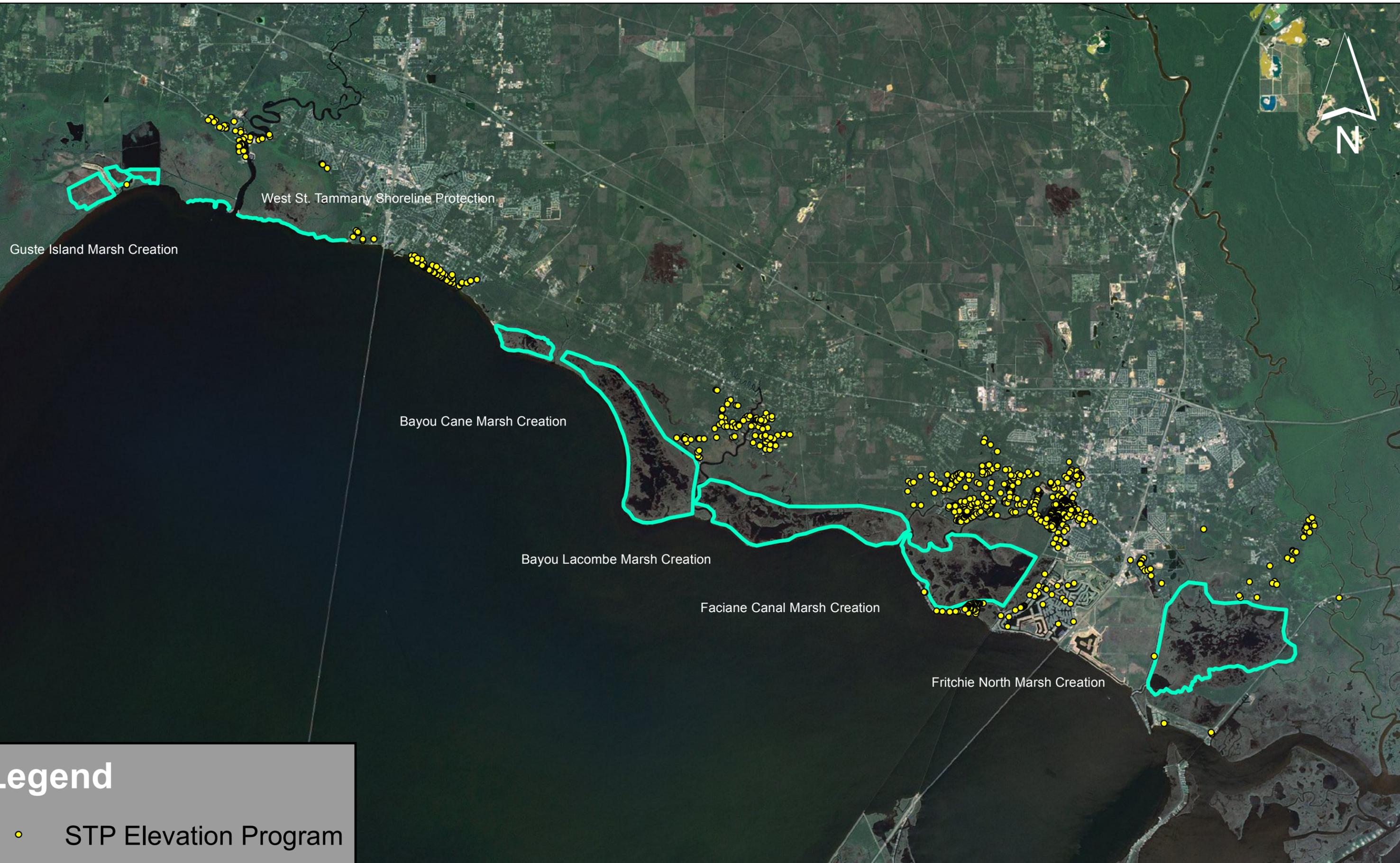


St. Tammany Parish Submittals to 2017 Coastal Master Plan



Legend

- STP Elevation Program



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 Pontchartrain 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 pleistocene 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



Lake
Pontchartrain

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 Pontchartrain 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 became almost all open water. With an increase in tidal exchange due to 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 to 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 yd³

Contact Information

David Brunet

St. Tammany Parish Coastal Zone Manager

985-898-2552



Guste Island Marsh Creation



Lake
Pontchartrain

Legend

-  Guste_Island_Borrow
-  Guste_Island_MC

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 Pontchartrain 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 height 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 yd³

Contact Information

David Brunet

St. Tammany Parish Coastal Zone Manager

985-898-2552



Bayou Cane Marsh Creation



Lake
Pontchartrain

Legend

-  Bayou_Cane_MC_Borrow
-  Bayou_Cane_MC

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

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 Pontchartrain 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 height 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



Lake
Pontchartrain

Legend

-  Bayou_Lacombe_MC_Borrow
-  Bayou_Lacombe_MC

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 Pontchartrain 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 height of +1.2 NAVD 88. Tidal creeks exist and would be maintained in order to 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 yd³

Contact Information

David Brunet

St. Tammany Parish Coastal Zone Manager

985-898-2552



Faciane Canal Marsh Creation



Legend

-  Faciane_Canal_MC_Borrow
-  Faciane_Canal_MC

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 Pontchartrain 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 height 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 yd³

Contact Information

David Brunet

St. Tammany Parish Coastal Zone Manager

985-898-2552



Fritchie North Marsh Creation



Lake Pontchartrain

Legend

 Fritchie_North_MC

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

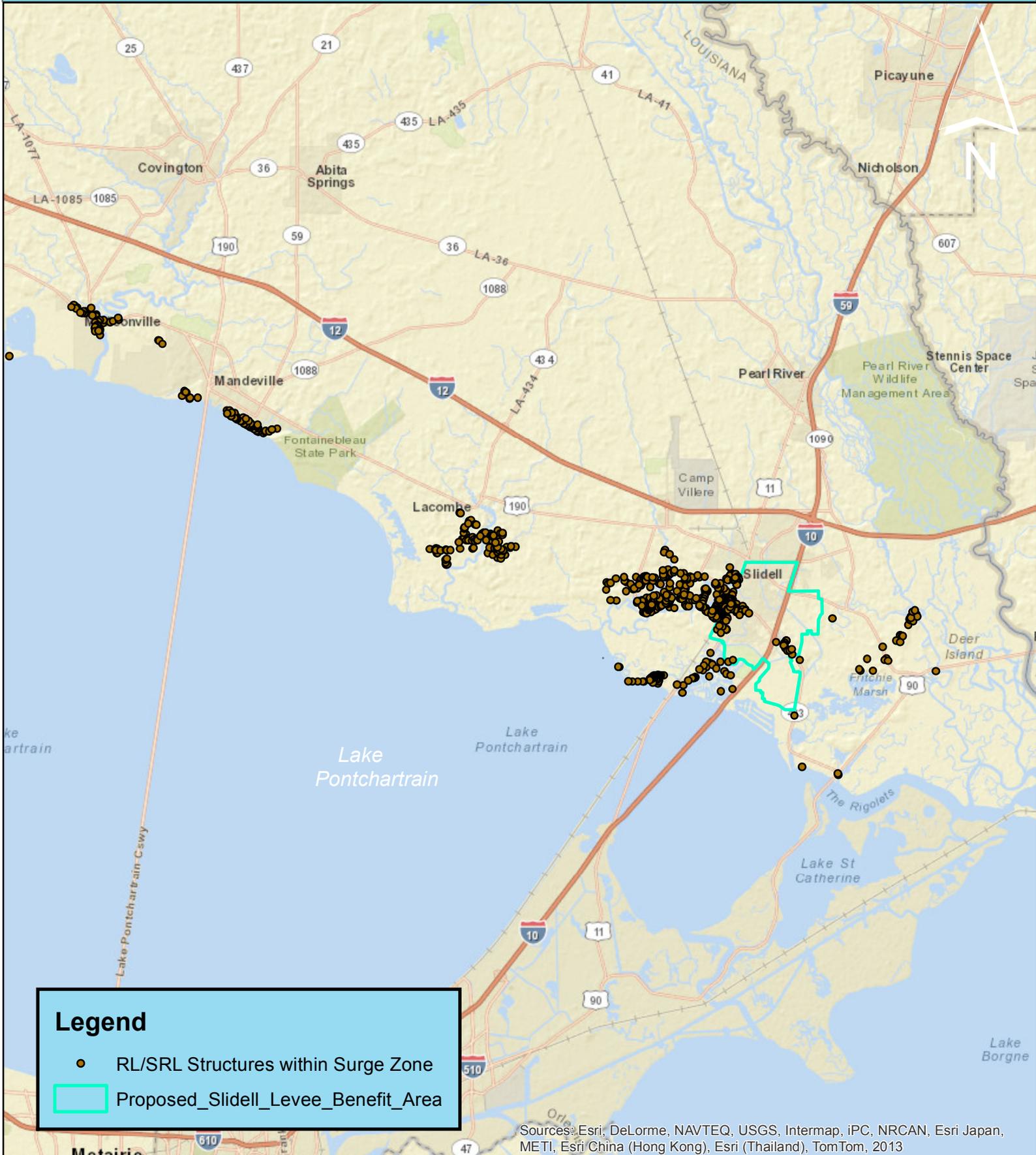
Target Elevation FEMA Base Flood Elevation

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

