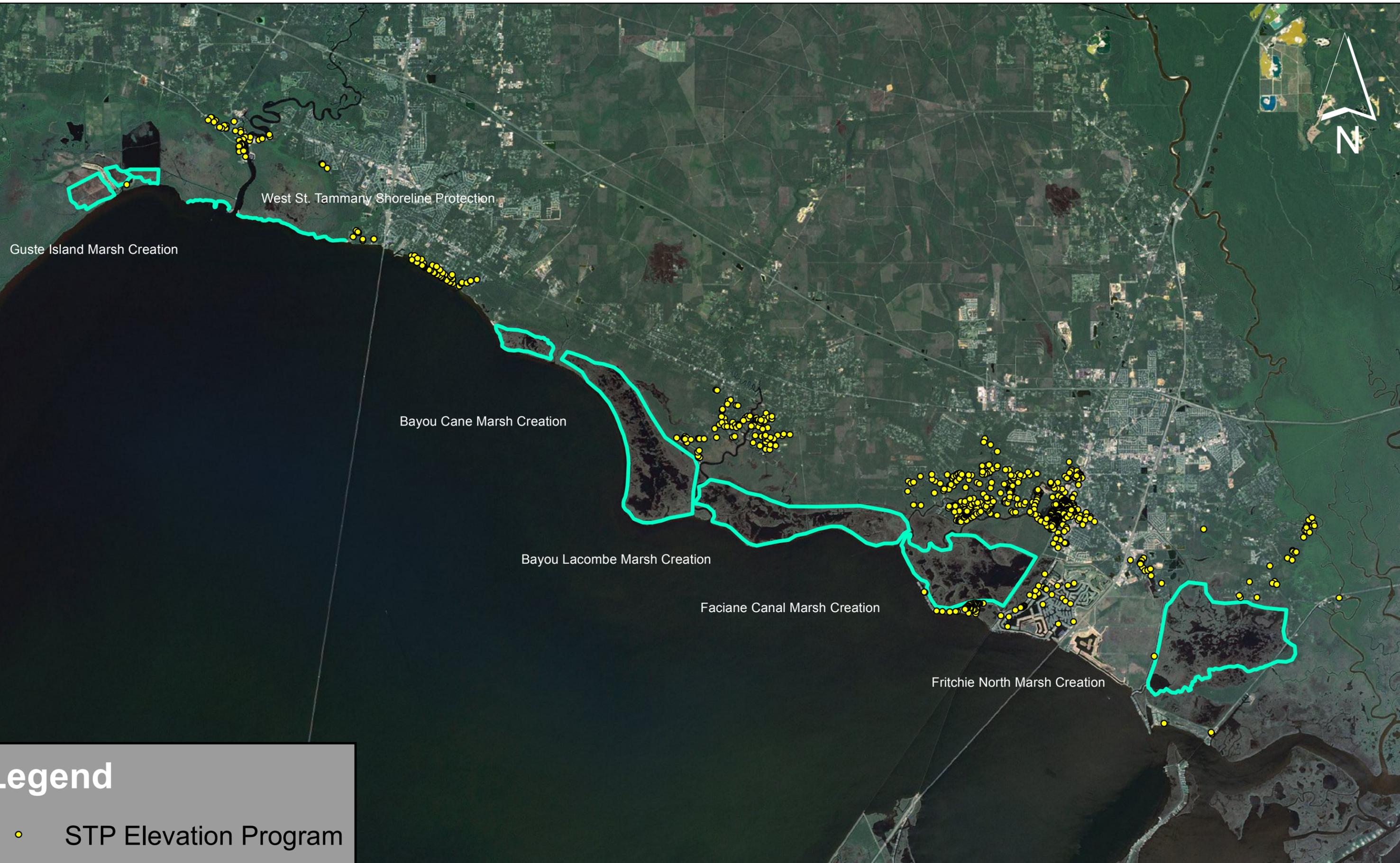


# St. Tammany Parish Submittals to 2017 Coastal Master Plan



**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

<b>Area</b>	24,773 feet
<b>Parish</b>	St. Tammany
<b>Location</b>	
	Latitude 30.374163
	Longitude -90.144885
<b>Dike Elevation</b>	2.5' NAVD
<b>Dike Top Width</b>	4'
<b>Rock</b>	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

<b>Project:</b>	<b>West St. Tammany Shoreline Protection</b>	<b>STP Coastal Plan 2014</b>	<b>Date:</b>	<b>28-Jul-14</b>	
<b>Computed by:</b>	<b>J Guillory</b>				
<b>Item No.</b>	<b>Work or Material</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Amount</b>
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 =	<b>0</b>	Acres	Perimeter =	<b>0</b>	LF
% Water =	<b>95%</b>		% Open Water =	<b>30%</b>	
% Marsh =	<b>5%</b>		% Marsh Remnant =	<b>70%</b>	
% Restored =	<b>0%</b>		Shoreline =	<b>24773</b>	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 yd<sup>3</sup>

### 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

<b>Project:</b>	<b>Guste Island Marsh Creation</b>	STP Coastal Plan 2014		<b>Date:</b>	<b>1-Aug-14</b>
<b>Computed by:</b>	<b>J Guillory</b>				
<b>Item No.</b>	<b>Work or Material</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Amount</b>
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	
		<b>SubTotal: \$2,262,339</b>

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

**Project Data**

Area =	<b>685</b>	Acres	Perimeter =	<b>38850</b>	LF
% Water =	<b>95%</b>		% Open Water =	<b>30%</b>	
% Marsh =	<b>5%</b>		% Marsh Remnant =	<b>70%</b>	
% Restored =	<b>0%</b>				

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 yd<sup>3</sup>

## 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

<b>Project:</b>	<b>Bayou Cane Marsh Creation</b>	STP Coastal Plan 2014	<b>Date:</b>	<b>28-Jul-14</b>	
<b>Computed by:</b>	<b>J Guillory</b>				
<b>Item No.</b>	<b>Work or Material</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Amount</b>
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 =	<b>4117</b>	Acres	Perimeter =	<b>89670</b>	LF
% Water =	<b>20%</b>		% Open Water =	<b>5%</b>	
% Marsh =	<b>70%</b>		% Marsh Remnant =	<b>95%</b>	
% Restored =	<b>10%</b>				

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

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

### 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

<b>Project:</b>	<b>Bayou Lacombe Marsh Creation</b>	STP Coastal Plan 2014	<b>Date:</b>	<b>28-Jul-14</b>	
<b>Computed by:</b>	<b>J Guillory</b>				
<b>Item No.</b>	<b>Work or Material</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Amount</b>
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 =	<b>3114</b>	Acres	Perimeter =	<b>69415</b>	LF
% Water =	<b>20%</b>		% Open Water =	<b>5%</b>	
% Marsh =	<b>75%</b>		% Marsh Remnant =	<b>95%</b>	
% Restored =	<b>5%</b>				

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 yd<sup>3</sup>

## 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

<b>Project:</b>	<b>Faciane Canal Marsh Creation</b>	STP Coastal Plan 2014	<b>Date:</b>	<b>28-Jul-14</b>	
<b>Computed by:</b>	<b>J Guillory</b>				
<b>Item No.</b>	<b>Work or Material</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Amount</b>
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 =	<b>2853</b>	Acres	Perimeter =	<b>54334</b>	LF
% Water =	<b>70%</b>		% Open Water =	<b>15%</b>	
% Marsh =	<b>22%</b>		% Marsh Remnant =	<b>85%</b>	
% Restored =	<b>8%</b>				

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

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

### Contact Information

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



# Fritchie North Marsh Creation



Lake Pontchartrain

**Legend**

 Fritchie\_North\_MC

<b>Project:</b>	<b>Fritchie North Marsh Creation</b>	STP Coastal Plan 2014		<b>Date:</b>	<b>28-Jul-14</b>
<b>Computed by:</b>	<b>J Guillory</b>				
<b>Item No.</b>	<b>Work or Material</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Amount</b>
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 =	<b>4395</b>	Acres	Perimeter =	<b>65736</b>	LF
% Water =	<b>55%</b>		% Open Water=	<b>15%</b>	
% Marsh=	<b>45%</b>		% Marsh Remnant =	<b>85%</b>	
% Restored=	<b>0%</b>				

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

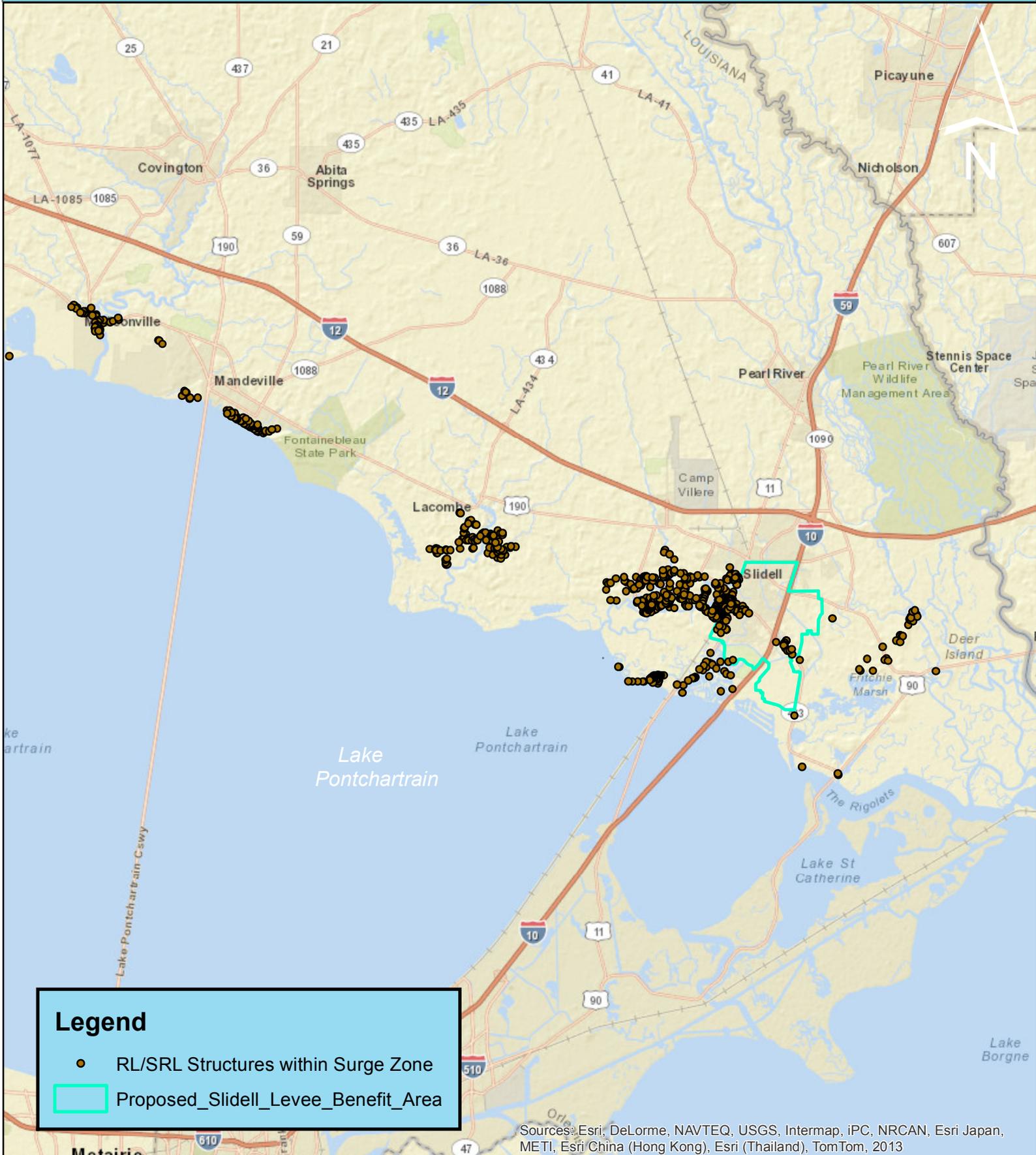
**Target Elevation** FEMA Base Flood Elevation

### Contact Information

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



# St. Tammany Parish Elevation



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

**ESTIMATED CONSTRUCTION COST**

**\$180,600,000**

