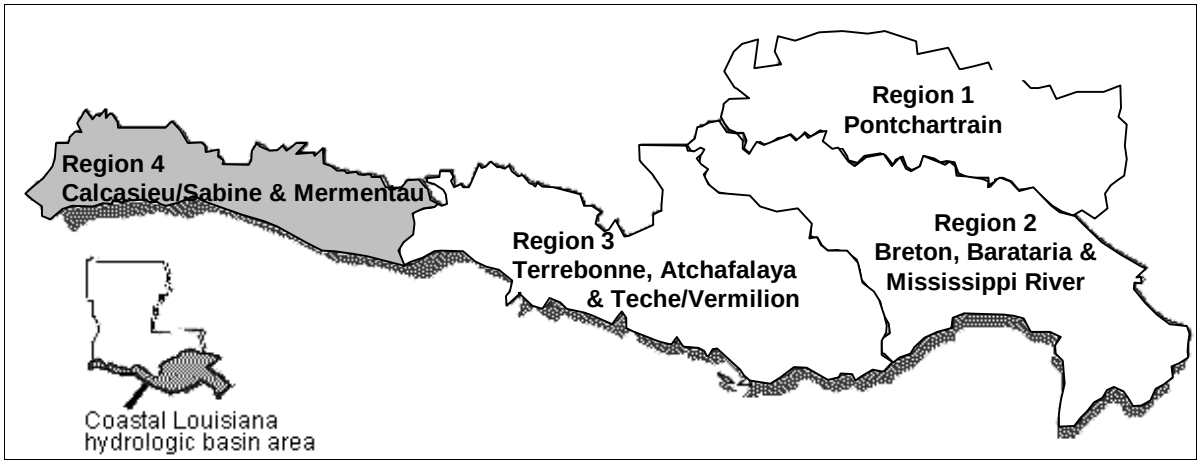
REGION 4



INTRODUCTION

Region 4 includes the Mermentau and Calcasieu/Sabine hydrologic basins and contains approximately 768,210 acres of coastal wetlands. This region extends from the western bank of the Freshwater Bayou Canal, westward to the Louisiana/Texas border in Sabine Lake, and from the marshes just north of the GIWW, south to the Gulf of Mexico. This region covers all or part of Vermilion, Cameron, and Calcasieu parishes.

The wetlands in Region 4 are classified as approximately 520 acres of cypress-tupelo swamps, 9,590 acres of bottomland hardwood forests, 354,600 acres of fresh marshes, 171,700 acres of intermediate marshes, 198,600 acres of brackish marshes, and 33,200 acres of saline marshes.

Estimates of wetland loss from Region 4 indicate that between 1932 and 1990, a total of 226,000 acres of wetlands were lost (an average of 3,897 acres per year). More recent estimates from 1978 to 1990 indicate that the wetland loss rate was even higher during this shorter time period and averaged 4,288 acres per year.

The Mermentau Basin extends from Freshwater Bayou Canal westward to Louisiana Highway 27, and is divided into two sub-basins, the Lakes Sub-basin north of the Grand Chenier ridge complex, and the Chenier Sub-basin to the south. The basin's primary source of freshwater inflow is the Mermentau River. The natural drainage of the Lakes sub-basin has been interrupted by canals and water control structures. The sub-basin contains Grand and White lakes, and functions similar to a freshwater reservoir. Drainage occurs eastward to Freshwater Bayou Canal, southward to the Gulf of Mexico, and westward to the Mermentau River and Calcasieu Ship Channel.

The Calcasieu/Sabine Basin is a shallow, coastal wetland system with freshwater input at the north end from the Sabine and Calcasieu rivers. Water circulates between Calcasieu and Sabine lakes via the GIWW and interior canals. Both lakes are connected to important shipping corridors and are also used for recreation. As in the Mermentau Basin, many wetlands in this basin are actively managed, with structures in the Cameron-Creole Watershed, Sabine National Wildlife Refuge, and on private lands.

The major objectives within this region are to reduce the salinities of the marsh habitats in the western and southern areas and to convert most of the Lakes Sub-basin to fresh marsh. The objective for the Chenier Sub-basin is to convert the existing saline and brackish marshes to brackish and intermediate

marshes by the year 2050. The objective for the Calcasieu/Sabine Basin is to create fresher conditions by the year 2050.

Coast 2050 identified specific ecosystem strategies for protecting and sustaining the region's coastal resources (Figure12). These specific ecosystem strategies can be grouped into one of the following five general categories: restoring and sustaining wetlands; controlling salinity in the Calcasieu Basin; protecting bay and lake shorelines; restoring and maintaining barrier islands and shorelines; and maintaining critical landforms.

PROJECT INFORMATION

A total of 109 restoration projects have been authorized for Region 4 (Table 4). Project specific information is presented below organized by project funding source.

BREAUX ACT

A total of 30 projects have been authorized under the direction of the Breaux Act in Region 4, which are anticipated to benefit 33,378 acres of wetlands at a cost of $80,015,518. Projects constructed in Region 4 under the Breaux Act this year are Sweet Lake/Willow Lake Hydrologic Restoration (CS-11b), Black Bayou Hydrologic Restoration (CS-27), Perry Ridge West Bank Stabilization/Terracing (CS-30), and Humble Canal Hydrologic Restoration (ME-11).

Eight Breaux Act projects address marsh loss caused by changes in natural hydrology. Previously constructed projects are Cameron-Creole Maintenance (CS-04a), Humble Canal Hydrologic Restoration (ME-11), Cameron/Creole Plugs (CS-17), Black Bayou Hydrologic Restoration (CS-27), and Freshwater Bayou Wetland (ME-04). More recently, the following four projects have been authorized and are currently in the design phase: East Sabine Lake Hydrologic Restoration Project (CS-32); Black Bayou Bypass Culverts (CS-29); Freshwater Introduction South of Hwy 82 (ME-16); and Little Pecan Bayou Control Structure (ME-17). In an attempt to address problems associated with saltwater intrusion and marsh impoundment, these projects all focus on changing human-altered drainage patterns back to their more natural state.

Four Breaux Act marsh management projects address the conversion of marshes to open water and changes in marsh vegetation. The three constructed projects are East Mud Lake (CS-20), Highway 384 (CS-21), and Replace Hog Island, West Cove, and Headquarter Structures (CS-23). Brown Lake (CS-09a) is planned for construction in 2002. These projects are intended to return marshes to their more natural hydrologic state through the use of control structures that restrict water exchange in an enclosed marsh area. Additionally, vegetation plantings will be used to reduce erosion and stabilize fragile soils.

Ten Breaux Act projects in this region address shoreline erosion. The projects that have been constructed are Sabine Refuge (CS-18), Clear Marais (CS-22), Perry Ridge East Shore Protection (CS-24), Sweet Lake/Willow Lake (CS-11b), Cameron Prairie Refuge (ME-09), Perry Ridge West Bank Stabilization/Terracing (CS-30), and Freshwater Bayou Bank Stabilization (ME-13). Dates of construction are still pending for Rockefeller Refuge Shoreline Stabilization (ME-18), Grand White Lake Land Bridge Protection (ME-19), and Holly Beach to Constance Beach Segmented Breakwaters Sand Management Project (CS-01). These projects involve various techniques which are designed to decrease shoreline erosion rates. Data from Freshwater Bayou Bank Stabilization (ME-13) indicate that the rock dikes were successful at decreasing wave-induced shoreline erosion, and in some instances deposition occurred between the dike and the shoreline. The reference area eroded at 6.5 feet per year for the first year after construction, whereas the shoreline at the project area actually prograded at a rate of 2.3 feet per year.

The Breaux Act sediment and nutrient trapping projects, Plowed Terraces Demonstration (CS-25) and Pecan Island Terracing (ME-14), were both constructed in 2000. These projects were designed to demonstrate the cost effectiveness of creating terraces with a plow, rather than with the more traditionally used drag line and bucket dredge. Once vegetated, the created emergent wetlands will trap sediment and reduce wave energy, thereby protecting interior marshes.

Two vegetation planting projects, West Hackberry (CS-19) and Dewitt-Rollover Plantings Demonstration (ME-08), were designed to increase vegetation and minimize wind-driven wave erosion. However, plants at the Dewitt-Rollover project survived for only a short time span; therefore, the project was deauthorized.

Sabine Refuge Marsh Creation (Revised, Increment I, CS-28) is to be constructed in 2002. This Breaux Act project was designed to create marshes in shallow waters by utilizing dredged material.

The following three projects have been deauthorized in Region 4: Compost Demonstration (CS-26); SW Shore White Lake Protection Demonstration (ME-12); and Dewitt-Rollover Plantings Demonstration (ME-08).

STATE

Eight projects, implemented in Region 4 by the CRD and funded by the Wetlands Trust Fund and/or local Parish funds, are estimated to benefit 1,972 acres of land at a cost of $10,582,556.

Holly Beach (CS-01bc), constructed in phases between 1991 and 1994, addressed shoreline erosion by utilizing segmented rock breakwaters. Monitoring data indicate that 49,284 cubic yards of sediment accumulated behind the breakwaters from 1990 to 1995.

Several state-funded shoreline protection projects constructed between 1989 and 1991, have benefitted areas within Region 4 using various techniques. The Sabine Shellbank Stabilization utilized shell to minimize shoreline erosion, whereas the Blind Lake shoreline protection project used limestone breakwaters and vegetation plantings along the GIWW adjacent to Blind Lake. Four years after planting, a high rate of plant survival enabled vegetation at Blind Lake to spread into an area 20 feet in width. The Brannon Ditch project incorporated the use of vegetation along the GIWW and a wooden wave-damping fence to protect the shoreline from continued erosion.

Segmented breakwaters constructed at Holly Beach (CS-01bc).

Shoreline protection along the GIWW in the vicinity of Blind Lake.

The Sabine Terraces project, constructed in 1991, decreased shoreline erosion and promoted vegetation growth and sedimentation in the Sabine National Wildlife Refuge. This project minimized wind-induced wave erosion through the construction of 128 earthen terraces, positioned in a checkerboard pattern in shallow open water. Monitoring data revealed a pre-construction, annual

shoreline retreat rate of -11.6 feet per year. After construction, the average annual shoreline movement advanced approximately +21.0 feet per year between 1990 and 1993. Data also indicate that wave height was significantly decreased, primary marsh production increased, and the amount of vegetation coverage increased following project construction.

The Rycade Canal (CS-02) marsh management project, constructed in 1994, involves hydrologic modifications designed to decrease salinity and improve marsh conditions. The Pecan Island (ME-01) freshwater diversion project, constructed in 1992, allowed for movement of sediment, nutrients, and freshwater from White Lake to surrounding wetlands south of the Pecan Island chenier. Cameron Creole (CS-04a-1), a hydrologic restoration project constructed in 1999, addresses habitat shifts associated with saltwater intrusion and marsh impoundment.

PARISH COASTAL WETLANDS RESTORATION PROGRAM

The eight Christmas tree projects that were implemented within Region 4 are Ellender Bridge, Goose Lake, Kelso Bayou, Portie Lakes, Cameron Creole, Cameron Creole #2, Black Lake, and Prien Lake. The Cameron Creole #2 and Prien Lake sites were constructed and/or maintained in 2001. The PCWRP is responsible for building approximately 8,723 linear feet of fences in Region 4 since 1990.

This program also includes the first phase of two vegetation projects, Collicon Lake and Turner's Bay, where 1,200 plants were installed along 6,000 linear feet of shoreline/bankline to reduce erosion and sediment accumulation.

DNR/NRCS/SWCC VEGETATION PLANNING PROGRAM

Since 1998, a total of 59 vegetation planting projects have been implemented in Region 4. These projects involved the planting of approximately 386,545 plants (mostly California bulrush, *Schoenoplectus californicus*, and smooth cordgrass) along more than 881,157 linear feet of shoreline. Several phases, which span over several years, exist for many of the planting projects. Projects completed in 2001 are Grand Lake, Cameron Creole, Grosse Savanne Marsh, Smooth Cordgrass Maintenance Demonstration, Jim Erbelding Beach, Superior Canal/Grand Lake, California Bulrush Sonde Demonstration 2, M.O. Miller, GIWW Pontoon Bridge, and Choupique Bayou.

SECTION 204/1135

Two Section 204 projects in Region 4, Brown Lake and Sabine National Wildlife Refuge, created approximately 982 acres of wetlands. These projects utilized dredged material from routine maintenance of the Calcasieu Ship Channel to benefit areas along the shore of Calcasieu Lake and areas in the Sabine National Wildlife Refuge.

Rows of vegetation planted in Goose Lake via the PCWRP are now thriving.

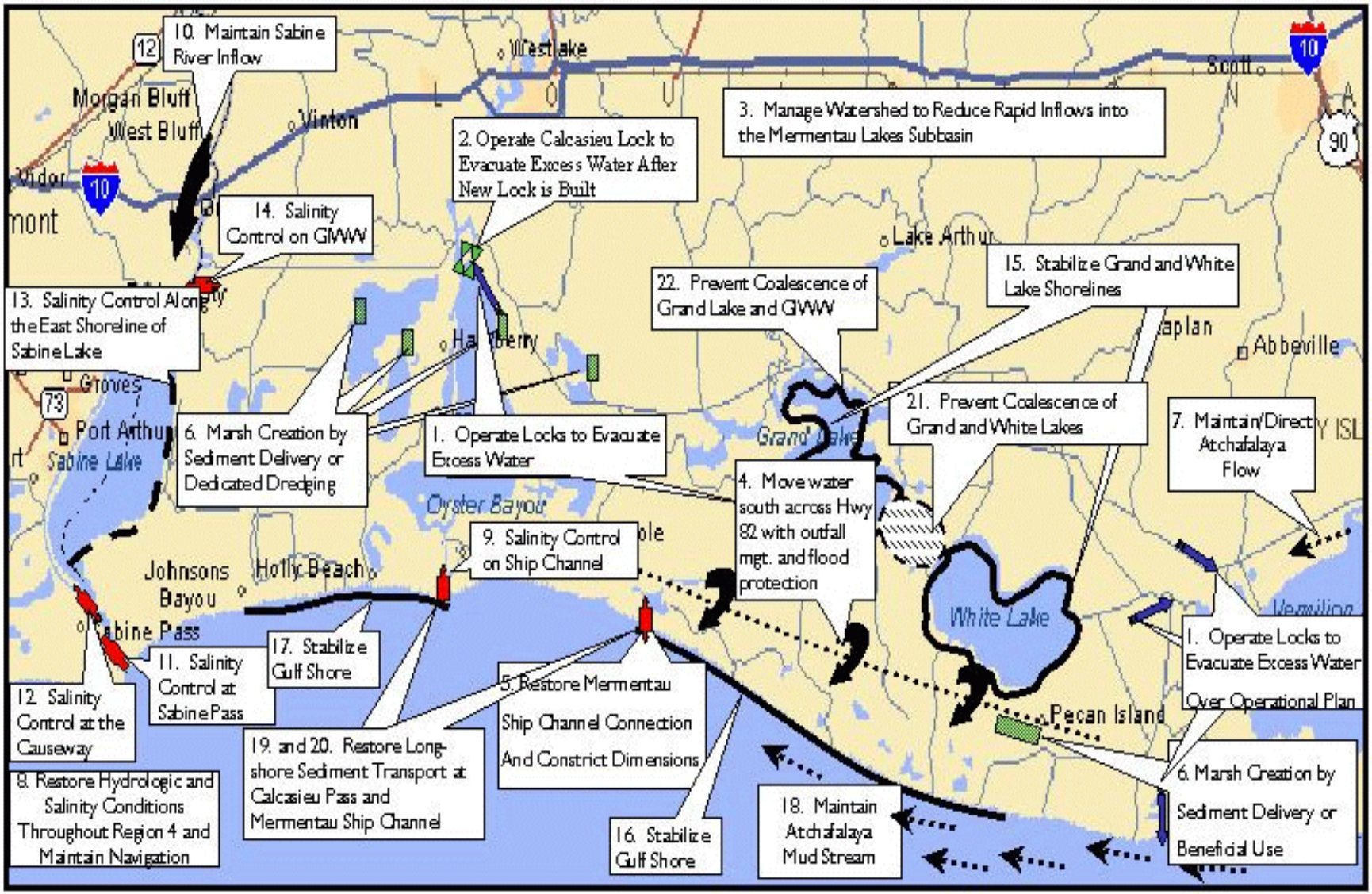


Figure 12. Coast 2050 Region 4 ecosystem strategies.

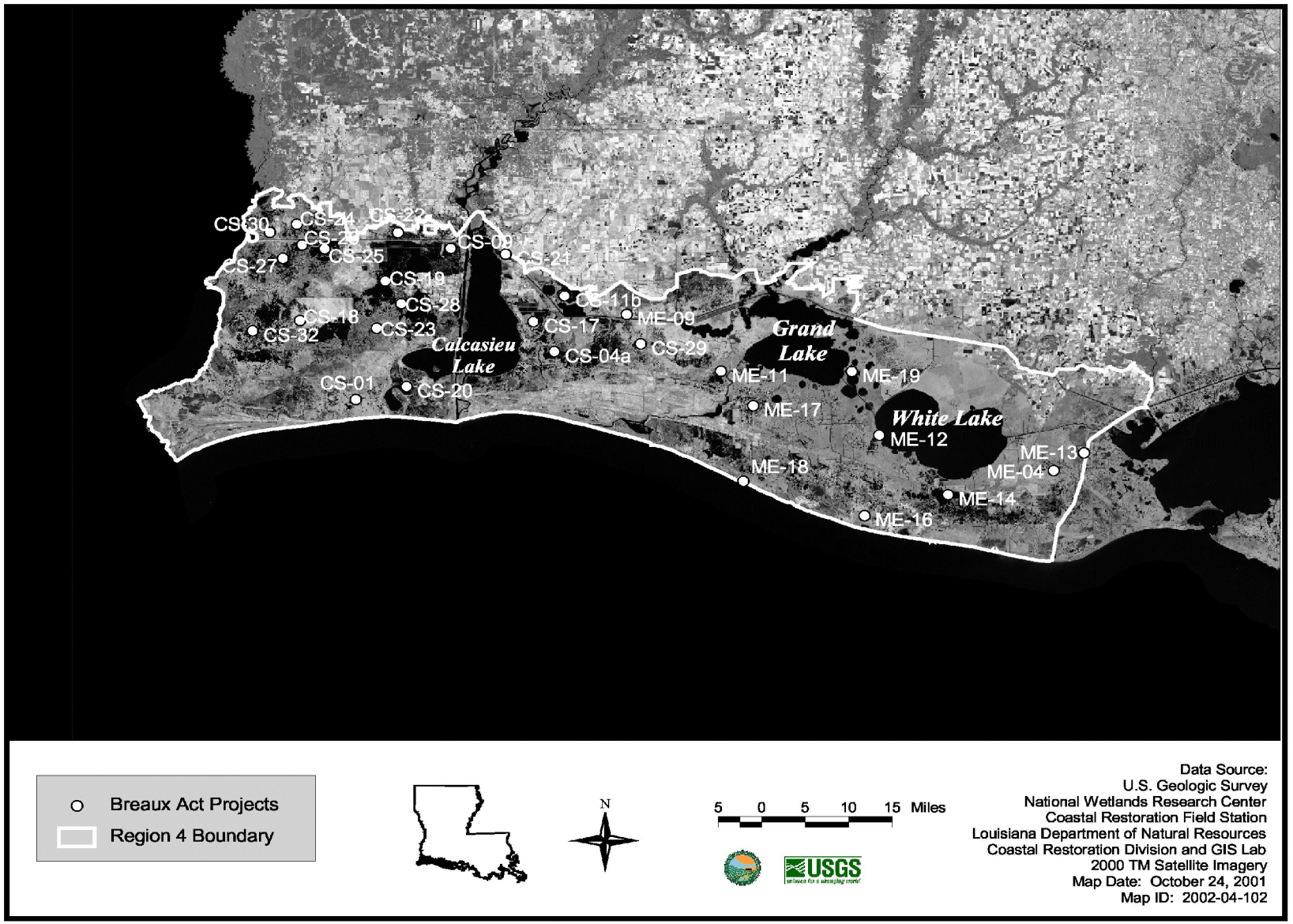


Figure 13. Location of Breaux Act projects authorized in Coast 2050 Region 4.

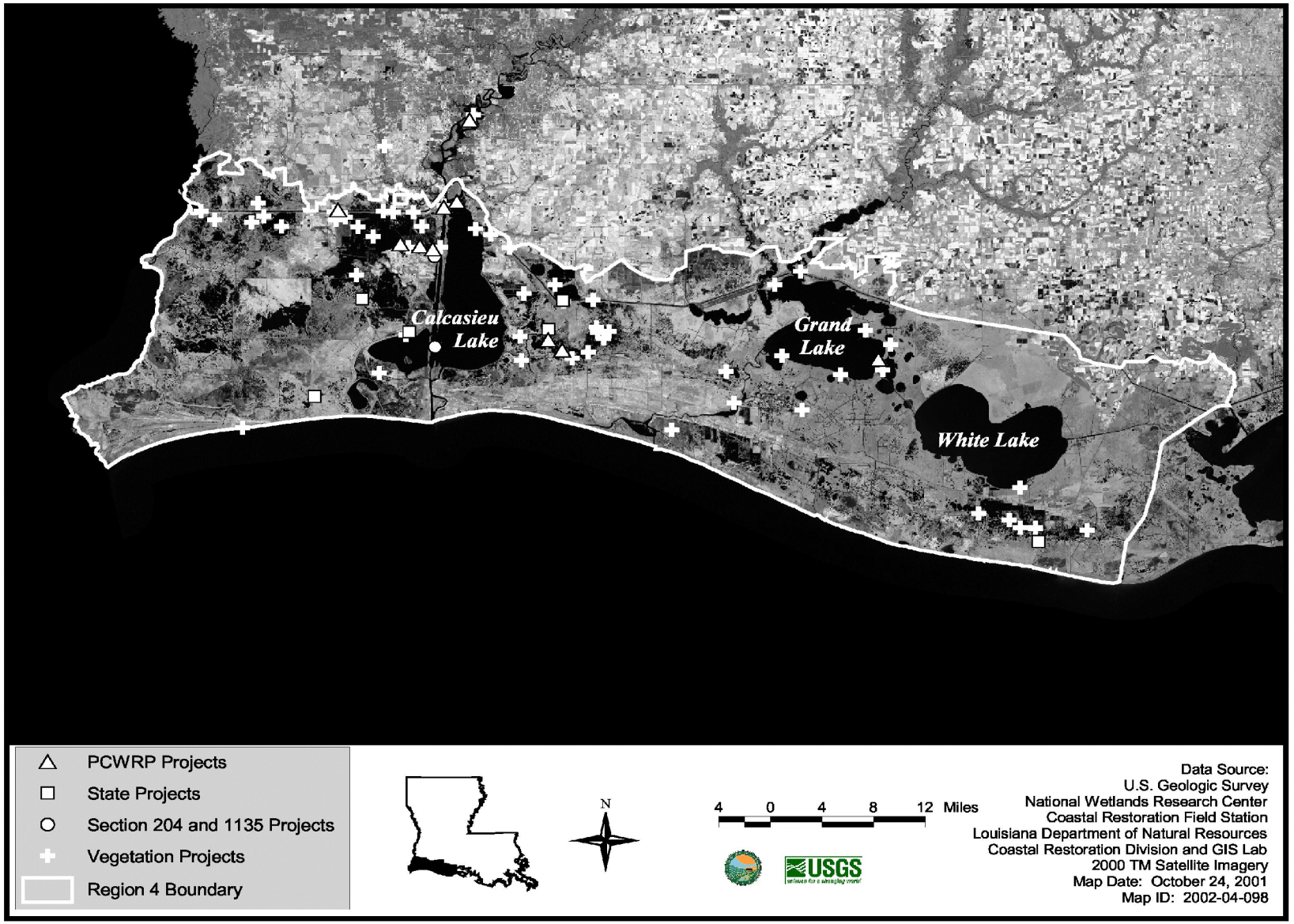


Figure 14. Location of PCWRP, State, Section 204 and 1135, and Vegetation projects in Coast 2050 Region 4.

Table 4. Restoration projects completed or pending in Coast 2050 Region 4.

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Breaux Act	CS-01 (Complex Project)					Sen. Gerald J. Theunissen			NI	No Date	NI	$18,912,500
		Holly Beach Project	SP	9	NRCS	Rep. Daniel T. Flavin	Cameron	8,600	N/A	N/A	N/A	$18,912,500
		The purpose of the project is to protect existing coastal wetlands by restoring and maintaining the integrity and functionality of the remaining chenier/beach ridge. This will be accomplished through beach renourishment and monitoring of the shoreline response, and possible augmentation and/or enhancement of existing breakwaters. This project is currently in Phase II.										
	CS-04a (CS-04a)	Cameron-Creole Maintenance	HR	3	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	2,602	C $0	1997 $0	I $3,736,718	$3,719,926 $3,736,718
		Cameron-Creole Maintenance includes maintenance provisions for 19 miles of levee and five structures. This project is not monitored with Breaux Act funds, and only seeks to keep the levees and structures of the Cameron-Creole Watershed Management Project in good condition. The Cameron-Creole Watershed Management Project was constructed before the Breaux Act was authorized and was funded as a Louisiana State project under the auspices of NRCS's Small Watershed Program (PL-566).										
	CS-09a (CS-09)	Brown Lake Hydrologic Restoration	MM	2	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	282	C $234,700	2002* $1,714,400	I $1,252,790	$3,222,800 $3,201,890
		Wetlands surrounding Brown Lake have suffered since the construction of the GIWW and the Calcasieu Ship Channel. These major navigation channels have allowed saltwater to enter surrounding marshes, exposing the wetlands to increased erosion from wind and waves. This project includes installing and maintaining water control structures to reduce fluctuations in salinity and water level, constructing levees and terraces to dissipate wave energy and promote the establishment of aquatic vegetation, and planting vegetation on exposed mudflats to help stabilize and protect eroding shorelines. Salinity, water level, and vegetation will be monitored to determine the project's effectiveness.										
	CS-11b (CS-11b)	Sweet Lake/Willow Lake Hydrologic Restoration	SP/HR	5	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	247	C $522,400	2001 $3,848,600	I $639,762	$4,800,000 $5,010,762
		As a result of waves and boat wakes, the GIWW spoil bank that protects the fragile marshes around Sweet Lake and Willow Lake has eroded and breached in several places. The GIWW has encroached on the lakes and their surrounding marshes, potentially creating one large open water body, exposing the marshes to saltwater and erosive processes. This project includes construction of rock embankments on the GIWW to close off the lakes, vegetation plantings to reduce erosion, and construction of earthen terraces combined with vegetation plantings in open water areas to promote growth of vegetation. Vegetation and shoreline change is being monitored.										
	CS-17 (FCS-17)	Cameron/Creole Plugs	HR	1	USFWS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	865	C $62,000	1996 $387,930	I $572,756	$660,460 $1,022,686
		The implementation of this project will limit salinity influxes and excessive water pooling adjacent to Calcasieu Lake in Cameron/Creole Watershed project. This will be accomplished by the construction of two plugs within the interior borrow canal of the Calcasieu Lake Eastern Levee.										
	CS-18 (FCS-18)	Sabine Refuge Erosion Protection	SP/HR	1	USFWS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	5,542	C $195,000	1995 $1,011,000	I $391,903	$4,895,780 $1,597,903
		This project is intended to protect an impounded freshwater marsh by reinforcing an eroded levee with a rock dike.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Breaux Act (continued)	CS-19 (FCS-19)	West Hackberry Plantings (Demonstration)	VP	1	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	N/A	C $24,266	1994 $125,461	I $96,514	$213,947 $246,241
		This project will reduce marsh erosion from interior open water wave energy using vegetation planting techniques as well as hay bale fences.										
	CS-20 (PCS-24)	East Mud Lake Marsh Management	MM	2	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	1,520	C $245,776	1996 $1,150,868	I $1,976,499	$2,903,635 $3,374,143
		The project will reduce wetland degradation by creating a hydrologic regime conducive to restoration, protection and enhancement of the Mud Lake area by using various types of water control structures and vegetation plantings. Structural components include culverts with flap gates, two variable-crest weirs, three earthen plugs, and the repair of existing levee.										
	CS-21 (PCS-25)	Highway 384 Hydrologic Restoration	MM	2	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	150	C $90,160	2000 $237,520	I $740,829	$700,717 $1,068,509
		The Highway 384 project area along the northeast shoreline of Calcasieu Lake is experiencing wetland loss due to increased tidal volume, enlarged tidal routes, and saltwater intrusion. The project area has also been isolated from its major source of freshwater, the Calcasieu River Basin. The project seeks to improve hydrologic conditions with the installation of culverts, plugs, and weirs within the project area and to stabilize shorelines by rock-lining canals and planting vegetation. Salinity, shoreline change, and water level will be monitored and vegetation surveys will be conducted. Project construction was completed in February 2000 but only pre-construction data exists.										
	CS-22 (PCS-27)	Clear Marais Bank Protection	SP	2	USACE	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	1,067	C $581,123	1997 $2,232,708	I $903,612	$1,741,310 $3,717,443
		The integrity of an existing water management levee between the GIWW and the project area was threatened by increased tidal action and boat wakes. In response, a 35,000 foot limestone breakwater was constructed to prevent continued erosion of the levee and to prevent encroachment of the GIWW into the project area which consists of hundreds of acres of highly organic freshwater marsh. This project will be monitored with aerial photography, shoreline surveys, cross-sectional surveys of the GIWW, and elevational surveys. Though this project is completed, only pre-construction data exists.										
	CS-23 (XCS-47/48i)	Replace Hog Island, West Cove Control Structures	MM	3	USFWS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	953	C $330,473	2000 $2,731,800	I $1,404,081	$4,581,454 $4,466,354
		This project was authorized to replace the water control structures on three major avenues of water passage that allow water to flow from saline areas into the project area's interior marshes. The new structures on Hog Island Gully, West Cove Canal, and Headquarters Canal will be operated to effectively discharge excess water, increase cross sectional area for movement of estuarine species, and help to curtail saltwater intrusion into the interior marshes. This project should help maintain intermediate and brackish vegetation communities and increase submerged aquatic vegetation. Salinity, water level, and vegetation will be monitored.										
	CS-24 (PCS-26i)	Perry Ridge (East) Shore Protection	SP	4	NRCS	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	1,203	C $277,300	1999 $1,809,100	I $578,213	$2,223,518 $2,664,613
		Marsh loss in the vicinity of Perry Ridge has been caused by water level fluctuations and tidal scour from the GIWW as the result of breaches in the northern spoil bank. As the GIWW has widened and deepened, it has acted as a conduit for saltwater to enter the fragile surrounding marshes. To protect these marshes, a 12,000 linear-foot rock dike was constructed along the bank of the GIWW. This dike serves to protect the existing emergent wetlands, prevent further deterioration from erosion, prevent the widening of the GIWW, and reduce salinity spikes in the project area by keeping a pool of freshwater behind the rocks.										

(continued)

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									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Breaux Act (continued)	CS-25 (XCS-56)	Plowed Terraces (Demonstration)	SNT	4	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	N/A	C $62,714	2000 $213,800	I $45,425	$299,690 $321,939
		Severely eroded marshes in the project area, adjacent to the GIWW, have resulted from excessive water level fluctuations, saltwater intrusion, and wind-generated wave action. The soils of the area appear suitable for plow-constructed earthen terraces and provide an excellent opportunity to develop and demonstrate a non-traditional procedure for constructing earthen terraces in shallow water areas. These demonstration terraces are expected to serve as wave-stilling, sediment-trapping structures that provide a base for the establishment of emergent vegetation. Vegetation will also be planted. Terrace dimensions will be measured to determine total area of wetlands created and vegetation cover will be assessed.										
	CS-26 (XCS-36)	Compost (Demonstration)	MC	4	EPA	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	N/A	C $57,000	No Date $292,785	I $75,548	$370,594 $425,333
		This project was authorized to evaluate the effectiveness of using tree trimmings as compostable material, using compost amended material in providing a growth medium for emergent vegetation, and determining settlement rates of the compost amended materials and tree trimmings. The project is currently pending deauthorization by the Breaux Act Task Force.										
	CS-27 (XCS-48)	Black Bayou Hydrologic Restoration	HR	6	NMFS	Sen. Gerald J. Theunissen Rep. Ronnie Johns	Cameron	3,594	C $796,291	2001 $4,154,300	I $1,431,920	$6,316,800 $6,382,511
		The marshes in the Black Bayou project area have been subjected to hydrological changes such as reduced freshwater inflow, increased magnitude and duration of tidal fluctuations, increased salinities, higher water levels, and excessive water exchange. This project includes the construction of spoil banks, weirs, plugs, and culverts which are designed to allow freshwater from the GIWW into the wetlands and to create a hydrologic head that increases freshwater retention time and reduces saltwater intrusion and tidal action in the wetlands. Vegetation will also be planted to decrease erosion and increase the establishment of emergent marsh. Salinity, shoreline change, and vegetation will be monitored.										
	CS-28 (XCS-48 (SA-1))	Sabine Refuge Marsh Creation (Revised, Increment 1)	MC	8	USFWS/ USACE	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	993	C $405,748	2002* $3,553,983	I $218,403	$5,920,248 $4,211,434
		This project will construct approximately 27,000 feet of earthen partitions in shallow open water areas to serve as material retention dikes for five marsh creation cells. Dredged spoil slurry obtained from operations and maintenance dredging of the Calcasieu Ship Channel will be deposited in the containment cells during USACE maintenance dredging events.										
	CS-29 (CS-16)	Black Bayou Bypass Culverts	HR	9	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	540	$711,579	No Date $0	$88,244	$799,823 $799,823
		This project was authorized to provide an avenue to remove excess water, which has contributed to marsh loss and shoreline erosion, from the Lakes Subbasin. This project's components include five 10 by 10-foot concrete box culverts with sluice gates to be installed in Black Bayou, and relocating LA Hwy 384 over the culverts. Operation of the structure will be in coordination with Calcasieu Lock and the Schooner Bayou and Catfish Point water control structures. This project is in the Phase I evaluation process.										
	CS-30 (PCS-26ii)	Perry Ridge West Bank Stabilization/Terracing	SP/MC	9	NRCS	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	83	$302,275	2001 $1,271,600	$38,924	$317,399 $1,612,799
		This project was authorized to install rip-rap along the northern bank of the GIWW in an area which was recently dredged to 30 feet to allow for the use of double barge traffic. This dredging has intensified bank erosion and has resulted in a breach of the bank, impacting interior wetlands.										

(continued)

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									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Breaux Act (continued)	CS-32	East Sabine Lake Hydrologic Restoration Project	HR	10	NRCS/ USFWS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	393	I $2,393,615	No Date $0	NI $52,916	$1,425,447 $1,768,154
		This project will utilize water control structures, shoreline protection, terraces, and vegetation plantings to restore the historical hydrologic regime to approximately 36,623 acres of the Sabine National Wildlife Refuge. Specific goals include reducing elevated salinities within fresh and intermediate marshes; reducing tidal scour; reducing erosion on the eastern shore of Sabine Lake; reducing the turbidity of open water areas; providing more marsh edge; and restoring and protecting marsh. This project is currently in the Phase I evaluation process.										
	ME-04 (XME-21)	Freshwater Bayou Wetland Restoration	HR/SP	2	NRCS	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	1,593	C $285,478	1998 $1,019,875	I $1,643,923	$2,770,093 $2,949,276
		This project was constructed in two phases. Phase I was completed in 1995 and consisted of a rock dike to protect the west bank of Freshwater Bayou Canal from shoreline erosion. Phase II of the project was completed in 1998 and included the construction of several water control structures to improve the capability of the interior wetlands to mediate the effects of increased salinity and higher water level fluctuations, on vegetation cover.										
	ME-08 (ME-08)	Dewitt Rollover Plantings (Demonstration)	VP	1	NRCS	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	N/A	C $36,582	1994 $51,460	C $3,722	$191,003 $91,764
		This demonstration project was authorized to investigate the ability of vegetation plantings of smooth cordgrass (*Spartina alterniflora*) to colonize a newly accreted mudflat, which will enhance sediment trapping and establish a buffer of vegetation to protect the beach from erosion. The vegetation was planted in a 1.5-mile-long strip on the Gulf of Mexico shoreline. After planting, the shoreline erosion rate remained consistent with the long-term range of erosion rates for this area, but no plants remained 10 months after planting. The project was officially deauthorized by the Breaux Act Task Force in February 1996 because no plants remained.										
	ME-09 (ME-09)	Cameron Prairie Refuge Protection	SP	1	USFWS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	247	C $56,549	1994 $1,030,340	I $314,236	$1,177,668 $1,401,125
		A rock dike was constructed to protect approximately two miles of eroded levee separating a 640-acre area of freshwater marsh from the high turbidities and erosive forces of the GIWW.										
	ME-11 (PME-15)	Humble Canal Hydrologic Restoration	HR	8	NRCS	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	378	C $173,529	2001 $357,164	I $914,679	$1,526,136 $1,526,136
		The objective of this project is to restore historical hydrology to the project area by constructing three 48-inch flap-gated structures, which will continue to protect the area from saltwater intrusion from the Mermentau River and allow for drainage of high water levels from the marsh to the river.										
	ME-12 (PME-6)	SW Shore White Lake Protection Demonstration	SP	3	NRCS	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	N/A	C $16,777	1996 $20,025	C $72,001	$126,062 $108,803
		This project was authorized to protect 25 acres of fresh and intermediate marsh along the southwest shore of White Lake. The area is exposed to high wave energy and severe shoreline erosion. A total of 2,650 California bulrush (*Schoenoplectus californicus*) plants were installed along the shoreline in three rows, and vegetation was monitored after planting. After 12 months, plant percent survival was 0.17 and erosion rates reached 11.7 feet/year. Water depth combined with high wind-generated wave energy were the likely causes of the planting's lack of success. The project was officially deauthorized by the Breaux Act Task Force in December of 1998 and is no longer monitored.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Breaux Act (continued)	ME-13 (XME-29)	Freshwater Bayou Bank Stabilization	SP	5	NRCS	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	511	C $229,132	1998 $1,682,077	I $632,258	$3,998,919 $2,543,467
		The main cause of wetland loss in this project area is boat wake-induced erosion of the canal spoil banks and the fragile organic soils of the adjacent marsh along the west bank of Freshwater Bayou Canal. The subsequent impact of tidal scour and seasonal salinity spikes entering the canal exacerbates the loss of shoreline marsh in the project area. To decrease the erosion rate and slow wetland loss, a 23,193 linear-foot, continuous rock dike was installed parallel to the shoreline.										
	ME-14 (XME-22)	Pecan Island Terracing	SNT	7	NMFS	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	442	C $421,111	2000 $1,450,700	I $351,542	$2,185,900 $2,223,353
		This project will convert areas of open water back to vegetated marsh through the construction of earthen terraces in shallow water areas.										
	ME-16 (PME-07a)	Freshwater Introduction South of Hwy 82	HR/MC	9	USFWS	Sen. Gerald J. Theunissen Reps. D. Flavin and M. Frith	Vermilion	296	 $478,013	No Date $0	 $129,125	$607,138 $607,138
		This project was authorized to address saltwater intrusion and lack of freshwater and sediment input in the project area. Project components include the installation of approximately eight water control structures, breaching spoilbanks in areas near LA Hwy 82 to allow water to flow across the chenier, and the removal of plugs to facilitate water flow from the Lakes Sub-basin south into the Chenier Subbasin. This project is in the Phase I evaluation process.										
	ME-17 (XME-42a)	Little Pecan Bayou Control Structure	HR	9	NRCS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	144	 $1,120,480	No Date $0	 $124,798	$1,245,278 $1,245,278
		This project will provide a means to remove excess water from the Lakes Subbasin by installing a water control structure within Little Pecan Bayou, constructing a freshwater conveyance channel with two water control structures through Grand Chenier Ridge to assist in excess water removal, and excavation of a collector channel within the marsh. This project is in the Phase I evaluation process.										
	ME-18	Rockefeller Refuge Gulf Shoreline	SP	10	NMFS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	920	I $2,393,615	No Date $0	NI $14,863	$1,929,888 $2,408,478
		This project entails the construction of a continuous, nearshore rock breakwater along the Gulf of Mexico shoreline. This structure will assist in halting Gulf shoreline retreat and direct marsh loss from Beach Prong to Joseph Harbor, protecting saline marsh habitat, and enhancing fish and wildlife habitat. This project is currently in the Phase I evaluation process.										
	ME-19	Grand-White Lake Land Bridge Protection	SP	10	USFWS	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	213	I $636,367	No Date $0	NI $18,478	$527,841 $654,845
		This project will protect freshwater wetlands by stopping the erosion of the southeastern shoreline of Grand Lake and the western shoreline of Collicon Lake through hard structure shoreline stabilization and planted earthen terraces. It will allow for vertical accretion of sediment along the eroding shorelines as well as provide for the access of aquatic organisms, water, sediment, and nutrient exchange between the protected wetlands and Grand and Collicon Lakes. This project is currently in the Phase I evaluation process.										
State	CS-01bc	Holly Beach	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	88	C	1991, 1992, 1993, 1994	I	$8,437,000
		The objective of this project is to protect the marsh north of the shoreline by expanding shoreline protection in phases from Ocean View, LA to the east near Calcasieu Pass. A total of 34 breakwaters were constructed in 1991, 21 breakwaters were constructed in 1992, 21 breakwaters were constructed in 1993, and nine breakwaters were constructed in 1994 between Calcasieu Pass and Holly Beach, LA.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
State (continued)	CS-02	Rycade Canal	MM	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	1,200	C	1994	I	$516,474
		The project area continues to experience a significant loss of wetlands and an increase in salinities. Water control on the Rycade Canal would stop saltwater flow from Calcasieu Ship Channel through Black Lake into the wetland system to the south.										
	CS-04a-1	Cameron-Creole Structure Automation	HR	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	N/A	C	1999	I	$700,000
		This project consists of automating three existing water control structures along the east shore of Calcasieu Lake. These structures are remotely located and are difficult to manipulate. Automation of these structures will improve management capabilities in the Sabine National Wildlife Refuge.										
	ME-01	Pecan Island	FD	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	84	C	1992	I	$487,152
		The purpose of this project is to introduce freshwater from the north to counteract the saltwater intrusion from the south. The project consists of two water control structures and approximately 5,700 linear feet of earthen embankment needed to channel water from White Lake to the south marshes.										
		Blind Lake	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	N/A	C	1989	I	$173,433
		The purpose of this project was to prevent the Gulf Intracoastal Waterway from breaching into Blind Lake. The project consisted of placing 2,339 linear feet of limestone breakwater along the south side of the GIWW adjecent to Blind Lake. The second phase of this project included planting giant cutgrass (*Zizaniopsis miliacea*) along the inside of the breakwater to enhance the accretion process.										
		Brannon Ditch	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Calcasieu	480	C	1991	I	$12,440
		This project included the construction of wooden breakwater fences along 2,200 feet of the GIWW across from Brannon Ditch in Calcasieu Parish. This area has experienced shoreline erosion in excess of 25 feet/year. The breakwaters will reduce wave action from boats and the current from Brannon Ditch during periods of high discharge. Smooth cordgrass (*Spartina alterniflora*) was also planted behind the breakwaters in order to enhance accretion and increase the stability of this site.										
		Sabine Shellbank Stabilization	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	10	C	1990	I	$66,000
		The purpose of this project was to provide natural shoreline protection by using tidal currents to deposit clam shell on the shoreline. The benefits of this design over the use of permanent structures are lower cost, less disturbance of the natural habitat during construction, and allowing natural distribution of sediments and organisms without impediment.										
		Sabine Terraces	SNT	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Cameron	110	C	1991	I	$190,047
		A total of 128 earthen terraces were constructed in a checkerboard pattern and planted with smooth cordgrass (*Spartina alterniflora*) in open water areas of the Sabine National Wildlife Refuge. This will increase the length of marsh-water interface, re establish emergent marsh vegetation, reduce marsh fringe retreat by reducing wind-generated wave energy, increase overall primary productivity, and promote the deposition of suspended sediment.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
PCWRP		Cameron Creole	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	8	C	1990, 1992, 1994, 1997	I	$66,400
		Brush fences were constructed in 1991 to trap sediment and act as a barrier to slow saltwater intrusion in the interior marsh. Periodic maintenance has been done in subsequent years.										
		Kelso Bayou	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	1	C	1991, 1993, 1996, 1999	I	$20,745
		Brush fences were constructed in 1991 to re establish the eroded shoreline and promote sediment deposition along Kelso Bayou in Cameron Parish, LA. Periodic maintenance has been done in subsequent years.										
		Portie Lakes	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	2	C	1992, 1996, 1998, 1999	I	$29,000
		Brush fences were constructed in 1992 to decrease erosion by trapping sediment along the shoreline and interior marsh adjacent to Portie Lake. Periodic maintenance has been done in subsequent years.										
		Ellender Bridge	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Calcasieu	2	C	1992, 1993, 1995, 1996, 1999	I	$39,061
		Brush fence were constructed in 1992 to protect marsh that was exposed to the GIWW. Periodic maintenance has been done in subsequent years.										
		Black Lake	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	2	C	1993-1996, 1998, 2000	I	$49,000
		Brush fences were constructed in 1993 to decrease wind fetch and prevent continued erosion of the Black Lake shoreline by wind-generated waves. Periodic maintenance has been done in subsequent years.										
		Goose Lake	SP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	1	C	1994, 1995	I	$9,995
		Brush fences were constructed in 1994 along the GIWW at Goose Lake to slow the shoreline erosion at this intersection.										
		Collicon Lake	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	9	C	1996	I	$6,000
		Vegetation was planted along the shoreline of Collicon Lake to slow the shoreline erosion, promote sediment accumulation, and enhance fish habitat.										
		Turner Bay	SP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	2	C	1996-2000	I	$83,000
		Brush fences were constructed in 1996 to protect the interior shoreline of Turner Bay. Periodic maintenance has been done in subsequent years.										
		Cameron Creole #2	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	3	C	1998, 1999, 2001	I	$43,000
		Brush fences were constructed in 1998 to slow wave action and prevent continued shoreline erosion and erosion of the interior marsh.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
PCWRP (continued)		Prien Lake	SP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Calcasieu	1	C	2001	I	$18,000
		Approximately 700 feet of brush fence were built along the shoreline of Prien Lake, located just south of Lake Charles, to reestablish the original shoreline.										
Vegetation		Grand Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	12	C	1986, 1987, 2001	I	$7,468
		A total of 2,520 smooth cordgrass *(Spartina alterniflora)* plants and 5,000 giant cutgrass *(Zizaniopsis miliacea)* plants were used to create a stand of emergent vegetation that will protect the shoreline from erosion and trap available sediment.										
		Brown Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	154	C	1987, 1989, 1992, 1995	I	$9,100
		A total of 37,000 smooth cordgrass *(Spartina alterniflora)* plants and 1,400 seashore paspalum *(Paspalum vaginatum)* plants were used to vegetate a marsh creation project area that utilized spoil disposal.										
		Rollover Bayou	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	23	C	1988	I	$4,408
		A total of 2,060 smooth cordgrass *(Spartina alterniflora)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediments.										
		Sabine NWR	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	69	C	1988	I	$39,076
		A total of 15,000 smooth cordgrass *(Spartina alterniflora)* plants were used within the Sabine National Wildlife Refuge to provide a barrier against erosion.										
		Mallard Bay	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	10	C	1988, 1989	I	$5,387
		A total of 1,600 giant cutgrass *(Zizaniopsis miliacea)* plants and 250 California bulrush *(Schoenoplectus californicus)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediments.										
		Black Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	36	C	1988, 1992	I	$32,500
		A total of 13,000 smooth cordgrass *(Spartina alterniflora)* plants were used to create a stand of emergent vegetation. This will provide a living barrier against wave-induced erosion and trap available sediment.										
		Lacassine	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	14	C	1989, 1990	I	$22,200
		A total of 1,500 giant cutgrass *(Zizaniopsis miliacea)* plants and 10,000 bald cypress *(Taxodium distichum)* trees were used to protect an island in Lacassine National Wildlife Refuge, located northwest of Grand Lake and adjacent to the GIWW.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Vegetation (continued)		Sabine Terraces	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	48	C	1990	I	$58,760
		A total of 20,800 smooth cordgrass *(Spartina alterniflora)* plants were used on 128 earthen terraces in order to stabilize the earthen terraces and create new marsh.										
		Blind Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	5	C	1990	I	$2,400
		A total of 400 giant cutgrass *(Zizaniopsis miliacea)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediment.										
		Mud Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	322	C	1991, 1992, 1994, 1996	I	$225,906
		A total of 47,400 smooth cordgrass *(Spartina alterniflora)* plants were used in order to re-establish stands of emergent vegetation in the interior marshes, where erosion has negatively affected marsh expanse.										
		Brannon Ditch	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	11	C	1991	I	$12,543
		A total of 4,200 smooth cordgrass *(Spartina alterniflora)* plants and 100 roseau cane *(Phragmites australis)* plants were used in sediment accreted behind the state-funded shoreline protection project (Brannon Ditch) to create a stand of emergent vegetation. This vegetation will provide a living barrier against wave-induced erosion and trap available sediment.										
		White Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	8	C	1991, 1993	I	$5,156
		A total of 1,825 giant cutgrass *(Zizaniopsis miliacea)* plants were used to provide a vegetation buffer against wave-induced erosion.										
		Pecan Island	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	29	C	1992, 1996	I	$17,470
		A total of 4,000 seashore paspalum *(Paspalum vaginatum)* plants and 910 California bulrush *(Schoenoplectus californicus)* plants were used in order to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Cameron Creole	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	28	C	1992, 2001	I	$36,716
		A total of 12,000 smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.										
		Walker GIWW	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	9	C	1992	I	$5,424
		A total of 800 smooth cordgrass *(Spartina alterniflora)* plants were used to provide a vegetation buffer against wave-induced erosion.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Vegetation (continued)		Doland Lease	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	4	C	1992	I	$3,771
		A total of 1,195 California bulrush *(Schoenoplectus californicus)* plants were used in order to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediment.										
		Little Pecan Bayou	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	23	C	1994	I	$13,560
		A total of 2,000 smooth cordgrass *(Spartina alterniflora)* plants were used to re establish stands of emergent vegetation in the interior marsh, where erosion has negatively affected marsh expanse.										
		Shell Western	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	23	C	1994	I	$13,831
		A total of 2,040 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Tebo Point	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	33	C	1994, 1995, 1997	I	$18,577
		A total of 2,740 California bulrush *(Schoenoplectus californicus)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.										
		Boudreaux Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	23	C	1994	I	$13,560
		A total of 2,000 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Sweet Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	18	C	1995, 1997	I	$9,899
		A total of 2,460 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Vermilion Corp #1	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	24	C	1995	I	$7,160
		A total of 1,056 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Vermilion Corp #2	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	24	C	1995	I	$7,160
		A total of 1,056 California bulrush (*Schoenoplectus californicus*) plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Vegetation (continued)		ARCO Road Marsh	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	8	C	1995	I	$3,675
		A total of 542 California bulrush *(Schoenoplectus californicus*) plants were usedto create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Black Bayou Marsh	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	47	C	1995, 1997	I	$26,713
		A total of 1,940 California bulrush *(Schoenoplectus californicus)* plants and 2,000 smooth cordgrass*(Spartina alterniflora)* plants were usedto create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Grosse Savanne Marsh	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	202	C	1995, 1997, 1998, 1999, 2000, 2001	I	$130,825
		A total of 16,755 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Sabine GIWW	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	10	C	1995	I	$6,102
		A total of 900 smooth cordgrass*(Spartina alterniflora)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.										
		Savanne Neuvelle Marsh	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	7	C	1995	I	$3,390
		A total of 500 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Umbrella Bay	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	37	C	1995, 1998	I	$20,787
		A total of 3,066 California bulrush *(Schoenoplectus californicus)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.										
		West Gum Cove Marsh	VP	N/A	N/A	Sen. Theunissen and Mount Reps. D. T. Flavin and R. Johns	Calcasieu/ Cameron	11	C	1995	I	$5,424
		A total of 800 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		West Hackberry Marsh	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	10	C	1995	I	$5,085
		A total of 750 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Vegetation (continued)		Webb Gully	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	11	C	1995	I	$5,560
		A total of 820 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Welfare Bridge Marsh	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	11	C	1995	I	$5,424
		A total of 800 California bulrush *(Schoenoplectus californicus)* plants were used to create a living fence which will reduce wind-generated wave action, reduce turbidity, encourage submerged aquatic vegetation, trap sediment, and increase food production for wildlife.										
		Goose Lake	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	22	C	1997	I	$12,679
		A total of 1,120 smooth cordgrass *(Spartina alterniflora)* plants and 750 California bulrush *(Schoenoplectus californicus)* plants were used to protect the levee of the GIWW from eroding further and also to slow water movement in the interior marsh to slow water movement and prevent the loss of marsh sediments.										
		Collicon Lake	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	95	C	1997, 1999	I	$56,206
		A total of 8,290 California bulrush *(Schoenoplectus californicus)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.										
		Platform #1	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	25	C	1997	I	$14,916
		A total of 2,200 California bulrush *(Schoenoplectus californicus)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.										
		Black Bayou Cutoff	VP	N/A	N/A	Sens. G. J. Theunissen and W. L. Mount Reps. D. T. Flavin and R. Johns	Calcasieu/ Cameron	13	C	1997	I	$7,797
		A total of 1,150 smooth cordgrass *(Spartina alterniflora)* plants were used to revegetate the old banks of the bayou. This revegetation process will provide a natural passive hydrologic baffle that will slow tidal exchange and provide a seed source for natural regeneration of emergent vegetation.										
		West Alkali Ditch	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	32	C	1997, 1999	I	$18,984
		A total of 2,800 smooth cordgrass *(Spartina alterniflora)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.										
		Marseillaise Bayou Marsh	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	50	C	1997, 1998	I	$29,290
		A total of 4,320 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and to re establish areas of emergent vegetation in a large area of open, shallow water.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Vegetation (continued)		Platform #2	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	21	C	1998	I	$12,204
		A total of 1,800 California bulrush *(Schoenoplectus californicus)* plants were used to create a stand of emergent vegetation that will reduce wave energy in a large open area of eroded marsh.										
		Vermilion Corp #3	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Mickey Frith	Vermilion	2	C	1998	I	$1,356
		A total of 200 California bulrush *(Schoenoplectus californicus)* plants were used to create a stand of emergent vegetation that will reduce the erosion along the backside of a protection levee that is preventing high salinities from entering a freshwater marsh.										
		Prien Lake Marsh	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	14	C	1998	I	$8,136
		A total of 1,200 smooth cordgrass *(Spartina alterniflora)* plants were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and to re establish areas of emergent vegetation in a large area of open, shallow water.										
		Cotton Well Road	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	25	C	1999	I	$14,916
		A total of 2,200 smoth cordgrass *(Spartina alterniflora)* plants were used to provide a living fence that will reduce fetch, reduce water movement, and provide a sediment source in order to accelerate the regeneration of this eroded marsh.										
		Turner's Bay	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	14	C	1999	I	$8,136
		A total of 1,200 smooth cordgrass *(Spartina alterniflora)* plants were used to provide a living barrier against wave-induced shoreline erosion and to trap available sediment.										
		Kelso Bayou	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	3	C	1999	I	$2,034
		A total of 300 smooth cordgrass *(Spartina alterniflora)* plants were used to provide a living barrier against wave-induced shoreline erosion and to trap available sediment.										
		Deepwater Cutgrass Demonstration	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	14	C	2000	I	$8,136
		A total of 1,200 giant cutgrass *(Zizaniopsis miliacea)* plants were used to determine ifcutgrass can successfully be planted in open and deep (18-24 inches) waters, to create emergent vegetation, and to create a living barrier against wind and wave erosion.										
		Mermentau River	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	27	C	2000	I	$15,730
		A total of 2,320 smooth cordgrass (*Spartina alterniflora*) plants were used to protect and slow erosion of newly rebuilt and critically eroding sections of levee.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Vegetation (continued)		X-mas Tree Fence Demonstration	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	2	C	2000	I	$1,243
		A total of 300 roseau cane *(Phragmites australis)* were used to establish living vegetation within a section of brush fence. This vegetation would assist in sediment trapping, and serve as a wind break. If successful, this would eliminate the need for yearly maintenance.										
		California Bulrush Sonde Demonstration	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	12	C	2000	I	$6,780
		A total of 1,000 California bulrush *(Schoenoplectus californicus)* plants were used to monitor the effects of variations in salinity and duration on growth and vigor in plants.										
		GIWW Cutgrass Demonstration	VP	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	9	C	2000	I	$5,424
		A total of 800 giant cutgrass *(Zizaniopsis miliacea)* plants were used to determine the suitability of planting giant cutgrass in various soil types, and to establish emergent vegetation in an actively eroding area. This will aid in wave reduction and sediment trapping.										
		West Prairie Ridge	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	34	C	2000	I	$20,340
		A total of 3,000 California bulrush *(Schoenoplectus californicus)* plant were used to provide a seed source for natural regeneration of emergent vegetation and to provide a natural, living barrier of emergent vegetation. This will protect against wind fetch and aid in decreasing water turbidity.										
		Gum Cove Ferry GIWW	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Ronnie Johns	Calcasieu	12	C	2000	I	$6,780
		A total of 1,000 smooth cordgrass *(Spartina alterniflora)* plants were used to provide a natural living barrier against wave-induced shoreline erosion on the south bank of the GIWW.										
		Smooth Cordgrass Maintenance Demonstration	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Daniel T. Flavin	Cameron	N/A	C	2001	I	$1,539
		This project, located just east of Black Bayou, was initiated to determine the effectiveness of fertilizing smooth cordgrass (*Spartina alterniflora*) on constricted terraces which are not exhibiting vigorous growth. Approximately 30,750 feet of terraces were fertilized with three different fertilizing regimes.										
		Jim Erbelding Beach	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Daniel T. Flavin	Cameron	4	C	2001	I	$2,089
		A total of 350 stems of bitter panicum (*Panicum amarum*) were planted to stabilize dunes located on the east side of Jim Erbelding Road. This project was designed to test the effectiveness of trapping and accumulating sand with the sole use of vegetation.										
		Superior Canal/Grand Lake	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Daniel T. Flavin	Cameron	11	C	2001	I	$7,479
		A total of 1,000 stems of giant cutgrass (*Zizaniopsis miliacea*) were planted to decrease shoreline erosion along Grand Lake shoreline, near Superior Canal.										

(continued)

Program	Project Number State/Federal	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Parish	Anticipated Acres Benefitted	Activities			Original Baseline Cost (top) and Current Cost Estimate (bottom)
									Engineering, Design, and Landrights	Construction	Operation, Maintenance, and Monitoring	
Vegetation (continued)		California Bulrush Sonde Demonstration 2	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Daniel T. Flavin	Cameron	7	C	2001	I	$5,751
		A total of 660 stems of California bulrush (*Schoenoplectus californicus*) were planted near the Highway 384 (CS-21) project area to determine the tolerance of bulrush in high salinity marshes.										
		M.O. Miller	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Daniel T. Flavin	Cameron	46	C	2001	I	$21,266
		A total of 4,000 stems of smooth cordgrass (*Spartina alterniflora*) were planted just south of Grand Chenier along existing infrastructure such as roads, levees, and canals. This project was constructed to reduce shoreline erosion, trap available sediment, and provide additional habitat for both fish and wildlife.										
		GIWW Pontoon Bridge	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Mickey Frith	Cameron	11	C	2001	I	$7,023
		A total of 1,000 stems of giant cutgrass (*Zizaniopsis miliacea*) were planted along the GIWW shoreline, south of the pontoon bridge on Highway 384. This project was constructed to determine the specific habitat requirements of giant cutgrass and its tolerance of deep water, loamy soils, and high wave energies.										
		Choupique Bayou	VP	N/A	N/A	Sen. Willie Landry Mount Rep. Daniel T. Flavin	Cameron	2	C	2001	I	$1,277
		A total of 150 stems of smooth cordgrass (*Spartina alterniflora*) were planted along Bayou Choupique to reduce bank erosion, trap available sediments, provide wildlife and fisheries habitat, and to provide a seed source for natural regeneration in an area with little vegetation.										
Section 204/1135		Brown Lake	DM/ MC	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	315	C	1999	N/A	$1,132,435
		Approximately 1.6 million cubic yards of dredged material was pumped to create 315 acres of land at an elevation conducive to marsh creation in the Brown Lake area near the Calcasieu River, 16 miles south of Lake Charles, LA.										
		Sabine National Wildlife Refuge	DM/ MC	N/A	N/A	Sen. Gerald J. Theunissen Rep. Daniel T. Flavin	Cameron	1,070	C	1992, 1996, 1999	N/A	$1,560,804
		Also known as the "Calcasieu River & Pass" project, Phases 1, 2, and 3 of this Section 204 project provide for the disposal of dredged material removed from the area between mile 7.5 and 11.5 of the Calcasieu Ship Channel. A total of 4 million cubic yards of material were deposited within the Sabine National Wildlife refuge at an elevation conducive to marsh creation.										

Program: Breaux Act=Coastal Wetlands Planning Protection and Restoration Act (CWPPRA); State=Restoration projects funded entirely by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Program; Vegetation=DNR/NRCS/SWCC Vegetation Planting Program; Section 204/1135= Water Resource Development Act Sections 204 and 1135 beneficial use of dredged material projects; WRDA=Water Resources Development Act; Mitigation=mitigation projects implemented by the Coastal Restoration Division.

Project Type: HR=Hydrologic Restoration; DM=Beneficial Use of Dredged Material; MM=Marsh Management; MC=Marsh Creation; SP=Shoreline Protection; FD=Freshwater Diversion; VP=Vegetation Planting; SNT=Sediment and Nutrient Trapping.

PPL: Priority Project List (as authorized by the Breaux Act Task Force).

Agency/Sponsor: NRCS=Natural Resources Conservation Service; USFWS=U.S. Fish and Wildlife Service; USACE=U.S. Army Corps of Engineers; EPA=Environmental Protection Agency; NMFS=National Marine Fisheries Service.

Anticipated Acres Benefitted: N/A for Breaux Act demonstration and deauthorized projects.

Activities: C=Completed; I=Initiated; NI=Not Initiated; N/A=Not Applicable; a date in the construction column indicates construction completion date or anticipated date (*).

Original Baseline Costs and Current Cost Estimates for Breaux Act projects are from the USACE. Costs for other restoration programs are from DNR's Contract and Budget Section. Original Baseline Cost and Current Cost Estimate both include contingency funds. Breaux Act PPL 9 project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

Table 5. Coastwide restoration projects and programs.

Program	Project Number	Project Name	Project Type	PPL	Agency/ Sponsor	Senator/Representative	Original Baseline Cost (top) and Current Cost Estimate (bottom)
State	LA-01	LDNR Dedicated Dredging Program	DM	N/A	LDNR	N/A N/A	$1,000,000 $3,000,000
		The goal of this program is to use a small, mobile hydraulic dredge along inland waterways in Louisiana's coastal zone to deposit dredged material, and thereby nourish and/or rebuild threatened coastal marshes adjacent to the waterways. Preliminary selection of project areas includes 14 potential sites totaling 135 acres. To date, the following two projects have been constructed: the Lake Salvador Project consisting of two sites totaling 28 acres; and the Jefferson Parish Wetlands Project consisting of three sites totaling 66 acres.					
Breaux Act	LA-02 (CW-7)	Nutria Harvest for Wetland Restoration (Demonstration)	N/A	6	USFWS	N/A N/A	$2,140,000 $2,140,000
		This project will enable the Louisiana Department of Wildlife and Fisheries to establish an economic incentive program to trap and control nutria, which are contributing to coastal wetland loss, by promoting the consumption of nutria meat.					
Other	LA-04	Shoreline Monitoring Effort with FEMA	N/A	N/A	LSU	N/A N/A	N/A $418,790
		The goal is to provide sea-state information including wave height, period, direction of propagation, water level, surge, current speed and direction, and meteorological conditions on a real-time basis. LDNR has entered into a cooperative agreement with LSU to assemble, test, deploy, operate and maintain 2 WAVCIS stations located in Terrebonne Bay and 1.2 miles off the coast of Timbalier Island. The stations will be maintained for 2 years and will aid in evaluating the effects of barrier island restoration efforts in Barataria and Terrebonne basins and providing information for emergency response to storms and oil spills.					
		Coastal Wetlands Public Outreach	N/A	N/A	N/A	N/A N/A	N/A $300,000
		In cooperation with LDNR's Public Information Office and the Breaux Act Public Outreach Coordinator, the CRD has actively participated in educating the public about Louisiana's rapidly eroding coastal wetlands, the many impacts this has on the state and nation, and what has been done and is being done to curtail the loss of this irreplaceable natural resource. The dissemination of printed and video materials, website maintenance, a traveling Save LA Wetlands exhibit, and participation in numerous conferences, public events, and schools constitute our primary outreach efforts. The CRD has contributed $50,000 annually to public outreach since FY1996-97.					
		NRCS Biomass Production Program	VP	N/A	NRCS	N/A N/A	$80,000 $80,000
		The NRCS-LDNR/CRD Biomass Program is a multiyear programmatic initiative to accelerate the collection, testing, and release of important coastal wetland restoration plants. The Biomass Program began in 1999 in conjunction with the LDNR/CRD Small-Dredge Program with emphasis on plant performance and dedicated dredged sediment. The Biomass Program has expanded to include plant collections, field trials, and new planting techniques for severely impacted coastal wetlands, such as those recently experienced in the 2000 Brown Marsh die-back. Currently, NRCS through its Plant Materials Program has collected, tested, and maintained over 200 ecotypes of smooth cordgrass (*Spartina alterniflora*). In addition, the program is accelerating work with marshhay cordgrass (*Spartina patens*), gulf cordgrass (*Spartina spartinae*) and a number of potentially important coastal woody species. This program is an important coastal restoration initiative that is advancing coastal wetland plant technology development and transfer.					
		NWRC Biomass Production Program	VP	N/A	NWRC	N/A N/A	$384,500 $800,900
		This multi-year cooperative agreement will study productivity of endemic wetland plants, with the goal of identifying specific environmental conditions for maximum growth of a number of varieties (i.e., cultivars) within four plant species. The information obtained will facilitate matching plant species and varieties to expected environmental conditions at restoration sites, thereby increasing the likelihood of successful revegetation efforts. The project was initiated in June 1998, and the first-year tasks consisted of defining an experimental design, acquiring necessary equipment and supplies, and collecting and propagating plant specimens. These tasks provided the basis for the second year of the project (1999), during which an experiment to quantify plant growth performance relative to varying salinities and water levels was conducted in the greenhouse environment. The third year (2000) greenhouse experiment focused on plant growth under various soil conditions at two salinity levels. Late in year 3 and into year 4 (2001), a field trial was initiated on dredged material deposited in brackish marsh in the Barataria Basin. The field trial consisted of planting replicate plots using six varieties of the four plant species used in the previous greenhouse experiments. Along with growth rate of the experimental plants, parameters being monitored include the rate of natural succession on dredged material, plant species composition in nearby natural marsh, and sedimentation rates and water quality at the dredged and natural sites. Plans for year 5 (2002) include monitoring the experimental site for a second growing season and preparing project reports.					

Program: Breaux Act=CWPPRA; State=Restoration projects funded entirely by the State of Louisiana through the Coastal Restoration Division.
Project Type: DM=Beneficial Use of Dredged Material; VP=Vegetation Planting; N/A=Not Applicable.
PPL: Priority Project List (as authorized by the Breaux Act Task Force).

Agency/Sponsor: LDNR=Louisiana Department of Natural Resources; NRCS=Natural Resources Conservation Service; USFWS=U.S. Fish and Wildlife Service; LSU=Louisiana State University; NWRC=National Wetlands Research Center.
Original Baseline Costs and Current Cost Estimates for Breaux Act projects are from the USACE. Costs for other restoration programs are from DNR's Contract and Budget Section. Original Baseline Cost and Current Cost Estimate both include contingency funds.

Table 6. Inactive state projects.

Project Number	Project Name	Parish
BA-03-b	Naomi (LaReussite) Diversion Enlargement of Capacity	Jefferson/ Plaquemines
BA-04-b	West Pointe a la Hache Diversion Enlargement	Plaquemines
BA-06	U.S. Highway 90 to GIWW Wetland Outfall Management	Plaquemines
BA-07	Couba Island-Restore Canal Closure	St. Charles
BA-08	Lake Cataouatche Shore Protection	St. Charles
BA-09	Salavador WMA Gulf Canal Project	St. Charles
BA-11/12	Tiger/Red Pass Diversion and Outfall Management and Grand/Spanish Pass Diversion	Plaquemines
BA-13	Hero Canal Diversion	Plaquemines
BA-14	Little Lake Marsh Management	Jefferson
BA-17-a	City Price Diversion - Home Place	Plaquemines
BA-17-b	City Price Diversion - Happy Jack	Plaquemines
BS-01-a	Bohemia Diversion Structure - Operation of Existing Structure	Plaquemines
BS-01-b	Bohemia Diversion Structure Outfall Management	Plaquemines
BS-04-b	White's Ditch Diversion Siphon Enlargement	Plaquemines
BS-05	Bayou LaMoque Diversion Outfall Management	Plaquemines
CS-04-b	Cameron-Creole Watershed Freshwater Introduction from GIWW	Cameron
CS-05-a	Sabine Freshwater Introduction	Cameron
CS-06	Black Lake South Shore Protection	Cameron
CS-07	Black Lake West Shore Protection	Cameron
CS-08	Black Lake North Marsh Management	Cameron
CS-10	Grand Lake Ridge Marsh Management	Cameron
CS-11-a	Sweet Lake/GIWW Bank Restoration (Phase I)	Cameron
CS-12	Black Bayou Ridge Freshwater Introduction	Cameron
CS-13	Back Ridge Freshwater Introduction	Cameron
CS-14	Tripod Bayou Control Structure	Cameron
CS-15	Boudreaux/Broussard Marsh Protection	Cameron
CS-16	Black Bayou Culverts	Cameron
ME-02	Hog Bayou Wetland Restoration and Enhancement	Cameron
ME-05	White Lake Shore Protection	Vermilion
ME-06	Big Burn Marsh Management	Cameron
ME-07	Deep Lake Marsh Protection	Vermilion
ME-10	Sawmill Canal Water Management (PD)	Cameron
MR-02	Pass a Loutre Sediment Fencing	Plaquemines
MR-04	Tiger Pass Wetland Creation(PD)	Plaquemines
MR-05	Pass a Loutre Sediment Mining (PD)	Plaquemines
PO-01-b	Violet Siphon Diversion Enlargement	St. Bernard
PO-01-c	Violet Siphon Diversion Outfall Management	St. Bernard
PO-02-b	Alligator Pointe Shore Protection	Orleans
PO-03-a	LaBranche Wetland Complete Management Plan	St. Charles
PO-05-a	SE Lake Maurepas Wetland - Reduce Ponding of Water	St. John
PO-05-b	SE Lake Maurepas Wetland - Small Diversion of Miss. River Water	St. John
PO-07	North Shore Wetland Marsh Restoration	St. Tammany
PO-11	Cutoff Bayou Marsh Management	Orleans
PO-12	West LaBranche Wetland Management	St. Charles
PO-13	Tangipahoa/Ponchartrain Shore Protection	Tangipahoa
PO-14	Green Point/Goose Point Marsh Restoration	St. Tammany
PO-15	Alligator Point Marsh Restoration	Orleans
TE-05-a	Grand Bayou Wetland Protection and Enhancement	Terrebonne

(continued)

Project Number	Project Name	Parish
TE-08	Bayou Pelton Wetland Protection	Terrebonne
TE-09	Bully Camp Marsh Management	Lafourche
TE-11	Isle Dernieres Cut Closure	Terrebonne
TE-12	Bird Island Restoration	Terrebonne
TE-13	Trinity Bayou Pilot Project	Terrebonne
TE-16	St. Louis Wetland Restoration	Terrebonne
TE-21	Falgout Canal South Wetland Creation (PD)	Terrebonne
TV-01-b	Shark Island/Weeks Bay Protection	Iberia
TV-05-1	Marsh Island Canal Backfilling - Increment 1	Iberia
TV-07	Marsh Island Sediment Fencing - Restoration	Iberia
TV-08	Redfish Point Shore Protection	Vermilion
TV-10	Weeks Bay Shore Restoration	Iberia

CONCLUSIONS

Since 1989, the Coastal Restoration Division and its partners have been responsible for restoring, preserving, and enhancing Louisiana's coastal wetlands, which are disappearing at a rate of 25 to 35 square miles per year. To date, the CRD has authorized 386 coastal restoration projects throughout the coastal zone which are intended to ameliorate the state's wetland loss. As of December 2001, the CRD had fully implemented 53 Breaux Act projects, 50 state projects, 22 federal projects, and installed over 7 miles of Christmas tree fences and 420 miles of vegetation plantings. Despite these efforts, land loss remains a significant problem in Louisiana.

Restoration project types range from large freshwater diversion projects, which divert a portion of a river's flow (including sediment and nutrients, to entire basins) to small vegetation projects, which involve planting salt- and flood- tolerant marsh plants to stabilize soils.

Among those projects already constructed, several have proven to be successful. Examples include beneficial use of dredged material and marsh creation projects, which have created vegetated marsh habitat in areas that previously contained deteriorated wetlands or open water. Sediment diversion projects have also been successful in creating marsh in the form of crevasse-splays in areas that were once shallow open water. Data collected from these projects are not only used to evaluate the effectiveness of individual restoration projects, but also to guide the planning and design of future projects.

Knowledge is a powerful tool in the conservation of natural resources, not only for wetland scientists and project engineers, but also for concerned citizens. By remaining aware and informed of coastal problems and restoration efforts, individuals can help preserve Louisiana's wetlands.

Show your support by promoting wetland restoration efforts, working with non-governmental coastal organizations, attending local meetings, and conserving wetland resources by following fishing and hunting regulations. Help by participating in beach clean-ups, environmental education programs, and in LDNR's Christmas tree program either by donating your tree after the holiday season or by volunteering your time to repair and create Christmas tree brush fences. Through concern and participation, citizens can play a role in the success of wetland restoration programs and can personally contribute toward the goal of saving a national treasure.

Please visit our website at www.saveLAwetlands.org for more information regarding LDNR restoration projects, as well as environmental data from over 2,400 monitoring stations located throughout the Louisiana coast. For any other information or questions, call 1-888-459-6107, or write to the Louisiana Department of Natural Resources, Coastal Restoration Division, P.O. Box 44027, Capitol Station, Baton Rouge, Louisiana 70804-4027.

Louisiana Department of Natural Resources
Coastal Restoration Division
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