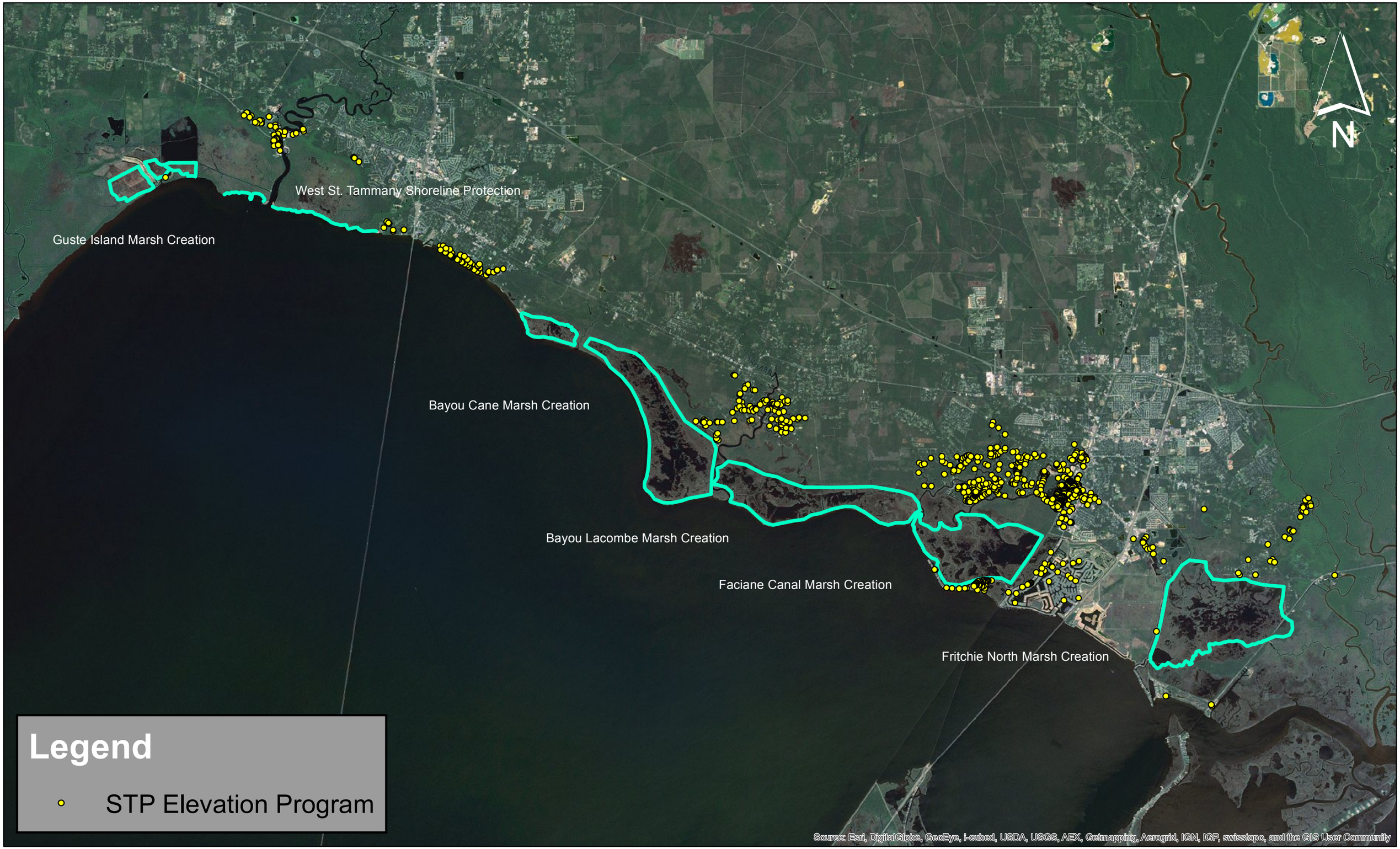
St. Tammany Parish Submitals to 2017 Coastal Master Plan



West St. Tammany Shoreline Protection

Project Type

Shoreline Protection

Project Summary

The West St. Tammany Shoreline Protection project is a 24,773 linear foot project located in St. Tammany Parish along the Lake Pontchartain Shoreline. This project is located west of Mandeville and south of Madisonville. The marsh loss in this area has been relatively minimal, partly due to wetland assimilation project on the east side of the project location. However, the shoreline in this area has begun to deteriorate rapidly and several breaches exist today. These breaches provide direct connection between the fresher interior marshes and higher salinity waters of Lake Pontchartrain. These shoreline breaches should be filled and the remaining shoreline protected before accelerated marsh loss rate begin.

The goal of this project is the restoration of 15,677 feet of shoreline and the protection of 9106 feet of currently functioning shoreline. Due to the shallow pleistoncene and fairly stiff soils in the area, rock would be used to protect the shoreline.

Project Attributes

Area	24,773 feet
Parish	St. Tammany
Location	
Latitude	30.374163
Longitude	-90.144885
Dike Elevation	2.5' NAVD
Dike Top Width	4'
Rock	94,988 Tons

Contact Information

David Brunet
St. Tammany Parish Coastal Zone Manager
985-898-2552

West St. Tammany Shoreline Protection

Legend

West_St_Tammany_Shoreline_Protection

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Project:	West St. Tammany Shoreline Protection	STP Coastal Plan 2014		Date:	28-Jul-14
Computed by:	J Guillory				
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$3,708,000	$3,708,000
2	Shoreline Protection	94,988	Tons	$60.00	$5,699,309
3	Marsh Creation (incl dike backfill)	0	CY	$4.50	$0
4	Marsh Nourishment	0	CY	$4.50	$0
5	Containment Dikes	0	CY	$4.00	$0
6	Construction Surveys	1	LS	$142,482.74	$142,483

ESTIMATED CONSTRUCTION COST **$9,549,792**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$11,937,240**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$721,102
Geotechnical Investigation	$58,000
Hydrologic Modeling	$100,000
Data Collection (incl ….)	$115,392
Cultural Resources	$10,000

SubTotal: **$1,004,494**

TOTAL ESTIMATED PROJECT FIRST COST **$12,941,734**

Project Data

Area =	**0**	Acres	Perimeter =	**0**	LF
% Water =	**95%**		% Open Water=	**30%**	
% Marsh=	**5%**		% Marsh Remnant =	**70%**	
% Restored=	**0%**		Shoreline=	**24773**	LF

Guste Island Marsh Creation

Project Type

Marsh Creation

Project Summary

The Guste Island Marsh Creation project is a 685 acre marsh creation project located in St. Tammany Parish along the Lake Pontchartain Shoreline. This project is located near Guste Island. The low salinity brackish marsh became impounded over 20 years ago and marsh loss was severe. During that time this area become almost all open water. With an increase in tidal exchange due increased land loss and increased wind driven fetch, land located north of this site is deteriorating quickly.

The goal of this project is the restoration of 651 acres of marsh as well as the nourishment of 34 acres of stressed marsh land using hydraulically dredged sediment from Lake Pontchartrain. Sediment would be placed throughout the site to a height of +1.2 NAVD 88. Tidal creeks would be constructed in order facilitate water exchange and fisheries access. Containment dikes would be gapped and/or degraded when practical.

Project Attributes

Area	685 Acres
Parish	St. Tammany
Location	
Latitude	30.386698
Longitude	-90.220022
Marsh Elevation	1.2' NAVD
Borrow Source	Lake Pontchartrain
Fill Volume	2,713,378 yd^3

Contact Information

David Brunet
St. Tammany Parish Coastal Zone Manager
985-898-2552

Guste Island Marsh Creation

Project:	Guste Island Marsh Creation	STP Coastal Plan 2014		Date:	1-Aug-14
Computed by:	J Guillory				
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$3,708,000	$3,708,000
2	Shoreline Protection	0	Tons	$60.00	$0
3	Marsh Creation (incl dike backfill)	3,453,044	CY	$4.50	$15,538,700
4	Marsh Nourishment	74,348	CY	$4.50	$334,565
5	Containment Dikes	111,156	CY	$4.00	$444,624
6	Construction Surveys	1	LS	$407,947.23	$407,947

ESTIMATED CONSTRUCTION COST **$20,433,836**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$25,542,295**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$1,474,139
Geotechnical Investigation	$198,602
Hydrologic Modeling	$100,000
Data Collection (incl ….)	$479,598
Cultural Resources	$10,000

SubTotal: **$2,262,339**

TOTAL ESTIMATED PROJECT FIRST COST **$27,804,634**

Project Data

Area =	**685**	Acres	Perimeter =	**38850**	LF
% Water =	**95%**		% Open Water=	**30%**	
% Marsh=	**5%**		% Marsh Remnant =	**70%**	
% Restored=	**0%**				

Borrow Volume	3,527,392	CY
Borrow Depth	10	Ft
Borrow Area	219	Acres

Bayou Cane Marsh Creation

Project Type

Marsh Creation

Project Summary

The Bayou Cane Marsh Creation project is a 4,117 acre marsh creation project located in St. Tammany Parish along the Lake Pontchartain Shoreline. This project is located near Bayou Cane with most of the site being located on the Big Branch Marsh National Wildlife Refuge. The low salinity brackish marsh in this area was reasonably stable until Hurricane Katrina. Over the following decade this area has seen an increase in open water by nearly double, far exceeding the previous rate of deterioration. With an increase in tidal exchange due to small breaches in the shoreline and increased wind driven fetch, the rate of marsh loss is expected to continue.

The goal of this project is the restoration of 850 acres of low salinity marsh as well as the nourishment of 3,293 acres of stressed marsh land using sediment that is hydraulically dredged from Lake Pontchartrain. Sediment would be placed throughout the site to a heigh of +1.2 NAVD 88. Tidal creeks exist and would be maintained in order facilitate water exchange and fisheries access. Containment Dikes would be gapped and/or degraded when practical.

Project Attributes

Area	4,117 Acres
Parish	St. Tammany
Location	
Latitude	30.292398
Longitude	-89.981120
Marsh Elevation	1.2' NAVD
Borrow Source	Lake Pontchartrain
Fill Volume	8,193,032 yd^3

Contact Information

David Brunet
St. Tammany Parish Coastal Zone Manager
985-898-2552

Bayou Cane Marsh Creation

Project:	Bayou Cane Marsh Creation	STP Coastal Plan 2014		Date:	28-Jul-14
Computed by:	J Guillory				
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$3,708,000	$3,708,000
2	Shoreline Protection	0	Tons	$60.00	$0
3	Marsh Creation (incl dike backfill)	4,369,169	CY	$4.50	$19,661,260
4	Marsh Nourishment	6,281,773	CY	$4.50	$28,267,977
5	Containment Dikes	168,465	CY	$4.00	$673,860
6	Construction Surveys	1	LS	$1,215,077.43	$1,215,077

ESTIMATED CONSTRUCTION COST **$53,526,175**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$66,907,719**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$3,655,119
Geotechnical Investigation	$569,047
Hydrologic Modeling	$100,000
Data Collection (incl ….)	$1,691,214
Cultural Resources	$10,000

SubTotal: **$6,025,380**

TOTAL ESTIMATED PROJECT FIRST COST **$72,933,099**

Project Data

Area =	**4117**	Acres	Perimeter =	**89670**	LF
% Water =	**20%**		% Open Water=	**5%**	
% Marsh=	**70%**		% Marsh Remnant =	**95%**	
% Restored=	**10%**				

Borrow Volume	10,650,942	CY
Borrow Depth	10	Ft
Borrow Area	660	Acres

Bayou Lacombe Marsh Creation

Project Type

Marsh Creation

Project Summary

The Bayou Lacombe Marsh Creation project is a 3,114 acre marsh creation project located in St. Tammany Parish along the Lake Pontchartain Shoreline. This project is located near Bayou Lacombe with much of the site being located on the Big Branch Marsh National Wildlife Refuge. The low salinity brackish marsh in this area was reasonably stable until Hurricane Katrina. Over the following decade this area has seen an increase in open water by nearly double, far exceeding the previous rate of deterioration. With an increase in tidal exchange due increased land loss and increased wind driven fetch, the rate of marsh loss is expected to continue.

The goal of this project is the restoration of 623 acres of low salinity marsh as well as the nourishment of 2,336 acres of stressed marsh land using sediment that is hydraulically dredged from Lake Pontchartrain. Sediment would be placed throughout the site to a heigh of +1.2 NAVD 88. Tidal creeks exist and would be maintained in order facilitate water exchange and fisheries access. Containment dikes would be gapped and/or degraded when practical.

Project Attributes

Area	3,114 Acres
Parish	St. Tammany
Location	
Latitude	30.261683
Longitude	-89.938037
Marsh Elevation	1.2' NAVD
Borrow Source	Lake Pontchartrain
Fill Volume	6,441,922 yd^3

Contact Information

David Brunet
St. Tammany Parish Coastal Zone Manager
985-898-2552

Bayou Lacombe Marsh Creation

Project:	Bayou Lacombe Marsh Creation	STP Coastal Plan 2014		Date:	28-Jul-14
Computed by:	J Guillory				
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$2,095,000	$2,095,000
2	Shoreline Protection	0	Tons	$60.00	$0
3	Marsh Creation (incl dike backfill)	3,304,735	CY	$4.50	$14,871,306
4	Marsh Nourishment	5,069,763	CY	$4.50	$22,813,935
5	Containment Dikes	130,411	CY	$4.00	$521,646
6	Construction Surveys	1	LS	$955,172.15	$955,172

ESTIMATED CONSTRUCTION COST **$41,257,058**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$51,571,323**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$2,858,607
Geotechnical Investigation	$460,195
Hydrologic Modeling	$100,000
Data Collection (incl ….)	$1,352,250
Cultural Resources	$10,000

SubTotal: **$4,781,052**

TOTAL ESTIMATED PROJECT FIRST COST **$56,352,375**

Project Data

Area =	**3114**	Acres	Perimeter =	**69415**	LF
% Water =	**20%**		% Open Water=	**5%**	
% Marsh=	**75%**		% Marsh Remnant =	**95%**	
% Restored=	**5%**				

Borrow Volume	8,374,498	CY
Borrow Depth	10	Ft
Borrow Area	519	Acres

Faciane Canal Marsh Creation

Project Type

Marsh Creation

Project Summary

The Faciane Canal Marsh Creation project is a 2,853 acre marsh creation project located in St. Tammany Parish along the Lake Pontchartain Shoreline. This project is located near Bayou Bonfouca with most of the site being located on the Big Branch Marsh National Wildlife Refuge. The low salinity brackish marsh in this area was reasonably stable until Hurricane Katrina. Over the following decade this area has seen an increase in open water by nearly double, far exceeding the previous rate of deterioration. With an increase in tidal exchange due to small breaches in the shoreline and increased wind driven fetch, the rate of marsh loss is expected to continue.

The goal of this project is the restoration of 1,997 acres of low salinity marsh as well as the nourishment of 630 acres of stressed marsh land using sediment that is hydraulically dredged from Lake Pontchartrain. Sediment would be placed throughout the site to a heigh of +1.2 NAVD 88. Tidal creeks exist and would be maintained in order facilitate water exchange and fisheries access. Containment dikes would be gapped and/or degraded when practical.

Project Attributes

Area	2853 Acres
Parish	St. Tammany
Location	
Latitude	30.2424
Longitude	-89.825230
Marsh Elevation	1.2' NAVD
Borrow Source	Lake Pontchartrain
Fill Volume	9,199,670 yd^3

Contact Information

David Brunet
St. Tammany Parish Coastal Zone Manager
985-898-2552

Faciane Canal Marsh Creation

Project:	Faciane Canal Marsh Creation	STP Coastal Plan 2014		Date:	28-Jul-14
Computed by:	J Guillory				
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$3,708,000	$3,708,000
2	Shoreline Protection	0	Tons	$60.00	$0
3	Marsh Creation (incl dike backfill)	10,597,119	CY	$4.50	$47,687,033
4	Marsh Nourishment	1,362,487	CY	$4.50	$6,131,190
5	Containment Dikes	123,430	CY	$4.00	$493,721
6	Construction Surveys	1	LS	$1,357,798.62	$1,357,799

ESTIMATED CONSTRUCTION COST **$59,377,743**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$74,222,179**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$4,031,490
Geotechnical Investigation	$425,493
Hydrologic Modeling	$100,000
Data Collection (incl ….)	$1,402,734
Cultural Resources	$10,000

SubTotal: **$5,969,717**

TOTAL ESTIMATED PROJECT FIRST COST **$80,191,896**

Project Data

Area =	**2853**	Acres	Perimeter =	**54334**	LF
% Water =	**70%**		% Open Water=	**15%**	
% Marsh=	**22%**		% Marsh Remnant =	**85%**	
% Restored=	**8%**				

Borrow Volume	11,959,605	CY
Borrow Depth	10	Ft
Borrow Area	741	Acres

Fritchie North Marsh Creation

Project Type

Marsh Creation

Project Summary

The Fritchie North Marsh Creation project is a 4,395 acre marsh creation project located in St. Tammany Parish along the Lake Pontchartain Shoreline. This project is located near Salt Bayou with most of the site being located on the Big Branch Marsh National Wildlife Refuge. The low salinity brackish marsh in this area was reasonably stable until Hurricane Katrina. Over the following decade this area has seen an increase in open water by nearly double, far exceeding the previous rate of deterioration. With an increase in tidal exchange due increased land loss and increased wind driven fetch, the rate of marsh loss is expected to continue.

The goal of this project is the restoration of 2,417 acres of marsh as well as the nourishment of 1,997 acres of stressed marsh land using sediment that is hydraulically dredged from Lake Pontchartrain. Sediment would be placed throughout the site to a heigh of +1.2 NAVD 88. Tidal creeks exist and would be maintained in order facilitate water exchange and fisheries access. Containment dikes would be gapped and/or degraded when practical.

Project Attributes

Area	4,395 Acres
Parish	St. Tammany
Location	
Latitude	30.213152
Longitude	-89.708031
Marsh Elevation	1.2' NAVD
Borrow Source	Lake Pontchartrain
Fill Volume	13,169,017 yd^3

Contact Information

David Brunet
St. Tammany Parish Coastal Zone Manager
985-898-2552

Fritchie North Marsh Creation

Project:	Fritchie North Marsh Creation	STP Coastal Plan 2014		Date:	28-Jul-14
Computed by:	J Guillory				
Item No.	**Work or Material**	**Quantity**	**Unit**	**Unit Cost**	**Amount**
1	Mobilization/Demobilization	1	LS	$3,708,000	$3,708,000
2	Shoreline Protection	0	Tons	$60.00	$0
3	Marsh Creation (incl dike backfill)	12,826,541	CY	$4.50	$57,719,434
4	Marsh Nourishment	4,293,181	CY	$4.50	$19,319,315
5	Containment Dikes	149,332	CY	$4.00	$597,329
6	Construction Surveys	1	LS	$1,940,901.94	$1,940,902

ESTIMATED CONSTRUCTION COST **$83,284,979**

ESTIMATED CONSTRUCTION + 25% CONTINGENCY **$104,106,224**

TOTAL ESTIMATED PROJECT COSTS

PHASE I

Federal Costs

Engineering and Design:

Engineering	$5,551,050
Geotechnical Investigation	$580,011
Hydrologic Modeling	$100,000
Data Collection (incl ….)	$2,123,934
Cultural Resources	$10,000

SubTotal: **$8,364,995**

TOTAL ESTIMATED PROJECT FIRST COST **$112,471,219**

Project Data

Area =	**4395**	Acres	Perimeter =	**65736**	LF
% Water =	**55%**		% Open Water=	**15%**	
% Marsh=	**45%**		% Marsh Remnant =	**85%**	
% Restored=	**0%**				

Borrow Volume	17,119,722	CY
Borrow Depth	10	Ft
Borrow Area	1061	Acres

St. Tammany Parish Elevation

Project Type

Home Elevation

Project Summary

St. Tammany Parish borders Lake Pontchartrain along its entire southern border. The parish has 3,216 homes listed on FEMA's Repetitive and Severe Repetitive (RL/SRL) flooded structures list. Loss of flood plain storage, decreased conveyance capacity, sea level rise and subsidence are all factors leading to the repetitive flooding of some areas within the parish. In a recent study funded by CPRA, 903 homes were identified as being on the RL/SRL list and existing with the storm surge zone of St. Tammany parish. Except for a small part of Slidell, a levee system along the southern border of the Parish is not practical or feasible, the only way to protect these structures is through elevation.

The goal of this project is to elevate all of the structures in St. Tammany parish's surge zone that would not be protected by the Slidell Ring levee, approximately 780 structures.

Project Attributes

Parish St. Tammany

RL/SRL Structures

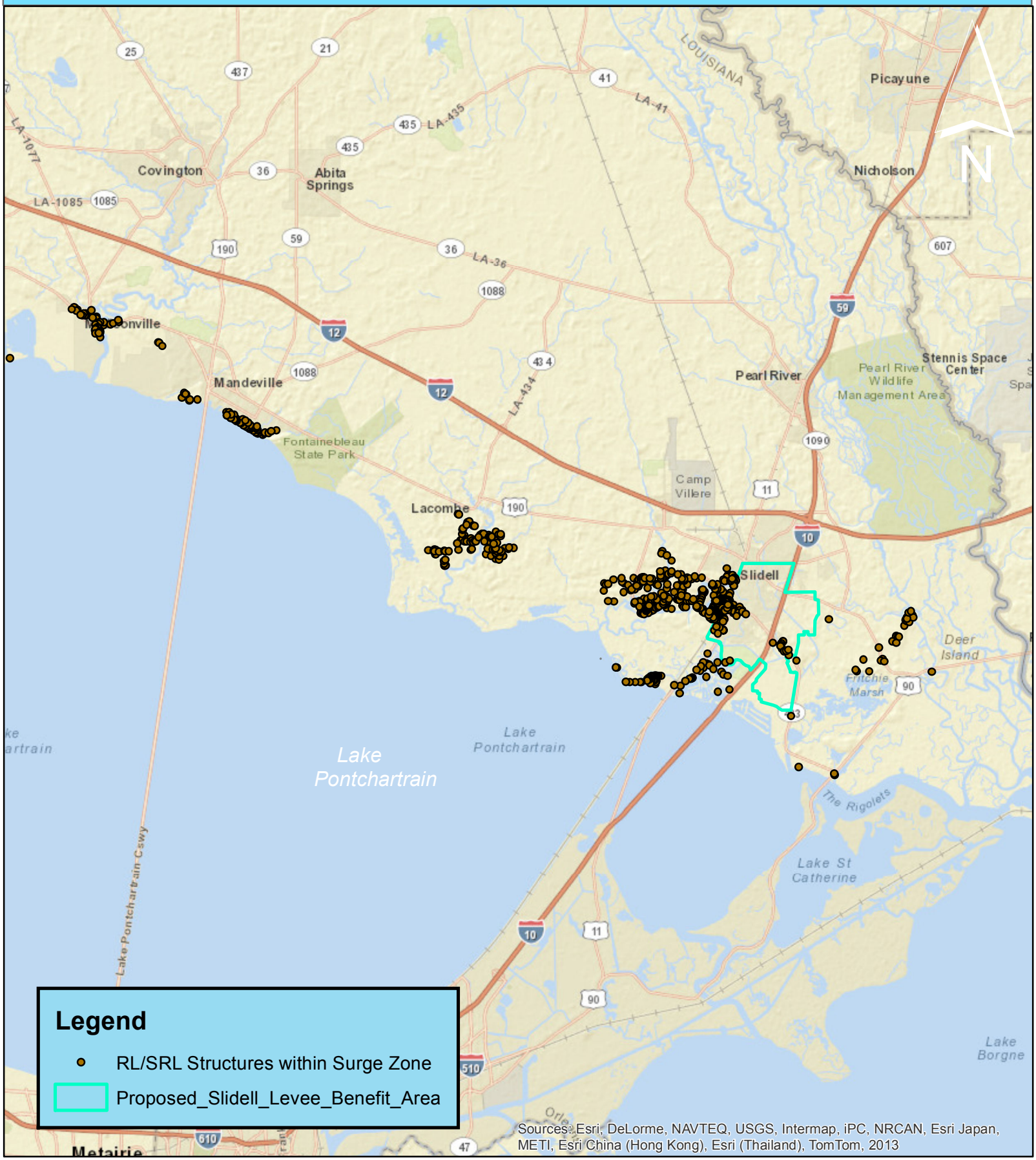
Total	3,216
Surge Zone	903

Target Elevation FEMA Base Flood Elevation

Contact Information

David Brunet
St. Tammany Parish Coastal Zone Manager
985-898-2552

St.Tammany Parish Elevation



Project:	St. Tammany Parish Elevation	STP Coastal Plan 2014		Date:	28-Jul-14
Computed by:	J Guillory				
Item No.	Work or Material	Quantity	Unit	Unit Cost	Amount
1	Structures	903	LS	$200,000	$180,600,000

ESTIMATED CONSTRUCTION COST **$180,600,000**