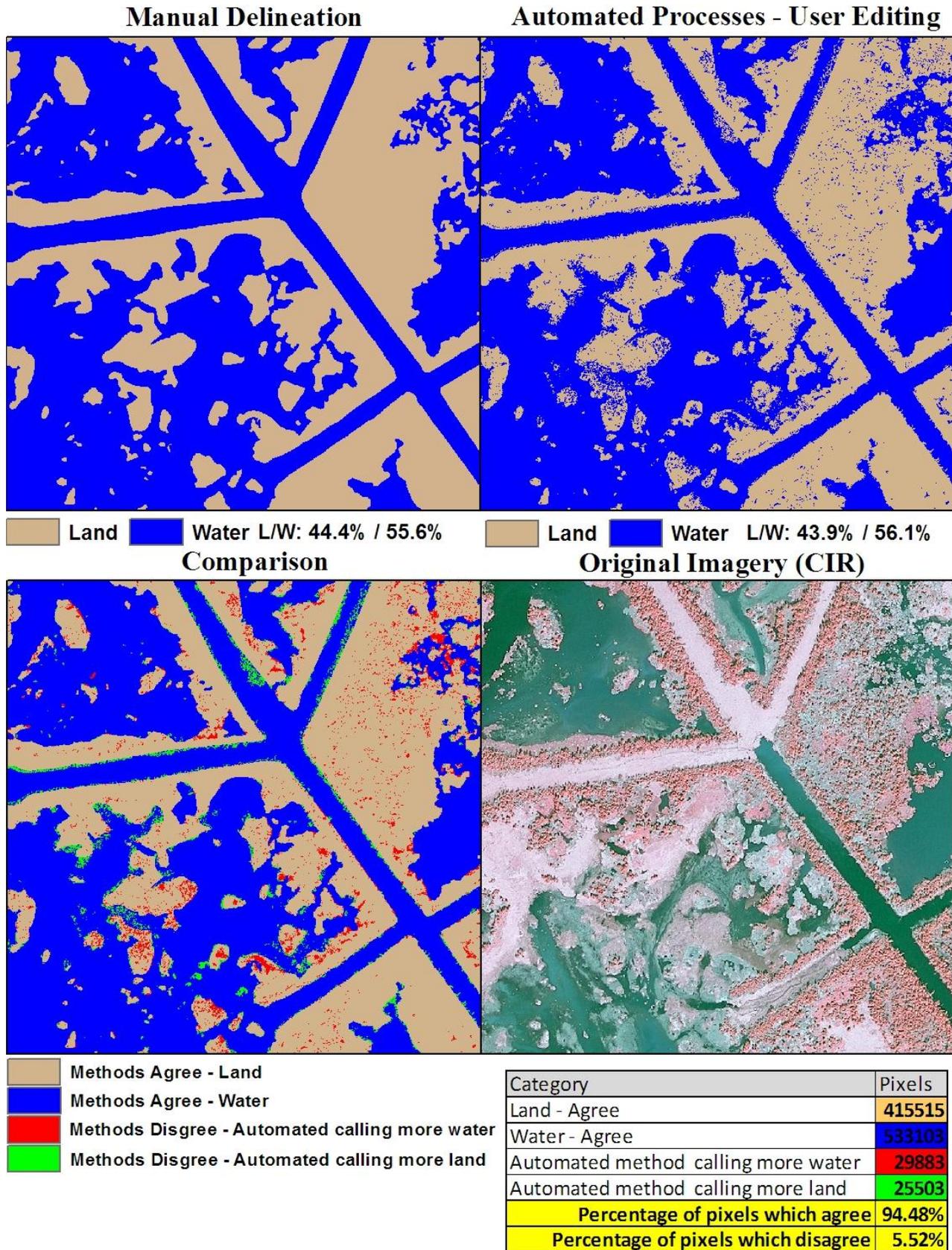


Figure 2. Illustration of the land/water classification products at CRMS0128 created by two methodologies: Manual Delineation Intensive Methodology (Option 1) versus Automated Classification with *Minimal* Data Improvement via Manual Delineation (Option 2).

CRMS0326 - 2008 Land/Water Classification Comparisons

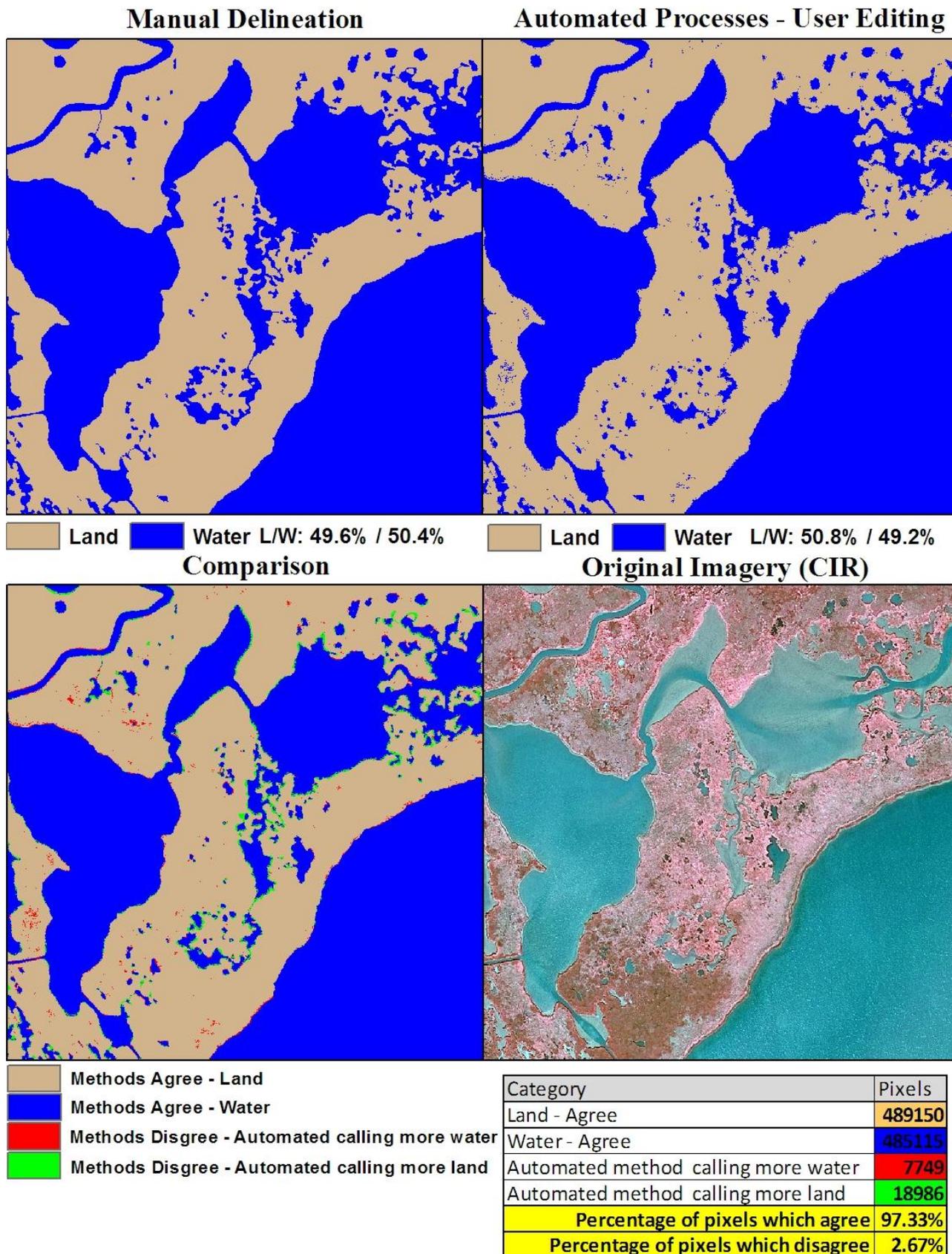
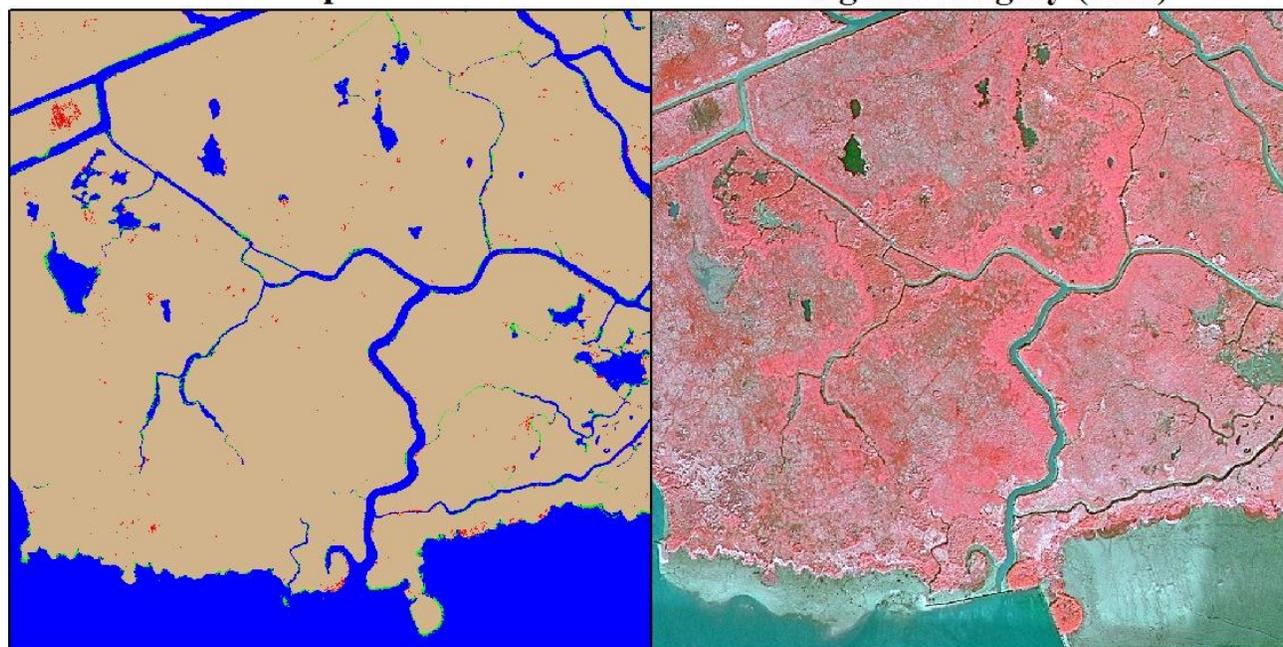
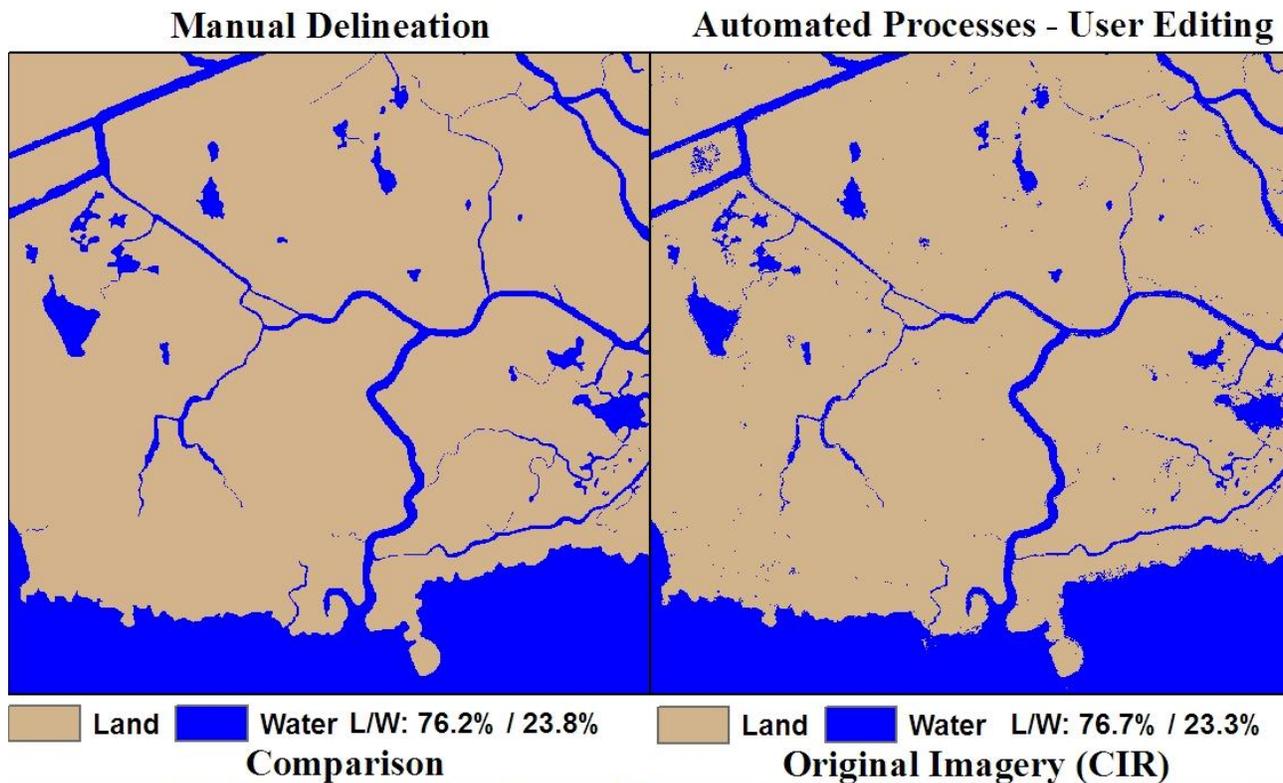


Figure 3. Illustration of the land/water classification products at CRMS0326 created by two methodologies: Manual Delineation Intensive Methodology (Option 1) versus Automated Classification with *Minimal Data Improvement* via Manual Delineation (Option 2).

CRMS0517 - 2008 Land/Water Classification Comparisons



Category	Pixels
Land - Agree	758738
Water - Agree	228763
Automated method calling more water	4295
Automated method calling more land	9204
Percentage of pixels which agree	98.65%
Percentage of pixels which disagree	1.35%

Figure 4. Illustration of the land/water classification products at CRMS0517 created by two methodologies: Manual Delineation Intensive Methodology (Option 1) versus Automated Classification with *Minimal* Data Improvement via Manual Delineation (Option 2).

CRMS0614 - 2008 Land/Water Classification Comparisons

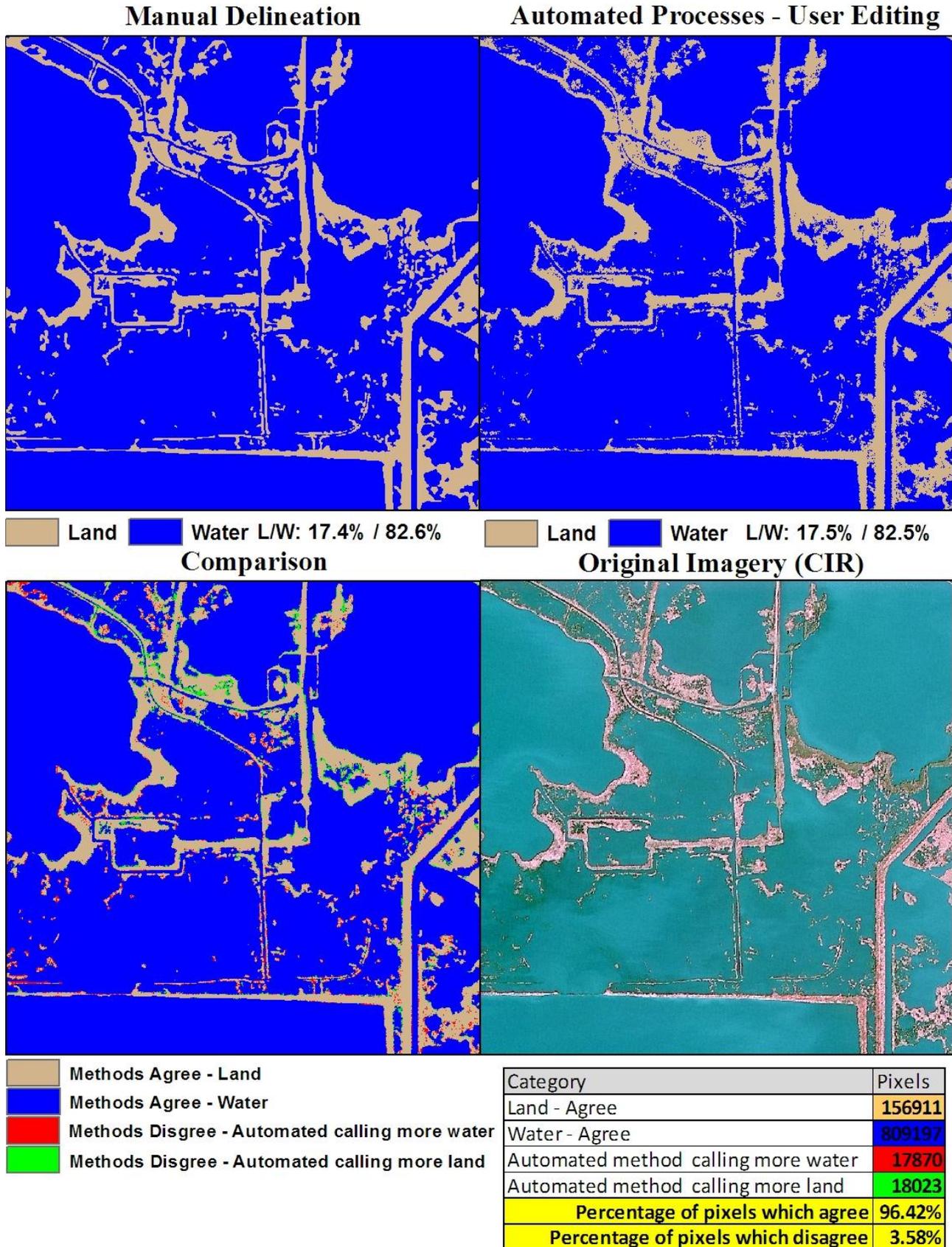


Figure 5. Illustration of the land/water classification products at CRMS0614 created by two methodologies: Manual Delineation Intensive Methodology (Option 1) versus Automated Classification with *Minimal* Data Improvement via Manual Delineation (Option 2).

CRMS3601 - 2008 Land/Water Classification Comparisons

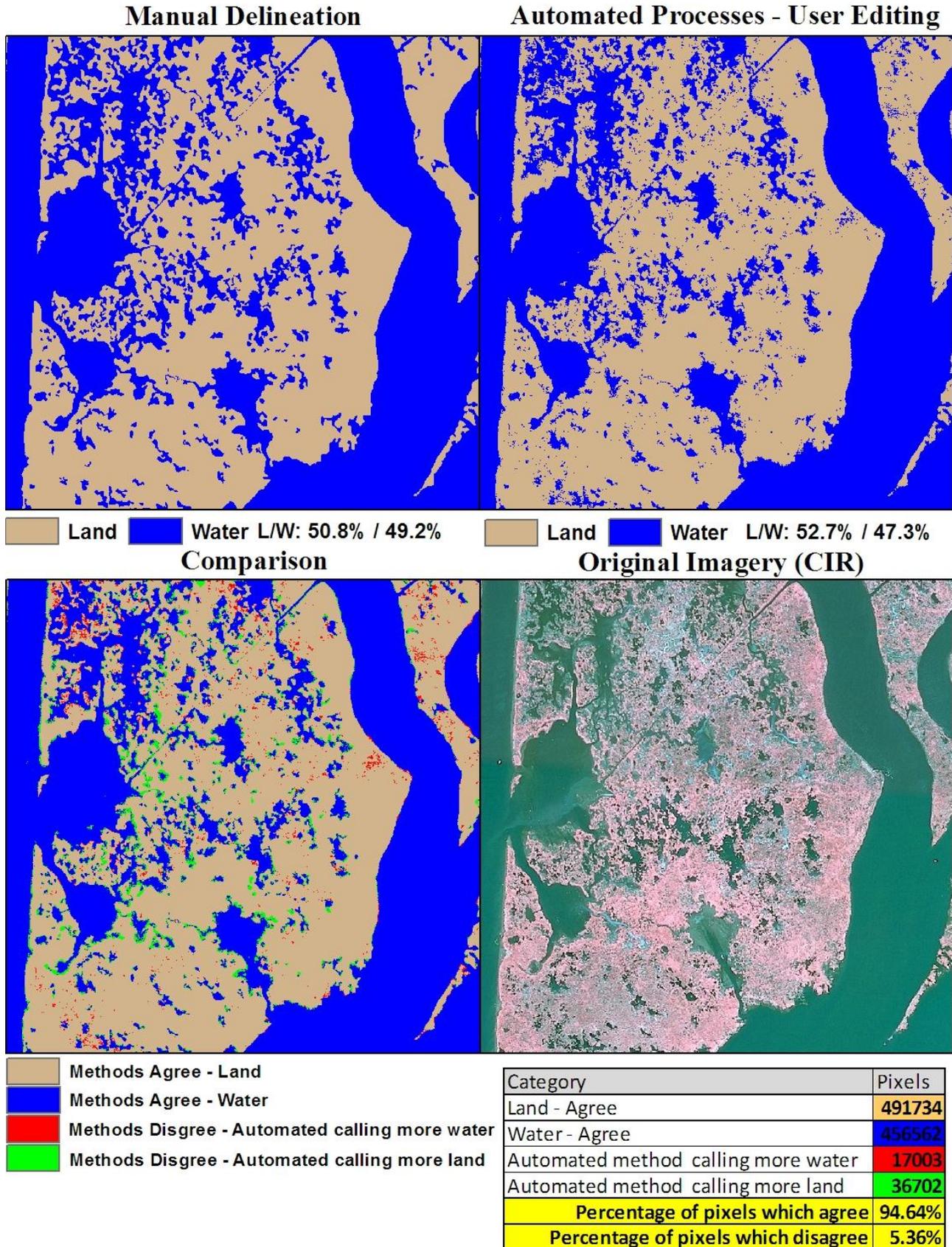


Figure 6. Illustration of the land/water classification products at CRMS3601 created by two methodologies: Manual Delineation Intensive Methodology (Option 1) versus Automated Classification with *Minimal* Data Improvement via Manual Delineation (Option 2).

Test Results:

Overall, the six CRMS sites chosen as test cases displayed similarities in their land/water classifications. The difference in the estimate of land area percent by the two methods ranged from 0.02% to 1.97%, with an average of 0.77% (1.9 acres). At most of the test sites (excluding CRMS0128) the automated methodology classified a greater percentage of the image as 'land' as compared to manual delineation. This was expected as automated methodologies generally have greater difficulty recognizing features such as FAV compared to an image analyst. However, the automated methodology proposed here was capable of recognizing FAV. CRMS0128 is evidence of the automated methodologies ability to classify FAV, as this site contained a large amount of area dominated by FAV.

While the overall land/water ratios were similar across the two methods (mean: 0.77% difference), that measure is only appropriate if the user is only interested in comparing an overall area of land and water for the 1km boundary. If the user is interested in the exact location of land and water features within the site, a more appropriate statistic would be a pixel-by-pixel comparison of the classifications resulting from the two methodologies. The average difference in pixel-by-pixel comparisons between the manual method and the automated method with user editing was 3.68% (9.09 acres). It is important to note that 3.68% does not necessarily imply 3.68% error in one classification or the other. Both classification methods contain errors, and as such, 'difference' cannot be interpreted as 'error.'

For example, the 'difference' shown in red in Figure 7 represents areas which were classified as land via the manual delineation method, but water via the automated methodology. While often times the manual method can better recognize complex features such as shadows and FAV, in this case, the automated method appears to have classified the area more accurately.

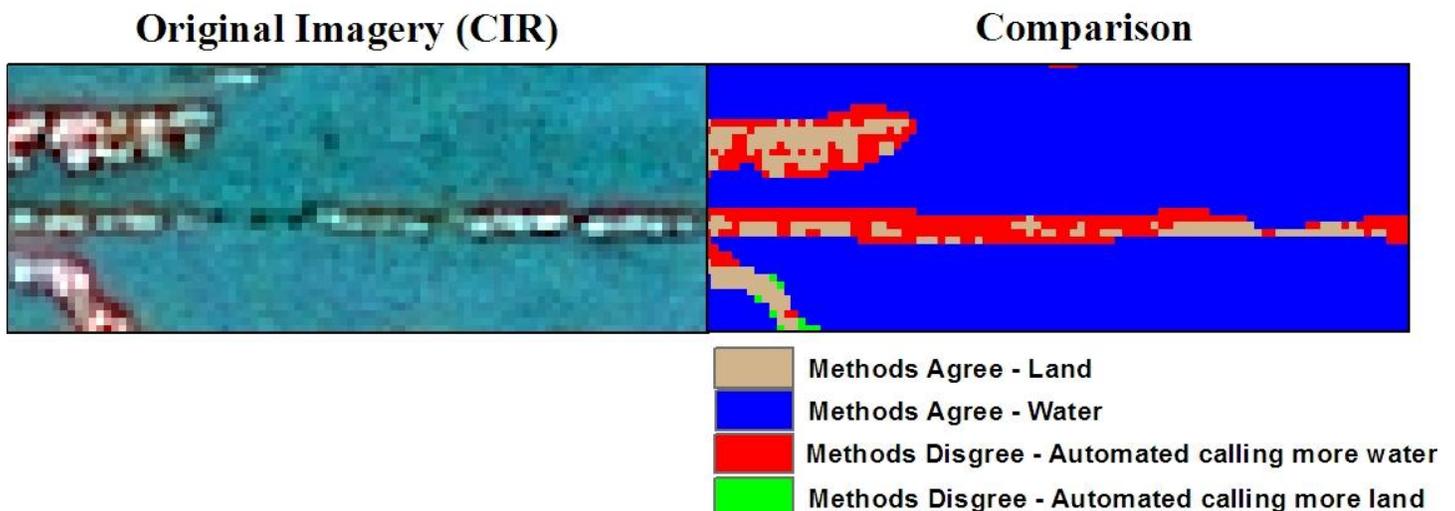


Figure 7. Illustration of 'difference' vs. 'error'. The areas shown in red represent difference between the two methodologies, but are likely not 'error' in many areas of the automated methodology classification.

Tradeoffs:

As with any consideration of the pros and cons of multiple different methodologies, there are trade-offs inherent in each methodology. While the automated methods represent significant cost and time savings, there are some aspects of the method that are inferior to manual delineation. A prime example would be shadows. In high resolution imagery, shadows distort or mask the expected spectral characteristics of a target and make it very difficult for an automated classification to correctly identify them. Another example would occur in areas of

thick-FAV. Depending upon the species and reflectance characteristics of vegetation at these sites, it can be difficult for an automated methodology to recognize these sites as water. Both shadows and FAV underscore the importance of the data improvements stage which will involve manual recoding of errors by a skilled image analyst.

Specific trade-offs are listed below:

Option 1: Manual Delineation Intensive Methodology

Pros:

- Most rigorous and accurate delineation of land and water categories
- Able to resolve complex features
- Consistent with 2005 and 2008 CRMS analyses
- Substantial Quality Control
- Comparable to previous 2005 and 2008 CRMS analyses

Cons:

- Most costly and time consuming option

Option 2: Automated Classification with *Minimal* Data Improvement via Manual Delineation

Pros:

- Cheapest and most time-efficient option
- Maintains relatively comparable accuracies in most areas

Cons:

- Will likely represent a reduction in accuracy, particularly in areas of transition among land and water categories, shadows, and areas containing aquatic vegetation.
- Different method from 2005 and 2008 CRMS analyses
- Minimum Quality Control

Option 3: Automated Classification with *Moderate* Data Improvement via Manual Delineation

Pros:

- Attempts to utilize the best aspects of Options 1 and 2, taking advantage of the automation proposed in Option 2, while conducting moderate levels of data improvement by image analysts.
- Represents a substantial cost-saving as compared to Option 1.
- Moderate Quality Control

Cons:

- Will likely represent a slight reduction in accuracy as compared to Option 1.
- Represents a moderate cost-increase as compared to Option 2.
- Different method from 2005 and 2008 CRMS analyses

Accuracy Assessments:

Edge Accuracy Assessment:

An edge accuracy assessment was conducted to determine accuracy along the edges where most editing takes place. Because the edge that separates land and water is not as simple as black and white, the exact location that marks the edge will need some human optical intervention. Some factors that make this distinction difficult: low or high water, transitional areas, mud flats, imagery color (hue, tint, shade and tone), tree or brush canopy, aquatics (rooted and floating) and man-made structures. The more broken-up (or patchiness) an image, the more necessary it is to check edges and make edits if needed. This accuracy assessment focuses on the edge and attempts to quantify results along this transition zone. For this assessment, the dividing line that separates land and water is buffered 10 meters along each side of this line. Using a stratified random sampling method, an equal number of points were selected 2 meters on either side of the land-water dividing line. The tables below detail land-water calls for reference data for both Options 1 (manual) and 2 (auto).

Site 2

Reference Data

	Land	Water
--	------	-------

Map Data	Manual	Land	Water	Total
	Land		49	
Water		6	42	48
Total		55	45	100

Producer's Accuracy

Land	89
Water	93

User's Accuracy

Land	94
Water	88

Overall Accuracy

91.0

Site 2

Reference Data

	Land	Water
--	------	-------

Map Data	Auto	Land	Water	Total
	Land		45	
Water		6	42	48
Total		51	49	100

Producer's Accuracy

Land	88
Water	86

User's Accuracy

Land	87
Water	88

Overall Accuracy

87.0

Site 128 Reference Data

Land Water

Map Data	Manual	Land	Water	Total
	Land	48	2	50
	Water	9	41	50
Total		57	43	100

Producer's Accuracy

Land 84
Water 95

User's Accuracy

Land 96
Water 82

Overall Accuracy

89.0

Site 128 Reference Data

Land Water

Map Data	Auto	Land	Water	Total
	Land	45	9	54
	Water	5	41	46
Total		50	50	100

Producer's Accuracy

Land 90
Water 82

User's Accuracy

Land 83
Water 89

Overall Accuracy

86.0

Site 326

Reference Data

Land Water

Map Data	Manual	Land	Water	Total
	Land	53	3	56
	Water	11	33	44
Total		64	36	100

Producer's Accuracy

Land 83
Water 92

User's Accuracy

Land 95
Water 75

Overall Accuracy

86.0

Site 326

Reference Data

Land Water

Map Data	Auto	Land	Water	Total
	Land	51	17	68
	Water	5	27	32
Total		56	44	100

Producer's Accuracy

Land 91
Water 61

User's Accuracy

Land 75
Water 84

Overall Accuracy

78.0

Site 517

Reference Data

Land Water

Map Data

Manual	Land	Water	Total
Land	48	3	51
Water	5	44	49
Total	53	47	100

Producer's Accuracy

Land 91
Water 94

User's Accuracy

Land 94
Water 90

Overall Accuracy
92.0

Site 517

Reference Data

Land Water

Map Data

Auto	Land	Water	Total
Land	48	10	58
Water	3	39	42
Total	51	49	100

Producer's Accuracy

Land 94
Water 80

User's Accuracy

Land 83
Water 93

Overall Accuracy
87.0

Site 614

Reference Data

Land Water

Map Data

Manual	Land	Water	Total
Land	36	17	53
Water	2	45	47
Total	38	62	100

Producer's Accuracy

Land 95
Water 73

User's Accuracy

Land 68
Water 96

Overall Accuracy
81.0

Site 614

Reference Data

Land Water

Map Data

Auto	Land	Water	Total
Land	39	8	47
Water	13	40	53
Total	52	48	100

Producer's Accuracy

Land 75
Water 83

User's Accuracy

Land 83
Water 75

Overall Accuracy
79.0

**Site
3601**

Reference Data
Land Water

Map Data	Manual	Land	Water	Total
	Land	47	6	53
	Water	5	42	47
	Total	52	48	100

Producer's
Accuracy

Land	90
Water	88

User's Accuracy

Land	89
Water	89

Overall Accuracy
89.0

**Site
3601**

Reference Data
Land Water

Map Data	Auto	Land	Water	Total
	Land	49	19	68
	Water	4	28	32
	Total	53	47	100

Producer's
Accuracy

Land	92
Water	60

User's Accuracy

Land	72
Water	88

Overall Accuracy
77.0

Overall Accuracy Assessment:

While the previously described edge accuracy assessment is particularly informative with regard to specific areas of the classifications, it is important to distinguish this from an overall accuracy assessment. A second accuracy assessment was conducted to compare the overall accuracies of the two methods. In this case, the random points were constrained to only those areas in which the classification methods disagreed. One hundred, random, stratified points were selected within the disagreement areas. An image analyst looked at each point and assigned a “user-truth” classification. The results of this analysis are seen below in Table 1. This table relies upon the assumption that areas that agree are correct. As any inaccuracies in “agreement” areas would affect the accuracy of both classification methods in the same direction, it maintains the information of interest to this particular exercise, which is a comparison of the accuracies of the two methods. It also applies the ratio of correct vs. incorrect calls for each of the methods to the larger sample of disagreement pixels.

Table 1. Overall Accuracy Assessment Comparison of manual and automated approaches.

CRMS0002								
Category	Pixels	# correct manual	# correct auto	% correct manual	% correct auto	Accurate Manual	Accurate Auto	
Land - Agree	511186	NA	NA	Assumed 100%	Assumed 100%	511186	511186	
Water - Agree	455015	NA	NA	Assumed 100%	Assumed 100%	455015	455015	
Manual - Land; Automated - Water	15072	17	23	42.50%	57.50%	6406	8666	Positive: Manual Better
Manual - Water; Automated - Land	20728	33	25	56.90%	43.10%	11794	8934	Difference in Overall Accuracy
Percentage of pixels which agree	96.43%					Overall Accuracy	98.24%	98.18%
Percentage of pixels which disagree	3.57%							0.06%

CRMS0128								
Category	Pixels	# correct manual	# correct auto	% correct manual	% correct auto	Accurate Manual	Accurate Auto	
Land - Agree	415515	NA	NA	Assumed 100%	Assumed 100%	415515	415515	
Water - Agree	533103	NA	NA	Assumed 100%	Assumed 100%	533103	533103	
Manual - Land; Automated - Water	29883	30	24	55.56%	44.44%	16602	13281	Positive: Manual Better
Manual - Water; Automated - Land	25503	30	16	65.22%	34.78%	16632	8871	Difference in Overall Accuracy
Percentage of pixels which agree	94.48%					Overall Accuracy	97.79%	96.69%
Percentage of pixels which disagree	5.52%							1.10%

CRMS0326								
Category	Pixels	# correct manual	# correct auto	% correct manual	% correct auto	Accurate Manual	Accurate Auto	
Land - Agree	489150	NA	NA	Assumed 100%	Assumed 100%	489150	489150	
Water - Agree	485115	NA	NA	Assumed 100%	Assumed 100%	485115	485115	
Manual - Land; Automated - Water	7749	12	17	41.38%	58.62%	3206	4543	Positive: Manual Better
Manual - Water; Automated - Land	18986	39	32	54.93%	45.07%	10429	8557	Difference in Overall Accuracy
Percentage of pixels which agree	97.33%					Overall Accuracy	98.69%	98.64%
Percentage of pixels which disagree	2.67%							0.05%

CRMS0517								
Category	Pixels	# correct manual	# correct auto	% correct manual	% correct auto	Accurate Manual	Accurate Auto	
Land - Agree	758738	NA	NA	Assumed 100%	Assumed 100%	758738	758738	
Water - Agree	228763	NA	NA	Assumed 100%	Assumed 100%	228763	228763	
Manual - Land; Automated - Water	4295	27	2	93.10%	6.90%	3999	296	Positive: Manual Better
Manual - Water; Automated - Land	9204	23	45	33.82%	66.18%	3113	6091	Difference in Overall Accuracy
Percentage of pixels which agree	98.65%					Overall Accuracy	99.36%	99.29%
Percentage of pixels which disagree	1.35%							0.07%

CRMS0614								
Category	Pixels	# correct manual	# correct auto	% correct manual	% correct auto	Accurate Manual	Accurate Auto	
Land - Agree	156911	NA	NA	Assumed 100%	Assumed 100%	156911	156911	
Water - Agree	809197	NA	NA	Assumed 100%	Assumed 100%	809197	809197	
Manual - Land; Automated - Water	17870	7	43	14.00%	86.00%	2502	15368	Negative: Automated Better
Manual - Water; Automated - Land	18023	40	10	80.00%	20.00%	14418	3605	Difference in Overall Accuracy
Percentage of pixels which agree	96.42%					Overall Accuracy	98.11%	98.31%
Percentage of pixels which disagree	3.58%							-0.20%

CRMS3601								
Category	Pixels	# correct manual	# correct auto	% correct manual	% correct auto	Accurate Manual	Accurate Auto	
Land - Agree	491734	NA	NA	Assumed 100%	Assumed 100%	491734	491734	
Water - Agree	456562	NA	NA	Assumed 100%	Assumed 100%	456562	456562	
Manual - Land; Automated - Water	17003	8	24	25.00%	75.00%	4251	12752	Negative: Automated Better
Manual - Water; Automated - Land	36702	38	30	55.88%	44.12%	20510	16192	Difference in Overall Accuracy
Percentage of pixels which agree	94.64%					Overall Accuracy	97.11%	97.53%
Percentage of pixels which disagree	5.36%							-0.42%

The results of this analysis indicate the manual classification method is still more accurate overall in most cases. But these results suggest the degree of that increase in accuracy is generally small. CRMS0128 is an exception in that the overall difference in accuracy was still 1.1% (2.7 acres). This area contained large areas of aquatic vegetation and the automated method is experiencing difficulty classifying in these types of conditions. In a couple of sites, the automated actually performs better, but again, the differences are small. Overall, the average difference in overall accuracies is 0.11% (0.27 acres).

Accuracy Requirements:

Though the testing has shown overall similarities in certain aspects of the two methodologies, with significant differences with regard to other aspects, the question of interest becomes: What level of accuracy is needed by the partners and resource managers who may utilize this data? The answer to this question has proven elusive as the partners are uncertain regarding what level of accuracy they need, and as such, are looking to NWRC to provide guidance. Ideally, the datasets would be able to discern wetland changes, and provide a level of confidence that those changes are greater than the error inherent in the datasets.

Wetland change rates vary spatially, and as such, the ‘real’ change that may be expected at any given CRMS site will also vary. This variability however can be quantified to provide some meaningful context to this discussion. Figure 8 details the spatial variability of observed, average wetland change rates (1983-2009) expressed as percent change per year. The dataset reveals that wetland change rates range from +1.78%/yr* to -2.16%/yr*. As seen in Figure 8, the highest wetland change rates can be expected in CRMS sites falling in lower portions of Terrebonne and Barataria basins, upper Breton Sound basin, areas of rapid land building such as Wax Lake Outlet, and small pockets of rapid change in the Chenier Plain.

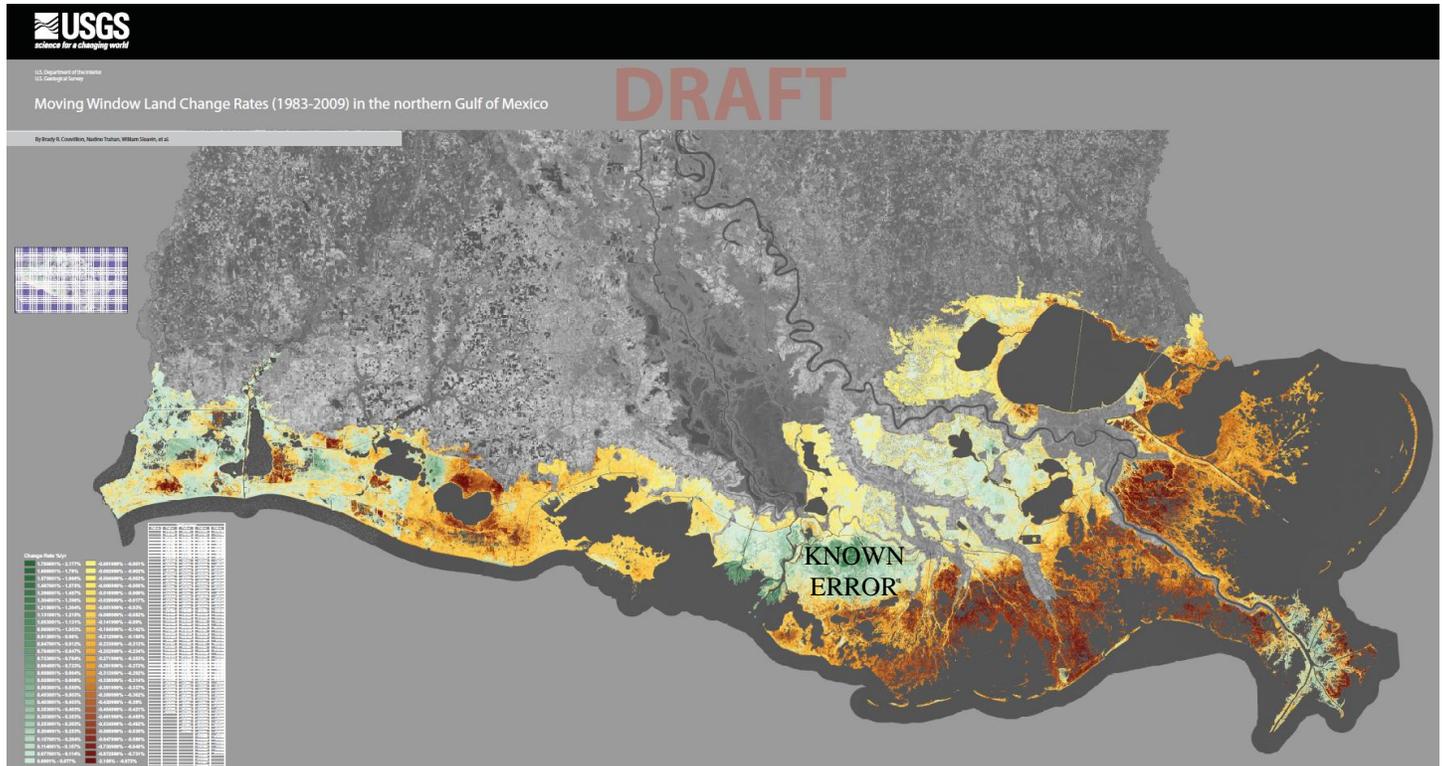


Figure 8. Illustration of the spatial variability of observed, average wetland change rates (1983-2009) expressed as percent change per year. This is a DRAFT product, not for release. It was created 3 years ago and the known error in the Upper Penchant region has since been resolved. It is shown merely to provide some context into the percent change we might reasonably expect to see in various CRMS sites depending upon their location.

*Note: Extreme events can lead to wetland change rates even higher than the range presented. These are long-term averages.

Coastwide, the wetland change rate may be expected to average approximately -0.3%/yr*. As the high-resolution land/water classifications are typically conducted every 3 years, that would lead to an average expected change of -0.9%*, with ranges from +5.34% to -6.48% or higher. This would mean the accuracy required for any given CRMS site would vary depending upon the change observed between the two dates the user desires to compare. Some sites which experience change at the extremes of the expected range are likely to have change which exceeds uncertainty. Conversely, some sites which experience very little change may have observed change that falls within the uncertainty bounds. Fortunately, accuracy also tends to vary with changes in image composition and complexity and as such, sites which experience less ‘real’ change may often have higher accuracies. However, it is unlikely that either methodology would be able to obtain the accuracies necessary for statistically valid comparisons at all CRMS sites. For this reason, it may be beneficial to interpret any observed change in the context of moderate resolution data with a higher temporal resolution to understand long term trends and reduce the impact of error potentially present in one date.

USGS Recommendation:

The USGS recommendation is to follow Option 3, Automated Classification with Moderate Data Improvement via Manual Delineation. This approach will most closely match the accuracies from the manual classification while providing cost and time savings by incorporation of automated processes. Figure 9 illustrates the differences in all three options for a particularly difficult site, CRMS4355. This site was chosen as it contained several features which complicate land/water classification including aquatic vegetation and shallow mud flats. All three options contain errors, and as mentioned in previous examples, difference does not equate to error, but knowing how different the options are from one another can still be informative.

In this case, Option 2 was 4.5% different from the original Option 1 product. Option 3 was 4.4% different than the original Option 1 product, and Options 2 and 3 contained 2.82% differences from one another. This lower difference between Options 2 and 3 may illustrate the improvements fostered by utilizing the strengths of the two methods in a hybrid approach.

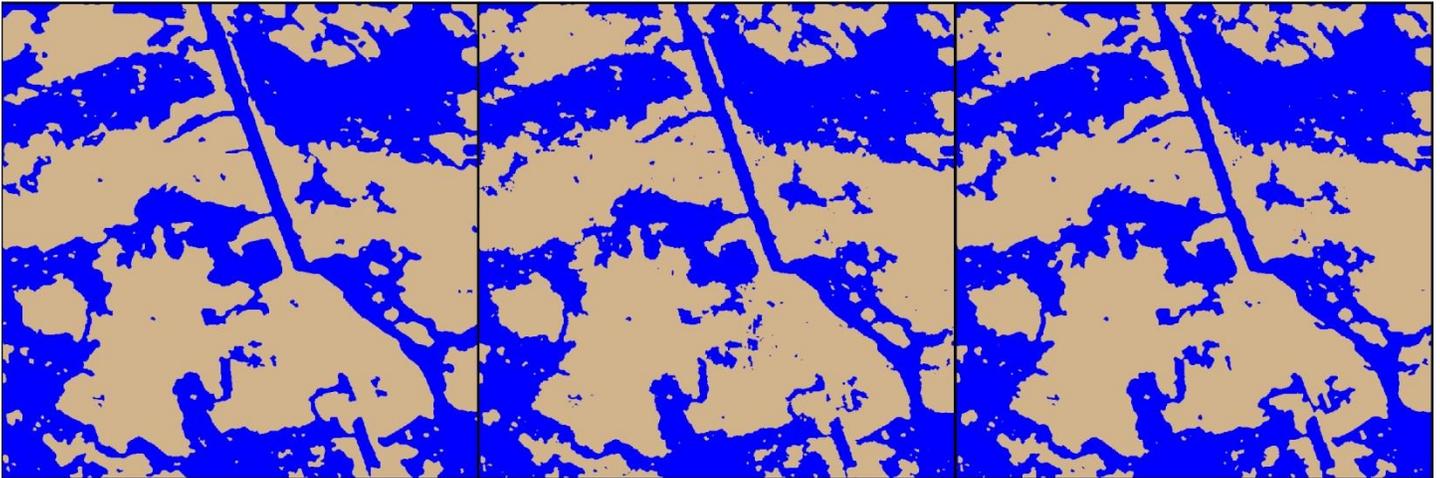
CRMS 4355 - 2008 - Original Imagery



Option 1 Land Water Product

Option 2 Land Water Product

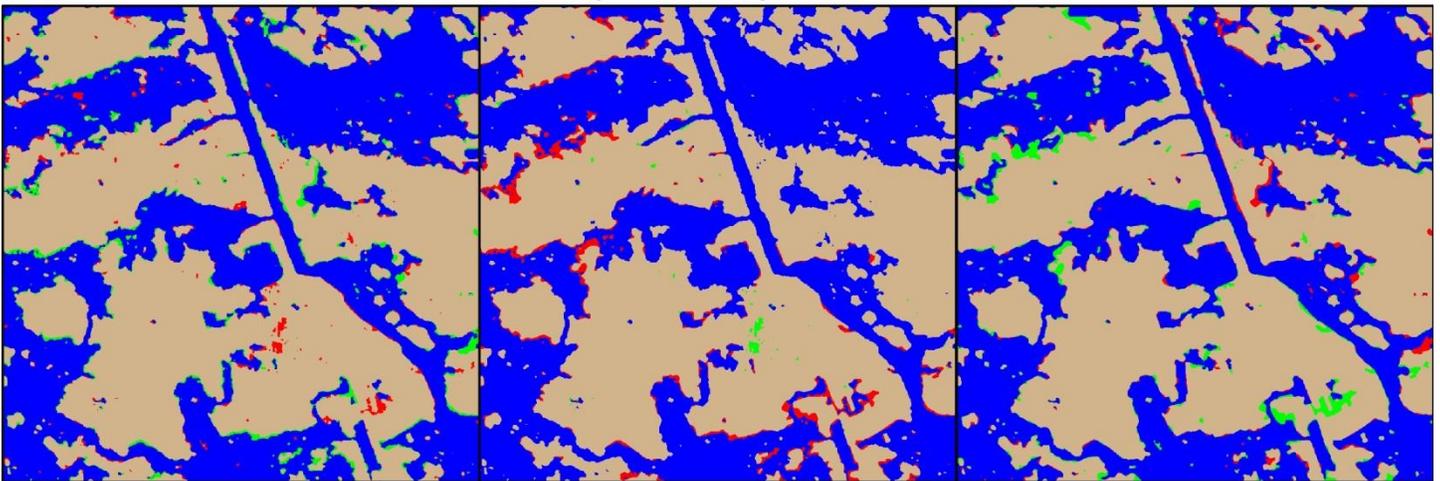
Option 3 Land Water Product



Option 1 vs. Option 2

Option 2 vs. Option 3

Option 3 vs. Option 1



4.5% difference

2.82% difference

4.26% difference

Figure 9. Illustration of all three options for land/water classification for one test site, CRMS4355.

Because difference does not equate to error, an accuracy assessment was conducted on just the edge portions of the image to quantify the errors in the edge zone in Options 2 and 3 (Table 2).

Table 2. Edge Accuracy Assessment Comparison of Option 2 and 3 approaches.

Site 4355		Reference Data			Site 4355		Reference Data			
Option 2		Land	Water		Option 3		Land	Water		
Map Data	Manual	Land	Water	Total	Map Data	Auto	Land	Water	Total	
	Land	71	17	88		Land	96	3	99	
	Water	65	47	112		Water	40	61	101	
	Total	136	64	200		Total	136	64	200	
Producer's Accuracy					Producer's Accuracy					
Land		52				Land		71		
Water		73				Water		95		
User's Accuracy					User's Accuracy					
Land		81				Land		97		
Water		42				Water		60		
Overall Accuracy					Overall Accuracy					
59.0					78.5					

These results suggest that the increased editing time permitted by Option 3 improve accuracy in land/water transition areas which are of particular interests in change assessments.

Deliverables:

Deliverables will include:

- Geospatial datasets characterizing land/water for each CRMS site for the 1 km² boundary
- Federal Geographic Data Committee compliant metadata for each dataset
- Land/water maps created in the CWPPRA approved templates for display on the CRMS website and/or reports. These maps will include overall statistics on the amount of land and water for each CRMS site.

Timeline:

Option 1: Manual Delineation Intensive Methodology

Fall 2013 – December 30, 2015

Option 2: Automated Classification with Minimal Data Improvement via Manual Delineation

August 1, 2013 – May 30, 2014

Option 3: Automated Classification with Moderate Data Improvement via Manual Delineation

Fall 2013 – June 30, 2015

Cost Estimates:

Option 1: Manual Delineation Intensive Methodology - \$497,945

Option 2: Automated Classification with Minimal Data Improvement via Manual Delineation - \$176,515

Option 3: Automated Classification with Moderate Data Improvement via Manual Delineation - \$355,493

Points of Contact:

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Email: jonesb@usgs.gov

References:

- Couvillion, B.R.; Barras, J.A.; Steyer, G.D.; Sleavin, W.; Fischer, M.; Beck, H.; Trahan, N.; Griffin, B., and Heckman, D., 2011. Land area change in coastal Louisiana from 1932 to 2010. U.S. Geological Survey Scientific Investigations Map 3164, scale 1:265,000, 1 sheet, 12 p. pamphlet.
- Homer, C., Huang, C., Yang, L., Wylie, B., and Coan, M. 2004. Photogrammetric Engineering & Remote Sensing, 70(7):829–840.
- Quinlan, J. R. 1993. C4.5: Programs for Machine Learning. San Mateo: Morgan Kaufmann.

Murry, Allison N CONTRACTOR @ MVN

From: Dona Weifenbach [Dona.Weifenbach@LA.GOV]
Sent: Wednesday, July 31, 2013 10:26 AM
To: Murry, Allison N CONTRACTOR @ MVN; Bren Haase; britt.paul@la.usda.gov; Darryl Clark; Holden, Thomas A MVN; Karen McCormick (McCormick.Karen@epamail.epa.gov); Richard.Hartman@noaa.gov
Cc: Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; 'Roy, Kevin'; Chris Allen (CPRA); Chavarria, Adrian; Sarai Piazza (piazas@usgs.gov)
Subject: RE: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

All,
No, CRMS would not have requested a budget increase had either of the other options been selected. The original budget was based on the cost of Option 1 analyses. The CRMS team is always investigating ways to update our methodology for all data types as technology improves and we are pleased to provide this cost savings for land/water analysis. Unfortunately, the trend has been that costs tend to increase over time, therefore, I think the funds should remain in the CRMS program. As with all of the other CWPPRA projects with a 20 year life, it is my understanding that we do not move unspent funds out of the project because one sampling event (or construction feature or O&M event) came under budget. We wait until all work is completed and at the end of the project, return the funds to the program.

Thanks,
Dona

Dona Weifenbach
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Office (337) 482-0688 Fax (337) 482-0687 dona.weifenbach@la.gov

For CRMS website
<http://www.lacoast.gov/crms>

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

From: Murry, Allison N CONTRACTOR @ MVN [mailto:Allison.Murry@usace.army.mil]
Sent: Tuesday, July 30, 2013 12:38 PM
To: Bren Haase; britt.paul@la.usda.gov; Darryl Clark; Holden, Thomas A MVN; Karen McCormick (McCormick.Karen@epamail.epa.gov); Richard.Hartman@noaa.gov
Cc: Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; 'Roy, Kevin'; Chris Allen (CPRA); Chavarria, Adrian
Subject: RE: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Technical Committee,

Thank you for your quick responses. We have an electronic vote concurrence to approve Option 2.

While it has been approved, Rick did have the following question:

"Had we gone with any of the other options, would the CRMS program had to request a budget increase? If the answer is no, obviously there should be a return of some funds to the program..."

Thanks,
Allison

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

From: Murry, Allison N CONTRACTOR @ MVN
Sent: Tuesday, July 30, 2013 10:16 AM
To: 'Bren Haase'; 'britt.paul@la.usda.gov'; 'Darryl Clark'; 'Holden, Thomas A MVN'; 'Karen McCormick (McCormick.Karen@epamail.epa.gov)'; 'Richard.Hartman@noaa.gov'
Cc: 'Dona Weifenbach'; Inman, Brad L MVN; 'Rachel Sweeney - NOAA Federal'; 'Cecelia Linder - NOAA Federal'; 'Jurgensen, John - NRCS, Alexandria, LA'; 'Roy, Kevin'; 'Chris Allen (CPRA)'; 'Chavarria, Adrian'
Subject: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Technical Committee,

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Option 1: Manual Delineation Intensive Method, currently used by USGS: \$497,945; Begin Fall 2013 - December 30, 2015.

Most rigorous and accurate delineation method, and able to resolve complex features, also most costly and time consuming.

[RECOMMENDED] Option 2: Automated Classification with Minimal Data Improvements via Manual Delineation: \$176,515; Begin August 1, 2013 - May 30, 2014

Least expensive and most time efficient option. Land/water classification is largely automated with very limited amounts of data improvement by an image analyst. This option will

result in a reduction in accuracy particularly in areas with shadows, floating aquatic vegetation, and areas along the land/water transition.

Option 3: Automated classification with Moderate Data Improvement via Manual Delineation:
\$355,493; Begin Fall 2013, - June 20, 2015

This method was recommended by USGS for the 2012 analysis. This option uses the same automation proposed in Option 2 but with moderate level of data improvement by image analysts.

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Thank you,
Allison Murry
CWPPRA Program
USACE New Orleans
Tel: 504.862.2075

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Murry, Allison N CONTRACTOR @ MVN

From: McCormick, Karen [McCormick.Karen@epa.gov]
Sent: Tuesday, July 30, 2013 11:14 AM
To: Murry, Allison N CONTRACTOR @ MVN; bren.haase@la.gov; britt.paul@la.usda.gov; Darryl Clark; Holden, Thomas A MVN; Richard.Hartman@noaa.gov
Cc: Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; 'Roy, Kevin'; Chris Allen (CPRA); Chavarria, Adrian
Subject: RE: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

EPA also concurs with the Monitoring WG and the P&E's recommendation to use the Option 2 method for land/water analysis.

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Cc: Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; 'Roy, Kevin'; Chris Allen (CPRA); Chavarria, Adrian
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CWPPRA Program
USACE New Orleans
Tel: 504.862.2075

Classification: UNCLASSIFIED
Caveats: NONE

Murry, Allison N CONTRACTOR @ MVN

From: Bren Haase [Bren.Haase@LA.GOV]
Sent: Tuesday, July 30, 2013 2:02 PM
To: Murry, Allison N CONTRACTOR @ MVN
Cc: britt.paul@la.usda.gov; Darryl Clark; Holden, Thomas A MVN; Karen McCormick (McCormick.Karen@epamail.epa.gov); Richard.Hartman@noaa.gov; Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; Roy, Kevin; Chris Allen (CPRA); Chavarria, Adrian
Subject: Re: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

We concur with the Monitoring WG and the P&E's recommendation to use the Option 2 methodology.

On Jul 30, 2013, at 10:16 AM, "Murry, Allison N CONTRACTOR @ MVN" <Allison.Murry@usace.army.mil> wrote:

> Classification: UNCLASSIFIED

> Caveats: NONE

>

> Technical Committee,

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> Thank you,

> Allison Murry

> CWPPRA Program

> USACE New Orleans

> Tel: 504.862.2075

>

>

>

>

>

> Classification: UNCLASSIFIED

> Caveats: NONE

>

>

> <CRMS_DRAFT_Land_Water_Classification_Proposal_070813_RESubmittedMWG.PDF>

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From: McCormick, Karen [McCormick.Karen@epa.gov]
Sent: Tuesday, July 30, 2013 11:14 AM
To: Murry, Allison N CONTRACTOR @ MVN; bren.haase@la.gov; britt.paul@la.usda.gov; Darryl Clark; Holden, Thomas A MVN; Richard.Hartman@noaa.gov
Cc: Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; 'Roy, Kevin'; Chris Allen (CPRA); Chavarria, Adrian
Subject: RE: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

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Allison Murry
CWPPRA Program
USACE New Orleans
Tel: 504.862.2075

Classification: UNCLASSIFIED
Caveats: NONE

Murry, Allison N CONTRACTOR @ MVN

From: Darryl Clark [darryl_clark@fws.gov]
Sent: Tuesday, July 30, 2013 11:12 AM
To: Paul, Britt - NRCS, Alexandria, LA; Murry, Allison N CONTRACTOR @ MVN; Bren Haase; Holden, Thomas A MVN; Karen McCormick; Richard.Hartman@noaa.gov
Cc: Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; Kevin Roy; Chris Allen (CPRA); Chavarria, Adrian; Robert Dubois; Jeff Weller
Subject: RE: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

FWS also concurs with the Monitoring WG and the P&E's recommendation to use the Option 2 method for land/water analysis.

Darryl

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

From: Paul, Britt - NRCS, Alexandria, LA [mailto:britt.paul@la.usda.gov]
Sent: Tuesday, July 30, 2013 10:46 AM
To: Murry, Allison N CONTRACTOR @ MVN; Bren Haase; Darryl Clark; Holden, Thomas A MVN; Karen McCormick (McCormick.Karen@epamail.epa.gov); Richard.Hartman@noaa.gov
Cc: Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; 'Roy, Kevin'; Chris Allen (CPRA); Chavarria, Adrian
Subject: RE: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

Allison,
NRCS concurs with option 2.

Britt

W. Britt Paul, P.E.
Assistant State Conservationist WR
USDA-NRCS
318-473-7756
cell 318-613-7988
britt.paul@la.usda.gov

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

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Sent: Tuesday, July 30, 2013 10:16 AM
To: Bren Haase; Paul, Britt - NRCS, Alexandria, LA; Darryl Clark; Holden, Thomas A MVN; Karen McCormick (McCormick.Karen@epamail.epa.gov); Richard.Hartman@noaa.gov
Cc: Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; 'Roy, Kevin'; Chris Allen (CPRA); Chavarria, Adrian
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Thank you,
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CWPPRA Program
USACE New Orleans
Tel: 504.862.2075

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This electronic message contains information generated by the USDA solely for the intended recipients. Any unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

Murry, Allison N CONTRACTOR @ MVN

From: Richard Hartman - NOAA Federal [richard.hartman@noaa.gov]
Sent: Tuesday, July 30, 2013 11:09 AM
To: Murry, Allison N CONTRACTOR @ MVN
Cc: Bren Haase; britt.paul@la.usda.gov; Darryl Clark; Holden, Thomas A MVN; Karen McCormick (McCormick.Karen@epamail.epa.gov); Dona Weifenbach; Inman, Brad L MVN; Rachel Sweeney - NOAA Federal; Cecelia Linder - NOAA Federal; Jurgensen, John - NRCS, Alexandria, LA; Roy, Kevin; Chris Allen (CPRA); Chavarria, Adrian
Subject: Re: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

NMFS concurs. One question, had we go with any of the other options, would the CRMS program had to request a budget increase? If the answer is no, obviously there should be a return of some funds to the program...

Rick

On Tue, Jul 30, 2013 at 10:15 AM, Murry, Allison N CONTRACTOR @ MVN
<Allison.Murry@usace.army.mil> wrote:

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Subject: RE: CWPPRA MWG Decision Regarding CRMS land/water analyses -- Email Vote Requested (UNCLASSIFIED)

Allison,
NRCS concurs with option 2.

Britt

W. Britt Paul, P.E.
Assistant State Conservationist WR
USDA-NRCS
318-473-7756
cell 318-613-7988
britt.paul@la.usda.gov

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COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

STATUS OF UNCONSTRUCTED PROJECTS

For Report/Decision:

The P&E Subcommittee will report on the status of unconstructed CWPPRA projects as well as projects recommended for deauthorization, inactivation, or transfer.

- a. Unconstructed projects recommended by the project team to deauthorize:
 - Bayou Sale Shoreline Protection (TV-20), NRCS
 - Bertrandville Siphon (BS-18), EPA
- b. Unconstructed project requested by the P&E Subcommittee to transfer:
 - River Reintroduction into Maurepas Swamp (PO-20), EPA – recommended transfer to CPRA
- c. Unconstructed projects requested by the P&E Subcommittee to inactivate:
 - Ship Shoal: Whiskey West Flank Restoration (TE-47), EPA
 - Venice Ponds Marsh Creation & Crevasses (MR-15), EPA

2013 SOUP - Status Unconstructed Projects - PPL 1 - 18

Project Name	Project No.	Agency	PPL	Authorized Date/Phase I Approval	Construction/Phase II Approval	30% Design Review Date*	95% Design Review Date*	Current Approved Economic Analysis Date (Budget Estimate on Books)	Construct Start*	Construct Complete*	Current Approved Funded Budget	Expenditures	1st cost Unexpended	Monitoring Unexpended	O&M Unexpended	TOTAL Unexpended	TOTAL Unobligated	Current Total FF Cost Est . On Books	On Sched	Waiting on Phase II Funds	Proj Issue Delays	Prog Issue Delays	Recomm end Transfer	Recom mend Deautho rization	Recom mend Inactivat ion	Inactive Projects	
Sabine Refuge Marsh Creation, Cycles 4&5	CS-28-4&5	FWS	8	20-Jan-99	19-Jan-11	na	na	19-Jan-11	1-Mar-14		\$7,952,796	\$0	\$7,795,447	\$0	\$157,349	\$7,952,796	\$7,952,796	\$8,111,705	X								
Rockefeller Refuge Gulf Shoreline Stabilization	ME-18	NMFS	10	10-Jan-01		23-Sep-04	20-Sep-05	10-Jan-01			\$2,408,478	\$1,332,159	\$1,069,388	\$6,931		\$1,076,319	\$1,074,057	\$28,082,507	X								
Hydrologic Restoration & Vegetative Planting in the des Allemands Swamp	BA-34-2	EPA	10	10-Jan-01	22-Jan-15	28-Feb-14	1-Jun-14	30-May-13	1-May-14	13-May-15	\$2,362,687	\$790,945	\$1,573,747	-\$2,005		\$1,571,742	\$228,246	\$8,263,731	X								
Grand Lake Shoreline Protection, Tebo Point & O&M Only [CIAP]	ME-21a&b	NRCS	11	16-Jan-02	15-Feb-07	11-May-04	16-Aug-04	15-Feb-07	1-Sep-14	30-Dec-14	\$10,055,616	\$804,453	\$2,944,577	\$14,559	\$6,306,586	\$9,265,722	\$9,279,733	\$24,117,374	X								
Madison Bay Marsh Creation and Terracing	TE-51	NMFS	16	18-Oct-06		23-Jul-13	24-Oct-13	18-Oct-06			\$3,002,171	\$191,455	\$1,810,716			\$1,810,716	\$364,617	\$38,798,788	X								
West Pointe a la Hache Marsh Creation	BA-47	NRCS	17	25-Oct-07	22-Jan-15	1-Jun-14	1-Sep-14		1-Sep-15	30-Aug-16	\$1,620,740	\$489,609	\$1,131,131			\$1,131,131	\$327,316	\$16,136,639	X								
Bayou Dupont Ridge and Marsh Restoration	BA-48	NMFS	17	25-Oct-07	19-Jan-11	29-Jun-10	27-Oct-10		1-Oct-13	1-Oct-14	\$37,984,593	\$1,537,487	\$36,476,524	\$5,252	\$348,418	\$36,830,194	\$5,488,512	\$38,539,615	X								
South Lake Lery Shoreline and Marsh Restoration	BS-16	FWS	17	25-Oct-07	19-Jan-12	27-Oct-10	16-Nov-11	15-Dec-11	1-Nov-13	1-Nov-14	\$32,238,260	\$1,515,418	\$30,672,929	\$24,938	\$24,975	\$30,722,842	\$30,523,103	\$32,466,987	X								
Central Terrebonne Freshwater Enhancement	TE-66	NRCS	18		1-Jan-16	1-May-15	1-Aug-15	18-Nov-08	1-Sep-16	1-Aug-17	\$2,326,289	\$1,077,036	\$1,249,253			\$1,249,253		\$16,640,120	X								
Grand Liard Marsh & Ridge Restoration	BA-68	NMFS	18	21-Jan-09	19-Jan-12	29-Jun-11	14-Nov-11	19-Jan-12	1-Dec-13		\$42,095,162	\$2,131,306	\$39,423,371	\$245,790	\$294,694	\$39,963,855	\$6,452,834	\$42,579,616	X								
South Grand Chenier Marsh Creation	ME-20	FWS	11	16-Jan-02	22-Jan-14	6-Aug-09	3-Nov-09	20-Jan-13	1-Dec-14	1-Dec-15	\$2,358,420	\$1,726,657	\$610,865	\$20,898		\$631,763	\$586,669	\$21,933,085		X							
Alligator Bend Marsh Restoration and Shoreline Protection	PO-34	NRCS	16	18-Oct-06	23-Jan-13	18-Aug-11	16-Nov-11	15-Nov-12	1-Sep-14	30-Aug-15	\$1,660,985	\$1,360,735	\$300,250			\$300,250	\$371,122	\$29,891,722		X							
West Pointe a la Hache Outfall Management	BA-04c	NRCS	3	01-Oct-93	23-Jan-13	2-Oct-12	21-Oct-13	5-Nov-08	1-Aug-14	1-Jan-15	\$4,269,295	\$985,240	\$1,884,581	\$798,087	\$829,138	\$3,511,806	\$3,284,055	\$5,370,526			X						
North Lake Boudreaux Basin Freshwater Intro and Hydro Mgt	TE-32a	FWS	6	na	28-Oct-10	4-Aug-09	29-Jun-10	28-Oct-10	1-Mar-14	1-May-15	\$20,048,152	\$2,705,803	\$16,549,285	\$363,872	\$429,192	\$17,342,349	\$17,094,309	\$25,766,765			X						
Cameron-Creole Freshwater Introduction	CS-49	NRCS	18		1-Jan-15	1-Jun-14	1-Aug-14	18-Nov-08	1-Sep-15	1-Aug-16	\$2,696,928	\$1,479,326	\$1,060,704			\$1,060,704		\$12,787,044			X						
River Reintroduction into Maurepas Swamp	PO-29	EPA	11	07-Aug-01	na	4-Dec-08	1-Oct-12	3-Jun-09	na	na	\$6,780,307	\$5,723,133	\$1,031,093	\$26,081		\$1,057,174	\$379,510	\$165,975,707					X				
Southwest LA Gulf Shoreline Nourishment and Protection	ME-24	COE	16	18-Oct-06	20-Jan-16	8-Apr-15	7-Jul-15	18-Oct-06	30-Jun-16	10-Jul-17	\$1,266,842	\$10,155	\$1,256,687			\$1,256,687	\$1,256,687	\$36,922,487					X				
Bayou Sale Shoreline Protection	TV-20	NRCS	13	28-Jan-04	23-Jan-13	na	na	28-Jan-04	na	na	\$2,254,912	\$1,825,126	\$429,787			\$429,787	\$456,693	\$32,103,020						X			
Bertrandville Siphon	BS-18	EPA	18	21-Jan-09	na											\$0		\$22,578,278						X			
Ship Shoal: Whiskey West Flank Restoration	TE-47	EPA	11	16-Jan-02	23-Jan-13	5-Oct-04	28-Sep-05	16-Jan-02	15-Jan-14	1-Oct-14	\$3,742,053	\$2,017,484	\$1,712,888	\$11,681		\$1,724,569	\$408,354	\$65,355,775							X		
Venice Ponds Marsh Creation & Crevasses	MR-15	EPA	15	08-Feb-06	23-Jan-13	29-Jun-11	25-Oct-11	8-Feb-06	1-Sep-13	1-Sep-14	\$1,074,522	\$400,614	\$673,908			\$673,908	\$161,184	\$22,156,292							X		
Freshwater Bayou Bank Stab - Belle Isle Canal to Lock	TV-11b	COE	9	11-Jan-00		17-Jun-02	22-Jan-04	11-Jan-00			\$1,498,967	\$1,101,738	\$283,328	\$113,901		\$397,229	\$397,229	\$35,634,067								X	

*Use actual or current schedule date for design review and construction schedules
 **CRITICAL WATCH LIST PROJECT
 ***Preliminary Analysis of Consistency
 na= Not applicable (Cash Flow, Complex, or PENDING DEAUTH)

Agency Key:

FWS
NMFS
EPA
COE
NRCS

	Current Approved Funded Budget	1st cost Unexpended	Monitoring Unexpended	O&M Unexpended	TOTAL Unexpended	TOTAL Unobligated	Current Total FF Cost Est . On Books
On Schedule	\$142,046,792	\$124,147,083	\$295,464	\$7,132,022	\$131,574,569	\$61,691,214	\$253,737,082
Waiting on Phase II \$	\$4,019,405	\$911,115	\$20,898	\$0	\$932,013	\$957,791	\$51,824,807
Project Issue Delays	\$27,014,375	\$19,494,571	\$1,161,959	\$1,258,330	\$21,914,860	\$20,378,364	\$43,924,335
Program Issue Delays							
Rec. Transfer	\$8,047,149	\$2,287,780	\$26,081	\$0	\$2,313,861	\$1,636,197	\$202,898,194
Rec. Deauthorization	\$2,254,912	\$1,825,126	\$429,787	\$0	\$429,787	\$456,693	\$54,681,298
Rec. Inactivation	\$4,816,575	\$2,418,098	\$2,386,796	\$11,681	\$2,398,477	\$569,538	\$87,512,067
Over \$50 million	\$10,522,360	\$2,743,981	\$37,762	\$0	\$2,781,743	\$787,864	\$231,331,482

Critical Watch List 2013

Note: All projects on this tab will give a status report at the September 2013 Technical Committee Meeting

Project Name	Project No.	Agency	PPL	Project Issue Delays	Near-term Milestones	Current Phase

Projects On Schedule

Project Name	Project No.	Agency	PPL	Project Status & Critical Milestone(s)	Current Phase
Sabine Refuge Marsh Creation, Cycle 4&5	CS-28-4&5	FWS	8	In June 2012 CWPPRA Task Force approved the transfer of Federal Sponsorship from USACE to FWS. A CSA has been signed between CPRA and FWS. Next dredging event is scheduled for FY14.	I
Rockefeller Refuge Gulf Shoreline Stabilization	ME-18	NMFS	10	Change in Scope approved for project June 2013 Task Force meeting. Renewed cooperative agreement (CSA) expected October 2013. 30% design review Summer 2014.	I
Hydrologic Restoration and Vegetative Planting in the des Allemands Swamp	BA-34-2	EPA	10	A scope and name change were approved by the Task Force at the June 2013 meeting. 30% design review is planned for August 2014 and 95% in October 2014.	I
Grand Lake Shoreline Protection, Tebo Point & O&M Only [CIAP]	ME-21a&b	NRCS	11	Project received MIPR and is now on schedule	II
Madison Bay Marsh Creation and Terracing	TE-51	NMFS	16	Conceptual design and preliminary cost estimates for new location developed. Project 30% design meeting is planned for July 2013.	I
West Pointe a la Hache Marsh Creation	BA-47	NRCS	17	Project design halted pending decision on BA-42 Lake Hermitage. If project is not combined with Lake Hermitage design will resume in Fall 2013 and be back on schedule with no further issues.	I
Bayou Dupont Ridge and Marsh Restoration	BA-48	NFMS	17	Notice to bidders released in June 12, 2013 with bid openings in July 25, 2013	I
South Lake Lery Shoreline and Marsh Restoration	BS-16	FWS	17	Landrights issues have delayed advertising for construction bids. Final landrights have been secured. Bid advertisement is expected in September 2013. Construction is expected to begin in February 2013.	II
Central Terrebonne Freshwater Enhancement	TE-66	NRCS	18	Project is in final stages of hydrodynamic modeling to analyze design of Grand Pass project feature. Design of preferred model scenario scheduled to begin in September 2013.	I
Grand Liard Marsh and Ridge Restoration	BA-68	NMFS	18	On track - minor delay due to landrights issue. Notice to bidders expected August 2013.	II

Projects Waiting on Phase II Funding

Project Name	Project No.	Agency	PPL	Near-term Milestones	# of Phase II Requests	Current Phase
South Grand Chenier Marsh Creation	ME-20	FWS	11	Phase 2 funding was returned to the program in December 2011 due to landrights issues. Final landrights were secured by July 2012. A scope/name change was approved in November 2012 to remove the freshwater introduction feature and reduce the cost. Phase 2 funding will be requested in December 2013.	1	I
Alligator Bend Marsh Restoration and Shoreline Protection	PO-34	NRCS	16	Project did not receive funding at January 2013 Task Force meeting; will re-compete for funding at January 2014 Task Force meeting.	2	I

Projects Delayed by Project Delivery Team Issues

Project Name	Project No.	Agency	PPL	Project Issue Delays	Project Status & Critical Milestone(s)	Current Phase
West Pointe a la Hache Outfall Management	BA-04c	NRCS	3	Scope Change in Past	CPRA design contractor has not completed design. A 95% review is planned for October 21, 2013.	I
North Lake Boudreaux Basin Freshwater Intro and Hydro Mgt	TE-32a	FWS	6	Permitting & Landrights	A revised cost share agreement has been executed. A 404 permit pre-application meeting and field trip have been conducted. Several regulatory issues will need to be resolved. A 404 permit application should be issued by August 2013. Landrights work should be finalized by June 2013. Construction is expected to begin in March 2014.	II
Cameron-Creole Freshwater Introduction	CS-49	NRCS	18		Results from the Chenier Plain Model are expected in Summer 2013, 30 and 95% design meetings will be conducted in 2014.	I

Projects Delayed by Programmatic Issues (e.g., CSAs, Induced Shoaling)

Project Name	Project No.	Agency	PL	Issue Category	Project Status & Critical Milestone(s)	Current Phase

Projects Recommended by Transfer to Other Federal Agency or Program

Project Name	Project No.	Agency	PL	Issues	Reason(s) for Potential De-authorization
River Reintroduction into Maurepas Swamp	PO-29	EPA	11	Coffer Dam Design	Gap Analysis completed in Jan. 12. 95% Design Review in Oct. 12. Funding for construction will be non-CWPPRA. CPRA continuing engineering and design and is currently working to resolve USACE guidance on coffer dam design. Tentatively scheduled to be transferred to CPRA at the Technical Committee in Sept. 2013
Southwest LA Gulf Shoreline Nourishment and Protection	ME-24	COE	16	CSA	All work is on hold pending approval of a new Cost Share Agreement. Late July 2012 the CG met with the head of CPRA to discuss this issue; however, the CSA issues are still unresolved. The P&E recommends transferring lead federal sponsor from USACE to EPA.

Projects Recommended for Deauthorization

Project Name	Project No.	Agency	PL	Issues	Reason(s) for Potential De-authorization
Bayou Sale Shoreline Protection	TV-20	NRCS	13		CPRA sent formal notice of intent to deauthorize to St. Mary Parish unless vegetative option is considered. Deauthorization will be initiated at Fall 2013 Technical Committee meeting. Recommended for deauthorization by project team.
Bertrandville Siphon	BS-18	EPA	18	Not-consistent with SMP & land rights	Phase I approval was received on January 21, 2009, but this project was placed on hold before Phase 1 E&D could begin as the Project Sponsor is evaluating CPRA's recommendation to deauthorize the project based upon land right issues. Recommended for deauthorization by project team.

Projects Recommended for Inactivation

Project Name	Project No.	Agency	PL	# of Phase II Requests	Reason(s) for Potential Inactivation
Ship Shoal: Whiskey West Flank Restoration	TE-47	EPA	11	9	Since this project is still viable, it is likely that some adjustments to the plans and specifications will be required once Phase 2 approval has been obtained. It does not appear to be practical to address these adjustments until phase 2 approval has been obtained. It is the recommendation of the P & E to place this project in the "Inactive" category due to the project having gone through a 95% design review.
Venice Ponds Marsh Creation & Crevasses	MR-15	EPA	15	3	It is recommendation of the P&E to place this project in the "Inactive" category due to the project having gone through a 95% design review.

Projects with Phase II Estimate > \$50 Million

Project Name	Project No.	Agency	PPL	Phase I Estimate	Phase II Estimate	Total Estimate*
River Reintroduction into Maurepas Swamp	PO-29	EPA	11	\$6,780,307	\$159,195,400	\$165,975,707
Ship Shoal: Whiskey West Flank Restoration	TE-47	EPA	11	\$3,742,053	\$61,613,722	\$65,355,775
				\$10,522,360	\$220,809,122	\$231,331,482

Inactive Projects

Project Name	Project No.	Agency	PL	Issue Category	Project Status & Critical Milestone(s)	Current Phase
Freshwater Bayou Bank Stab - Belle Isle Canal to Lock	TV-11b	COE	9	CSA	All work was put on hold pending approval of a new Cost Share Agreement. The Task Force voted to inactivate this project at the June 4, 2013 meeting.	I

Projects Removed from SOUP

Project Name	Project No.	Agency	PL	Yr Removed from SOUP	Reason Removed from SOUP List
South Lake Decade Freshwater Introduction	TE-39	NRCS	9		Construction completed July 12, 2011.
Lake Borgne and MRGO Shoreline Protection	PO-32	COE	12		Project was deauthorized.
South Shore of the Pen	BA-41	NRCS	14		Construction completed June 5, 2012.
East Marsh Island Marsh Creation	TV-21	EPA/NRCS	14		Construction completed February 2011.
Penchant Basin Natural Resources Plan, Incr 1	TE-34	NRCS	6		Construction completed August 29, 2012.
West Belle Pass Barrier Headland Restoration Project	TE-52	NMFS	16	2011	Bid opening occurred July 14, 2011.
Barataria Barrier Shoreline, Pelican Island to Chaland Pass (CU2)	BA-38	NMFS	11	2011	Bid opening occurred July 7, 2011. Low bidder within available funds. Construction anticipated to begin Fall 2011.
Fort Jackson Sediment Diversion	na	COE	na	2012	Project was closed out October 2011.
Riverine Sand Mining/Scofield Island Restoration	BA-40	NMFS	14	2012	Project was deauthorized January 2012
Lake Hermitage Marsh Creation	BA-42	FWS	15	2012	Construction scheduled to be completed by October 2012.
Barataria Basin Landbridge, Phase 3 CU #7	BA-27c	NRCS	9	2012	Construction scheduled to begin by September 2013.
Barataria Basin Landbridge, Phase 3 CU #8	BA-27c	NRCS	9	2012	Construction scheduled to begin by September 2013.
Raccoon Island Shoreline Protection and Marsh Creation	TE-48	NRCS	11	2012	Construction completed on April 27, 2013.
Little Pecan Bayou Hydrologic Restoration	ME-17	NRCS	9	2013	Project was deauthorized in October 2012.
Benneys Bay Diversion	MR-13	COE	10	2013	Project was deauthorized in October 2012.
Weeks Bay Marsh Creation/Shoreline Protection/Commercial Canal/Freshwater Redirection	TV-19	COE	9	2013	Project was transferred out of the CWPPRA Program to Iberia Parish in June 2013.
Delta Building Diversion North of Fort St. Philip	BS-10	COE	10	2013	Project was deauthorized in June 2013.
Avoca Island Diversion and Land Building	TE-49	COE	12	2013	Project was deauthorized in June 2013.
Spanish Pass Diversion	MR-14	COE	13	2013	Project was deauthorized in June 2013.
White Ditch Resurrection	BS-12	NRCS	14	2013	Project was deauthorized in June 2013.
Bohemia Mississippi River Reintroduction	BS-15	EPA	17	2013	Project was deauthorized in June 2013.
GIWW Bank Rest of Critical Areas in Terrebonne	TE-43	NRCS	10	2013	In construction
Sediment Containment for Marsh Creation Demonstration	LA-09	NRCS	17	2013	In construction

Status Review - Unconstructed CWPPRA Projects
July 22, 2013

- 1. Project Name (and number):** Sabine Refuge Marsh Creation (CS-28 - 4 & 5)
- 2. SOUP Category:** On Schedule
- 3. PPL:** 8
- 4. Federal Agency:** Fish and Wildlife Service
- 5. Date of Construction Approval / Phase Two Approval:** January 19, 2011
- 6. Approved Total Budget:** \$ 8,111,705
- 7. Fully Funded Cost Estimate:** \$ 8,111,705
- 8. Expenditures:** \$ 0
- 9. Unexpended Funds:** \$ 7,952,796
- 10. Estimate of anticipated funding increases, including O&M:** Unknown
- 11. Potential changes to project benefits:** Total benefits changed from 232 acres to 462 acres after scope change
- 12. Brief chronology of project development and issues affecting implementation:**
 - (1999) Sabine Refuge Marsh Creation project approved
 - (2004) Additional funds and construction approval for Cycles II and III
 - (2009) Construction of Cycle II pipeline
 - (2011) Project scope change to merge remaining two cycles into one project
 - (2012) Lead sponsorship transferred to FWS
 - (2012) CSA signed between FWS and CPRA
- 13. Current status/remaining issues:** Awaiting the draft and final CWPPRA Sabine Pipeline O&M Manual. In the process of obtaining a 404 Permit from USACE.
- 14. Projected schedule:** Construction of Cycles IV and V is now planned to meet the schedule of the next USACE Calcasieu River Ship Channel maintenance dredging event in FY 14.
- 15. Preparer:** Robert Dubois (FWS) 337-291-3127

**Status Review - Unconstructed CWPPRA Projects
June 2013**

- 1. Project Name (and number):** Rockefeller Refuge Gulf Shoreline Stabilization (ME-18)
- 2. SOUP Category:** On Schedule
- 3. PPL:** 10 - Phase 1 was authorized in January 10, 2001
- 4. Federal Agency:** NMFS
- 5. Date of Construction Approval / Phase Two Approval:** NA
- 6. Approved Total Budget:** \$2,408,478
- 7. Fully Funded Estimate:** \$28,082,507
- 8. Expenditures:** \$1,332,159
- 9. Unexpended Funds:** \$1,076,319
- 10. Estimate of anticipated funding increases, including O&M:** NA
- 11. Potential changes to project benefits:** 198 net acres at year 20 (down from 920 net acres)
- 12. Brief chronology of project development and issues affecting implementation:**
 - January 2001 – Phase 1 Approval
 - September 23, 2004 – 30% E&D review. Over 80 alternatives were considered based on their ability to meet project goals and objectives.
 - February 17, 2005 – Task Force request for a change in scope to pursue the development of test sections approved. Four final alternatives were selected for consideration in a prototype test program at the Refuge that would help predict their potential for success if installed for the full 9.2-mile project.
 - September 20, 2005 – 95% E&D review of four design alternatives.
 - December 7, 2005 – NMFS/DNR sought Phase 2 funding for construction.
 - December 5, 2006 – NMFS/DNR sought Phase 2 funding for construction.
 - November 29, 2007 – The Coastal Impact Assistance Program (CIAP) adopted the project for construction.
 - December 4, 2009 – CIAP completed construction on three shoreline protection test sections.
 - August 30, 2011 – CIAP final monitoring report submitted.
 - June 4, 2013 – Task Force approves project scope change from 9.2 miles to 2.0 miles.
- 13. Current status/remaining issues:** After Task Force approval (June 2013), moving to complete Phase 1 of light-weight aggregate core foreshore breakwater feature. Surveys and renewed cooperative agreement underway late Summer/Fall.
- 14. Projected schedule and milestones:** Complete E&D by May 2014, 30% Design Review Meeting by July 2014, 95% Design Review Meeting by November 2014, Request Phase 2 by December 2014.
- 15. Preparer:** John D. Foret, Ph.D., NOAA Fisheries Service, john.foret@noaa.gov

Revised June 2013 (JDF)

Status Review - Unconstructed CWPPRA Projects
June 21, 2013

- 1. Project Name (and number):** Hydrologic Restoration and Vegetative Planting in the des Allemands Swamp (BA-34-2)
- 2. SOUP Category:** On Schedule
- 3. PPL:** 10
- 4. Federal Agency:** EPA
- 5. Date of Construction Approval / Phase Two Approval:** Anticipated January 2014
- 6. Approved Total Budget:** \$2,362,687
- 7. Fully Funded Cost Estimate:** \$8,263,731 (June 3, 2013)
- 8. Expenditures:** \$790,940
- 9. Unexpended Funds:** \$1,571,742
- 10. Estimate of anticipated funding increases, including O&M:** None anticipated at this time.
- 11. Potential changes to project benefits:** Project benefits will need to be reevaluated based on the proposed future request to rescope the project from a combination of a small Mississippi River diversion, plus outfall management/hydrologic restoration, plus plantings, to a small hydrologic restoration project, plus plantings, only. Environmental benefits will decline, but so will costs. We expect costs to decline more dramatically than benefits, resulting in a more cost-effective project overall. A scope change for the project and the name of the project was requested and has been authorized by both the Technical Committee (April 2013) and the Task Force (June 2013). The project is now called the Hydrologic Restoration and Vegetative Planting in the des Allemands Swamp (BA-34-2)
- 12. Brief chronology of project development and issues affecting implementation:** Modeling is complete. Modeling and engineering judgment suggests that Dredge Boat Canal can only convey very small flows without expensive improvement. While even small flows would benefit this swamp, they would be very costly. For this reason, we are considering in the near future requesting a scope change to focus on the hydrologic restoration/outfall management project features. We are confident that this approach will provide significant environmental benefits at minimal cost here, and this has been confirmed by an independent, expert swamp ecologist.
- 13. Current status/remaining issues:** See above.

14. Projected schedule:

- Revised WVA: December 2012
- Revised Phase 0 Level Cost Estimate: December 2012
- Scope Change Request: April 2013
- 30% Design Review: August 2013
- 95% Design Review: October 2013
- Design Completion: December 2013
- Phase 2 Approval: January 2014
- Construction Start: May 2014

15. Preparer: Ken Teague (214-665-6687); Teague.kenneth@epa.gov

**Status Review - Unconstructed CWPPRA Projects
June 21, 2013**

- 1. Project Name:** Grand Lake Shoreline Protection (Tebo Point) (ME-21a)
Grand Lake Shoreline Protection O&M (ME-21b)
- 2. SOUP Category:** On Schedule
- 3. PPL:** 11
- 4. Federal Agency:** NRCS
- 5. Date of Construction Approval / Phase Two Approval:** Feb 2007
- 6. Approved Total Budget:** Phase I (Grand Lake-ME-21) \$1,049,030
Phase II (Grand Lake, Tebo Point): \$9,006,586
- 7. Fully Funded Cost Estimate:** \$24,117,374
- 8. Expenditures:** \$804,453.08
- 9. Unexpended Funds:** ME-21a Tebo Point, \$2,944,576.92
ME-21 O&M Only (CIAP), \$6,306,586
- 10. Estimate of anticipated funding increases, including O&M:** Final E&D will determine additional funding needed to complete Tebo Point portion, O&M will be revised to show entire project as one O&M budget, including CIAP portion of shoreline.
- 11. Potential changes to project benefits:** CWPPRA can only claim the benefits from Tebo Point and the benefits for continuing O&M on the CIAP portion.
- 12. Brief chronology of project development and issues affecting implementation:**
 - 2007 – 2010 At the February 2007 Task Force meeting the Task Force (TF) took the initiative to approve the Grand Lake Project in segments. 90% of the project (37,000 lf) would be constructed under CIAP. The remaining segment of the project, Tebo Point, would be constructed under CWPPRA. The Task Force also took the initiative to approve the first 3 yrs of O&M for both of these segments. Using the Grand Lake Cost with Tebo Point included the TF broke the project up into the following:

\$2,700,000 for the construction of Tebo Point
\$6,300,000 for the first three yr of O&M for both segments
\$9,000,000 total
 - 2011 Task Force voted to transfer federal sponsor from USACE to NRCS. Currently USACE is providing all E&D to NRCS to determine what is needed to move to construction.

- 2012 NRCS has never received MIPR for project. USACE will not issue MIPR until 5% cash contribution from local sponsor is received.
- 2013 MIPR received in August 2012, alignment was surveyed in Fall 2012 to verify any changes in site since original project design. Geotechnical Investigation currently being performed on Tebo Point in areas not covered by original investigation. Phase II request anticipated for Winter 2013.

13. Current status/remaining issues:

Due to Cost Share Agreements (CSA) and accounting procedures the projects should not have been broken up as listed above. The projects should have been broken up as the following and a detailed cost estimate approved by the Engineering Work Group (Eng WG) should have been provided:

Funding for construction and the first 3 yrs of O&M for the CWPPRA Tebo Point segment.

Funding for the first 3 yrs of O&M for the CIAP Grand Lake Portion.

The last official cost estimate was calculated in 2007. A draft cost estimate was calculated in 2008 and the TF approved \$2,700,000 for the Tebo Point Project Construction (Phase II) was still \$44,335 within the approved budget. The combined O&M for both segments equaled \$7,460,604, \$1,160,604 over the TF \$6.3M approved amount.

In 2011, the Task Force transferred this project from USACE to NRCS. NRCS received a MIPR eighteen months later. Design has begun on the Tebo Point portion of the project.

14. Projected schedule:

NRCS will evaluate existing E&D and revise with current surveys and geotechnical investigations in order to finalize E&D and move to construction. Phase II request is anticipated for Winter 2013.

15. Preparer: Travis Creel, USACE (504) 862-1071

Updated (6/23/2011): John Jurgensen, NRCS (318) 473-7694

Updated (7/10/2012): John Jurgensen, NRCS (318) 473-7694

Updated (6/21/2013): John Jurgensen, NRCS (318) 473-7694

**Status Review - Unconstructed CWPPRA Projects
June 2013**

1. Project Name (and number): Madison Bay Marsh Creation and Terracing (TE-51)

2. SOUP Category: On Schedule

3. PPL: 16

4. Federal Agency: NMFS

5. Date of Construction Approval / Phase Two Approval: NA

6. Approved Total Budget: \$3,002,171

7. Fully Funded Estimate: \$38,798,788

8. Expenditures: \$1,191,455

9. Unexpended Funds: \$1,810,716

10. Estimate of anticipated funding increases, including O&M: NA

11. Potential changes to project benefits: NA

12. Brief chronology of project development and issues affecting implementation:

- October 2006 – Phase 1 Approval
- March 7, 2007 – Project Kick off meeting.
- October 2008 – Landowner meeting (Oyster lease coordination initiated)
- April 2009 – Survey and Geotechnical Investigations initiated.
- January 2010 – Survey, magnetometer survey, and landrights results began discussion of project boundary shift.
- May 2010 – Field investigation conducted to evaluate alternative project locations.
- April 2011 – Technical Committee presentation to request permission to expend project funds outside of the approved project area for geotechnical investigation of an alternative project site.
- August 30, 2011 – Geotechnical investigation to begun.
- November 19, 2011 – Geotechnical report delivered, results show Wonder Lake area most appropriate for construction consideration.
- April 19, 2012 – Technical Committee approves project scope change; i.e. 32% reduction in constructed acres, 29% reduction in TY20 acres, and 19% increase to the Full-Funded costs; and approved the relocation of the project boundary to the Wonder Lake area.
- June 5, 2012 – Task Force approved Technical Committee recommendation.
- July 23, 2013 – 30% Design Review Meeting

13. Current status/remaining issues: None

14. Projected schedule and milestones: 95% Design Review Meeting in October 24, 2013, Phase 2 request in November 2013.

Preparer: John D. Foret, Ph.D., NOAA Fisheries Service, john.foret@noaa.gov

Revised June 2013 (JDF)

**Status Review - Unconstructed CWPPRA Projects
June 21, 2013**

- 1. Project Name (and number):** West Pointe a la Hache Marsh Creation (BA-47)
- 2. SOUP Category:** On Schedule
- 3. PPL:** 17
- 4. Federal Agency:** NRCS
- 5. Date of Construction Approval / Phase Two Approval:** N/A
- 6. Approved Total Budget:** \$1,620,740
- 7. Fully Funded Cost Estimate:** \$16,136,639
- 8. Expenditures:** \$489,609.48
- 9. Unexpended Funds:** \$1,131,130.52
- 10. Estimate of anticipated funding increases, including O&M:** N/A at this time
- 11. Potential changes to project benefits:** None at this time.
- 12. Brief chronology of project development and issues affecting implementation:**

2007	Approved
May 2008	Kick-off Meeting
November 2008	Kick-off Field Trip
2009-May 2012	Obtain access/entry permissions from landowners & pipeline company - affected by resolution of the Jefferson Canal acquisition, and review & approval of negotiated permission language by OGC.
May 2012	Engineering task – Survey of project fill area & healthy marsh sites completed.
August 2012	Magnetometer survey completed.
2012 – 2013	Project design halted pending decision to combine project with BA-42 Lake Hermitage project currently under construction.
- 13. Current status/remaining issues:** NRCS final design pending decision to combine project with existing CWPPRA Project currently under construction.
- 14. Projected schedule:** If design is resumed in Fall 2013 anticipated Phase II request is Winter 2014.

15. Preparer: Cindy Steyer, NRCS, (225) 389-0334 (5/17/12)
Review/Concurrence (5/18/12): William Feazel, OCPR, (225) 342-4641
Updated (7/10/12): John Jurgensen, NRCS, (318) 473-7694
Updated (7/30/12): John Jurgensen, NRCS, (318) 473-7694
Updated (6/21/13): John Jurgensen, NRCS, (318) 473-7694

Status Review - Unconstructed CWPPRA Projects
16 May 2013

1. Project Name (and number): Bayou Dupont Ridge Creation and Marsh Restoration (BA-48)

2. SOUP Category: On Schedule

3. PPL: 17

4. Federal Agency: NMFS

5. Date of Construction Approval / Phase Two Approval: January 19, 2011

6. Approved Total Budget: \$37,984,593

7. Fully Funded Estimate: \$38,539,615

8. Expenditures: \$1,537,487 (estimated)

9. Unexpended Funds: \$36,476,524 (estimated)

10. Estimate of anticipated funding increases, including O&M: NA

11. Potential changes to project benefits: NA

12. Brief chronology of project development and issues affecting implementation:

- October 25, 2007 – Phase 1 Approval.
- June 29, 2010– 30% E&D review
- October 27, 2010 – 95% E&D review
- January 19, 2011 – Phase 2 Approval
- August 2011 – Initial permit application submittals to USACE and DNR
- December 2011 – Response to comments provided to USACE
- March 2012 – Submitted permit modification request to USACE to increase borrow depth
- June 29, 2012 – Submitted information related to additional June 2012 comments
- February 20, 2013 – Permit received from USACE
- April 2013 – Draft bid package to FPC for approval

13. Current status/remaining issues: Bid package was submitted to Louisiana Office of Facility Planning and Control (FPC) for review and acceptance. The Notice to Bidders should be released around June 3, 2013 with a bid opening date around July 17, 2013

14. Projected schedule and milestones: There are three items that are currently being finalized:

- Notice to Bidders – June 3, 2013 (Estimated)
- Bids Due/Bid Openings – July 17, 2013 (Estimated)
- Notice of Award – July 31, 2013 (Estimated)

Preparer: Phillip Parker, P.E., NOAA Fisheries Service, phillip.parker@noaa.gov

**Status Review - Unconstructed CWPPRA Projects
July 22, 2013**

1. Project Name (and number): South Lake Lery Shoreline and Marsh Restoration (BS-16)

2. SOUP Category: On Schedule

3. PPL: 17

4. Federal Agency: USFWS

5. Date of Construction Approval / Phase Two Approval: January 19, 2012

6. Approved Total Budget: \$32,238,260

7. Fully-Funded Cost: \$32,466,987

8. Expenditures: \$1,515,418

9. Unexpended Funds: \$30,722,842

10. Estimate of anticipated funding increases, including O&M: Unknown at this time.

11. Potential changes to project benefits: None

12. Brief chronology of project development and issues affecting implementation:

10/25/2007	Phase I E & D Task Force Approval.
10/27/2010	Successful 30% Design Review Meeting.
06/08/2011	Scope Change to Decrease Benefits (Removal of Diversion Feature/Inclusion of Cell 6 Marsh Creation).
11/15/2011	Successful 95% Design Review Meeting.
01/06/2012	Scope Change to Decrease Funding.
01/19/2012	Task Force Phase II Construction Approval.
07/2012	Section 404 Permit received from the Corps.
05/2013	Final landrights secured.

13. Current status/remaining issues:

CPRA has received and recorded all landrights agreements. CPRA is currently finalizing the assignment of the servitude agreements to FWS and NRCS. NRCS currently ready to advertise for bids.

14. Projected schedule:

09/2013	Bid Advertisement
02/2014	Begin Construction

14. Preparer: Robert Dubois, USFWS (337-291-3127)

Status Review - Unconstructed CWPPRA Projects
April 03, 2013

- 1. Project Name (and number):** Central Terrebonne Freshwater Enhancement Project (TE-66)
- 2. SOUP Category:** On Schedule
- 3. PPL:** 18
- 4. Federal Agency:** NRCS
- 5. Date of Construction Approval / Phase Two Approval:** N/A
- 6. Approved Total Budget:** \$2,326,289
- 7. Fully Funded Cost Estimate:** \$ 16,640,120
- 8. Expenditures:** \$1,051,993 +\$ 25,043 = \$1,077,036
- 9. Unexpended Funds:** \$1,249,253
- 10. Estimate of anticipated funding increases, including O&M:** N/A at this time
- 11. Potential changes to project benefits:** N/A at this time
- 12. Brief chronology of project development and issues affecting implementation:**

2009	Approved (Phase I)
2009 - 2013	Planning
2010	Initiation of hydrodynamic model
2011	Hydrodynamic model surveys and monitoring
2012	Hydrodynamic model calibration and initial scenarios
2013	Hydrodynamic model draft report (March 2013) and design scenario model runs. Initiation of Design/Geotechnical/Surveys
- 13. Current status/remaining issues:** Project is in final stages of hydrodynamic modeling to analyze design of Grand Pass project feature. Design of preferred model scenario scheduled to begin in September 2013.
- 14. Projected schedule:** Anticipate Phase II request in Winter 2015.
- 15. Preparer:** Ron Boustany, NRCS, (337) 291-3067 (Updated 4/3/13)
John Jurgensen, NRCS (318) 473-7694 (Updated 6/21/13)

**Status Review - Unconstructed CWPPRA Projects
June 2013**

1. Project Name (and number): Grand Liard Marsh and Ridge Restoration (BA-68)

2. SOUP Category: On Schedule

3. PPL: 18

4. Federal Agency: NMFS

5. Date of Construction Approval / Phase Two Approval: January 19, 2012

6. Approved Total Budget: \$42,095,162

7. Fully Funded Estimate: \$42,579,616

8. Expenditures: \$2,131,306 (estimated)

9. Unexpended Funds: \$39,423,371 (estimated)

10. Estimate of anticipated funding increases, including O&M: NA

11. Potential changes to project benefits: NA

12. Brief chronology of project development and issues affecting implementation:

- January 21, 2009 – Phase 1 Approval.
- June 29, 2011 – 30% E&D review
- November 14, 2011 – 95% E&D review
- January 19, 2012 – Phase 2 Approval
- Construction plans and specifications, regulatory approvals and environmental compliance, oyster lease assessments were complete within six months of Phase 2 approval. However, land rights completion was delayed on a single tract critical to project construction. CPRA made extended efforts to obtain permission from the remaining landowner resulting in execution of the land rights agreement on June 5, 2013.

13. Current status/remaining issues: Construction documents require revision to incorporate new contracting requirements resulting from the transfer of state construction contracting responsibilities from the Office of State Purchasing to the Office of Facility Planning. CPRA has indicated it anticipates a final set of bid documents will be available for team review by mid-July.

14. Projected schedule and milestones:

- July 2013: revised bid package available for NMFS review
- August 2013: Bid advertisement
- October 2013: Bid Opening
- Winter 2013: Mobilization and construction initiation
- Fall 2014: Construction completion

15. Preparer: Rachel Sweeney, NOAA Fisheries Service, rachel.sweeney@noaa.gov

**Status Review - Unconstructed CWPPRA Projects
July 22, 2013**

- 1. Project Name (and number):** South Grand Chenier Marsh Creation (ME-20)
- 2. SOUP Category:** Waiting on Phase II Funding
- 3. PPL:** 11
- 4. Federal Agency:** USFWS
- 5. Date of Construction Approval / Phase Two Approval:** Anticipated January, 2014
- 6. Approved Total Budget:** \$2,358,420
- 7. Fully-Funded Cost:** \$21,933,085 (November 26, 2012 Scope change & economic analysis)
- 8. Expenditures:** \$1,726,657
- 9. Unexpended Funds:** \$631,763
- 10. Estimate of anticipated funding increases, including O&M:** Unknown at this time.
- 11. Potential changes to project benefits:** None at this time.

12. Brief chronology of project development and issues affecting implementation:

1/2002	Phase I E & D Task Force approval
8/6/2009	Successful 30% Design Review Meeting
10/28/2009	Scope change to increase costs 33% to \$27.9 M and remove Area A; approved by Task Force
11/3/2009	95% Design Review meeting
10/27/2010	Corps Section 404 Permit Issued
1-20-2010	Initial Phase II construction funding approval
5/16/2011	NEPA completed: Final EA and FONSI
1/2012	Returned construction funding due to landrights
11/26/2012	Scope/name change removed FW feature, reduced costs & benefits
9/2012	All landrights secured for the project
Current	Will request Phase II funding in December 2013

Issues affecting implementation: Since construction funding, the project had been delayed due to failure to acquire landrights agreements from principal landowners.

13. Current status/remaining issues:

Although Phase 2 approval was received on January 20, 2010, project sponsors returned construction funding to the Program at the January 2012 Task Force meeting due to landowner issues. The project is on schedule for construction in 2014 if construction funding can be secured in January 2014.

13. Projected schedule:

10/2013	Revised costs and benefits
12/2013- 1/2014	Request Phase II Funding
12/2014	Begin construction

14. Preparer: Darryl Clark, USFWS (337-291-3111)

dc 5-02-2013

Status Review - Unconstructed CWPPRA Projects
Jun 21, 2013

- 1. Project Name (and number):** Alligator Bend Shoreline Protection Project (PO-34)
- 2. SOUP Category:** Waiting on Phase II Funding
- 3. PPL:** 16
- 4. Federal Agency:** NRCS
- 5. Date of Construction Approval / Phase Two Approval:** n/a
- 6. Approved Total Budget:** \$1,660,985
- 7. Fully Funded Cost Estimate:** \$29,891,722
- 8. Expenditures:** \$1,360,734.60
- 9. Unexpended Funds:** \$300,250.40
- 10. Estimate of anticipated funding increases, including O&M:** N/A at this time
- 11. Potential changes to project benefits:** The project scope changed due to landowner using marsh areas for a mitigation bank. Current project is shoreline protection only.
- 12. Brief chronology of project development and issues affecting implementation:**

2006	Approved (Phase I)
2006 - 2008	USACE and OCPR unable to sign Cost Share Agreement
2008	Project transferred from USACE to NRCS as federal sponsor, Scope changed from marsh creation to shoreline protection.
2008 – 2010	Planning and Design
2010	Additional geotechnical analysis performed due to failure of Lake Borgne project south of this location. Information used to finalize PO-34 design.
2011	Preliminary design complete, pending Phase II approval.
2012	Project was not approved for Phase II; will re-compete for funding in January 2013.
2013	Project was not approved for Phase II; will re-compete for funding in January 2014.
- 13. Current status/remaining issues:** Project has completed design and is currently requesting Phase II approval.
- 14. Projected schedule:** Phase II request in January 2014.
- 15. Preparer:** John Jurgensen, NRCS (318) 473-7694 (6/23/2011)
Updated (6/22/11): John Jurgensen, NRCS, (318) 473-7694
Updated (6/21/13): John Jurgensen, NRCS, (318) 473-7694

**Status Review - Unconstructed CWPPRA Projects
June 21, 2013**

- 1. Project Name (and number):** West Pointe a la Hache Outfall Management (BA-4c)
- 2. SOUP Category:** Project Team Issues
- 3. PPL:** 3
- 4. Federal Agency:** NRCS
- 5. Date of Construction Approval / Phase Two Approval:** N/A
- 6. Approved Total Budget:** \$4,269,295
- 7. Fully Funded Cost Estimate:** \$5,370,526
- 8. Expenditures:** \$985,240.41
- 9. Unexpended Funds:** \$3,284,054.59
- 10. Estimate of anticipated funding increases, including O&M:** None
- 11. Potential changes to project benefits:** None
- 12. Brief chronology of project development and issues affecting implementation:**

1993	– Approved
1993 - 2000	- Various planning and engineering tasks; increased construction budget from \$400K to about \$2M; DNR concerned about benefits
2000 - 2004	- Hydrodynamic Model predicted that siphon operation (more so than proposed outfall mgt) creates favorable conditions in project area. DNR and NRCS desire to pursue modifications to siphon to improve / extend ability to operate siphon.
2005 - 2006	- DNR “working with” Plaquemines Parish Government to establish a cooperative agreement regarding siphon operation, so as to ensure long term operation prior to designing siphon improvements.
Jan 2007	– DNR/PPG siphon operations agreement executed
Oct 2007	– EnvWG approved the use of the original project boundary for the proposed scope change.
Feb 2008	– NRCS revised and DNR reviewed and concurred with submittal of draft WVA to EnvWG
April 2008	– Revised WVA and preliminary engineering cost estimates approved by EnvWG and EngrWG.
January 2009	– Scope Change approved by Task Force, revised design began.

2009 – 2011 – Survey and geotechnical analysis completed. OCPR had delays due to dispute with contractor. Project design halted at 30% review phase pending dispute resolution.
2012 CPRA contractor resumed work on design.
2013 CPRA requested extension of design to be completed in August 2013. A 30% review meeting was held on October 3, 2012.

13. Current status/remaining issues: CPRA preparing plans and specifications in anticipation of October 21, 2013 95% review meeting.

14. Projected schedule: Phase II request anticipated for Winter 2013.

15. Preparer: Cindy Steyer, NRCS, (225) 389-0334 (10/23/09)
Review/Concurrence (10/23/09): William Feazel, OCPR, (225) 342-4641
Updated (6/21/10): John Jurgensen, NRCS, (318) 473-7694
Updated (6/22/11): John Jurgensen, NRCS, (318) 473-7694
Updated (7/10/12): John Jurgensen, NRCS, (318) 473-7694
Updated (7/30/12): John Jurgensen, NRCS, (318) 473-7694
Updated (6/21/13): John Jurgensen, NRCS, (318) 473-7694

**Status Review - Unconstructed CWPPRA Projects
July 22, 2013**

- 1. Project Name (and number):** North Lake Boudreaux Basin Freshwater Intro. (TE-32a)
- 2. SOUP Category:** Project Team Issues
- 3. PPL:** 6
- 4. Federal Agency:** USFWS
- 5. Date of Construction Approval / Phase Two Approval:** October 2010
- 6. Approved Total Budget:** \$20,048,152
- 7. Fully-Funded Cost:** \$25,766,765
- 8. Expenditures:** \$2,791,532
- 9. Unexpended Funds:** \$17,256,620
- 10. Estimate of anticipated funding increases, including O&M:** none anticipated
- 11. Potential changes to project benefits:** none anticipated
- 12. Brief chronology of project development and issues affecting implementation:**
 - Jun 2007 – all landrights obtained for construction of the conveyance channel
 - Aug 2009 – 30% design meeting conducted
 - Jun 2010 – 95% design meeting conducted
 - Oct 2010 – Task Force approved Phase II request
 - April 2011 – Corps stated that fiscal law issue resolved
 - Aug 2012 – Applied for DNR/Corps permits
 - Nov 2012 – Received a Coastal Zone Consistency determination from the LDNR
- 13. Current status/remaining issues:** Section 10/404 permits have not yet been issued. Property appraisals are being updated. Updated property values will be used to prepare updated final landrights documents. Once those tasks have been completed, bid advertisement and associated construction tasks will begin.
- 14. Projected schedule:**

DNR/Corps Permit issuance	- Aug 2013
Bid Advertisement	- Dec 2013
Construction start	- Mar 2014
Construction completion	- May 2015
- 15. Preparer:** Ronny Paille USFWS (337-291-3117) Ronald_Paille@FWS.GOV

**NRCS Project Plan of Work and Milestones
May 3, 2013**

- 1. Project Name:** Cameron Creole Freshwater Introduction (CS-49)
- 2. SOUP Category:** Project Team Issues
- 3. PPL:** 18
- 4. Federal Agency:** NRCS
- 5. Date of Construction Approval / Phase Two Approval:** Jan. 2010 (planting phase only)
- 6. Approved Total Budget:** Phase I: \$1,549,832
Phase II (planting phase only): \$1,147,096
Total = \$2,696,928
- 7. Fully Funded Cost Estimate:** \$12,787,044
- 8. Expenditures:** E&D: \$1,300,407
State: \$46,456.16
Lands: \$132,462.47
Total = \$ 1,479,325.63
- 9. Unexpended Funds:** \$ 1,060,704
- 10. Potential changes to project benefits:** none
- 11. Brief chronology of project development and issues affecting implementation:**

2009 – 2013	The project was approved for Phase I funding at the January 2009 Task Force meeting. NRCS initially modeled the freshwater introduction using a spreadsheet model. Concerns about the spreadsheet model prompted discussion of using the Chenier Plain Model developed by Ehab Meselhe under the Southwest Study project to also model the project. NRCS and CPRA agreed to run that model in February 2012. Results from the Chenier Plain Model are expected in Summer 2013.
2014	30 and 95 percent design meetings will be conducted.
2015	NRCS will ask for Phase 2 funding.
- 12. Current milestones/remaining issues:**
 - Results from Chenier Plain Modeling (Dain, CPRA)
 - Detailed Cultural Resources Investigation (Cindy)
 - Design to 30%, including preliminary drawings and other applicable info (Dain)
 - Formal Land Ownership Determination / Landrights Map (CPRA)
 - Assemble Elements of Plan/Environmental Assessment (Troy)
 - Conduct Review of Draft Permit Application (NRCS, CPRA, Permit Applicant)
 - Revise WVA, if needed (Troy)

Prepare 30% Cost Estimate (Jason)
Section 303e approval (USACE)
Overgrazing determination (Chapman)
Phase II request anticipated for Winter 2014

13. Preparer: Troy Mallach, NRCS, (337) 291-3064

**Status Review - Unconstructed CWPPRA Projects
August 1, 2012**

- 1. Project Name (and number):** River Reintroduction into Maurepas Swamp (PO-29)
- 2. SOUP Category:** Recommended for Transfer
- 3. PPL:** 11
- 4. Federal Agency:** US Environmental Protection Agency
- 5. Date of Construction Approval / Phase Two Approval:** NA
- 6. Approved Total Budget:** \$6,780,173
- 7. Fully Funded Cost Estimate:** Estimate for Phase I Approval - \$37,531,000 (August 7, 2001), Estimate for Project Scope Change - \$165,975,707 (June 3, 2009)
- 8. Expenditures:** \$5,723,133
- 9. Unexpended Funds:** \$1,057,174
- 10. Estimate of anticipated funding increases, including O&M:** No anticipated CWPPRA funding increase to complete Phase I work. A revised 30% cost estimate has been developed to include OMR&R, admin, landrights, etc. in the amount of \$178,127,000.
- 11. Potential changes to project benefits:** CWPPRA SOP calls for an approved WVA at 95% Design Review. In spite of the fact that we do not intend to seek CWPPRA Phase 2 approval, we want to complete a 95% Design Review under CWPPRA. It would seem an appropriate milestone prior to deauthorization from CWPPRA, and construction under some other authority. Project design changes (e.g. small diversions to swamps south of I-10) and additional information obtained since the Phase 0 WVA was completed, suggest that project benefits could be different than reflected in the approved Phase 0 WVA. However, it is not clear that the CWPPRA agencies will want to expend the effort necessary to revise the WVA, in view of the fact that the project will be moved to another authority soon. We will offer to revise the WVA in advance of the 95% Design Review.
- 12. Brief chronology of project development and issues affecting implementation:** 30% Design Review was held December 4, 2008. Initial responses to comments were submitted to commenting agencies. 30% Letter to Technical Committee was sent. The "change in scope" resulting from the increase in estimated construction costs was approved by the Task Force in June 2009. The Task Force also directed the sponsors to work with USACE to perform a gap analysis on the work done to date and to further address comments on the 30% design report.

Meanwhile, various studies have been completed to support NEPA requirements, including fish and wildlife, water quality, HTRW, cultural resources, noise, etc.

Significant efforts on land rights were previously initiated. However, land values in the area have increased greatly since we were first granted permission to acquire landrights in Phase 1 using existing funds. Sufficient funds don't exist in the project budget to acquire landrights in Phase 1.

COE has completed the "Gap Analysis" to determine to what extent the existing CWPPRA project might meet COE LCA requirements, in the event that the project is transferred to the COE LCA program. Not surprisingly, this report identified large gaps between the results of work done under CWPPRA, and what COE requires under its own programs.

CPRA is continuing engineering and design, including detailed responses to some of the 30% Design Review comments, with the assistance of URS Corp. However, these efforts had been limited by lack of clear guidance regarding requirements for the coffer dam. Recently, we have been informed that clear guidance should be forthcoming. EPA has, for the most part, discontinued work on an Environmental Information Document, intended to help satisfy NEPA requirements.

13. Current status/remaining issues: Feasibility phase complete. Actual engineering and design work complete, significantly beyond 30%. However, these efforts had been limited by lack of clear guidance regarding requirements for the coffer dam. Recently, we have been informed that clear guidance should be forthcoming. 30% Design Review held December 4, 2008. Initial responses to comments forwarded to agencies. Letter to Technical Committee sent. Landrights are no longer being pursued. "Gap Analysis" to determine what is needed should the project be moved to LCA, was completed by COE in January 2012. CPRA is continuing engineering and design, including detailed responses to some of the 30% Design Review comments, with the assistance of URS Corp. As of December 2012, EPA has nearly ceased work on the Environmental Information Document intended to help satisfy NEPA requirements.

14. Projected schedule:

- 95% Design Review: February 2013

15. Preparer: Kenneth Teague, EPA (214-665-6687), teague.kenneth@epa.gov)

Status Review - Unconstructed CWPPRA Projects
June 20, 2013

1. Project Name (and number): Southwest Louisiana Gulf Shoreline Nourishment & Protection (ME-24)

2. SOUP Category: Recommended for Transfer

3. PPL: 16

4. Federal Agency: COE

5. Date of Construction Approval / Phase Two Approval: TBD (scheduled 20 Jan 16)

6. Approved Total Budget: \$1,266,842

7. Fully Funded Cost Estimate: \$36,922,487 (Phase 1 Approval: 18 Oct 06)

8. Expenditures: \$ 10,155

9. Unexpended Funds (Total) : \$1,256,687)

10. Estimate of anticipated funding increases, including O&M: TBD; dredging costs have probably increased since original estimates prepared.

11. Potential changes to project benefits: None anticipated.

12. Brief chronology of project development and issues affecting implementation:

- Phase 1 approved January '06 & project delivery team assembled
- Kickoff meeting and site visit will be planned once cost share agreement can be negotiated with the state (Coastal Protection and Restoration Authority or CPRA)

13. Current status/remaining issues: Need a cost share agreement signed with CPRA as of June, 2013.

14. Projected schedule (if CPRA concurs & cost share agreement signed today):

- 11 Mar 2015 - Announce 30% Design Review
- 29 Apr 2015 - Submit Final Design Report to CPRA
- 05 Jun 2015 - Announce 95% Review

15. Preparer: Susan M. Hennington, USACE-MVN, (504) 862-2504

**Status Review - Unconstructed CWPPRA Projects
June 21, 2013**

- 1. Project Name (and number):** Bayou Sale Shoreline Protection (TV-20)
- 2. SOUP Category:** Recommended for Deauthorization
- 3. PPL:** 13
- 4. Federal Agency:** NRCS
- 5. Date of Construction Approval / Phase Two Approval:** N/A
- 6. Approved Total Budget:** \$ 2,254,912 (Phase I)
- 7. Fully Funded Cost Estimate:** \$32,103,020
- 8. Expenditures:** \$1,825,125.86
- 9. Unexpended Funds:** \$429,787.14
- 10. Estimate of anticipated funding increases, including O&M:** Not anticipated at this time.
- 11. Potential changes to project benefits:** Material will not be available for marsh creation because access channels will not be dredged due to the high number of utilities identified by the magnetometer survey (i.e., pipelines, flow lines, and metallic debris). Approximately 123 acres of marsh will therefore not be created. Shoreline protection benefits remain as originally anticipated. In Spring 2011 project failed to get Technical Committee approval for a change in scope to modify the limits of shoreline construction, therefore project team is re-evaluating alternatives.
- 12. Brief chronology of project development and issues affecting implementation:**

2003 - 2004	Approved
2004 - 2005	Project Plan of Work developed for USACE
2004 - 2006	Magnetometer & Gradiometer Survey conducted
2007 – 2008	Evaluated various shoreline protection alternatives.
2009 – 2010	NEPA and Engineering Evaluation performed on shoreline protection alternatives. Geotechnical investigation completed. Openings in shoreline identified and measured. Coordination with pipeline companies determined new proposed layout of shoreline features.
2010 – 2011	Project team requested a scope change for new alignment. This request was not approved by Technical Committee. Project team re-evaluated alternatives, and proposed a vegetative alternative to St. Mary Parish.

2012 - 2013

St. Mary Parish rejected vegetative shoreline proposal and requested that the Project team evaluate the viability of proposal by Parish to test a section of Oyster Break product. Parish did not test the product and instead used the existing various demonstration areas to predict effectiveness of product. Project Team evaluated proposal and determine that project cost vs. benefits of proposal was not enough to pursue as a viable option. State sent formal letter to Parish notifying them of the intent to deauthorize the project unless the Parish was willing to consider an option with vegetative planting in lieu of a structural component due to costs and difficulty of construction associated with the existing pipelines.

13. Current status/remaining issues: CPRA has sent formal letter to Parish notifying intent to deauthorize unless a vegetative option can be considered.

14. Projected schedule: Project decision to deauthorize will be made in August 2013.

15. Preparer: Troy Mallach, NRCS, (337) 291-3064 (3/6/08)
Review/Concurrence (3/7/2008): Ismail Merhi, DNR, (225) 342-4127
Updated (3/17/09): John Jurgensen, NRCS, (318) 473-7694
Updated (10/19/2009): Michael Nichols, NRCS (318) 473-7690
Updated (6/9/2010): Michael Nichols, NRCS (318) 473-7690
Updated (7/20/2011): John Jurgensen, NRCS (318-473-7694)
Updated (7/10/2012): John Jurgensen, NRCS (318-473-7694)
Updated (6/21/2013): John Jurgensen, NRCS (318-473-7694)

**Status Review - Unconstructed CWPPRA Projects
June 21, 2013**

- 1. Project Name:** Bertrandville Siphon (BS-18)
- 2. SOUP Category:** Recommended for Deauthorization
- 3. PPL:** 18
- 4. Federal Agency:** US Environmental Protection Agency
- 5. Date of Construction Approval / Phase Two Approval:** N/A (This project is currently on hold as Project Sponsor is evaluating CPRA recommendation to deauthorize project based upon land right issues and consistency with State Master Plan.)
- 6. Approved Total Budget:** \$2,129,816
- 7. Fully Funded Cost Estimate:** \$22,578,278 (January 2009)
- 8. Expenditures:** N/A
- 9. Unexpended Funds:** N/A
- 10. Estimate of anticipated funding increases, including O&M:** No anticipated CWPPRA funding increase for Phase I work.
- 11. Potential changes to project benefits:** N/A
- 12. Brief chronology of project development and issues affecting implementation:**
Phase I approval was received on January 21, 2009, but this project was placed on hold before Phase 1 E&D could begin as the Project Sponsor is evaluating CPRA recommendation to deauthorize project based upon land right issues and consistency with State Master Plan.
- 13. Current status/remaining issues:** Phase 1 E&D has been halted as the Project Sponsor is evaluating CPRA recommendation to deauthorize project based upon land right issues and consistency with State Master Plan.
- 14. Projected schedule:** N/A (This project is currently on hold as Project Sponsor is evaluating CPRA recommendation to deauthorize project based upon land right issues and consistency with State Master Plan.)
- 15. Preparer:** Adrian Chavarria, (214-665-3103), chavarria.adrian@epa.gov

**Status Review - Unconstructed CWPPRA Projects
July 6, 2012**

- 1. Project Name:** Ship Shoal: Whiskey West Flank Restoration (TE-47)
- 2. SOUP Category:** Recommended for Inactivation
- 3. PPL:** 11
- 4. Federal Agency:** US Environmental Protection Agency
- 5. Date of Construction Approval / Phase Two Approval:** Anticipated January 2013
- 6. Approved Total Budget:** \$3,742,053
- 7. Fully Funded Cost Estimate:** \$65,355,775 (January 2012)
- 8. Expenditures:** \$2,017,484
- 9. Unexpended Funds:** \$1,724,569
- 10. Estimate of anticipated funding increases, including O&M:** No anticipated CWPPRA funding increase for Phase I work. A revised fully funded cost estimate in the amount of \$61,750,053 was developed for the January 2010 Phase II funding request. This is \$9,609,925 increase to the prior January 2009 Phase II funding request in the amount of \$52,140,860. A subsequent revised estimate in the amount of \$65,355,755 was prepared for the January 2012 Phase II funding request.
- 11. Potential changes to project benefits:** N/A – Phase 1 Completed.
- 12. Brief chronology of project development and issues affecting implementation:** Phase I approval was received on January 16, 2002, 30% E&D Review on November 8, 2004, and the 95% E&D Review was held on September 28, 2005. Phase 2 approval requests were request in 2006, 2007, 2008, 2009, 2010, 2011 and 2012. CWPPRA funding has been insufficient to fund this project to date.
- 13. Current status/remaining issues:** Phase 1 E&D has been completed, but project has not yet been selected for Phase 2 construction funding. Sponsors have considered numerous options to move the project forward including re-scoping and/or seeking alternative funding sources. Because of the nature of the project, these re-scoping alternatives do not appear to be practical. A resurvey the island was conducted after the 2009 Hurricane Season to verify validity of plans and specifications. The results of the survey show that quantities and have actually decreased by approximately 100,000 cubic yards. While the project is still viable, it is likely that some adjustments to the plans and specifications will be required once Phase 2 approval has been obtained. It does not appear to be practical to address these

adjustments until phase 2 approval has been obtained. Likewise, a lease from BOEMRE must be obtained prior to construction but cannot be negotiated until Phase 2 funds are obtained. A slight modification to the schedule has been made to address these issues. It is currently intended to request Phase II construction funding again in January 2012, however, future funding requests may be dropped. This project is currently on hold as Project Sponsor is evaluating CPRA recommendation to deauthorize project based upon cost-benefit and consistency with State Master Plan.

14. Projected schedule:

- 30% Design Review: November 8, 2004
- 95% Design Review: September 28, 2005
- Design Completion: September 29, 2005
- Project Resurvey: November 2009
- Phase 2 Approval: January 2013
- Construction Start: January 2014

15. Preparer: Paul Kaspar, (214-665-7459), kaspar.paul@epa.gov

**Status Review - Unconstructed CWPPRA Projects
July 6, 2012**

- 1. Project Name:** Venice Ponds Marsh Creation & Crevasses (MR-15)
- 2. SOUP Category:** Recommended for Inactivation
- 3. PPL:** 15
- 4. Federal Agency:** US Environmental Protection Agency
- 5. Date of Construction Approval / Phase Two Approval:** Anticipated January 2013
- 6. Approved Total Budget:** \$1,074,522
- 7. Fully Funded Cost Estimate:** \$22,156,292 (January 2012)
- 8. Expenditures:** \$287,088
- 9. Unexpended Funds:** \$787,434
- 10. Estimate of anticipated funding increases, including O&M:** No anticipated CWPPRA funding increase for Phase I work.
- 11. Potential changes to project benefits:** Unknown at this time.
- 12. Brief chronology of project development and issues affecting implementation:**

Phase I approval was received on February 8, 2006. MOA established between USACE/EPA/OCPR to transfer project from USACE to EPA for design and construction of project. EPA cost share agreement with OCPR to perform Phase 1 E&D was completed on May 28, 2009. A project site visit was conducted on October 29, 2009. Geotechnical investigations were delayed in 2010 due to the Deepwater Horizon Spill. Phase 1 E&D was completed in November 2011.
- 13. Current status/remaining issues:** This project is currently on hold as Project Sponsor is evaluating CPRA recommendation to deauthorize project based upon cost-benefit and consistency with State Master Plan. Phase 1 E&D was completed in November 2011. Project team will be requesting Phase 2 funds in January 2013.
- 14. Projected schedule:**
 - 30% Design Review: Completed 29 June 2011
 - 95% Design Review: Completed 25 October 2011
 - Design Completion: Completed November 2011
 - Phase 2 Approval: January 2013
 - Construction Start: September 2013

15. Preparer: Chris Llewellyn, (214-665-7239), llewellyn.chris@epa.gov

Status Review - Unconstructed CWPPRA Projects
June 24, 2013

- 1. Project Name:** Freshwater Bayou Bank Stabilization-Belle Isle Canal to Lock (TV-11b)
- 2. SOUP Category:** Inactive
- 3. PPL:** 9
- 4. Federal Agency:** USACE
- 5. Date of Construction Approval / Phase Two Approval:** N/A
- 6. Approved Total Budget:** \$1,498,967
- 7. Fully Funded Cost Estimate:** \$38,065,335
- 8. Expenditures:** \$1,101,738
- 9. Unexpended Funds:** \$397,229
- 10. Estimate of anticipated funding increases, including O&M:** N/A
- 11. Potential changes to project benefits:** Possible decrease, requires further analysis
- 12. Brief chronology of project development and issues affecting implementation:**
 - Project completed a 30% design review meeting in Jun. of 2002
 - Project completed a 95% design review meeting in Jan. of 2004
 - The PDT requested Phase II authorization, in the fall of 2004, 2006, and 2007
 - In 2007 a 1-mile portion of CWPPRA was included in a CIAP proposed and approved project.
 - 2007 WRDA authorized the deepening of the Freshwater Bayou Channel to 16 ft.
 - 2009, Due to funding limitations, and a prioritization of the four CIAP reaches by Vermilion Parish, the state has indicated that the 1-mile portion of CWPPRA project that was included in a CIAP proposal is unlikely going to be built under the CIAP program.
- 13. Current status/remaining issues:**

The 2007 WRDA only authorized the deepening of the Freshwater Bayou Channel. It did not provide funding for the construction of the channel. The original feasibility study included a 24 ft depth channel with shoreline stabilization. The 2007 WRDA authorized channel was changed to a 16 ft depth. This size channel may or may not include a shoreline stabilization component. In 2010, a decision was made to further discuss the path forward for the project with the stakeholders, State, and USACE based on State's position to not support CWPPRA investments in embankment stabilization along federally maintained channels. In December 2011, the project was submitted for phase II funding, but later withdrawn from consideration and placed in a newly

proposed suspension category due to the amount of times submitted and denied for funding, and new information indicating a possible decrease in benefits, from updated shoreline loss rate figures in the project area. However, the new suspension category was never approved, and the project remains authorized.

14. Projected schedule: Not applicable. This project is inactive.

14. Preparer: Scott Wandell / 504-862-1878

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

COASTWIDE REFERENCE MONITORING SYSTEM (CRMS) REPORT

For Report:

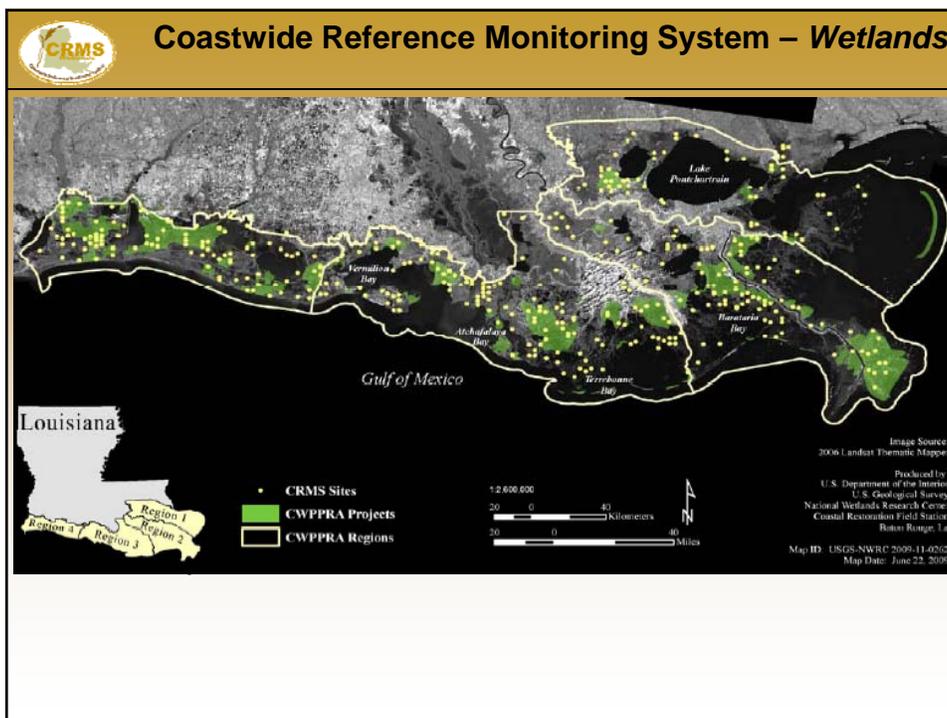
Ms. Dona Weifenbach will present a report on CRMS.

CRMS Update to the CWPPRA Task Force



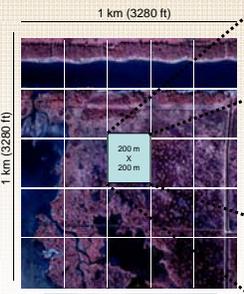
Dona Weifenbach
Coastal Protection and Restoration Authority
and
Sarai Piazza
USGS National Wetlands Research Center
September 11, 2013





Site Design and Metrics

CRMS-Wetlands Sampling Area:
1 km² aerial photography area

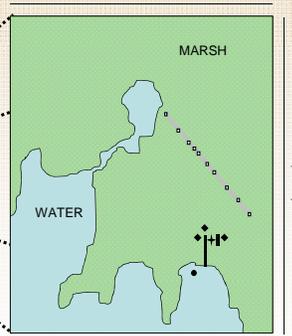


1 km (3280 ft)

200 m X 200 m



CRMS-Wetlands Sampling Area:
200m X 200m area for non-spatial data collection



200 m (656 ft)

MARSH

WATER

- 2m X 2m vegetation station
- + Surface Elevation Table (SET)
- ◆ Accretion plot
- Datasonde collecting water level and salinity
- Boardwalk

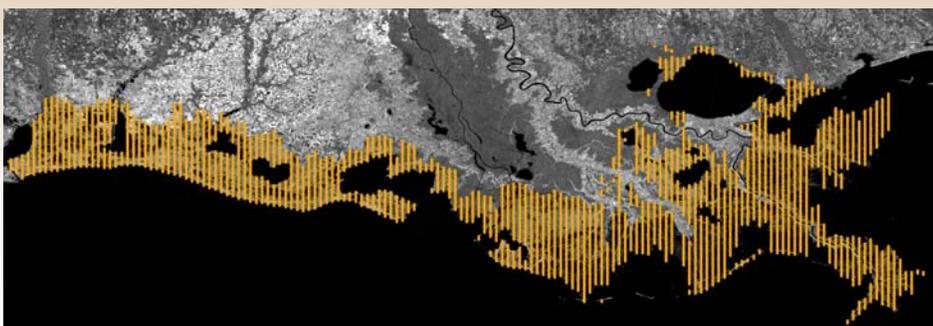
METRICS

- **Vegetation**
 - Cover and species comp.
 - Relative abundance
 - Dominance
 - Richness
 - Height
 - NDVI
- **Hydrology**
 - Water depth
 - Flooding frequency and duration
 - Salinity
 - Temperature
- **Soils**
 - Bulk density & % organic
 - Water content
 - Sediment elevation
 - Sediment accretion
 - Shallow subsidence
 - Salinity
 - Temperature
 - pH
 - Soil type
 - Deep subsidence
- **Landscape**
 - Land:water ratio



2013 Coastwide Vegetation Survey

- Approximately 6298 sites
- Consistent methodology with 2007 survey
- Continuation of surveys initiated in 1968 by Chabreck et al.
- CRMS collaboration with LDWF, LSU, ULL
- 2013 data collection completed August 9th
- Data being QA'd
- Final data product due 6/30/2014



CRMS Website Vegetation Assessment Tool

Single-click the yellow symbology on the map to view CRMS Site information.

Layers Menu

- CRMS
- Zoom To: CRMS0034
- 1 km² Buffer
- 200 m² Buffer
- RealTime Hydro Sites
- Classify
- CWPPRA
- Hydro Basins
- Vegetation
- Soils
- Public Lands
- Land/Water
- CRMS
- Base Layer

Info | Water | Vegetation | Soil | Spatial | Report Card | Tools

CRMS0034 - 1Km² Acreage Assessment

- Land/Water
- Coastwide Vegetation

1949 1968 1978 1988 1997 2001 2007

Click a Year to Assess

CRMS0034 1Km² Coastwide Vegetation for 1997

Saline:	N/A
Fresh:	207.57 acres (84.00%)
Brackish:	N/A
Intermediate:	39.54 acres (16.00%)
Swamp:	N/A
Water:	N/A
Other:	N/A
Total:	247.11 acres

Expand

Long: -90.424, Lat: 30.346

Identify potential areas in need of restoration

Single-click the yellow symbology on the map to view CRMS Site information.

Layers Menu

- CRMS
- Zoom To: CRMS0034
- 1 km² Buffer
- 200 m² Buffer
- RealTime Hydro Sites
- Classify
- CWPPRA
- Hydro Basins
- Vegetation
- Soils
- Public Lands
- Land/Water
- CRMS
- Base Layer

Info | Water | Vegetation | Soil | Spatial | Report Card | Tools

CRMS0034 - 1Km² Acreage Assessment

- Land/Water
- Coastwide Vegetation

1956 1978 1988 2004 2006 2008

Click a Year to Assess

CRMS0034 1Km² Land/Water for 2006

Land:	235.83 acres (95.44%)
Water:	11.27 acres (4.56%)
Total:	247.11 acres

Expand

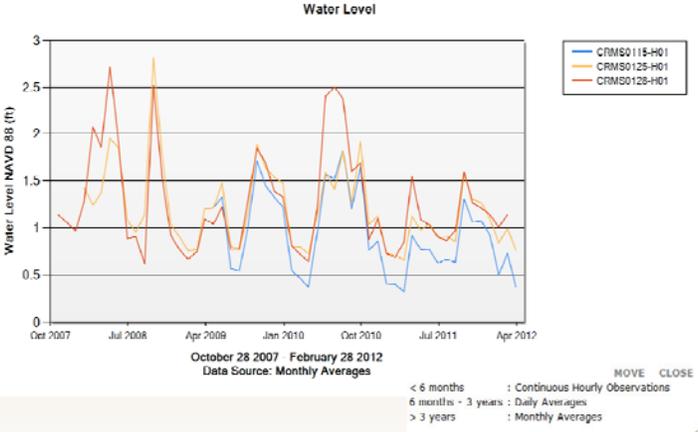
Long: -90.317, Lat: 30.312

20 Projects are nominated from 9 hydrologic basins each year

How much land has the area lost over time?
 How have the vegetation types changed?
 What caused the change?
 Can it be reversed?
 How?



Plan a new project on the Priority List



< 6 months : Continuous Hourly Observations
 6 months - 3 years : Daily Averages
 > 3 years : Monthly Averages

29 projects in E&D

Phase 1 - 18

Phase 2 - 9

Demos - 2

Characterize the project area

Set goals for the restoration project

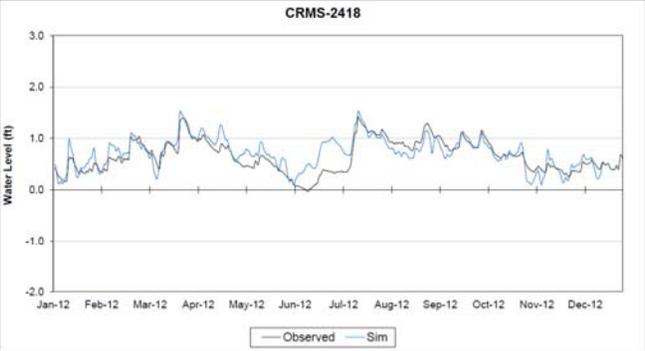
Set measurable target ranges



CRMS Data used in Model Development for CWPPRA and State Projects

CRMS-2418





Cameron Creole Freshwater Introduction, CS- 49

One of six projects being modeled

CRMS Elevation Data Marsh Creation project Planning

Single-click the yellow symbology on the map to view CRMS Site Information.

Info | Water | Vegetation | Soil | Spatial | Report Card | Tools

Site ID: CRMS0034
 Lat, Long: 30.3035, -90.3855
 Marsh Elevation: 0.98ft NAVD1988 GEOID99

Data Availability: 2012

Pre/Post Construction Pictures:

Post Construction | Pre Construction | Preliminary Site Visit North

Survey Report

Layers Menu

Zoom To: CRMS0034

- 1 km² Buffer
- 200 m² Buffer
- RealTime Hydro Sites
- Classify
- CWPPRA
- Hydro Basins
- Vegetation
- Soils
- Public Lands
- Land/Water
- CMS
- Base Layer

Long: -90.373, Lat: 30.302

Evaluate the performance of a constructed project

Coastwide Reference Monitoring System

Home | Data | Mapping | Library | Visualization | Program

Single-click in a red polygon on the map to view CWPPRA Project Information.

Info | Water | Vegetation | Report Card | Tools

State ID: CS-20
 Name: East Mud Lake Marsh Management
 Sponsors: HBSC and OCPB
 Type: Marsh Management

Links:

- CS-20 General Fact Sheet(2.45 MB)
- CS-20 Comprehensive Monitoring Report(2.77 MB)

Objectives:

- Prevent wetland degradation in the project area by reducing vegetative stress, thereby improving the abundance of emergent and submergent vegetation. This will be achieved through hydrologic structural management to reduce water levels and salinities.
- Stabilize shoreline of Mud Lake through vegetative plantings.

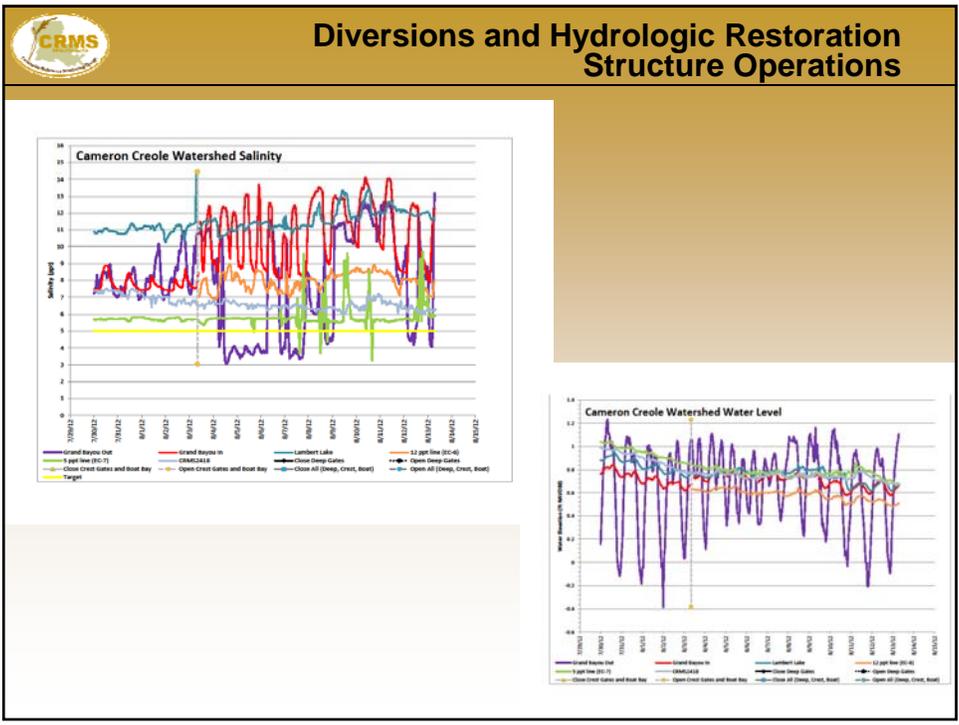
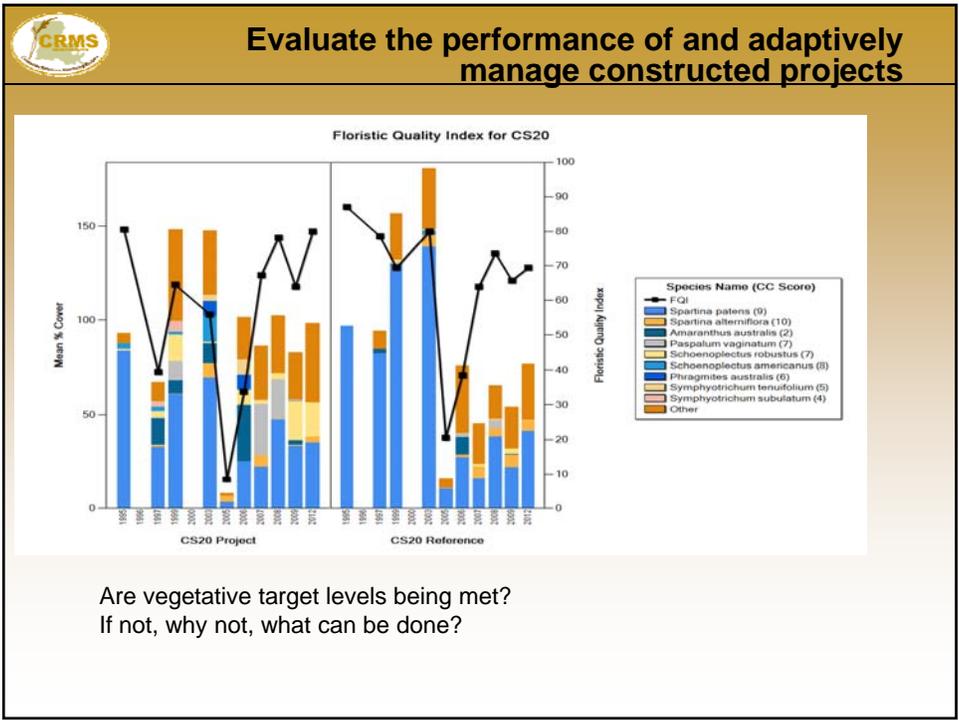
Goals:

- Decrease rate of marsh loss
- Increase vegetative cover along shoreline of East Mud Lake
- Increase coverage of emergent vegetation in shallow, open-water areas
- Increase abundance of vegetation in presently vegetated portions of project area
- Reduce water level and salinity fluctuations to within target ranges for brackish vegetation. Target range for salinities is less than or equal to 15 ppt and 4 in. below marsh level to 2 in. above marsh level for water levels.
- Decrease duration and frequency of floods over marsh.

Layers Menu

Zoom To: CS-20

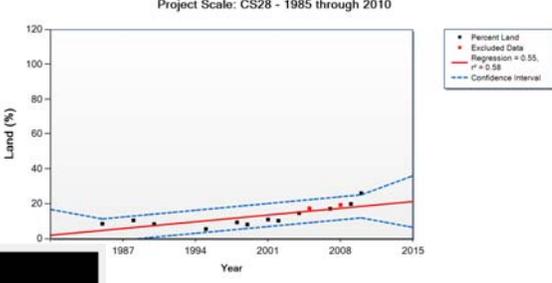
- Constructed
- Not Constructed
- Infrastructure
- Legend
- Hydro Basins
- Vegetation
- Soils
- Public Lands
- Land/Water
- CMS
- Base Layer

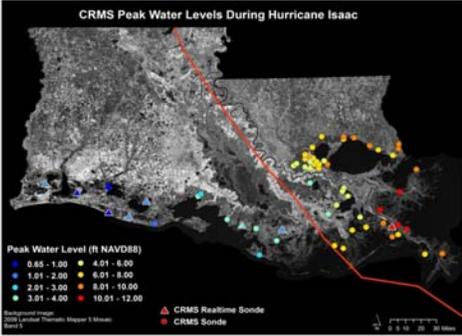




Identify damages to projects following a major disturbance: Resiliency

Tease out the effects of storm effects versus project effects



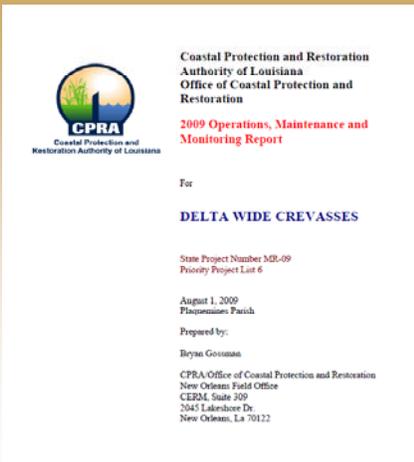


Did the project bounce back?

How did the project area respond relative to the hydrologic basin?

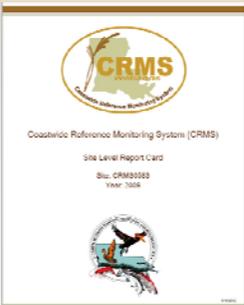


Recommendation for projects at end of 20 years: Monitoring data, report cards, and reports



When the project reaches year 15, the monitoring data is reviewed to determine project performance

- 2014 - 2 projects
- 2015 - 1 project
- 2016 - 4 projects
- 2017 - 7 projects
- 2018 - 5 projects







CRMS Implementation Status

Milestones

- 13 OM&M Reports in progress for 2013
 - BA-27 Barataria Basin Landbridge Shoreline Protection (NRCS) **
 - BA-39 Miss. River Sediment Delivery, Bayou DuPont (EPA) **
 - MR-09 Delta Wide Crevasses (NMFS) **
 - BA-02 GIWW to Clovelly Hydrologic Restoration, (NRCS) **
 - TE-44 North Lake Mechant Landbridge Restoration (USFWS)
 - TE-45 Terrebonne Bay Shore Protection Demonstration (USFWS) **
 - TE-46 West Lake Boudreaux Shoreline Projection and Marsh Creation (USFWS)
 - TE-48 Raccoon Island Shoreline Projection and Marsh Creation (NRCS) **
 - CS-20 East Mud Lake Marsh Management (NRCS)
 - CS-23 Replace Sabine Refuge Water Control Structures (USFWS)
 - CS-31 Holly Beach Sand Management (NRCS) **
 - TV-21 East Marsh Island Marsh Creation (NRCS) **
 - ME-11 Humble Canal Hydrologic Restoration (NRCS) **
- CRMS 2012 Coastwide Aerial Photography currently being analyzed by USGS using automated land/water technique approved by CWPPRA.
- Working with FEMA on damages to CRMS sites from Hurricane Isaac



CRMS Implementation Status

- Website training scheduled in Baton Rouge Wednesday, September 25
- Watermarks featuring CRMS articles released in June 2013
- Working with CWPPRA Outreach Committee on a CRMS educational document to be released in October 2013
- Vegetation Helicopter Survey completed August 2013
- Coastwide Elevation Survey of CRMS sites in planning for 2014
- MWG meeting June 21, 2013 presented SVI, VVI, and Land:Water analysis
- Conferences:
 - National Conference on Ecosystem Restoration, August 2013
 - Coastal and Estuarine Research Federation, November 2013
 - State of the Coast, March 2014




Questions?

<http://www.lacoast.gov/crms2>



CRMS Past Expenditures and Projections thru FY18-19

	Inception through FY10-11	FY11-12	FY12-13	FY13-14	FY14-15	FY15-16**	FY16-17	FY17-18	FY18-19
Admin and Supervision		\$213,604	\$218,944	\$224,417	\$230,028	\$235,779	\$241,673	\$247,715	\$253,908
Landrights		\$5,500	\$5,638	\$5,778	\$5,923	\$6,071	\$6,223	\$6,378	\$6,538
Engineering Services		\$310,000	\$317,750	\$325,694	\$333,836	\$342,182	\$350,737	\$359,505	\$368,493
Site Construction		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Temporal Data Collection		\$6,550,000	\$6,713,750	\$6,881,594	\$7,053,634	\$7,229,974	\$7,410,724	\$7,595,992	\$7,785,892
Spatial Data Collection		\$780,000	\$338,250	\$346,706	\$839,975	\$364,258	\$373,365	\$904,561	\$392,266
OMRR&R		\$150,000	\$153,750	\$157,594	\$161,534	\$165,572	\$169,711	\$173,954	\$178,303
Database Management		\$234,830	\$240,701	\$246,718	\$252,886	\$259,208	\$265,689	\$272,331	\$279,139
Analysis and Reporting		\$549,002	\$562,727	\$576,795	\$591,215	\$605,995	\$621,145	\$636,674	\$652,590
TOTAL		\$40,265,767	\$8,792,936	\$8,551,509	\$9,469,030	\$9,209,040	\$9,439,266	\$10,197,109	\$9,917,129
							GRAND TOTAL		\$114,607,081.72

Note:

** Current out-year request

Totals for FY13-14 thru FY18-19 are projected.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

ANNUAL REQUEST FOR INCREMENTAL FUNDING FOR FY16 ADMINISTRATIVE COSTS FOR CASH FLOW PROJECTS

For Decision:

The U.S. Army Corps of Engineers will request funding approval in the amount of \$26,834 for administrative costs for cash flow projects beyond Increment 1. The Technical Committee will consider and vote to make a recommendation to the Task Force on the request for funds for the following projects:

- Barataria Basin Landbridge Shoreline Protection, Phase 4 (BA-27d), PPL 11, NRCS
Incremental funding amount: \$1,064
- Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c), PPL 9, NRCS
Incremental funding amount: \$1,396
- Little Lake Shoreline Protection/ Dedicated Dredging (BA-37), PPL 11, NMFS
Incremental funding amount: \$1,097
- North Lake Mechant Landbridge Restoration (TE-44), PPL 10, USFWS
Incremental funding amount: \$828
- West Lake Boudreaux Shoreline Protection & Marsh Creation (TE-46), PPL 11, USFWS
Incremental funding amount: \$908
- GIWW - Perry Ridge West Bank Stabilization (CS-30), PPL 9, NRCS
Incremental funding amount: \$1,056
- South White Lake Shoreline Protection (ME-22), PPL 12, USACE
Incremental funding amount: \$1,285
- Lake Borgne Shoreline Protection (PO-30), PPL 10, EPA
Incremental funding amount: \$1,704
- Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS
Incremental funding amount: \$2,099
- Pass Chalant to Grand Bayou Pass Barrier Shoreline Protection (BA-35), PPL 11, NMFS
Incremental funding amount: \$908
- Pelican Island and Pass La Mer to Chalant Pass Restoration (BA-38), PPL 11, NMFS
Incremental funding amount: \$1,590
- Mississippi River Sediment Delivery System Bayou Dupont (BA-39), PPL 12, EPA
Incremental funding amount: \$1,752
- Goose Pt., Pt. Platte Marsh Creation (PO-33), PPL 13, USFWS
Incremental funding amount: \$1,744
- Coastwide Nutria Control Program (LA-03b), PPL 11, NRCS
Incremental funding amount: \$2,161
- Point Au Fer Canal Plugs (TE-22), PPL 2, NMFS
Incremental funding amount: \$1,349

- Lake Chapeau Sediment Input and Hydrologic Restoration (TE-26), PPL 6, NMFS
Incremental funding amount: \$1,544
- Brady Canal Hydrologic Restoration (TE-28), PPL 3, NRCS
Incremental funding amount: \$1,349
- Replace Sabine Refuge Water Control Structures & Hog Island (CS-23), PPL 3, USFWS
Incremental funding amount: \$1,000
- Coastwide Reference Monitoring System (CRMS) -Wetlands
Incremental funding amount: \$2,000

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

REQUEST FOR FUNDING FOR THE CWPPRA PROGRAM'S TECHNICAL SERVICES

For Decision:

The U.S. Geological Survey (USGS) and CPRA are requesting funding for technical services for the CWPPRA program in the amount of \$171,410.

The Technical Committee will consider and vote to make a recommendation to the Task Force to approve the request for funding for technical services in the amount of \$171,410.



United States Department of the Interior
U.S. GEOLOGICAL SURVEY
BIOLOGICAL RESOURCES DIVISION

National Wetlands Research Center

April 2, 2014

Scope of Work

Technical Services to the CWPPRA Program

Accurate and timely information is critical to large, interagency programs such as CWPPRA for project planning and interacting with the general public. Due to the spatial extent of the CWPPRA program, the number of stakeholders involved, and the amount of Federal and State dollars associated with the program, the continued maintenance of project, GIS, and website data are necessary to ensure the most up to date and accurate data are available. It is the goal of USGS to provide the CWPPRA partners and the public with timely and accurate information about the program and the constructed projects, as well as, aid project managers during project reevaluation.

Project Information Database Maintenance Task Description:

NWRC has created and maintains a real-time, interactive, internet-based data management system, which provides consistent, current programmatic information. This system comprised of several synchronized database components deployed in various locations which serve specific tasks at their respective location ranging from tracking project costs to progress milestones. This information system is currently working with several CWPPRA databases including: Outreach Committee's standardized public project fact sheets, CWPPRA budget analyst reports and databases, the WVA working group spreadsheets, and the USGS CWPPRA project mapping effort. Additionally, the presence of this system allows staff to "database enable" the CWPPRA fact sheets thus allowing the inclusion of real-time information which directly addresses the conflicting information problem.

As security requirements governing federal systems change, there is a need to ensure that the CWPPRA project information database complies with current with information exchange policies wherever a database component is deployed.

As the primary mechanism for integrating databases across the five Task Force agencies and the State of Louisiana, this system is critical to ensure consistent, accurate information exchange and dissemination between the many moving parts of CWPPRA and ensures resources are available to address any problems or user needs in a timely manner.

CWPPRA Website (www.LAcoast.gov) Maintenance Task Description:

The CWPPRA website currently provides a continuous online presence for federal/state partners and the general public to access the latest information on CWPPRA, its projects, partners, and other pertinent information related to Louisiana's coastal wetlands conservation and restoration. The LaCoast.gov website is an interface between the public and the program. NWRC utilizes web server hardware and software, and performs system management, backup and recovery

maintenance, and programming efforts for the www.LaCoast.gov website. This task includes storing and distributing WaterMarks, fact sheets, videos, legislative links, and educational materials, as well as, daily maintenance and update of text and links.

GIS Task Description:

During Phase I of a CWPPRA project, it may be necessary to reevaluate that project to facilitate a scope change. NWRC provides the project manager with GIS support that consists of spatial data analyses, maps, graphics, and technical support utilizing the most recent spatial data sets available. Providing these products and services to CWPPRA agencies requires a standardized GIS data management environment and a good deal of coordination with those project managers.

Technical Services for FY14

Description	Cost
Project Information Database Maintenance - USGS	\$41,710
CWPPRA Website (www.LaCoast.gov) Maintenance	\$55,000
GIS Support for CWPPRA Constructed Project Activities	\$74,700
TOTAL	\$171,410

Deliverables:

Project Information Database Maintenance Task

- Programming and database administration
- Data enabling fact sheets
- Federal security review

CWPPRA Website Maintenance Task

- Active and updated CWPPRA website maintained on daily basis
- Summary of CWPPRA website activities (Three times per year at Task Force meetings)

GIS Task

- Updated WVA analysis for In Phase projects
- Fact Sheet maps for In Phase and newly selected PPL projects
- Miscellaneous requests for CWPPRA agencies

Points of Contact:

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COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

**REQUEST FOR MONITORING INCREMENTAL FUNDING AND BUDGET
INCREASES**

For Decision:

The Technical Committee will consider and vote to make a recommendation to the Task Force to approve requests for total FY16 incremental funding in the amount of \$10,008,316.

- a. PPL 9+ Projects requesting approval for FY16 incremental funding in the total amount of \$639,283 for the following projects:
 - Grand Lake-White Lake Landbridge Protection (ME-19), PPL 10, USFWS
Incremental funding amount: \$29,000
 - Coastwide Planting Project (LA-39), PPL 20, NRCS
Incremental funding amount: \$76,686
 - Coastwide Nutria Control Program (LA-03b), PPL 11, NRCS
Incremental Funding amount: \$96,109
 - Barataria Basin Landbridge Shoreline Protection (BA-27c), PPL 9, NRCS
Incremental funding amount: \$8,648
 - Pass Chaland to Grand Bayou Pass (Bay Joe Wise) Barrier Shoreline Restoration (BA-35), PPL 11, NMFS
Incremental funding amount: \$102,738
 - Dedicated Dredging on the Barataria Basin Landbridge (BA-36), PPL 11, USFWS
Incremental funding amount: \$88,179
 - Pelican Island and Pass La Mer to Chaland Pass Restoration (BA-38), PPL 11, NMFS
Incremental funding amount: \$147,657
 - Lake Hermitage Marsh Creation (BA-42), PPL 15, USFWS
Incremental funding amount: \$31,027
 - Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS
Incremental funding amount: \$16,736
 - Timbalier Island Dune & Marsh Creation (TE-40), PPL 9, EPA
Incremental funding amount: \$13,297
 - Four Mile Canal Terracing and Sediment Trapping (TV-18), PPL 9, NMFS
Incremental funding amount: \$29,206

- b. PPL 1-8 Project requesting approval for FY16 incremental funding in the total amount of \$135,501:
 - East Mud Lake Marsh Management (CS-20), PPL 2, NRCS
Incremental funding amount: \$130,071
 - Naomi Outfall Project (BA-03c), PPL 5, NRCS
Incremental funding amount: \$5,430

- c. PPL 1-8 Projects requesting approval for a budget increase and incremental funding:
 - Vermilion River Cutoff Bank Protection (TV-03), PPL 1, USACE
Funding increase amount: \$24,492
Incremental funding amount: \$24,492

- d. Coastwide Reference Monitoring System (CRMS) requesting approval for FY16 incremental funding in the total amount of \$9,209,040:
 - Incremental funding (FY13 – FY15): \$9,209,040

**Request for CWPPRA Project O&M Funding Increase
Project Performance Synopsis
August 29, 2013**

Vermilion River Cutoff (TV-03)

The shoreline along the east bank of the Vermilion River Cut-Off Canal has benefitted from the construction of the rock dike. The Differential Global Positioning System (DGPS) shoreline survey performed in 2006 (figure 1) and post-construction aerial photography suggest that the shoreline is stable behind the rock dike while erosion continues along un-rocked portions of the channel.

Additional monitoring funds will support analysis of a DGPS shoreline survey collected in 2011, collection and analysis of a final shoreline survey in 2014, and the compilation of a final monitoring report in 2015.

The project appears to have been successful but at present, we cannot quantify the extent of that success.

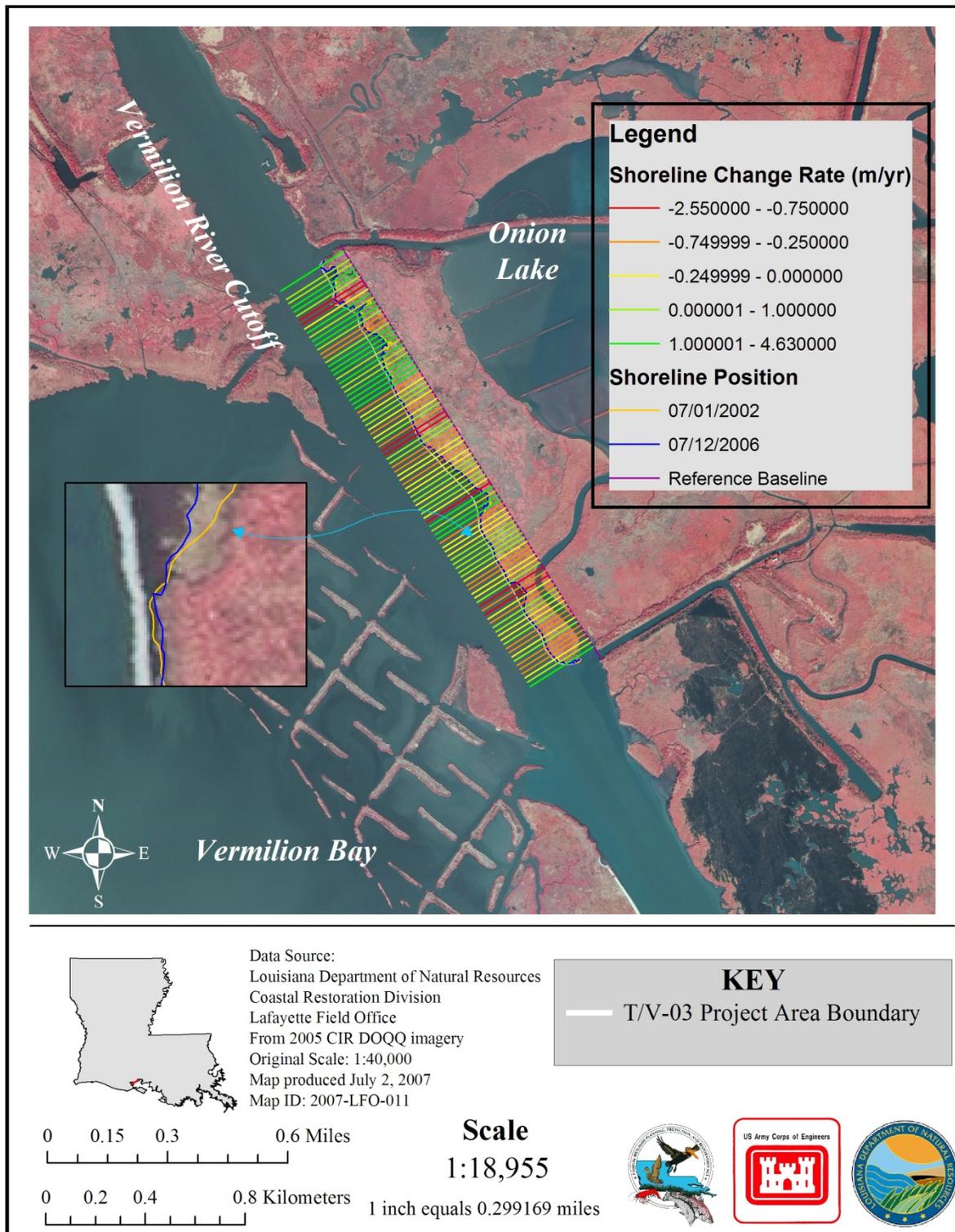


Figure 1. Shoreline change map of the Vermilion River Cut-Off (TV-03) project for July 9, 2002 to July 12, 2006.

CWPPRA Project Monitoring Budget Adjustment Template

Project Name: Vermilion River Cutoff
 PPL: 1
 Project Sponsor: COE

Prepared By: CPRA
 Date Prepared: 8/28/2013
 Date Revised:

Construction completed Feb 1996

Approved Original Base Line				Obligations (CWPPRA) to Date				Proposed Revised Estimate and Schedule				
Year	FY	State Monitoring	Corps Admin	Fed Monitoring	FY	State Monitoring	Corps Admin	Fed Monitoring	FY	Monitoring	Corps Admin	Fed Monitoring
0	1996		\$0	\$0	1996				1996			
-1	1997		\$0	\$0	1997				1997			
-2	1998		\$0	\$0	1998				1998			
-3	1999		\$0	\$0	1999				1999			
-4	2000		\$0	\$0	2000				2000			
-5	2001		\$0	\$0	2001				2001			
-6	2002		\$0	\$0	2002				2002			
-7	2003		\$0	\$0	2003				2003			
-8	2004		\$0	\$0	2004				2004			
-9	2005		\$0	\$0	2005				2005			
-10	2006		\$0	\$0	2006				2006			
-11	2007		\$0	\$0	2007				2007			
-12	2008		\$0	\$0	2008				2008			
-13	2009		\$0	\$0	2009				2009			
-14	2010		\$0	\$0	2010				2010			
-15	2011		\$0	\$0	2011				2011			
-16	2012		\$0	\$0	2012				2012	\$0		\$0
-17	2013		\$0	\$0	2013	\$90,258			2013			
-18	2014		\$0	\$0	2014				2014	\$8,500		
-19	2015		\$0	\$0	2015				2015	\$17,500		
Total		\$0	\$0			\$90,258	\$0	\$0		\$26,000	\$0	\$0

Shoreline Mapping
OM&M Report

SUMMARY:

Benefits:

Original Net Acres	Revised Net Acres
194.2	194.2

Approved Mon Budget vs Obligations to Date: Increment Years -0 through -6

Funding Category	Approved Original Mon Baseline	Mon Obligations to Date	Difference
State Monitoring	\$69,000	\$90,258	(\$21,258)
Corps Admin	\$0	\$0	\$0
Fed Monitoring	\$0	\$0	\$0
Totals	\$69,000	\$90,258	(\$21,258)

Current Request:

Current Increment Funding Request Year	Proposed Revised Estimate	Remaining Available Mon Budget	Current Funding Request Amount
Year - 17	\$0		\$0
Year - 18	\$8,500		\$8,500
Year - 19	\$17,500		\$17,500
Totals	\$26,000	\$1,508	\$24,492

Approved Budgeted Mon Funds less Obligations to Date:

	Total Approved Mon	Mon Obligations to Date	Remaining Available Mon Budget
Original Budget	\$91,766	\$90,258	
Totals	\$91,766	\$90,258	\$1,508

Original Approved vs Proposed Revised Fully Funded Estimates:

Original Fully Funded Baseline Estimate	Approved Net Budget Change to E&D, Constr., O&M and Monitoring	Additional Mon funding required for remaining project life	Requested Revised Fully Funded Estimate
\$69,000	\$22,766	\$26,000	\$117,766

Total Approved Budget less Total Proposed Revised Budget

Funding Category	Current Total	Proposed Revised Total	Difference
State Monitoring	\$91,766	\$117,766	(\$26,000)
Corps Admin	\$0	\$0	\$0
Fed Monitoring	\$0	\$0	\$0
Total	\$91,766	\$117,766	(\$26,000)

Change in Total Cost and Cost Effectiveness:

As Compared To	Cost Estimate % Change	Cost Effectiveness	Revised Cost Effectiveness
Original Fully Funded Baseline Est.	70.68%	355	606
Approved Fully Funded Baseline Est. Plus Net Budget Changes	28.33%	473	606

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

**REQUEST FOR OPERATION AND MAINTENANCE (O&M) INCREMENTAL
FUNDING AND BUDGET INCREASES**

For Decision:

The Technical Committee will consider and vote to make a recommendation to the Task Force to approve requests for total FY16 incremental funding in the amount of \$5,903,032 and O&M budget increases totaling \$1,754,749.

- a. PPL 9+ Projects requesting approval for FY16 incremental funding in the total amount of \$3,359,605 for the following projects:
 - Little Lake Shoreline Protection/ Dedicated Dredging Near Round Lake (BA-37), PPL 11, NMFS
Incremental funding amount (FY16) (O&M and State Insp.): \$12,253
Incremental funding amount (Federal S&A): \$1,604
 - Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c), PPL 9, NRCS
Incremental funding amount \$5,882
 - North Lake Mechant Landbridge Restoration (TE-44), PPL 10, USFWS
Incremental funding amount: \$95,367
 - West Lake Boudreaux Shoreline Protection and Marsh Creation (TE-46), PPL 11, USFWS
Incremental funding amount: \$15,801
 - GIWW - Perry Ridge West Bank Stabilization (CS-30), PPL 9, NRCS
Incremental funding amount: \$413,252
 - South White Lake Shoreline Protection (ME-22), PPL 12, USACE
Incremental funding amount: \$11,871
Incremental funding amount (Federal S&A): \$3,957
 - Lake Borgne Shoreline Protection (PO-30), PPL 10, EPA
Incremental funding amount (FY16) (O&M and State Insp.): \$88,400
Incremental funding amount (Federal S&A): \$1,180
 - Delta Management at Fort St. Philip (BS-11), PPL 10, USFWS
Incremental funding amount (FY16): \$5,666
 - Pass Chalant to Grand Bayou Pass Barrier Shoreline Protection (BA-35), PPL 11, NMFS
Incremental funding amount (FY16) (O&M and State Insp.): \$224,790
Incremental funding amount (Federal S&A): \$4,178
 - Pelican Island and Pass La Mer to Chalant Pass Restoration (BA-38), PPL 11, NMFS

Incremental funding amount (FY16) (O&M and State Insp.): \$142,707

Incremental funding amount (Federal S&A): \$10,861

- Mississippi River Sediment Delivery System Bayou Dupont (BA-39), PPL 12, EPA

Incremental funding amount (FY16) (O&M and State Insp.): \$3,726

Incremental funding amount (Federal S&A): \$3,726

- Goose Pt., Pt. Platte Marsh Creation (PO-33), PPL 13, USFWS

Incremental funding amount (FY16) (O&M and State Insp.): \$3,650

Incremental funding amount (Federal S&A): \$3,399

- Coastwide Nutria Control Program (LA-03b), PPL 11, NRCS

Incremental funding amount (FY16): \$2,307,335

- b. PPL 1-8 Projects requesting approval for FY16 incremental funding in the amount of \$850,544 for the following projects:

- Point Au Fer Canal Plugs (TE-22), PPL2, NMFS

Incremental funding amount (FY16) (O&M and State Insp.): \$14,127

Incremental funding amount (Federal S&A): \$2,430

- Lake Chapeau Sediment Input and Hydrologic Restoration, Point Au Fer Island (TE-26), PPL 6, NMFS

Incremental funding amount (FY16) (O&M and State Insp.): \$13,904

Incremental funding amount (Federal S&A): \$2,459

- Brady Canal Hydrologic Restoration (TE-28), PPL 3, NRCS

Incremental funding amount: \$172,706

- West Belle Pass Headland Restoration (TE-23), PPL 2, USACE

Incremental funding amount: \$42,111

- Cameron-Creole Maintenance (CS-04a), PPL 3, NRCS

Incremental funding amount: \$248,439

- East Mud Lake Marsh Management (CS-20), PPL 2, NRCS

Incremental funding amount: \$38,877

- Highway 384 Hydrologic Restoration (CS-21), PPL 2, NRCS

Incremental funding amount: \$171,450

- Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully (CS-23), PPL 3, USFWS

Incremental funding amount: \$144,041

- c. PPL 1-8 Project requesting approval for an O&M budget increase of \$1,754,749 and FY16 incremental funding in the amount of \$1,692,883:

- GIWW to Clovelly Hydrologic Restoration (BA-02), PPL 1, NRCS

Budget Increase amount: \$1,754,749

Incremental Funding amount: \$1,692,883



BA-02 GIWW to Clovelly Hydrologic Restoration Project

CWPPRA Technical Committee
09/11/2013



committed to our coast

INITIAL CONSTRUCTION DETAILS

Project was designed to reduce adverse tidal effects in the project area and to promote freshwater introduction and sediment retention. Project features included:

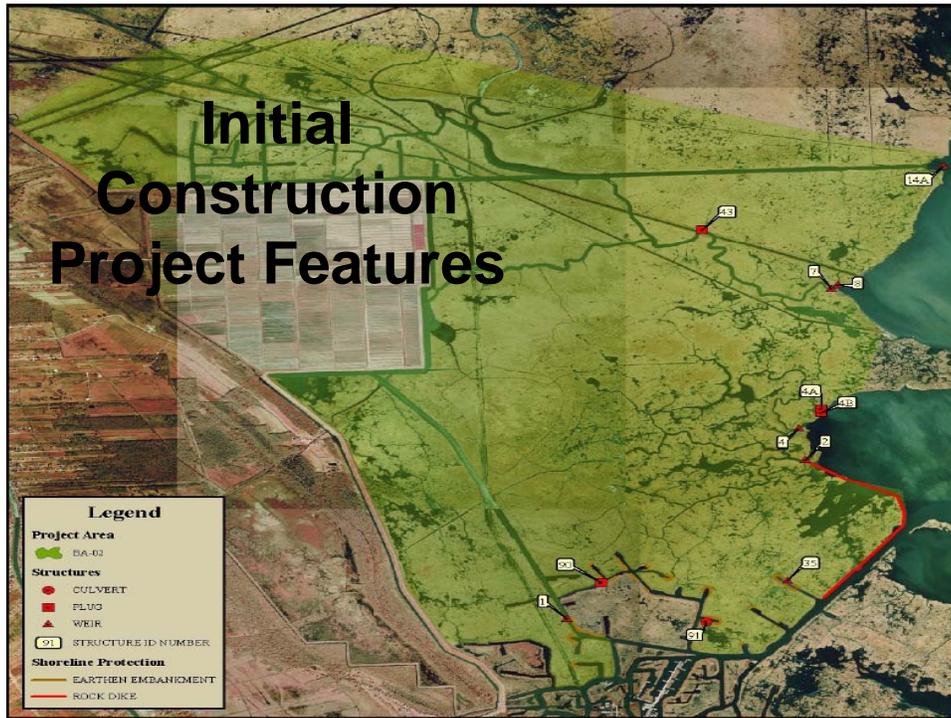
Construction Unit No.1

- Three (3) fixed crest rock weirs with boat bays.
- Two (2) rock channel plugs.
- Rock plug with culvert and flap gate.

Construction Unit No.2

- Fixed crest weir with boat bay
- Rock riprap channel plug
- Fixed crest weir with barge bay
- Variable crest weir, water control structure
- Riprap channel plug
- 5,665 linear feet lake rim restoration
- 11,711 linear feet earthen embankment stabilization

Total Construction Cost: \$6,444,428



MAINTENANCE EVENT No.1 (2006) – DETAILS

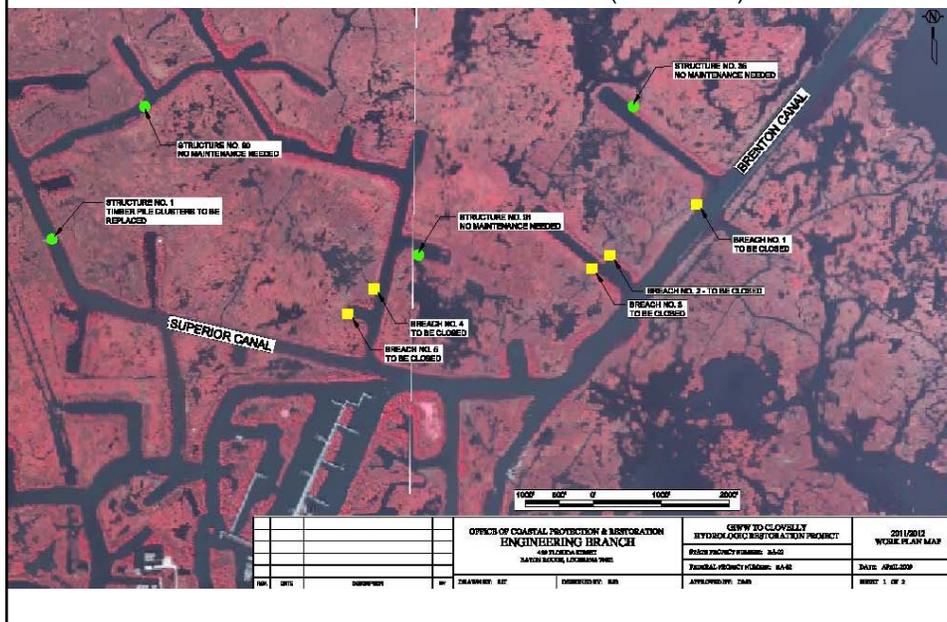
- Maintenance needs on project determined in 2006.
- Maintenance resulting from a maritime barge colliding with the timber dolphin system supporting the navigational aids on the southwest side of Structure 14A.
- Tidewater Dock, Inc of Galliano, La. constructed the new timber pile dolphin
- The project was completed in Dec 2006.
- Work funded from the O&M budget
- **BA-02 Maintenance Cost for Construction: \$14,000**

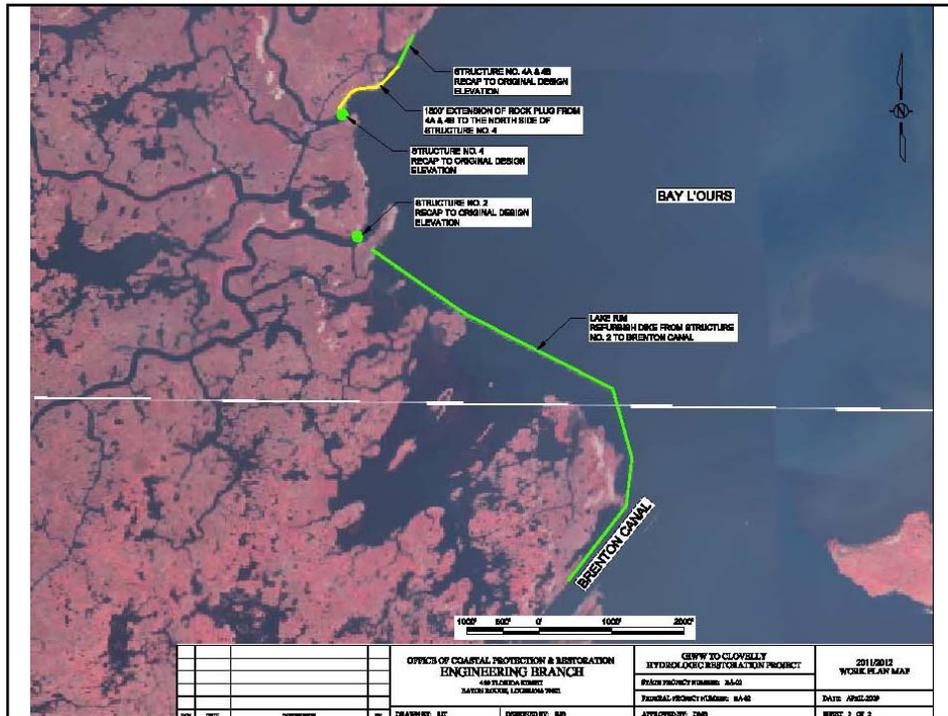
MAINTENANCE EVENT No. 2 - (Year 2012)

- Removal and replacement of four (4) timber pile dolphins at Structure No.1
- Recap rock weir Structures No.2 and 4.
- Extend rock plug No.4A approximately 1,500 linear feet to Structure No. 4 to close breach opened during Hurricanes Gustav and Ike.
- Removal and replacement of two (2) timber pile dolphins at Structure 14A.
- Rock riprap lift on approximately 5,000 linear feet of the lake rim of Bay L' Ours
- Repair five (5) earthen breaches in the northern project area.

BA-02 Final Construction Cost (CWPPRA):	\$2,454,711.55
BA-02 Final Construction Cost (FEMA – State Surplus)	<u>\$ 511,122.35</u>
Final Construction Cost:	\$3,056,833.90

MAINTENANCE EVENT No. 2 – (Year 2012)





PROPOSED MAINTENANCE EVENT No. 3 (2013)

Proposed Maintenance Event No.3 consist of approximately 1,700 linear feet of rock dike to protect the fragile and deteriorating marsh between Structures 2 and 4. The project area breached during Hurricane Isaac, compromising the project goals. The Overall Projected Project Budget to complete this work is outlined below:

Estimated Construction Cost:	\$1,512,000
Engineering and Design:	\$ 104,600
Surveying:	\$ 19,950
Permitting:	\$ 3,200
Construction Inspection:	\$ 102,000
Construction Administration:	\$ 18,000
CPRA Administration:	\$ 20,000
Total Overall Estimated Project Budget:	\$1,779,750



CWPPRA Project O&M Budget Adjustment Template - Option A

Project Name: GIWW to Clovelly Hydrologic Restoration
 PPL: 1
 Project Sponsor: NRCS

Prepared By: CPRA
 Date Prepared: 7/30/2013
 Date Revised: 7/30/2013

		Approved Base Line (Includes TF approved increase from Jan 1999)			Obligations to Date				Proposed Revised Estimate and Schedule			
Year	FY	State O&M & Insp.	Corps Admin	Fed S&A & Insp	FY	State O&M & Insp.	Corps Admin	Fed S&A & Insp	FY	O&M & State Insp.	Corps Admin	Fed S&A & Insp
0	2001	\$4,929	\$0	\$0	2001	\$0	\$0	\$0	2001	\$0	\$0	\$0
-1	2002	\$5,057	\$0	\$0	2002	\$0	\$0	\$0	2002	\$0	\$0	\$0
-2	2003	\$5,189	\$0	\$0	2003	\$0	\$0	\$0	2003	\$0	\$0	\$0
-3	2004	\$5,323	\$0	\$0	2004	\$0	\$0	\$0	2004	\$0	\$0	\$0
-4	2005	\$5,462	\$0	\$0	2005	\$0	\$0	\$0	2005	\$0	\$0	\$0
-5	2006	\$5,604	\$0	\$0	2006	\$0	\$0	\$0	2006	\$0	\$0	\$0
-6	2007	\$614,399	\$0	\$0	2007	\$0	\$0	\$0	2007	\$0	\$0	\$0
-7	2008	\$5,899	\$0	\$0	2008	\$0	\$0	\$0	2008	\$0	\$0	\$0
-8	2009	\$6,052	\$0	\$0	2009	\$0	\$0	\$0	2009	\$0	\$0	\$0
-9	2010	\$5,210	\$0	\$0	2010	\$0	\$0	\$0	2010	\$0	\$0	\$0
-10	2011	\$6,371	\$0	\$0	2011	\$0	\$0	\$0	2011	\$0	\$0	\$0
-11	2012	\$6,537	\$0	\$0	2012	\$0	\$0	\$0	2012	\$0	\$0	\$0
-12	2013	\$6,707	\$0	\$0	2013	\$3,215,716	\$0	\$86,456	2013	\$3,215,716	\$0	\$86,456
-13	2014	\$6,881	\$0	\$0	2014	\$0	\$0	\$0	2014	\$1,801,296	\$1,301	\$0
-14	2015	\$507,283	\$0	\$0	2015	\$0	\$0	\$0	2015	\$24,838	\$1,325	\$0
-15	2016	\$7,244	\$0	\$0	2016	\$0	\$0	\$0	2016	\$25,134	\$1,349	\$0
-16	2017	\$7,432	\$0	\$0	2017	\$0	\$0	\$0	2017	\$25,438	\$1,373	\$0
-17	2018	\$7,625	\$0	\$0	2018	\$0	\$0	\$0	2018	\$28,751	\$2,329	\$0
-18	2019	\$7,824	\$0	\$0	2019	\$0	\$0	\$0	2019	\$29,614	\$2,399	\$0
-19	2020	\$8,051	\$0	\$0	2020	\$0	\$0	\$0	2020	\$30,502	\$2,471	\$0
	Total	\$1,235,079	\$0	\$0		\$3,215,716	\$0	\$86,456		\$5,181,289	\$12,547	\$86,456

SUMMARY:

Benefits:

Original Net Acres	Revised Net Acres
175	175

Approved O&M Budget vs Obligations to Date: Increment Years -0 through -7

Funding Category	Approved Original O&M Baseline	O&M Obligations to Date	Difference
State O&M & Insp.	\$1,235,079	\$3,215,716	(\$1,980,637)
Corps Admin	\$0	\$0	\$0
Fed S&A & Insp	\$0	\$86,456	(\$86,456)
Totals	\$1,235,079	\$3,302,172	(\$2,067,093)

Current Request:

Current Increment Funding Request Year	Proposed Revised Estimate	Remaining Available O&M Budget	Current Funding Request Amount
Year -15	\$1,801,296		
Year -16	\$24,838		
Year -17	\$25,134		
Totals	\$1,851,268	\$158,385	\$1,692,883

Approved Budgeted O&M Funds less O&M Obligations to Date:

	Total Approved O&M	O&M Obligations to Date	Remaining Available O&M Budget
1999 App. Budget	\$1,235,079	\$3,302,172	
Funding Inc. 2009	\$795,124		
Funding Inc. 2011	\$1,430,354		
Funding Incr.	\$0	\$0	
Totals	\$3,460,557	\$3,302,172	\$158,385

Original Approved vs Proposed Revised Fully Funded Estimates:

Original Fully Funded Baseline Estimate	Approved Net Budget Change to E&D, Constr., O&M and Monitoring	Additional O&M funding required for remaining project life	Requested Revised Fully Funded Estimate
\$8,916,131	\$2,225,478	\$1,754,749	\$12,896,358

Total Approved Budget less Total Proposed Revised Budget

Funding Category	Current Total	Proposed Revised Total	Difference
State O&M & Insp.	\$3,460,557	\$5,121,173	(\$1,660,616)
Corps Admin	\$0	\$7,677	(\$7,677)
Fed S&A & Insp	\$0	\$86,456	(\$86,456)
Total	\$3,460,557	\$5,215,306	(\$1,754,749)

Change in Total Cost and Cost Effectiveness:

As Compared To	Cost Estimate % Change	Cost Effectiveness	Revised Cost Effectiveness
Original Fully Funded Baseline Est.	44.64%	\$50,949	\$73,693
Approved Fully Funded Baseline Est. Plus Net Budget Changes	15.75%	\$63,666	\$73,693

Request for CWPPRA Project O&M Funding Increase
Project Performance Synopsis
August 2013

GIWW (Gulf Intracoastal Waterway to Clovelly)
Hydrologic Restoration (BA-02)

Specific objectives of the GIWW (Gulf Intracoastal Waterway) to Clovelly Hydrologic Restoration (BA-02) project are (1) to protect and maintain approximately 14,948 acres (6,049 hectares) of intermediate marsh by restoring natural hydrologic conditions that promote greater freshwater retention and utilization, prevent rapid salinity increases, and reduce the rate of tidal exchange; and (2) to reduce shoreline erosion through shoreline stabilization. The goals which contribute to the evaluation of these objectives are to 1) increase or maintain marsh to open water ratios, 2) decrease salinity variability in the project area, 3) decrease the water level variability in the project area, 4) increase or maintain the relative abundance of intermediate marsh plants, 5) promote greater freshwater retention and utilization in the project area, 6) reduce shoreline erosion through shoreline stabilization, and 7) increase or maintain the relative abundance of submerged aquatic vegetation (SAV).

Engineering and design components are comparable to the monitoring goals and are essential to the project's success. The final design of the GIWW (Gulf Intracoastal Waterway to Clovelly) Hydrologic Restoration Project (BA-02), consisted of two construction units aimed at protecting the intermediate marshes in the project area; to restore natural hydrologic conditions, Construction Unit I included the construction of three (3) fixed crest rock weirs with boat bays, two (2) rock riprap channel plugs, one rock riprap weir with a boat bay, and one rock-filled channel plug with a corrugated aluminum pipe through the plug embankment with an aluminum flap gate. To further restore natural hydrologic conditions and to stabilize the eastern and southern project shorelines and protect them from erosion, Construction Unit II included the construction of 5,665 linear ft (1,727 m) of lake-rim shoreline protection along the southwestern shorelines of Little Lake, Bay L'Ours, and Brusle Lake, the construction of approximately 5,023 linear ft (1531 m) of bank stabilization along the northern shoreline of Breton Canal, the construction of approximately 11,711 linear ft (3,570 m) of earthen bank stabilization along dead-end oilfield canals on the northern edge of Breton Canal, the construction of two (2) fixed crest weirs with barge bays, the construction of two (2) rock riprap channel plugs, and the construction of one sheet pile variable crest weir with a variable crest section containing a stop log bay with twelve (12) stop logs and a movable crane with a hand winch.

This area is experiencing rapid land loss and shoreline retreat. Unprotected shoreline adjacent to the project area is eroding up to 14 ft/yr. Land-water analysis indicates a trend from land to open water in both the project and reference areas between 1993 and 2008. There were slight gains inside the project area between 1996 and 2002, which could have possibly been attributed to project effects since project construction occurred

within this time period. Despite a large shift from land to open water inside both the project and reference areas between 2002 and 2008, the change was slightly lower in the project area in comparison to the reference area which could be attributed to the project's moderating effects against powerful hurricanes such as Katrina, Rita, Gustav, and Ike which impacted the area during this time frame. In addition, water level and salinity data analyses show the area to be classified as an oligohaline marsh (0.5 – 5.0 ppt), which illustrates the project area has not drastically changed marsh classifications.

The rock dike along the lake rim has reduced the average shoreline erosion rate by 0.24 m/yr⁻¹ (0.78 ft/yr⁻¹) during post-construction (2000-2012) in the immediate vicinity of its position. There were five (5) sampling areas lost during the sampling time frame (1993 – 2012); however, the overall rate of erosion has decreased. During the 2007 annual inspection, shoreline segments along the rim of Little Lake and Bay L'Ours exhibited moderate settlement. The ensuing profile survey in 2008 helped to determine the extent of the settlement and which segments required maintenance and/or rehabilitation. The capping of the lake rim shoreline protection structure occurred in 2012 and is expected to continue to contribute to the overall reduction of the shoreline erosion rate meeting the goal of the project.

Closure of the breaches will assist in obtaining the project's goals of promoting greater freshwater retention and utilization, prevention of rapid salinity increases, and reduction of the rate of tidal exchange. Closure of the breaches along Bay L'Ours is critical to ensure the reduction of the rate of tidal exchange. Without the closure of these breaches, the influences of the lake will affect the marshes farther inside the project and may cause a loss of marsh as the erosion occurs.

An examination of limited Coastwide Reference Monitoring System (CRMS) data as well as extensive project-specific data indicates that tidal ranges in the project area sites have been significantly lower than in the reference sites. Reference sites had a tidal range 0.1 ft (0.03 m) greater than project sites. Salinities inside the project area have remained in the normal range for a healthy intermediate marsh. Variation in salinities based upon the minimum and maximum yearly data indicated a wide salinity range (0.14 – 20.71 ppt). Salinities spiked in the spring and fall, however the yearly means remained below 3 ppt.

As the data has shown and from field observations, it is recommended that the proposed O&M event occur to ensure the goals of the project are met.

Request for CWPPRA Project O&M Funding Increase
Project Costs and Benefits Reevaluation
Fact Sheet
August 22, 2013

Project Name: GIWW to Clovelly Hydrologic Restoration (BA-02)

PPL: 1

Federal Sponsor: NRCS

Construction Completion Date: October 2000

Projected Project Close-out Date: October 2020

Project Description: The GIWW to Clovelly Hydrologic Restoration project consisted of the installation and maintenance of structures in two (2) construction units (CU's). CU#1 included three (3) fixed crest weirs with boat bays, two (2) rock channel plugs and a rock plug with culvert and flap gate. CU#2 consisted of the construction of a two (2) fixed crested weirs with a boat bay, the other with a barge bay, a variable crest weir structure, two (2) rock channel plugs, 5,665 linear feet of lake rim restoration and 11,711 linear feet of earthen bank stabilization. These structures were designed to reduce the adverse tidal effects in the project area and promote freshwater introduction to better utilize available freshwater and sediment retention. If these objectives are met, it is anticipated that the rate of shoreline erosion will be reduced and a hydrologic regime, conducive to sediment and nutrient deposition, will encourage the re-establishment of emergent and submerged vegetation in eroded areas to a more historic low energy environment.

Construction changes from the approved project: No change

Explain why O&M funding increase is needed: Due the excessive erosion of the shoreline, the potential for breaching of the remaining marsh adjacent to Structures 2 and 4 is very high, which would greatly compromise the restored hydrology of the project. O&M funding is needed in year 2014 to construct a hardened structure between Structures 2 and 4 along the shoreline of Bay L' Ours to prevent breaching and protect the remaining marsh in this area. The proposed maintenance event includes the construction of approximately 1,200 linear feet of composite rock dike and approximately 500 linear feet of gabion mats extending from the south side of Structure No. 4 to the northern end of Structure No.2. The gabion mats are needed in areas where the existing electrical transmission line is too close to the shoreline to allow rock dike construction.

Detail O&M work conducted to date: Maintenance Event No.1 included the replacement of a timber dolphin structure on the lake side of Structure 14A. The timber dolphin was destroyed by a vessel accessing the barge bay in 2006. The total cost for replacement was approximately \$14,000. Maintenance event No.2 was completed in 2012 and included the removal and replacement of four (4) timber pile dolphins at Structure No.1, refurbishment of the rock weir at Structures 2 and 4, closure of a 1,500 linear feet breach in the shoreline between Structures 4 and 4A, removal and replacement of two (2) timber pile dolphins at Structure 14A, refurbishment of approximately 5,000 linear feet of rock dike along the lake rim of Bay L' Ours, and repair of five (5) breaches along the earthen embankment. The final cost of Maintenance Event No.2 was \$3,056,834, of which \$511,122 was funded by FEMA and the remaining \$2,454,712 was funded by CWPPRA.

Detail and date of next O&M work to be completed: We are anticipating that the rock dike shoreline construction could begin in the fall of 2014 contingent upon approval of CWPPRA funds in the fall of 2013. Construction Completion is estimated to occur around the summer of 2015.

Detail of future O&M work to be completed: The remaining years beginning in year 2015 through 2020, the end of the project life, we do not anticipate any other major maintenance events other than routine earthen breach repairs, navigational aid maintenance, structure operations and annual inspections.

Originally approved fully funded project cost estimate: \$8,916,131

Originally approved O&M budget: \$1,235,079

Approved O&M Budget Increases: \$2,225,478

Total O&M obligations to date: \$3,302,172

Remaining available O&M budget funds: \$158,385

Current Incremental Funding Request: \$1,692,883

Revised fully funded cost estimate \$12,896,358

Total Project Life Budget Increase: \$1,754,749

Requested Revised fully funded O&M estimate \$5,215,206

Percent total project cost increase of proposed revised budget over original budget: 44.64 %

Percent total project cost increase of proposed revised budget over original budget plus net budget changes: 15.75%

Original net benefits based on WVA prepared when project was approved: 175 acres

Estimate of cumulative project wetland acres to date (from quantitative and/or qualitative analysis):

Revised estimate of project benefits in net acres through 20 year project life based on the project with and without continued O&M (include description of method used to determine estimate): No anticipated change in estimated net benefits, project is performing as expected.

Original and revised cost effectiveness (cost/net acre) and percent change:

Original CE = \$50,949/acre

Revised CE = \$73,693/acre 44.64%

Original plus net budget changes and revised cost effectiveness (cost/acre) and percent change:

Original CE = \$63,666/acre

Revised CE = \$73,693/acre 15.75%

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

ADDITIONAL AGENDA ITEMS

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

REQUEST FOR PUBLIC COMMENTS

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

DATE OF UPCOMING CWPPRA PROGRAM MEETING

For Announcement:

The Task Force Meeting will be held October 17, 2013 at 9:30 a.m. at the U.S. Army Corps of Engineers, 7400 Leake Avenue, New Orleans, Louisiana in the District Assembly Room (DARM).

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

DATE OF UPCOMING CWPPRA DEDICATION EVENT

For Announcement:

The CWPPRA Dedication Ceremony will be held on October 18, 2013 to celebrate the progress on CWPPRA projects in southeastern Louisiana. The ceremony will begin at 10:00 a.m. at ConocoPhillips, 806 Bayou Black Drive, Houma, Louisiana.

COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT

TECHNICAL COMMITTEE MEETING

SEPTEMBER 11, 2013

SCHEDULED DATES OF FUTURE PROGRAM MEETINGS

For Announcement:

2013			
October 17, 2013	9:30 a.m.	Task Force	New Orleans
November 13, 2013	7:00 p.m.	PPL 23 Public Comment Meeting	Baton Rouge
December 12, 2013	9:30 a.m.	Technical Committee Meeting	Baton Rouge