



Coastal Protection and
Restoration Authority of Louisiana

**State of Louisiana
Coastal Protection and Restoration
Authority**

2012 Annual Inspection Report

for

**LITTLE LAKE SHORELINE
PROTECTION / DEDICATED
DREDGING NEAR ROUND LAKE
(BA-37)**

State Project Number BA-37
Priority Project List 11

September 5, 2012
Lafourche Parish

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Table of Contents

I. Introduction.....	1
II. Inspection Purpose and Procedures.....	1
III. Project Description and History.....	2
IV. Summary of Past Operation and Maintenance Projects.....	3
V. Inspection Results	4
VI. Conclusions and Recommendations	5

Appendices

- Appendix A Project Features Map
- Appendix B Photographs
- Appendix C Three Year Budget Projections

I. Introduction

The Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake Project is a shoreline protection and marsh creation project located in the central Barataria Basin in Lafourche Parish, Louisiana. The project area lies along the southwestern shoreline of Little Lake from Breton Canal to Plumb Point (See Appendix A).

The Little Lake Shoreline Protection / Dedicated Dredging near Round Lake project is co-sponsored by the National Marine Fisheries Service (NMFS) and the Coastal Protection and Restoration Authority (CPRA) of Louisiana. The project was authorized by Section 303(a) of Title III Public Law 4101-646, the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) enacted on November 29, 1990, as amended. The project was approved on the eleventh (11th) Project Priority List.

The property associated with the Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake Project is owned by Clovelly Lands, a subsidiary of General Agricultural Services, Ltd.

II. Inspection Purpose and Procedures

The purpose of the annual inspection of the Little Lake Shoreline Protection / Dedicated Dredging near Round Lake Project (BA-37) is to evaluate the constructed project features in order to identify any deficiencies. The inspection results are used to prepare a report detailing the condition of the project features and recommending any corrective actions considered necessary. Should it be determined that corrective actions are needed, the CPRA shall provide, in the report, a detailed cost estimate for engineering, design, supervision, inspection, construction, and contingencies and an assessment of the urgency of such repairs (O&M Plan, 2008). The annual inspection report also contains a summary of maintenance projects which were completed since completion of constructed project features and an estimated projected budget for the upcoming three (3) years for operation, maintenance, and rehabilitation. In addition to the three (3) year budget, a spreadsheet has been included showing the baseline O&M funding, current approved O&M funding levels, and the twenty (20) year projected expenditures for the remaining project life. The three (3) year and twenty (20) year projections for operation and maintenance are shown in Appendix C. A summary of past operation and maintenance projects completed since construction of the Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake Project is outlined in Section IV.

The annual inspection of the Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake Project (BA-37) took place on May 29th, 2012. In attendance were Adam Ledet, Shane Triche, and Glen Curole of CPRA; John Foret with NMFS; and Randy Moertle representing the landowner. The attendees met at the Clovelly Canal Boat Launch and traveled to the project area by boat. The annual inspection began at approximately 11:00am at the west end of the rock shoreline protection at Segment 1 in Bay L'Ours and ended at the southeast

end of the rock dike at John the Fool Bayou. The field trip included a visual inspection of the 24 rock dike segments of the shoreline protection, all warning signs, and the outer edges of the marsh creation area. The marsh creation area was viewed from the northern boundary along the south shoreline of Round Lake and the southwest corner of the area. The inspection ended at approximately 1:20pm with a water level reading of 0.6' NAVD88 at station BA-02-57. Photographs from the inspection are located in Appendix B.

III. Project Description and History

The project consisted of constructing 25,976 linear feet of shoreline protection rock dike in open water along the Little Lake shoreline and using dredged material from Little Lake to create/nourish 920 acres of marsh along the Little Lake shoreline.

The project area is characterized by open water areas and fragmented intermediate marsh with a high rate of marsh loss due to shoreline erosion, subsidence, and pipeline and oilfield access canal construction. The purpose of the project is to reduce erosion along the Little Lake shoreline, create new marsh in the open water areas, and maintain and nourish the existing, deteriorated marsh.

The principle project features include:

- Shoreline Protection – 25,976 feet of rock dike constructed in 24 segments along the shoreline. Two lifts were constructed over the entire length using DOTD Class 250-lb rock with top EL 2.5' NAVD88 (first lift to EL 1.0'), 3.5' crown width, 4:1 front slope and 2:1 back slope. The rock dike was constructed on a geotextile fabric base. Fish dips (20' openings in the dike) are located between the segments with a 2-ft thick, 40-ft wide rock scour pad constructed at each dip flush with existing bottom. A third lift was constructed along segments 10 through 24 using Corps Class R650 rock. For segments 10 through 20 the lift was placed to top EL 3.5' NAVD88, with 2.0' crown width, and 2:1 front and back slopes. Segments 21 and 22 were placed to top EL 4.0' NAVD88, with 2.0' crown width, and 2:1 front and back slopes. Segments 23 and 24 were placed to top EL 4.0' NAVD88, with 3.5' crown width, 4:1 front slope and 2:1 back slope. Galvanized steel settlement plate riser pipes were installed in each rock segment.

Segments 1 – 24: Two lifts DOTD Class 250-lb, EL 2.5' NAVD88, 3.5' crown width, 4:1 front slope and 2:1 back slope

Segments 10 – 20: Third lift Corps Class R650, EL 3.5' NAVD88, 2.0' crown width, 2:1 front and back slopes

Segments 21 and 22: Third lift Corps Class R650, EL 4.0' NAVD88, 2.0' crown width, 2:1 front and back slopes

Segments 23 and 24: Third lift Corps Class R650, EL 4.0' NAVD88, 3.5' crown width, 4:1 front slope and 2:1 back slope

- Marsh Creation/Nourishment – Approximately 920 acres was filled with dredge material cut from Little Lake with a target fill height of EL 2.1' NAVD88 (min EL 1.8' and max EL 2.4'). Actual fill elevations varied across the site; however, the average elevation (derived from the individual grid elevations) of the as-built marsh creation area was EL 2.3' NAVD88. For specific as-built elevations of marsh creation area grid points, see Project Completion Report and As-Built Drawings (2007). The in-place fill volume was computed as 3,463,089 cubic yards based on the as-built surveys. The estimated volume of material cut from the borrow area was 3,818,213 cubic yards.

Additionally, 17,000 spartina alterniflora (smooth cordgrass) plugs were planted in the marsh creation area.

The Little Lake Shoreline Protection / Dedicated Dredging near Round Lake Project (BA-37) has a twenty-year (20 year) project life which began in March 2007. Attached is the three (3) year projected budget for the project (See Appendix C).

IV. Summary of Past Operation and Maintenance Projects

Below is a summary of completed maintenance projects and operation tasks performed since completion of the Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake Project (BA-37).

May 2008 – Survey of marsh creation area was performed by Shaw Coastal, Inc. The marsh elevations at the grid points within the marsh creation area as well as top elevations of the 24 rock dike settlement plates were collected. This survey represents the first of the scheduled O&M surveys to be performed but is actually the second post-construction survey. The first post-construction survey was performed by Shaw Coastal, Inc. in May 2007 with remaining construction funds immediately following acceptance of the project. The actual surveying consultant costs associated with the 2008 survey was \$36,007.28.

July 2009 – Survey of marsh creation area was performed by Shaw Coastal, Inc. The marsh elevations at the grid points within the marsh creation area as well as top elevations of the 24 rock dike settlement plates were collected. This survey represents the second of the scheduled O&M surveys to be performed but is actually the third post-construction survey. The actual surveying consultant costs associated with the 2009 survey was \$42,590.40.

July 2010 – Survey of marsh creation area was performed by Morris Hebert, Inc. The marsh elevations and the grid points within the marsh creation area as well as the tops elevations of the rock dike settlement plates were collected. This survey represents the third of the scheduled O&M surveys to be performed but is actually the fourth post-construction survey. The actual surveying consultant costs associated with the 2010 survey is \$23,500.

September 2011 – Survey of the marsh creation area, rock dike, and settlement plates was performed by Morris Hebert, Inc. The marsh elevations and the grid points within the marsh creation area, the profile of the rock dike sections, as well as the tops elevations of the rock dike settlement plates were collected. This survey represents the last of the scheduled O&M surveys to be performed post-construction. The actual surveying consultant cost associated with the 2011 survey was \$60,013.23.

V. Inspection Results

Rock Segments 1 – 24 (Photos 1 – 22, 29 – 36, Appendix B)

All rock segments were visually inspected by boat. As expected, it appears all rock segments have experienced some amount of rock settlement. Some segments have portions that are below EL 2.5 FT including those that did not receive a third lift during construction (1-5, 8, 9). There are no recommendations for corrective action at this time; however the segments should continue to be monitored for further settlement.

The elevation of the settlement plates were initially surveyed after construction in 2007 and then again every year until 2011. Comparing the final construction survey elevations of the settlement plates (February 2007) to the latest settlement plate survey (September 2011) shows an average settlement of 0.42 feet across the 24 segments, with the most extreme settlement being 0.70 feet. The survey conducted in 2011 (year 4) was the latest of the five surveys done since construction. The surveys will continue in years 10 and 15 of the project life to determine additional settlement of the rock dike and if a maintenance lift of the rock dike is needed.

Spoil that was placed behind the rock segments has fully vegetated. Also, it appears that the SAV (submerged aquatic vegetation) behind the rock segments continues to increase from past inspections. This can be seen in the inspection photos located in Appendix A.

Currently, Rock Segments 1 and 2 have no marsh or vegetation along their southern edge, only open water. The fringe marsh that once separated Brusle Lake and Bay L'Ours, located along Rock Segments 1 and 2, has been eroded below the water level by Hurricane Katrina. This land loss occurred during construction of the project and the rock segments were put in place as designed and contracted. There are no recommendations for maintenance at this time; however this site will continue to be monitored to determine if the rock segments have become a hazard, and corrective actions will be conducted as needed.

Marsh Creation Area (Photos 22 – 24, Appendix B)

The fill material in the marsh creation area has fully vegetated. As mentioned above, marsh creation area grid point "O&M" surveys were performed in May 2008, June 2009, July 2010, and September 2011 as well as "as-built" and 9-month post-placement (May 2007) surveys. Figure 5 through Figure 10 displays the change in marsh creation elevation from the time of construction to the time of the latest available data (September 2011).

The average grid elevations for the marsh creation area surveys are shown in the table below.

Survey	Average Grid Elevation (FT, NAVD88)
As-Built (May-Aug 2006)	2.2
Post-Construction (May 2007)	1.49
Post-Construction (May 2008)	1.40
Post-Construction (June 2009)	1.14
Post-Construction (July 2010)	1.23

The 2011 rock dike and marsh survey will serve as the fifth of year 1-5 surveys. It was completed in September 2011 and its marsh creation elevations can be seen in Figure 10. There will also be “O&M” surveys of the marsh creation area in Years 10 and 15 as per the O&M Plan.

VI. Conclusions and Recommendations

Based on the visual observations during the annual inspection and the settlement plate data from the post-construction surveys, the rock dike segments have experienced some settlement. Settlement is typical and anticipated for a rock dike structure of this type. We have reviewed the data from the 2011 survey, and by comparing the survey profile of all 24 rock dike segments to their constructed height, we have determined that a rock lift is not necessary at this time. Currently we are not recommending any corrective actions or maintenance of the shoreline protection. Although settlement occurred approximately 6 years faster than was anticipated (due to added weight of the third rock lift), this rapid settlement is not expected to continue. Further recommendations regarding potential rock lifts will be re-evaluated after annual visual inspections and review of the elevation data obtained from the 10 and 15 year surveys.

The marsh creation area appears to be completely vegetated and the surveys indicate its elevations are approaching the average marsh elevation for the area. There are no funds allocated for the marsh creation portion of the project other than the surveying of the area grid points. We recommend that the 2011 survey be the last of the first five annual surveys as we will have five total data sets for post-construction analysis, in addition to the 10 and 15 year survey as per the O&M Plan. The survey data along with the annual visual inspections will monitor the consolidation and settlement of the fill material and the resulting elevations within the marsh creation area.

2012 Annual Inspection Report
 Little Lake Shoreline Protection / Dedicated Dredging
 State Project No. BA-37

SETTLEMENT PLATES																			
S.P. #	STATION	CONSTRUCTION						POST-CONSTRUCTION				POST-CONSTRUCTION				POST-CONSTRUCTION			
		DATE INSTALLED	ELEV. INST.	FINAL ELEV.	DATE OF FINAL ELEV.	Δ (FT) (INST. TO FINAL)	TIME (DAYS)	2008 ELEV.	DATE OF 2008 ELEV.	Δ (FT) (FINAL TO 2008)	TIME (DAYS)	2009 ELEV.	DATE OF 2009 ELEV.	Δ (FT) (FINAL TO 2009)	TIME (DAYS)	2010 ELEV.	DATE OF 2010 ELEV.	Δ (FT) (FINAL TO 2010)	TIME (DAYS)
1	14+23	11/27/06	6.48	5.87	02/11/07	-0.61	76	5.71	05/02/08	-0.16	446	5.62	08/20/09	-0.25	921	5.60	07/26/10	-0.27	1261
2	23+93	11/14/06	6.32	3.95	02/11/07	-2.37	89	3.60	05/02/08	-0.36	446	3.48	08/20/09	-0.48	921	3.56	07/26/10	-0.39	1261
3	34+22	11/09/06	7.02	5.17	02/11/07	-1.85	94	4.93	05/02/08	-0.23	446	4.94	08/20/09	-0.23	921	4.94	07/26/10	-0.23	1261
4	44+41	11/06/06	6.96	4.57	02/11/07	-2.39	97	4.41	05/02/08	-0.16	446	4.46	08/20/09	-0.12	921	4.32	07/26/10	-0.25	1261
5	54+75	11/06/06	7.71	5.90	02/11/07	-1.81	97	5.66	05/02/08	-0.23	446	5.65	08/20/09	-0.25	921	5.48	07/26/10	-0.42	1261
6	63+17	11/05/06	6.98	4.70	02/11/07	-2.28	98	4.70	05/02/08	0.00	446	4.61	08/20/09	-0.09	921	4.56	07/26/10	-0.14	1261
7	71+47	11/05/06	7.92	4.42	02/11/07	-3.50	98	4.08	05/02/08	-0.34	446	4.03	08/20/09	-0.39	921	4.20	07/26/10	-0.23	1261
8	82+37	10/25/06	6.98	5.51	02/11/07	-1.47	109	5.32	05/02/08	-0.19	446	5.29	08/20/09	-0.22	921	5.33	07/26/10	-0.18	1261
9	92+32	10/26/06	6.70	5.84	02/11/07	-0.86	108	5.82	05/02/08	-0.02	446	5.82	08/20/09	-0.02	921	5.83	07/26/10	-0.01	1261
10	102+21	09/28/06	6.96	5.28	02/11/07	-1.68	136	5.18	05/02/08	-0.10	446	5.08	08/20/09	-0.20	921	5.26	07/26/10	-0.02	1261
11	112+90	09/01/06	6.40	4.19	02/11/07	-2.21	163	3.82	05/02/08	-0.37	446	3.69	08/20/09	-0.50	921	3.86	07/26/10	-0.33	1261
12	123+14	07/09/06	7.74	6.16	02/11/07	-1.58	217	5.74	05/02/08	-0.41	446	5.68	08/20/09	-0.48	921	5.66	07/26/10	-0.50	1261
13	133+25	07/06/06	7.32	3.61	02/11/07	-3.71	220	3.24	05/02/08	-0.37	446	3.09	08/20/09	-0.53	921	3.14	07/26/10	-0.48	1261
14	144+18	06/27/06	6.68	5.56	02/11/07	-1.12	229	5.38	05/02/08	-0.18	446	5.40	08/20/09	-0.16	921	5.29	07/26/10	-0.27	1261
15	154+23	06/16/06	7.02	5.17	02/11/07	-1.85	240	4.93	05/02/08	-0.24	446	4.96	08/20/09	-0.21	921	4.71	07/26/10	-0.45	1261
16	164+05	06/03/06	6.95	6.10	02/11/07	-0.85	253	5.93	05/02/08	-0.17	446	5.86	08/20/09	-0.24	921	5.82	07/26/10	-0.28	1261
17	175+51	05/21/06	7.53	6.36	02/11/07	-1.17	266	6.27	05/02/08	-0.10	446	6.27	08/20/09	-0.09	921	6.15	07/26/10	-0.21	1261
18	190+71	05/18/06	7.68	5.97	02/11/07	-1.71	269	5.74	05/02/08	-0.23	446	5.60	08/20/09	-0.38	921	5.58	07/26/10	-0.39	1261
19	203+43	05/06/06	8.51	6.27	02/11/07	-2.24	281	6.09	05/02/08	-0.18	446	5.94	08/20/09	-0.33	921	5.85	07/26/10	-0.41	1261
20	216+05	04/11/06	7.80	5.65	02/11/07	-2.15	306	5.52	05/02/08	-0.13	446	5.34	08/20/09	-0.30	921	5.28	07/26/10	-0.37	1261
21	229+62	04/05/06	7.31	4.81	02/11/07	-2.51	312	4.65	05/02/08	-0.15	446	4.34	08/20/09	-0.47	921	4.41	07/26/10	-0.40	1261
22	240+24	03/31/06	8.38	4.58	02/11/07	-3.80	317	4.35	05/02/08	-0.24	446	4.26	08/20/09	-0.32	921	4.21	07/26/10	-0.38	1261
23	250+46	03/26/06	7.64	5.16	02/11/07	-2.49	322	4.99	05/02/08	-0.17	446	4.62	08/20/09	-0.54	921	4.79	07/26/10	-0.37	1261
24	262+76	03/21/06	8.26	6.71	02/11/07	-1.55	327	6.69	05/02/08	-0.02	446	6.51	08/20/09	-0.20	921	6.51	07/26/10	-0.20	1261

Δ (FT) – Change in Elevation between noted surveys in feet
 TIME (DAYS) – Time Elapsed between noted surveys in days

Settlement Plate Elevation Comparison July 2010 and September 2011																								
S.P. #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
2010 Ele.	5.60	3.56	4.94	4.32	5.48	4.56	4.20	5.33	5.83	5.26	3.83	5.66	3.14	5.29	4.71	5.82	6.15	5.58	5.85	5.28	4.41	4.21	4.79	6.51
2011 Ele.	5.61	3.43	4.78	4.21	5.48	4.61	3.91	5.13	5.65	4.94	3.59	5.46	2.96	5.22	4.67	5.76	6.10	5.48	5.78	5.25	4.31	4.00	4.65	6.35
Δ Ele.	0.01	-0.13	-0.16	-0.11	-0.00	0.05	-0.29	-0.20	-0.18	-0.22	-0.24	-0.20	-0.18	-0.07	-0.04	-0.06	-0.05	-0.10	-0.07	-0.03	-0.10	-0.21	-0.14	-0.16

Figure 1. Rock Dike Settlement Plate Data

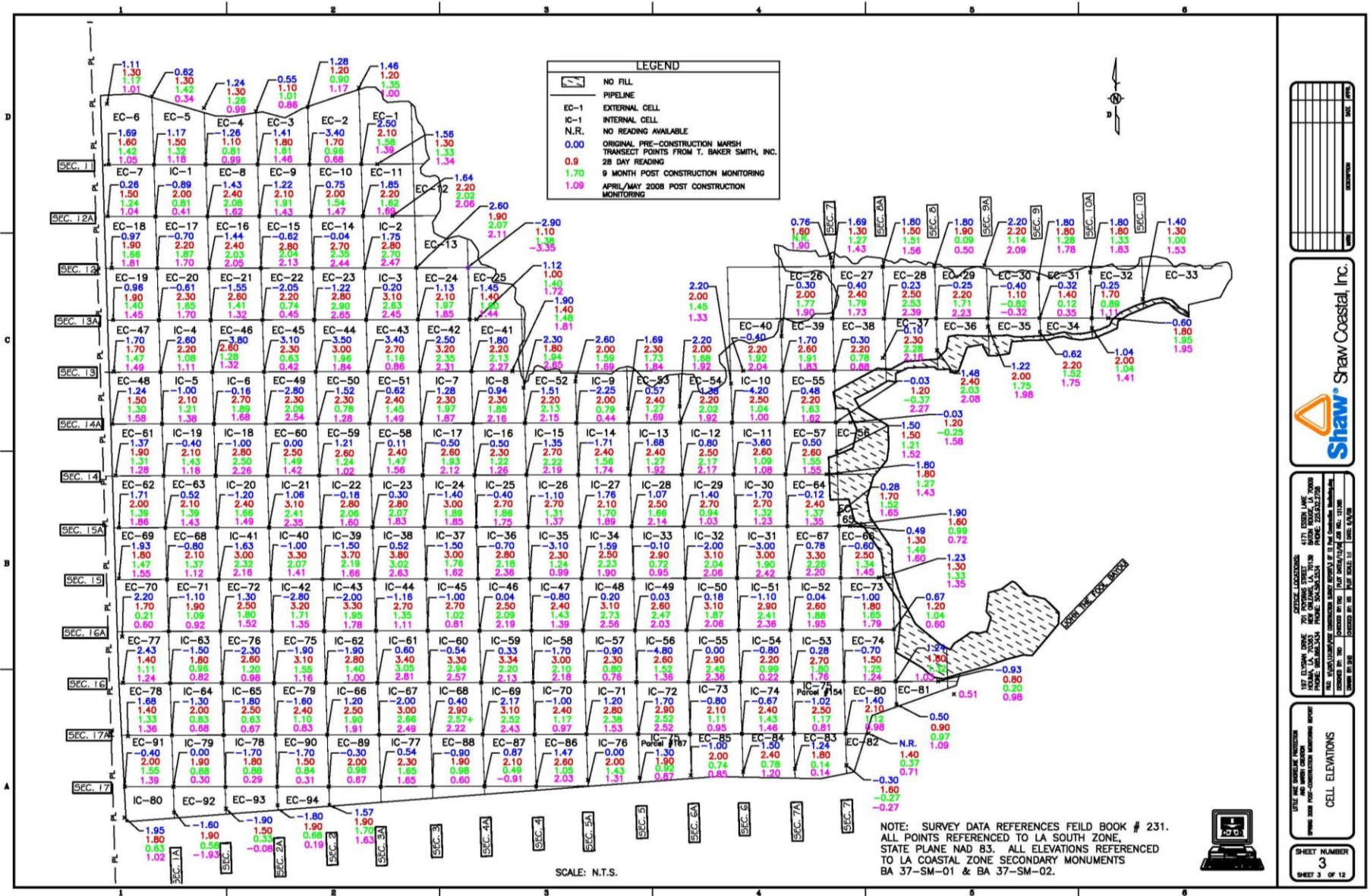


Figure 1. Marsh Creation Area Grid Survey showing Pre-Construction, As-Built (May-Aug 2006), May 2007, and May 2008 Elevations

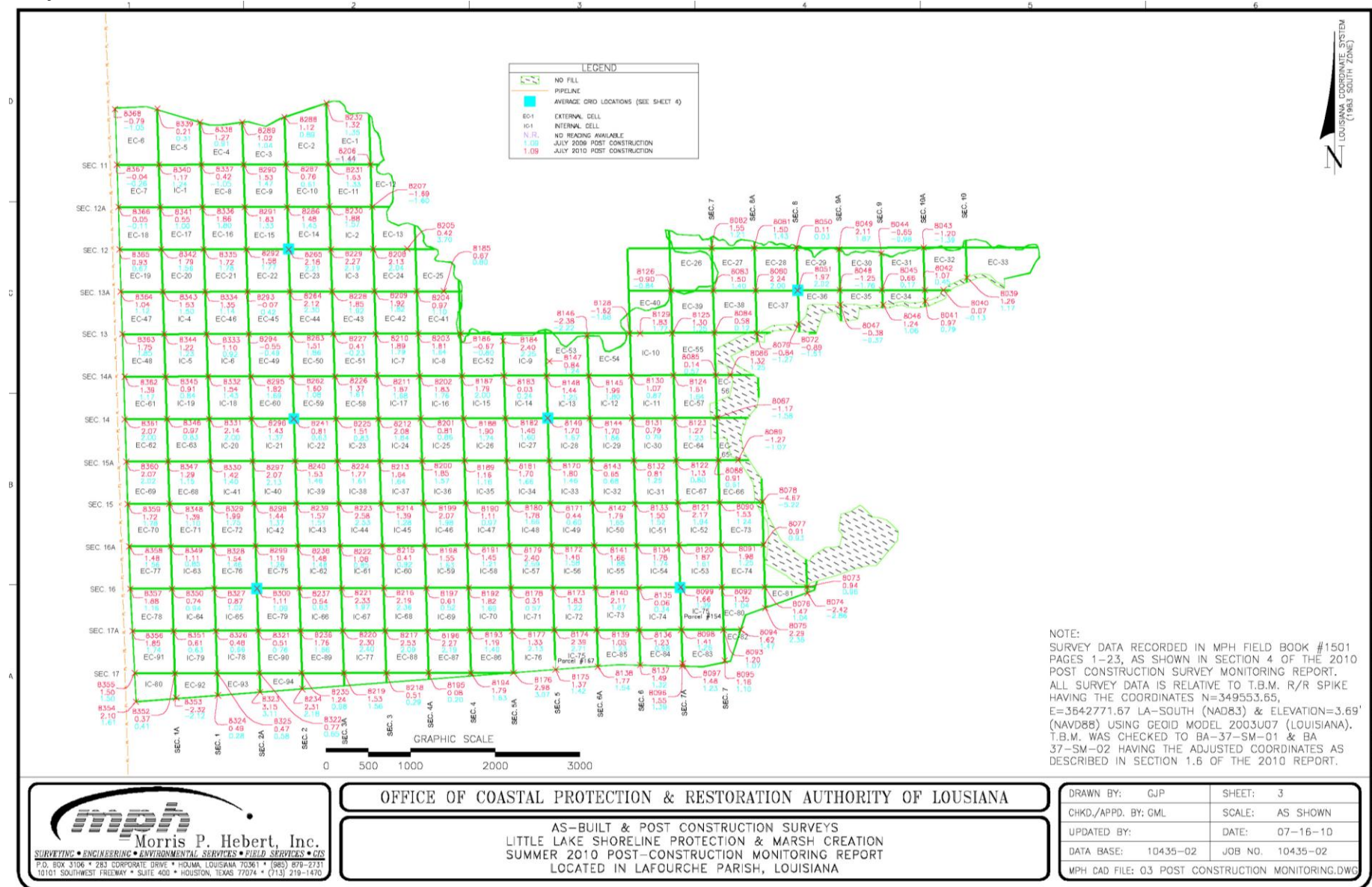


Figure 3. Marsh Creation Area Grid Survey showing June 2009 and July 2010 Elevations

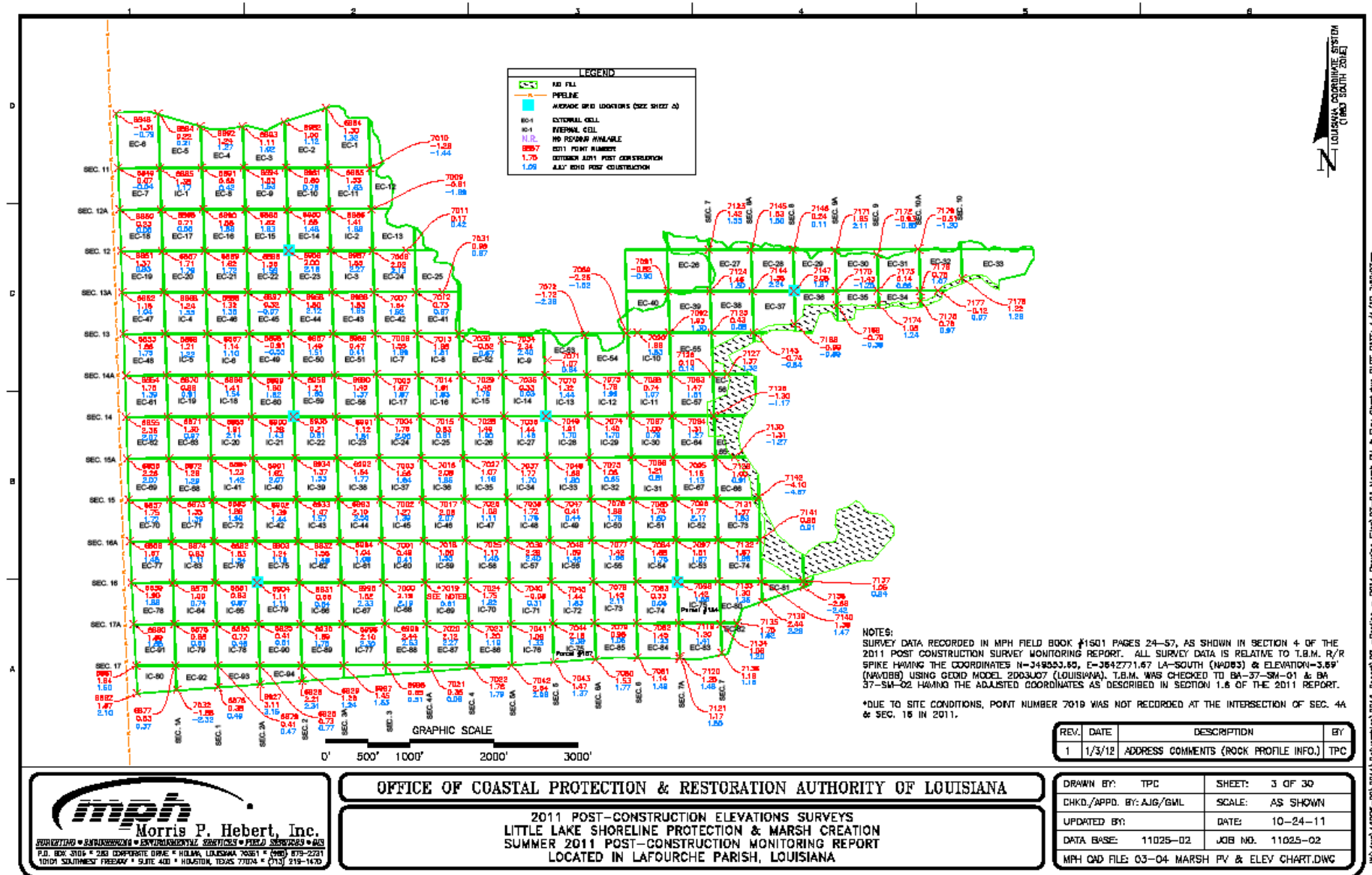
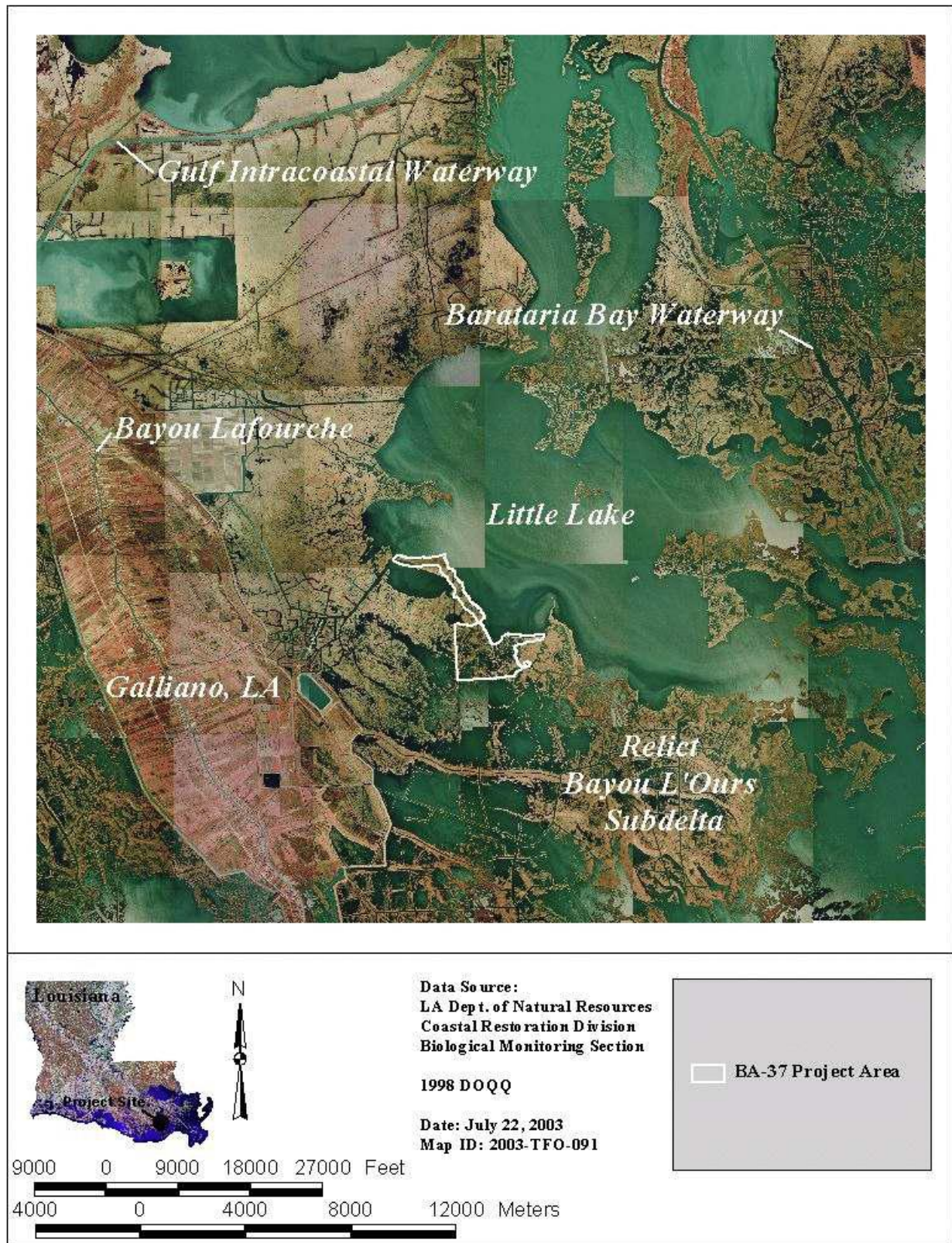


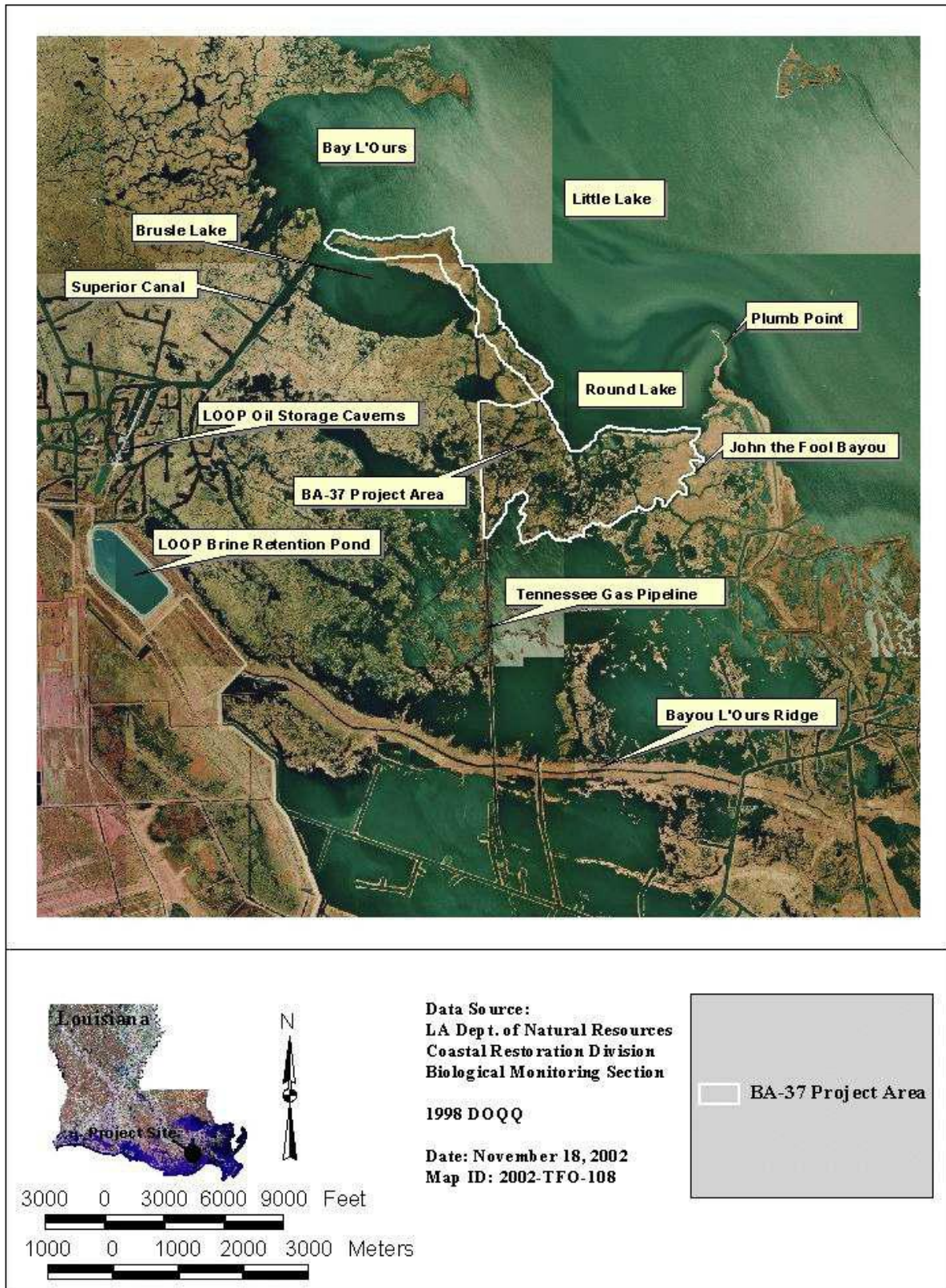
Figure 4. Marsh Creation Area Grid Surveying showing July 2010 and September 2011 Elevations

Appendix A

Project Features Map

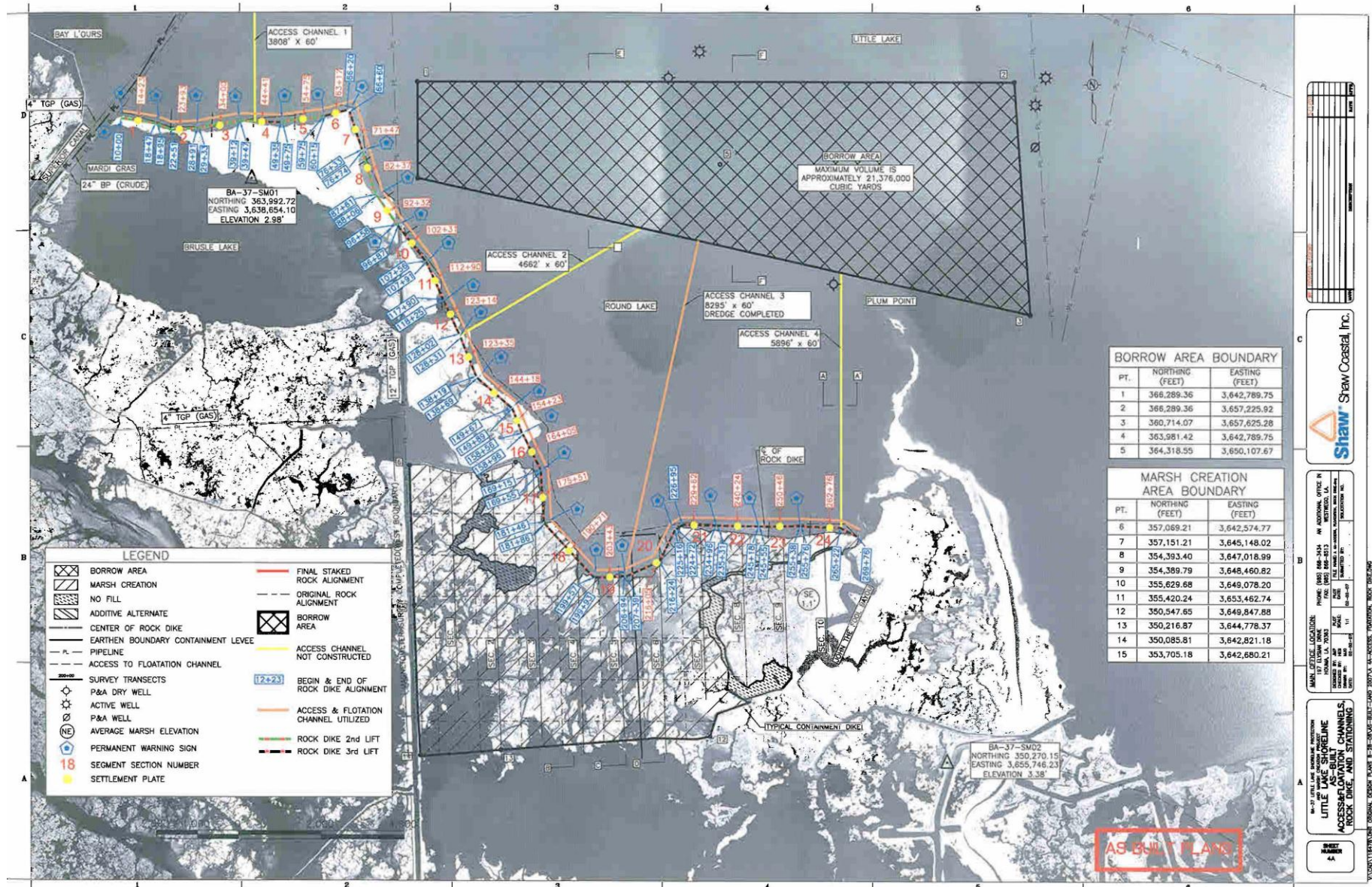


Vicinity Map of Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake Project (BA-37)



Location Map of Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake Project (BA-37)

2012 Annual Inspection Report
 Little Lake Shoreline Protection / Dedicated Dredging
 State Project No. BA-37



As-Built Project Features - Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake Project (BA-37)

Appendix B

Photographs



Photo #1: View of the end of Rock Segment #1 closest to Benton Canal, looking south



Photo #2: View along Rock Segment #1 closest to Benton Canal, looking east.



Photo #3: View of fish dip and warning sign between Rock Segment #1 & #2, looking southeast



Photo #4: View of fish dip and warning sign between Rock Segment #1 & #2, looking southwest



Photo #5: View along Rock Segment #2, looking southeast.



Photo #6: View of fish dip and warning sign between Rock Segment #2 & #3, looking southeast



Photo #7: View of fish dip and warning sign between Rock Segment #2 & #3, looking southwest



Photo #8: View of settlement plate in Rock Segment #4, looking southeast



Photo #9: View of fish dip and warning sign between Rock Segments #5 & #6, looking southeast



Photo #10: View of fish dip and warning sign between Rock Segments #6 & #7, looking east



Photo #11: View of fish dip and warning sign between Rock Segments #6 & #7, looking south



Photo #12: View of fish dip and warning sign between Rock Segments #6 & #7, looking west



Photo #13: View along Rock Segment #7, looking southwest



Photo #14: View of fish dip and warning sign between Rock Segments #7 and #8, looking southwest



Photo #15: View along Rock Segment #8, looking southwest



Photo #16: View of fish dip and warning sign between Rock Segments #8 and #9, looking southwest



Photo #17: View along Rock Segment #9, looking southwest



Photo #18: View of fish dip and warning sign between Rock Segments #9 and #10, looking southwest



Photo #19: View along Rock Segment #10, looking southwest



Photo #20: View of fish dip and warning sign between Rock Segments #10 and #11, looking southwest



Photo #21: View along Rock Segment #11, looking southwest



Photo #22: View of fish dip and warning sign between Rock Segments #11 and #12, looking southwest



Photo #23: View of the Marsh Creation Area from the southern boundary of the containment dike, looking north



Photo #24: View of the Marsh Creation Area from the southern boundary of the containment dike, looking north



Photo #25: View of the Marsh Creation Area from the southern boundary of the containment dike, looking north



Photo #26: View of the Marsh Creation Area from the southern boundary of the containment dike, looking north



Photo #27: View of the Marsh Creation Area from the southern boundary of the containment dike, looking north



Photo #28: View of the Marsh Creation Area from the southern boundary of the containment dike, looking north



Photo #29: View along Rock Segment #14, looking southwest



Photo #30: View of fish dip and warning sign between Rock Segments #15 and #16, looking south



Photo #31: View of fish dip and warning sign between Rock Segments #15 and #16, looking southeast



Photo #32: View of fish dip and warning sign between Rock Segments #20 and #21, looking southeast



Photo #33: View of Rock Segment #24 closest to John the Fool Bayou, looking southwest



Photo #34: View of Rock Segment #24 closest to John the Fool Bayou, looking southwest



Photo #35: View of Rock Segment #24 closest to John the Fool Bayou, looking northwest



Photo #36: View of water level reading of 0.6' NAVD88 @ 1:20pm from station BA-02-57

Appendix C

Three Year Budget Projection

LITTLE LAKE SHORELINE PROTECTION & DEDICATED DREDGING / BA37 / PPL11
Three-Year Operations & Maintenance Budgets 07/01/2012 - 06/30/2015

<u>Project Manager</u>	<u>O & M Manager</u>	<u>Federal Sponsor</u>	<u>Prepared By</u>
	<i>Ledet</i>	<i>NMFS</i>	<i>Ledet</i>

	2012/2013	2013/2014	2014/2015
Maintenance Inspection	\$ 5,662.00	\$ 5,843.00	\$ 6,030.00
Surveys			
Administration (NMFS)	\$ 1,459.00	\$ 1,506.00	\$ 1,555.00

Maintenance/Rehabilitation

12/13 Description:	

<i>E&D</i>	
<i>Construction</i>	\$ -
<i>Construction Oversight</i>	\$ -
<i>Sub Total - Maint. And Rehab.</i>	\$ -

13/14 Description:	

<i>E&D</i>	\$ -
<i>Construction</i>	\$ -
<i>Construction Oversight</i>	\$ -
<i>Sub Total - Maint. And Rehab.</i>	\$ -

14/15 Description:	

<i>E&D</i>	\$ -
<i>Construction</i>	\$ -
<i>Construction Oversight</i>	\$ -
<i>Sub Total - Maint. And Rehab.</i>	\$ -

	2012/2013	2013/2014	2014/2015
<u>Total O&M Budgets</u>	\$ 7,121.00	\$ 7,349.00	\$ 7,585.00

<u>O&M Budget (3-yr Total)</u>	\$ 22,055.00
<u>Unexpended O&M Funds</u>	\$ 84,720.44
<u>Remaining O&M Budget (Projected)</u>	\$ 62,665.44

OPERATIONS & MAINTENANCE BUDGET WORKSHEET

Project: **BA-37 Little Lake Shoreline Protection / Dedicated Dredging Near Round Lake**

FY 12/13 –

Administration (NMFS)		\$	1,459
O&M Inspection & Report		\$	5,662
Operation:		\$	0
Maintenance:		\$	0
E&D:	\$	0	
Construction:	\$	0	
Construction Oversight:	\$	0	

Operation and Maintenance Assumptions:

FY 13/14 –

Administration (NMFS)		\$	1,506
O&M Inspection & Report		\$	5,843
Operation:		\$	0
Maintenance:		\$	0
E&D:	\$	0	
Construction:	\$	0	
Construction Oversight:	\$	0	

Operation and Maintenance Assumptions:

FY 14/15 –

Administration (NMFS)		\$	1,555
O&M Inspection & Report		\$	6,030
Operation:		\$	0
Maintenance:		\$	0
E&D:	\$	0	
Construction:	\$	0	
Construction Oversight:	\$	0	

Operation and Maintenance Assumptions:

2012-2015 Accounting

OCPR Expenditures:	\$138,870.74
NMFS Expenditures:	<u>\$ 29,204.82</u>
Total Expenditures:	\$168,075.56
O&M Budget (from Lana Report)	\$252,796.00
Unexpended Funds:	\$ 84,720.44