Coastal Restoration Annual Project Reviews

December 2006

Working to Save Our Coastal Wetlands

STATE OF LOUISIANA
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The purpose of this document is to provide interested parties with easily accessible information about projects constructed to date and the current efforts to address Louisiana's coastal land loss problem. The information contained in this report is current through November 2006. For more detailed information on these projects, or other relevant efforts visit our website at http://dnr.louisiana.gov/crm, call 1-888-459-6107, or write to the Department of Natural Resources, Coastal Restoration Division, P.O. Box 44027, Capitol Station, Baton Rouge, Louisiana 70804-4027.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACRONYMS

APR	Annual Project Reviews
BBBS	Barataria Basin Barrier Shoreline
BBWW	Barataria Bay Waterway
BI	Barrier Island
BICM	Barrier Island Comprehensive Monitoring
BIMP	Barrier Island Maintenance Program
BUDMAT	Beneficial Use of Dredged Material
CED	Coastal Engineering Division
CFS	Cubic Feet Per Second
CIAP	Coastal Impact Assistance Program
CPRA	Coastal Protection and Restoration Authority
CRD	Coastal Restoration Division
CREST	Coastal Restoration and Enhancement through Science and Technology
CRMS	Coastwide Reference Monitoring System
CWPPRA	Coastal Wetlands Planning, Protection and Restoration Act
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GIS	Geographic Information System
GIWW	Gulf Intracoastal Waterway
HL	Headlands
IPT	Integrated Planning Team
LCA	Louisiana Coastal Area
LDAF	Louisiana Department of Agriculture and Forestry
LDNR	Louisiana Department of Natural Resources
LDOTD	Louisiana Department of Transportation and Development
LDWF	Louisiana Department of Wildlife and Fisheries
LiDAR	Light Detection and Ranging
LRA	Louisiana Recovery Authority
LSU	Louisiana State University
MRGO	Mississippi River Gulf Outlet
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWRC	National Wetlands Research Center
OCRM	Office of Coastal Restoration and Management
OCS	Outer Continental Shelf
OLACP	Oyster Lease Acquisition and Compensation Program
PCWRP	Parish Coastal Wetlands Restoration Program
PPL	Priority Project List
S&T	Science and Technology
SONRIS	Strategic Online Natural Resources Information System
SSL	Sandy Shoreline
SSPM	Mississippi River Small-Scale Physical Model
SSRT	Shoreline Science Restoration Team
SWAMP	System-wide Assessment and Monitoring Program

SWCC	Soil and Water Conservation Committee
SWCD	Soil and Water Conservation Districts
TPCG	Terrebonne Parish Consolidated Government
UNO	University of New Orleans
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WRDA	Water Resources Development Act

AN INTRODUCTION TO COASTAL RESTORATION IN LOUISIANA

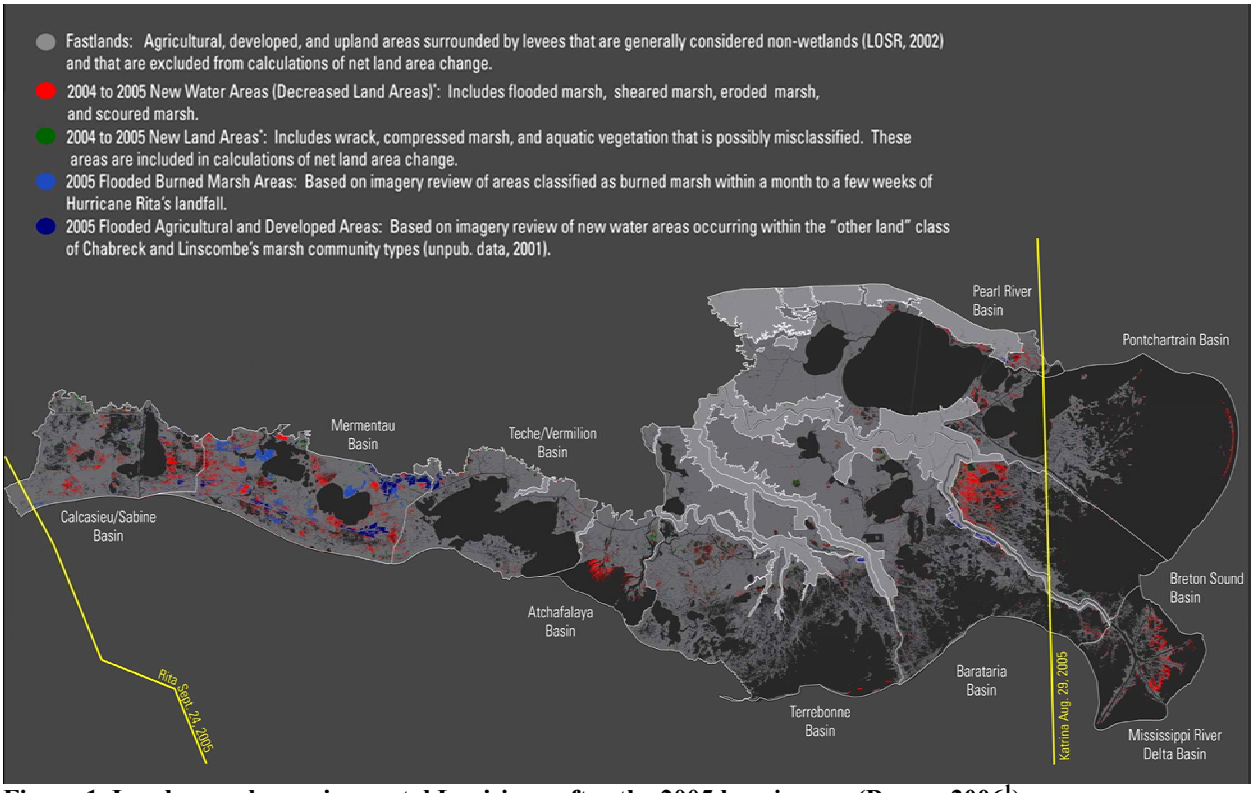


Figure 1. Land area change in coastal Louisiana after the 2005 hurricanes. (Barras 2006[1])

OVERVIEW

Scientists with the USGS estimated that hurricanes Katrina and Rita transformed 217 square miles of marsh to open water in coastal Louisiana. Katrina caused approximately 41 square miles of marsh in Breton Sound to be transformed into open water. An additional 60 square miles of marsh was lost throughout the Pontchartrain, Pearl River, Barataria, and Terrebonne basins. Approximately 18 square miles of loss occurred in the Mississippi River Delta. The Chandeleur Islands, one of coastal Louisiana's barrier island chains that serve as the first line of defense against tropical storms, have been reduced by as much as 50 percent as a result of the hurricanes.

In southwestern Louisiana, 62 square miles of land changed to water in the Mermentau basin. An additional 36 square miles of marsh was lost throughout the Calcasieu/Sabine, Teche/Vermilion, and Atchafalaya basins. It is still too early to tell just how much of the open water will revert back to marshland, but it is very likely that many new lakes will form.

The storms caused 42 percent of the damage that scientists had formerly predicted would occur in the next 50 years through non-storm events (background) loss. Since the 1930s, Louisiana has lost over 1,900 square miles of land. Between 1990 and 2000 wetland loss was approximately 24 square miles per year (Figures 1 and 2). At this rate, an area the size of a football field is lost every 38 minutes. Currently, Louisiana has 30% of the total coastal marsh in the

[1] Barras, John A., 2006, Land area change in coastal Louisiana after the 2005 hurricanes—a series of three maps: U.S. Geological Survey Open-File Report 06-1274.

contiguous United States, yet accounts for 90% of the coastal marsh loss.

The causes of wetland loss are complex and vary across the State. They can be attributed to both natural processes (subsidence and storm events) and human activities (levee and canal construction). Wetlands not only provide recreation (sport fishing and hunting, photography, and bird watching), but also ecological benefits such as hurricane protection, water quality improvement, storm surge reduction, and resource production. If the trend of wetland loss in Louisiana continues, it puts vital infrastructure valued at $90-100 billion at risk.

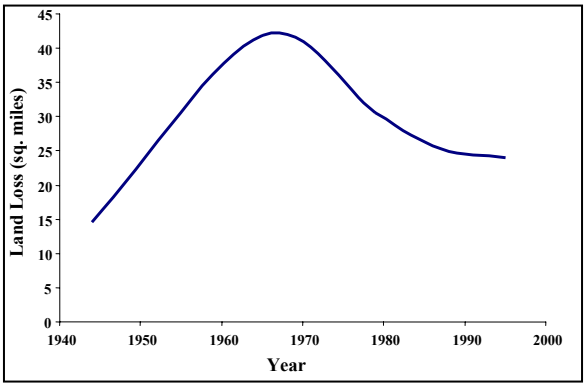


Figure 2. Land loss rate in Louisiana coastal plain. (Barras et al. 2003[2] and Dunbar et al. 1992[3])

CHRONOLOGY

The State of Louisiana has initiated a series of programs to offset the catastrophic loss of coastal wetlands. The Louisiana State and Local Coastal Resources Management Act was passed in 1978 to regulate the developmental activities that affect wetland loss. The resulting Louisiana Coastal Resources Program became a federally approved coastal zone management program in 1980.

Additionally, the Louisiana Legislature passed Act 6 of the second extraordinary session of 1989 (R.S. 49:213-214), and a subsequent constitutional amendment that created the Coastal Restoration Division (CRD) within the Louisiana Department of Natural Resources (LDNR), as well as the Wetlands Conservation and Restoration Authority (Wetlands Authority). Act 6 also established the Wetlands Trust Fund, which provides revenues derived from oil and gas activities to wetland restoration efforts in Louisiana.

In August 2003, the Coastal Restoration Division went through an administrative reorganization and was subsequently divided into the Coastal Restoration Division and the Coastal Engineering Division (CED). The CRD is comprised of the Restoration Technology Section, the Land Section, the Planning Section, and the Monitoring Section. The CED is comprised of the Project Management Section, the Engineering and Design Section, and the Field Engineering Section.

Act No. 114 of the Louisiana State Legislature created the Governor's Advisory Commission on Coastal Restoration and Conservation during the First Extraordinary Session of 2002. The 31-member commission represents statewide stakeholders. The purpose of the Commission is to advise the Governor and the Executive Assistant for Coastal Activities on the overall status and direction of the state's coastal restoration program, while fostering cooperation on coastal preservation and restoration issues among federal, state, and local governmental agencies, conservation organizations, and the private sector.

[2] Barras, J. A., S. Beville, D. Britsch, S. Hartley, S. Hawes, J. Johnston, P. Kemp, Q. Kinler, A. Martucci, J. Porthouse, D. Reed, K. Roy, S. Sapkota, and J. Suhayda. 2003. Historical and projected coastal Louisiana land changes: 1978-2050: USGS Open File Report 03-334.

[3] Dunbar, J.B., L.D. Britsch and E.B. Kemp, III. 1992. Land loss rates: report 3, Louisiana coastal plain. Technical Report GL-90-2, U.S. Army Corps of Engineers District, New Orleans, La. 28 pp.

RESTORATION INITIATIVES

Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA)

In 1990, the United States Congress recognized the national significance of wetland loss in Louisiana and passed the Coastal Wetlands Planning, Protection and Restoration Act (Public Law 101-646, Title III; also known as the Breaux Act) to contribute federal monies and build upon existing state restoration activities. In 2004, the United States Congress voted to extend CWPPRA for an additional 15 years, under the Consolidated Appropriations Act, 2005. Since passage, CWPPRA has dedicated approximately $40 million annually to wetland restoration projects in Louisiana and has authorized 155 projects, of which 77 have been constructed. CWPPRA also created a partnership between Louisiana and five federal agencies: the United States Departments of the Army, Agriculture, Commerce, and the Interior; and the United States Environmental Protection Agency. Since 1991, the State of Louisiana and its cooperating federal partners have been formally selecting restoration projects on an annual basis for implementation.

Coast 2050

In 1997, a significant planning effort called "Coast 2050" was initiated to combine all elements of Louisiana's previous coastal restoration efforts, as well as recommend new initiatives. This new approach included input from private citizens, local governments, state and federal agency personnel, and the academic community. This comprehensive plan focused all efforts of the participating agencies on the common goal of restoring and protecting the coastal ecosystem in Louisiana. The 1998 report entitled "Coast 2050: Towards a Sustainable Coastal Louisiana" subdivided the Louisiana coast into four planning regions based on hydrologic basins. In order to reestablish a sustainable, highly productive ecosystem, Coast 2050 identified the following three strategic goals as the essential natural processes required:

Goal 1: Assure vertical accumulation to achieve sustainability
Goal 2: Maintain estuarine gradient to achieve diversity
Goal 3: Maintain exchange and interface to achieve system linkages

The Louisiana Coastal Wetlands Conservation and Restoration Task Force (Breaux Act Task Force) and the State Wetlands Authority adopted the Coast 2050 effort as their official restoration plan. It has also garnered the support of the 20 parish councils and police juries within the Louisiana coastal zone.

Louisiana Coastal Area (LCA) Ecosystem Restoration Program

The "Louisiana Coastal Area, LA - Ecosystem Restoration: Comprehensive Coastwide Ecosystem Restoration Study" was the initial effort of the State of Louisiana and the USACE to implement the restoration strategies outlined in the Coast 2050 report. Guidance from President Bush's 2005 budget request resulted in a scaled-down version of the comprehensive study entitled "Louisiana Coastal Area, Louisiana Ecosystem Restoration Study" (hereafter referred to as the LCA Study). Although not a comprehensive plan, the LCA Study lays out a series of projects and programs that is a positive first step toward achieving the restoration goals outlined in the Coast 2050 Plan. By focusing on critical projects, allowing for action on larger-scale restoration strategies, and supporting the program with science-based decision support systems, we will be able to

implement projects in the near-term that have relatively low risk and uncertainty while allowing us to develop the science and technology that will ultimately provide for sustainable restoration of Louisiana's coastal ecosystem.

The LCA Study contains seven recommended program features for implementation: 1) five projects for conditional authorization; 2) ten additional projects for implementation in the next 10 years under standard authorization processes; 3) six large-scale studies that will lay the groundwork for the systemic restoration of deltaic processes and natural system hydrology; 4) a Science and Technology (S&T) Program that will implement the principles and practices of adaptive management; 5) a Demonstration Project Program that will assist in resolving critical uncertainties; 6) a program to re-evaluate existing water resources structures for their potential to contribute to ecosystem restoration; and 7) a new program for expanded beneficial use of dredged material. The LCA Study main report can be viewed at http://www.lca.gov/main_report.aspx.

Critical Restoration Projects

A total of 15 critical projects were identified through the study process that could be implemented in the first 10 years of the LCA Program (Table 8). Five of these projects are recommended for conditional authorization, including three freshwater reintroduction projects, a barrier island project, and a project to implement environmental restoration features for the Mississippi River Gulf Outlet (MRGO). These five projects are based on proven science and technology, are in the engineering and design phase, and have had the National Environmental Policy Act (NEPA) compliance process initiated. Therefore, it is likely that they will be able to go to construction before the remaining ten projects. The requested construction authorization by Congress would be conditional upon the approval of a decision document by the Secretary of the Army. The remaining ten projects would be authorized through the standard process for the implementation of USACE projects.

The first three freshwater reintroduction projects recommended in the LCA Study have been partially developed through CWPPRA and include: the River Reintroduction into Maurepas Swamp (PO-29), the Mississippi River Reintroduction into Bayou Lafourche (BA-25b), and the Delta Building Diversion at Myrtle Grove (BA-33). The barrier island project, Barataria Basin Barrier Shoreline (BBBS) Restoration, is based on work that has undergone extensive analysis under a previous USACE/LDNR feasibility study. The goal of this project is to re-establish the geomorphic functions of the Caminada Headland and Shell Island. It is anticipated that the BBBS project feasibility study should be completed by the end of 2007. Pending possible closure to deep draft navigation, the LCA MRGO project will focus on environmental restoration in the area.

Large-Scale Studies

The above 15 projects are critical for near-term implementation and provide significant benefits to the coastal ecosystem, but there remain large portions of the coastal ecosystem that have not been addressed. A sustainable solution to Louisiana's coastal ecosystem degradation will require additional measures to restore deltaic processes and natural system hydrology across much of the coast. For these reasons, even as we implement critical near-term projects, we will begin studies of large-scale concepts that may provide more long-term solutions (Table 8). These concepts include initiating new delta-building in the central

portions of the Barataria-Terrebonne Estuarine System, optimizing water and sediment distribution at the Old River Control Complex, and "re-plumbing" the lower Mississippi River Delta to optimize the ecosystem functions while maintaining the vitally important navigation functions of the river. Although there is great promise in all of these concepts, there is also great uncertainty; based on other similar large-scale projects these projects may take greater than ten years to construct. However, it is critical that we begin this work so as not to delay their implementation in the long-term. Although work has been initiated on some level on all six of the large-scale projects identified in the LCA Study report, the Chenier Plain Freshwater and Sediment Management and Allocation Reassessment Study, the Mississippi River Hydrodynamic Study, and the Mississippi River Delta Management Study will likely undergo further development in the coming year.

Science & Technology (S&T) Program

The science of ecosystem restoration and protection is evolving rapidly through theoretical and applied research. The body of scientific data and knowledge for coastal Louisiana has advanced sufficiently to provide a sound basis for implementation of restoration and protection projects incorporating a number of technological and engineering solutions with continuous learning and method improvement. The LCA S&T Program has advanced significantly in 2006 with the support of $2.5 million in dedicated federal funding, matched with $2.5 million of state funding. After a late start, a work plan was approved by the Program Management Team in March 2006, and the State and USACE began executing activities to support the development and implementation of coastal protection and restoration studies. Administration activities included beginning the search for a permanent S&T Director, securing permanent office space at Louisiana State University (LSU), and generating several procedural guidance documents. Several technical review teams were established, including the Science Board to provide national-level oversight and guidance to the LCA and S&T program, the Technical Support Team to provide task-specific guidance and recommendations, and an interagency Science Coordination Team to promote collaboration and efficiency among resource agencies, non-governmental organizations, and other groups. Scientific activities were classified into several broad categories: decision support, modeling and assessment, monitoring and data acquisition, computing and information management, and adaptive assessment and synthesis.

In addition to the annual operating budget, dedicated funding ($1 million federal, matched with $1 million state) was provided in a supplemental appropriations bill which directed the S&T Office to evaluate the environmental impacts of hurricanes Katrina and Rita on coastal Louisiana wetlands. Three main tasks were identified (with multiple sub-tasks): coastwide assessment (near- and long-term assessment of impacts to vegetated wetlands, comprehensive mapping of land loss, comprehensive mapping of habitat changes), barrier shoreline assessment (evaluating changes in barrier island size, elevation, and movement as a result of the hurricanes), and an investigation of whether the wetland losses in the Breton Sound wetlands (heaviest hit by Hurricane Katrina) are recoverable and can be mitigated using the Caernarvon Freshwater Diversion.

The S&T Program will continue to develop and implement elements of a science plan to support restoration and protection efforts. A fundamental relationship exists between this S&T

Program and the IPT developing the state's master plan, the LCA Program Execution Team (PET) and other coastal restoration and protection activities at the state, local, and federal level. It also supports the opportunity to perform restoration and protection projects in the near term and thus slow overall coastal degradation while concurrently pushing forward the cutting edge of coastal science and engineering, reducing uncertainty, and improving the effectiveness of all future restoration and protection activities.

Demonstration Project Program

Related to the S&T Program is a Demonstration Project Program which will enable the testing of new technologies and restoration concepts in the field to minimize the risk associated with implementing similar projects on a large scale throughout the coastal zone. The oversight provided by the S&T Program in executing the demonstration projects will ensure that we make the most out of these learning opportunities. One of the first demonstration project focus areas is Long-Distance Pipeline Conveyance of Dredged Material. The S&T Program is collaborating with currently funded projects through CWPPRA and CIAP to examine various engineering and ecological uncertainties associated with using pipeline conveyance of sediment slurries on a large-scale operational basis to create marsh in remote areas.

Beneficial Use Program

Lastly, there is the potential to use existing federally-authorized projects in the coastal zone, such as navigation projects, for increased benefit to the ecosystem. The New Orleans District of the USACE dredges an average of 70 million cubic yards (mcy) of material annually. Not all of this material is available for beneficial placement in the coastal ecosystem; however, there is the potential to use up to 30 mcy annually to enhance coastal wetlands. The ten year, $100 million LCA Beneficial Use of Dredged Material (BUDMAT) Program will provide the institutional framework to optimize the use of dredged material resulting from the maintenance of these federally maintained navigational channels to attain the LCA hydrogeomorphic and ecosystem objectives. The goals of this program are to: 1) create, restore, and/or nourish coastal wetlands; 2) create or restore coastal landscape features, including barrier islands, chenier ridges, and shorelines; and 3) provide protection to coastal wetlands or coastal landscape features. The costs associated with the program are those that are incurred above and beyond the ordinary costs associated with the USACE's dredging and disposal operations base plan (the Federal Standard). The BUDMAT Program Study Team initiated the NEPA process by holding scoping meetings in September 2006. Efforts are underway to select beneficial use sites that could be utilized in the first three years of program implementation. Concurrently, the study team is developing a method for prioritizing sites over the 10-year program life. The completion of the draft feasibility report is scheduled for January 2008.

Next Steps

The LCA Study was completed in December of 2004. The Chief of Engineers of the USACE signed his report (http://www.lca.gov/chief_report.aspx) in January of 2005, providing the opportunity for Congress to authorize the LCA Program in a future Water Resources Development Act (WRDA). Although a WRDA has not been passed since the signing of the report, the State and the USACE are continuing to develop the LCA Program and initiate activities under existing study authorities.

Energy Policy Act of 2005

Congress authorized the Coastal Impact Assistance Program (CIAP) as part of the Energy Policy Act of 2005. Louisiana is projected to receive up to $523 million in CIAP funds over 4 years, beginning in 2007. Sixty-five percent ($340 million) of those funds will go to the State, and 35% ($183 million) will be provided to the 19 coastal parishes. Louisiana must submit a CIAP Plan to the U.S. Minerals Management Service (MMS), and MMS must approve it before disbursing CIAP funds. The LDNR has the lead for preparing that plan, and is working closely with the coastal parishes and various state entities to complete a draft plan soon for public review. The State will send the final CIAP Plan to MMS after its approval by the state's CPRA. That document will identify projects to be supported by the state's share of the CIAP funds, the parishes' share of those funds, and projects jointly funded by the State and parishes. The plan will include coastal conservation and restoration projects, and onshore infrastructure projects to mitigate the impact of OCS activities. Initial CIAP funding will be available in the late spring of 2007. However, the LDNR plans to begin implementing projects contained in Louisiana's CIAP Plan before then, using money from the state's Coastal Protection and Restoration Trust Fund. The LDNR solicited input and project proposals from the coastal parishes, state and federal agencies, non-governmental organizations, and the public. A description of the program, guidelines for application, and project selection criteria were disseminated via meetings and mailings, and were posted for download from the LDNR CIAP website (http://dnr.louisiana.gov/crm/ciap/ciap.asp). The LDNR consistently said that the plan would draw heavily from previous collaborative coastal planning efforts that have occurred in recent years (e.g., the Coast 2050 Plan, the LCA Plan, and the Governor's Advisory Panel and Science Working Group on Coastal Wetland Forest Conservation and Use).

The evaluation criteria for coastal conservation and restoration project proposals included:

1. Is the proposed project free of issues that may impact timely implementation?
2. Is the proposed project linked to a regional strategy that maintains established landscape features critical to a sustainable ecosystem structure and function?
3. Does the proposed project protect health, safety, or infrastructure of national, state, regional or local significance?
4. How cost effective is the project?
5. What is the certainty of the project's benefits?
6. Does the project address an area of critical need or high land loss?
7. How sustainable are the project's benefits?

The LDNR staff provided technical assistance to parishes and other entities in the development of their proposals. The deadline for project proposals was May 22, 2006 (an extension of two earlier deadlines). Three hundred and twenty-six (326) proposals were received by the LDNR from the 19 coastal parishes, municipalities, state agencies, federal agencies, universities, corporations, landowners, non-governmental organizations, and the general public.

The LDNR solicited public input on the proposed projects at regional open house events in Baton Rouge and Lafayette (June 20 and 22, 2006). Proposals were also available for review on the LDNR CIAP website, and comments from the public were

solicited via the website for consideration during the selection process.

Project proposals were initially screened by the LDNR to determine whether state CIAP funds were being requested, whether the projects complied with the authorized uses of CIAP funds, and whether the proposals were focused on conservation/restoration or infrastructure. Each conservation and restoration proposal involving state CIAP funding for one or more of the authorized uses was then reviewed to determine whether it had clear links to a regional strategy for maintaining established landscape features deemed critical to a sustainable ecosystem structure and function.

A group of natural resource researchers from Louisiana conducted an external technical review of CIAP conservation and restoration projects proposed for state funding. That interactive review identified the strengths and weaknesses of individual proposals and assessed their competitiveness as candidates for CIAP funding.

Using information compiled for the projects selected for detailed analysis (including the external technical review findings), a LDNR technical review panel generated a preliminary list of projects for inclusion in the draft CIAP Plan. That preliminary list formed the primary basis of the recommended list of state-funded projects presented by the LDNR's CIAP Team to the CIAP Selection Committee. The selection committee was comprised of CPRA agency representatives from the Louisiana Departments of Transportation and Development, Wildlife and Fisheries, Environmental Quality, Natural Resources, and Agriculture and Forestry, and the Governor's Office of Coastal Activities. An external science advisor also participated at the meeting, as did members of the CPRA-IPT. The list adopted by that selection committee will become the primary component of the draft CIAP Plan (projects involving state CIAP funding).

The anticipated plan components involving the state's share of CIAP funds include:

1. Enhanced Management of Mississippi River Water and Sediment;
2. Barrier Shoreline Restoration and Protection;
3. Interior Shoreline Protection (Interior Lakes and Critical Reaches of Navigation Channels);
4. Beneficial Use of Dredged Material/Marsh Creation;
5. a Coastal Forest Conservation Initiative; and
6. Infrastructure Projects to Mitigate Onshore OCS Impacts.

Coastal Protection and Restoration Authority

In response to the devastation of hurricanes Katrina and Rita, the Louisiana Legislature passed Act 8 of the First Extraordinary Session of 2005, thereby restructuring the state's Wetland Conservation and Restoration Authority to form the Coastal Protection and Restoration Authority (CPRA). The CPRA was established so that a single state entity articulates a clear statement of priorities for coastal protection, including hurricane protection and coastal restoration, and ultimately is responsible for implementation and enforcement of the state's objectives. To this end, Act 8 charged the CPRA to develop a comprehensive coastal protection and restoration plan. The draft plan was presented to the public in a series of meetings in the fall of 2006, and will be subjected to modeling and technical review of the plan's capacity to meet the program objectives. This information will be used to

finalize the plan for approval by the CPRA and submission to the state Legislature in late April 2007. Additional information on the CPRA and the draft plan can be found at http://www.louisianacoastalplanning.org.

Other Restoration Programs

Several other wetland restoration programs have been implemented, each utilizing a specific strategy to combat coastal wetland loss, including: the Parish Coastal Wetlands Restoration Program (PCWRP); the Coastal Impact Assistance Program (CIAP) of 2001 governed by Section 903 of the Commerce, State, Justice FY2001 Appropriations Act; the Louisiana Department of Natural Resources (DNR)/Natural Resources Conservation Service (NRCS)/Soil and Water Conservation Committee (SWCC) Vegetation Planting Program; and the beneficial use of dredged material program governed by Sections 204 and 1135 of the WRDA.

The PCWRP, also known as the "Christmas Tree Program," is designed to encourage public involvement and participation in coastal restoration. Wooden enclosures are filled with recycled Christmas trees that have been donated by the public. These structures are built in close proximity to the shoreline and absorb wave energy, protecting existing marsh vegetation. Sediment is deposited behind these structures and promotes subsequent colonization and growth of new marsh vegetation. Christmas tree fences are relatively inexpensive, with an average cost of $50 per linear foot.

The CIAP of 2001 was authorized to assist states in mitigating the impacts from OCS oil and gas production. The CIAP recognized that offshore oil and gas activities impact coastal states and localities nearest to where the activities occur and where the related facilities are located. The CIAP legislation appropriated money to coastal states and coastal political subdivisions and required that each state submit a Coastal Impact Assistance Plan which describes how these funds will be expended. Louisiana was one of seven coastal states selected to receive funds under the appropriation to implement this program. The one-time allocation in 2001 to Louisiana totaled $26.4 million. These funds are to be expended according to the legislation and guidelines developed by the National Oceanic and Atmospheric Administration (NOAA).

A unique, three-agency partnership forms the DNR/NRCS/SWCC Vegetative Planting Program through which native marsh vegetation is planted and monitored throughout the coastal zone of Louisiana. The LDNR enters into annual cooperative agreements with the Louisiana Department of Agriculture and Forestry (LDAF). It is through the LDAF and the SWCC's Soil and Water Conservation Districts (SWCD) that the planting tasks are selected, planned, evaluated, planted, and monitored. Each NRCS District Conservationist provides technical assistance to their respective SWCD throughout the planting task process.

Projects funded under WRDA Sections 204 and 1135 originated from operation and maintenance of existing USACE dredging projects for navigable waterways. Through cooperation between the state and federal governments, the material dredged during regularly scheduled maintenance is utilized for the creation of wetlands, improvement of wetland habitat, or the protection of eroding shorelines.

Through WRDA, the United States Congress authorized the USACE to construct large-scale freshwater diversion projects along the Mississippi River. These river diversions have the potential to benefit vast areas of deteriorating marsh by introducing beneficial freshwater, sediment,

and nutrients. It is anticipated that the Caernarvon and Davis Pond Freshwater Diversions near New Orleans will benefit over 51,200 acres of wetland habitat.

AMERICA'S WETLAND: CAMPAIGN TO SAVE COASTAL LOUISIANA

In 2002, the State of Louisiana launched America's WETLAND: Campaign to Save Coastal Louisiana, the largest, most comprehensive public education initiative in the state's history. Since that time, the America's WETLAND campaign has been raising awareness of the impact that Louisiana's wetland loss has on the state, nation, and world. The campaign has gained support for efforts to conserve and save coastal Louisiana – known as America's WETLAND.

The America's WETLAND campaign is one of the most recognized public education efforts in Louisiana history, garnering more than thirty national awards including the nation's most prestigious public relations recognition, the Silver Anvil Award.

During 2006, the campaign's media outreach efforts have ensured that the message of hurricane protection and coastal restoration reached national audiences. Total broadcast and print media impressions for the period of January 2006 to September 2006 totaled more than 206 million.

Campaign spokespeople have been featured or interviewed on countless broadcast news programs such as 60 Minutes, Anderson Cooper 360°, Meet the Press, CBS Evening News, the Hannity & Colmes Show, the Fox Report, NewsNight with Aaron Brown, and the Big Story, along with nationally syndicated radio programs, such as All Things Considered, Morning Edition, and Marketplace.

Furthermore, almost every major daily newspaper, magazine, and internet news source has educated readers about Louisiana's coastal wetlands, including: the Atlanta Journal-Constitution, the Philadelphia Inquirer, Chicago Tribune, USA Today, Los Angeles Times, the Boston Globe, Pittsburgh Post-Gazette, the Wall Street Journal, Newsweek, Time, the New Yorker, U.S. News & World Report, MSNBC.com, and dailies in cities like Tampa, Los Angeles, Sacramento, Detroit, New York City, Washington, DC, Seattle, and Dallas.

In 2006, the America's WETLAND campaign hosted a series of forums and events to focus national attention on Louisiana's land loss. These events and summits included the Blue Tarp Fashion Show, three America's Energy Coast Economic Forums, Storm Warnings II, and the Riding the Road to Recovery Cattle Drive among many others.

The campaign also partnered with Louisiana Public Broadcasting to produce a one-hour documentary that focused on coastal erosion in the wake of hurricanes Katrina and Rita. "Washing Away" began airing nationally in August 2006 and has been seen by more than 250 million people.

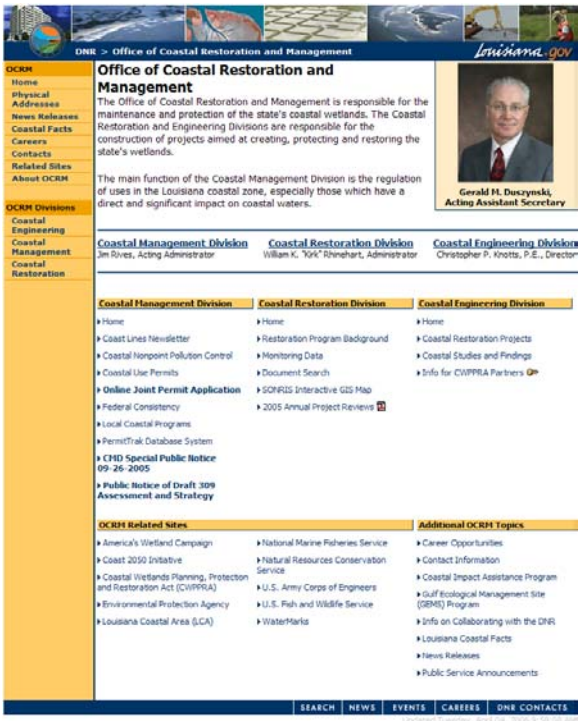
The development of affiliate groups and the promotion of their efforts expanded the reach of the America's WETLAND campaign. In 2006, the campaign joined forces with the Women of the Storm and the Coast Guardians, two groups educating political leaders of the importance of restoring America's WETLAND.

For more information about the America's WETLAND campaign please visit http://www.americaswetland.com.

CONTINUING PROGRAM DEVELOPMENTS

Information Management System

Implementation of the coastal restoration program generates an abundance of environmental monitoring data, engineering data, geospatial data, and both project-specific and programmatic reports. In an effort to effectively manage and make available the large amount of data and information generated by the coastal restoration program, a detailed information management system is maintained. It is accessible to the public through the LDNR Office of Coastal Restoration and Management (OCRM) website, located at http://dnr.louisiana.gov/crm. This website has recently been updated and restructured to improve efficiency and to reflect organizational changes within the OCRM.



This website also contains a link to the SONRIS Interactive Geographic Information System (GIS) Map. This is a system that combines a detailed GIS database and a coastal restoration project relational database. GIS data that are available on the system include satellite imagery, aerial photography, coastal restoration project boundaries, elevation benchmarks, geotechnical soil borings, and monitoring stations. Users can perform a wide range of custom queries, to refine and summarize information, on many of the GIS data layers available. Through the use of this GIS technology, it is possible to seamlessly link directly to the coastal restoration project database and download environmental data, geospatial data, and project reports for any coastal restoration project. This innovative approach to environmental data and information dissemination will elevate public awareness and advance the science behind coastal restoration.

Coastwide Reference Monitoring System–Wetlands (CRMS-Wetlands)

The CWPPRA monitoring program, CRMS-*Wetlands*, evaluates the effectiveness of each constructed restoration project in creating, restoring, protecting, and enhancing the coastal wetlands in Louisiana. The CRMS-*Wetlands* helps the State meet these objectives by providing a network or "pool" of reference sites that can be used to evaluate the effectiveness of individual projects. CRMS-*Wetlands* will also ensure that the state's comprehensive restoration plan for coastal restoration is indeed restoring hydrologic basins and entire coastal ecosystems—not just the areas directly affected by individual projects. CRMS-*Wetlands* will also provide data to fill information gaps and help refine hydrodynamic and ecological models developed as part of the state's overall coastal restoration program. The CWPPRA Task Force has authorized a total of $20,252,781 in funding for the CRMS-

Wetlands program through FY10 ($3,037,917 is the state's 15% share).

The implementation of CRMS-*Wetlands* is well underway and progress has occurred on several fronts. An amendment to the Cost Share Agreement between the federal sponsor (U.S. Geological Survey [USGS]) and the State is currently being processed that will allow the agreement to run through the year 2010. The LDNR has secured land rights agreements for approximately 486 of the 612 CRMS-*Wetlands* sites. The LDNR is working with its contractor, Coastal Estuary Services, LLC (CES; a partnership between Shaw and CH2M Hill), on CRMS-*Wetlands* site installation and servicing. To date, approximately 294 sites have been visited and characterized and approximately 153 sites have been constructed. Data collection activities for all parameters have begun on 91 CRMS sites through August 30, 2006. Vegetation data collection has begun on an additional 124 sites. Hurricanes Katrina and Rita temporarily disrupted site construction and data collection activities. These events prompted the LDNR and USGS to request post-hurricane impact assessments from CES for all previously characterized CRMS sites during fall/winter 2005. It was determined that 49 sites needed to be rehabilitated, re-selected, or have parts of the site moved and this work is progressing as planned. It is anticipated that the full suite of stations for the first year of CRMS-*Wetlands* will be constructed and operational before the end of March 2007.

In addition to the field data collection activities, CRMS-*Wetlands* has funded the collection of a comprehensive set of color infrared digital aerial photography at 1:24,000 scale for the entire coastal zone from the Sabine River to the Pearl River, including the barrier islands. This photography, which has been used to assess hurricane impacts, was acquired by the USGS between October 15 and December 5, 2005, and is available from the CWPPRA website (http://www.lacoast.gov). Land:water analyses for 55 CRMS sites have been completed through August 30, 2006, and those data are available on the CRMS-*Wetlands* webpage.

The CRMS-*Wetlands* webpage is linked to the LDNR SONRIS web portal, and serves as a centralized location for CWPPRA partners and other interested parties to access current data, reports, analyses, and other work products without having to wait for a project-specific or a semi-annual report. The temporal data will be available on the internet within 60-90 days after collection. Interactive data graphics have been developed to facilitate the visualization of temporal data. The spatial data products (photography/satellite imagery) will be available within 6 months from collection and the land:water analyses will be available within 15 months from the date of acquisition. The LDNR and USGS provided training to CWPPRA agency personnel on January 19, 2006, on how to navigate through the LDNR SONRIS web portal and gain access to available data and information products on both the SONRIS GIS and CWPPRA websites.

Oyster Lease Acquisition and Compensation Program (OLACP)

Act 425 of the 2006 Regular Legislative Session, the Oyster Lease Acquisition and Compensation Program (OLACP), gave the LDNR the statutory authority to acquire any oyster leases, or portions thereof, necessary for the construction or maintenance of a coastal protection, conservation, or restoration project. This act provided that oyster leases, or portions thereof, would be acquired only when direct physical impacts are involved (e.g., dredging or placement of dredged material). No oyster leases would be

acquired based on hydrologic modifications. Lease holders would be compensated for the fair market value of any acquired lease, or portion thereof. Compensation for standing crop of oysters would also be provided if the lease holder is not provided with sufficient time to remove the standing crop. The lease holder has the opportunity, through a formal administrative process, to challenge the level of compensation but not the actual acquisition. In addition, the indemnification language currently in all new oyster lease agreements was refined and codified in the statutes. Subsequent to the passage of Act 425, the LDNR promulgated regulations necessary for the implementation of the statues. The regulations govern the actual administration of the OLACP by the department, in accord with R.S. 56:432.1. The OLACP allows for a single, uniform method for the acquisition of oyster leases directly impacted by coastal protection, conservation, and restoration projects, regardless of funding source or lead agency.

In the wake of hurricanes Katrina and Rita, and in conjunction with the passage of Act 425, the LDNR worked with the Louisiana Department of Wildlife and Fisheries (LDWF) and the Louisiana Oyster Task Force in an effort to assist them in re-establishing this vital industry. These efforts included supporting the lifting of the current moratorium on the issuance of new oyster leases and working with the LDWF to process all currently pending lease applications. Additionally, the restricted area map process, whereby leases could be non-renewed and/or lease terms modified, was repealed thus reinstating the traditional 15-year lease term. The LDNR will also review all new lease applications to ensure that a lease is not issued in the direct impact area of an impending coastal protection, conservation, or restoration project.

Landowner Database and Mapping System

The Land Section has created an electronic landowner database and a relational GIS database. The landowner database contains contact information for the landowner(s), the property description of the land, and the expiration date and recordation information for executed landrights documents required for coastal restoration projects. In addition, the program is used for all Land Section document tracking, as well as tracking documents that are expiring in any given time period. Reports can be generated from the landowner database, such as lists of documents expiring by a certain date and lists of all landowners within a project area.

This information is tied to the GIS system. The property owner information is mapped as a separate theme and shows the property associated with the landowner and its relationship to the project and its features. The Land Section can add project boundaries and features, aerial photography, pipelines, utilities, oyster leases, and other information to maps and/or exhibits which also show land ownership. Both databases are updated and maintained regularly.

These databases are tools used every day by the staff of the Land Section to provide information about landowners and their relationship to a project. Exhibit maps are created for document preparation and project team information. Preliminary information is provided in the candidate phase of the project selection process. Documents and their expiration dates are also provided to project team members and federal partners. This information has proven to be a great indicator of landowner participation in the early stages of project development.

Mississippi River Small-Scale Physical Model

The Mississippi River Small-Scale Physical Model (SSPM) was designed to analyze sediment transport patterns and marsh building capabilities of various uncontrolled diversions in the Mississippi River Delta. It is expected that the SSPM will aid coastal engineers and scientists in evaluating the effectiveness of using combinations of large and small freshwater diversions, more efficient sediment management practices, and the consequences to navigation in returning the delta to a more natural state. Brown Cunningham Gannuch, Inc., the contracting consultant for the LDNR, organized an interdisciplinary team of recognized experts in river modeling, sediment transport, coastal estuaries, and coastal geology to aid in the design of the model. The model was constructed and verified by SOGREAH of Grenoble, France in June 2003, then shipped to Louisiana where it was subsequently re-assembled and reverified. The SSPM is currently housed at the Vincent A. Forte River and Coastal Engineering Research Laboratory on LSU's Baton Rouge campus.

The SSPM represents 3,500 square miles of the Mississippi River delta region and features 3 large diversions, 12 small diversions, and the Bohemia Spillway/Pointe a la Hache Relief Outlet. The model is built to a horizontal scale of 1:12,000 and a vertical scale of 1:500. Plans for future studies of the model include time-lapse photography for a more detailed assessment of clay and silt deposition in the region, as well as modeling future diversions and navigation changes in the Mississippi River.

The final modeling report for the SSPM titled "Report on Feasibility of Small Scale Physical Model of the Lower Mississippi River Delta for Testing Water and Sediment Diversion Projects" has been completed and is now available electronically through the OCRM website. Additionally, the model layout was improved by extending the headbox (the point where sediment is injected into the model) to correct sediment distribution issues associated with the northernmost diversions. The extension was constructed by LSU staff. New model runs were performed by LSU with funding from the Coastal Restoration and Enhancement through Science and Technology (CREST) program. Recent SSPM activity included model runs to look at the feasibility of a diversion in the Myrtle Grove area to divert river flow and sediment. Over the past year, the LDNR and LSU have hosted a number of tours/visits to the SSPM by several state and federal agencies, and reports on the model and model runs will be presented at national conferences.

2005 HURRICANE SEASON: ASSESSMENT OF DAMAGES FROM HURRICANES KATRINA AND RITA

Over the years, tropical storm and hurricane impacts have been recognized as one of the major causes of wetland loss in Louisiana. Last year was no exception with two major hurricanes, Katrina and Rita, causing catastrophic damage along the Gulf Coast.

Hurricane Katrina will likely be remembered as the most destructive and most costly natural disaster in the history of the United States. Katrina made landfall as a Category 4 hurricane in Plaquemines parish just south of Buras on August 29, 2005, with maximum winds of 140 miles per hour. Katrina made a second landfall near the Louisiana/Mississippi border with winds of 125 miles per hour. The storm surge caused widespread flooding in the greater New Orleans area.

On September 24, 2005, Hurricane Rita made landfall as a Category 3 hurricane

between Sabine Pass, Texas and Johnson's Bayou, Louisiana. Maximum sustained winds from Hurricane Rita were 120 miles per hour and caused extensive damage across southwestern Louisiana and east Texas.

LDNR Damage Assessment Report

Hurricanes Katrina and Rita devastated the coastal region of Louisiana in many ways, including the complete destruction of wetlands in widespread areas. The LDNR is the only state agency responsible for the planning, design, construction, operation, and maintenance of projects funded for the purposes of protection, enhancement, restoration, and creation of Louisiana's wetlands.

The LDNR completed the "Post Storm Assessment Report for Hurricane Katrina and Hurricane Rita" that describes the post-storm conditions of the previously constructed wetlands projects, as well as projects in the planning and design phases. A total of 151 wetland projects in all phases were investigated by field trips on the ground or from the air. The 151 projects derive their funding from three different sources. The majority of the projects were funded through CWPPRA. Numerous other wetland projects were funded entirely by the State Wetland Trust Fund initiated in 1989. Lastly, the WRDA funded a few large wetland projects with the LDNR as the local cost share partner.

The report represents the most comprehensive post-storm assessment ever undertaken by the LDNR and the resounding conclusion is as follows: all projects constructed by the LDNR, the CWPPRA program, and the WRDA have survived the storms without major damage. The aforementioned programs have constructed $475 million dollars worth of projects and the cumulative cost estimate to repair all damaged projects is $23 million. This represents less than 5% of the total constructed cost. It should also be mentioned that of the 151 projects investigated only 19 projects (Figure 3) are in need of storm repair. The majority of the $23 million dollar claim comes from the estimated cost to repair the barrier island projects. The five barrier island projects together represent an estimated 17.5 million dollars, about 75% of the total claims.

The above mentioned conclusions pertain to the structural components constructed on each project. It does not address the damages sustained to the marshes in and around the project area. In the final analysis, the structural components of the projects built to enhance, create, protect, and restore Louisiana's wetlands have survived hurricanes Katrina and Rita in an exceptional manner and are currently protecting the remaining wetlands, and the infrastructure behind them.

The Federal Emergency Management Agency (FEMA) aids the State with funding on qualified public works projects. The main qualifications are: 1) a project has to have already been improved; and 2) intent from the State that a maintenance program is in place and viable. The majority of the projects meet these requirements, and for past hurricanes FEMA has approved and funded most of the LDNR requests. As a part of the repair process, the LDNR has been assigned a FEMA Project Officer and is currently in the process of acquiring funding for the 19 projects. Claims have been submitted for 16 of the 19 projects that were damaged by the hurricanes, and FEMA has approved the claims for 4 projects.

In addition to the CWPPRA and state projects for which claims were submitted to FEMA, the PCWRP completed the Brush Fence Removal Project to remove all Christmas tree fences that were severely damaged by hurricanes Katrina and Rita.

Fences were removed in six coastal parishes (Cameron, St. Mary, St. Charles, Jefferson, St. Bernard, and Orleans). The total cost of the project was $278,892.

As a result of damage to the Breton Sound estuary, the LDNR was proactive in its management of the Caernarvon Freshwater Diversion. The operational plan of the diversion was changed to increase the footprint of the diversion to assist in marsh recovery.

In addition to the establishment of the CPRA and the Coastal Protection and Restoration Fund, it is anticipated that there will be additional legislative enactments and policy revisions based upon the continuing assessment of the hurricanes' impact on coastal Louisiana.

SYNOPSIS

The LDNR, its federal partners, and the State Wetlands Authority have implemented projects throughout coastal Louisiana that have been successful at restoring, protecting, and enhancing coastal wetlands. These projects are reducing coastal erosion, improving habitat conditions for coastal fisheries and wildlife species, and building new wetlands.

This report provides information about all coastal restoration projects that either have been completed or are in the planning stages in the four Coast 2050 regions to date. It includes a compilation of information from all federal and state agencies involved in coastal restoration in Louisiana.

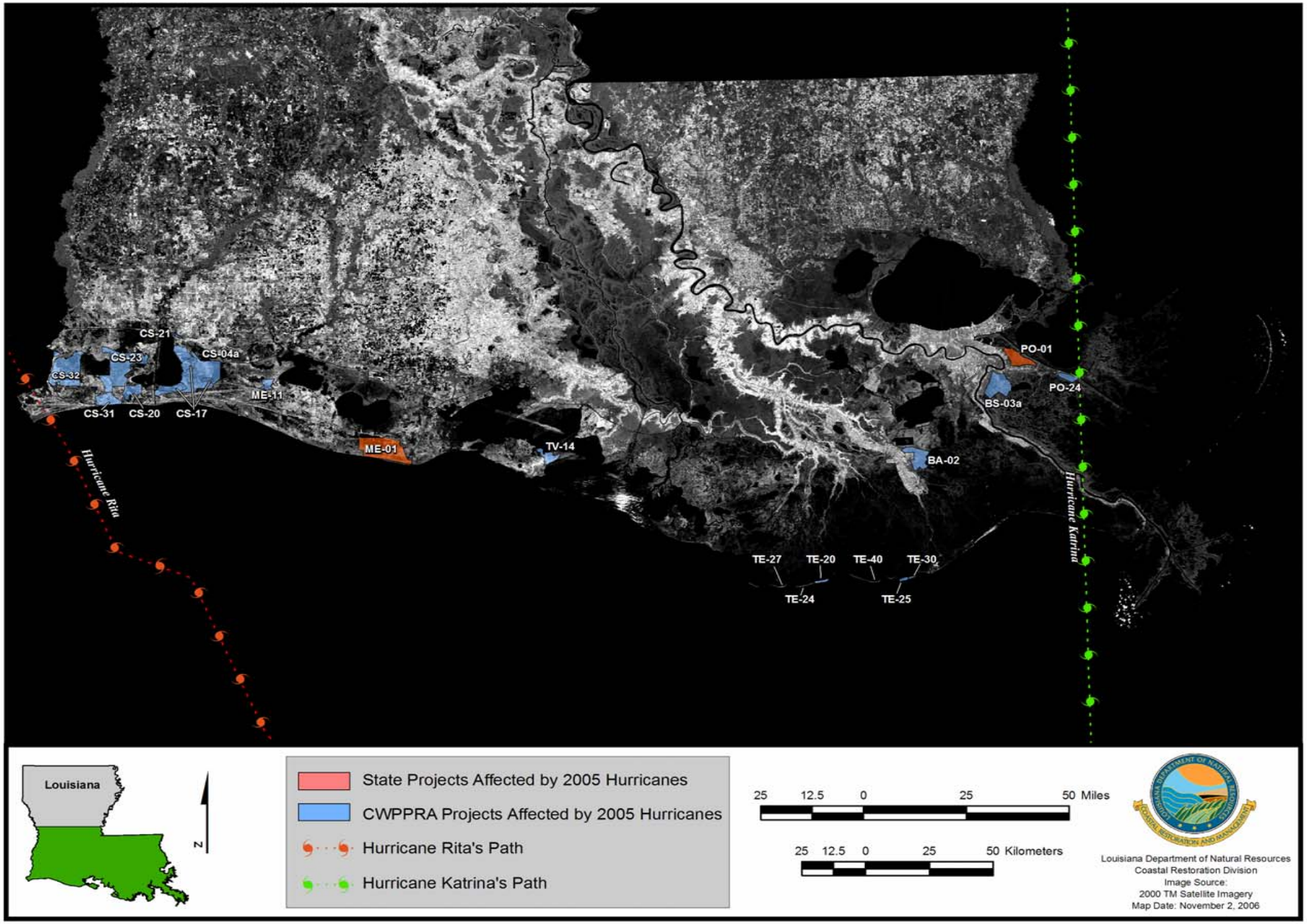


Figure 3. Coastal restoration projects damaged by hurricanes Katrina and Rita.

BARRIER ISLAND STATUS REPORT

In order to comply with Act 297 of the 2006 Regular Legislative Session, the LDNR is providing this barrier island status report as part of this Annual Project Reviews (APR) document, which will be submitted to each member of the Louisiana Legislature. The act requires that the report indicate the condition of all barrier islands, provide the status of all barrier island stabilization and preservation projects under construction, and outline future plans for restoration and maintenance of the barrier islands and coastal passes. In order to comply with the mandate, that status report has been included as a separate section of this document. Because the APR provides information about all coastal restoration projects in Louisiana (including location, status, features, acres benefited, cost, and funding source), it is appropriate to include a report on the status of the barrier islands within the APR.

Introduction

The storm events of 2005 have clearly demonstrated the advantages of robust barrier islands and a well managed coastline in terms of shoreline resilience and hurricane damage reduction. These coastal landscapes can provide a significant and potentially sustainable buffer from wind and wave action as well as storm surges generated by tropical storms and hurricanes. The same events have also highlighted the ecological concerns of the coast with the massive loss of these wetland systems (Ewing and Pope, 2006[1]). Barrier shorelines not only assist in protecting bay areas from storm surges, waves, and erosion, but are unique habitats and the foundation for complex coastal and marine ecosystems. Furthermore, properly scheduled maintenance for existing projects not only enhances the longevity, but also makes the project cost effective by maintaining the integrity of the barrier island in time.

Data collection through the Barrier Island Comprehensive Monitoring (BICM) Program has begun in order to provide information on the status and trends of the Louisiana shoreline. The Barrier Island Maintenance Program (BIMP) has been initiated in order to provide a framework for prioritizing planning, design, and construction of barrier island restoration projects.

Barrier Island Comprehensive Monitoring (BICM) Program

The LDNR began the development of a comprehensive program to monitor and evaluate the state's barrier shoreline through an in-house workgroup in 2002. This group developed a monitoring framework to evaluate shoreline processes and resulting habitats and the changes in these important ecosystems over time. This initial plan was then reviewed in 2004 by the Louisiana Shoreline Science Restoration Team (SSRT) working under the LCA program. The LCA study recommended the establishment of a coordinated System-wide Assessment and Monitoring Program (SWAMP). This program was to be built upon existing coast-wide efforts such as CRMS-*Wetlands* under CWPPRA and called for a barrier shoreline component. This BICM program is currently being initiated under the LCA S&T office, along with funding from the University of New Orleans (UNO) and USGS to establish baseline conditions for the barrier shoreline after hurricanes Katrina and Rita. In addition, the methods and products for use in multiple programs beyond LCA, such as CWPPRA and the

[1] Ewing, L. and Pope, J., 2006. Viewing the Beach as an Ecosystem? *Shore & Beach*, 74 (1), 2.

LDNR Barrier Island Maintenance Program (BIMP), and for future initiation of the complete BICM program under the LCA SWAMP are being refined.

The advantage of BICM over the current CWPPRA project specific monitoring was that it would provide long-term data on all of Louisiana's barrier shorelines, instead of just those areas with constructed projects. As a result, a greater amount of long-term data would be available not only to evaluate constructed projects, but to facilitate planning and design of future barrier island projects in numerous other programs (CWPPRA, LCA, and BIMP), assist O&M activities, and determine storm impacts. Because data would be collected for the entire barrier island system concurrently and with the same methodologies, those data would be more consistent, accurate, and complete than the current barrier island data collection efforts.

Implementation of the BICM program began in 2005 based on the need to establish a new baseline dataset for the coastline after the impacts of hurricanes Katrina and Rita. Initial datasets to be collected include: 1) post-storm damage assessment, 2) shoreline position, 3) habitat composition, 4) land/water analysis, 5) topography, 6) bathymetry, and 7) sediment characteristics. Additionally, these datasets will be compared to historic datasets that will be standardized and provided digitally to user groups for future use. Currently, the LDNR has an agreement with UNO, and its partner USGS, to implement the approximately $3 million program.

Data collection activities were initiated with a post-storm video and coast-wide imagery, LiDAR (Light Detection and Ranging) data collection and bathymetric surveying. Imagery was collected for the entire Louisiana coast and is a combination of CRMS-*Wetlands* and UNO photography and Quickbird satellite imagery. Shoreline positions for post-storm photography are being developed and will be compared to other datasets to provide long-term, short-term, and near-term erosion rates for the entire coastline. The LiDAR data has been collected for three portions of the coast: the Chandeleur Islands, from Raccoon Island to Sandy Point, and in the Chenier Plain from Sabine Pass to the Mermentau River Outlet. Bathymetric surveying encompassed two areas this season: the Raccoon Island to Sandy point area and the North Chandeleur Islands. Surveys covered from 6 km offshore to 2 km bayward of the shoreline. In addition to bathymetry data, USGS collected seismic data along all the offshore lines and did a complete sidescan sonar mosaic of the gulf side of the northern Chandeleur Islands. Data collection activities will continue in 2007 to complete bathymetric surveys in areas of the Chenier Plain as well as the southern portions of the Chandeleur Island chain. Also, habitat analysis of the aerial photography will begin and the collection of surface sediments for sediment budget development will be conducted.

Data analysis is ongoing and data will be available in the spring of 2007. The project will be completed in the fall of 2008 with updated information on the status and trends of the complete Louisiana shoreline.

Barrier Island Maintenance Program (BIMP)

Several legislative programs have been established on both the state and federal levels and additional state legislation was introduced in the 2004 Regular Session that called for the implementation of a program to stabilize and preserve the barrier islands and shorelines of Louisiana. House Bill No. 429, Act No. 407 authored by Representative Gordon Dove calls for the LDNR to establish a program for barrier island and shoreline stabilization and

preservation. This Act outlined the process for annually developing a priority list of projects to be submitted to the House and Senate Committees on Natural Resources. House Bill No. 1034, Act No. 786 of the 2004 Session established the Barrier Island Stabilization and Preservation Fund. This Act established a funding source for the program including appropriations, donations, grants, and other monies. The legislation states that this fund shall be used exclusively by the LDNR to support the Barrier Island Stabilization and Preservation Program, with all interest earnings and unencumbered monies remaining in the fund at the end of the fiscal year.

In view of the above legislation and with the realization that the maintenance is an integral part of stabilization, preservation, and restoration of any barrier island or shoreline protection project, the BIMP has been conceptualized by the LDNR/OCRM. The BIMP will provide the framework for categorizing, prioritizing, selecting, and funding state projects, while coordinating with the CWPPRA and other existing restoration mechanisms.

Rationale

This program is necessary to coordinate and fund restoration of barrier shorelines in Louisiana to quickly and comprehensively address the extremely high barrier shoreline erosion of this state. This program can act as a comprehensive management approach to Louisiana's shoreline and drive restoration through programmatic approaches to restoration and coordination with other restoration initiatives (CWPPRA, LCA, etc.). The development of this program into both near-term and long-term approaches to shoreline management will allow the State to both better build and cooperate in shoreline restoration activities. By initiating a comprehensive approach to shoreline management, the State will provide guidance to other programs and cooperators through prioritization of state funding and decision making based on comprehensive data and need identification, thereby coordinating and driving project implementation of all restoration sources.

Additionally, during the past decade, numerous barrier islands and headlands in Louisiana have been or are being restored by the State and its federal partners through CWPPRA and other sources. The CWPPRA projects have a design life of twenty years; however, neither systematic nor scheduled maintenance of these projects was incorporated into their funding or design. Design of these projects relies heavily on numerical models for predicting their longevity and ultimate success. Inherent in these models are certain assumptions and the realization that there are significant uncertainties about the physical processes that affect the stability of these land masses. If the project is impacted by more events than assumed in the model, the condition of the barrier island or headland deteriorates considerably, thereby reducing the life of the project. The project then requires maintenance to sustain the predicted design template. Maintenance costs can increase exponentially when not performed in a timely manner. Thus, another rationale of BIMP is to formulate a much needed component of maintenance planning for existing projects without funds. This strategy will address the need for cost-effective maintenance of barrier shoreline projects in a timely fashion that will afford them the opportunity to succeed.

Program Area

BIMP encompasses all the barrier islands (BI), including headlands (HL) and sandy shoreline (SSL) restored or otherwise (Figure 4). On the basis of the geographic and geologic setting, the barrier island,

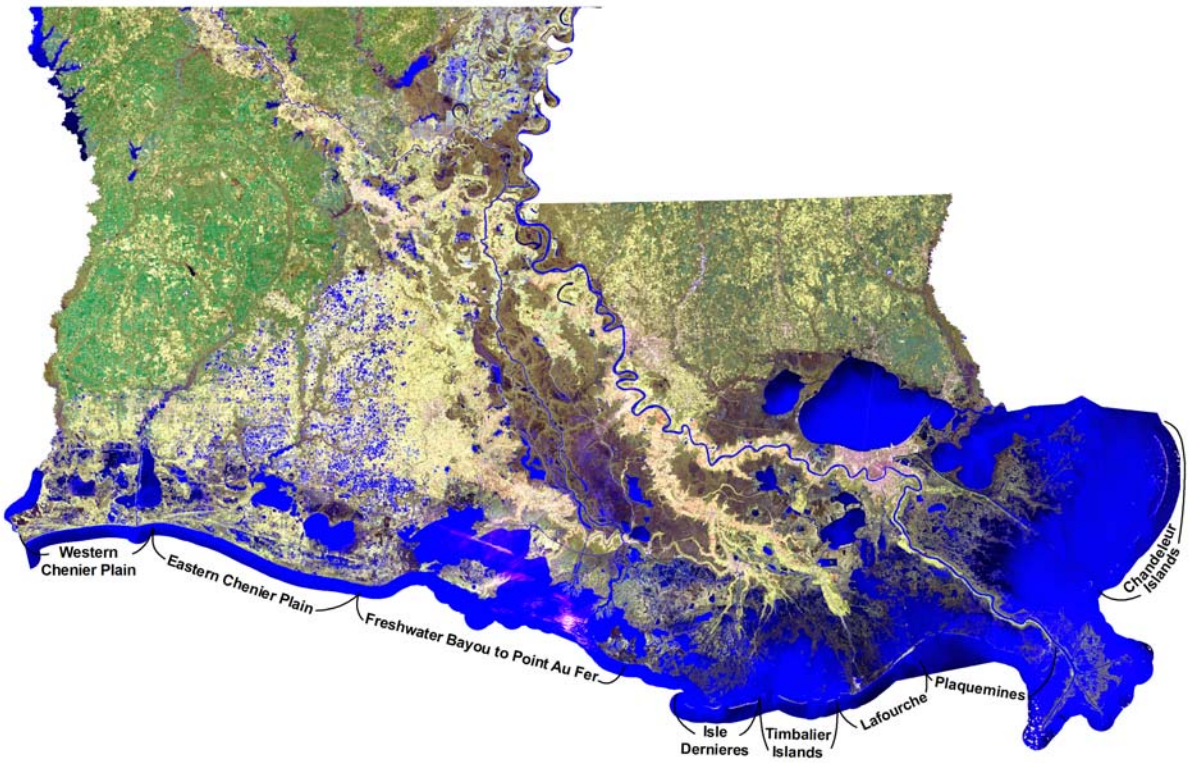


Figure 4. Various coastal segments including sandy shorelines, headlands, and barrier islands.

systems of Louisiana, along with the associated headlands and sandy shorelines will be treated as a series of the following eight coastal segments (Campbell et al. 2005[2]).

1. Chandeleur Islands – Northern Chandeleur Islands (Freemason Islands, North Islands, and New Harbor Islands) and Southern Chandeleur Islands (Breton Island, Grand Gosier Island, and Curlew Islands)
2. Plaquemines - Sandy Point, Pelican Island, Shell Island, ‘‘Chaland Headland’’ (Pass La Mer area), Chenier Ronquille, and East & West Grand Terre Islands
3. Lafourche Headland – Grand Isle and Caminada Moreau Headland
4. Timbalier Islands - Timbalier and East Timbalier islands
5. Isle Dernieres - Raccoon, Whiskey, Trinity, East, and Wine
6. Point Au Fer to Freshwater Bayou - Point Au Fer, Marsh Island, and Chenier au Tigre
7. Eastern Chenier Plain - Freshwater Bayou to Calcasieu Pass
8. Western Chenier Plain - Calcasieu Pass to Sabine Pass

Grouping these apparently disparate and disjointed units of BI, HL, and SSL in various coastal segments is helpful in evolving a regional strategy for shoreline maintenance, especially in the long-term rationales for shoreline needs. These units will be used in the development of long-

[2] Campbell, T.; L. Benedet, and C. W. Finkl. 2005. Regional strategies for barrier island restoration. *In:* Finkl, C.W. and S. M. Khalil, (eds.), *Louisiana Barrier Island Restoration.* West Palm Beach, Florida: *Journal of Coastal Research*, Special Issue No. 44, 240–262.

term strategies for project prioritization and development. It should be noted that any modification or alteration to one area will affect the other units in a segment because the coastal processes and morphodynamics, and consequently the sediment budget, are not restricted to any one unit.

Program Needs

Successful implementation of the BIMP will entail the coordination and funding of several other programmatic restoration issues. The LDNR/OCRM will need information on barrier islands related to erosion, storm damages, and sand sources. LDNR/OCRM has identified four program needs:

1. Program Implementation Team - LDNR needs to continue the development of a BIMP Implementation Team to assure successful implementation of this program. Clearly defined roles and responsibilities are crucial to a programmatic approach.
2. Barrier Island Comprehensive Monitoring (BICM) - The BICM Program is a comprehensive monitoring effort designed to complement other coast-wide monitoring programs (CRMS- *Wetlands*) (Troutman et al. 2003[3]). BICM is directly related to the successful implementation of the BIMP due to the need for updated shoreline erosion, wetland loss, and volume changes used for project selection processes that BICM will provide. Also, other data collected through BICM such as habitat classifications, elevations, and sediment characteristics will be useful in project design and maintenance activities funded by BIMP. Successful implementation of BICM will facilitate a cost-effective implementation of the BIMP program.
3. Sand Management Program - Because "soft engineering" is the preferred approach for restoration strategies in Louisiana, the restoration efforts will primarily depend on the emplacement of sand to build up barrier and deltaic systems, both elevation and volumetrically, so that ecological and geomorphologic environments can persist within decadal time frames with minimal redress after the initial placement of sediment (Finkl and Khalil 2005[4]).
4. Programmatic Sand Fencing Program - Sand fencing needs to be in place to take advantage of conditions necessary for the transport of sand. This includes bare sand and winds sufficient to move sand grains. Both of these conditions can manifest themselves without regard to program budgets or planning request cycles. The State needs to implement a programmatic sand fencing approach that will allow for quick deployment of fencing to take advantage of changing field conditions and still allow for cooperation with FEMA and other funding sources.

Funding and Timeline

Funding for this program will come from the Barrier Island Stabilization and Preservation Fund as set forth in House Bill No. 1034, Act No. 786 of the 2004 Session. LDNR/OCRM will formulate an annual list of projects each year by December 1st and submit those to both the House and Senate

[3] Troutman, J. P., D. M. Lee, S. Khalil, B. S. Carter, K. S. Grey, and L. A. Reynolds. UNPUBLISHED. DRAFT- Barrier Island Comprehensive Monitoring Program. Louisiana Dept. Natural Resources, Office of Coastal Restoration and Management. Baton Rouge, LA. 26 pp + appendices.

[4] Finkl, C. W. and S. M. Khalil. 2005. Offshore exploration for sand sources: General guidelines and procedural strategies along deltaic coasts. *In*: Finkl, C.W. and S. M. Khalil, (eds.), Savings America's Wetland: Strategies for Restoration of Louisiana's Coastal Wetlands and Barrier Islands. *Journal of Coastal Research*, Special Issue No. 44, pp. 203-233.

Committees on Natural Resources for funding by February 1st as stated in the legislation.

LDNR/OCRM will formulate an annual list by solicitation of parishes with boundaries within the program area, and those parishes will provide potential projects to LDNR/OCRM by September 1st of each year. LDNR/OCRM will also solicit project ideas based on internal information such as, island inspections, post-storm inspections, and existing project maintenance schedules. All projects will be compiled and ranked by December 1st of each year. This list, along with recommended funding levels, will be provided to the state Legislature for funding as stated above.

Restored Projects

During the last decades, the following barrier island and shoreline protection projects were implemented or constructed under CWPRRA (Figure 5):

1. Chandeleur Islands Marsh Restoration (PO-27) (2002) - This project is intended to accelerate the recovery period of barrier island areas overwashed by Hurricane Georges in 1998 through vegetation plantings. The overwash areas, which encompass 364 acres, are located at 22 sites along the Chandeleur Sound side of the island chain and were planted with smooth cordgrass (*Spartina alterniflora*).
2. Vegetative Plantings of a Dredged Material Disposal Site on Grand Terre Island (BA-28) (2001) - The goal of this project is to stabilize dredged material sites on West Grand Terre Island. This objective was achieved through vegetation plantings and by purchasing grazing rights on the island for the life of the project (20 years).
3. East Timbalier Island Sediment Restoration, Phase 1 (TE-25) (2000) - The objective of this project is to strengthen and thus increase the life expectancy of East Timbalier Island. The project called for the mining of 890,000 cubic yards of sediment and placement of the material in three embayments along the landward shoreline of East Timbalier Island. The project also included aerial seeding of the dune platform and installation of sand fencing. Dune vegetation plantings have been completed.
4. East Timbalier Island Sediment Restoration, Phase 2 (TE-30) (2000) - The project goal is to strengthen and increase the life expectancy of East Timbalier Island by placing dredged material along its landward shoreline. Additional rock has been placed on the existing breakwater in front of the island which will help protect the created area from erosion.
5. Timbalier Island Planting Demonstration (TE-18) (1996) - For this demonstration project, sand fences were installed and vegetation suited to the salinity and habitat type of Timbalier Island was planted in several areas on the island to trap sand and buffer wind and wave energy.
6. Timbalier Island Dune and Marsh Creation (TE-40) (2004) - Timbalier Island is migrating rapidly to the west/northwest; therefore, the western end of Timbalier Island is undergoing lateral migration by spit-building processes at the expense of erosion along the eastern end. The objective of this project is to restore the eastern end of Timbalier Island by the direct creation of beach, dunes, and marsh.
7. Isles Dernieres Restoration East Island (TE-20) (1998) - The project objective is to restore the coastal dunes and wetlands of the Eastern Isles Dernieres. Approximately 3,925,000 cubic yards of

sand were dredged from adjacent waters and used to build a retaining dune which was then hydraulically filled to create an elevated marsh platform. Sand fences and vegetation were also installed to stabilize the sand and minimize wind-driven transport.

8. Isles Dernieres Restoration Trinity Island (TE-24) (1998) - The project objectives include the restoration of Trinity Island (dunes and marsh) of the Isles Dernieres chain. Approximately 4,850,000 cubic yards of sand were dredged from adjacent waters and used to build a retaining dune which was then hydraulically filled to create an elevated marsh platform sloping from the dune to +4.0 feet at the bay side of the island. Sand fences and vegetation were also installed to stabilize the sand and minimize wind-driven transport.
9. Whiskey Island Restoration (TE-27) (1998) - The project is intended to create and restore beaches and back island marshes on Whiskey Island. The project consists of creating 523 acres of back island marsh and filling in the breach at Coupe Nouvelle. The initial vegetation planting of smooth cordgrass (*Spartina alterniflora*) on the bay shore was completed in July 1998 and additional vegetation seeding and planting was carried out in Spring 2000.
10. Raccoon Island Breakwaters Demonstration (TE-29) (1997) - The goal is to reduce shoreline erosion and increase land coverage. Eight segmented breakwaters were constructed along the eastern end of the island to reduce the rate of shoreline retreat, promote sediment deposition along the beach, and protect seabird habitat. Project effectiveness was determined by monitoring changes in the shoreline, wave energy, and elevations along the beach, and by surveys of the gulf floor between the shoreline and the breakwaters.
11. Holly Beach Sand Management (CS-31) (2003) - 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 objective was accomplished through beach renourishment, installation of sand fencing, vegetation plantings, and monitoring of the shoreline response.

Projects Funded for Restoration

The following projects are in various stages of construction under CWPPRA as these have been funded for construction (Figure 5):

1. Raccoon Island Shoreline Protection/Marsh Creation (TE-48) - The goal of this project is to protect the Raccoon Island rookery and seabird colonies from an encroaching shoreline by reducing the rate of erosion along the western end of the island and creating more land along the northern shoreline. This goal will be accomplished through the construction of eight additional segmented breakwaters and a terminal groin along the gulf side of the island, adjacent to the Raccoon Island Breakwaters Demonstration (TE-29) project. In addition, dredged material will be used to create marsh on the bay side of the island.
2. New Cut Dune and Marsh Restoration (TE-37) - The objective of this project is to close the breach between East and Trinity Islands that was originally created by Hurricane Carmen (1974) and subsequently enlarged by Hurricane Juan (1985). The project will create barrier island dunes and marsh habitat and lengthen the structural integrity of the eastern Isles Dernieres by restoring the

littoral drift and adding sediment into the near-shore system.

3. Barataria Barrier Island Complex Project: Pelican Island and Pass La Mer to Chaland Pass Restoration (BA-38) - The objectives of this project are to create barrier island habitat, enhance storm-related surge and wave protection, prevent overtopping during storms, and increase the volume of sand within the active barrier system. Conceptual project plans envision dedicated dredging of local, near shore sand sources to directly create beach, dune, and wetland habitats.

Future Projects

The following restoration projects are in various stages of design (Figure 5):

1. Ship Shoal: Whiskey West Flank Restoration (TE-47) - This project is intended to rebuild dunes and a marsh platform on the west flank of Whiskey Island through the deposition of dredged material transported from Ship Shoal. This project will provide a barrier to reduce wave and tidal energy, thereby protecting mainland shoreline from continued erosion.
2. Whiskey Island Back Barrier Marsh Creation (TE-50) - The goal of this project is to enhance the structural function of Whiskey Island as a protective barrier for back bay and inland areas. Dredged material will be deposited on the island's back barrier area to widen the marsh platform on the central and eastern portions of Whiskey Island.
3. East/West Grand Terre Islands Restoration (BA-30) - The goal of this project is to stabilize and benefit 1,575 acres of barrier island habitat and extend the island's life expectancy. Dredged material will be used to create dune and marsh habitat on East Grand Terre Island.
4. Pass Chaland to Grand Bayou Pass Barrier Shoreline Restoration (BA-35) - This project will prevent the barrier island from breaching through the deposition of dredged material, the creation of tidal creeks and ponds, and vegetation plantings. This will provide a continued barrier to reduce wave and tidal energy, thereby protecting the mainland shoreline from continued erosion.
5. Riverine Sand Mining/Scofield Island Restoration (BA-40) - The goals of this project are to repair breaches and tidal inlets in the shoreline, reinforce the existing shoreline with sand, and increase the island width with back barrier marsh to increase island longevity. The project will create and nourish existing island habitat through the introduction of riverine sand and offshore fine sediment.

To demonstrate the importance that has been placed on barrier island restoration in Louisiana, over 51% of the construction dollars that have been expended through CWPPRA have been used to restore barrier islands. In addition, barrier island projects account for over 37% of the current estimated cost of all CWPPRA projects.

The following two projects are in the feasibility level stage under LCA (Figure 5):

1. Shell Island Restoration - Shell Island is a barrier island in the Plaquemines barrier island system and a critical component of the Barataria shoreline. The Shell Island segment has been nearly lost and failure to take restorative action could result in the loss of any future options for restoration. This would result in permanent modification

of the tidal hydrology of the Barataria Basin. This project would preserve 147 acres of barrier island habitat over the next 50 years.

2. Caminada Headland Restoration - The Caminada-Moreau Headland protects the highest concentration of near-gulf oil and gas infrastructure in the coastal area. This reach of the Barataria shoreline also supports the only land-based access to the barrier shoreline in the Deltaic Plain. This project would preserve 640 acres of dune and berm over the next 50 years and 1,780 acres of saline marsh.

The Shell Island component of the BBBS Restoration should be constructed at the earliest possible date and include beach restoration by use of containment to rebuild a vital link in the Louisiana barrier shoreline system. The overall goal is to prevent the intrusion of the Gulf of Mexico into the interior bays and marshes, which threatens fisheries and the regional ecology. The project would also help restore natural sand transport along this reach of the coast supporting the adjacent regional shorelines and various shoreline habitats. Numerous infrastructure elements such as highways, levees, ports, and oil and gas facilities located along the rim of the inland bays would incidentally benefit from this ecologic restoration.

The Caminada Headland component of the BBBS Restoration should be constructed at the earliest possible date and should include ecosystem restoration of the dune and berm as well as marsh creation. The overall goal of this feature is to maintain this headland reach, which would sustain significant and unique coastal habitats, help preserve endangered and threatened species, continue to transport sand to Grand Isle, and protect Port Fourchon and the only hurricane evacuation route available to the region.

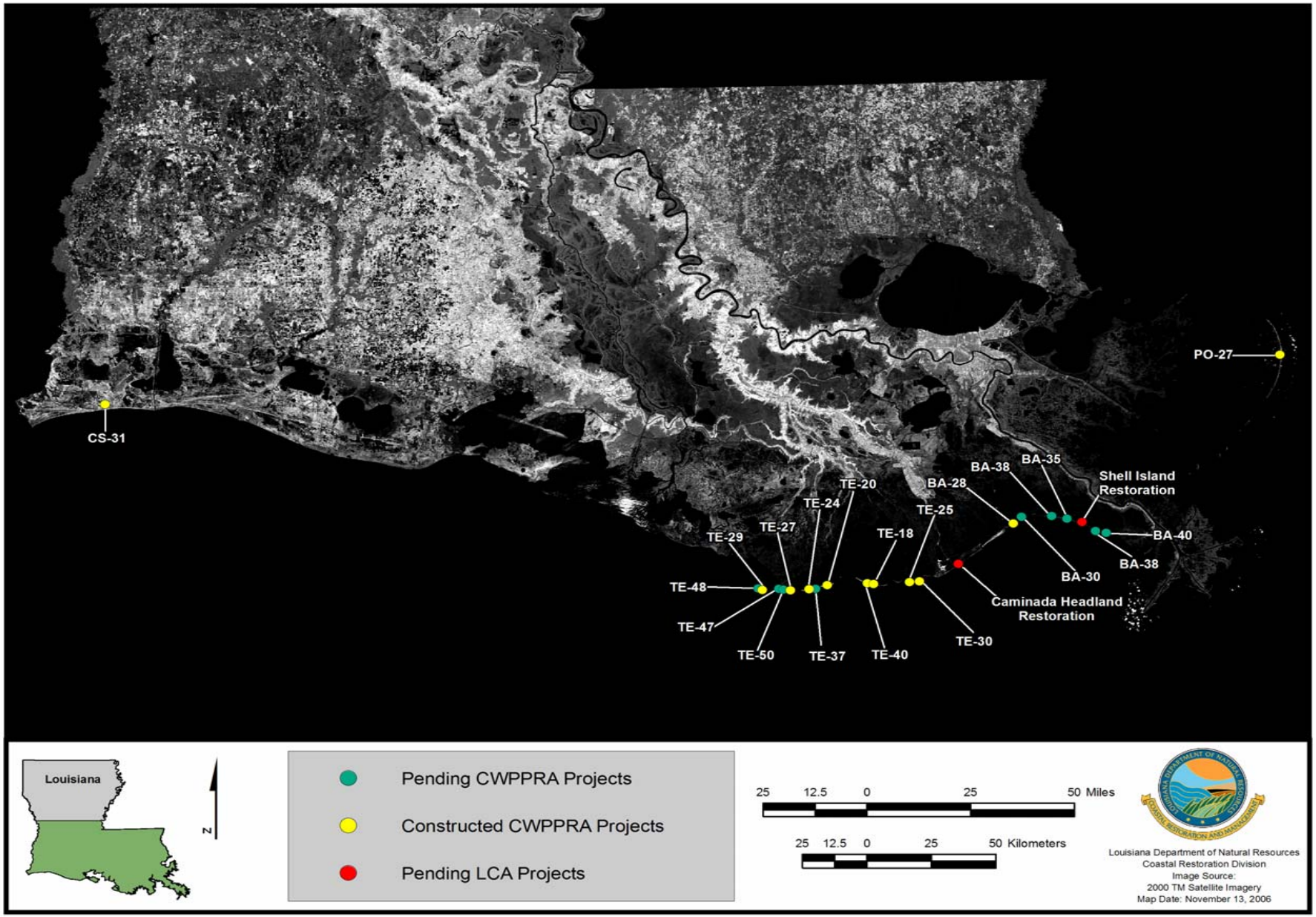
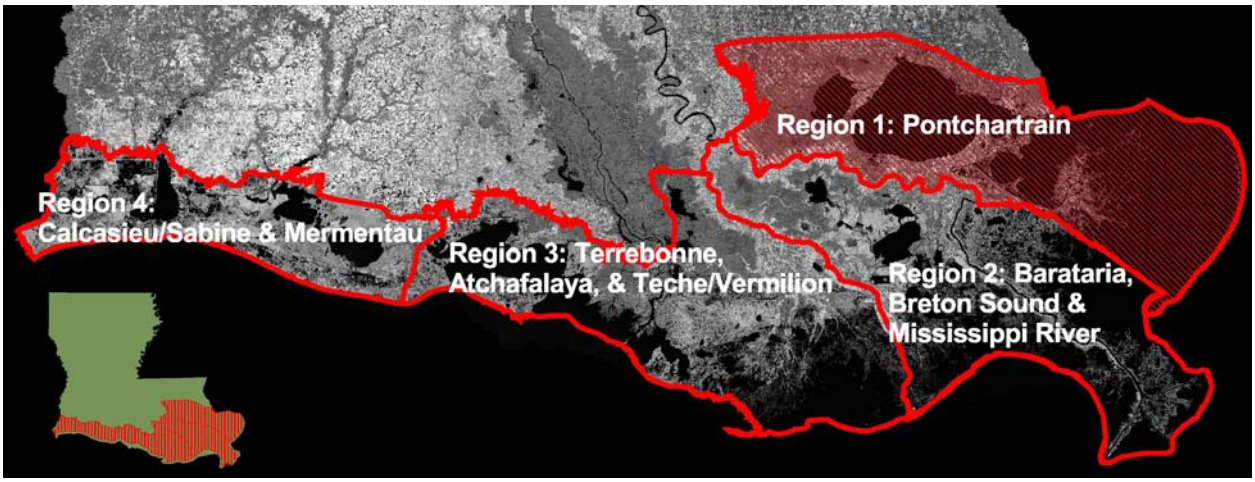


Figure 5. Barrier island coastal restoration projects (including constructed CWPPRA projects, pending CWPPRA projects, and pending LCA projects).

REGION 1



INTRODUCTION

Region 1 encompasses the Lake Pontchartrain Basin, extending from the MRGO on the south to the Prairie Terrace on the north, and from the Chandeleur Islands on the east to the Lake Maurepas swamps and marshes on the west. This region covers all or part of the following parishes: Livingston, Tangipahoa, St. Tammany, St. Bernard, Orleans, Jefferson, St. Charles, St. John the Baptist, St. James, and Ascension.

Region 1 contains 576,570 acres of coastal wetlands consisting of approximately 110,000 acres of bottomland hardwood forest; 213,570 acres of swamp; 34,700 acres of freshwater marshes; 27,700 acres of intermediate marshes; 110,900 acres of brackish marshes; and 79,700 acres of saline marshes.

Estimates of wetland loss from Region 1 indicate that between 1990 and 2000, a total of 23,296 acres of wetlands were lost (an average of 2,304 acres per year). Lakes Pontchartrain, Maurepas, and Borgne are the dominant hydrologic features within this region. Predominantly all of the Amite, Lake Maurepas, and Tickfaw watersheds (a combined area of 3,255 square miles) drain into Lake Maurepas. Lake Pontchartrain, connected to Lake Maurepas by Pass Manchac and North Pass, also receives freshwater inflows from the Tangipahoa and Liberty Bayou-Tchefuncte watersheds (a combined area of 1,471 square miles), as well as the Bonnet Carre´ Spillway. Major navigation channels within the region are the MRGO and the Gulf Intracoastal Waterway (GIWW).

Considerable wetland loss began in Region 1 in the early 1960s after the construction of the MRGO, with marsh loss occurring directly through channel dredging, and indirectly through saltwater intrusion and vessel wakes. Effects of increased salinities were seen as far away as the Pontchartrain/Maurepas Land Bridge. Marshes east of New Orleans and adjacent to the MRGO were severely impacted by levee-induced ponding of water. Other major causes of land loss within this region include shoreline erosion, subsidence, and altered hydrology.

The most critical concerns of parish governments and the public are preserving the present habitats and current levels of productivity. Near the Manchac and North Shore areas and around the Pearl River mouth, conversion of some intermediate and brackish marshes to fresh marshes is needed.

Open water in the interior of the forested wetlands near Lake Maurepas is also recommended for conversion back to forested wetland. Forested wetlands located immediately southwest of the MRGO in the Central Wetlands are slated for expansion. Some of the saline Biloxi Marshes are recommended for conversion to brackish marshes.

Coast 2050 identified specific ecosystem strategies for protecting and sustaining the region's coastal resources. These strategies can be grouped into one of the following five general categories: restoring swamps, restoring and sustaining marshes, protecting the integrity of the shorelines, restoring and maintaining the Chandeleur Islands, and restoring and maintaining critical landforms.

PROJECT SUMMARIES

A total of 86 restoration projects have been authorized in Region 1 (Figures 6 and 7, Table 1). Project specific information is presented below, organized by project funding source.

CWPPRA

A total of 18 projects have been authorized under the direction of CWPPRA in Region 1. These projects are anticipated to benefit 12,228 acres of wetlands at a cost of $45,056,191.

The CWPPRA Task Force officially deauthorized the following four projects in Region 1: Violet Freshwater Distribution (PO-09a), Red Mud Demonstration (PO-20), Eden Isles East Marsh Restoration (PO-21), and Bayou Bienvenue Pump Station Diversion and Terracing (PO-25).

State

Six projects have been implemented in Region 1 and funded by the Wetlands Trust Fund. These projects are currently estimated to benefit 2,443 acres of land at a cost of $3,673,435.

Parish Coastal Wetlands Restoration Program

The following seven Christmas tree projects have been constructed within Region 1: Blind Lagoon, Crab Pond, Goose Point, LaBranche, The Prairie, Bayou Bienvenue, and Jones Island. In 2006, The Prairie Christmas tree project was refurbished. Christmas trees were also placed on Jones Island to create habitat areas. Vegetation was planted in the Bayou Sauvage National Wildlife Refuge near the Blind Lagoon Christmas tree project, and vegetation was planted adjacent to the fences of The Prairie project. Since 1990, approximately 6,044 linear feet of fences have been constructed in Region 1.

DNR/NRCS/SWCC Vegetation Planting Program

Since 1988, a total of 47 vegetation planting projects have been implemented within Region 1. Several phases, spanning multiple years, exist for many of the planting projects. The 2006 vegetation planting projects for Region 1 included Hog Island, Springfield wildlife enhancement, Amite River wildlife enhancement, MRGO, and Bayou Conway.

Section 204/1135

Within Region 1, three Section 204/1135 projects were constructed in 1999 along the MRGO between Mile -3 and Mile 14. These projects utilized dredged material from routine maintenance of the MRGO to create approximately 76 acres of wetlands. Two projects were constructed along the MRGO, Mile 14 to 12 in 2002 and 2003 in Region 1. These projects utilized dredged material from the MRGO to create approximately 163 acres of wetlands behind the MRGO jetty.

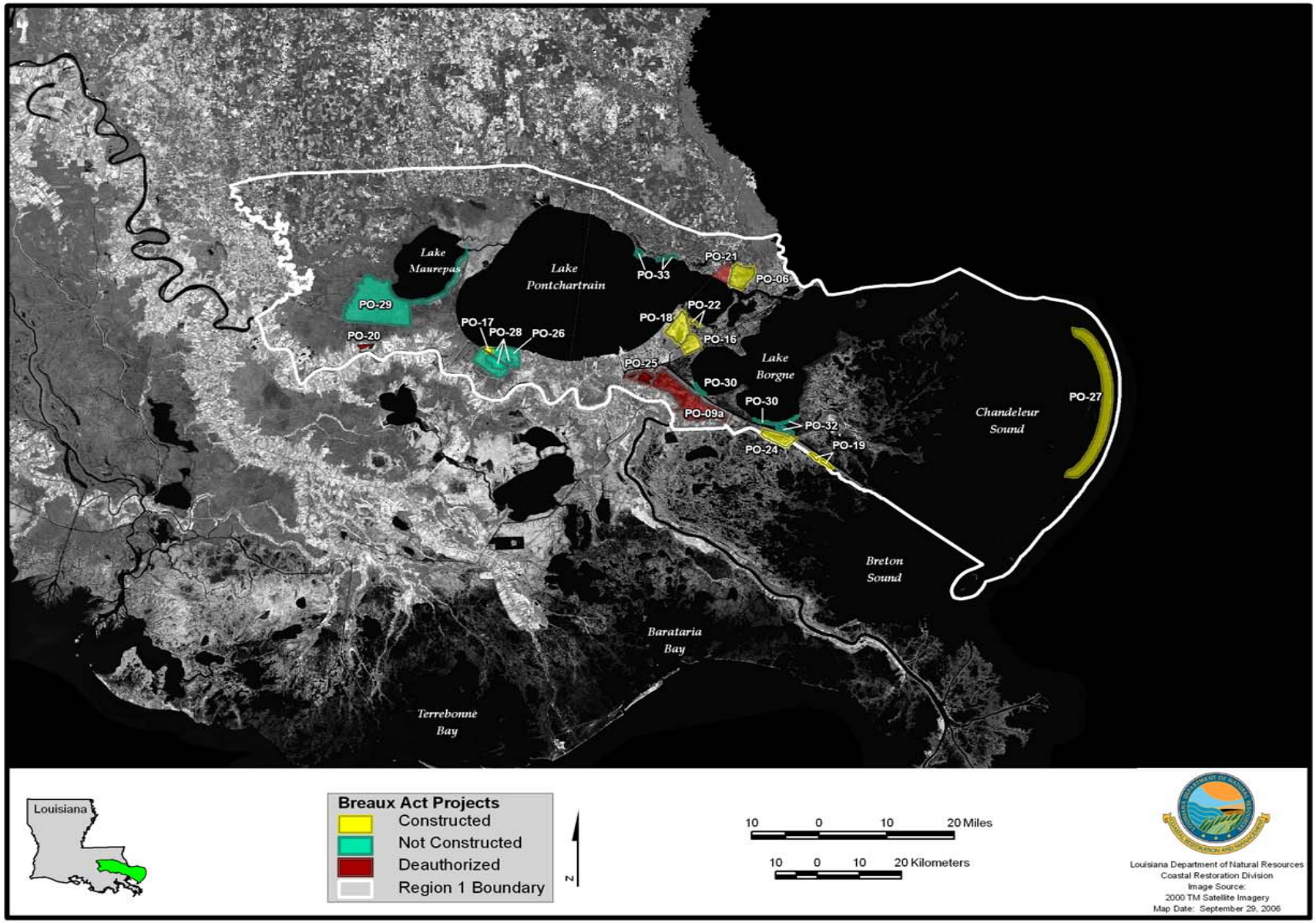


Figure 6. Location of Breaux Act projects authorized in Coast 2050 Region 1.

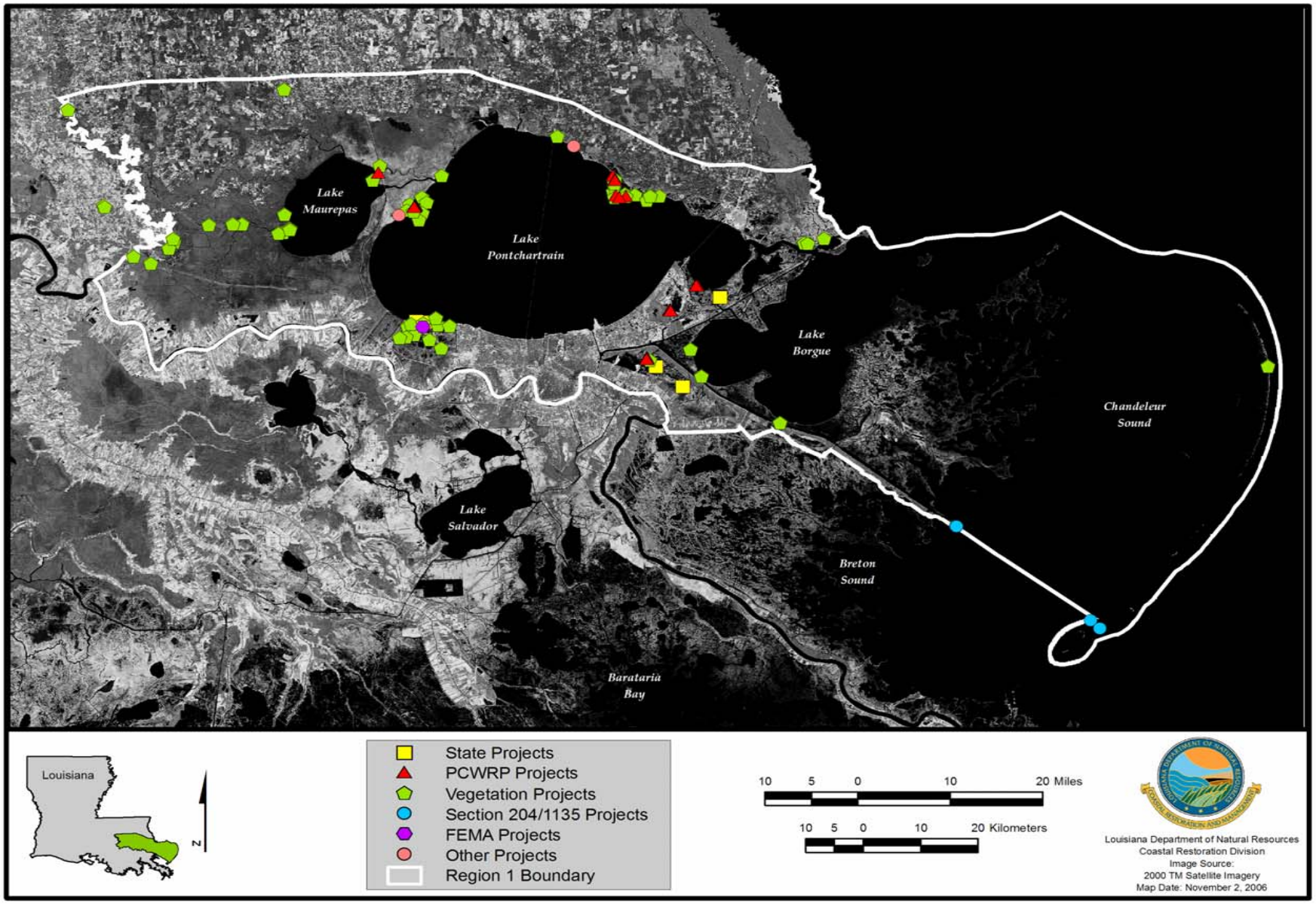


Figure 7. Location of State, PCWRP, Vegetation, Section 204/1135, FEMA, and Other projects in Coast 2050 Region 1.

Table 1. Restoration projects completed or pending in Coast 2050 Region 1.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	PO-06 (PO-06)	Fritchie Marsh Restoration	HR	2	NRCS	Boasso	Crowe	StT.	1,040	2001	$309,687	$751,128	$1,140,858	$3,048,389	$2,201,674	The purpose of the project is to address wetland loss in the area and to improve habitat for wildlife and fisheries by increasing the flow of freshwater into the marsh and managing the outfall. Project features include diverting part of the W-14 Canal and installing larger culverts under Highway 90.
Breaux Act	PO-09a (PO-09a)	Violet Freshwater Distribution (Deauthorized)	HR	3	NRCS	Boasso, Duplessis	Hutter, Odinet	StB.	N/A	Deauth.	$85,717	N/A	$42,910	$1,821,438	$128,627	The objective of the outfall management plan was to optimize the use of freshwater and sediment supplied by the existing siphons by managing water flow through the area. This would be accomplished by reducing channelized flow and routing the diverted flow across marshes or through shallow water areas instead of through larger channels. This project was officially deauthorized by the Breaux Act Task Force in October of 2001.
Breaux Act	PO-16 (XPO-52A)	Bayou Sauvage National Wildlife Refuge Hydrologic Restoration, Phase 1	HR	1	USFWS	Duplessis	Odinet	Orl.	1,550	1996	$87,653	$887,848	$654,692	$1,657,708	$1,630,193	The Lake Pontchartrain hurricane protection levee isolated Units 3 and 4 of the Bayou Sauvage Wildlife Refuge from the surrounding marsh complex and established a large freshwater impoundment. The project utilizes pumps to remove the excess water during the spring and summer.
Breaux Act	PO-17 (PPO-10)	Bayou LaBranche Wetland Creation	MC	1	USACE	Chaisson	Smith	StC.	203	1994	$758,435	$2,784,909	$274,584	$4,461,301	$3,817,929	The project goal was to create vegetated wetlands in an area bounded by I-10, Lake Pontchartrain, and Bayou LaBranche. This objective was accomplished by dredging sediment from Lake Pontchartrain.
Breaux Act	PO-18 (XPO-52B)	Bayou Sauvage National Wildlife Refuge Hydrologic Restoration, Phase 2	HR	2	USFWS	Duplessis	Odinet	Orl.	1,280	1997	$101,483	$892,402	$648,666	$1,452,035	$1,642,552	The hurricane protection levee system has impounded the marsh in the project area. The project increases the drainage capacity of the system to reduce water levels in the project area. Project features consist of two 36-inch pumps, which operate to maintain water levels at 0.5 feet above or below marsh elevation.
Breaux Act	PO-19 (XPO-71)	Mississippi River Gulf Outlet (MRGO) Disposal Area Marsh Protection	HR	3	USACE	Boasso	Odinet	StB.	755	1999	$246,834	$40,000	$26,311	$512,198	$313,145	The objective of the project is to protect and preserve vegetated wetlands by repairing the lateral and rear dikes of the Mississippi River Gulf Outlet (MRGO) disposal areas. Repairs to a 28,000 linear-foot dike, in conjunction with the installation of metal box weirs with a single 40-inch pipe is used to control and divert water flow to prevent the perched marshes from draining.
Breaux Act	PO-20 (XTE-43)	Red Mud Demonstration (Deauthorized)	MC	3	EPA	Amedee	Faucheux	StJo.	N/A	Deauth.	$26,836	$321,499	$122,165	$350,000	$470,500	This project was authorized to determine whether red mud, produced as a by-product of removing alumina from bauxite, could be utilized as marsh-creation material in combination with compost and marsh sediment. Construction of the experimental units was initiated in 1997; however, due to unexpected problems with fill material, liners, and contaminants in the water source, the project was officially deauthorized by the Breaux Act Task Force in August 2001.
Breaux Act	PO-21 (PPO-4)	Eden Isles East Marsh Restoration (Deauthorized)	HR	4	NMFS	Boasso	Crowe	StT.	N/A	Deauth.	$36,078	N/A	$2,947	$5,018,968	$39,025	The project was intended to restore 2,536 acres of drained fastlands by actively managing water levels to maximize marsh creation. There was a change in landowners of the project area during the planning phase of this project. Consequently, the project was officially deauthorized by the Breaux Act Task Force in January 1998.
Breaux Act	PO-22 (XPO-69)	Bayou Chevee Shoreline Protection	SP	5	USACE	Duplessis	Odinet	Orl.	75	2001	$405,813	$1,802,719	$380,871	$2,555,029	$2,589,403	The project is designed to protect currently exposed wetland areas from erosive wave energy from Lake Pontchartrain and to enhance the establishment of submerged aquatic vegetation in the ponds behind the rock dikes. This is accomplished by constructing a 2,870 linear-foot rock dike across the mouth of the north cove and a 2,820 linear-foot rock dike, tying into an existing USFWS rock dike, across the south cove.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	PO-24 (PPO-38)	Hopedale Hydrologic Restoration	HR	8	NMFS	Boasso	Odinet	StB.	134	2004	$299,549	$1,043,148	$1,090,261	$2,179,491	$2,432,958	This project is designed to abate site-specific wetland loss by replacing collapsed culverts installed in the 1950s near Yscloskey, Louisiana. The project involves re-furbishment and construction of a water control structure designed to prevent tidal surges and reduce wetland deterioration within the project site. Replacement of this structure would allow more rapid drainage of the area, improve fisheries access, reduce wetland loss rates, and protect approximately 3,086 acres of marsh. A claim was submitted to FEMA to repair damage to this project caused by Hurricane Katrina. The claim has been approved.
Breaux Act	PO-25 (XPO-74a)	Bayou Bienvenue Pump Station Diversion and Terracing (Deauthorized)	HR MC	8	NMFS	Boasso, Duplessis	Odinet, Richmond	Orl. StB.	N/A	Deauth.	$211,310	N/A	$832	$3,295,574	$212,142	This project was intended to combine the use of existing pump stations with the construction of a diversion channel, water control structures, and earthen terraces planted with smooth cordgrass (*Spartina alterniflora*). This will force the flow of freshwater and nutrients through a deteriorated marsh area to abate site-specific marsh loss. The project was officially deauthorized by the Breaux Act Task Force in April 2002.
Breaux Act	PO-26 (XPO-55a)	Opportunistic Use of the Bonnet Carre´ Spillway	FD	9	USACE	Chaisson	Smith	StC.	177	Pending	$106,104	N/A	$82,279	$150,706	$188,383	This project is intended to abate high salinity stress on vegetated wetlands surrounding Lake Pontchartrain. This objective will be accomplished through the removal of pins from the Bonnet Carre´ Spillway structure during high flow periods in the Mississippi River to allow no more than 4,000 cubic feet per second of water to flow from the river into Lake Pontchartrain.
Breaux Act	PO-27(XPO-95)	Chandeleur Islands Marsh Restoration	VP	9	NMFS	Boasso	Odinet	StB.	220	2001	$261,006	$502,708	$174,263	$1,435,066	$937,977	This project is intended to accelerate the recovery period of barrier island areas overwashed by Hurricane Georges in 1998 through vegetation plantings. The overwash areas, which encompass 364 acres, are located at 22 sites along the Chandeleur Sound side of the island chain and were planted with smooth cordgrass (*Spartina alterniflora*).
Breaux Act	PO-28 (PPO-07a)	LaBranche Wetlands Terracing, Planting, and Shoreline Protection	SNT SP VP	9	NMFS	Chaisson	Smith	StC.	489	Pending	$305,266	N/A	$1,570	$821,752	$306,836	Located along Lake Pontchartrain, the project intends to reduce emergent marsh loss along the shoreline by restoring and creating 489 acres through marsh terracing, shoreline protection, and vegetation planting.
Breaux Act	PO-29 (Complex Project)	River Reintroduction into Maurepas Swamp	FD	11	EPA	Amedee, Chaisson	Faucheux, Quezaire, Smiley, Smith	StJo.	5,438	Pending	$6,731,444	N/A	$48,863	$5,434,288	$6,780,307	This project is intended to restore a natural hydrologic regime and increase nutrient inputs in cypress-tupelo swamp tracts south of Lake Maurepas. This will be accomplished through the diversion of Mississippi River water into an area of degraded swamp.
Breaux Act	PO-30	Lake Borgne Shoreline Protection	SP	10	EPA	Boasso	Hutter, Odinet	StB.	165	Pending	$2,452,581	$13,381,787	$2,451,231	$18,378,900	$18,285,599	The goal of this project is to maintain the integrity of the narrow strip of marsh that separates Lake Borgne from the Mississippi River Gulf Outlet (MRGO). This land helps protect the communities of Shell Beach, Yscloskey, and Hopedale from direct exposure to lake wave energy and storm surges. This will be accomplished through construction of a continuous nearshore rock breakwater. A separately authorized adjoining project, Lake Borgne Shoreline Protection at Bayou Dupre (PO-31), has been merged with this project.
Breaux Act	PO-32	Lake Borgne and MRGO Shoreline Protection	SP	12	USACE	Boasso	Odinet	StB.	266	Pending	$1,317,413	N/A	$30,932	$1,348,345	$1,348,345	The objective of this project is to preserve the marsh between Lake Borgne and the Mississippi River Gulf Outlet (MRGO) by preventing shoreline erosion. A rock dike will be constructed along the Lake Borgne shoreline and along the northern bank of the MRGO.

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Breaux Act	PO-33	Goose Point/Point Platte Marsh Creation	MC	13	USFWS	Schedler	Burns	StT.	436	Pending	$1,730,596	N/A	N/A	$1,930,596	$1,730,596	The objective of this project is to create marsh habitat through the deposition of dredged material in open water areas in the vicinity of Goose Point and Point Platte as well as to maintain the lake rim function along this section of the north shore of Lake Pontchartrain.
State	PO-01	Violet Siphon Diversion	FD	N/A	N/A	Boasso	Hutter, Odinet	StB.	84	1992	N/A	N/A	N/A	N/A	$380,584	The purpose of this project is to return into operation the existing siphon, and to enlarge the size of the diversion so that more sediment and freshwater are available to offset marsh subsidence and saltwater intrusion. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Katrina.
State	PO-02c	Bayou Chevee	SP	N/A	N/A	Duplessis	Odinet	Orl.	75	1994	N/A	N/A	N/A	N/A	$62,000	This project installed 2,000 feet of brush fences at the mouth of Bayou Chevee.
State	PO-03	LaBranche Shoreline Stabilization and Canal Closure	SP	N/A	N/A	Chaisson	Smith	StC.	1,750	1987	N/A	N/A	N/A	N/A	$1,324,000	The purpose of this project is to restore the integrity of the shoreline, which separates Lake Pontchartrain from the western edge of the LaBranche wetlands.
State	PO-03b	LaBranche Shoreline Protection	SP	N/A	N/A	Chaisson	Smith	StC.	50	1996	N/A	N/A	N/A	N/A	$1,290,851	A rock breakwater was constructed along the Lake Pontchartrain shoreline, east of Bayou LaBranche, to protect the hydrologic boundary between the lake and the wetlands from being breached.
State	PO-08	Central Wetlands Pump Outfall	FD	N/A	N/A	Boasso, Duplessis	Hutter, Odinet	StB.	300	1992	N/A	N/A	N/A	N/A	$250,000	This project is designed to provide freshwater, nutrients, and sediment associated with storm water runoff to an area of marsh near the Violet Siphon (PO-01).
State	PO-10	Turtle Cove Shore Protection	SP	N/A	N/A	Chaisson	Smith	StJo.	184	1994	N/A	N/A	N/A	N/A	$366,000	A 1,640 foot rock-filled gabion breakwater was constructed to maintain and protect the Lake Pontchartrain shoreline that shelters "The Prairie" (an 800-acre expanse of shallow, open water marsh bordered by organic freshwater marsh) from high wave energies and to encourage sediment deposition behind the gabion structure. An additional $195,600 was used for maintenance in 2001.
PCWRP		Crab Pond	SP	N/A	N/A	Duplessis	Odinet	Orl.	1	1991	N/A	N/A	N/A	N/A	$24,547	The Crab Pond, an open-water area adjacent to Chef Menteur Pass, is located within the Bayou Sauvage National Wildlife Refuge. Christmas tree fences were constructed to prevent Chef Menteur Pass from eroding further into Crab Pond. Fences were originally constructed and filled in 1991, and maintenance was performed in 1994 and 1997. The brush fences at Crab Pond were either destroyed as a result of the 2005 hurricanes or later removed because of hurricane damage.
PCWRP		Goose Point	SP	N/A	N/A	Schedler	Burns	StT.	3	1991	N/A	N/A	N/A	N/A	$120,937	The Goose Point project is located along the northern shore of Lake Pontchartrain. The project was constructed to restrict the opening between Lake Pontchartrain and the inner marsh, to protect existing marsh vegetation from erosion, and to encourage the colonization and growth of new marsh vegetation. Fences were originally constructed and filled in 1991, and maintenance was performed in 1992, 1993, 1995, 1998, 2000, 2003, and 2004.
PCWRP		LaBranche Wetlands	SP	N/A	N/A	Chaisson	Smith	StC.	5	1991	N/A	N/A	N/A	N/A	$218,600	The LaBranche Christmas tree fences were constructed in a series of open-water ponds located within the LaBranche wetlands. These pond edges are susceptible to erosion by wind-generated waves. The brush fences were designed to create emergent marsh in the LaBranche wetland area. Fences were originally constructed and filled in 1990, and maintenance was performed in 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2000. Approximately 2,800 linear feet of brush fence were either destroyed as a result of the 2005 hurricanes or later removed because of hurricane damage.

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PCWRP		The Prairie	SP	N/A	N/A	Chaisson	Smith	StJo.	53	1991	N/A	N/A	N/A	N/A	$190,000	Wave action from Lake Pontchartrain was eroding the strip of land adjacent to "The Prairie", an 800-acre expanse of shallow, open water bordered by freshwater marsh between Lakes Maurepas and Pontchartrain. The project was constructed to maintain the separation between The Prairie and Lake Pontchartrain, to promote the growth of marsh vegetation, and to prevent the erosion of the lake rim. Fences were originally constructed and filled in 1991, and maintenance was performed in 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, and 2006.
PCWRP		Blind Lagoon	SP	N/A	N/A	Duplessis	Odinet	Orl.	9	2000	N/A	N/A	N/A	N/A	$105,000	Christmas tree fences were placed in a wind-row manner to trap sediment and provide wildlife habitat in the Bayou Sauvage National Wildlife Refuge. Fences were originally constructed and filled in 2000, and maintenance was performed in 2001, 2004, 2005, and 2006.
PCWRP		Jones Island	SP	N/A	N/A	Quinn	Powell	Tan.	47	2000	N/A	N/A	N/A	N/A	$133,383	Christmas tree islands were created and vegetation was planted (cypress seedlings) to re-establish bottomland forest. Fences were originally constructed and filled in 2000, and maintenance was performed in 2001, 2002, 2003, 2004, 2005, and 2006.
PCWRP		Bayou Bienvenue	SP	N/A	N/A	Boasso	Odinet	StB.	1	2001	N/A	N/A	N/A	N/A	$54,000	Approximately 400 feet of brush fence were constructed in 2001 to the southwest of Bayou Gauche to slow tidal-influenced water exchange, trap sediment, and protect vegetation along Bayou Bienvenue. Maintenance was performed in 2002 and 2004.
Vegetation		Turtle Cove	VP	N/A	N/A	Chaisson	Smith	StJo.	6	1987	N/A	N/A	N/A	N/A	$3,254	A total of 480 giant cutgrass (*Zizaniopsis miliacea*) plants were used over 2,400 linear feet of shoreline in order to establish vegetation in a reach of eroded shoreline on Lake Pontchartrain. These plants were installed behind a rock breakwater structure.
Vegetation		Madisonville Lighthouse	VP	N/A	N/A	Quinn	Burns	StT.	10	1988	N/A	N/A	N/A	N/A	$5,203	A total of 4,400 smooth cordgrass (*Spartina alterniflora*) plants were used to decrease erosion from wave action in Lake Pontchartrain near the Madisonville Lighthouse, which is located on a peninsula extending about 600 feet into Lake Pontchartrain. Plants were installed around a small nearby island and along the sides of the peninsula where there was no rock protection.
Vegetation		Goose Point	VP	N/A	N/A	Schedler	Burns	StT.	9	1991	N/A	N/A	N/A	N/A	$40,000	A total of 10,000 single stems of smooth cordgrass (*Spartina alterniflora*) were used along the north shore of Lake Pontchartrain and Bayou LaCombe.
Vegetation		LaBranche Wetlands	VP	N/A	N/A	Chaisson	Smith	StC. Jeff.	27	1991	N/A	N/A	N/A	N/A	$24,000	A total of 2,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) plants and 2,000 seashore paspalum (*Paspalum vaginatum*) plants were planted along shorelines, across interior marshes, and across mudflats, which have a history of extensive nutria damage.
Vegetation		LaBranche Sediment Fence	VP	N/A	N/A	Chaisson	Smith	StC.	5	1992	N/A	N/A	N/A	N/A	$3,432	Approximately 210 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) and 209 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were planted to renourish marsh areas impacted by nutria herbivory.
Vegetation		Goose Point 1	VP	N/A	N/A	Schedler	Burns	StT.	7	1992	N/A	N/A	N/A	N/A	$16,000	A total of 4,000 smooth cordgrass (*Spartina alterniflora*) plants were used to establish a plant community on newly deposited silts and sands, which the Christmas tree fence had effectively trapped.
Vegetation		Goose Point 1	VP	N/A	N/A	Schedler	Burns	StT.	7	1993	N/A	N/A	N/A	N/A	$16,000	A total of 4,000 smooth cordgrass (*Spartina alterniflora*) plants were used to establish a plant community on newly deposited silts and sands, which the Christmas tree fence had effectively trapped.

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Vegetation		94 Goose Point	VP	N/A	N/A	Schedler	Burns	StT.	4	1994	N/A	N/A	N/A	N/A	$3,693	A total of 3,000 single stem smooth cordgrass (*Spartina alterniflora*) plants and 500 peat pots of seashore paspalum (*Paspalum vaginatum*) were used to establish perennials in a marsh experiencing erosion and degradation from wave and tidal energy from Lake Pontchartrain. Seventy-three percent of the plants were protected by nutria exclusion fence.
Vegetation		MRGO	VP	N/A	N/A	Boasso	Hutter	StB.	17	1995	N/A	N/A	N/A	N/A	$10,299	A total of 1,500 gallon containers of smooth cordgrass (*Spartina alterniflora*) were used along the Mississippi River Gulf Outlet (MRGO) in order to create marsh and to provide shoreline protection along Bayou Dupree.
Vegetation		95 Goose Point	VP	N/A	N/A	Schedler	Burns	StT.	4	1995	N/A	N/A	N/A	N/A	$3,866	A total of 3,000 single stem smooth cordgrass (*Spartina alterniflora*) plants were used to establish perennial vegetation on a bare mudflat area within a marsh experiencing degradation and erosion from wave and tidal energy from Lake Pontchartrain.
Vegetation		LaBranche Marsh Creation	VP	N/A	N/A	Chaisson	Smith	StC.	18	1996	N/A	N/A	N/A	N/A	$12,800	A total of 1,600 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted in the interior spoil disposal area to enhance productivity.
Vegetation		Bayou Bienvenue	VP	N/A	N/A	Boasso	Hutter	StB.	13	1996	N/A	N/A	N/A	N/A	$7,580	A total of 430 trade gallons of black mangrove (*Avicennia germinans*) trees and 688 smooth cordgrass (*Spartina alterniflora*) trade gallons were used on Bayou Bienvenue along the levee and along an interior borrow canal in order to decrease shoreline erosion.
Vegetation		Turtle Cove	VP	N/A	N/A	Chaisson	Smith	StJo.	6	1996	N/A	N/A	N/A	N/A	$3,840	A total of 480 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) plants were used to establish giant cutgrass along an area of eroded shoreline, which is protected by a gabion breakwater structure.
Vegetation		96 Goose Point	VP	N/A	N/A	Schedler	Burns	StT.	15	1996	N/A	N/A	N/A	N/A	$16,000	A total of 4,000 single stems of smooth cordgrass (*Spartina alterniflora*) were used to vegetate an exposed mudflat in order to help prevent marsh erosion and degradation. All plants were enclosed in a nutria exclusion fence.
Vegetation		97 Goose Point	VP	N/A	N/A	Schedler	Burns	StT.	20	1997	N/A	N/A	N/A	N/A	$13,600	A total of 1,200 trade gallons of smooth cordgrass (*Spartina alterniflora*) and 500 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to provide a buffer against wave action and to combat interior marsh degradation and erosion.
Vegetation		98 Goose Point	VP	N/A	N/A	Schedler	Burns	StT.	23	1998	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to provide a vegetative buffer against wave action from Lake Pontchartrain.
Vegetation		LaBranche '98	VP	N/A	N/A	Chaisson	Smith	StC.	14	1998	N/A	N/A	N/A	N/A	$9,600	A total of 1,200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted on a spoil site located in the interior marsh area. The establishment of the plants will provide stability in case of damage to the surrounding levee.
Vegetation		Hog Island	VP	N/A	N/A	Boasso	Crowe	StT.	18	1999	N/A	N/A	N/A	N/A	$10,848	A total of 800 giant cutgrass (*Zizaniopsis miliacea*) trade gallons and 800 California bulrush (*Schoenoplectus californicus*) trade gallons were used to provide a vegetation buffer along an eroding shoreline segment.
Vegetation		LaBranche '99	VP	N/A	N/A	Chaisson	Smith	StC.	11	1999	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to enhance the productivity and wildlife habitat of the LaBranche marsh area.

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Vegetation		LaBranche '99 II	VP	N/A	N/A	Chaisson	Smith	StC.	11	1999	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to enhance the productivity and wildlife habitat of the LaBranche marsh area.
Vegetation		Blind River	VP	N/A	N/A	Amedee	Smiley	Asc.	14	2000	N/A	N/A	N/A	N/A	$8,136	A total of 200 trade gallons of California bulrush (*Schoenoplectus californicus*) and 1,000 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) plants were used in selected areas to provide a vegetation buffer and reclaim eroded areas along the banks of Blind River.
Vegetation		West Pearl River	VP	N/A	N/A	Boasso	Crowe	StT.	9	2000	N/A	N/A	N/A	N/A	$5,424	A total of 400 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) and 400 trade gallons of California bulrush (*Schoenoplectus californicus*) plants were used along a barren channel bank to stabilize the eroding bank.
Vegetation		LaBranche 2000	VP	N/A	N/A	Chaisson	Smith	StC.	23	2000	N/A	N/A	N/A	N/A	$16,000	Approximately 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted in the interior marsh to enhance productivity and improve wildlife habitat.
Vegetation		Saveiro Canal	VP	N/A	N/A	Amedee	Smiley	Asc.	6	2000	N/A	N/A	N/A	N/A	$4,000	A total of 500 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were planted along Saveiro Canal, east of Sorrento, to create a buffer against shoreline erosion.
Vegetation		Bayou LaBranche	VP	N/A	N/A	Chaisson	Smith	StC.	11	2001	N/A	N/A	N/A	N/A	$7,558	A total of 1,000 California bulrush (*Schoenoplectus californicus*) plants were placed along Bayou LaBranche to provide a buffer against shoreline erosion. This particular stretch of the canal bank is currently at risk of breaching, allowing water exchange between the canal and the adjacent marsh.
Vegetation		Lake Maurepas	VP	N/A	N/A	Amedee	Smiley	Liv.	9	2001	N/A	N/A	N/A	N/A	$7,524	A total of 800 giant cutgrass (*Zizaniopsis miliacea*) plants were used in an attempt to close off an abandoned oil field canal located three miles north of the Blind River - Lake Maurepas junction.
Vegetation		Goose Point Demonstration	VP	N/A	N/A	Schedler	Burns	StT.	11	2001	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to establish a vegetative buffer along the shoreline and to observe the effects of fertilization of plants in natural environments of newly planted vegetation as well as existing vegetation.
Vegetation		Saveiro Canal	VP	N/A	N/A	Amedee	Smiley	Asc.	9	2001	N/A	N/A	N/A	N/A	$6,400	A total of 400 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) and 400 trade gallons of California bulrush (*Schoenoplectus californicus*) were planted to protect the existing canal bank from erosion.
Vegetation		Big Branch Shoreline Demo	VP	N/A	N/A	Schedler	Burns	StT.	7	2002	N/A	N/A	N/A	N/A	$4,816	A total of 500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) and 136 4-inch containers of bitter panicum (*Panicum amarum*) were planted to demonstrate the effects of fertilizer application to smooth cordgrass on a shoreline planting and to demonstrate the effectiveness of establishing bitter panicum on shallow sand banks. A total of 2,908 linear feet of plantings were created.
Vegetation		Lake Maurepas Demonstration	VP	N/A	N/A	Quinn	Powell	Liv.	7	2002	N/A	N/A	N/A	N/A	$6,200	A river bank planting using 600 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and a shoreline planting using 200 feet of coconut fiber logs planted with 100 plugs of giant cutgrass (*Zizaniopsis miliacea*) were done to create a vegetative buffer along Blind River and to stabilize barren shoreline of Lake Maurepas in an area which was used by the oil industry. A total of 3,200 feet of river bank and lake shoreline were protected.

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Vegetation		New River Canal	VP	N/A	N/A	Amedee	Smiley	Asc.	9	2002	N/A	N/A	N/A	N/A	$6,400	This canal bank planting used 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) to vegetate a newly lifted levee bank along the canal. A total of 4,000 feet of canal bank was vegetated.
Vegetation		Point Platte Demonstration	VP	N/A	N/A	Schedler	Burns	StT.	1	2003	N/A	N/A	N/A	N/A	$1,550	Approximately 100 trade gallon containers and 150-feet of smooth cordgrass (*Spartina alterniflora*) plugs, impregnated into coconut fiber, were planted to establish vegetation on an oil canal spoilbank.
Vegetation		Amite River Diversion Canal	VP	N/A	N/A	Amedee	Smiley	Liv.	9	2003	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to establish a vegetative buffer to dampen wave action along the intersection of two channels.
Vegetation		Bayou Conway	VP	N/A	N/A	Amedee	Smiley	Asc.	11	2003	N/A	N/A	N/A	N/A	$8,000	Approximately 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted on Bayou Conway to create vegetation on new spoil.
Vegetation		Big Branch Demo '04	VP	N/A	N/A	Schedler	Burns	StT.	5	2004	N/A	N/A	N/A	N/A	$2,725	A total of 200 trade gallon containers and 225 feet of coconut fiber mats impregnated with smooth cordgrass (*Spartina alterniflora*) were planted to determine whether or not coconut mats prevent herbivore damage.
Vegetation		Lake Maurepas Demo II	VP	N/A	N/A	Amedee	Smiley	Liv.	1	2004	N/A	N/A	N/A	N/A	$1,650	Approximately 150 feet of coconut fiber mats and 100 feet of coconut fiber logs with giant cutgrass (*Zizaniopsis miliacea*) were used to create a vegetative buffer to stabilize the barren shoreline of Lake Maurepas.
Vegetation		New River '04	VP	N/A	N/A	Amedee	Lambert	Asc.	9	2004	N/A	N/A	N/A	N/A	$6,400	Approximately 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation on a newly dredged canal.
Vegetation		St. Bernard Wetlands Foundation	VP	N/A	N/A	Boasso	Hutter	StB.	1	2004	N/A	N/A	N/A	N/A	$750	A total of 150 feet of coconut fiber mats impregnated with smooth cordgrass (*Spartina alterniflora*) were planted to demonstrate the effectiveness of coconut fiber materials in a saline marsh.
Vegetation		West Lake Maurepas	VP	N/A	N/A	Amedee	Faucheux	StJo.	9	2004	N/A	N/A	N/A	N/A	$6,400	A total of 4,000 feet of shoreline planting using 800 trade gallons containers of California bulrush (*Schoenoplectus californicus*) were planted on a newly accreted area at the mouth of the Blind River.
Vegetation		Point Platte - '05	VP	N/A	N/A	Schedler	Burns	StT.	1	2005	N/A	N/A	N/A	N/A	$1,170	A total of 90 feet of coconut fiber mats with impregnated smooth cordgrass (*Spartina alterniflora)* and 80 feet of unvegetated coconut fiber logs were planted to accelerate silting of an interior marsh.
Vegetation		Blind River '05	VP	N/A	N/A	Amedee	Smiley	Liv.	7	2005	N/A	N/A	N/A	N/A	$4,800	A total of 600 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to vegetate a natural silt deposit on the eastern bank of Blind River.
Vegetation		Bayou Black	VP	N/A	N/A	Amedee	Lambert	Asc.	9	2005	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation on a newly dredged canal.

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Vegetation		Hog Island '06	VP	N/A	N/A	Boasso	Crowe	StT.	9	2006	N/A	N/A	N/A	N/A	$6,400	The goal of this project is to plant 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to decrease fetch length in a large open pond.
Vegetation		Springfield '06 wildlife enhancement	VP	N/A	N/A	Amedee	Smiley	Liv.	10	2006	N/A	N/A	N/A	N/A	$2,175	The goal of this project was to plant 4,350 bare root trees. The following species were planted: Shumard oak (*Quercus shumardii*), Southern Red oak (*Q. falcata*), Water oak (*Q. nigra*), Sawtooth oak (*Q. acutissima*), White oak (*Q. alba*), Native Sweet pecan (*Carya illinoensis*), Native Mayhaw (*Crataegus opara*), and Persimmon (*Diospyros virginiana*) to reestablish hardwood and fruit bearing trees in an overpopulated area of dense tallow trees.
Vegetation		Amite River '06 wildlife enhancement	VP	N/A	N/A	Fontenot	Erdey	Liv.	10	2006	N/A	N/A	N/A	N/A	$2,175	The goal of this project was to plant 4,350 bare root trees. The following species were planted: cow oak (*Quercus michauxii*), Nuttall oak (*Q. texana*), Water oak (*Q. nigra*), Sawtooth oak (*Q. acutissima*), Native Sweet pecan (*Carya illinoensis*), Native Mayhaw (*Crataegus opara*), and Persimmon (*Diospyros virginiana*) to reestablish hardwood and fruit bearing trees along the Amite River for wildlife enhancement purposes.
Vegetation		MRGO '06	VP	N/A	N/A	Boasso	Odinet	StB.	3	2006	N/A	N/A	N/A	N/A	$4,800	A total of 1,200 smooth cordgrass (*Spartina alterniflora*) plugs were planted along 3,000 feet of interior marsh to vegetate newly deposited dredged material.
Vegetation		Bayou Conway '06	VP	N/A	N/A	Amedee	Smiley	Asc.	9	2006	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation on a newly dredged canal.
Section 204/1135		MRGO, Berm, Mile -2 to -3	DM	N/A	N/A	Boasso	Wooton	Plaq.	N/A	1999	N/A	N/A	N/A	N/A	$150,000	This Section 204 project utilized material from maintenance dredging activities along the Mississippi River Gulf Outlet (MRGO) to nourish the littoral system that feeds Breton Island. This project was completed in August 1999.
Section 204/1135		MRGO, Breton Island Restoration, Mile 2.3 to 4.0	DM	N/A	N/A	Boasso	Wooton	Plaq.	26	1999	N/A	N/A	N/A	N/A	$1,050,000	This Section 204 project utilized material from maintenance dredging activities along the Mississippi River Gulf Outlet (MRGO) to repair Breton Island. This project was completed in November 1999.
Section 204/1135		MRGO (1999), Mile 14 to 11	DM	N/A	N/A	Boasso	Odinet	StB.	50	1999	N/A	N/A	N/A	N/A	$350,000	This Section 204 project provided for the unconfined placement of 3,468,901 cubic yards of material into shallow water adjacent to the south jetty at about mile 15.3. The material was dredged from miles 14.0 to 11.0 of the Mississippi River Gulf Outlet (MRGO) navigation channel and placed to an elevation conducive to marsh vegetation establishment.
Section 204/1135		MRGO, Mile 14 to 12 (2002)	DM	N/A	N/A	Boasso	Odinet	StB.	50	2002	N/A	N/A	N/A	N/A	$290,000	The project involved pumping approximately 1.6 million cubic yards to create some 50 acres of marsh behind the MRGO jetty. This project was fast tracked due to the impact of Hurricane Lili and Tropical Storm Isidore.

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Section 204/1135		MRGO, Mile 14 to 12 (2003)	DM	N/A	N/A	Boasso	Odinet	StB.	113	2003	N/A	N/A	N/A	N/A	$580,000	This project involved pumping 4.3 million cubic yards of sediments to create 113 acres of marsh. The material was dredged from miles 14.0 to 12.0 of the Mississippi River Gulf Outlet (MRGO) navigation channel and placed at an elevation conducive to marsh vegetation establishment.
FEMA	DSR-81768	LaBranche Wetlands (FEMA)	SP	N/A	N/A	Chaisson	Smith	StC.	N/A	2000	N/A	N/A	N/A	N/A	$42,800	A 700-foot section of a Christmas tree brush fence was repaired. This project was damaged by Hurricane Georges, Hurricane Earl, and Tropical Storm Francis in 1998.
Other	HPL-MIT	Lake Pontchartrain Mitigation Project	SP	N/A	N/A	Chaisson	Smith	StJo.	600	1996	N/A	N/A	N/A	N/A	$2,222,892	This project consisted of a near-shore, segmented breakwater system in Lake Pontchartrain parallel to a five-mile reach of the Manchac Wildlife Management Area. The project specifically mitigated for damages resulting from construction of the Lake Pontchartrain Hurricane Protection Project.
Other	PO-4355NP4	Fontainebleau State Park Mitigation	SP DM	N/A	N/A	Schedler	Burns	StT.	6	1999	N/A	N/A	N/A	N/A	$225,000	This project repaired a section of breached shoreline by depositing approximately 9,000 cubic yards of sand for a feeder berm on the easternmost end of Fontainebleau State Park.

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); State=Restoration projects funded primarily by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Program (Christmas Tree 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; FEMA= Federal Emergency Managment Agency projects; CIAP= Coastal Impact Assistance Program projects.

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; OM=Outfall Management; BI=Barrier Island; SD=Sediment Diversion.

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

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

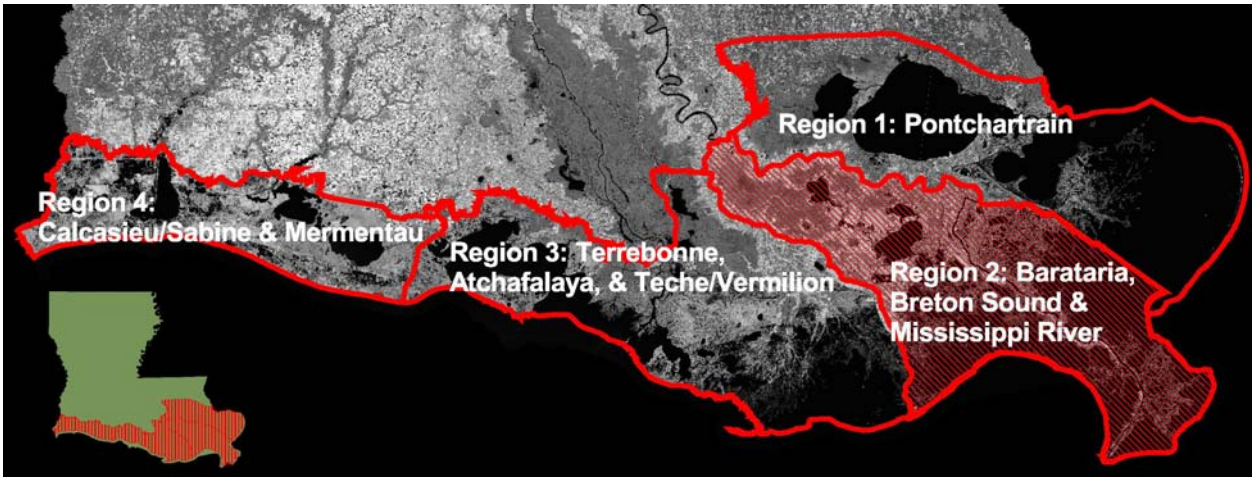
Parish: Asc.=Ascension, Asu.=Assumption, Cal.=Calcasieu, Cam.=Cameron, Ibe.=Iberia, Jef.=Jefferson, Laf.=Lafourche, Orl.=Orleans, Plaq.=Plaquemines, StB.=St. Bernard, StC.=St. Charles, StJo.=St. John the Baptist, StM.=St. Mary, StT.=St. Tammany, Tan.=Tangipahoa, Ter.=Terrebonne, Ver.=Vermilion.

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

Baseline Cost Estimates 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. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable.

REGION 2



INTRODUCTION

Region 2 encompasses the Breton Sound and Barataria Basins and the Mississippi River Delta. It extends from the MRGO on the east to Bayou Lafourche on the west, and from the Mississippi River on the north to the Gulf of Mexico on the south. This region covers all or part of the following parishes: St. Bernard, Plaquemines, Jefferson, Lafourche, St. Charles, St. James, St. John the Baptist, and Assumption.

Region 2 contains 894,700 acres of coastal wetlands. These wetlands are classified as 90,000 acres of bottomland hardwood forests; 146,000 acres of cypress-tupelo swamps; 220,100 acres of fresh marshes; 73,000 acres of intermediate marshes; 214,500 acres of brackish marshes; and 151,100 acres of saline marshes.

This region lost approximately 52,160 acres of wetlands between 1990 and 2000 (an average of 5,184 acres per year). This region is currently experiencing some of the highest rates of land loss across Louisiana's coast; therefore, there is a high concentration of restoration projects in the area. Factors that are contributing to this degradation include: altered hydrology, oil and gas access canals and associated saltwater intrusion, nutria herbivory, wind induced shoreline erosion, and high subsidence rates.

Habitat objectives for the year 2050 are the result of a cooperative effort between the public, parish governments, and Coast 2050 Regional Team members. Several large diversions into the Barataria Basin are proposed to extend the fresh marshes south of Little Lake and across the basin through the Myrtle Grove area. Another objective is to create a new strip of fresh marsh parallel to the Mississippi River from West Pointe a la Hache to Venice and near the river in American Bay. A band of intermediate marsh is desired gulfward of the fresh marshes, and brackish marshes are desired to its south in the vicinity of Barataria Bay. Additional objectives include the restoration and maintenance of barrier islands and the barrier shoreline.

Coast 2050 identified specific regional ecosystem strategies for protecting and sustaining the region's coastal resources. These specific ecosystem strategies can be grouped into one of the following five general categories: restoring swamps; restoring and sustaining marshes; protecting bay and lake shorelines; restoring and maintaining barrier headlands, islands,

and shorelines; and maintaining critical landforms on the Central Basin Land Bridge.

PROJECT SUMMARIES

A total of 180 restoration projects have been authorized for Region 2 (Figures 8 and 9, Table 2). Project specific information is presented below, organized by project funding source.

CWPPRA

A total of 49 projects have been authorized under the direction of CWPPRA in Region 2. They are anticipated to benefit 44,199 acres of wetlands at a cost of $323,155,364. This includes the Lake Hermitage Marsh Creation (BA-42) project, the Bayou Lamoque Freshwater Diversion (BS-13) project, and the Venice Ponds Marsh Creation and Crevasses (MR-15) project which were authorized in 2006 on the 15th Project Priority List.

The CWPPRA Task Force officially deauthorized nine projects in Region 2, these projects include: Fourchon Hydrologic Restoration (BA-18), Bayou Perot and Bayou Rigolettes Marsh Restoration (BA-21), White's Ditch Outfall Management (BS-04a), Grand Bay Crevasse (BS-07), Pass-a-Loutre Crevasse (MR-07), Beneficial Use of Hopper Dredged Material Demonstration (MR-08), Upper Oak River Freshwater Siphon, Phase I (BS-09), Bayou L'Ours Ridge Hydrologic Restoration (BA-22), and LA Highway 1 Marsh Creation (BA-29).

State

Thirteen projects have been implemented in Region 2 and funded by the Wetlands Trust Fund and/or local parish funds. These projects benefited an estimated 11,298 acres of land at a cost of $21,271,508.

Parish Coastal Wetlands Restoration Program

A total of twelve Christmas tree projects have been constructed in Region 2. The projects include Goose Bayou, Leeville #2, Hwy 61 Borrow Canal, Fourchon, Eighty Arpent Canal, Jefferson Oilfield Canals, Grand Isle, Whiskey Canal, Bayou Gauche, Bayou Segnette, Catfish Lake, and St. James Parish. In 2006, the Fourchon and Catfish Lake Christmas tree projects were refurbished.

DNR/NRCS/SWCC Vegetation Planting Program

Since 1988, a total of 99 vegetation planting projects have been implemented in Region 2. Several phases, spanning multiple years, exist for many of the planting projects. The vegetation planting projects that were constructed in 2006 in Region 2 are Grand Isle, East Bayou Dupont, Couba Canal, Mason Heirs, Fourchon, Little Lake/Round Lake, Grand Bayou, and Pass Chaland.

Section 204/1135

Within Region 2, the three Section 204/1135 projects which created marsh using dredged material are Grand Terre Island Wetland Creation, Barataria Bay Waterway (mile 31 to 24.5), and Barataria Bay Waterway (Grand Terre, Phase II). Approximately 115 acres of marsh were created on Grand Terre Island. The two Barataria Bay Waterway projects created approximately 205 acres of marsh along 6.5 miles of waterway.

Water Resources Development Act

Two freshwater diversion projects, authorized under the WRDA, will benefit the largest acreage of wetlands, thus far. The Davis Pond Freshwater Diversion project, completed in 2001, will preserve 33,000 acres of deteriorating wetlands in the Barataria Basin. The Caernarvon Freshwater Diversion project, completed in

1991, will preserve 16,000 acres of wetlands in the Breton Sound hydrologic basin. Operation of the Caernarvon diversion is anticipated to help rehabilitate marshes lost and damaged by Hurricane Katrina in the upper Breton Sound Basin within Region 2.

Other

In Region 2, the Fifi Island Restoration Project, which received funding from the CIAP of 2001, was constructed in 2003. An additional project, Fisheries Habitat Restoration on West Grand Terre Island at Fort Livingston, was also constructed in 2003 and received funding through a NOAA Fisheries grant.

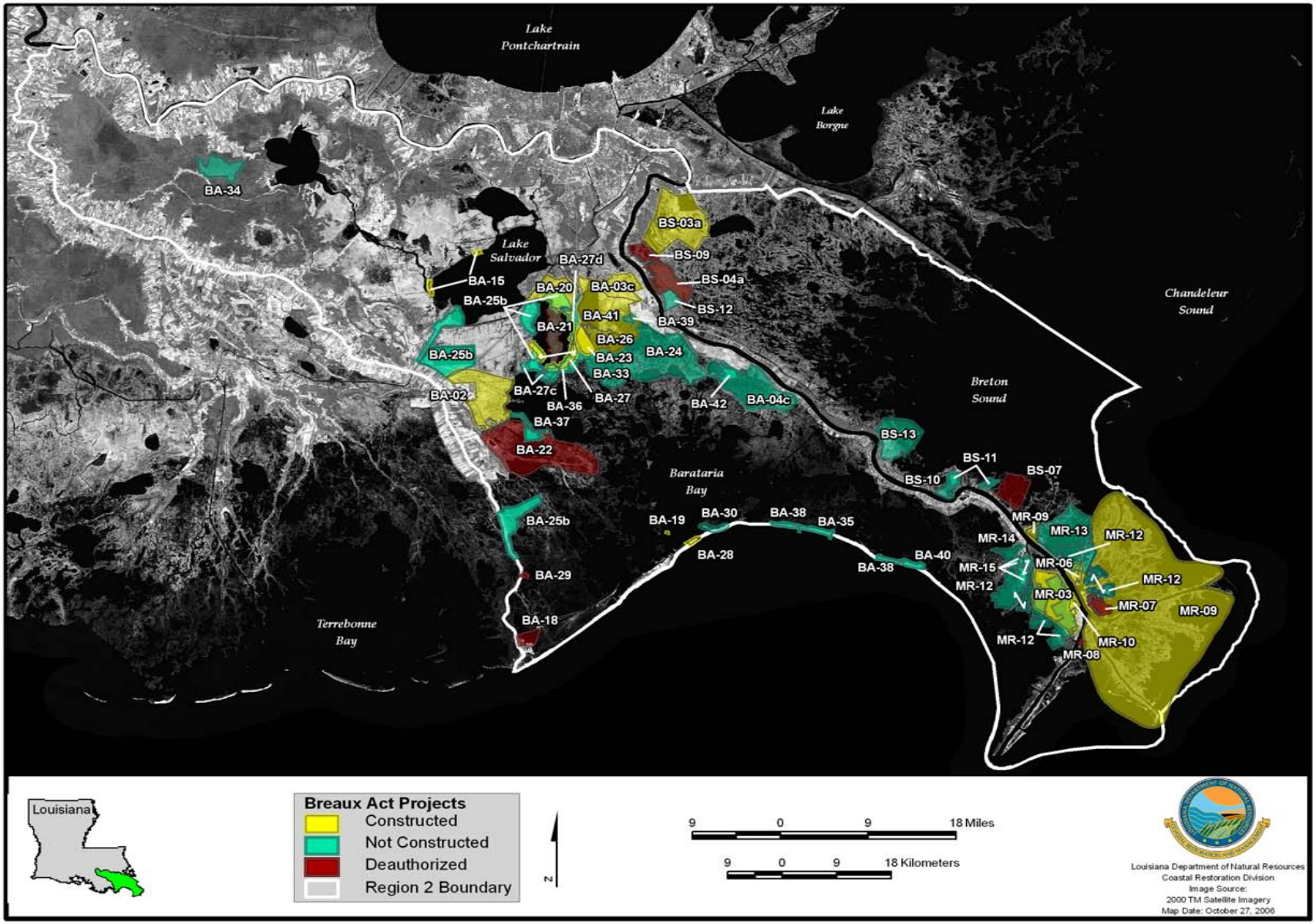


Figure 8. Location of Breaux Act projects authorized in Coast 2050 Region 2.

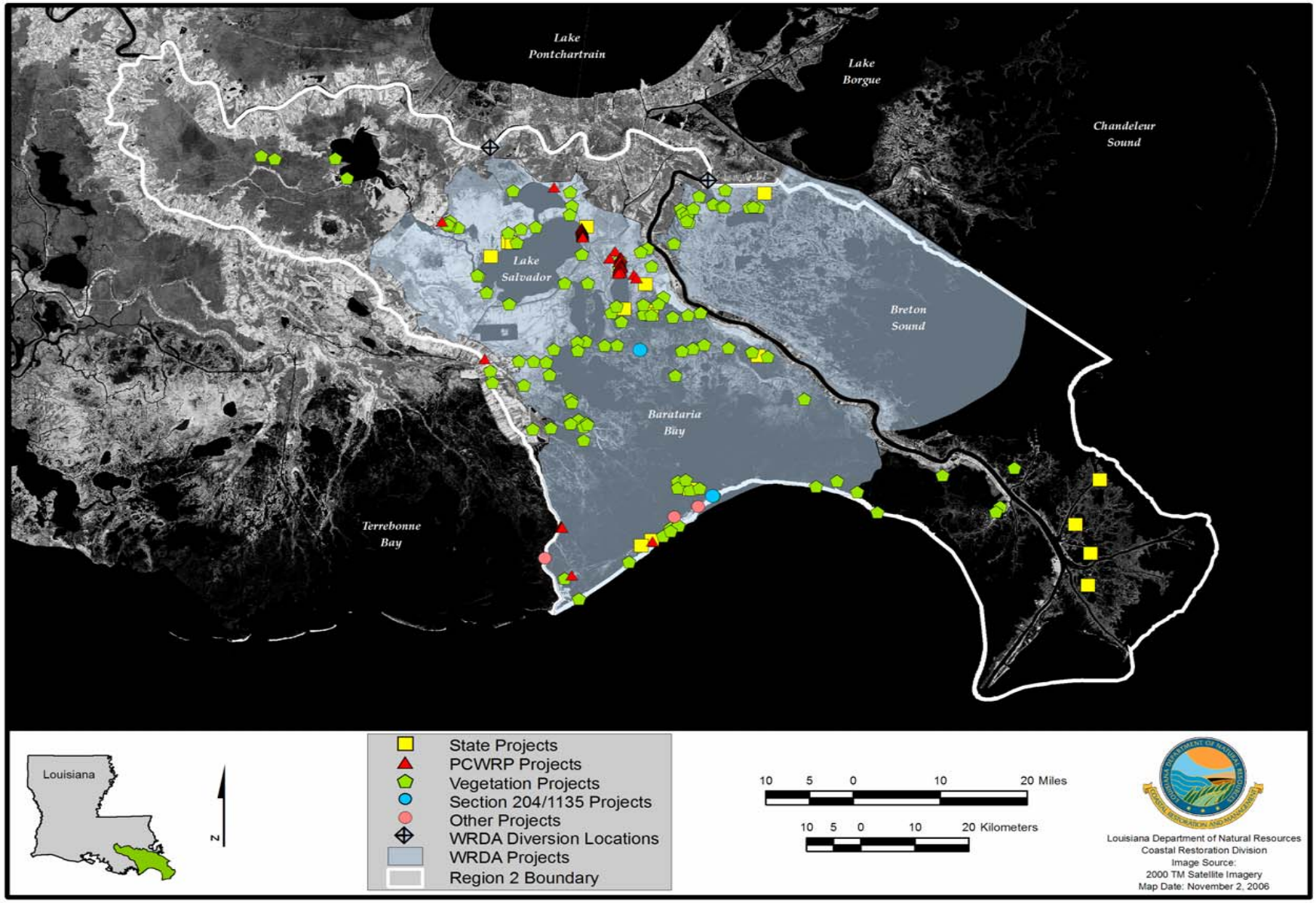


Figure 9. Location of State, PCWRP, Vegetation, Section 204/1135, WRDA, and Other projects in Coast 2050 Region 2.

Table 2. Restoration projects completed or pending in Coast 2050 Region 2.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BA-02 (BA-02)	GIWW (Gulf Intracoastal Waterway) to Clovelly Hydrologic Restoration	HR	1	NRCS	Dupre	Pitre	Laf.	175	2000	$981,549	$5,462,880	$2,471,703	$8,141,512	$8,916,131	This project will protect approximately 14,948 acres of intermediate wetlands by restoring natural hydrologic conditions. The project utilizes canal plugs, weirs, and the rebuilding of low overflow banks to better retain freshwater and prevent rapid salinity increases resulting from saltwater intrusion. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Katrina.
Breaux Act	BA-03c (BA-03c)	Naomi Outfall Management	OM	5	NRCS	Boasso, Ullo	Wooton	Plaq.	633	2002	$303,108	$800,169	$1,078,150	$1,686,865	$2,181,427	The goal of this project is to reduce saltwater intrusion and enhance wetland productivity by managing the outfall of eight existing siphons. The two fixed crest weirs assist in the management of existing siphon outfall water from the Mississippi River into adjacent west bank wetlands.
Breaux Act	BA-04c (BA-04c)	West Pointe a la Hache Outfall Management	OM	3	NRCS	Boasso	Wooton	Plaq.	1,087	Pending	$637,409	$1,764,443	$1,666,193	$881,148	$4,068,045	This project provides for management of the West Pointe a la Hache siphon outfall area to maximize the retention of freshwater, nutrients, and sediment within interior brackish marshes to counteract saltwater intrusion and wetland loss. This project utilizes water control structures to divert water from the main distributary channels to secondary channels and allow more efficient flow over the marsh.
Breaux Act	BA-15 (BA-15)	Lake Salvador Shore Protection Demonstration	SP	3	NMFS	Chaisson	Wooton	StC.	N/A	1998	$363,162	$2,058,356	$380,264	$1,444,628	$2,801,782	The project is intended to maintain the shoreline along a section of Lake Salvador and help re-establish the natural hydrology of interior marsh. Phase I of the project was constructed to demonstrate the effectiveness of four separate types of segmented breakwaters in a poor soil environment. Phase II of the project included the installation of 8,000 feet of continuous rock structure along the western section of the lake.
Breaux Act	BA-18 (BA-18)	Fourchon Hydrologic Restoration (Deauthorized)	HR	1	NMFS	Dupre	Pitre	Laf.	N/A	Deauth.	$7,340	N/A	$363	$252,036	$7,703	The goal of this project was to restore tidal exchange to 2,400 acres of impounded wetlands. The project was officially deauthorized by the Breaux Act Task Force in July of 1994 at the request of the landowner.
Breaux Act	BA-19 (BA-19)	Barataria Bay Waterway Wetland Restoration	MC	1	USACE	Ullo	Wooton	Jef.	445	1996	$157,135	$945,791	$64,906	$1,759,257	$1,167,832	This project was authorized to create marsh in shallow water areas adjacent to the Barataria Bay Waterway (BBWW). However, oyster leases prohibited the use of the dredged material at all of the marsh creation sites. As an alternative, approximately 9 acres of vegetated wetlands were created adjacent to the state-funded Queen Bess project by constructing a rock dike and filling the containment area with dredged material from the BBWW.
Breaux Act	BA-20 (PBA-35)	Jonathan Davis Wetland Protection	HR	2	NRCS	Ullo	Wooton	Jef.	510	2001	$1,385,628	$19,373,499	$8,127,489	$3,398,867	$28,886,616	The goal of this project is to restore the natural hydrologic conditions of the area and reduce shoreline erosion. This was accomplished through constructing a series of water control structures and a rock dike.
Breaux Act	BA-21 (XBA-65a)	Bayou Perot/Bayou Rigolettes Marsh Restoration (Deauthorized)	MC	3	NMFS	Ullo	Wooton	Jef. Laf.	N/A	Deauth.	$14,880	N/A	$6,083	$1,835,047	$20,963	This project was authorized to protect deteriorated intermediate-to-brackish marsh located between Lake Salvador and Little Lake by using dredged material to re-establish the shoreline. Due to an unstable and rapidly eroding site, the project was deemed unfeasible and was officially deauthorized by the Breaux Act Task Force in January of 1998.
Breaux Act	BA-22 (PBA-34i)	Bayou L'Ours Ridge Hydrologic Restoration (Deauthorized)	HR	4	NRCS	Dupre	Pitre	Laf.	N/A	Deauth.	$265,334	N/A	$105,899	$2,418,676	$371,232	This project was proposed to restore natural hydrologic flow to the marsh by reinforcing breached areas of the Bayou L'Ours Ridge through a series of canal closures and two water control structures. The project was officially deauthorized by the Breaux Act Task Force in April 2003.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BA-23 (PBA-12a)	Barataria Bay Waterway West Side Shoreline Protection	SP	4	NRCS	Ullo	Wooton	Jef.	232	2000	$284,550	$1,851,223	$877,592	$2,192,418	$3,013,365	This project is intended to reduce erosion of the channel bank and protect exposed marsh from increased water exchange and rapid changes in salinity. The project strategies included armoring the western bank of the Barataria Bay Waterway (BBWW) with approximately 9,400 linear feet of rock material and installation of a water control structure to limit saltwater intrusion into the area.
Breaux Act	BA-24 (XBA-48a)	Myrtle Grove Siphon	FD	5	NMFS	Boasso, Ullo	Wooton	Plaq.	1,119	Pending	$482,951	N/A	$6,152	$15,525,950	$489,103	The goal of the project is to reduce saltwater intrusion and to nourish existing marsh. This will be accomplished by diverting water through a siphon from the Mississippi River to adjacent wetlands.
Breaux Act	BA-25 (PBA-20)	Bayou Lafourche Siphon (Phase 1)	FD	5	EPA	Dupre	Pitre	Ter. Laf.	N/A	N/A	$1,500,000	N/A	N/A	$24,487,337	$1,500,000	The goal of the project is to reduce marsh loss adjacent to Bayou Lafourche by introducing nutrient and sediment laden river water through large siphon pipes. This project was reauthorized on the 11th PPL as BA-25b.
Breaux Act	BA-25b	Mississippi River Reintroduction Into Bayou Lafourche	FD	11	EPA	Chaisson, Dupre, Ullo	Baldone, Dartez, Dove, Pitre, Triche, Wooton	Laf. Asc. Asu.	988	Pending	$9,619,600	N/A	$80,400	$9,700,000	$9,700,000	The goal of the project is to restore and protect the health of marshes in the Barataria and Terrebonne basins through reintroduction of sediment and nutrient laden Mississipp River water via Bayou Lafourche. This project was originally authorized on the 5th PPL as BA-25.
Breaux Act	BA-26 (PBA-12b)	Barataria Bay Waterway East Side Shoreline Protection	SP	6	NRCS	Ullo	Wooton	Orl. Jef.	217	2001	$365,838	$3,560,349	$1,307,290	$5,019,900	$5,224,477	The objective of this project is to rebuild the banks of the Barataria Bay Waterway (BBWW), to protect the adjacent marsh from excessive tidal action, and to prevent saltwater intrusion. The project consists of installing a 17,600 linear-foot rock dike on the east bank of the BBWW.
Breaux Act	BA-27 (XBA-63/63ii)	Barataria Basin Landbridge Shoreline Protection, Phases 1 and 2	SP	7 and 8	NRCS	Ullo, Dupre	Wooton, Pitre	Jef. Laf.	1,304	Pending	$1,826,285	$25,908,814	$1,694,259	$17,515,029	$29,429,358	This project is designed to protect a deteriorated intermediate-to-brackish marsh located between Lake Salvador and Little Lake by reducing shoreline erosion. Phases 1 and 2 of this project will provide 35,000 linear feet of shoreline protection along Bayous Pero and Rigolettes within the Barataria Basin.
Breaux Act	BA-27c (XBA-63iii)	Barataria Basin Landbridge Shoreline Protection, Phase 3	SP	9	NRCS	Ullo, Dupre	Wooton, Pitre	Jef. Laf.	264	2004*	$1,284,703	$11,496,297	$38,526	$15,204,620	$12,819,526	Phase 3 of this project encompasses approximately 41,000 feet of shoreline protection. Approximately 26,000 feet of protection will be along the west bank of Bayou Perot and the north shore of Little Lake in Lafourche Parish. In Jefferson Parish, about 9,600 feet of the shoreline protection will be along the east bank of Bayou Rigolettes and approximately 2,700 feet along each bank of Harvey Cutoff. *Construction Units 1-3 have been completed.
Breaux Act	BA-27d	Barataria Basin Landbridge Shoreline Protection, Phase 4	SP	11	NRCS	Ullo	Wooton	Jef.	256	2006	$1,574,561	$8,704,760	$6,642,206	$22,787,951	$16,921,527	Phase 4 of this project begins at the intersection of Bayou Rigolettes and Barataria Bay Waterway (BBWW) and extends about 31,500 feet southward along the east bank of Bayou Rigolettes and ties into the northern limit of Phase 2.
Breaux Act	BA-28 (XBA-1a-i)	Vegetative Plantings of a Dredged Material Disposal Site on Grand Terre Island	VP	7	NMFS	Ullo	Wooton	Jef.	127	2001	$117,657	$166,521	$209,575	$928,895	$493,753	The goal of this project is to stabilize dredged material sites on West Grand Terre Island. This objective was achieved through vegetation plantings and by purchasing grazing rights on the island for the life of the project (20 years).

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BA-29 (BA-32a)	LA Highway 1 Marsh Creation (Deauthorized)	MC	9	EPA	Dupre	Pitre	Laf.	N/A	Deauth.	$319,700	N/A	$23,851	$1,151,484	$343,551	The objective of this project was to create marsh habitat in a large open water area adjacent to Louisiana Highway 1 using dredged material from two proposed borrow areas. This project was officially deauthorized by the Breaux Act Task Force in February of 2005.
Breaux Act	BA-30 (XBA-01a)	East/West Grand Terre Islands Restoration	BI	9	NMFS	Boasso	Wooton	Jef.	335	Pending	$2,280,777	N/A	$31,246	$1,856,203	$2,312,023	The goal of this project is to stabilize and benefit 1,575 acres of barrier island habitat and extend the island's life expectancy. Dredged material will be used to create dune and marsh habitat on East Grand Terre Island.
Breaux Act	BA-31 (Complex Project)	Delta Building South of Empire	SD	9	USACE	Boasso	Wooton	Plaq.	N/A	Pending	N/A	N/A	N/A	N/A	N/A	The objective of this project is to create marsh in open water areas south of Empire through the diversion and capture of fluvial sediment from the Mississippi River. Ultimately, the project will relay sediment to the barrier shoreline enhancing the ability of these features to regenerate and stabilize.
Breaux Act	BA-33	Delta Building Diversion at Myrtle Grove	SD	10	USACE	Boasso, Ullo	Wooton	Plaq. Jef. Laf.	8,891	Pending	$3,002,114	N/A	N/A	$3,002,114	$3,002,114	The objective of this project is to divert Mississippi River water and sediment for the creation of new emergent wetlands. The project would involve installation of gated box culverts on the west bank of the Mississippi River in the vicinity of Myrtle Grove; dedicated dredging from the Mississippi River to create marsh in the vicinity of Bayou Dupont, the Barataria Bay Waterway (BBWW), and the Wilkinson Canal; or a combination of these actions.
Breaux Act	BA-34	Mississippi River Reintroduction Into Northwest Barataria Basin	FD	10	EPA	Amedee, Chaisson	Quezaire, Triche	StJo. Laf.	941	Pending	$2,314,925	N/A	$47,762	$1,899,834	$2,362,687	The goal of this project is to restore the natural hydrologic regime and add nutrients to adjacent swamp areas. The project will utilize a freshwater diversion/siphon from the Mississippi River to northwest Barataria Basin wetlands with gapping of spoil banks and placement of culverts under LA Highway 20.
Breaux Act	BA-35	Pass Chaland to Grand Bayou Pass Barrier Shoreline Restoration	BI	11	NMFS	Boasso	Wooton	Plaq.	263	Pending	$4,330,721	$22,190,566	$2,727,401	$29,753,880	$29,248,688	This project will prevent the barrier island from being breached through the deposition of dredged material, the creation of tidal creeks and ponds, and vegetation plantings. This will provide a continuous barrier to reduce wave and tidal energy, thereby protecting the mainland shoreline from continued erosion.
Breaux Act	BA-36	Dedicated Dredging on the Barataria Basin Landbridge	MC	11	USFWS	Ullo	Wooton	Jef.	605	Pending	$441,370	N/A	$22,572	$2,294,410	$463,942	This project, in conjunction with the Barataria Basin Landbridge Shoreline Protection project (BA-27, BA-27c), will protect the functional integrity of this critical area of the Barataria Basin. This project will create emergent marsh through the deposition of dredged material into open water areas.
Breaux Act	BA-37	Little Lake Shoreline Protection/ Dedicated Dredging Near Round Lake	SP MC	11	NMFS	Dupre	Pitre	Laf.	713	Pending	$2,023,483	$31,829,321	$139,136	$35,994,929	$33,991,940	This project is designed to protect area wetlands, which currently experience high rates of shoreline erosion. This project will protect approximately 21,000 feet of Little Lake shoreline, create 488 acres of intertidal wetlands, and nourish an additional 532 acres of fragmented, subsiding marsh.
Breaux Act	BA-38	Barataria Barrier Island Complex Project: Pelican Island and Pass La Mer to Chaland Pass Restoration	BI	11	NMFS	Boasso	Wooton	Plaq.	534	Pending	$6,977,334	$58,978,833	$537,622	$61,995,587	$66,493,789	The objectives of this project are to create barrier island habitat, enhance storm-related surge and wave protection, prevent overtopping during storms, and increase the volume of sand within the active barrier system. Conceptual project plans envision dedicated dredging of local, nearshore sand sources to directly create beach, dune, and wetland habitats. This project was first authorized on the 9th PPL as Barrier Island Restoration Grande Terre to SW Pass (BA-32).
Breaux Act	BA-39	Mississippi River Sediment Delivery System - Bayou Dupont	MC	12	EPA	Boasso, Ullo	Wooton	Jef.	400	Pending	$2,693,719	N/A	$37,760	$2,192,735	$2,731,479	The goal of this project is to create/restore 474 acres of brackish marsh by delivering, via pipeline, dredged material from the Mississippi River to an adjacent area within the Barataria Basin, and planting marsh vegetation.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BA-40	Riverine Sand Mining/Scofield Island Restoration	BI	14	NMFS	Boasso	Wooton	Plaq.	234	Pending	$3,211,373	N/A	$10,514	$3,221,887	$3,211,887	The goals of this project are to repair breaches and tidal inlets in the shoreline, reinforce the existing shoreline with sand, and increase the island width with back barrier marsh creation to increase longevity.
Breaux Act	BA-41	South Shore of The Pen Shoreline Protection and Marsh Creation	SP	14	NRCS	Ullo	Wooton	Jef.	116	Pending	$1,311,146	N/A	N/A	$1,311,146	$1,311,146	The goals of this project are to stop shoreline erosion create 74 acres and nourish 107 acres of marsh located between The Pen and Barataria Bay. Approximately 1,000 feet of concrete pile and panel wall and 10,900 feet of rock revetment will be constructed along the south shore of The Pen and Bayou Dupont.
Breaux Act	BA-42	Lake Hermitage Marsh Creation	MC	15	USFWS	Boasso	Wooton	Plaq.	438	Pending	$1,197,590	N/A	N/A	$1,197,590	$1,197,590	The goals of this project are to create approximately 593 acres of wetlands, reduce tidal exchange in marshes surrounding Lake Hermitage, and reduce fetch and turbidity to enhance open water habitats. This project utilizes hydraulic dredging, terraces, a rock dike, and an earthen plug to benefit approximately 1,581 acres of brackish marsh and open water habitats.
Breaux Act	BS-03a (BS-03a)	Caernarvon Diversion Outfall Management	OM	2	NRCS	Boasso	Odinet, Wooton	Plaq.	802	2002	$397,464	$2,128,665	$2,009,870	$2,522,199	$4,536,000	The objective of this project is to promote better utilization of freshwater and nutrients from the Mississippi River via the Caernarvon diversion structure during low-discharge periods. The outfall management project includes installation of flow-through culverts with water control at 8 sites, 3 plug closures with armor protection, 13,000 feet of spoil bank restoration, and vegetation plantings where applicable. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Katrina.
Breaux Act	BS-04a (BS-04a)	White's Ditch Outfall Management (Deauthorized)	OM	3	NRCS	Boasso	Wooton	Plaq.	N/A	Deauth.	$25,341	N/A	$7,521	$756,134	$32,862	This project was designed to direct the flow of Mississippi River nutrients and sediment into the deteriorating wetlands in the Breton Sound Basin that are not directly benefited by the Caernarvon Freshwater Diversion project. Because of the failure to secure landrights, the project was officially deauthorized by the Breaux Act Task Force in January of 1998. This project was reauthorized on the 14th PPL as BS-12.
Breaux Act	BS-07 (PBS-06)	Grand Bay Crevasse (Deauthorized)	SD	4	USACE	Boasso	Wooton	Plaq.	N/A	Deauth.	$62,437	N/A	$3,310	$2,468,908	$65,747	Project goals included construction of a rock-lined opening through the rocks at the head of the Jurjevich Canal in order to establish a pathway for freshwater and sediment into Grand Bay and the adjacent marshes to create, restore, and enhance wetlands in the area. The project was officially deauthorized by the Breaux Act Task Force in July of 1998.
Breaux Act	BS-09 (PBS-1)	Upper Oak River Freshwater Siphon, Phase 1 (Deauthorized)	FD	8	NRCS	Boasso	Wooton	Plaq.	N/A	Deauth.	$56,476	N/A	N/A	$2,500,239	$56,476	The primary goal of this project was to reverse the trend of interior marsh deterioration in the project area due to saltwater intrusion through installation of a freshwater siphon and outfall channel. These strategies would have provided freshwater, nutrients, and sediment to enhance marsh health. The project was officially deauthorized by the Breaux Act Task Force in January of 2003.
Breaux Act	BS-10	Delta Building Diversion North of Fort St. Philip	SD	10	USACE	Boasso	Wooton	Plaq.	501	Pending	$1,403,754	$25,067	$15,179	$1,155,200	$1,444,000	This project is intended to reduce the loss of existing marsh in the 2,252-acre project area and enhance the integrity of the delta system. Project strategies include dredging a series of channel armor gaps that will be strategically located along the east descending bank of the Mississippi River in the vicinity of Fort St. Philip to divert sediment and nutrients to adjacent wetlands.
Breaux Act	BS-11	Delta Management at Fort St. Philip	SD	10	USFWS	Boasso	Wooton	Plaq.	267	Pending	$377,946	$1,580,053	$97,704	$3,183,940	$2,055,703	The objective of the project is to enhance the delta-building process occurring as a result of the crevasse at Fort St. Philip. Six additional artificial crevasses will be constructed to divert freshwater and sediment into areas currently restricted by spoil banks or natural ridges. In addition, linear vegetated terraces will be constructed to enhance sediment retention and reduce wave energy in one of the large receiving bays.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	BS-12	White Ditch Resurrection and Outfall Management	OM	14	NRCS	Boasso	Wooton	Plaq.	189	Pending	$1,595,677	N/A	N/A	$1,595,677	$1,595,677	The goal of this project is to reduce the erosion rate by introducing fresh water, nutrients, and sediment into the marsh. This will be accomplished through the rehabilitation or replacement of the existing siphon at White Ditch and the construction of an additional siphon of similar size. The project's proposed strategies also include installing a water control structure in the White Ditch outfall channel at the junction with River Aux Chenes in order to force water into the interior marsh. This project was originally authorized on the 3rd PPL as White's Ditch Outfall Management, BS-04a.
Breaux Act	BS-13	Bayou Lamoque Freshwater Diversion	FD	15	EPA	Boasso	Wooton	Plaq.	620	Pending	$1,170,639	N/A	$34,715	$1,205,354	$1,205,354	This project is intended to create approximately 620 acres of new marsh, increase the percent cover of aquatic vegetation in interior marsh ponds and channels, increase the area of shallow open water habitat in the project area, and decrease mean salinity in the project area. Project strategies include repairing the Bayou Lamoque freshwater diversion structures and constructing gaps in the natural levee ridges or spoil banks on Bayou Lamoque to facilitate distribution of diverted water and to promote the accretion of new wetlands through the deposition of diverted river sediments.
Breaux Act	MR-03 (FMR-03)	West Bay Sediment Diversion	SD	1	USACE	Boasso	Wooton	Plaq.	9,831	2003	$1,845,470	$4,607,552	$16,339,854	$8,517,066	$22,792,876	The objective of the project is to restore vegetated wetlands in the West Bay area that are currently shallow open water. A diversion channel was constructed in two phases: (1) initial construction of an interim channel to accommodate a discharge of 20,000 cubic feet per second (cfs) at the 50% duration stages in the Mississippi River and marsh development areas and (2) modification of the interim diversion channel design t accommodate a full-scale diversion of 50,000 cubic feet per second at the 50% duration stage.
Breaux Act	MR-06 (XMR-10)	Channel Armor Gap Crevasse	SD	3	USACE	Boasso	Wooton	Plaq.	936	1997	$253,486	$241,720	$393,778	$808,397	$888,985	The implementation of this project is intended to restore vegetated wetlands by increasing freshwater and sediment from the Mississippi River to the Delta National Wildlife Refuge area. The project consisted of deepening the existing 150-foot wide gap in the Mississippi River channel bank armor and adding 125,000 cubic yards of material from the outfall channel to the adjacent marsh.
Breaux Act	MR-07 (MR-8/9)	Pass-a-Loutre Crevasse (Deauthorized)	SD	3	USACE	Boasso	Wooton	Plaq.	N/A	Deauth.	$108,114	N/A	$11,721	$2,857,790	$119,835	Marsh creation and restoration was the objective of this project. This was to be accomplished through construction of a crevasse on the left descending bank of the Mississippi River between Pass-a-Loutre and Raphael Pass. The project was officially deauthorized by the Breaux Act Task Force in July of 1998 due to high costs attributed to relocating underground utilities in the area.
Breaux Act	MR-08 (XMR-12)	Beneficial Use of Hopper Dredged Material Demonstration (Deauthorized)	DM	4	USACE	Boasso	Wooton	Plaq.	N/A	Deauth.	$48,719	N/A	$9,591	$300,000	$58,310	The goal of this project was to construct a crevasse to allow sediment to enter near the mouth of the pass and be deposited in the shallow open water area between Pass-a-Loutre and Raphael Pass to create new emergent marsh. Due to design problems, the project was officially deauthorized by the Breaux Act Task Force in November of 2000
Breaux Act	MR-09 (PMR-10)	Delta Wide Crevasses	SD	6	NMFS	Boasso	Wooton	Plaq.	2,386	1999	$298,034	$471,360	$3,983,259	$5,473,934	$4,752,653	The objective of this project is to promote the formation of emergent freshwater and intermediate marsh in shallow, open water areas of the Pass-a-Loutre Wildlife Management Area and the Delta National Wildlife Refuge by either cleaning existing splays or creating new ones.

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Breaux Act	MR-10 (XMR-12b)	Dustpan Maintenance Dredging Operations for Marsh Creation in the Mississippi River Delta Demonstration	DM	6	USACE	Boasso	Wooton	Plaq.	N/A	2002	$135,876	$1,729,611	$46,000	$1,600,000	$1,911,487	This project was intended to demonstrate the beneficial use of dredged material from routine maintenance of the Mississippi River Navigation Channel by using a dustpan hydraulic dredge to create and restore adjacent marsh. Approximately 40 acres of deteriorated marsh that had converted to shallow open water was restored with approximately 222,000 cubic yards of dredged material.
Breaux Act	MR-11 (MR-DEMO)	Periodic Introduction of Sediment and Nutrients at Selected Diversion Sites Demonstration	FD	9	USACE	Boasso	Wooton	Plaq.	N/A	Pending	$93,515	$1,340,730	$68,572	$1,502,817	$1,502,817	This demonstration project is intended to show the effectiveness of using a hydraulic pipeline dredge to provide increased sediment through a diversion structure or siphon. Monitoring of the project will determine not only the characteristics of the sediment input concentrations, but also the subsequent effects in the outfall area.
Breaux Act	MR-12	Mississippi River Sediment Trap	SNT	12	USACE	Boasso	Wooton	Plaq.	1,190	Pending	$1,856,427	N/A	$23,949	$1,880,376	$1,880,376	This project was reauthorized on the 12th PPL to create emergent wetlands through the beneficial use of material dredged from a sediment trap located between miles 5 and 1 above Head of Passes in the Mississippi River. The proposed sediment trap would consist of an area dredged out of the riverbed that would force sediment deposition.
Breaux Act	MR-13	Benneys Bay Diversion	SD	10	USACE	Boasso	Wooton	Plaq.	5,706	Pending	$1,047,083	N/A	$29,245	$1,076,328	$1,076,328	The objective of the project is to create vegetated wetlands in shallow open water areas in Benneys Bay. The project would divert sediment in an effort to create, nourish, and maintain approximately 16,982 acres of fresh to intermediate marsh over the 20-year project life.
Breaux Act	MR-14	Spanish Pass Diversion	SD	13	USACE	Boasso	Wooton	Plaq.	433	Pending	$1,421,680	N/A	N/A	$1,137,344	$1,421,680	The goal of this project is to create emergent marsh, to the maximum extent practicable, by diverting Mississippi River water and sediment from Grand Pass into open water receiving areas.
Breaux Act	MR-15	Venice Ponds Marsh Creation and Crevasses	MC	15	USACE, EPA	Boasso	Wooton	Plaq.	511	Pending	$1,074,522	N/A	N/A	$1,074,522	$1,074,522	The goals of the project are to create, maintain, nourish, and replenish existing deteriorating wetlands through dedicated dredging, hydrologic restoration, crevasse construction, and crevasse enhancement. The project would benefit approximately 1,944 acres of fresh marsh and open water. Approximately 511 acres of marsh would be created/protected over the 20-year project life.
State	BA-03	Naomi Siphon Diversion	FD	N/A	N/A	Boasso, Ullo	Wooton	Jef. Plaq.	1,318	1992	N/A	N/A	N/A	N/A	$6,666,667	This project involves the construction of eight parallel siphons to divert water from the Mississippi River, over the levee, and into the adjacent wetlands near Naomi, Louisiana. The maximum discharge of the siphons is 2,100 cubic feet per second.
State	BA-04	West Pointe a la Hache Siphon Diversion	FD	N/A	N/A	Boasso	Wooton	Plaq.	718	1992	N/A	N/A	N/A	N/A	$6,081,800	This project involves the construction of eight parallel siphons to divert water from the Mississippi River, over the levee, and into the adjacent wetlands on the west side of the river near Pointe a la Hache, Louisiana. The maximum discharge of the siphons is 2,10 cubic feet per second.
State	BA-05b	Queen Bess	DM	N/A	N/A	Ullo	Wooton	Jef.	15	1990	N/A	N/A	N/A	N/A	$161,250	The purpose of this project is to restore Queen Bess Island as a brown pelican (*Pelecanus occidentalis*) rookery. Dredged material was added to the island to increase its size in 1991, and a rock dike was installed around the perimeter of the original island in 1992 to armor the shoreline. Pelican nests continue to increase and the area has become vegetated.
State	BA-05c	Baie de Chactas	SP	N/A	N/A	Chaisson	Wooton	StC.	130	1990	N/A	N/A	N/A	N/A	$175,000	Approximately 300,000 pounds of crushed oyster shell were placed on 7,400 feet of shoreline to restore the physical integrity of the marsh shoreline separating Lake Salvador and Baie de Chactas and Baie du Cabanage.

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State	BA-15x1	Lake Salvador Shoreline Protection Extension	SP	N/A	N/A	Chaisson	Wooton	StC.	2,035	2005	N/A	N/A	N/A	N/A	$2,270,847	The purpose of this project is to build a rock dike that will protect the marsh shoreline along the northeastern portion of Lake Salvador. The shoreline protection project was built on the land (as opposed to in shallow water) to avoid dredging in an area with cultural resources. This project is designed as an extension of the BA-15 Phase II CWPPRA project.
State	BA-16	Bayou Segnette	SP	N/A	N/A	Ullo	Damico	Jef.	88	1994, 1998	N/A	N/A	N/A	N/A	$1,373,151	This project armored and re-defined approximately 6,800 linear feet of shoreline separating Bayou Segnette from Lake Salvador. Additional CWPPRA funds were appropriated for the design of this state-funded project. Maintenance of this project was necessary in the 1998-1999 fiscal year at a cost of $300,000.
State	BS-06	Lake Lery Hydrologic Restoration	FD	N/A	N/A	Boasso	Odinet	StB.	100	1997	N/A	N/A	N/A	N/A	$1,000,000	This project involved the construction of a pumping station located along the south-central edge of the St. Bernard Parish Ridge. This will discharge collected rainfall into the marsh north of Lake Lery and help prevent saltwater intrusion. The project was built in partnership with the Lake Borgne Basin Levee District and was completed in May of 1997.
State	GIBSB	Grand Isle Bay Side Breakwaters	SP	N/A	N/A	Ullo	Pitre, Wooton	Jef.	5	1995	N/A	N/A	N/A	N/A	$500,000	The purpose of this project was to reduce erosion on the bay side of Grand Isle. Fifteen 300-foot breakwaters were constructed on the back-bay side of Grand Isle.
State	LA-01a	Dedicated Dredging Program - Lake Salvador	DM	N/A	N/A	Chaisson	Wooton	StC.	28	1999	N/A	N/A	N/A	N/A	$342,276	Two sites were filled utilizing dredged material adjacent to Baie du Cabanage on the Salvador Wildlife Management Area. This project is part of the coastwide state Dedicated Dredging Program. 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.
State	LA-01b	Dedicated Dredging Program - Bayou Dupont	DM	N/A	N/A	Ullo	Wooton	Jef.	66	2000	N/A	N/A	N/A	N/A	$1,080,017	Three sites were filled utilizing dredged material adjacent to Bayou Dupont and The Pen. This project is part of the coastwide state Dedicated Dredging Program. 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.
State	LA-01c	Dedicated Dredging Program - Pass a Loutre	DM	N/A	N/A	Boasso	Wooton	StC.	26	2005	N/A	N/A	N/A	N/A	$450,000	The project has created approximately 26 acres of sustainable freshwater marsh in the vicinity of Pass a Loutre, Louisiana. This project is part of the coastwide state Dedicated Dredging Program. 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.
State	MR-01b	Small Sediment Diversions	SD	N/A	N/A	Boasso	Wooton	Plaq.	6,719	1986, 1991	N/A	N/A	N/A	N/A	$1,010,500	These projects involve the refurbishment of three crevasses constructed in the 1986-1987 fiscal year at South Pass, Loomis Pass, and Pass-a-Loutre; four new crevasses constructed on Pass-a-Loutre (1, 2, 3a, and 3b) in 1990-1991; and three new crevasses were created in South Pass (2, 3, and 4) in 1990-1991.
State	NGI	North Grand Isle Breakwaters	SP	N/A	N/A	Ullo	Pitre	Jef.	50	1995	N/A	N/A	N/A	N/A	$160,000	This project was authorized to construct segmented rock breakwaters on the bay side of Grand Isle to protect camps located between Caminada Bay and the west side of Louisiana Hwy 1. The Louisiana Department of Natural Resources (LDNR) contributed no construction funds and was involved in construction inspection only. The local Levee District supplied construction funds. Construction was completed in June 1995.

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PCWRP		Goose Bayou	SP	N/A	N/A	Ullo	Wooton	Jef.	23	1991	N/A	N/A	N/A	N/A	$346,250	The brush fences were constructed to protect the shoreline and promote sediment accretion and vegetation growth at the shoreline. This project includes others at Bayou Cypress, Bayou LeFleur, and Bayou La Tour. Fences were originally constructed and filled in 1991, and maintenance was performed in 1992, 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, 2002, and 2005. Approximately 3,000 linear feet of fence were either destroyed as a result of the 2005 hurricanes or later removed because of hurricane damage.
PCWRP		Leeville #2	SP	N/A	N/A	Dupre	Pitre	Laf.	5	1991	N/A	N/A	N/A	N/A	$36,000	Brush fences were built in 1991 to promote sediment accretion along a canal adjacent to Louisiana Hwy 1 in Leeville, Louisiana, and maintenance was performed in 1992 and 1994. Portions of the fence were removed in 1996 and 1999.
PCWRP		Highway 61 Borrow Canal	SP	N/A	N/A	Amedee	Quezaire	StJa.	2	1991	N/A	N/A	N/A	N/A	$18,000	Brush fences were constructed adjacent to the Blind River. The fences were later removed.
PCWRP		Fourchon	SP	N/A	N/A	Dupre	Pitre	Laf.	2	1992	N/A	N/A	N/A	N/A	$105,938	Brush fences were built in 1992 along a canal to prevent shoreline erosion, and maintenance was performed in 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2002, 2003, 2004, 2005, and 2006.
PCWRP		Eighty Arpent Canal	SP	N/A	N/A	Boasso	Odinet	StB.	7	1991, 1992	N/A	N/A	N/A	N/A	$56,989	Brush fences were constructed in 1991 and 1992 along Eighty Arpent Canal to promote sediment accumulation and minimize erosion along the shoreline. The fences were maintained in 1997 and 2000. The brush fences were either destroyed as a result of the 2005 hurricanes or later removed because of hurricane damage.
PCWRP		Jefferson Oilfield Canals	SP	N/A	N/A	Ullo	Wooton	Jef.	40	1993	N/A	N/A	N/A	N/A	$106,000	Christmas trees were placed at the opening of dead-end oilfield canals in order to fill in the canals.
PCWRP		Grand Isle	SP	N/A	N/A	Ullo	Wooton	Jef.	1	1997	N/A	N/A	N/A	N/A	$18,000	Brush fences were installed along a section of marsh on the western portion of Grand Isle. The project was designed to protect the marsh shoreline. Due to high wave energy in the area, the fences were removed in 1998.
PCWRP		Whiskey Canal	SP	N/A	N/A	Ullo	Alario	Jef.	2	1997	N/A	N/A	N/A	N/A	$26,000	Whiskey Canal is located north of Lake Cataouatche in Jefferson Parish. The brush fences were constructed in 1997 to prevent erosion at the intersection of two canals, and maintenance was performed in 1998.
PCWRP		Bayou Gauche	SP	N/A	N/A	Chaisson	Wooton	StC.	3	2001	N/A	N/A	N/A	N/A	$90,000	Brush fences were constructed along Bayou Gauche, near the intersection of Grand Bayou and Simoneaux Ponds, in order to slow water exchange and reduce shoreline erosion. Fences were originally constructed in 2001, and maintenance was performed in 2002, 2003, 2004, and 2005.
PCWRP		Bayou Segnette	SP	N/A	N/A	Ullo	Damico	Jef.	1	2001	N/A	N/A	N/A	N/A	$53,000	Approximately 45,000 Christmas trees were placed in an area between Bayou Segnette and Lake Salvador in order to slow water flow and provide additional wildlife and fisheries habitat. Maintenance was performed in 2002.
PCWRP		Catfish Lake	SP	N/A	N/A	Dupre	Pitre	Laf.	1	2001	N/A	N/A	N/A	N/A	$50,000	Approximately 400 feet of brush fencing was constructed along the bank of Catfish Lake, just west of Golden Meadow, in order to stabilize that particular section of the hurricane protection levee. Maintenance was performed in 2003, 2004, 2005, and 2006.
PCWRP		St. James Parish	SP	N/A	N/A	Amedee	Quezaire	StJa.	N/A	2002	N/A	N/A	N/A	N/A	$8,000	St. James Parish has partnered with St. John Parish and with Lafourche Parish to provide Christmas trees to refurbish their respective projects. Maintenance was performed on these projects in 2002, 2003, 2004, and 2005.
Vegetation		Salvador WMA	VP	N/A	N/A	Chaisson	Wooton	StC.	7	1988	N/A	N/A	N/A	N/A	$46,460	A total of 900 smooth cordgrass (*Spartina alterniflora*) plants, 900 cattail (*Typha latifolia*) plants, and 900 California bulrush (*Schoenoplectus californicus*) plants were used to stabilize the bank behind newly constructed wave damping devices.

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Vegetation		Clovelly	VP	N/A	N/A	Dupre	Pitre	Laf.	111	1988	N/A	N/A	N/A	N/A	$21,626	A total of 24,000 smooth cordgrass (*Spartina alterniflora*) plants were used along 48,000 linear feet of shoreline to minimize shoreline erosion.
Vegetation		Kings Ridge	VP	N/A	N/A	Dupre	Pitre	Laf.	1	1989	N/A	N/A	N/A	N/A	$52,604	A total of 1,345 smooth cordgrass (*Spartina alterniflora*) plants were used to provide a living natural barrier for protection against wave-induced shoreline erosion.
Vegetation		Bayou La Tour	VP	N/A	N/A	Ullo	Wooton	StC.	24	1991	N/A	N/A	N/A	N/A	$29,804	A total of 7,125 single stems of smooth cordgrass (*Spartina alterniflora*) and 1,425 gallon containers were used in a single row on 1-foot centers to stabilize the bank behind newly constructed wave damping devices.
Vegetation		Myrtle Grove	VP	N/A	N/A	Boasso	Wooton	Plaq.	48	1991	N/A	N/A	N/A	N/A	$53,558	A total of 13,050 single stems of smooth cordgrass (*Spartina alterniflora*) were used to vegetate an area on the uppermost part of a protection levee.
Vegetation		Red Pass/Spanish Pass	VP	N/A	N/A	Boasso	Wooton	Plaq.	21	1991	N/A	N/A	N/A	N/A	$19,820	A total of 3,500 single stems of smooth cordgrass (*Spartina alterniflora*) and 1,500 single stems of giant cutgrass (*Zizaniopsis miliacea*) were planted on interior marsh in the Venice area.
Vegetation		Bay L' Ours	VP	N/A	N/A	Dupre	Pitre	Laf.	46	1991	N/A	N/A	N/A	N/A	$28,250	A total of 10,000 single stems of smooth cordgrass (*Spartina alterniflora*) were used to provide stabilization behind a recently constructed wave damping device.
Vegetation		Kings Ridge	VP	N/A	N/A	Dupre	Pitre	Laf.	1	1991	N/A	N/A	N/A	N/A	$1,600	A total of 400 single stems of smooth cordgrass (*Spartina alterniflora*) were used to provide a living natural barrier for protection against wave-induced shoreline erosion.
Vegetation		Goose Bayou	VP	N/A	N/A	Ullo	Wooton	Jef.	28	1992	N/A	N/A	N/A	N/A	$20,340	Approximately 4,000 single stems of smooth cordgrass (*Spartina alterniflora*) were used behind sediment fences and Christmas tree fences along Bayou La Tour to help stabilize new sediment.
Vegetation		Lake Salvador	VP	N/A	N/A	Dupre	Pitre	Laf.	11	1992	N/A	N/A	N/A	N/A	$6,780	A total of 800 gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation along a section of eroded coast.
Vegetation		Temple Bay	VP	N/A	N/A	Dupre	Pitre	Laf.	9	1992	N/A	N/A	N/A	N/A	$5,424	A total of 800 smooth cordgrass (*Spartina alterniflora*) plants were used to stabilize a spoil bank behind a wave-reduction fence.
Vegetation		Bayou Dupont	VP	N/A	N/A	Boasso	Wooton	Plaq.	1	1992	N/A	N/A	N/A	N/A	$8,088	A total of 2,022 smooth cordgrass (*Spartina alterniflora*) plants were used along the shoreline to stabilize the bank of Bayou Dupont.
Vegetation		Round Lake	VP	N/A	N/A	Boasso	Wooton	Plaq.	4	1992	N/A	N/A	N/A	N/A	$4,435	A total of 250 seashore paspalum (*Paspalum vaginatum*) plants and 1,320 single stems of smooth cordgrass (*Spartina alterniflora*) plants were used to prevent erosion along the shoreline of Round Lake.
Vegetation		Yellow Cotton Bay	VP	N/A	N/A	Boasso	Wooton	Plaq.	6	1992	N/A	N/A	N/A	N/A	$6,144	A total of 1,875 single stems of smooth cordgrass (*Spartina alterniflora*) and 300 peat pots of seashore paspalum (*Paspalum vaginatum*) were used to stabilize the shoreline of a pipeline canal that runs east to west.

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Vegetation		Lake Hermitage	VP	N/A	N/A	Boasso	Wooton	Plaq.	2	1993	N/A	N/A	N/A	N/A	$1,068	A total of 110 seashore paspalum (*Paspalum vaginatum*) plants and 100 smooth cordgrass (*Spartina alterniflora*) plants were used to plant vegetation behind a wave reduction fence for ground stabilization.
Vegetation		Lake Lery/Eighty Arpent Canal	VP	N/A	N/A	Boasso	Odinet	StB.	11	1993	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 smooth cordgrass (*Spartina alterniflora*) plants were used to block openings to small lagoons and provide a protective barrier along the Eighty Arpent Canal.
Vegetation		Lake Laurier	VP	N/A	N/A	Boasso	Wooton	Plaq.	2	1993	N/A	N/A	N/A	N/A	$1,068	A total of 110 seashore paspalum (*Paspalum vaginatum*) plants and 100 smooth cordgrass (*Spartina alterniflora*) plants were used behind a wave-reduction fence to help stabilize sediment.
Vegetation		Little Lake Hunting Club	VP	N/A	N/A	Ullo	Wooton	Jef.	80	1994	N/A	N/A	N/A	N/A	$134,244	A total of 2,000 gallon containers of smooth cordgrass (*Spartina alterniflora*), 10,000 "D" pots of marshhay cordgrass (*Spartina patens*) plants, and 10,000 "D" pots of gulf cordgrass (*Spartina spartinae*) were used to stabilize the levee and protect the shoreline at the base of the levee.
Vegetation		West Pointe a la Hache	VP	N/A	N/A	Boasso	Wooton	Plaq.	6	1994	N/A	N/A	N/A	N/A	$3,526	A total of 400 gallon containers of smooth cordgrass (*Spartina alterniflora*) and 120 gallon containers of California bulrush (*Schoenoplectus californicus*) plants were used to reduce the effects of wave energy on several deteriorating spoil banks in a brackish marsh, to trap sediment in the same area, and to establish freshwater vegetation in the immediate outfall area of the West Pointe a la Hache freshwater siphon.
Vegetation		LaReussite	VP	N/A	N/A	Boasso	Wooton	Plaq.	3	1994	N/A	N/A	N/A	N/A	$4,579	A total of 250 gallon containers of California bulrush (*Schoenoplectus californicus*) were used to establish marsh vegetation and trap sediment in the marsh receiving the outfall from the LaReussite freshwater siphon.
Vegetation		Kings Ridge	VP	N/A	N/A	Dupre	Pitre	Laf.	2	1994	N/A	N/A	N/A	N/A	$17,149	A total of 145 gallon containers of smooth cordgrass (*Spartina alterniflora*) plants were used to revegetate a levee. Broken or deteriorated boards were replaced on 1,800 feet of wave damping fence.
Vegetation		Fourchon	VP	N/A	N/A	Dupre	Pitre	Laf.	29	1995	N/A	N/A	N/A	N/A	$26,829	A total of 1,000 smooth cordgrass (*Spartina alterniflora*) plants and 1,500 black mangrove (*Avicennia germinans*) trees were used to protect and stabilize mud flats, protect the shoreline from erosion by high energy tidal currents, and improve wildlife habitat diversity.
Vegetation		Bayou Lafourche Shoreline	VP	N/A	N/A	Dupre	Pitre	Laf.	37	1995	N/A	N/A	N/A	N/A	$18,304	A total of 3,200 gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were used along the shoreline of Bayou Lafourche to provide a living barrier against wave-induced shoreline erosion.
Vegetation		Big Mar	VP	N/A	N/A	Boasso	Wooton	Plaq.	8	1995	N/A	N/A	N/A	N/A	$4,056	A total of 500 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to establish emergent freshwater vegetation in the immediate outfall area of the Caernarvon Freshwater Diversion project.
Vegetation		Scarsdale	VP	N/A	N/A	Boasso	Wooton	Plaq.	30	1995	N/A	N/A	N/A	N/A	$4,056	A total of 500 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to introduce an emergent freshwater plant species in a once brackish marsh area, which is now being influenced by the Caernarvon Freshwater Diversion.
Vegetation		Belair	VP	N/A	N/A	Boasso	Wooton	Plaq.	7	1995	N/A	N/A	N/A	N/A	$4,056	A total of 500 gallon containers of smooth cordgrass (*Spartina alterniflora*) were used to vegetate a low canal levee for protection against wave-induced shoreline erosion.

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Vegetation		Clovelly Farms	VP	N/A	N/A	Dupre	Pitre	Laf.	1	1996	N/A	N/A	N/A	N/A	$814	A total of 120 gallon containers of California bulrush (*Schoenoplectus californicus*) were used to absorb boat-generated wave energy and provide a seed source for revegetation
Vegetation		Myrtle Grove #2	VP	N/A	N/A	Boasso	Wooton	Plaq.	15	1996	N/A	N/A	N/A	N/A	$16,080	A total of 1,340 "D" pots of gulf cordgrass (*Spartina spartinae*) plants and 1,340 "D" pots of marshhay cordgrass (*Spartina patens*) plants were used to vegetate an area on the uppermost part of a protection levee.
Vegetation		Red Pass/Spanish Pass 2	VP	N/A	N/A	Boasso	Wooton	Plaq.	21	1996	N/A	N/A	N/A	N/A	$19,820	A total of 840 gallon containers of California bulrush (*Schoenoplectus californicus*) and 1,000 bald cypress (*Taxodium distichum*) seedlings were used to form a vegetative buffer along several deteriorating islands and a degraded spoil bank.
Vegetation		Little Lake Hunting Club Phase 2	VP	N/A	N/A	Ullo	Wooton	Jef.	10	1996	N/A	N/A	N/A	N/A	$27,200	A total of 400 trade gallons of smooth cordgrass (*Spartina alterniflora*), 2,000 tube containers of marshhay cordgrass (*Spartina patens*) plants, and 2,000 tube containers of gulf cordgrass (*Spartina spartinae*) plants were used to protect shoreline at the base of a levee and to stabilize the levee.
Vegetation		Queen Bess Island	VP	N/A	N/A	Ullo	Wooton	Jef.	5	1997	N/A	N/A	N/A	N/A	$2,967	Approximately 430 trade gallons of black mangrove (*Avicennia germinans*) and 688 trade gallons of smooth cordgrass (*Spartina alterniflora*) were planted to provide soil stability on the edges of the soil disposal area and to enhance wildlife habitat.
Vegetation		Bayou Segnette	VP	N/A	N/A	Shepherd	Alario	Jef.	9	1997	N/A	N/A	N/A	N/A	$5,085	A total of 375 trade gallons of California bulrush (*Schoenoplectus californicus*) and 375 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were used to reduce shoreline erosion caused by both wind-generated wave energy and frequent boat traffic.
Vegetation		Simoneaux Ponds	VP	N/A	N/A	Chaisson	Wooten	StC.	20	1997	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to revegetate open bodies of water, which were once pump-off areas intended for agricultural purposes.
Vegetation		Lake Lery Shoreline	VP	N/A	N/A	Boasso	Odinet	StB.	23	1997	N/A	N/A	N/A	N/A	$6,780	A total of 500 trade gallons of California bulrush (*Schoenoplectus californicus*) and 500 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were used along the Lake Lery shoreline to reduce shoreline erosion and vegetate predominately bare silt deposits
Vegetation		Sebastopol Canal	VP	N/A	N/A	Boasso	Odinet	StB.	2	1997	N/A	N/A	N/A	N/A	$1,017	A total of 150 California bulrush (*Schoenoplectus californicus*) trade gallons were used to prevent erosion along Sebastopol Canal.
Vegetation		Cane Ridge Slough	VP	N/A	N/A	Boasso	Wooton	Plaq.	8	1997	N/A	N/A	N/A	N/A	$4,746	A total of 700 California bulrush (*Schoenoplectus californicus*) trade gallons were used along a deteriorating canal bank to prevent boat-wake induced erosion from causing breaches into an adjacent interior marsh.
Vegetation		Delacroix Corp.	VP	N/A	N/A	Boasso	Wooton	Plaq.	11	1997	N/A	N/A	N/A	N/A	$6,780	A total of 500 California bulrush (*Schoenoplectus californicus*) trade gallons and 500 giant cutgrass (*Zizaniopsis miliacea*) trade gallons were used to provide a buffer along areas of the Delacroix Canal in Plaquemines Parish, where boat traffic is causing the banks to erode into the adjacent marsh.
Vegetation		Bayou Des Allemands	VP	N/A	N/A	Chaisson	Wooton	StC.	15	1998	N/A	N/A	N/A	N/A	$8,814	A total of 150 California bulrush (*Schoenoplectus californicus*) trade gallons and 150 giant cutgrass (*Zizaniopsis miliacea*) trade gallons were used on approximately 1,500 feet of shoreline to prevent shoreline erosion.
Vegetation		Elmer's Island	VP	N/A	N/A	Ullo	Pitre	Jef.	15	1998	N/A	N/A	N/A	N/A	$18,358	After the construction of sand fences for dune building purposes, a total of 306 4-inch pots of marshhay cordgrass (*Spartina patens*) plants and 1,014 4-inch pots of bitter panicum (*Panicum amarum*) plants were used around the fence to prevent the new sand from being eroded by winds.

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Vegetation		Fourchon '98	VP	N/A	N/A	Dupre	Pitre	Laf.	23	1998	N/A	N/A	N/A	N/A	$13,560	A total of 1,000 bitter panicum (*Panicum amarum*) tubes and 1,000 marshhay cordgrass (*Spartina patens*) tubes were used to stabilize sand dunes, which were created by newly constructed sand-trapping fence segments.
Vegetation		Bay Joe Wise	VP	N/A	N/A	Boasso	Wooton	Plaq.	9	1998	N/A	N/A	N/A	N/A	$2,712	A total of 400 nursery-grown black mangrove (*Avicennia germinans*) trees were planted to provide habitat for various bird species.
Vegetation		Bayou Dupont	VP	N/A	N/A	Ullo	Wooton	Plaq.	3	1998	N/A	N/A	N/A	N/A	$2,400	A total of 300 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to establish vegetation along an oilfield pipe canal.
Vegetation		Lake Lery Shoreline '98	VP	N/A	N/A	Boasso	Odinet	StB.	11	1998	N/A	N/A	N/A	N/A	$8,000	A total of 500 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) and 500 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to block openings to small lagoons and provide a protective barrier along the Eighty Arpent Canal.
Vegetation		Big Mar '98	VP	N/A	N/A	Boasso	Wooton	Plaq.	7	1998	N/A	N/A	N/A	N/A	$9,600	A total of 600 California bulrush (*Schoenoplectus californicus*) trade gallons and 600 giant cutgrass (*Zizaniopsis miliacea*) trade gallons were used to establish emergent freshwater vegetation in the immediate outfall area of the Caernarvon Freshwater Diversion project.
Vegetation		Scarsdale '98	VP	N/A	N/A	Boasso	Wooton	Plaq.	30	1998	N/A	N/A	N/A	N/A	$8,475	A total of 1,000 baldcypress (*Taxodium distichum*) seedlings were used to re-introduce vegetation that was historically known to occur in this area.
Vegetation		Clovelly Levee	VP	N/A	N/A	Dupre	Pitre	Laf.	34	1999	N/A	N/A	N/A	N/A	$20,340	A total of 3,000 giant cutgrass (*Zizaniopsis miliacea*) trade gallons were used to provide a vegetation buffer along a hurricane protection levee, which has eroded due to boat traffic.
Vegetation		Delacroix '99	VP	N/A	N/A	Boasso	Wooton	Plaq.	14	1999	N/A	N/A	N/A	N/A	$8,475	A total of 1,250 giant cutgrass (*Zizaniopsis miliacea*) trade gallons were used along areas of the Delacroix Canal to create a vegetative buffer and decrease shoreline erosion due to boat traffic.
Vegetation		Ollie Canal Pump-off	VP	N/A	N/A	Boasso	Wooton	Plaq.	14	1999	N/A	N/A	N/A	N/A	$8,475	A total of 1,250 trade gallons of California bulrush (*Schoenoplectus californicus*) were used in an old pump-off in order to revegetate the area and decrease flooding.
Vegetation		Bayou Dupont Canal	VP	N/A	N/A	Ullo	Wooton	Plaq.	11	1999	N/A	N/A	N/A	N/A	$8,000	A total of 500 trade gallons of California bulrush (*Schoenoplectus californicus*) plants and 500 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) plants were used along the shoreline and interior marsh, which has undergone heavy wave erosion.
Vegetation		Salvador Pump-in	VP	N/A	N/A	Chaisson	Wooton	StC.	11	1999	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 giant cutgrass (*Zizaniopsis miliacea*) plants were used along 5,000 linear feet of shoreline in order to protect an area of eroded shoreline, absorb wave energy, and prevent continued erosion.
Vegetation		Grand Isle	VP	N/A	N/A	Ullo	Pitre	Jef.	7	2000	N/A	N/A	N/A	N/A	$6,000	Approximately 1,000 4-inch containers of bitter panicum (*Panicum amarum*) were planted to create a vegetative buffer along a sand trapping fence.
Vegetation		Burchell Canal	VP	N/A	N/A	Chaisson	Wooton	StC.	2	2000	N/A	N/A	N/A	N/A	$1,356	A total of 100 California bulrush (*Schoenoplectus californicus*) trade gallons and 100 giant cutgrass (*Zizaniopsis miliacea*) trade gallons were used to create a vegetation buffer on the canal bank and to reduce the erosion caused by both wind-generated wave energy and frequent boat traffic. This bank separates the canal from the Simoneaux Ponds.

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Vegetation		Bayou Bardeaux	VP	N/A	N/A	Ullo	Damico	Jeff.	5	2000	N/A	N/A	N/A	N/A	$1,600	A total of 200 trade gallon containers each of California bulrush (*Schoenoplectus californicus*) and giant cutgrass (*Zizaniopsis miliacea*) were planted to create a vegetative buffer on the bayou bank to reduce erosion caused by wave energy and boat traffic.
Vegetation		Port Sulphur	VP	N/A	N/A	Boasso	Wooton	Plaq.	9	2000	N/A	N/A	N/A	N/A	$5,424	A total of 800 4-inch pots of black mangrove (*Avicennia germinans*) trees were planted to provide cover for nesting bird populations.
Vegetation		Reggio Canal	VP	N/A	N/A	Boasso	Wooton	Plaq.	21	2000	N/A	N/A	N/A	N/A	$12,204	A total of 1,000 giant cutgrass (*Zizaniopsis miliacea*) trade gallons and 800 California bulrush (*Schoenoplectus californicus*) trade gallons were used on the canal bank to reduce the erosion caused by both boat traffic and wind-generated wave energy.
Vegetation		Queen Bess Island 2	VP	N/A	N/A	Ullo	Wooton	Jef.	37	2000	N/A	N/A	N/A	N/A	$4,932	A total of 822 4-inch pots of black mangrove (*Avicennia germinans*) trees were used on the island to provide cover and nesting areas for the native birds in the area.
Vegetation		Simoneaux Ponds - 2	VP	N/A	N/A	Chaisson	Wooton	StC.	8	2000	N/A	N/A	N/A	N/A	$5,600	A total of 700 California bulrush (*Schoenoplectus californicus*) trade gallons were used to revegetate open bodies of water, which were once pump-off areas intended for agricultural purposes.
Vegetation		Bayou Des Allemands	VP	N/A	N/A	Chaisson	Wooton	StC.	11	2000	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were used to establish a vegetative barrier to slow shoreline erosion along the bayou.
Vegetation		Barataria Waterway Pump-in	VP	N/A	N/A	Ullo	Wooton	Jef.	11	2001	N/A	N/A	N/A	N/A	$9,058	A total of 2,571 smooth cordgrass (*Spartina alterniflora*) plugs were placed to establish a vegetative cover over the newly created spoil area that is within a confined area.
Vegetation		East Golden Meadow	VP	N/A	N/A	Dupre	Pitre	Laf.	23	2001	N/A	N/A	N/A	N/A	$16,048	A total of 2,000 smooth cordgrass (*Spartina alterniflora*) trade gallons were used to shorten the fetch length within this area to try to reduce the wind-generated waves that were eroding the existing marsh.
Vegetation		Deer Range Canal	VP	N/A	N/A	Boasso	Wooton	Plaq.	17	2001	N/A	N/A	N/A	N/A	$7,558	A total of 5,257 smooth cordgrass (*Spartina alterniflora*) bare root plugs were used to vegetate a newly created spoil area on the banks of Deer Range Canal, in order to keep the new spoil from eroding into the canal.
Vegetation		Barataria Waterway	VP	N/A	N/A	Ullo	Wooton	Jef.	N/A	2001	N/A	N/A	N/A	N/A	$5,000	A total of 1,000 California bulrush (*Schoenoplectus californicus*) trade gallons were used to establish vegetation in a shallow pond in the interior marsh that had been indirectly affected by the deposit of spoil in the vicinity.
Vegetation		Kings Ridge Marsh Demonstration	VP	N/A	N/A	Dupre	Pitre	Laf.	10	2001	N/A	N/A	N/A	N/A	$8,085	A total of 870 trade gallons of smooth cordgrass (*Spartina alterniflora*) and 225 feet of coconut fiber mats were used to protect marsh and attempt to reclaim some marsh that is protecting the Kings Ridge.
Vegetation		Myrtle Grove	VP	N/A	N/A	Boasso	Wooton	Plaq.	5	2001	N/A	N/A	N/A	N/A	$3,200	A total of 400 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to vegetate the canal bank to provide a vegetative buffer to protect the land that separates the canal from the pond.
Vegetation		Grand Isle 2001	VP	N/A	N/A	Ullo	Pitre	Jef.	23	2001	N/A	N/A	N/A	N/A	$12,000	Approximately 2,000 4-inch containers of bitter panicum (*Panicum amarum*) were planted to stabilize the bare sand on the beach of Grand Isle and to determine if the vegetation alone will promote some dune creation.

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Vegetation		Queen Bess Marsh Restoration	VP	N/A	N/A	Ullo	Wooton	Jef.	11	2002	N/A	N/A	N/A	N/A	$8,000	This interior marsh planting used 2,000 bare root plugs of smooth cordgrass (*Spartina alterniflora*) to re-establish vegetation after a dieback in 2000. A total of 5,000 linear feet of interior marsh were planted.
Vegetation		Grand Isle Demo	VP	N/A	N/A	Ullo	Wooton	Jef.	7	2002	N/A	N/A	N/A	N/A	$6,000	This beach planting used 1,000 4-inch containers of bitter panicum (*Panicum amarum*) to create a vegetative mat to hold and collect sand on the beach. A total of 3,000 linear feet were planted.
Vegetation		Barataria Land Bridge CU #2	VP	N/A	N/A	Ullo	Wooton	Jef.	6	2002	N/A	N/A	N/A	N/A	$4,000	Approximately 500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation in an open marsh area that was exposed to high wave action.
Vegetation		Jonathan Davis	VP	N/A	N/A	Ullo	Wooton	Jef.	1	2002	N/A	N/A	N/A	N/A	$4,500	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and 50 feet of coconut fiber logs were planted to stabilize marsh land that had been eroding and subsiding.
Vegetation		Bayou Mandeville	VP	N/A	N/A	Boasso	Wooton	Plaq.	16	2002	N/A	N/A	N/A	N/A	$11,200	This canal bank planting used 1,400 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) to vegetate a newly created spoil bank along Bayou Mandeville. A total of 7,000 linear feet of canal bank were planted.
Vegetation		Reggio '02	VP	N/A	N/A	Boasso	Wooton	Plaq.	14	2002	N/A	N/A	N/A	N/A	$9,600	This canal bank planting used 1,200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to establish vegetation along the canal bank that was dredged in the summer of 2001. A total of 6,000 linear feet of canal bank were planted.
Vegetation		Simoneaux Ponds '02	VP	N/A	N/A	Chaisson	Wooton	StC.	2	2002	N/A	N/A	N/A	N/A	$6,500	A total of 500 plugs of giant cutgrass (*Zizaniopsis miliacea*) and 500 feet of coconut fiber logs were used to recreate some of the islands that have eroded.
Vegetation		Raphael Canal	VP	N/A	N/A	Dupre	Pitre	Laf.	23	2002	N/A	N/A	N/A	N/A	$16,000	Approximately 2,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to establish a vegetative buffer to slow the effects of wave action on a newly established levee.
Vegetation		Pelican Island	VP	N/A	N/A	Boasso	Wooton	Plaq.	8	2003	N/A	N/A	N/A	N/A	$6,400	A total of 800 4-inch containers of bitter panicum (*Panicum amarum*) and 200 trade gallons of sea oats (*Uniola paniculata*) were planted to stabilize the sandy areas of Pelican Island and aid in the collection of new sand deposits.
Vegetation		Shell Island Bay	VP	N/A	N/A	Boasso	Wooton	Plaq.	18	2003	N/A	N/A	N/A	N/A	$4,800	A total of 800 4-inch containers of black mangroves (*Avicennia germinans*) were planted on Shell Island to enhance wildlife habitat and stabilize soils.
Vegetation		North Little Lake/South Bayou Perot Demo.	VP	N/A	N/A	Dupre	Pitre	Laf.	12	2003	N/A	N/A	N/A	N/A	$9,500	A total of 1,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) and 300 feet of coconut fiber mats impregnated with giant cutgrass (*Zizaniopsis miliacea*) were placed along the southern end of Bayou Perot to assess the possibility of vegetating the areas behind the shoreline protection structures.
Vegetation		Barataria Waterway Terrace Demo	VP	N/A	N/A	Ullo	Wooton	Jef.	5	2003	N/A	N/A	N/A	N/A	$8,700	A total of 1,500 bare root plugs of smooth cordgrass (*Spartina alterniflora*) and 300-feet of smooth cordgrass (*Spartina alterniflora*) impregnated coconut fiber logs were planted in order to vegetate a newly created spoil area and protect the embankment.
Vegetation		Northwest Pen	VP	N/A	N/A	Ullo	Wooton	Jef.	9	2003	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to establish vegetation in a shallow area that is silting in because of the rock jetty that has been built in front of the project area.

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Vegetation		Goose Bayou	VP	N/A	N/A	Ullo	Wooton	Jef.	9	2003	N/A	N/A	N/A	N/A	$3,200	A total of 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to attempt to create a vegetative buffer along the bayou shoreline.
Vegetation		Bayou Mandeville II	VP	N/A	N/A	Boasso	Wooton	Plaq.	9	2004	N/A	N/A	N/A	N/A	$11,200	A total of 700 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and 700 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation on a newly dredged canal.
Vegetation		Bayou Perot Cypress Tree	VP	N/A	N/A	Ullo	Wooton	Jeff.	69	2004	N/A	N/A	N/A	N/A	$1,500	Approximately 3,000 baldcypress cypress tree seedlings (*Taxodium distichum*) were planted to establish trees in newly deposited spoil.
Vegetation		Lake Des Allemands	VP	N/A	N/A	Chaisson	Pitre	Laf.	1	2004	N/A	N/A	N/A	N/A	$750	Approximately 150 feet of coconut mats impregnated with giant cutgrass (*Zizaniopsis miliacea*) were used to establish a vegetative buffer around a peninsula.
Vegetation		Myrtle Grove '04	VP	N/A	N/A	Ullo	Wooton	Jeff.	14	2004	N/A	N/A	N/A	N/A	$8,000	The goal of this project was to establish vegetation in a new spoil area by planting the area with 2,000 plugs of smooth cordgrass (*Spartina alterniflora*).
Vegetation		Simoneaux Ponds Demo '04	VP	N/A	N/A	Chaisson	Wooton	StC.	1	2004	N/A	N/A	N/A	N/A	$1,275	Seventy-five feet of coconut fiber mats and 100 feet of coconut fiber logs with giant cutgrass (*Zizaniopsis miliacea*) were planted in Simoneaux Ponds. The objective of this project was to establish vegetation in areas where conventional plantings have been unsuccessful.
Vegetation		Christmas Tree Fence Demonstration	VP	N/A	N/A	Ullo	Wooton	Jeff.	6	2005	N/A	N/A	N/A	N/A	$1,000	A total of 1,000 cut stolons of roseau cane (*Phragmites australis*) were planted on interior marsh to determine if cut stolons will grow in Christmas tree fencing.
Vegetation		East Little Lake	VP	N/A	N/A	Ullo	Wooton	Jeff.	12	2005	N/A	N/A	N/A	N/A	$8,000	A total of 2,000 smooth cordgrass (*Spartina alterniflora*) plugs were planted along a shoreline to vegetate newly dredged material so that the fresh spoil would have vegetative cover to inhibit the loss of these soils through erosion.
Vegetation		West Bayou Dupont	VP	N/A	N/A	Ullo	Wooton	Jeff.	12	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to decrease the fetch length within the interior ponds between Barataria Waterway and Bayou Dupont.
Vegetation		Ollie Canal '05	VP	N/A	N/A	Boasso	Wooton	Plaq.	12	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted along a newly dredged canal bank to establish vegetation.
Vegetation		Lake Des Allemands	VP	N/A	N/A	Amedee	Quezaire	StJo.	6	2005	N/A	N/A	N/A	N/A	$4,000	A total of 250 trade gallon containers each of California bulrush (*Schoenoplectus californicus*) and giant cutgrass (*Zizaniopsis miliacea*) were planted to create a vegetative buffer to slow the high erosion rate in the area.
Vegetation		Bayou Chevreuil	VP	N/A	N/A	Amedee	Quezaire	StJa.	9	2005	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation on a newly dredged canal.

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Vegetation		Baptiste Collette	VP	N/A	N/A	Boasso	Wooton	Plaq.	11	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted on an interior marsh to establish vegetation on newly dredged material (terraces).
Vegetation		Grand Isle '06	VP	N/A	N/A	Ullo	Wooton	Jeff.	23	2006	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 5-inch containers of sea oats (*Uniola paniculata*) were planted to introduce a new species of vegetation on newly established sand dunes created by a previous vegetation project.
Vegetation		East Bayou Dupont	VP	N/A	N/A	Ullo	Wooton	Jeff.	14	2006	N/A	N/A	N/A	N/A	$7,200	The goal of this project is to plant a total of 600 plugs and 600 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to decrease fetch length in interior ponds.
Vegetation		Couba Canal '06	VP	N/A	N/A	Chiasson	Wooton	StC.	11	2006	N/A	N/A	N/A	N/A	$8,000	The goal of this project is to plant 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) to vegetate a canal bank.
Vegetation		Mason Heirs	VP	N/A	N/A	Dupre	Pitre	Laf.	23	2006	N/A	N/A	N/A	N/A	$8,000	A total of 2,000 plugs of California bulrush (*Schoenoplectus californicus*) were planted to establish vegetation in an interior pond that borders Little Lake.
Vegetation		Fourchon '06	VP	N/A	N/A	Dupre	Pitre	Laf.	5	2006	N/A	N/A	N/A	N/A	$8,000	A total of 800 4-inch containers of bitter panicum (*Panicum amarum*) and 400 5-inch containers of sea oats (*Uniola paniculata*) were planted to establish vegetation on a newly accreted sand dune.
Vegetation		Little Lake/Round Lake	VP	N/A	N/A	Dupre	Pitre	Laf.	7	2006	N/A	N/A	N/A	N/A	$10,000	The goal of this project is to plant 2,500 plugs of smooth cordgrass (*Spartina alterniflora*) to establish vegetation on a freshly deposited spoil area.
Vegetation		Grand Bayou '06	VP	N/A	N/A	Boasso	Wooton	Plaq.	3	2006	N/A	N/A	N/A	N/A	$4,800	The goal of this project is to plant 1,200 plugs of smooth cordgrass (*Spartina alterniflora*) to establish vegetation on a newly dredged shoreline.
Vegetation		Pass Chaland	VP	N/A	N/A	Boasso	Wooton	Plaq.	4	2006	N/A	N/A	N/A	N/A	$7,000	The goal of this project is to plant 500 4-inch containers of bitter panicum (*Panicum amarum*) and 500 5-inch containers of sea oats (*Uniola paniculata*) to establish vegetation on a newly accreted sand dune.
Section 204/1135		Barataria Bay Waterway, Grand Terre Island (Phase I)	DM	N/A	N/A	Ullo	Wooton	Jef.	115	1996	N/A	N/A	N/A	N/A	$1,370,000	This Section 204 project provides for the beneficial placement of 500,000 cubic yards o dredged material from the Barataria Bay Waterway (BBWW) to create wetlands on Grand Terre Island. Construction was completed in December of 1996.
Section 204/1135		Barataria Bay Waterway, Mile 31 to 24.5	DM	N/A	N/A	Ullo	Wooton	Jef.	125	1999	N/A	N/A	N/A	N/A	$140,000	This Section 204 project utilized dredged material taken from a zone between miles 31 and 24.5 of the Barataria Bay Waterway (BBWW) to create marsh habitat. Construction was completed in September of 1999.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Section 204/1135		Barataria Bay Waterway, Grand Terre Island (Phase II)	DM	N/A	N/A	Ullo	Wooton	Jef.	80	1999, 2002	N/A	N/A	N/A	N/A	$100,000	This Section 204 project provided for the beneficial placement of 500,000 cubic yards of material dredged from the Barataria Bay Waterway (BBWW) to create wetlands on the bay side of Grand Terre Island. Construction was completed in September of 1999.
WRDA	BS-08	Caernarvon Freshwater Diversion	FD	N/A	USACE	Boasso	Odinet, Wooton	Plaq.	16,000	1991	N/A	N/A	N/A	N/A	$24,818,800	This project diverts freshwater and its accompanying nutrients and sediment from the Mississippi River to coastal bays and marshes in Breton Sound for fish and wildlife enhancement. This project can divert up to 8,000 cubic feet per second.
WRDA	BA-01	Davis Pond Freshwater Diversion	FD	N/A	USACE	Boasso, Boissiere, Chaisson, Dupre, Heitmeier, Ullo	Alario, Damico, Pitre, Shepherd, Smith, Wooton	StC.	33,000	2001	N/A	N/A	N/A	N/A	$106,000,000	The purpose of this project is to maintain and enhance the existing ecological framework of the Barataria Basin by providing freshwater, nutrients, and sediment. This will counter saltwater intrusion and help offset marsh subsidence. This project can divert up to 10,650 cubic feet per second.
Other	CIAPFIFI	Fifi Island Restoration	SP	N/A	N/A	Ullo	Wooton	Jef.	126	2003	N/A	N/A	N/A	N/A	$3,000,000	Approximately 100 acres of existing island (Grand Isle & Fifi Island) will be protected by the installation of approximately 10,000 linear feet of rock shore protection. An additional $999,500 was contributed from the Coastal Impact Assistance Program (CIAP) of 2001 for the construction and design of this project.
Other	FTL-01	Fisheries Habitat Restoration on West Grand Terre Island at Fort Livingston	SP	N/A	N/A	Ullo	Wooton	Jef.	10	2003	N/A	N/A	N/A	N/A	$2,076,816	This project consists of a rock dike built to conserve the Gulf shoreline of West Grand Terre Island and protect Fort Livingston. As a result of tropical storm systems in 2002, the erosion rates along West Grand Terre Island greatly accelerated. The construction of this project was expedited for the protection of Fort Livingston on West Grand Terre Island. Fort Livingston, which is listed on the National Register of Historic Places, was constructed in the 19th century by the U.S. Army Corps of Engineers as part of the nation's coastal defense system.

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); State=Restoration projects funded primarily by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Progran (Christmas Tree 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; FEMA= Federal Emergency Managment Agency projects; CIAP= Coastal Impact Assistance Program projects.

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; OM=Outfall Management; BI=Barrier Island; SD=Sediment Diversion.

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

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

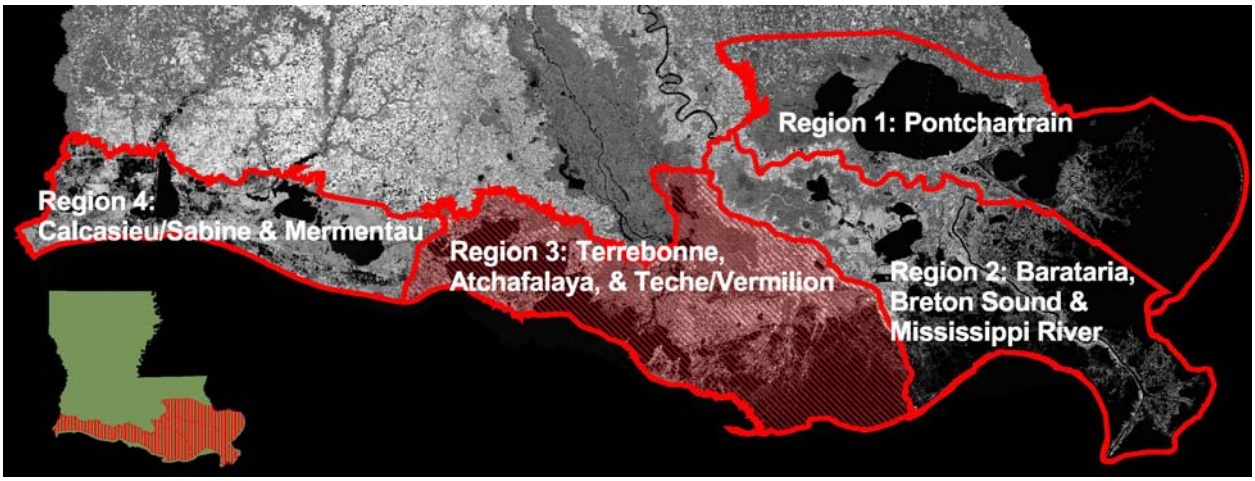
Parish: Asc.=Ascension, Asu.=Assumption, Cal.=Calcasieu, Cam.=Cameron, Ibe.=Iberia, Jef.=Jefferson, Laf.=Lafourche, Orl.=Orleans, Plaq.=Plaquemines, StB.=St. Bernard, StC.=St. Charles, StJo.=St. John the Baptist, StM.=St. Mary, StT.=St. Tammany, Tan.=Tangipahoa, Ter.=Terrebonne, Ver.=Vermilion.

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

Baseline Cost Estimates 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. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable.

REGION 3



INTRODUCTION

Region 3 encompasses the Terrebonne, Atchafalaya, and Teche-Vermilion Basins. It extends from Bayou Lafourche on the east, to Freshwater Bayou on the west, and south from the Gulf of Mexico to the boundary of the coastal wetlands on the north. It covers all or part of the following parishes: Lafourche, Terrebonne, Assumption, Iberville, St. Martin, Iberia, St. Mary, Lafayette, and Vermilion.

This region covers 1,140,450 acres of vegetated wetlands. These wetlands are classified as approximately 368,550 acres of cypress-tupelo swamp and bottomland forests; 298,300 acres of fresh marshes; 92,700 acres of intermediate marshes; 240,700 acres of brackish marshes; and 140,200 acres of saline marshes.

Estimates of land loss from Region 3 indicate that between 1990 and 2000, a total of 46,976 acres of wetlands were lost (an average of 4,672 acres per year).

The central and eastern portions of the Terrebonne Basin have experienced extensive losses of fresh and brackish marshes. Altered hydrology and an intermediate to high natural subsidence rate have led to excessive flooding in these wetlands, which impairs plant health and productivity and ultimately results in marsh loss. Shoreline erosion along the fringes of bays and large lakes has also contributed to the basin's significant land loss. Wetland loss in the western portion of the Terrebonne Basin is less severe, and is primarily attributed to excessive marsh inundation and ponding of water.

The Atchafalaya Basin includes Atchafalaya Bay and adjacent marshes to the north. This is a very important area for wildlife because it is the site of active delta building, which naturally builds new habitat. This area includes the Wax Lake Delta, the Atchafalaya River Delta, and the "Jaws", a smaller delta.

Throughout Region 3, shoreline erosion has been severe along large lakes and bays. Generally, there is support both from parish governments and the public in Region 3 to maintain present habitats in areas above the GIWW, and to restore habitats in areas below the GIWW.

Coast 2050 identified specific ecosystem strategies for protecting and sustaining the region's coastal resources. These specific ecosystem strategies can be grouped into one of the following five general categories: restoring swamps;

restoring and sustaining marshes; protecting bay, lake, and Gulf shorelines; restoring barrier islands; and maintaining brackish conditions in the Vermilion, West Cote Blanche, and East Cote Blanche bay complex, while reducing turbidity and sedimentation.

PROJECT SUMMARIES

A total of 214 restoration projects have been authorized for Region 3 (Figures 10 and 11, Table 3). Project-specific information is presented below, organized by project funding source.

CWPPRA

A total of 50 projects have been authorized under the direction of CWPPRA in Region 3, which is anticipated to benefit 20,818 acres of wetlands at a cost of $237,542,589.

The CWPPRA Task Force officially deauthorized four projects in Region 3: Lower Bayou LaCache Hydrologic Restoration (TE-19), Flotant Marsh Fencing Demonstration (TE-31), Bayou Boeuf Pump Station (TE-33), and Marsh Creation East of the Atchafalaya River-Avoca Island (TE-35).

State

Fifteen projects have been implemented in Region 3 and funded by the Wetlands Trust Fund. These projects are currently estimated to benefit 9,979 acres of land at a cost of $13,554,677.

Parish Coastal Wetlands Restoration Program

The following sixteen Christmas tree projects have been constructed in Region 3: Hammock Lake, Atchafalaya River Delta, GIWW near Hanson Canal, Leeville #1, Pelican Point/Shark Island, Weeks Island at GIWW, St. Martin Parish, Vermilion Bay, Bayou Lafourche Plantings and Wave Damping, Shark Bayou, Rainey Wildlife Refuge, Goudchaux Plantings, Weeks Canal and Scout Terraces, Kern-Stovall, and Pecan Island. In 2006, the Weeks Island at GIWW and the Hammock Lake projects were refurbished. Vegetation was planted at the Hammock Lake and Pecan Island projects.

DNR/NRCS/SWCC Vegetation Planting Program

Since 1988, a total of 118 vegetation planting projects have been implemented in Region 3. Several phases, spanning multiple years, exist for many of the planting projects. The vegetation planting projects that were constructed in 2006 in Region 3 are Delcambre Canal, Weeks Island Mudflat, Lake DeCade Roseau Fence Demo., GIWW, Terrebonne Levee District, Lost Lake, Avoca Trees and Cutgrass, and Rainey Smooth Cordgrass.

Section 204/1135

Within Region 3, one Section 204/1135 project was constructed in 1991, and one was constructed in 2002. The Wine Island Restoration project, constructed in 1991, rebuilt the island with the use of dredged material. The Houma Navigation Canal, Wine Island Barrier Island Restoration project, constructed in late 2002, investigated the feasibility of using dredged material from the bar channel area to create 50 acres of wetlands in deteriorated marshes and open water areas.

Other

Within Region 3, one project was constructed with funding from a NOAA grant in 2002. The Brown Marsh project consists of a thin layer of marsh creation/nourishment over 44 acres. The Rainey Audubon Wildlife Sanctuary Earthen Terraces project, completed in 2005, consists of 35,000 linear feet of terraces constructed in shallow open water.

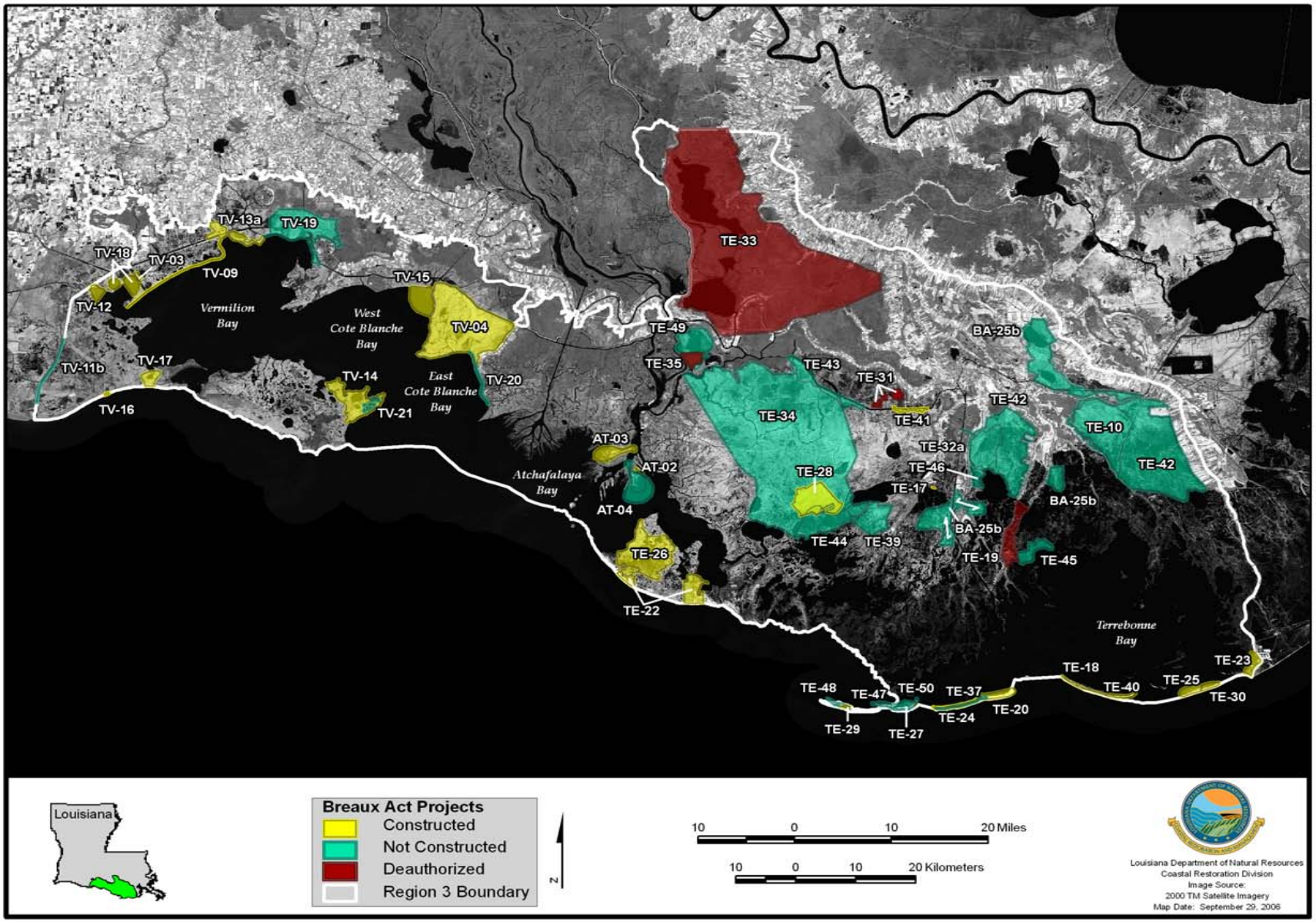


Figure 10. Location of Breaux Act projects authorized in Coast 2050 Region 3.

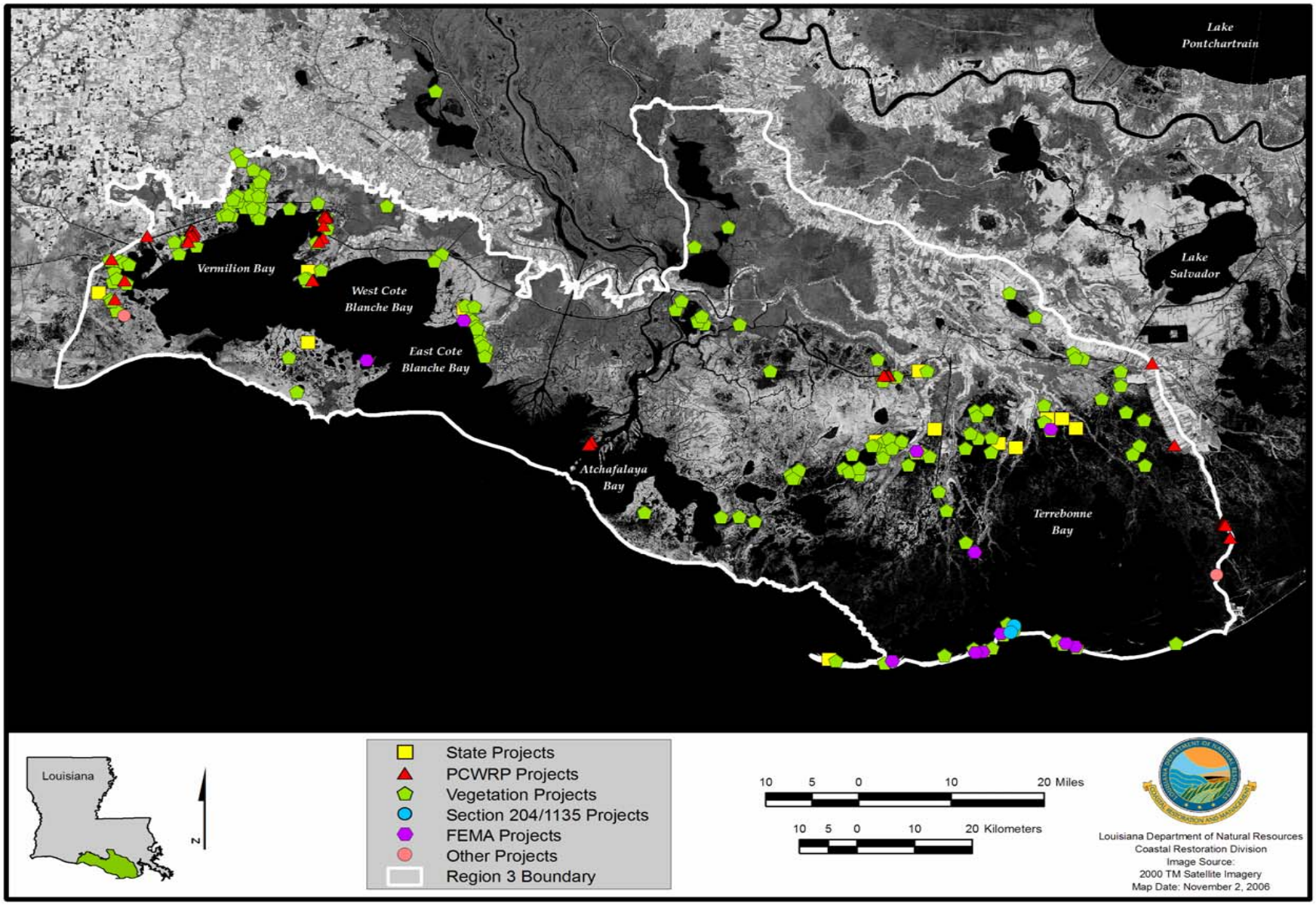


Figure 11. Location of State, PCWRP, Vegetation, Section 204/1135, FEMA, and Other projects in Coast 2050 Region 3.

Table 3. Restoration projects completed or pending in Coast 2050 Region 3.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	AT-02 (PAT-2)	Atchafalaya Sediment Delivery	DM MC HR	2	NMFS	Gautreaux	Smith	StM.	2,232	1998	$190,588	$1,676,356	$665,202	$907,810	$2,532,147	The objective of this project is to enhance natural delta growth by re-opening Natal Channel and Castille Pass. Natal Channel was re-established with a 120-foot wide, 10-foot deep, 8,800-foot long channel and Castille Pass with a 190-foot wide, 10-foot deep, 2,000-foot long channel. Material dredged (700,925 cubic yards) as a result of construction was strategically placed at elevations mimicking natural delta lobes.
Breaux Act	AT-03 (XAT-7)	Big Island Mining	DM MC HR	2	NMFS	Gautreaux	Dartez, Smith	StM.	1,560	1998	$513,254	$5,948,384	$615,766	$4,136,057	$7,077,404	The project includes creating a new western delta lobe behind Big Island to enhance the accretion of land beyond the west bank of the Atchafalaya River. Construction included dredging of a main stem and five branch channels designed to mimic natural channel bifurcations. Dredged material was strategically placed at elevations mimicking natural delta lobes. Re-opening the channels is allowing continued natural sediment transport and marsh growth.
Breaux Act	AT-04 (XAT-11)	Castille Pass Channel Sediment Delivery	SD	9	NMFS	Gautreaux	Smith	StM.	577	Pending	$1,809,438	N/A	$36,888	$1,484,633	$1,846,326	The Castille Pass project was intended to re-establish the sedimentation processes that lead to subdelta development in this area of the Atchafalaya Delta. This project consists of dredging and extending Castille Pass to promote subdelta development.
Breaux Act	TE-10 (XTE-49)	Grand Bayou Hydrologic Restoration	HR	5	USFWS	Dupre	Baldone, Pitre	Laf.	199	Pending	$1,601,868	$2,637,807	$3,970,047	$5,135,468	$8,209,722	The objective of the project is to maintain emergent wetlands in this area by providing supplemental freshwater, nutrients, and sediment from the Atchafalaya River via the Gulf Intracoastal Waterway (GIWW). Project features include a water control structure on Bayou Pointe au Chien just south of its junction with St. Louis Canal, the relief structure on Grand Bayou, and the pipeline structure on Grand Bayou Canal.
Breaux Act	TE-17 (TE 17)	Falgout Canal Planting Demonstration	VP	1	NRCS	Dupre	Dartez	Ter.	N/A	1997	$36,330	$82,075	$90,879	$144,561	$209,284	For this demonstration project, smooth cordgrass (*Spartina alterniflora*) suited to the salinity and habitat type of the Falgout Canal area was planted along the canal and protected by 6 types of wave-stilling devices. This is a subproject of the Vegetation Plantings project.
Breaux Act	TE-18 (TE 18)	Timbalier Island Planting Demonstration	VP	1	NRCS	Dupre	Baldone	Ter.	N/A	1996	$36,955	$158,611	$97,558	$372,589	$293,124	For this demonstration project, sand fences were installed and vegetation suited to the salinity and habitat type of Timbalier Island was planted in several areas on the island to trap sand and buffer wind and wave energy.
Breaux Act	TE-19 (TE 19)	Lower Bayou LaCache Hydrologic Restoration (Deauthorized)	HR	1	NMFS	Dupre	Baldone	Ter.	N/A	Deauth.	$92,808	N/A	$6,818	$1,694,739	$99,625	The project would have reduced marsh loss rates and improved fish and wildlife habitat quality by restoring natural north-south water exchange with estuarine water bodies and by reducing flow through the numerous dredged canals in the area. Because of problems with landrights and navigation, the project was officially deauthorized by the Breaux Act Task Force in February of 1996.
Breaux Act	TE-20 (TE 20)	Isles Dernieres Restoration East Island	BI	1	EPA	Dupre	Baldone	Ter.	9	1999	$466,359	$7,784,527	$511,530	$6,345,468	$8,762,416	The project objective is to restore the coastal dunes and wetlands of the Eastern Isles Dernieres. Approximately 3,925,000 cubic yards of sand were dredged from adjacent waters and used to build a retaining dune which was then hydraulically filled to create an elevated marsh platform. Sand fences and vegetation were also installed to stabilize the sand and minimize wind-driven transport. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Katrina.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	TE-22 (PTE-22/24)	Point Au Fer Canal Plugs	SP HR	2	NMFS	Dupre	Dartez	Ter.	375	1997	$230,196	$2,062,750	$942,262	$1,069,589	$3,235,208	The project is intended to reduce saltwater intrusion and tidal flushing in the Point au Fer marshes, due to unplugged canals and beach overwash, without reducing freshwater back flooding from the Atchafalaya River. This project involved plugging a number of canals and stabilizing the Mobil Canal/Gulf of Mexico breach to prevent saltwater intrusion into the interior of the island.
Breaux Act	TE-23 (PTE-27)	West Belle Pass Headland Restoration	DM SP	2	USACE	Dupre	Pitre	Laf.	474	1998	$1,018,973	$5,134,019	$598,449	$4,854,102	$6,751,441	The project goals include reducing the encroachment of Timbalier Bay into the marshes on the west side of Bayou Lafourche through the use of dedicated dredged materials to create 184 acres of marsh on the west side of Belle Pass. A water control structure was placed in the Evans Canal, and plugs on other canals. Riprap was used to anchor 17,000 linear feet of the western side of Belle Pass and Bayou Lafourche.
Breaux Act	TE-24 (XTE-41)	Isles Dernieres Restoration Trinity Island	BI	2	EPA	Dupre	Baldone	Ter.	109	1999	$517,918	$10,099,253	$157,804	$6,907,897	$10,774,974	The project objectives include the restoration of Trinity Island (dunes and marsh) of the Isles Dernieres chain. Approximately 4,850,000 cubic yards of sand were dredged from adjacent waters and used to build a retaining dune, which was then hydraulically filled to create an elevated marsh platform sloping from the dune to +4.0 feet at the bay side of the island. Sand fences and vegetation were also installed to stabilize the sand and minimize wind-driven transport. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	TE-25 (XTE-67)	East Timbalier Island Restoration, Phase I	BI	3	NMFS	Dupre	Pitre	Laf.	1,913	2000	$430,859	$3,156,091	$142,636	$2,046,971	$3,729,587	The objective of this project is to strengthen and thus increase the life expectancy of East Timbalier Island. The project called for the mining of 890,000 cubic yards of sediment and placement of the material in three embayments along the landward shoreline of East Timbalier Island. The project also included aerial seeding of the dune platform, installation of sand fencing, and dune vegetation plantings. A claim was submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	TE-26 (PTE-23/26a /33)	Lake Chapeau Sediment Input and Hydrologic Restoration, Point Au Fer Island	HR MC	3	NMFS	Dupre, Gautreaux	Dartez, Smith	Ter.	509	1999	$599,221	$3,602,934	$1,177,832	$4,149,182	$5,379,987	The objectives of the project are to restore the marshes west of Lake Chapeau, to re-establish the hydrologic separation of the Locust Bayou and Alligator Bayou watersheds, and to re-establish the natural drainage patterns within the Lake Chapeau area. The project components included the re-establishment of a hydrologic separation of the island's two major watersheds utilizing dredged material from Atchafalaya Bay and the restoration of the island hydrology by plugging oil field access canals and gapping artificial spoil banks to restore natural hydrologic pathways.
Breaux Act	TE-27 (PTE-15bi)	Whiskey Island Restoration	BI	3	EPA	Dupre	Baldone	Laf.	1,239	1999	$566,235	$6,401,038	$139,313	$4,844,274	$7,106,586	The project is intended to create and restore beaches and back island marshes on Whiskey Island. The project consists of creating 523 acres of back island marsh and filling in the breach at Coupe Nouvelle (134 acres). The initial vegetation planting with smooth cordgrass (*Spartina alterniflora*) on the bay shore was completed in July 1998, and additional vegetation seeding/planting was carried out in Spring 2000. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	TE-28 (PTE-26b)	Brady Canal Hydrologic Restoration	HR	3	NRCS	Dupre	Dartez	Ter.	297	2000	$221,156	$2,630,026	$2,428,376	$4,717,928	$5,279,558	The objective of the project is to maintain the highly-fragmented transitional marshes between the fresh and estuarine zones by enhancing freshwater, sediment, and nutrient delivery into the area. The project promotes freshwater flow from Bayou Penchant into a fresh/intermediate marsh that encompasses the western-most segment of the Mauvais Bois Ridge. Tidal scouring and rapid water exchange rates would be reduced by decreasing the cross-sectional areas of natural and man-made outlets and by maintaining the banks along Bayou DeCade, Turtle Bayou, and Superior Canal.
Breaux Act	TE-29 (PTE-15-vii)	Raccoon Island Breakwaters Demonstration	BI	5	NRCS	Dupre	Baldone	Ter.	N/A	1997	$200,401	$1,373,569	$221,418	$1,497,538	$1,795,388	This demonstration project's goal is to reduce shoreline erosion and increase land coverage. Eight segmented breakwaters were constructed along the eastern end of the island to reduce the rate of shoreline retreat, promote sediment deposition along the beach, and protect seabird habitat. Project effectiveness was determined by 1) monitoring changes in the shoreline, wave energy, and elevations along the beach, and 2) by surveys of the gulf floor between the shoreline and the breakwaters.
Breaux Act	TE-30 (XTE-45/67b)	East Timbalier Island Restoration, Phase 2	BI	4	NMFS	Dupre	Pitre	Laf.	215	2000	$885,717	$6,570,105	$145,041	$5,752,404	$7,600,863	The project goal is to strengthen and increase the life expectancy of East Timbalier Island by placing dredged material along its landward shoreline. Additional rock has been placed on the existing breakwater in front of the island, which will help protect the created area from erosion. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	TE-31 (XTE-54b)	Flotant Marsh Fencing Demonstration (Deauthorized)	VP	4	NRCS	Gautreaux	Dartez	Ter.	N/A	Deauth.	$96,590	N/A	$10,370	$367,066	$106,960	The purpose of this demonstration project was to determine the effectiveness of different fencing techniques used to conserve and restore floating marshes. There was difficulty in locating an appropriate site for demonstration and in addressing engineering constraints. The restoration techniques that were originally suggested for this project were not feasible. The project was officially deauthorized by the Breaux Act Task Force in October of 2001.
Breaux Act	TE-32a (TE-7f)	North Lake Boudreaux Basin Freshwater Introduction and Hydrologic Management	FD	6	USFWS	Dupre	Baldone, Dartez, Dove	Ter.	603	Pending	$961,357	$5,453,945	$4,104,081	$9,831,306	$10,519,383	The project objective is to seasonally introduce freshwater from the Houma Navigation Canal in order to reduce saltwater intrusion and promote vegetation diversity within the project area. Project plans include enlargement of a portion of Bayou Pelton, dredging of an outfall channel, installation of a major water control structure, building a bridge for Louisiana Highway 57 over the outfall canal, construction of water management structures, and a flood protection provision.
Breaux Act	TE-33 (XTE-32i)	Bayou Boeuf Pump Station (Deauthorized)	HR	6	EPA	Gautreaux	Dartez, St. Germain, Smith, Triche	StM.	N/A	Deauth.	$3,452	N/A	N/A	$150,000	$3,452	The purpose of this project was to link the wetlands protection/restoration objectives of the Breaux Act with flood protection and navigation needs generally covered by WRDA. The project components consisted of implementing a long-term water management strategy for the Verret Basin, and evaluating a long-term river water delivery strategy from Atchafalaya River to Terrebonne wetlands. The project was officially deauthorized by the Breaux Act Task Force in July of 1998.
Breaux Act	TE-34 (PTE-26i)	Penchant Basin Natural Resources Plan, Increment 1	HR	6	NRCS	Dupre, Gautreaux	Dartez	Ter.	1,155	Pending	$1,669,054	$9,723,048	$2,710,949	$14,103,051	$14,103,051	The objective of the project is to combine the long-term realignment of the Penchant Basin hydrology with restoration and protection measures aimed at maintaining the physical integrity of the area during the transition toward greater riverine influence. The major problems in the project area include hydrologic alterations, interior marsh erosion, subsidence, saltwater intrusion, herbivory, and hurricane damage.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	TE-35 (CW-5i)	Marsh Creation East of the Atchafalaya River - Avoca Island (Deauthorized)	MC	6	USACE	Gautreaux	Dartez	StM. Ter.	N/A	Deauth.	$66,425	N/A	$443	$6,438,400	$66,869	The project consisted of the beneficial use of dredged material from the "Crew Boat Chute" and placing it in the Avoca Island area. Although the project would have benefited 434 acres at a cost of $6,438,400, the cost of the project was estimated to be considerably higher than originally planned, making it economically unjustifiable. The project was officially deauthorized by the Beaux Act Task Force in July of 1998.
Breaux Act	TE-36 (CW-DEMO)	Thin Mat Floating Marsh Enhancement Demonstration	SNT	7	NRCS	Dupre	Dartez	Ter.	N/A	2000	$67,748	N/A	$471,925	$460,222	$539,673	The purpose of this demonstration project is to evaluate techniques to create and enhance thin floating mats of marsh, as well as the effects of water movement and sediment on these marshes. The objective of the project is to induce development of thick, continually floating mats from a thin-mat flotant and to determine the effects of water movement on the floats in areas with and without available sediment.
Breaux Act	TE-37 (TE 11a)	New Cut Dune and Marsh Restoration	BI	9	EPA	Dupre	Baldone	Ter.	102	Pending	$1,788,807	$10,890,023	$348,631	$7,393,626	$13,027,460	The objective of this project is to close the breach between East and Trinity Islands that was originally created by Hurricane Carmen (1974) and subsequently enlarged by Hurricane Juan (1985). The project will create barrier island dunes and marsh habitat and lengthen the structural integrity of the eastern Isles Dernieres by restoring the littoral drift and adding sediment into the near-shore system.
Breaux Act	TE-39 (PTE-28)	South Lake DeCade Freshwater Introduction	FD	9	NRCS	Dupre	Dartez	Ter.	202	Pending	$599,265	N/A	$71,346	$396,489	$670,611	This project will include the construction of a water control structure in the southern bank of Lake DeCade. This will increase the amount of Atchafalaya River water and sediment introduced into the marshes south of the lake. In addition, shoreline protection will be implemented adjacent to the proposed structure, and a weir in Lapeyrouse Bayou will be removed.
Breaux Act	TE-40 (XTE-45a)	Timbalier Island Dune and Marsh Creation	BI	9	EPA	Dupre	Baldone	Ter.	273	2004	$1,700,376	$14,827,413	$129,917	$16,234,679	$16,657,706	Timbalier Island is migrating rapidly to the west/northwest; therefore, the western end of Timbalier Island is undergoing lateral migration by spit-building processes at the expense of erosion along the eastern end. The objective of this project is to restore the eastern end of Timbalier Island by the direct creation of beach, dunes, and marsh. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	TE-41 (XTE-DEMO)	Mandalay Bank Protection Demonstration	SP	9	USFWS	Dupre, Gautreaux	Dartez, Dove	Ter.	N/A	2003	$263,189	$1,386,366	$117,659	$1,194,495	$1,767,214	This demonstration project is intended to develop new techniques for protecting and restoring organic soils, which can be easily eroded. Intact banks and breakthroughs were treated to determine the cost-effectiveness of demonstrated approaches. The project will evaluate several low-cost solutions for restoring habitat in blowout areas and preventing bank erosion.
Breaux Act	TE-42 (Complex Project)	Move Existing Atchafalaya Water to Central Terrebonne	HR	9	USFWS	Dupre	Baldone, Dartez, Dove, Pitre	StM.	N/A	Pending	N/A	N/A	N/A	N/A	N/A	This project is intended to reduce marsh loss through the improved distribution of excess freshwater seasonally available in the Gulf Intracoastal Waterway (GIWW). The project will benefit deteriorating marshes in central and/or eastern portions of the Terrebonne Basin.
Breaux Act	TE-43	GIWW Bank Restoration of Critical Areas in Terrebonne	SP	10	NRCS	Gautreaux	Dartez	Ter. Laf.	366	Pending	$1,721,029	N/A	$14,954	$1,735,983	$1,735,983	The project objective is to restore critical lengths of deteriorated channel banks and stabilize/armor selected critical lengths of deteriorated channel banks with hard shoreline stabilization materials.
Breaux Act	TE-44	North Lake Mechant Landbridge Restoration	SP	10	USFWS	Dupre	Dartez	Ter.	604	Pending	$2,059,539	$26,516,586	$433,646	$31,727,917	$29,009,771	The project will help to maintain and restore the landbridge (Lake Mechant north shoreline and the Small Bayou La Pointe Ridge) which provides a hydrologic barrier between brackish and low-salinity habitats. Project features include marsh creation, the planting of smooth cordgrass on the shoreline, the construction of various plugs, and repairing a fixed-crest weir along Bayou Raccourci.

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Breaux Act	TE-45	Terrebonne Bay Shore Protection Demonstration	SP	10	USFWS	Dupre	Baldone	Ter.	N/A	Pending	$550,491	$1,465,921	$487,356	$2,006,373	$2,503,768	This demonstration project is intended to test several applications of concrete mats, A-Jacks®, and techniques for establishing shoreline oyster reefs for their ability to prevent shoreline erosion while encouraging oyster reef formation. The project design includes three 230 to 300 foot-long replicates of each treatment.
Breaux Act	TE-46	West Lake Boudreaux Shoreline Protection and Marsh Creation	SP MC	11	USFWS	Dupre	Dartez	Ter.	277	Pending	$1,796,333	$12,612,430	$1,568,191	$17,519,731	$15,976,954	This project is intended to protect the shoreline from erosion due to direct exposure to lake wave energy and to restore interior marsh lost from subsidence and saltwater intrusion. This objective will be accomplished through the construction of a rock dike to stop erosion along the western shoreline of Lake Boudreaux and the creation of marsh habitat through the deposition of dredged material.
Breaux Act	TE-47	Ship Shoal: Whiskey West Flank Restoration	BI	11	EPA	Dupre	Baldone	Ter.	195	Pending	$3,717,855	N/A	$24,198	$2,998,960	$3,742,053	This project is intended to rebuild dunes and a marsh platform on the west flank of Whiskey Island through the deposition of dredged material transported from Ship Shoal. This project will provide a barrier to reduce wave and tidal energy, thereby protecting mainland shoreline from continued erosion.
Breaux Act	TE-48	Raccoon Island Shoreline Protection/Marsh Creation	SP MC	11	NRCS	Dupre	Baldone	Ter.	16	Pending	$1,480,922	$6,166,005	$220,156	$7,797,791	$7,867,083	The goal of this project is to protect the Raccoon Island rookery and seabird colonies from an encroaching shoreline by reducing the rate of erosion along the western end of the island and creating more land along the northern shoreline. This goal will be accomplished through the construction of eight additional segmented breakwaters and a terminal groin along the gulf side of the island, adjacent to the Raccoon Island Breakwaters Demonstration (TE-29) project. In addition, dredged material will be used to create marsh on the bay side of the island.
Breaux Act	TE-49	Avoca Island Diversion and Land Building	SD	12	USACE	Gautreaux	Dartez	StM.	143	Pending	$2,185,217	N/A	$44,659	$2,229,876	$2,229,876	The project objective is to divert freshwater, sediment, and nutrients into the open water areas in central Avoca Island to create and protect 143 acres of emergent wetlands by the end of the 20-year project life. The project design team is considering the addition of a marsh creation component utilizing dredged material to increase project wetland benefits.
Breaux Act	TE-50	Whiskey Island Back Barrier Platform Creation	BI	13	EPA	Dupre	Baldone, Dartez	Ter.	272	Pending	$2,751,494	N/A	N/A	$2,293,893	$2,751,494	The goal of this project is to enhance the structural function of Whiskey Island as a protective barrier for back bay and inland areas. Dredged material will be deposited on the island's back barrier area to widen the marsh platform on the central and eastern portions of Whiskey Island.
Breaux Act	TV-03 (FTV-03)	Vermilion River Cutoff Bank Protection	SP	1	USACE	Gautreaux	Hebert	Ver.	65	1996	$509,401	$1,185,882	$327,703	$1,526,000	$2,022,987	The east bank of the Vermilion River Cutoff was stabilized by armoring the shoreline with a 6,520-foot rock breakwater to maintain the shoreline position and protect the integrity of several thousand acres of the Onion Lake wetland complex.
Breaux Act	TV-04 (TV-04)	Cote Blanche Hydrologic Restoration	HR	3	NRCS	Gautreaux	Smith	StM.	2,223	1999	$465,765	$4,128,061	$3,295,277	$5,173,062	$7,889,103	The primary objectives of the project are to reduce shoreline loss from wave erosion, to reduce excessive tidal fluctuations and rapid tidal exchange currently causing scouring of interior marsh, to develop a hydrologic regime conducive to sediment and nutrient deposition, and to re-establish vegetation in eroded areas. These objectives have been accomplished through the use of both structural and non-structural features.
Breaux Act	TV-09 (PTV-18)	Boston Canal/Vermilion Bay Bank Protection	SP	2	NRCS	Gautreaux	Hebert	Ver.	378	1995	$154,701	$524,439	$333,510	$1,008,634	$1,012,649	The objective of this project is to conserve vegetated wetlands by reducing erosion through the dissipation of wave energy. The project will stabilize 15 miles of Vermilion Bay shoreline and prevent further regression of the Boston Canal banks. A rock bulkhead was installed parallel to the banks of Boston Canal on both sides of the channel from the existing shoreline at the mouth of the channel and extends into the bay. Sediment fences were installed behind the bulkhead to encourage sedimentation and land accretion.

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Breaux Act	TV-11b (XTV-27)	Freshwater Bayou Bank Stabilization - Belle Isle Canal to Lock	SP	9	USACE	Gautreaux	Frith	Ver.	241	Pending	$1,380,303	N/A	$118,664	$1,498,967	$1,498,967	The goal of this project is to stop erosion along the bank of Freshwater Bayou Canal and to protect the interior wetlands from increased tidal exchange and wake-induced erosion. This objective will be achieved by constructing a rock dike along the eastern bank of Freshwater Bayou Canal, between Belle Isle Canal and Freshwater Bayou Lock.
Breaux Act	TV-12 (PTV-19)	Little Vermilion Bay Sediment Trapping	SNT	5	NMFS	Gautreaux	Frith, Hebert	Ver.	441	1999	$196,817	$351,930	$337,283	$940,065	$886,030	This project is designed to optimize the retention of sediment from the Atchafalaya River to create new marsh areas in Little Vermilion Bay. Dredged material was placed to create emergent marsh, thereby protecting the existing shoreline from wind-induced wave erosion.
Breaux Act	TV-13a (XTV-25i)	Oaks/Avery Canals Hydrologic Restoration, Increment 1	HR	6	NRCS	Gautreaux, Romero	Hebert	Ibe. Ver.	160	2002	$473,455	$1,455,061	$996,700	$2,367,700	$2,925,216	This project is designed to protect the Vermilion Bay shoreline and the Gulf Intracoastal Waterway (GIWW) banklines and to stabilize water level fluctuation north of the GIWW and east of Oaks Canal. Vegetation was planted and rock dikes were constructed. An additional state-funded project (TV-13), located adjacent to this project, will incorporate the use of low-sill structures placed at the outfall of Avery Canal to redirect additional water flow through one particular section of Bayou Petite Anse.
Breaux Act	TV-14 (TV-5/7)	Marsh Island Hydrologic Restoration	HR	6	USACE	Romero	Hebert	Ibe. Ver.	408	2001	$602,995	$3,166,547	$1,373,747	$4,094,900	$5,143,288	The objective of the project is to stabilize the northeastern shoreline of Marsh Island, including the northern shoreline of Lake Sand, and to help to restore the historical hydrology. The project included construction of nine plugs in oil and gas canals at the northeast end of Marsh Island, protection of the northeast shoreline with rock, and isolation of Lake Sand from Vermilion Bay with a rock dike. A claim was submitted to FEMA to repair damage to this project caused by Hurricane Rita. The claim has been approved.
Breaux Act	TV-15 (PTV-19b)	Sediment Trapping at "The Jaws"	SNT	6	NMFS	Gautreaux	Smith	StM.	1,999	2004	$438,654	$2,548,187	$405,294	$3,167,400	$3,392,135	The objective of the project is to induce sedimentation to create emergent vegetated wetlands. This will be achieved by constructing wetland terraces, thereby reducing wave fetch. Distributary channels will be dredged to deliver water and sediment to the project area.
Breaux Act	TV-16 (CW-05)	Chenier Au Tigre Sediment Trapping Demonstration	SNT SP	6	NRCS	Gautreaux	Frith	Ver.	N/A	2001	$88,323	$457,388	$79,289	$500,000	$624,999	This demonstration project is intended to test the effectiveness of rock breakwaters that are designed to trap and retain sediment from gulf tides, stabilize the existing shoreline from ongoing erosion on Chenier Au Tigre, and build up portions of the coastline that have already eroded. Increased sediment accretion on the Gulf of Mexico side of the chenier is expected to act as a buffer between the higher salinity gulf water and the brackish marsh, which lies immediately behind the chenier.
Breaux Act	TV-17 (PTV-20)	Lake Portage Land Bridge	SP	8	NRCS/ EPA	Gautreaux	Frith, Hebert	Ver.	24	2004	$306,665	$682,225	$192,239	$1,013,820	$1,181,129	The objective of this project is to prevent the shoreline south of Lake Portage from breaching and creating another pass from Vermilion Bay to the Gulf. The project will consist of backfilling a canal and armoring the beach with rock.
Breaux Act	TV-18 (XTV-30)	Four Mile Canal Terracing and Sediment Trapping	SNT	9	NMFS	Gautreaux	Frith, Hebert	Ver.	167	2004	$632,144	$1,616,826	$76,260	$5,086,511	$2,325,230	This project includes construction and planting of terraces with smooth cordgrass (*Spartina alterniflora*) within Little White Lake and Little Vermilion Bay, along Four Mile Canal, to abate wave-induced shoreline erosion and facilitate sedimentation in the open water areas between the terraces.

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Breaux Act	TV-19 (PTV-13)	Weeks Bay Marsh Creation and Shore Protection/ Commercial Canal Freshwater Redirection	MC SP	9	USACE	Romero	Hebert	Ibe.	278	Pending	$1,188,236	N/A	$41,101	$1,229,337	$1,229,337	The objective of this project is to stop shoreline and bank erosion. This will be achieved by the construction of a retention levee and channel plugs, dedicated placement of dredged material, re-vegetating critical areas, and armoring shore/bank areas with sheetpile revetment. In addition, a low-sill weir will be placed across Commercial Canal to reduce tidal energy and redirect Atchafalaya River water.
Breaux Act	TV-20	Bayou Sale Shoreline Protection	SP	13	NRCS	Gautreaux	Smith	StM.	329	Pending	$2,254,912	N/A	N/A	$2,254,912	$2,254,912	The project goal is to reduce and/or reverse shoreline erosion and create marsh between the breakwater and the existing shoreline. A foreshore rock dike will be constructed parallel to the existing eastern shoreline of East Cote Blanche Bay.
Breaux Act	TV-21	East Marsh Island Marsh Creation	MC	14	NRCS	Romero	Hebert	Ibe.	189	Pending	$1,193,606	N/A	N/A	$1,193,606	$1,193,606	The goal of the project is to re-create brackish marsh habitat in the open water areas of the interior marsh primarily caused by hurricane damage. The project will also create marsh behind the two easternmost existing rock dikes.
State	CAT-01	Cheniere Au Tigre	SP	N/A	N/A	Gautreaux	Frith	Ver.	40	2005	N/A	N/A	N/A	N/A	$921,672	The primary objective of the project is to protect the Cheniere au Tigre shoreline from additional erosion and protect local infrastructure. This project will use segmented rock breakwater structures to help reduce the rate of shoreline erosion and promote sediment deposition along the beach north of the breakwater structures. The proposed series of segmented breakwaters will be placed just east of the CWPPRA funded TV-16 project with up to 9 additional structures. The structures will cover approximately 2,800 linear feet with an approximate distance of 240 feet from the existing shoreline.
State	LA-01d	Dedicated Dredging Program - Terrebonne Parish School Board	DM	N/A	N/A	Dupre	Dartez	Ter.	40	2006	N/A	N/A	N/A	N/A	$1,102,154	This project created approximately 40 acres of marsh just north of Lake DeCade along the western bank of Minors Canal. This project is part of the coastwide state Dedicated Dredging Program. 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.
State	RI	Raccoon Island Repair	DM	N/A	N/A	Dupre	Baldone	Ter.	197	1994	N/A	N/A	N/A	N/A	$1,400,000	This project was a cooperative effort that utilized dredged material and vegetation to repair Raccoon Island from storm damage. Cooperators include the Louisiana Department of Natural Resources (LDNR)/ Coastal Restoration Division (CRD), Louisiana Department of Wildlife and Fisheries (LDWF)/Fur and Refuge Division, Terrebonne Parish Consolidated Government (TPCG), South Terrebonne Tidewater Management and Conservation District, T. Baker Smith & Son, Inc., Coastal Engineering & Environmental Consultants, Inc., and Bean Dredging. Federal grant money was also utilized for this project by LDWF and TPCG.
State	SBG	Spoilbank along the GIWW	VP	N/A	N/A	Gautreaux	Dove	Ter.	1	1993	N/A	N/A	N/A	N/A	$9,400	This project planted 8,000 feet of spoilbank along the Gulf Intracoastal Waterway with black willow (*Salix nigra*) and bald cypress (*Taxodium distichum*) in an effort to reduce further bank erosion. The effectiveness of different types of nutria exclusion devices was also tested.
State	TE-01	Montegut Wetland	MM	N/A	N/A	Dupre	Baldone	Ter.	1,655	1993	N/A	N/A	N/A	N/A	$1,023,487	The project objective was to protect and enhance 4,200 acres of degraded wetland habitat in the Pointe au Chien Wildlife Management Area. The project design included maintenance of approximately 3.5 miles of levee and the modification of two existing fixed-crest weirs by installing stop-logs and flapgates.

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State	TE-02	Falgout Canal Wetland	MM	N/A	N/A	Dupre	Dartez	Ter.	1,300	1993, 1995	N/A	N/A	N/A	N/A	$1,560,000	The primary objectives of the project were to protect approximately 8,000 acres of marsh and cypress-tupelo swamp, reduce saltwater intrusion, and improve wildlife habitat by moderating water flux and tidal energy in the deteriorating wetland community. Anthropogenic changes, such as the construction of pipeline and access canals throughout the region's history, have altered its original hydrology. The project design consisted of levee construction and maintenance, construction of seven water control structures, and construction of a pumping station.
State	TE-03	Bayou LaCache Wetland	MM	N/A	N/A	Dupre	Baldone	Ter.	171	1991, 1996	N/A	N/A	N/A	N/A	$1,189,494	A water control structure in Bayou LaCache needed to complete the Bush Canal Marsh Management Area was constructed. The structure is a four barrel prefabricated steel pipe structure with flap gates. The structure is 135 feet in length, consisting of four 48 inch diameter steel pipes with steel diaphragm plates, steel pipe bracing, gate supports, walkways, and structural steel shop-fabricated flap gates.
State	TE-06	Pointe-aux-Chenes Hydrologic Restoration	HR	N/A	N/A	Dupre	Baldone	Ter.	4,700	2006	N/A	N/A	N/A	N/A	$1,506,819	This cooperative coastal restoration project will restore approximately 4,700-acres of brackish-intermediate marsh within the Pointe Aux Chenes WMA managed by the Louisiana Department of Wildlife and Fisheries (LDWF). The goal is conservation and enhancement of the marsh area and aquatic vegetation for the benefit of wildlife species in the area. Major funding for the project was provided by Ducks Unlimited (DU) and the North American Wetlands Conservation Act (NAWCA).
State	TE-07b	Lower Petit Caillou	HR	N/A	N/A	Dupre	Baldone	Ter.	333	1995	N/A	N/A	N/A	N/A	$440,000	The objective of this project is to decrease saltwater intrusion into the project area by re-routing freshwater discharge from the Lashbrook pumping station through the project area prior to entry into Lake Boudreaux. Outfall from the pumping station is discharged into Lashbrook Canal and flows into the project area. Project features include five plugs on the perimeter of the project area to contain the pump discharge and promote sheetflow over the marsh surface and shoreline stabilization along the northern spoilbank of Boudreaux Canal and the eastern shore of Lake Boudreaux.
State	TE-14	Point Farm Refuge Planting	VP	N/A	N/A	Dupre	Baldone	Ter.	150	1995	N/A	N/A	N/A	N/A	$192,016	This project was developed to create bottomland hardwood forests in former farmlands within the Point Farm Refuge Area (PFRA). Approximately 108,900 seedlings of bitter pecan (*Carya aquatica*), water oak (*Quercus nigra*), and cow oak (*Quercus michauxii*) (with nutria exclusion devices) were planted on 300 acres of former farmland within the PFRA.
State	TV-02b	Yellow Bayou	SP	N/A	N/A	Gautreaux	Smith	StM.	52	1992	N/A	N/A	N/A	N/A	$194,500	The objectives of the project were to maintain the integrity of approximately 2,000 acres of interior marsh between Jackson Bayou and the British-American Canal and to stabilize 7,465 feet of the East Cote Blanche Bay shoreline. This was achieved by constructing an oyster shell berm adjacent to the water's edge to reduce shoreline erosion.
State	TV-06	Marsh Island Control Structures	MM	N/A	N/A	Romero	Hebert	Ibe.	643	1993	N/A	N/A	N/A	N/A	$453,500	The objectives of this project were to reduce the rate of land loss, revegetate shallow open-water areas, and increase waterfowl food within the water management units. Flap-gated/stoplog culverts and earthen canal plugs were installed in October of 1993 at the northeast and southeast units to control water exchange between the units and the surrounding water bodies. Within the management units, canal spoil banks were breached and ditches were constructed to facilitate water movement between interior marsh ponds.

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State	TV-11	Freshwater Bayou Bank Protection	SP	N/A	N/A	Gautreaux	Frith, Hebert	Ibe. Ver.	511	1994	N/A	N/A	N/A	N/A	$2,177,025	This project conserves vegetated wetlands by maintaining the physical integrity of marshes that separate Freshwater Bayou and interior water bodies. The dominant project feature consists of the construction of 24,000 linear feet of rock dike, extending north to the confluence of Belle Isle Bayou and Freshwater Bayou. The original project was constructed in 1994; however, repairs were made to the structure in 1996 and 2001.
State	TV-13b	Oaks/Avery Structures	SP	N/A	N/A	Gautreaux, Romero	Hebert	Ibe. Ver.	160	2000	N/A	N/A	N/A	N/A	$700,000	This project enhanced the adjacent CWPPRA-funded TV-13a project by installing low-sill structures at the outfall of Oaks and Avery Canals to redirect more water flow through the portion of Bayou Petite Anse south of the GIWW.
State	TV-4355NP1	Quintana Canal/ Cypremort Point	SP	N/A	N/A	Gautreaux	Smith	StM.	26	1998	N/A	N/A	N/A	N/A	$684,610	The project features approximately 3,650 linear feet of rock breakwaters along the Vermilion Bay shoreline and approximately 3,375 linear feet of foreshore rock dike along the Vermilion Bay/Quintana Canal intersect and the south bank of the Quintana Canal.
PCWRP	TV-02a	Hammock Lake	SP	N/A	N/A	Gautreaux	Smith	StM.	33	1990	N/A	N/A	N/A	N/A	$696,766	Brush fences were constructed to prevent erosion of the shoreline separating West Cote Blanche Bay from Hammock Lake, and to protect the adjacent marsh from erosion. Approximately 5,000 plugs of smooth cordgrass (*Spartina alterniflora*) were planted adjacent to the brush fences. Fences were originally constructed in 1990, and maintenance was performed in 1992, 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001 2003, 2004, and 2005. Approximately 600 linear feet of brush fence were either destroyed as a result of the 2005 hurricanes or later removed because of hurricane damage.
PCWRP		Atchafalaya River Delta	SP	N/A	N/A	Gautreaux	Smith	StM.	1	1991	N/A	N/A	N/A	N/A	$30,966	Brush fences were constructed to promote the accumulation of sediment in an active delta. Fences were originally constructed and filled in 1991, and maintenance was performed in 1992 and 1994.
PCWRP		GIWW near Hanson Canal	SP	N/A	N/A	Gautreaux	Dartez	Ter.	26	1991	N/A	N/A	N/A	N/A	$133,280	Brush fences were constructed to protect the shoreline along the GIWW near Hanson's Canal from boat-induced waves and erosion. California bulrush (*Schoenoplectus californicus*) and cutgrass (*Zizaniopsis miliacea*) plugs were planted adjacent to the GIWW. Fences were originally constructed and filled in 1991, and maintenance was performed in 1992, 1993, 1994, 1995, 1997, 1998, 1999, 2003, and 2004.
PCWRP		Leeville #1	SP	N/A	N/A	Dupre	Pitre	Laf.	2	1991	N/A	N/A	N/A	N/A	$74,438	Brush fences were built in 1991 to promote sediment accretion along a canal adjacent to Louisiana Hwy 1 in Leeville, Louisiana, and maintenance was performed in 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, and 2003.
PCWRP		Pelican Point/Shark Island	SP	N/A	N/A	Romero	Hebert	Ibe.	3	1991	N/A	N/A	N/A	N/A	$19,000	Brush fences were constructed in 1991 to prevent the continued shoreline erosion of Pelican Point and Shark Island in Iberia Parish. The fences were removed in 1992.
PCWRP		Weeks Island at GIWW	SP	N/A	N/A	Romero	Hebert	Ibe.	5	1992	N/A	N/A	N/A	N/A	$167,331	Brush fences were constructed to protect the shoreline and promote the accumulation of sediment adjacent to Weeks Island in Iberia Parish. Fences were originally constructed and filled in 1992, and maintenance was performed in 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2003, 2004, 2005, and 2006.
PCWRP		St. Martin Parish	SP	N/A	N/A	Romero	Hebert	Ibe.	0	1993	N/A	N/A	N/A	N/A	$159,316	St. Martin Parish has partnered annually with Iberia Parish and worked together on their projects at Weeks Island and Shark Bayou. Fences were originally constructed and filled in 1993, and maintenance was performed in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2003, and 2004.

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PCWRP		Vermilion Bay	SP	N/A	N/A	Gautreaux	Frith, Hebert	Ver.	276	1993	N/A	N/A	N/A	N/A	$126,815	Vegetation has been planted along the shoreline and interior marsh along and adjacent to Vermilion Bay to protect the shoreline from continued erosion and to accumulate sediment to promote marsh creation. Fences were originally constructed and filled in 1993, and maintenance was performed in 1994, 1995, 1996, 1997, 2000, and 2003.
PCWRP		Bayou Lafourche Plantings	SP	N/A	N/A	Dupre	Pitre	Laf.	10	1994	N/A	N/A	N/A	N/A	$18,000	Vegetation was planted in order to protect critical shoreline of an island of marsh near Leeville.
PCWRP		Bayou Lafourche Wave Damping	SP	N/A	N/A	Dupre	Pitre	Laf.	1	1996	N/A	N/A	N/A	N/A	$22,500	Wave damping fences were constructed along Bayou Lafourche to minimize shoreline erosion from boat-induced waves. Fences were originally constructed and filled in 1996, and maintenance was performed in 1997. The fences were removed in 1998.
PCWRP		Shark Bayou	SP	N/A	N/A	Romero	Hebert	Ibe.	34	1996	N/A	N/A	N/A	N/A	$17,250	Vegetation was planted along 15,000 linear feet of the Weeks Bay shoreline near Shark Bayou to decrease shoreline erosion.
PCWRP		Rainey Wildlife Refuge	SP	N/A	N/A	Gautreaux	Frith, Hebert	Ver.	20	1997	N/A	N/A	N/A	N/A	$36,000	Vegetation has been planted along the shoreline and interior marsh on the Rainey Wildlife Refuge to protect the shoreline from continued erosion and to accumulate sediment to promote marsh creation. Plantings took place in 1997 and 2001.
PCWRP		Goudchaux Plantings	SP	N/A	N/A	Gautreaux	Hebert	Ver.	13	1998	N/A	N/A	N/A	N/A	$18,000	Vegetation has been planted along the shoreline and interior marsh along the Vermilion River on the Goudchaux property to protect the shoreline from continued erosion and to accumulate sediment to promote marsh creation. Plantings took place in 1998.
PCWRP		Weeks Canal and Scout Terraces	SP	N/A	N/A	Gautreaux	Frith, Hebert	Ver.	10	1999	N/A	N/A	N/A	N/A	$18,000	Vegetation has been planted along the shoreline and interior marsh near Weeks Canal on the Scout Terraces to protect the shoreline from continued erosion and to accumulate sediment to promote marsh creation. Plantings took place in 1999.
PCWRP		Kern-Stovall	SP	N/A	N/A	Gautreaux	Hebert	Ver.	42	2002	N/A	N/A	N/A	N/A	$18,000	Vermilion Parish planted California bulrush (*Schoenoplectus californicus*) on the Kern-Stovall property in 2002 and 2004.
PCWRP		Pecan Island	SP	N/A	N/A	Gautreaux	Frith	Ver.	61	2005	N/A	N/A	N/A	N/A	$36,000	California bulrush (*Schoenoplectus californicus*) and smooth cordgrass (*Spartina alterniflora*) were planted near Pecan Island in 2005 and 2006.
Vegetation		Lake DeCade	VP	N/A	N/A	Dupre	Dartez	Ter.	83	1988	N/A	N/A	N/A	N/A	$3,354	A total of 6,000 smooth cordgrass (*Spartina alterniflora*) plants, 400 California bulrush (*Schoenoplectus californicus*) plants, and 2,000 roseau cane (*Phragmites australis*) plants were used to restore an eroding shoreline by providing a vegetation barrier against wave-induced erosion.
Vegetation		Pointe au Chien	VP	N/A	N/A	Dupre	Pitre	Laf.	17	1988	N/A	N/A	N/A	N/A	$6,500	A total of 12,290 smooth cordgrass (*Spartina alterniflora*) plants were used to stabilize the bank behind newly constructed wave damping devices.
Vegetation		Timbalier Island	VP	N/A	N/A	Dupre	Baldone	Ter.	133	1988	N/A	N/A	N/A	N/A	$78,736	A total of 11,600 marshhay cordgrass (*Spartina patens*) plants were used on Timbalier Island to stabilize the sand, prevent its loss due to winds, and trap additional wind-borne sand.

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Vegetation		Lake DeCade Shoreline	VP	N/A	N/A	Dupre	Dartez	Ter.	18	1991	N/A	N/A	N/A	N/A	$16,000	Approximately 4,000 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to damp the effects of wave energies created by wind along a cut bank.
Vegetation		Vermilion-Weeks Bay	VP	N/A	N/A	Romero	Hebert	Ibe.	92	1991	N/A	N/A	N/A	N/A	$56,500	A total of 20,000 single stems of smooth cordgrass (*Spartina alterniflora*) plants were used to create a stand of vegetation, which will protect the Weeks Bay shoreline from wave-induced erosion.
Vegetation		Vermilion Bay North	VP	N/A	N/A	Gautreaux	Hebert	Ver.	17	1991	N/A	N/A	N/A	N/A	$10,453	A total of 2,500 smooth cordgrass (*Spartina alterniflora*) single stem plants and 500 gallon containers were used to protect the north shore of Vermilion Bay from wave induced erosion.
Vegetation		Levee Stabilization	VP	N/A	N/A	Dupre	Dartez	Ter.	2	1991	N/A	N/A	N/A	N/A	$2,825	Six marsh grass species were planted on a spoilbank in Terrebonne Parish in order to stabilize the levee. These included common bermuda grass (*Cynodon dactylon*), seashore saltgrass (*Distichlis spicata*), marshhay cordgrass (*Spartina patens*), Atlantic coastal panic grass (*Panicum* sp.), gulf cordgrass (*Spartina spartinae*), and seashore paspalum (*Paspalum vaginatum*).
Vegetation		Jackson Bayou Wetlands - Phase I	VP	N/A	N/A	Gautreaux	Smith	StM.	9	1991	N/A	N/A	N/A	N/A	$16,020	Approximately 4,005 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to renourish marsh,which had been subjected to nutria herbivory.
Vegetation		Pointe Au Chien	VP	N/A	N/A	Dupre	Pitre	Laf.	1	1991	N/A	N/A	N/A	N/A	$2,400	A total of 600 single stems of smooth cordgrass (*Spartina alterniflora*) were used to revegetate the shoreline of Grand Bayou at Pointe Au Chien.
Vegetation		Franz-Petite Anse Oxbow	VP	N/A	N/A	Romero	Hebert	Ibe.	14	1992	N/A	N/A	N/A	N/A	$11,784	A total of 2,946 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to stabilize cutbanks.
Vegetation		Bayou Petite Carlin Oxbow	VP	N/A	N/A	Romero	Hebert	Ibe.	65	1992	N/A	N/A	N/A	N/A	$38,205	A total of 1,545 smooth cordgrass (*Spartina alterniflora*) plants and 1,000 seashore paspalum (*Paspalum vaginatum*) plants were used to protect the shoreline of Bayou Petite Carlin from wave-induced erosion.
Vegetation		Lake Boudreaux Shoreline	VP	N/A	N/A	Dupre	Baldone	Ter.	18	1992	N/A	N/A	N/A	N/A	$10,543	A total of 855 gallon containers of smooth cordgrass (*Spartina alterniflora*) were used to protect and stabilize a levee through the establishment of vegetation.
Vegetation		Jackson Bayou Wetlands	VP	N/A	N/A	Gautreaux	Smith	StM.	9	1992	N/A	N/A	N/A	N/A	$16,020	A total of 340 gallon containers and 445 single stems of smooth cordgrass (*Spartina alterniflora*) and 34 gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted in an open pond area on interior marsh.
Vegetation		McIlhenny Oxbow	VP	N/A	N/A	Romero	Hebert	Cam.	8	1992	N/A	N/A	N/A	N/A	$6,820	A total of 1,705 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to stabilized cutbanks on both sides of the Oxbow.
Vegetation		Petite Anse #5	VP	N/A	N/A	Romero	Hebert	Ibe.	9	1994	N/A	N/A	N/A	N/A	$14,400	A total of 3,000 single stem and 300 gallon containers of smooth cordgrass (*Spartina alterniflora*) were used to introduce adaptable revegetation on mud flats to hold new spoil in place.

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Vegetation		Petite Anse #6	VP	N/A	N/A	Romero	Hebert	Ibe.	7	1994	N/A	N/A	N/A	N/A	$11,600	A total of 2,500 single stem and 200 gallon containers of smooth cordgrass (*Spartina alterniflora*) were used to introduce adaptable vegetation on mud flats to hold new spoil in place.
Vegetation		Thibodeaux Oxbow	VP	N/A	N/A	Romero	Hebert	Ibe.	5	1994	N/A	N/A	N/A	N/A	$3,774	A total of 1,000 single stems and 140 gallon containers of smooth cordgrass (*Spartina alterniflora*) plants were used to revegetate mud flats and stabilize new spoil.
Vegetation		Bayou Milhomme	VP	N/A	N/A	Gautreaux	Smith	StM.	5	1994	N/A	N/A	N/A	N/A	$2,949	A total of 435 California bulrush (*Schoenoplectus californicus*) plants were used along the protection levee on Bayou Milhomme to establish a buffer against additional shoreline erosion.
Vegetation		L.L. & E.	VP	N/A	N/A	Gautreaux	Dartez	Ter.	1	1994	N/A	N/A	N/A	N/A	$13,763	A total of 75 California bulrush (*Schoenoplectus californicus*) plants were used to retain flotant and detrital material in a freshwater marsh and to form plugs in spoil levee breaches. Sediment fences were constructed at 42 sites where flotant loss was most severe.
Vegetation		Lake Boudreaux Levee	VP	N/A	N/A	Dupre	Dartez	Ter.	18	1994	N/A	N/A	N/A	N/A	$13,025	A total of 700 gallon containers of smooth cordgrass (*Spartina alterniflora*) and 8,000 peat pots of marshhay cordgrass (*Spartina patens*) plants were used to protect and stabilize a levee through the establishment of vegetation.
Vegetation		Four League Bay	VP	N/A	N/A	Dupre	Dartez	Ter.	5	1995	N/A	N/A	N/A	N/A	$2,712	A total of 400 gallons containers of smooth cordgrass (*Spartina alterniflora*) plants were used to protect a segment of Four League Bay shoreline from wind-generated wave erosion.
Vegetation		Blue Hammock	VP	N/A	N/A	Dupre	Dartez	Ter.	2	1995	N/A	N/A	N/A	N/A	$1,356	This project was designed to prevent shoreline erosion by establishing a stand of smooth cordgrass (*Spartina alterniflora*); 200 gallon containers were installed within the intertidal zone.
Vegetation		Hidalgo One	VP	N/A	N/A	Gautreaux	Smith	StM.	60	1995	N/A	N/A	N/A	N/A	$35,161	A total of 200 smooth cordgrass (*Spartina alterniflora*) trade gallons, 1,533 California bulrush (*Schoenoplectus californicus*) trade gallons, and 1,533 giant cutgrass (*Zizaniopsis miliacea*) trade gallons were used to establish a stand of emergent vegetation, which will prevent shoreline erosion and trap available sediment.
Vegetation		Lake DeCade	VP	N/A	N/A	Dupre	Dartez	Ter.	5	1995	N/A	N/A	N/A	N/A	$16,000	This project intends to restore an eroding shoreline using 400 trade gallon containers of California bulrush (*Schoenoplectus californicus*).
Vegetation		Bayou DeCade	VP	N/A	N/A	Dupre	Dartez	Ter.	5	1995	N/A	N/A	N/A	N/A	$2,712	A total of 400 roseau cane (*Phragmites australis*) gallon containers were used to increase protection to this embankment by providing soil stability through a potentially extensive rootmass.
Vegetation		Bayou Petite Anse #7	VP	N/A	N/A	Romero	Hebert	Ibe.	10	1995	N/A	N/A	N/A	N/A	$22,400	A total of 5,600 single stems of smooth cordgrass (*Spartina alterniflora*) were used to establish a stand of emergent vegetation, which will protect the shoreline from erosion and trap available sediments.
Vegetation		Bayou Petite Anse #8	VP	N/A	N/A	Romero	Hebert	Ibe.	15	1995	N/A	N/A	N/A	N/A	$33,600	A total of 8,400 single stems of smooth cordgrass (*Spartina alterniflora*) were used to establish a stand of emergent vegetation, which will protect the shoreline from erosion and trap available sediments.

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Vegetation		St. Mary Parish Land Company	VP	N/A	N/A	Gautreaux	Smith	StM.	13	1996	N/A	N/A	N/A	N/A	$8,800	Approximately 1,100 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to establish a stand of emergent marsh, which will prevent shoreline erosion and trap available sediment.
Vegetation		Bayou Sale '96	VP	N/A	N/A	Gautreaux	Smith	StM.	2	1996	N/A	N/A	N/A	N/A	$1,085	A total of 160 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to establish a stand of emergent vegetation, which will prevent shoreline erosion and trap available sediment.
Vegetation		H Bar H	VP	N/A	N/A	Gautreaux	Dartez	Ter.	6	1996	N/A	N/A	N/A	N/A	$3,390	A total of 300 giant cutgrass (*Zizaniopsis miliacea*) trade gallons and 200 California bulrush (*Schoenoplectus californicus*) trade gallons were planted alongside a canal situated in a fresh marsh.
Vegetation		Jaws '96	VP	N/A	N/A	Gautreaux	Smith	StM.	2	1996	N/A	N/A	N/A	N/A	$1,600	A total of 200 California bulrush (*Schoenoplectus californicus*) trade gallons were used to establish a stand of emergent vegetation, which will trap available sediment and prevent the loss of the sediment already established.
Vegetation		Bayou Carlin Mudflats	VP	N/A	N/A	Romero	Hebert	Ibe.	24	1996	N/A	N/A	N/A	N/A	$14,069	A total of 2,075 smooth cordgrass (*Spartina alterniflora*) trade gallons were used to establish a stand of emergent vegetation, which will prevent shoreline erosion and trap available sediment.
Vegetation		Bayou Piquant	VP	N/A	N/A	Gautreaux	Dartez	Ter.	2	1996	N/A	N/A	N/A	N/A	$1,220	A total of 180 California bulrush (*Schoenoplectus californicus*) trade gallons were used to re-establish emergent vegetation on a natural bayou bank, provide a buffer for boat-generated waves, and filter suspended detrital material so that it is retained within the interior marsh.
Vegetation		Montegut Levee	VP	N/A	N/A	Dupre	Baldone	Ter.	1	1996	N/A	N/A	N/A	N/A	$640	A total of 80 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to provide shoreline stability to an area of the Montegut levee where approximately 200 feet of sheetpile were installed.
Vegetation		New Canal	VP	N/A	N/A	Dupre	Baldone	Laf.	1	1996	N/A	N/A	N/A	N/A	$320	Approximately 40 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to reduce wake-induced shoreline erosion along a canal bank.
Vegetation		Lake Cheniere	VP	N/A	N/A	Dupre	Baldone	Laf.	75	1996	N/A	N/A	N/A	N/A	$52,160	A total of 6,520 trade gallons of smooth cordgrass (*Spartina alterniflora*) were planted to reduce shoreline erosion along two oilfield canals in the vicinity of Lake Cheniere.
Vegetation		Washout	VP	N/A	N/A	Romero	Hebert	Ibe.	3	1997	N/A	N/A	N/A	N/A	$1,627	A total of 60 trade gallons of roseau cane (*Phragmites australis*) plants and 180 trade gallons of smooth cordgrass (*Spartina alterniflora*) plants were used to establish a stand of emergent vegetation, which will create a living barrier against wave-induced shoreline erosion and protect an area where the Vermilion Bay shoreline is in danger of breaching into an adjacent oilfield canal.
Vegetation		Tigre Lagoon #1	VP	N/A	N/A	Romero	Hebert	Ibe.	7	1997	N/A	N/A	N/A	N/A	$4,640	A total of 580 smooth cordgrass (*Spartina alterniflora*) trade gallons were used to provide a living barrier against wave-induced shoreline erosion and trap available sediments.
Vegetation		Bayou Faleau	VP	N/A	N/A	Dupre	Pitre	Laf.	14	1997	N/A	N/A	N/A	N/A	$9,600	Approximately 1,200 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted along the tidal interface of the spoil banks. Nutria exclusion devices were used to protect the plants.

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Vegetation		Bayou Blue Canal	VP	N/A	N/A	Dupre	Pitre	Laf.	14	1997	N/A	N/A	N/A	N/A	$9,600	A total of 1,200 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted along the spoil bank where the cutbank is absent or less severe. Nutria exclusion devices were used to protect the plants.
Vegetation		Lake DeCade	VP	N/A	N/A	Dupre	Dartez	Ter.	23	1997	N/A	N/A	N/A	N/A	$16,000	Approximately 2,000 trade gallon containers of roseau cane (*Phragmites australis*) were planted to reduce shoreline erosion on the levees of Lake DeCade.
Vegetation		Lake Hatch GIWW	VP	N/A	N/A	Gautreaux	Dartez	Ter.	6	1997	N/A	N/A	N/A	N/A	$3,390	A total of 500 California bulrush (*Schoenoplectus californicus*) trade gallons were used to create a living natural barrier across breaches in the Intracoastal Canal levee, which allows wave energy to destroy fragile, organic freshwater marsh behind the levee.
Vegetation		Hidalgo Two	VP	N/A	N/A	Gautreaux	Smith	StM.	9	1997	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to establish a stand of emergent vegetation, which will prevent shoreline erosion and trap available sediment.
Vegetation		Bayou Blue	VP	N/A	N/A	Dupre	Pitre	Ter.	23	1998	N/A	N/A	N/A	N/A	$13,560	A total of 1,800 trade gallons of California bulrush (*Schoenoplectus californicus*) and 200 trade gallons of roseau cane (*Phragmites australis*) were used to re-establish emergent vegetation on a natural bayou bank, provide a buffer for boat generated waves, and filter suspended detrital material so that it is retained within the interior marsh.
Vegetation		Humble Canal	VP	N/A	N/A	Gautreaux	Smith	StM.	23	1998	N/A	N/A	N/A	N/A	$13,560	A total of 2,000 California bulrush (*Schoenoplectus californicus*) trade gallons were used to create a stand of emergent vegetation, which will provide a living barrier against wave-induced marsh erosion.
Vegetation		Bayou Chauvin	VP	N/A	N/A	Dupre	Dove	Ter.	4	1998	N/A	N/A	N/A	N/A	$2,373	A total of 350 California bulrush (*Schoenoplectus californicus*) trade gallons were used to reduce boat-induced shoreline erosion on the edge of a pipeline canal.
Vegetation		Falgout Canal	VP	N/A	N/A	Dupre	Dartez	Ter.	26	1998	N/A	N/A	N/A	N/A	$15,153	A total of 2,235 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were used to revegetate a pipeline canal bank where erosion was occurring.
Vegetation		Petite Anse #15	VP	N/A	N/A	Romero	Hebert	Ibe.	26	1998	N/A	N/A	N/A	N/A	$25,600	A total of 6,400 vegetative plugs of smooth cordgrass (*Spartina alterniflora*) were used to provide a living barrier against wave-induced shoreline erosion and trap available sediments.
Vegetation		Burns Point #1	VP	N/A	N/A	Gautreaux	Smith	StM.	2	1999	N/A	N/A	N/A	N/A	$1,280	Approximately 160 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to create an emergent stand of vegetation, which will reduce shoreline erosion and trap sediment in an oilfield canal.
Vegetation		Hidalgo #3 - Revised	VP	N/A	N/A	Gautreaux	Smith	StM.	21	1999	N/A	N/A	N/A	N/A	$14,880	A total of 1,860 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to establish a stand of emergent vegetation, which will prevent shoreline erosion and trap available sediments.
Vegetation		Tigre Lagoon #2	VP	N/A	N/A	Romero	Hebert	Ibe.	21	1999	N/A	N/A	N/A	N/A	$14,880	A total of 1,860 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to aid in sediment trapping and to establish a stand of emergent vegetation, which will prevent shoreline erosion.

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Vegetation		Houma Navigation Canal	VP	N/A	N/A	Dupre	Dartez	Ter.	32	2000	N/A	N/A	N/A	N/A	$9,492	A total of 1,400 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used along the shoreline of the Houma Navigation Canal in order to buffer boat-wave energy and decrease bank erosion.
Vegetation		2000 Iberia Maintenance Planting	VP	N/A	N/A	Romero	Hebert	Ibe.	4	2000	N/A	N/A	N/A	N/A	$2,400	A total of 600 bare-rooted plugs of smooth cordgrass (*Spartina alterniflora*) were planted to fill voids in the Petite Anse #7 and Petite Anse #8 vegetation projects.
Vegetation		Bayou Chauvin #2 Demo	VP	N/A	N/A	Dupre	Dartez	Ter.	17	2000	N/A	N/A	N/A	N/A	$4,800	A total of 500 trade gallons of smooth cordgrass (*Spartina alterniflora*) and 1,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were planted to establish a vegetative barrier to slow shoreline erosion along the bayou and to act as a wind/wave break in open water areas within the marsh.
Vegetation		Company Canal Levee	VP	N/A	N/A	Dupre	Pitre	Laf.	21	2000	N/A	N/A	N/A	N/A	$14,400	A total of 1,800 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were used along Company Canal to establish a vegetation barrier and to provide seed for natural revegetation.
Vegetation		Shell Canal	VP	N/A	N/A	Dupre	Baldone	Ter.	23	2000	N/A	N/A	N/A	N/A	$16,000	A total of 1,000 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) and 1,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to revegetate an interior marsh that has subsided near the canal bank and to protect a narrow canal bank, which has eroded almost into the adjacent marsh.
Vegetation		Cocodrie Pump-in	VP	N/A	N/A	Dupre	Baldone	Ter.	11	2000	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) plants were used to establish vegetation on a new pump-in area.
Vegetation		Camp Canal	VP	N/A	N/A	Gautreaux	Hebert	Ver.	5	2000	N/A	N/A	N/A	N/A	$4,400	Approximately 1,100 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to produce a living barrier of plants to slow erosion of canal banks and levees.
Vegetation		Oaks Canal	VP	N/A	N/A	Gautreaux	Hebert	Ver.	36	2000	N/A	N/A	N/A	N/A	$26,442	A total of 5,200 smooth cordgrass (*Spartina alterniflora*) plugs were used to produce a living barrier of vegetation, which will slow erosion of canal banks and levees, accrete available sediment, provide habitat for wildlife, and make a seed source available for natural regeneration.
Vegetation		Luke's Landing	VP	N/A	N/A	Gautreaux	Smith	StM.	12	2000	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to create stands of emergent vegetation, which will provide a living barrier against boat and wave-induced erosion and tidal scouring, to trap sediments, and to provide a seed source for natural regeneration of emergent vegetation.
Vegetation		Petite Anse #9	VP	N/A	N/A	Romero	Hebert	Ibe.	7	2000	N/A	N/A	N/A	N/A	$4,800	A total of 600 California bulrush (*Schoenoplectus californicus*) trade gallons were used to create a stand of emergent vegetation, which will reduce shoreline erosion, trap sediment, and provide a seed source for future regeneration.
Vegetation		St. Mary Land Company #3	VP	N/A	N/A	Gautreaux	Smith	StM.	23	2000	N/A	N/A	N/A	N/A	$16,352	A total of 2,044 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to establish a stand of emergent vegetation, which will prevent shoreline erosion and trap available sediment.
Vegetation		Tigre Lagoon #2	VP	N/A	N/A	Romero	Hebert	Ibe.	8	2000	N/A	N/A	N/A	N/A	$7,320	A total of 1,830 trade gallons of smooth cordgrass (*Spartina alterniflora*) plants were used to establish a stand of emergent vegetation, which will prevent shoreline erosion and trap available sediment.

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Vegetation		Bayou Carlin - GIWW	VP	N/A	N/A	Romero	Hebert	Ibe.	20	2001	N/A	N/A	N/A	N/A	$10,202	A total of 1,800 California bulrush (*Schoenoplectus californicus*) plants were used to create a stand of emergent vegetation, which will narrow the bayou, reestablish the shoreline, and reclaim marsh.
Vegetation		Lake Cheniere Interior Marsh Demo	VP	N/A	N/A	Dupre	Baldone	Laf.	10	2001	N/A	N/A	N/A	N/A	$11,700	A total of 300 trade gallons of black mangrove (*Avicennia germinans*), 600 trade gallons of smooth cordgrass (*Spartina alterniflora*), and 500 feet of coconut fiber logs were used to protect the existing marsh.
Vegetation		Small Bayou La Pointe	VP	N/A	N/A	Dupre	Dartez	Ter.	21	2001	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to create a vegetative buffer along the back side of the levee, which encompasses Lake DeCade.
Vegetation		Hammock Bayou	VP	N/A	N/A	Gautreaux	Smith	StM.	11	2001	N/A	N/A	N/A	N/A	$9,120	A total of 640 smooth cordgrass (*Spartina alterniflora*) trade gallons and 1,000 plugs were placed along Hammock Bayou near its confluence with West Cote Blanche Bay to decrease the rate of shoreline erosion, to stabilize the bank of Hammock Bayou, and to trap additional sediment.
Vegetation		Hammock Lake	VP	N/A	N/A	Gautreaux	Smith	StM.	4	2001	N/A	N/A	N/A	N/A	$21,173	A total of 360 smooth cordgrass (*Spartina alterniflora*) trade gallons were placed along the shoreline of Hammock Lake near Cypremort Point in order to accrete additional sediment and protect the shoreline of Hammock Lake from further erosion.
Vegetation		Colony Establishment Demonstration	VP	N/A	N/A	Gautreaux	Smith	StM.	7	2001	N/A	N/A	N/A	N/A	$3,500	A total of 1,000 smooth cordgrass (*Spartina alterniflora*) plugs were placed near Oyster Lake in an expansive mud flat, located approximately two miles southeast of Cypremort Point, between Hammock Lake and Oyster Lake. Vegetation was planted in a grid formation to encourage ongoing, self-sustaining marsh growth in this particular shallow-water area and to provide additional fisheries and wildlife habitat.
Vegetation		Round Lake	VP	N/A	N/A	Gautreaux	Smith	StM.	6	2001	N/A	N/A	N/A	N/A	$3,606	A total of 560 smooth cordgrass (*Spartina alterniflora*) trade gallons were placed along the shoreline of Round Lake, an interior lake located about three miles southeast of Cypremort Point, in order to reduce tidal exchange into the marsh, trap available sediment, and provide seed for natural revegetation.
Vegetation		Parish Line Canal	VP	N/A	N/A	Gautreaux	Hebert	Ver.	23	2001	N/A	N/A	N/A	N/A	$11,204	A total of 2,000 smooth cordgrass (*Spartina alterniflora*) trade gallons were placed along Parish Line Canal, just west of the Iberia/Vermilion parish line, to provide a buffer against shoreline erosion and trap available sediment.
Vegetation		Bayou Folse	VP	N/A	N/A	Chaisson	Triche	Laf.	34	2002	N/A	N/A	N/A	N/A	$24,000	This project consists of a canal bank planting using 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and an interior marsh planting using 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to create a vegetative buffer along the new spoil material on Bayou Folse and to restore vegetation in interior ponds; 15,000 linear feet were planted.
Vegetation		Grand Bayou	VP	N/A	N/A	Dupre	Pitre	Laf.	11	2002	N/A	N/A	N/A	N/A	$8,000	This canal bank planting used 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) to create a vegetative buffer against wind- and boat-generated wave energy; 5,000 linear feet of canal bank were planted.
Vegetation		Bayou Colyell	VP	N/A	N/A	Dupre	Dartez	Ter.	7	2002	N/A	N/A	N/A	N/A	$4,800	This canal bank planting used 600 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) to create a vegetative buffer against wind- and boat-generated wave energy; 3,000 linear feet of canal bank were planted.

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Vegetation		GIWW Cypress Restoration	VP	N/A	N/A	Dupre	Pitre	Laf.	11	2002	N/A	N/A	N/A	N/A	$4,000	This canal bank planting used 500 bare root bald cypress (*Taxodium distichum*) seedlings to restore a vegetative corridor along the GIWW; 5,000 linear feet of canal bank were planted.
Vegetation		Falgout Canal Flotant Demo	VP	N/A	N/A	Dupre	Dartez	Ter.	11	2002	N/A	N/A	N/A	N/A	$10,600	This interior marsh demonstration project used 800 trade gallon containers of California bulrush (*Schoenoplectus californicus*) and 600 feet of coconut fiber matting planted with 300 giant cutgrass (*Zizaniopsis miliacea*) plugs to demonstrate the use of fiber matting to restore and establish floating marsh and to show the use of vegetative terraces to filter sediment and reduce wave energy; 4,600 linear feet of interior marsh were planted.
Vegetation		Union Oil Canal	VP	N/A	N/A	Romero	Hebert	Ibe.	23	2002	N/A	N/A	N/A	N/A	$13,400	This eroding canal bank was planted with 3,350 smooth cordgrass (*Spartina alterniflora*) plugs to produce a living barrier to slow the erosion of the canal banks, to protect the interior marsh behind the banks, and to compare the effectiveness of plantings on the banks with and without trees; 10,050 linear feet were planted.
Vegetation		GIWW Delcambre	VP	N/A	N/A	Romero	Hebert	Ibe.	12	2002	N/A	N/A	N/A	N/A	$8,560	Several actively eroding areas along the GIWW were planted with a total of 1,070 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) to demonstrate the ability of the plant to produce a living barrier against erosion, to accrete available sediment and establish stands of vegetation, and to serve as a seed source for natural revegetation; 5,350 linear feet were planted.
Vegetation		Avoca Island	VP	N/A	N/A	Gautreaux	Dartez	StM.	10	2002	N/A	N/A	N/A	N/A	$7,040	A total of 880 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted in several areas to slow erosion and protect interior marshes; a total of 4,400 linear feet were planted.
Vegetation		Gray Duck Hole	VP	N/A	N/A	Gautreaux	Dartez	StM.	12	2002	N/A	N/A	N/A	N/A	$8,480	A total of 1,060 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted along an eroding levee and on islands that protect an interior marsh. This was done to create a living barrier of plants to slow erosion on the levee and on the islands, to provide wildlife habitat, and to provide a seed source for natural revegetation; 5,300 linear feet were planted.
Vegetation		Treyne	VP	N/A	N/A	Gautreaux	Dartez	StM.	10	2002	N/A	N/A	N/A	N/A	$7,200	A total of 900 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) plants were placed across an eroding marsh area to slow water movement to allow sediment to drop out of the flowing water, to encourage growth of submerged aquatic vegetation, and to accrete available sediment. To accomplish the goal of slowing sedimentation of the interior open water area, 4,500 linear feet were planted.
Vegetation		Boy Scout Camp	VP	N/A	N/A	Gautreaux	Dartez	StM.	6	2002	N/A	N/A	N/A	N/A	$4,000	A total of 500 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted in large cells to create islands of vegetation, to provide emergent vegetation in an open water area, and to determine the feasibility of using giant cutgrass to create vegetative terraces; 2,500 linear feet were planted.
Vegetation		Delcambre Terraces	VP	N/A	N/A	Gautreaux	Hebert	Ver.	7	2002	N/A	N/A	N/A	N/A	$6,376	This demonstration project used 1,594 plugs of smooth cordgrass (*Spartina alterniflora*) to establish vegetation on newly built terraces to prevent their erosion, to provide wildlife habitat, and to determine the effectiveness of smooth cordgrass in stabilizing small terraces; 4,782 linear feet were planted.
Vegetation		Lake Boudreaux	VP	N/A	N/A	Dupre	Dartez	Ter.	11	2002	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to provide a vegetative buffer against wind- and boat-generated wave energy.

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Vegetation		Vermilion Maintenance	VP	N/A	N/A	Gautreaux	Hebert	Ver.	11	2002	N/A	N/A	N/A	N/A	$6,132	This project complemented the Oaks Canal, Camp Canal, and Parish Line Canal vegetation planting projects. A total of 1,533 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to provide a living barrier of plants to slow erosion of canal banks and levees and to fill in gaps and areas with poor survival.
Vegetation		Castex Water Management Protection Project	VP	N/A	N/A	Dupre	Dartez	Ter.	23	2003	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) plants were used to form a vegetative barrier in the interior marsh, which will prevent scouring caused by flap gates recently installed to manage water levels.
Vegetation		Delcambre Canal	VP	N/A	N/A	Romero	Hebert	Ver.	28	2003	N/A	N/A	N/A	N/A	$19,680	A total of 2,120 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) and 340 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted along the banks of Delcambre Canal to slow shoreline erosion and trap available sediments.
Vegetation		Catfish Bayou South	VP	N/A	N/A	Gautreaux	Hebert	Ibe.	4	2003	N/A	N/A	N/A	N/A	$4,000	A total of 1,000 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to slow erosion on the bayou bank and to trap available sediments.
Vegetation		Gray Duck Hole 2	VP	N/A	N/A	Gautreaux	Dartez	StM.	23	2003	N/A	N/A	N/A	N/A	$16,000	A total of 800 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and 1,200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to create a living barrier to slow erosion on a newly rebuilt levee and to create vegetative terraces in a large pond.
Vegetation		Burns Point 2	VP	N/A	N/A	Gautreaux	Smith	StM.	1	2003	N/A	N/A	N/A	N/A	$720	A total of 90 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted north of Burns Point to create an emergent stand of vegetation, which will reduce wave-induced shoreline erosion.
Vegetation		Brady Canal II	VP	N/A	N/A	Dupre	Dartez	Ter.	11	2003	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to create a vegetative buffer along the interior side of a levee system.
Vegetation		GIWW Wildlife Habitat Enhancement '03	VP	N/A	N/A	Dupre	Pitre	Laf.	51	2003	N/A	N/A	N/A	N/A	$1,165	A total of 3,300 bare root trees including bald cypress (*Taxodium distichum*), live oak (*Quercus virginiana*), shumard oak (*Q. shumardii*), wild pecan (*Carya illinoinensis*), sawtooth oak (*Q. acutissima*), and water oak (*Q. nigra*) were planted to establish a variety of trees on a newly managed area as well as for wildlife habitat enhancement.
Vegetation		Delcambre Marsh	VP	N/A	N/A	Gautreaux	Hebert	Ver.	6	2003	N/A	N/A	N/A	N/A	$5,400	A total of 1,350 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetative stands, which will provide wildlife habitat and a seed source for natural regeneration.
Vegetation		South Lake DeCade	VP	N/A	N/A	Dupre	Dartez	Ter.	22	2003	N/A	N/A	N/A	N/A	$15,360	A total of 9,600 feet of California bulrush (*Schoenoplectus californicus*) trade gallons were planted to establish a vegetative buffer, which will trap sediment and reduce wind-generated wave erosion.
Vegetation		Cheniere Au Tigre	VP	N/A	N/A	Gautreaux	Frith	Ver.	6	2003	N/A	N/A	N/A	N/A	$5,800	Approximately 1,450 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation on newly accreted sand behind rock breakwaters and to stop further erosion of the shoreline.
Vegetation		Cheniere Au Tigre 2	VP	N/A	N/A	Gautreaux	Frith	Ver.	7	2004	N/A	N/A	N/A	N/A	$5,160	A total of 3,225 feet of gulf coastline were planted with bitter panicum (*Panicum amarum*), gulf cordgrass (*Spartina spartinae*), and smooth cordgrass (*Spartina alterniflora*) to establish vegetation on a newly accreted beach.

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Vegetation		Apache '04	VP	N/A	N/A	Dupre	Dartez	Ter.	23	2004	N/A	N/A	N/A	N/A	$16,000	The goal of this project was to reduce the fetch length of an interior pond by planting 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*).
Vegetation		Audubon	VP	N/A	N/A	Gautreaux	Frith	Ver.	23	2004	N/A	N/A	N/A	N/A	$13,332	A total of 1,667 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation on mudflats and canal banks to prevent erosion.
Vegetation		Bourgeois	VP	N/A	N/A	Gautreaux	Smith	StM.	39	2004	N/A	N/A	N/A	N/A	$19,986	A total of 180 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*), 1,670 trade gallon containers and 150 plugs of California bulrush (*Schoenoplectus californicus*), 1,109 plugs of smooth cordgrass (*Spartina alterniflora*), and 300 bare root bald cypress trees (*Taxodium distichum*) were planted to establish vegetation to act as natural terraces to dampen wave action and slow water movement in an old pump-off area.
Vegetation		GIWW Lockport	VP	N/A	N/A	Dupre	Pitre	Laf.	1	2004	N/A	N/A	N/A	N/A	$4,200	A total of 300 feet of coconut logs and 300 feet of coconut mats impregnated with both giant cutgrass (*Zizaniopsis miliacea*) and smooth cordgrass (*Spartina alterniflora*) were used to establish vegetation on a newly established spoil deposit.
Vegetation		Jaws Spoil Disposal	VP	N/A	N/A	Gautreaux	Smith	StM.	26	2004	N/A	N/A	N/A	N/A	$18,000	Approximately 750 trade gallon containers each of California bulrush (*Schoenoplectus californicus*), smooth cordgrass (*Spartina alterniflora*), and giant cutgrass (*Zizaniopsis miliacea*) were planted to stabilize a newly created mudflat with naturally occurring vegetation.
Vegetation		Terrebonne Land Development '04	VP	N/A	N/A	Dupre	Dartez	Ter.	34	2004	N/A	N/A	N/A	N/A	$24,000	A total of 3,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to establish vegetation in an open pond to reduce the fetch length.
Vegetation		Marsh Island	VP	N/A	N/A	Romero	Hebert	Ibe.	13	2005	N/A	N/A	N/A	N/A	$6,075	A total of 150 trees of various species were planted on a canal levee to establish desirable woody plant species, which will be beneficial to neotropical migrants and other wildlife species. A total of 1,500 plugs of smooth cordgrass (*Spartina alterniflora*) were planted on interior mudflats to establish vegetation on terraces and mudflats to decrease erosion.
Vegetation		Island Outpost	VP	N/A	N/A	Romero	Smith	Ibe.	9	2005	N/A	N/A	N/A	N/A	$6,000	A total of 750 trade gallons of giant cutgrass (*Zizaniopsis miliacea*), California bulrush (*Schoenoplectus californicus*), roseau cane (*Phragmites australis*), and Jamaican sawgrass (*Cladium mariscus*) were planted along a shoreline to protect against erosion on the island, to create wildlife habitat, and to increase diversity of wetland plants.
Vegetation		GIWW Mandalay	VP	N/A	N/A	Gautreaux	Dartez	Ter.	12	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted along a shoreline to establish a vegetative buffer in a high traffic area.
Vegetation		Harry Bourg Corporation	VP	N/A	N/A	Dupre	Dartez	Ter.	12	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted along a canal bank to establish vegetation on newly dredged material.
Vegetation		Avoca 2005	VP	N/A	N/A	Gautreaux	Dartez	StM.	24	2005	N/A	N/A	N/A	N/A	$16,000	A total of 1,000 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) and 1,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were planted in an open water area to create a living stand of vegetation to act as a natural terrace, to help prevent shoreline erosion, and to provide wildlife habitat with a seed source for natural regeneration.

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Vegetation		McIlhenny Canal	VP	N/A	N/A	Gautreaux	Frith	Ver.	23	2005	N/A	N/A	N/A	N/A	$13,332	A total of 3,333 smooth cordgrass (*Spartina alterniflora*) plugs were planted to establish vegetation on the canal bank to prevent erosion, to provide wildlife habitat, and to provide a seed source for natural regeneration.
Vegetation		Brady Canal '05	VP	N/A	N/A	Dupre	Dartez	Ter.	11	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to establish a vegetative buffer along a cut bank in the Brady Canal project area.
Vegetation		Minors Canal	VP	N/A	N/A	Dupre	Dartez	Ter.	29	2005	N/A	N/A	N/A	N/A	$20,000	A total of 2,500 each of California bulrush (*Schoenoplectus californicus*) and giant cutgrass (*Zizaniopsis miliacea*) plugs were planted in interior marsh to establish vegetation in a small interior pond behind the spoil bank on Lake DeCade.
Vegetation		Delcambre Canal 2	VP	N/A	N/A	Romero	Hebert	Ibe.	11	2006	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation on the banks of the Delcambre Canal to slow shoreline erosion, to trap available sediments, to create wildlife habitat, and to provide a seed source for natural regeneration.
Vegetation		Weeks Island Mudflat	VP	N/A	N/A	Romero	Hebert	Ibe.	14	2006	N/A	N/A	N/A	N/A	$12,000	A total of 2,000 smooth cordgrass (*Spartina alterniflora*) plugs and 500 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation on mudflats to aid in preventing erosion, to trap available sediments, to create wildlife habitat, and to provide a seed source for natural regeneration.
Vegetation		Lake DeCade Roseau Fence Demo.	VP	N/A	N/A	Dupre	Dartez	Ter.	7	2006	N/A	N/A	N/A	N/A	$5,245	The goal of this project is to plant 500 trade gallon containers of roseau cane (*Phragmites australis*); twenty, 15-foot sections of fencing with freshly cut stalks of roseau cane; twenty, 15-foot sections of fencing with cut stolens of roseau cane; and 105 feet of coconut fiber mats with roseau cane.
Vegetation		GIWW '06	VP	N/A	N/A	Dupre	Pitre	Laf.	14	2006	N/A	N/A	N/A	N/A	$9,600	A total of 1,200 trade gallon containers of roseau cane (*Phragmites australis*) were planted to establish a vegetative buffer along a freshly dredged bank on the GIWW.
Vegetation		Terrebonne Levee District	VP	N/A	N/A	Dupre	Baldone	Ter.	7	2006	N/A	N/A	N/A	N/A	$10,000	A total of 2,500 plugs of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation on a newly dredged marsh creation project.
Vegetation		Lost Lake	VP	N/A	N/A	Dupre	Dartez	Ter.	7	2006	N/A	N/A	N/A	N/A	$10,000	The goal of this project is to plant 2,500 plugs of smooth cordgrass (*Spartina alterniflora*) to establish a vegetative buffer along the bank of Violin Bayou.
Vegetation		Avoca Trees and Cutgrass	VP	N/A	N/A	Gautreaux	Dartez	StM.	44	2006	N/A	N/A	N/A	N/A	$9,825	A total of 1,200 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) and 450 bare root bald cypress seedlings (*Taxodium distichum*) were planted to create a living stand of vegetation, to help prevent erosion on newly created and refurbished levees, and to provide wildlife habitat with a seed source for natural regeneration.
Vegetation		Rainey Smooth Cordgrass	VP	N/A	N/A	Gautreaux	Frith	Ver.	14	2006	N/A	N/A	N/A	N/A	$13,332	A total of 3,333 smooth cordgrass (*Spartina alterniflora*) plugs were planted to establish vegetation on the shoreline and mudflats to prevent erosion, to provide wildlife habitat, and to provide a seed source for natural regeneration.

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Section 204/1135	DSR-81558	Wine Island Restoration	DM	N/A	N/A	Dupre	Baldone	Ter.	37	1991	N/A	N/A	N/A	N/A	$1,007,000	This Section 204/1135 project was a cooperative effort with the USACE and included the use of beneficial dredging from a scheduled Houma Navigational Canal maintenance dredging project to restore Wine Island.
Section 204/1135		Houma Navigation Canal, Wine Island Barrier Island Restoration	DM	N/A	N/A	Dupre	Baldone	Ter.	50	2002	N/A	N/A	N/A	N/A	$1,000,000	This Section 204/1135 project investigated the feasibility of beneficially using the dredged material from the bar channel area in lieu of the Ocean Dredged Material Disposal Site. The project area is approximately 35 miles south of Houma, Louisiana at the mouth of the navigation channel in Terrebonne Bay. The construction schedule of this project was expedited due to the impact of Hurricane Lili and Tropical Storm Isadore.
FEMA	DSR-81557	Houma Navigational Canal Levee Maintenance (FEMA)	SP	N/A	N/A	Dupre	Baldone	Ter.	4,000	1995	N/A	N/A	N/A	N/A	$218,165	This FEMA project involved the repair of segments of the western bank of the Houma Navigation Canal damaged by Hurricane Andrew in 1992.
FEMA	DSR-81558	Wine Island (FEMA)	DM	N/A	N/A	Dupre	Baldone	Ter.	25	1995	N/A	N/A	N/A	N/A	$253,579	This FEMA project was a cooperative venture with the USACE in the beneficial use of dredged material from a scheduled Houma Navigational Canal maintenance dredging project. The island was repaired to pre-Hurricane Andrew condition and planted with vegetation to stabilize the sediment.
FEMA	DSR-81560	East Island Repair Protection (FEMA)	DM	N/A	N/A	Dupre	Baldone	Ter.	25	1996	N/A	N/A	N/A	N/A	$633,179	This FEMA project constructed an elevated marsh platform in an area of a Terrebonne Parish project destroyed by Hurricane Andrew in 1992. Vegetation was also planted to stabilize the sand.
FEMA	DSR-81559	Timbalier Island Repair (FEMA)	DM	N/A	N/A	Dupre	Baldone	Ter.	70	1996	N/A	N/A	N/A	N/A	$551,653	This FEMA project closed a major breach created by Hurricane Andrew and provided a 300-foot-wide elevated marsh platform to stabilize the island. Vegetation was also planted to stabilize the sand.
FEMA	DSR-81784	Timbalier Island (FEMA 1999)	SP	N/A	N/A	Dupre	Baldone	Ter.	N/A	2000	N/A	N/A	N/A	N/A	$181,394	This FEMA project repaired sand fencing on Timbalier Island that was destroyed during a series of tropical storms and hurricanes in the fall of 1998.
FEMA	DSR-81785	Falgout Canal (FEMA 1999)	MM	N/A	N/A	Dupre	Dartez	Ter.	N/A	2000	N/A	N/A	N/A	N/A	$7,070	This FEMA project replaced flap gates on water control structures damaged during tropical storms and hurricanes in the fall of 1998. The installation of the new flapgate culverts was completed by Terrebonne Parish Consolidated Government (TPCG).
FEMA	DSR-81786	East Island (FEMA 1999)	VP	N/A	N/A	Dupre	Baldone	Ter.	N/A	2000	N/A	N/A	N/A	N/A	$89,940	This FEMA project involved the planting of marsh vegetation on the dune and Lake Pelto shoreline of East Island. This area is part of a CWPPRA project damaged by a series of tropical storms and hurricanes in the fall of 1998. A total of 4,280 smooth cordgrass (*Spartina alterniflora*), 500 black mangrove (*Avicennia germinans*), and 6,147 roseau cane (*Phragmites australis*) plants were planted in April 2000.
FEMA	DSR-81787	Whiskey Island (FEMA 1999)	SP	N/A	N/A	Dupre	Baldone	Ter.	1,259	2000	N/A	N/A	N/A	N/A	$581,566	This FEMA project involved the installation of sand fencing and the planting of vegetation to repair areas of Whiskey Island damaged by tropical storms and hurricanes during the fall of 1998. This area is part of a CWPPRA project area and CWPPRA funds were combined with the FEMA funds for repairs. Repairs were completed in August 2000.
FEMA	PW-1906	Cote Blanche Repairs (FEMA)	HR	N/A	N/A	Gautreaux	Smith	StM.	N/A	2005	N/A	N/A	N/A	N/A	$64,092	This FEMA project consisted of repairs to areas of stone paving, stone dikes, and minor repair of navigation aids on the Cote Blanche Hydrologic Restoration (TV-04) project damaged during Hurricane Lili in 2002. The project also included minor maintenance work paid for by CWPPRA.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
FEMA	PW-1646	Marsh Island Repairs (FEMA)	HR	N/A	N/A	Romero	Hebert	Ibe.	N/A	2005	N/A	N/A	N/A	N/A	$267,059	This FEMA project consisted of repairs to areas of stone paving, stone dikes, and minor repair of navigation aids on the Marsh Island Hydrologic Restoration (TV-14) project damaged during Hurricane Lili in 2002. The project also included minor maintenance work paid for by CWPPRA.
FEMA/CIAP	PW-1728	Montegut Wetlands (FEMA)	MM	N/A	N/A	Dupre	Baldone	Ter.	N/A	2005	N/A	N/A	N/A	N/A	$1,093,962	This FEMA project repaired damage to the Montegut Wetland (TE-01) project that occurred during Hurricane Lili in 2002. The project consisted of refurbishing and reconstructing 17,000 linear feet of an existing earthen levee using off-site borrow material.
Other	BRM-01	Brown Marsh	MC	N/A	N/A	Pitre	Dupre	Laf.	44	2002	N/A	N/A	N/A	N/A	$473,365	The project features consisted of a thin layer marsh creation/nourishment covering 44 acres in Lafourche Parish.
Other	RAINEY	Rainey Audubon Wildlife Sanctuary Earthen Terraces	MC	N/A	N/A	Gautreaux	Frith	Ver.	640	2005	N/A	N/A	N/A	N/A	$851,869	The project consists of constructing approximately 35,000 linear feet of terraces. The terraces were created by dredging in shallow open water areas and piling the spoil on one side of the borrow area. An additional $391,763 was contributed from the Coastal Impact Assistance Program (CIAP).

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA); State=Restoration projects funded primarily by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Program (Christmas Tree 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; FEMA= Federal Emergency Managment Agency projects; CIAP= Coastal Impact Assistance Program projects.

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; OM=Outfall Management; BI=Barrier Island; SD=Sediment Diversion.

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

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

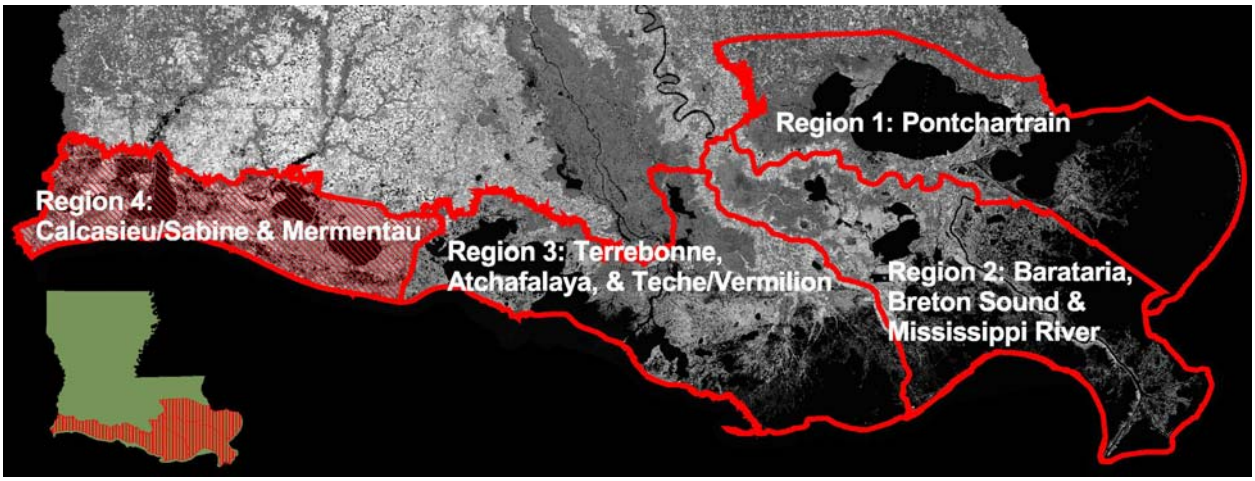
Parish: Asc.=Ascension, Asu.=Assumption, Cal.=Calcasieu, Cam.=Cameron, Ibe.=Iberia, Jef.=Jefferson, Laf.=Lafourche, Orl.=Orleans, Plaq.=Plaquemines, StB.=St. Bernard, StC.=St. Charles, StJo.=St. John the Baptist, StM.=St. Mary, StT.=St. Tammany, Tan.=Tangipahoa, Ter.=Terrebonne, Ver.=Vermilion.

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

Baseline Cost Estimates 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. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable.

REGION 4



INTRODUCTION

Region 4 encompasses the Mermentau and Calcasieu/Sabine Basins. It 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. It covers all or part of Vermilion, Cameron, and Calcasieu parishes.

This region covers approximately 768,210 acres of coastal wetlands. These wetlands 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 1990 and 2000, a total of 34,688 acres of wetlands were lost (an average of 3,468 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 primary source of freshwater inflow to the basin 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 the Mermentau 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 water control 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 respectively by the year 2050. The overall 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. These specific ecosystem strategies can be grouped into one of the following five general categories: restoring and sustaining wetlands, controlling salinity in the Calcasieu/Sabine Basin, protecting bay and lake shorelines, restoring and maintaining barrier islands and shorelines, and maintaining critical landforms.

PROJECT SUMMARIES

A total of 190 restoration projects have been authorized for Region 4 (Figures 12 and 13, Table 4). Project specific information is presented below, organized by project funding source.

CWPPRA

A total of 35 projects have been authorized under the direction of CWPPRA in Region 4, which is anticipated to benefit 25,985 acres of wetlands at a cost of $90,654,742. This includes the South Pecan Island Freshwater Introduction (ME-23) project which was authorized in 2006 on the 15th Project Priority List.

The CWPPRA Task Force officially deauthorized three projects in Region 4: Compost Demonstration (CS-26), SW Shore White Lake Demonstration (ME-12), and Dewitt-Rollover Vegetative Plantings Demonstration (ME-08).

State

Eight projects have been implemented in Region 4 and funded by the Wetlands Trust Fund and/or local Parish funds. These projects are estimated to benefit 1,972 acres of land at a cost of $10,582,546.

Parish Coastal Wetlands Restoration Program

The ten Christmas tree projects implemented in Region 4 are Cameron Creole, Kelso Bayou, Portie Lakes, Ellender Bridge, Black Lake, Goose Lake, Cameron Creole #2, and Prien Lake. In 2006, the Prien Lake Christmas tree project was refurbished. 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 to promote sediment accumulation.

DNR/NRCS/SWCC Vegetation Planting Program

Since 1988, a total of 133 vegetation planting projects have been implemented in Region 4. Several phases, spanning multiple years, exist for many of the planting projects. Projects completed in 2006 are Marseillaise Bayou Marsh, Lacassine Pool Levee, Hackberry Terrace Tops, Black Lake Levee, Rockefeller Smooth Cordgrass, Little Florida, PDH Trees, Cameron Farm Trees, South Perry Ridge, and Sand Fence Maintenance.

Section 204/1135

There are four Section 204/1135 projects in Region 4: Brown Lake and Calcasieu River & Pass Phases I, II, and III. These projects 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 within the Sabine National Wildlife Refuge.

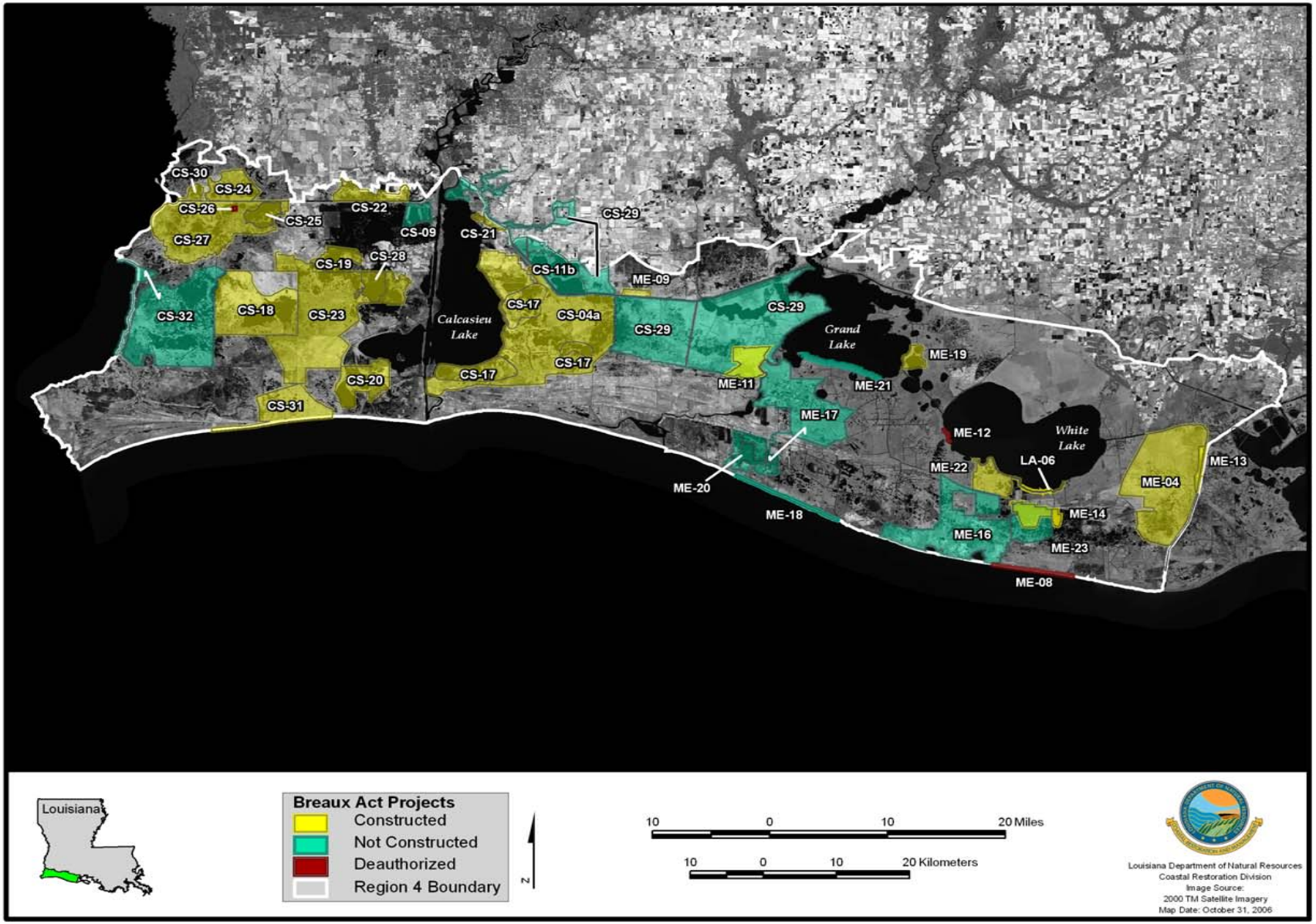


Figure 12. Location of Breaux Act projects authorized in Coast 2050 Region 4.

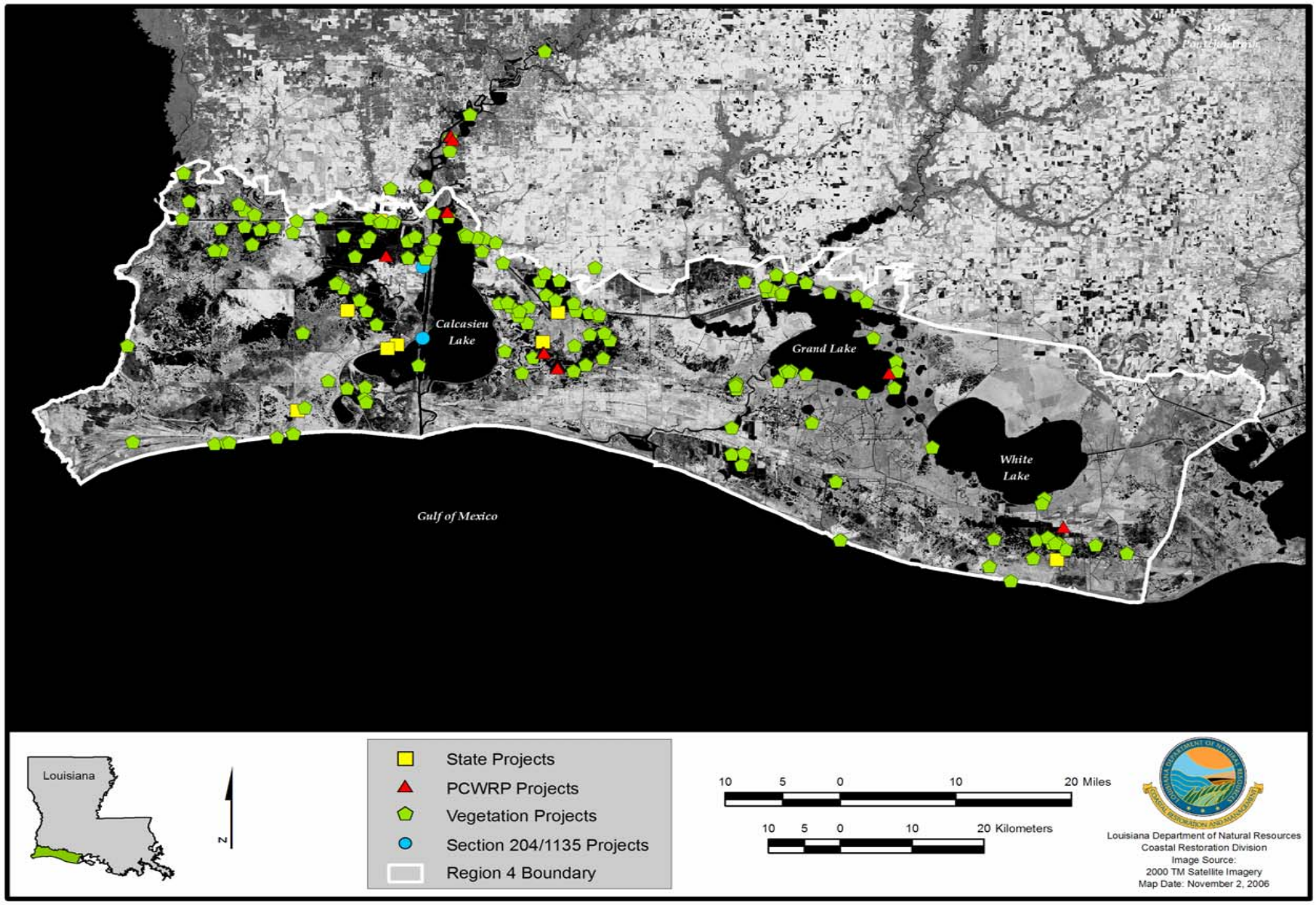


Figure 13. Location of State, PCWRP, Vegetation, and Section 204/1135 projects in Coast 2050 Region 4.

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

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	CS-04a (CS-04a)	Cameron-Creole Maintenance	HR	3	NRCS	Theunissen	Frith	Cam.	2,602	1997	N/A	N/A	$3,736,718	$3,719,926	$3,736,718	The project area falls within the Cameron-Creole watershed management area, which has been adversely impacted by saltwater intrusion and loss of sediment due to channelization and water diversion of the Calcasieu River. The project provides needed maintenance for the existing 19 miles of levee and five major structures which make up the Cameron-Creole Watershed Project. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	CS-09 (CS 09)	Brown Lake Hydrologic Restoration	HR	2	NRCS	Cain, Theunissen	Frith, Kleckley	Cam.	282	Pending	$481,841	$1,467,259	$1,252,790	$3,222,800	$3,201,890	The project is intended to restore, to the extent possible, the natural hydrology of the area. A reduction in marsh loss and improved water conditions are expected to occur following project implementation. The project includes rebuilding the Alkali Ditch levee, utilizing dredged material from the Calcasieu River when available, as well as rebuilding water control structures and canal plugs.
Breaux Act	CS-11b (CS-11b)	Sweet Lake/Willow Lake Hydrologic Restoration	SP	5	NRCS	Theunissen	Frith	Cam.	247	2001	$408,208	$3,195,025	$639,762	$4,800,000	$4,242,995	The project objectives are to re-establish the shoreline (hydrologic boundary) between Sweet Lake and the Gulf Intracoastal Waterway (GIWW), to reduce lake turbidity and tidal exchange, and to halt erosion and trap sediment needed to rebuild marsh along the northern and northwestern shorelines of Sweet Lake. 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 revegetation.
Breaux Act	CS-17 (FCS-17)	Cameron Creole Plugs	HR	1	USFWS	Theunissen	Frith	Cam.	865	1996	$73,158	$345,381	$572,756	$660,460	$991,295	The project goal is to restore historic water circulation patterns within the Cameron-Creole Watershed. This objective will be accomplished by slowing the rapid movement of saline waters that enter the watershed from Calcasieu Lake. The project consisted of the installation of two sheetpile plugs in the lakeshore borrow canal. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	CS-18 (FCS-18)	Sabine National Wildlife Refuge Erosion Protection	SP	1	USFWS	Theunissen	Frith	Cam.	5,542	1995	$200,185	$1,010,568	$391,903	$4,895,780	$1,602,656	The goal of this project is to protect 13,000 acres of fresh marsh from deterioration associated with the anticipated failure of the existing west levee. The original design was to reconstruct 5.5 miles of eroded levee. The project was redesigned to include 1,000 feet of levee reconstruction and 5.5 miles of rock armor. Vegetation plantings were used to reduce erosion from boat traffic.
Breaux Act	CS-19 (FCS-19)	West Hackberry Vegetative Planting Demonstration	VP	1	NRCS	Theunissen	Frith	Cam.	N/A	1994	$36,830	$125,461	$96,514	$213,947	$258,804	The goal of this demonstration project is to reduce marsh erosion from interior open water wave energy using vegetation plantings consisting of smooth cordgrass (*Spartina alterniflora*). In addition, wave-stilling hay bale fences were utilized to protect the vegetation plantings.
Breaux Act	CS-20 (PCS-24)	East Mud Lake Marsh Management	MM	2	NRCS	Theunissen	Frith	Cam.	1,520	1996	$248,569	$1,150,868	$2,696,499	$2,903,635	$4,095,936	The project is intended to create 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 flapgates, two variable crest weirs, three earthen plugs, and repair of an existing levee. A claim will be submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	CS-21 (PCS-25)	Highway 384 Hydrologic Restoration	MM	2	NRCS	Theunissen	Frith	Cam.	150	2000	$154,447	$163,278	$740,829	$700,717	$1,058,554	The purpose of this project is to restore the natural hydrology of the project area and eliminate high salinities and severe water fluctuations to reduce marsh loss. The project installed flapgated culverts and a shell plug along the Calcasieu Lake shoreline to repair a breach. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	CS-22 (PCS-27)	Clear Marais Bank Protection	SP	2	USACE	Cain	Kleckley	Cal.	1,067	1997	$562,832	$2,229,644	$903,612	$1,741,310	$3,696,088	The goal of this project is to stabilize six miles of the Gulf Intracoastal Waterway (GIWW) channel bank with a rock armored breakwater. 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. Vegetation plantings were used to enhance the bank protection and promote sediment trapping.
Breaux Act	CS-23 (XCS-47/48i)	Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully	MM	3	USFWS	Theunissen	Frith	Cam.	953	2000	$348,862	$2,775,475	$1,404,081	$4,581,454	$4,528,418	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. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita. The claim has been approved.
Breaux Act	CS-24 (PCS-26i)	Perry Ridge Shore Protection	SP	4	NRCS	Cain	Johns	Cal.	1,203	1999	$244,881	$1,465,996	$578,213	$2,223,518	$2,289,090	The project is intended to reduce tidal scour, wave action from boats, and other excessive energy impacts on interior marshes, and to reduce the possibility of saltwater intrusion by repairing the northern spoil bank of the Gulf Intracoastal Waterway (GIWW). A riprap breakwater was placed along low areas of the northern bank of the GIWW from Perry Ridge to Vinton Drainage Canal.
Breaux Act	CS-25 (XCS-56)	Plowed Terraces Demonstration	SNT	4	NRCS	Cain, Theunissen	Frith, Johns	Cam.	N/A	2000	$65,788	$214,428	$45,425	$299,690	$325,641	This demonstration project is intended to develop and demonstrate a non-traditional procedure for constructing earthen terraces in shallow open water areas. Thirty-eight earthen terraces served as wave-stilling, sediment-trapping structures and provided a medium base for the establishment of emergent vegetation.
Breaux Act	CS-26 (XCS-36)	Compost Demonstration (Deauthorized)	MC	4	EPA	Theunissen	Frith	Cam.	N/A	Deauth.	$191,239	$6,171	$16,234	$370,594	$213,645	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 was officially deauthorized by the Breaux Act Task Force in January 2002.
Breaux Act	CS-27 (XCS-48)	Black Bayou Hydrologic Restoration	HR	6	NMFS	Cain, Theunissen	Frith, Johns	Cam.	3,594	2001	$752,048	$3,788,645	$1,431,920	$6,316,800	$5,972,613	The project goals are to reduce wetland loss resulting from hydrologic changes including reduced freshwater inflow, increased magnitude and duration of tidal fluctuations, increased salinities, higher water levels, and excessive water exchange. This project included the construction of spoil banks, weirs, plugs, and culverts designed to allow freshwater from the Gulf Intracoastal Waterway (GIWW) into the wetlands and to create a hydrologic head that increases freshwater retention time and reduces saltwater intrusion.
Breaux Act	CS-28 (XCS-48 (SA-1))	Sabine Refuge Marsh Creation, Cycles 1-3	MC	8	USACE/ USFWS	Theunissen	Frith	Cam.	214	2002	$2,840,532	$14,464,068	$109,246	$28,621,140	$17,413,846	The project is intended to strategically create marsh in large, open water areas to block the wind-induced introduction of saltwater. Additionally, it will increase nourishment in adjacent marshes while reducing open water fetch and erosion of marsh fringe. The project consists of 5 marsh creation sites (5 cycles) within the Sabine National Wildlife Refuge using material dredged from the Calcasieu River Ship Channel.
Breaux Act	CS-29 (CS 16)	Black Bayou Culverts Hydrologic Restoration	HR	9	NRCS	Theunissen	Frith, Kleckley, Morrish	Cam.	540	Pending	$894,144	$4,240,815	$252,744	$5,900,387	$5,387,703	The project objective is to discharge and remove excess water, which has contributed to marsh loss and shoreline erosion. This project consists of installing box culverts with sluice gates in Black Bayou and relocating Louisiana 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.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	CS-30 (PCS-26ii)	GIWW - Perry Ridge West Bank Stabilization	SP	9	NRCS	Cain	Johns	Cal.	83	2001	$254,932	$1,376,878	$115,021	$3,742,451	$1,746,831	This project was authorized to install riprap along the northern bank of the Gulf Intracoastal Waterway (GIWW) in an area which was dredged to a depth of 30 feet to allow for the use of double barge traffic. Rock was installed along the bank to prevent further erosion.
Breaux Act	CS-31	Holly Beach Sand Management	SP	11	NRCS	Theunissen	Frith	Cam.	330	2002	$544,641	$12,964,592	$621,000	$19,252,500	$14,130,233	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 objective was accomplished through beach renourishment, installation of sand fencing, vegetation plantings, and monitoring of the shoreline response. This project was originally authorized on the 9th PPL as a complex project, Holly Beach Project, CS-01. An additional $4,728,125 was contributed by the Coastal Impact Assistance Program (CIAP) for the construction of this project. A claim has been submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	CS-32	East Sabine Lake Hydrologic Restoration	HR	10	NRCS/ USFWS	Theunissen	Frith	Cam.	225	Pending	$1,488,871	$3,939,219	$68,490	$6,490,751	$5,496,580	This project utilizes 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, and restoring and protecting marsh. A claim will be submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	LA-06	Shoreline Protection Foundation Improvements Demonstration (Demo)	SP	13	USACE	Gautreaux	Frith	Ver.	N/A	2006	$360,809	$443,344	$250,847	$1,000,000	$1,055,000	The goal of this demonstration project is to determine the feasibility of shoreline protection structures where a relatively poor soil foundation exists. This goal will be achieved using sand as a foundation beneath rock dike structures as a means to increase bearing capacity and consolidation settlement design tolerances. This project will be incorporated into the South White Lake Shoreline Protection (ME-22) project.
Breaux Act	ME-04 (XME-21)	Freshwater Bayou Wetland Protection	HR SP	2	NRCS	Gautreaux	Frith	Ver.	1,593	1998	$285,397	$1,019,875	$2,150,032	$2,770,093	$3,455,303	This project was constructed in two phases. Phase I was completed in 1995 and consisted of a 10,000 linear-foot 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.
Breaux Act	ME-08 (ME-08)	Dewitt-Rollover Vegetative Plantings Demonstration (Deauthorized)	VP	1	NRCS	Gautreaux	Frith	Ver.	N/A	1994 Deauth.	$36,830	$51,460	$3,722	$191,003	$92,012	This demonstration project's purpose was to investigate the ability of vegetation plantings of smooth cordgrass (*Spartina alterniflora*) to colonize a newly accreted mudflat, thereby establishing a vegetation buffer between the Gulf of Mexico and coastal wetlands. This project was officially deauthorized by the Breaux Act Task Force in February 1996 because no plants remained.
Breaux Act	ME-09 (ME-09)	Cameron Prairie National Wildlife Refuge Shoreline Protection	SP	1	USFWS	Theunissen	Frith	Cam.	247	1994	$61,112	$851,775	$314,236	$1,177,668	$1,227,123	The project goals are to protect the emergent wetlands of the Cameron Prairie National Wildlife Refuge adjacent to the Gulf Intracoastal Waterway (GIWW). Project features include construction of approximately 2.5 miles of rock dike parallel to the existing spoil bank, thereby terminating the encroachment of the GIWW into the refuge.

Program	State Project Number (Federal) / Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	ME-11 (PME-15) Humble Canal Hydrologic Restoration	HR	8	NRCS	Theunissen	Frith	Ver.	378	2003	$155,912	$460,221	$914,679	$1,526,136	$1,530,812	The objective of this project is to restore historical hydrology to the project area by constructing a water control structure consisting of five 48-inch diameter by 50-foot long corrugated aluminum pipes with flap gates and weir drop inlets along with one 18-inch diameter corrugated aluminum pipe with screw gate. This structure will protect the area from Mermentau River saltwater intrusion and allow high water to drain from the marsh to the river. A claim will be submitted to FEMA to repair damage to this project caused by Hurricane Rita.
Breaux Act	ME-12 (PME-6) Southwest Shore White Lake Demonstration (Deauthorized)	SP	3	NRCS	Gautreaux, Theunissen	Frith	Ver.	N/A	1996 Deauth.	$21,752	$20,025	$61,692	$126,062	$103,468	The objective of this demonstration project was to stabilize one mile of the White Lake shoreline and prevent breaching into Deep Lake. The project was initiated to determine if California bulrush (*Schoenoplectus californicus*) is effective at damping high energy wave action. The project was officially deauthorized by the Breaux Act Task Force in October of 1998 and is no longer monitored.
Breaux Act	ME-13 (XME-29) Freshwater Bayou Bank Stabilization	SP	5	NRCS	Gautreaux	Frith	Ver.	511	1998	$228,978	$1,682,077	$632,258	$3,998,919	$2,543,313	The objective of this project is to protect the integrity of the Mermentau River Basin by preventing interior ditches from connecting Freshwater Bayou Canal to the Old Intracoastal Canal. A 23,193 linear-foot rock dike was constructed approximately 100 feet from the existing shoreline to prevent Freshwater Bayou Canal from eroding into the intermediate marshes.
Breaux Act	ME-14 (XME-22) Pecan Island Terracing	SNT	7	NMFS	Gautreaux	Frith	Ver.	442	2003	$424,321	$1,616,090	$351,542	$2,185,900	$2,391,953	The goal of this project it to convert areas of open water back to vegetated marsh. Project features included the construction of earthen terraces to reduce wave action.
Breaux Act	ME-16 (PME-07a) Freshwater Introduction South of Highway 82	FD	9	USFWS	Gautreaux, Theunissen	Frith	Ver.	296	Pending	$856,669	$4,036,941	$189,918	$6,051,325	$5,083,528	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 Louisiana Hwy 82 to allow water to flow across the chenier, and the removal of plugs to facilitate water flow from the lakes subbasin south into the chenier subbasin.
Breaux Act	ME-17 (XME-42a) Little Pecan Bayou Hydrologic Restoration	HR	9	NRCS	Theunissen	Frith	Cam.	144	Pending	$1,400,600	$31,200	$124,798	$1,245,278	$1,556,598	The project objectives include providing 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.
Breaux Act	ME-18 Rockefeller Refuge Gulf Shoreline Stabilization	SP	10	NMFS	Theunissen	Frith	Cam.	920	Pending	$2,393,615	N/A	$14,863	$1,929,888	$2,408,478	The project will address Rockefeller Refuge Gulf shoreline retreat, which averages approximately 39 feet per year with subsequent direct loss of saline marsh. The project would entail construction of a nearshore breakwater along the Gulf of Mexico shoreline, extending approximately from Beach Prong to Joseph Harbor.
Breaux Act	ME-19 Grand-White Lakes Landbridge Protection	SP	10	USFWS	Theunissen	Frith	Cam.	213	2004	$208,086	$4,379,533	$1,217,307	$9,635,224	$5,804,926	This project is intended to protect freshwater wetlands by stopping the erosion of the southeastern shoreline of Grand Lake and the western shoreline of Collicon Lake. Project features include construction of hard structure shoreline stabilization and planted earthen terraces to protect the landbridge.
Breaux Act	ME-20 South Grand Chenier Hydrologic Restoration Project	HR	11	USFWS	Theunissen	Frith	Mer.	440	Pending	$2,295,423	N/A	$62,997	$2,358,420	$2,358,420	This project is intended to restore the Hog Bayou watershed hydrology through the use of dredged material to create two 200-acre cells that will stop saltwater intrusion into the project area. Freshwater, sediment, and nutrients from the Mermentau River will also be introduced into the project area at two separate locations.

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Breaux Act	ME-21	Grand Lake Shoreline Protection	SP	11	USACE	Theunissen	Frith	Cam.	540	Pending	$1,032,157	N/A	$16,872	$1,049,029	$1,049,029	The objective of this project is to reduce erosion along the southern shoreline of Grand Lake, which is caused by high wave energy associated with storm winds and frontal passages. Project features will include construction of a rock breakwater from Superior Canal to Tebo Point.
Breaux Act	ME-22	South White Lake Shoreline Protection	SP	12	USACE	Gautreaux	Frith	Ver.	844	2006	$1,824,322	$13,836,339	$51,398	$19,673,929	$15,712,059	This project is intended to reduce erosion along the southern White Lake shoreline through the construction of a foreshore rock dike. Marsh accretion and submerged aquatic vegetation habitat creation is expected to occur behind the structure due to occasional wave overwash and the reduction of turbidity in the interior open water areas.
Breaux Act	ME-23	South Pecan Island Freshwater Introduction	FD	15	NMFS	Gautreaux	Frith	Ver.	98	Pending	$1,102,043	N/A	N/A	$1,102,043	$1,102,043	The goal of this project is to provide freshwater flow to 7,000 acres for at least 3 months per year and to create 98 acres of marsh. The project would be constructed to allow excess freshwater to drain, while preventing saltwater intrusion into the Lakes Sub-basin. The project would benefit approximately 7,000 acres of brackish marsh, submerged aquatic vegetation, and open water.
State	BD	Brannon Ditch	SP	N/A	N/A	Cain	Kleckley	Cal.	480	1991	N/A	N/A	N/A	N/A	$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.
State	CS-01	Holly Beach	SP	N/A	N/A	Theunissen	Frith	Cam.	88	1991, 1992, 1993, 1994	N/A	N/A	N/A	N/A	$8,437,000	The objective of this project is to protect the marsh north of the Gulf of Mexico shoreline by expanding shoreline protection in phases from Ocean View, Louisiana 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, Louisiana. Eighteen of the existing breakwaters were raised and/or extended in 2003 utilizing marine mattress foundations and armor stone.
State	CS-02	Rycade Canal Marsh Management	MM	N/A	N/A	Theunissen	Frith	Cam.	1,200	1994	N/A	N/A	N/A	N/A	$516,474	The project is designed to stabilize salinities and water levels in the project area by reducing water flows through Rycade Canal and Black Lake.
State	CS-04a-1	Cameron-Creole Structure Automation	HR	N/A	N/A	Theunissen	Frith	Cam.	N/A	1999	N/A	N/A	N/A	N/A	$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.
State	CS-BL	Blind Lake	SP	N/A	N/A	Theunissen	Frith	Cam.	N/A	1989	N/A	N/A	N/A	N/A	$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 adjacent 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.
State	CS-ST	Sabine Terraces	SNT	N/A	N/A	Theunissen	Frith	Cam.	110	1990	N/A	N/A	N/A	N/A	$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.

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State	ME-01	Pecan Island Freshwater Introduction	FD	N/A	N/A	Gautreaux	Frith	Ver.	84	1992	N/A	N/A	N/A	N/A	$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. A claim was submitted to FEMA to repair damage to this project caused by Hurricane Rita. The claim has been approved.
State	SSB	Sabine Shellbank Stabilization	SP	N/A	N/A	Theunissen	Frith	Cam.	10	1990	N/A	N/A	N/A	N/A	$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 sediment and organisms without impediment.
PCWRP		Cameron Creole	SP	N/A	N/A	Theunissen	Frith	Cam.	8	1990	N/A	N/A	N/A	N/A	$69,900	Brush fences were constructed to trap sediment and act as a barrier to slow saltwater intrusion in the interior marsh. Fences were originally constructed and filled in 1990, and maintenance was performed in 1992, 1994, 1997, and 2000.
PCWRP		Kelso Bayou	SP	N/A	N/A	Theunissen	Frith	Cam.	1	1991	N/A	N/A	N/A	N/A	$45,245	Brush fences were constructed to re-establish the eroded shoreline and promote sediment deposition along Kelso Bayou in Cameron Parish, Louisiana. Fences were originally constructed and filled in 1991, and maintenance was performed in 1993, 1996, 1999, and 2004. The brush fences were either destroyed as a result of the 2005 hurricanes or later removed because of hurricane damage.
PCWRP		Ellender Bridge	SP	N/A	N/A	Mount	Kleckley	Cal.	2	1992	N/A	N/A	N/A	N/A	$43,561	Brush fences were constructed to protect marsh that was exposed to the GIWW. Fences were originally constructed and filled in 1992, and maintenance was performed in 1993, 1995, 1996, 1999, and 2005.
PCWRP		Portie Lakes	SP	N/A	N/A	Theunissen	Frith	Cam.	2	1992	N/A	N/A	N/A	N/A	$32,500	Brush fences were constructed to decrease erosion by trapping sediment along the shoreline and interior marsh adjacent to Portie Lake. Fences were originally constructed and filled in 1992, and maintenance was performed in 1996, 1998, 1999, 2002, and 2004. The brush fences were either destroyed as a result of the 2005 hurricanes or later removed because of hurricane damage.
PCWRP		Black Lake	SP	N/A	N/A	Theunissen	Frith	Cam.	2	1993	N/A	N/A	N/A	N/A	$52,500	Brush fences were constructed to decrease wind fetch and prevent continued erosion of the Black Lake shoreline by wind-generated waves. Fences were originally constructed and filled in 1993, and maintenance was performed in 1994, 1995, 1996, 1998, 2000, and 2002.
PCWRP		Goose Lake	SP	N/A	N/A	Cain	Kleckley	Cal.	1	1994	N/A	N/A	N/A	N/A	$14,495	Brush fences were constructed along the GIWW at Goose Lake to slow the shoreline erosion at this intersection. Fences were originally constructed and filled in 1994. The fences were removed in 1995.
PCWRP		Collicon Lake	SP	N/A	N/A	Theunissen	Frith	Cam.	9	1996	N/A	N/A	N/A	N/A	$9,500	Vegetation was planted along the shoreline of Collicon Lake to slow shoreline erosion, promote sediment accumulation, and enhance fish habitat.
PCWRP		Turner Bay	SP	N/A	N/A	Theunissen	Kleckley	Cal.	2	1996	N/A	N/A	N/A	N/A	$96,500	Brush fences were constructed to protect the interior shoreline of Turner Bay. Fences were originally constructed and filled in 1996, and maintenance was performed in 1997, 1998, 1999, 2000, 2001, 2003 , 2005, and 2006.
PCWRP		Cameron Creole #2	SP	N/A	N/A	Theunissen	Frith	Cam.	3	1998	N/A	N/A	N/A	N/A	$67,500	Brush fences were constructed to slow wave action and prevent continued shoreline erosion and erosion of the interior marsh. Fences were originally constructed and filled in 1998, and maintenance was performed in 1998, 1999, 2001, 2003, and 2005.
PCWRP		Prien Lake	SP	N/A	N/A	Mount, Theunissen	Kleckley	Cal.	1	2001	N/A	N/A	N/A	N/A	$67,500	Approximately 700 feet of brush fence was built along the shoreline of Prien Lake, located just south of Lake Charles, to re-establish the original shoreline. Fences were originally constructed and filled in 2001, and maintenance was performed in 2002, 2003, 2004, 2005, and 2006.

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Vegetation		Grand Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	12	1986	N/A	N/A	N/A	N/A	$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.
Vegetation		Brown Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	4	1987	N/A	N/A	N/A	N/A	$9,100	A total of 10,483 smooth cordgrass (*Spartina alterniflora*) plants were used to vegetate a marsh creation project area that utilized spoil disposal.
Vegetation		Grand Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	12	1987	N/A	N/A	N/A	N/A	$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.
Vegetation		Rollover Bayou	VP	N/A	N/A	Gautreaux	Frith	Ver.	23	1988	N/A	N/A	N/A	N/A	$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 sediment.
Vegetation		Sabine NWR	VP	N/A	N/A	Theunissen	Frith	Cam.	69	1988	N/A	N/A	N/A	N/A	$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.
Vegetation		Mallard Bay	VP	N/A	N/A	Theunissen	Frith	Cam.	10	1988	N/A	N/A	N/A	N/A	$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 sediment.
Vegetation		Black Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	36	1988	N/A	N/A	N/A	N/A	$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.
Vegetation		Lacassine	VP	N/A	N/A	Theunissen	Frith	Cam.	14	1989	N/A	N/A	N/A	N/A	$22,200	A total of 1,500 giant cutgrass (*Zizaniopsis miliacea*) plants and 10,000 baldcypress (*Taxodium distichum*) trees were used to protect an island in Lacassine National Wildlife Refuge, located northwest of Grand Lake and adjacent to the GIWW.
Vegetation		Brown Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	4	1989	N/A	N/A	N/A	N/A	$9,100	A total of 10,483 smooth cordgrass (*Spartina alterniflora*) plants were used to vegetate a marsh creation project area that utilized spoil disposal.
Vegetation		Sabine Terraces	VP	N/A	N/A	Theunissen	Frith	Cam.	48	1990	N/A	N/A	N/A	N/A	$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.
Vegetation		Blind Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	5	1990	N/A	N/A	N/A	N/A	$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.
Vegetation		Fina Mud Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	58	1991	N/A	N/A	N/A	N/A	$99,088	A total of 24,000 single-stemmed plants and 386 one-gallon plugs of smooth cordgrass (*Spartina alterniflora*) were planted to stabilize the base of a levee.
Vegetation		Sweetlake Hyacinth Fence	VP	N/A	N/A	Theunissen	Frith	Cam.	5	1991	N/A	N/A	N/A	N/A	$11,340	A total of 2,000 feet of fence was constructed to prevent water hyacinth (*Eichhornia crassipes*) from encroaching onto the adjacent bank.

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Vegetation		Brannon Ditch	VP	N/A	N/A	Cain	Kleckley	Cal.	11	1991	N/A	N/A	N/A	N/A	$12,543	A total of 4,200 single stems of smooth cordgrass (*Spartina alterniflora*) and 100 roseau cane (*Phragmites australis*) plants were used in an area of sediment that 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.
Vegetation		White Lake South	VP	N/A	N/A	Gautreaux	Frith	Ver.	2	1991	N/A	N/A	N/A	N/A	$4,000	A total of 1,000 single stems of giant cutgrass (*Zizaniopsis miliacea*) were used to provide a vegetation buffer against wave-induced erosion.
Vegetation		Newman's Black Lake Levee	VP	N/A	N/A	Theunissen	Frith	Cam.	24	1992	N/A	N/A	N/A	N/A	$42,000	A total of 10,500 single-stemmed plants of smooth cordgrass (*Spartina alterniflora*) were planted to stabilize the base of a levee.
Vegetation		Southwest Pecan Island	VP	N/A	N/A	Gautreaux	Frith	Ver.	29	1992	N/A	N/A	N/A	N/A	$17,470	A total of 4,310 seashore paspalum (*Paspalum vaginatum*) plants were used in order to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Cameron Creole	VP	N/A	N/A	Theunissen	Frith	Cam.	28	1992	N/A	N/A	N/A	N/A	$36,716	A total of 12,000 single stems of smooth cordgrass (*Spartina alterniflora*) were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Cameron Creole Living Fence	VP	N/A	N/A	Theunissen	Frith	Cam.	11	1992	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 California bulrush (*Schoenoplectus californicus*) plants were used in the Cameron Creole watershed.
Vegetation		Walker GIWW	VP	N/A	N/A	Cain	Kleckley	Cal.	9	1992	N/A	N/A	N/A	N/A	$5,424	A total of 800 gallon containers of smooth cordgrass (*Spartina alterniflora*) plants were used to provide a vegetation buffer against wave-induced erosion.
Vegetation		Doland Lease	VP	N/A	N/A	Theunissen	Frith	Cam.	4	1992	N/A	N/A	N/A	N/A	$3,771	A total of 1,095 single stems and 100 gallon containers of California bulrush (*Schoenoplectus californicus*) 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.
Vegetation		Brown Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	7	1992	N/A	N/A	N/A	N/A	$64,136	A total of 16,034 single stems of smooth cordgrass (*Spartina alterniflora*) were used to vegetate a marsh creation project area that utilized spoil disposal.
Vegetation		Fina Mud Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	15	1992	N/A	N/A	N/A	N/A	$8,000	A total of 1,300 gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to stabilize the base of a levee.
Vegetation		White Lake South	VP	N/A	N/A	Gautreaux	Frith	Ver.	4	1993	N/A	N/A	N/A	N/A	$9,256	A total of 2,314 giant cutgrass (*Zizaniopsis miliacea*) plants were used to provide a vegetation buffer against wave-induced erosion.
Vegetation		Little Pecan Bayou	VP	N/A	N/A	Theunissen	Frith	Cam.	23	1994	N/A	N/A	N/A	N/A	$11,500	A total of 2,000 smooth cordgrass (*Spartina alterniflora*) plugs were used to re-establish stands of emergent vegetation in the interior marsh, where erosion has negatively affected the marsh.

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Vegetation		Shell Western	VP	N/A	N/A	Theunissen	Frith	Cam.	23	1994	N/A	N/A	N/A	N/A	$13,831	A total of 2,040 California bulrush (*Schoenoplectus californicus*) plugs were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Tebo Point Shoreline	VP	N/A	N/A	Theunissen	Frith	Cam.	9	1994	N/A	N/A	N/A	N/A	$6,560	A total of 820 gallon containers of California bulrush (*Schoenoplectus californicus*) were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Boudreaux Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	23	1994	N/A	N/A	N/A	N/A	$13,560	A total of 2,000 California bulrush (*Schoenoplectus californicus*) plugs were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		94 Mud Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	23	1994	N/A	N/A	N/A	N/A	$8,000	A total of 2,000 plugs of smooth cordgrass (*Spartina alterniflora*) were used in order to re-establish stands of emergent vegetation in the interior marshes where erosion has negatively affected the marsh.
Vegetation		SW Pecan Island #2	VP	N/A	N/A	Gautreaux	Frith	Ver.	18	1994	N/A	N/A	N/A	N/A	$24,000	A total of 4,000 peat pots of seashore paspalum (*Paspalum vaginatum*) were used to enhance perennials in the area to increase wildlife food, to trap sediments, and to decrease open water areas by rebuilding the marsh.
Vegetation		Sweet Lake Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	11	1995	N/A	N/A	N/A	N/A	$4,515	A total of 666 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Brown Lake Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	64	1995	N/A	N/A	N/A	N/A	$22,400	A total of 1,400 trade gallon containers each of seashore paspalum (*Paspalum vaginatum*) and seashore saltgrass (*Distichlis spicata*) were planted on a marsh creation area.
Vegetation		North Grand Lake Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	12	1995	N/A	N/A	N/A	N/A	$8,160	Approximately 1,020 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to protect the shoreline from erosion and trap available sediment.
Vegetation		Brannon Ditch Fence (Phase 2)	VP	N/A	N/A	Cain	Kleckley	Cal.	1	1995	N/A	N/A	N/A	N/A	$1,132	Approximately 200 feet of an existing 2,000 foot sediment fence were repaired to provide a barrier against wave-induced shoreline erosion.
Vegetation		Vermilion Corp #1	VP	N/A	N/A	Gautreaux	Frith	Ver.	24	1995	N/A	N/A	N/A	N/A	$7,160	A total of 1,056 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Vermilion Corp #2	VP	N/A	N/A	Gautreaux	Frith	Ver.	24	1995	N/A	N/A	N/A	N/A	$7,160	A total of 1,056 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Arco Road Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	8	1995	N/A	N/A	N/A	N/A	$3,675	A total of 542 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.

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Vegetation		Black Bayou Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	15	1995	N/A	N/A	N/A	N/A	$6,102	A total of 900 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Grosse Savanne Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	14	1995	N/A	N/A	N/A	N/A	$5,661	A total of 835 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Sabine GIWW	VP	N/A	N/A	Cain	Johns	Cal. Cam.	10	1995	N/A	N/A	N/A	N/A	$6,102	A total of 900 trade galloons of smooth cordgrass (*Spartina alterniflora*) were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Savanne Neuville Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	7	1995	N/A	N/A	N/A	N/A	$3,390	A total of 500 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Umbrella Bay Shoreline	VP	N/A	N/A	Theunissen	Frith	Cam.	11	1995	N/A	N/A	N/A	N/A	$4,515	A total of 666 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, slow shoreline erosion, and trap available sediment.
Vegetation		West Gum Cove Marsh	VP	N/A	N/A	Theunissen	Frith	Cal. Cam.	13	1995	N/A	N/A	N/A	N/A	$5,424	A total of 800 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		West Hackberry Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	12	1995	N/A	N/A	N/A	N/A	$5,085	A total of 750 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Webb Gully Marsh	VP	N/A	N/A	Cain	Johns	Cal.	11	1995	N/A	N/A	N/A	N/A	$5,560	A total of 820 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Welfare Bridge Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	11	1995	N/A	N/A	N/A	N/A	$5,424	A total of 800 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Tebo Point Shoreline (Phase 2)	VP	N/A	N/A	Theunissen	Frith	Cam.	14	1995	N/A	N/A	N/A	N/A	$5,560	A total of 820 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		East Mud Lake Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	226	1996	N/A	N/A	N/A	N/A	$157,840	A total of 19,730 trade gallons of smooth cordgrass (*Spartina alterniflora*) plants were used in order to establish emergent vegetation that will prevent shoreline erosion as well as provide a seed source for future regeneration.
Vegetation		SW Pecan Island #3	VP	N/A	N/A	Gautreaux	Frith	Ver.	10	1996	N/A	N/A	N/A	N/A	$7,280	A total of 910 trade gallons of California bulrush (*Schoenoplectus californicus*) were used in order to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.

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Vegetation		Goose Lake	VP	N/A	N/A	Cain	Kleckley	Cal.	22	1997	N/A	N/A	N/A	N/A	$12,679	A total of 1,120 trade gallons of smooth cordgrass (*Spartina alterniflora*) and 750 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to protect the levee of the GIWW from eroding further, to slow water movement in the interior marsh, and to prevent the loss of marsh sediment.
Vegetation		Collicon Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	49	1997	N/A	N/A	N/A	N/A	$34,320	A total of 4,290 trade gallons of 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.
Vegetation		Platform One 1997	VP	N/A	N/A	Gautreaux	Frith	Ver.	25	1997	N/A	N/A	N/A	N/A	$14,916	A total of 2,200 trade gallons of 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.
Vegetation		Black Bayou Cutoff	VP	N/A	N/A	Theunissen	Frith	Cal. Cam.	13	1997	N/A	N/A	N/A	N/A	$7,797	A total of 1,150 trade gallons of smooth cordgrass (*Spartina alterniflora*) plants were used to revegetate the old banks of the bayou. This revegetation process will create a natural passive hydrologic baffle that will slow tidal exchange and provide a seed source for natural revegetation of emergent vegetation.
Vegetation		GIWW West Alkali Ditch	VP	N/A	N/A	Cain	Kleckley	Cal.	15	1997	N/A	N/A	N/A	N/A	$10,400	A total of 1,300 trade gallons of 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.
Vegetation		Marseillaise Bayou Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	23	1997	N/A	N/A	N/A	N/A	$15,840	A total of 1,980 trade gallons of California bulrush (*Schoenoplectus californicus*) 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 shallow, open water.
Vegetation		Tebo Point Shoreline #3	VP	N/A	N/A	Theunissen	Frith	Cam.	13	1997	N/A	N/A	N/A	N/A	$8,800	A total of 1,100 trade gallons of 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.
Vegetation		Sweet Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	9	1997	N/A	N/A	N/A	N/A	$6,400	A total of 800 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Black Bayou Marsh #2	VP	N/A	N/A	Theunissen	Frith	Cam.	35	1997	N/A	N/A	N/A	N/A	$20,320	A total of 1,040 trade gallons of California bulrush (*Schoenoplectus californicus*) and 1,000 trade gallons and 1,000 vegetative plugs of smooth cordgrass (*Spartina alterniflora*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Grosse Savanne Marsh #2	VP	N/A	N/A	Theunissen	Frith	Cam.	29	1997	N/A	N/A	N/A	N/A	$20,320	A total of 2,540 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Platform Two	VP	N/A	N/A	Gautreaux	Frith	Ver.	21	1998	N/A	N/A	N/A	N/A	$12,204	A total of 1,800 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a stand of emergent vegetation that will reduce wave energy in a large open area of eroded marsh.
Vegetation		North Grand Lake Marsh #2	VP	N/A	N/A	Theunissen	Frith	Cam.	17	1998	N/A	N/A	N/A	N/A	$12,000	A total of 1,500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to provide a living barrier against wave-induced shoreline erosion and trap available suspended sediment.

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Vegetation		Vermilion Corporation #3	VP	N/A	N/A	Gautreaux	Frith	Ver.	2	1998	N/A	N/A	N/A	N/A	$1,356	A total of 200 trade gallons of 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 saltwater intrusion into a freshwater marsh.
Vegetation		Prien Lake Marsh	VP	N/A	N/A	Theunissen	Kleckley	Cal.	14	1998	N/A	N/A	N/A	N/A	$8,136	A total of 1,200 trade gallons of smooth cordgrass (*Spartina alterniflora*) 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 shallow, open water.
Vegetation		Mallard Bay GIWW	VP	N/A	N/A	Theunissen	Frith	Cam.	3	1998	N/A	N/A	N/A	N/A	$2,000	A total of 250 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediment.
Vegetation		Grosse Savanne #3	VP	N/A	N/A	Theunissen	Frith	Cam.	57	1998	N/A	N/A	N/A	N/A	$39,680	A total of 4,960 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		Umbrella Bay #2	VP	N/A	N/A	Theunissen	Frith	Cam.	28	1998	N/A	N/A	N/A	N/A	$19,200	A total of 2,400 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Marseillaise Bayou Marsh #2	VP	N/A	N/A	Theunissen	Frith	Cam.	27	1998	N/A	N/A	N/A	N/A	$18,720	A total of 2,340 trade gallons of California bulrush (*Schoenoplectus californicus*) 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 shallow, open water.
Vegetation		West Turner's Bay Shoreline	VP	N/A	N/A	Mount	Kleckley	Cal.	14	1999	N/A	N/A	N/A	N/A	$9,600	Approximately 1,200 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to provide a living barrier against wave-induced shoreline erosion and trap available suspended sediment.
Vegetation		Cotton Well Road	VP	N/A	N/A	Theunissen	Frith	Cam.	25	1999	N/A	N/A	N/A	N/A	$14,916	A total of 2,200 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to provide a living fence that will reduce fetch, reduce water movement, and trap sediment in order to accelerate the revegetation of this eroded marsh.
Vegetation		Kelso Bayou	VP	N/A	N/A	Theunissen	Frith	Cam.	3	1999	N/A	N/A	N/A	N/A	$2,034	A total of 300 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to provide a living barrier against wave-induced shoreline erosion and to trap available sediment.
Vegetation		Grosse Savanne Marsh #4	VP	N/A	N/A	Theunissen	Frith	Cam.	39	1999	N/A	N/A	N/A	N/A	$27,200	A total of 3,400 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, encourage growth of submerged aquatic vegetation, trap sediment, and increase food production for wildlife.
Vegetation		GIWW West Alkali Ditch	VP	N/A	N/A	Cain	Kleckley	Cal.	17	1999	N/A	N/A	N/A	N/A	$12,000	A total of 1,500 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to create a stand of emergent vegetation that will provide a living barrier against wave-induced shoreline erosion and trap available sediment.
Vegetation		Vermilion Corporation #4	VP	N/A	N/A	Gautreaux	Frith	Ver.	23	1999	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to reduce fetch, slow water exchange, and provide wildlife habitat.

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Vegetation		Deepwater Cutgrass Demonstration	VP	N/A	N/A	Theunissen	Frith	Cam.	14	2000	N/A	N/A	N/A	N/A	$8,136	A total of 1,200 giant cutgrass (*Zizaniopsis miliacea*) trade gallons were used to determine if cutgrass 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.
Vegetation		Lacassine Bayou	VP	N/A	N/A	Theunissen	Frith	Cam.	11	2000	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to re-establish the shoreline of the GIWW and Bayou Lacassine.
Vegetation		I-10/Sabine River Bridge Marsh	VP	N/A	N/A	Cain	Johns	Cal.	41	2000	N/A	N/A	N/A	N/A	$24,000	Approximately 3,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were planted to provide a natural living barrier of emergent vegetation to protect the shoreline from erosion.
Vegetation		Mermentau River	VP	N/A	N/A	Theunissen	Frith	Cam.	27	2000	N/A	N/A	N/A	N/A	$15,730	A total of 2,320 trade gallons of smooth cordgrass (*Spartina alterniflora*) were used to protect and slow erosion of newly rebuilt and critically eroding sections of levee.
Vegetation		Christmas Tree Fence Demonstration	VP	N/A	N/A	Theunissen	Frith	Cam.	2	2000	N/A	N/A	N/A	N/A	$1,243	A total of 100 trade gallons and 200 feet of roseau cane (*Phragmites australis*) runners 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.
Vegetation		California Bulrush-Sonde Demonstration	VP	N/A	N/A	Theunissen	Frith	Cam.	12	2000	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 California bulrush (*Schoenoplectus californicus*) plants were used to monitor the effects of variations in salinity and flood duration on growth and vigor of plants.
Vegetation		GIWW Cutgrass Demonstration	VP	N/A	N/A	Theunissen	Frith	Cam.	9	2000	N/A	N/A	N/A	N/A	$5,424	A total of 800 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) 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.
Vegetation		West Perry Ridge	VP	N/A	N/A	Cain	Johns	Cal.	34	2000	N/A	N/A	N/A	N/A	$20,340	A total of 3,000 trade gallons of California bulrush (*Schoenoplectus californicus*) plants 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.
Vegetation		Gum Cove Ferry - GIWW	VP	N/A	N/A	Cain	Johns	Cal.	12	2000	N/A	N/A	N/A	N/A	$6,780	A total of 1,000 trade gallons of 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.
Vegetation		Grosse Savanne Marsh #5	VP	N/A	N/A	Theunissen	Frith	Cam.	11	2000	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, and establish areas of emergent vegetation.
Vegetation		Smooth Cordgrass Maintenance Demonstration	VP	N/A	N/A	Theunissen	Frith	Cam.	N/A	2001	N/A	N/A	N/A	N/A	$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 fertilization regimes.
Vegetation		Jim Erbelding Beach	VP	N/A	N/A	Theunissen	Frith	Cam.	4	2001	N/A	N/A	N/A	N/A	$2,089	A total of 350 4-inch containers 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 using vegetation.

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Vegetation		Superior Canal - Grand Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	11	2001	N/A	N/A	N/A	N/A	$7,479	A total of 1,000 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were placed to decrease shoreline erosion along Grand Lake shoreline, near the Superior Canal.
Vegetation		California Bulrush Sonde Demo 2	VP	N/A	N/A	Theunissen	Frith	Cam.	7	2001	N/A	N/A	N/A	N/A	$5,751	A total of 660 California bulrush (*Schoenoplectus californicus*) plants were placed near the Highway 384 Hydrologic Restoration (CS-21) project area to determine the tolerance of bulrush in high salinity marshes.
Vegetation		M.O. Miller	VP	N/A	N/A	Theunissen	Frith	Cam.	46	2001	N/A	N/A	N/A	N/A	$21,266	A total of 4,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) were placed 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.
Vegetation		Choupique Bayou	VP	N/A	N/A	Cain	Kleckley	Cam.	2	2001	N/A	N/A	N/A	N/A	$1,277	A total of 150 trade gallons of smooth cordgrass (*Spartina alterniflora*) were placed along Bayou Choupique to reduce bank erosion, trap available sediment, provide wildlife and fisheries habitat, and to provide a seed source for natural regeneration in an area with little vegetation.
Vegetation		GIWW - Pontoon Bridge	VP	N/A	N/A	Theunissen	Frith	Cam.	11	2001	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted in deeper-water areas (1.5 - 2 feet) with loamy soils. This was done to determine the suitability of planting giant cutgrass in deeper water areas with loamy soils and significant wave energy. Other objectives are to establish emergent vegetation in an actively eroding area, to aid in wave reduction and sediment trapping, and to provide wildlife and fisheries habitat. Approximately 5,000 linear feet were planted.
Vegetation		Grand Lake-GIWW	VP	N/A	N/A	Theunissen	Frith	Cam.	5	2001	N/A	N/A	N/A	N/A	$3,200	A total of 200 trade gallons of California bulrush (*Schoenoplectus californicus*) and 200 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were used to protect the shoreline between the GIWW and Grand Lake shorelines.
Vegetation		Cameron Creole Living Fence Maintenance	VP	N/A	N/A	Theunissen	Frith	Cam.	5	2001	N/A	N/A	N/A	N/A	$3,200	A total of 400 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were used to monitor the effectiveness of giant cutgrass in deeper water areas with substantial water hyacinth problems.
Vegetation		Grosse Savanne Marsh #6	VP	N/A	N/A	Theunissen	Frith	Cam.	34	2001	N/A	N/A	N/A	N/A	$24,000	A total of 3,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were used to create a living fence, which will reduce wind-generated wave action, reduce turbidity, and establish areas of emergent vegetation.
Vegetation		DU Terraces	VP	N/A	N/A	Theunissen	Frith	Cam.	107	2002	N/A	N/A	N/A	N/A	$70,000	A total of 5,500 smooth cordgrass (*Spartina alterniflora*) plugs and a total of 6,000 smooth cordgrass trade gallon containers were placed on newly built dragline terraces. The effectiveness of trade gallon containers on 5-foot spacing versus bare root plugs on 3-foot spacing will be compared. Which form of fertilizer application, if any, is effective in increasing growth rate of smooth cordgrass will be also determined. A total of 46,500 linear feet were planted.
Vegetation		Trident Dock	VP	N/A	N/A	Theunissen	Frith	Cam.	6	2002	N/A	N/A	N/A	N/A	$4,400	A total of 550 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted in an extremely high-wave-energy area to demonstrate their ability to withstand extremely strong wave energies, to establish emergent vegetation in an actively eroding area, to aid in wave reduction and sediment trapping, and to provide wildlife and fisheries habitat. A total of 2,750 linear feet were planted.

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Vegetation		Briggs Marsh	VP	N/A	N/A	Theunissen	Frith	Cam.	11	2002	N/A	N/A	N/A	N/A	$8,000	Approximately 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to provide a living barrier against wave action and improve water clarity.
Vegetation		DU Terrace Top Demonstration	VP	N/A	N/A	Theunissen	Frith	Cam.	25	2002	N/A	N/A	N/A	N/A	$13,104	A total of 1,150 4-inch pots of marshhay cordgrass (*Spartina patens*), 908 of saltgrass (*Distichlis spicata*), 90 of gulf cordgrass (*Spartina spartinae*), and 36 of bitter panicum (*Panicum amarum*) were planted to determine which species were the most effective in colonizing newly constructed terraces.
Vegetation		Lacassine A-Jacks	VP	N/A	N/A	Theunissen	Frith	Cam.	11	2002	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to examine the effectiveness of giant cutgrass as a vegetative barrier.
Vegetation		Calcasieu Ship Channel-SW	VP	N/A	N/A	Theunissen	Frith	Cam.	23	2003	N/A	N/A	N/A	N/A	$16,000	Approximately 2,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted in the Calcasieu Ship Channel to demonstrate the ability of the vegetation to stabilize shorelines in extremely high wave energy sites. In addition, comparisons concerning the effectiveness of single versus double row plantings will be observed.
Vegetation		Christmas Tree Fence Demo 2	VP	N/A	N/A	Theunissen	Frith	Cam.	2	2003	N/A	N/A	N/A	N/A	$1,000	A total of 100 trade gallon containers and 200 feet of roseau cane (*Phragmites australis*) were planted in brush fences to serve as a wind break and assist in sediment trapping. If successful this project would eliminate the need for yearly refilling with Christmas trees.
Vegetation		Marseillaise Bayou Marsh 3	VP	N/A	N/A	Theunissen	Frith	Cam.	23	2003	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted on the north end of Little Chenier Road to create a stand of emergent vegetation that will provide a living barrier against wave erosion.
Vegetation		Sabine Lake Shoreline	VP	N/A	N/A	Theunissen	Frith	Cam.	17	2003	N/A	N/A	N/A	N/A	$12,000	Approximately 1,500 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted on the Sabine Lake shoreline to prevent shoreline erosion and introduce seed for natural regeneration.
Vegetation		Catfish Lake	VP	N/A	N/A	Theunissen	Frith	Cam.	23	2003	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were planted to create a stand of emergent vegetation that will act as a wave break to protect the shoreline and trap available sediments.
Vegetation		South Fork Black Bayou	VP	N/A	N/A	Theunissen	Frith	Cam.	5	2003	N/A	N/A	N/A	N/A	$3,200	A total of 200 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and 200 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to slow erosion on the shoreline of the GIWW and to slow the water exchange in small adjacent ponds.
Vegetation		Grand Chenier Highway	VP	N/A	N/A	Theunissen	Frith	Cam.	11	2003	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted south of Hwy. 82 to protect the remaining infrastructure and establish a seed source for natural regeneration.
Vegetation		Moss Lake	VP	N/A	N/A	Mount	Kleckley	Cal.	3	2003	N/A	N/A	N/A	N/A	$2,400	A total of 300 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted on the southwest bank of Moss Lake to slow erosion in a rapidly deteriorating marsh.
Vegetation		Lacassine Bayou 2003	VP	N/A	N/A	Theunissen	Frith	Cam.	11	2003	N/A	N/A	N/A	N/A	$7,696	Approximately 962 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to determine the effectiveness of the two species to reduce erosion in low salinity areas.
Vegetation		DU Terraces 2	VP	N/A	N/A	Theunissen	Frith	Cam.	51	2003	N/A	N/A	N/A	N/A	$42,664	A total of 2,000 trade gallon containers and 6,666 plugs of smooth cordgrass (*Spartina alterniflora*) were planted on the Duck Wing terraces. The project results will be used to demonstrate the effectiveness of various fertilizers on the success and vigor of newly planted plants.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Vegetation		Apache Terrace Tops	VP	N/A	N/A	Theunissen	Frith	Cam.	18	2004	N/A	N/A	N/A	N/A	$9,600	Approximately 800 4-inch pots of marshhay cordgrass (*Spartina patens*) and 800 4-inch pots of saltgrass (*Distichlis spicata*) were planted to vegetate the tops of terraces.
Vegetation		Beach Reclamation	VP	N/A	N/A	Theunissen	Frith	Cam.	12	2004	N/A	N/A	N/A	N/A	$6,228	Approximately 1,000 4-inch pots of bitter panicum (*Panicum amarum*) and 38 4-inch pots of seashore paspalum (*Paspalum vaginatum*) were planted to establish native vegetation on a newly deposited sand beach.
Vegetation		DU Terraces - Hackberry	VP	N/A	N/A	Theunissen	Frith	Cam.	28	2004	N/A	N/A	N/A	N/A	$16,000	A total of 4,000 plugs of smooth cordgrass (*Spartina alterniflora*) were planted on existing terraces to control erosion.
Vegetation		Highway 384 - GIWW	VP	N/A	N/A	Theunissen	Frith	Cam.	12	2004	N/A	N/A	N/A	N/A	$8,320	The objective of this project was to stop erosion on the banks of the GIWW and interior bayous through the plantings of 500 trade gallons of giant cutgrass (*Zizaniopsis miliacea*), 300 trade gallons of roseau cane (*Phragmites australis*), and 240 trade gallons of California bulrush (*Schoenoplectus californicus*).
Vegetation		Johnson Bayou Chenier Creation	VP	N/A	N/A	Theunissen	Frith	Cam.	41	2004	N/A	N/A	N/A	N/A	$750	This project planted bare rooted and container grown trees. The following species were planted: live oak (*Quercus virginiana*), hackberry (*Celtis laevigata*), red mulberry (*Morus rubra*), common persimmon (*Diospyros virginiana*), and honey locust (*Gleditsia triacanthos*) to recreate a naturally occurring chenier ridge.
Vegetation		Rockefeller Terraces	VP	N/A	N/A	Theunissen	Frith	Cam.	59	2004	N/A	N/A	N/A	N/A	$34,000	A total of 200 trade gallons of California bulrush (*Schoenoplectus californicus*), 3,038 vegetative plugs on 3-foot spacing, and 3,202 vegetative plugs on 5-foot spacing were planted on terraces to control erosion and establish wildlife habitat.
Vegetation		Smooth Cordgrass Maintenance Demonstration 2	VP	N/A	N/A	Theunissen	Frith	Laf.	23	2004	N/A	N/A	N/A	N/A	$16,000	The project goal will be to look at establishing vegetation on terraces where initial plantings were not successful. Approximately 1,000 trade gallons of California bulrush (*Schoenoplectus californicus*) and 1,000 of giant cutgrass (*Zizaniopsis miliacea*) were planted on plowed terraces that are experiencing erosion.
Vegetation		Vinton Drainage Canal	VP	N/A	N/A	Cain	Johns	Cal.	11	2004	N/A	N/A	N/A	N/A	$8,000	A total of 500 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) and 500 trade gallon containers of California bulrush (*Schoenoplectus californicus*) were planted to slow erosion on a levee near the Vinton Drainage Canal.
Vegetation		Tebo Point Cutgrass	VP	N/A	N/A	Theunissen	Frith	Cam.	12	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were planted to create a stand of emergent vegetation that will provide a living barrier against wave-induced erosion and trap available sediment.
Vegetation		Eroded Terrace Demonstration	VP	N/A	N/A	Theunissen	Frith	Cam.	23	2005	N/A	N/A	N/A	N/A	$16,000	A total of 1,000 trade gallons of California bulrush (*Schoenoplectus californicus*) and 1,000 trade gallons of giant cutgrass (*Zizaniopsis miliacea*) were planted and anchored to establish vegetation on eroded terraces.
Vegetation		Flotant Creation	VP	N/A	N/A	Theunissen	Frith	Cam.	1	2005	N/A	N/A	N/A	N/A	$1,200	A total of 16 coconut fiber mats, with early successional flotant species actively growing in the mats, were placed in a quiet water area. The mats were anchored in place with floats attached to them. Some of the mats had a single species growing, others had multiple species.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Vegetation		Highway 384 '05	VP	N/A	N/A	Theunissen	Frith	Cam.	24	2005	N/A	N/A	N/A	N/A	$16,600	A total of 1,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) and 100 4-inch containers of marshhay cordgrass (*Spartina patens*) were planted to protect and stabilize a large mudflat, and 1,000 trade gallons of California bulrush (*Schoenoplectus californicus*) were planted in several lines across the open water areas to act as vegetative terraces to break wind and water movement, decrease turbidity, and create habitat.
Vegetation		PPG/Port	VP	N/A	N/A	Mount	Johns	Cal.	12	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation, to reduce erosion, and to establish wildlife habitat.
Vegetation		Ship Channel - Hackberry	VP	N/A	N/A	Theunissen	Frith	Cam.	12	2005	N/A	N/A	N/A	N/A	$8,000	A total of 1,000 trade gallons of smooth cordgrass (*Spartina alterniflora*) were planted to establish emergent vegetation in an actively eroding area to aid in wave reduction and sediment trapping.
Vegetation		Peveto Beach	VP	N/A	N/A	Theunissen	Frith	Cam.	86	2005	N/A	N/A	N/A	N/A	$45,120	A total of 7,520 4-inch containers of bitter panicum (*Panicum amarum*) were planted on either side of a sand fence to establish native vegetation on a newly forming beach dune to help control erosion, to create wildlife habitat, and to provide a seed source for natural regeneration.
Vegetation		Marseillaise Bayou Marsh #4	VP	N/A	N/A	Theunissen	Frith	Cam.	17	2006	N/A	N/A	N/A	N/A	$9,000	The goal of this project is to plant 750 trade gallon containers and 750 plugs of California bulrush (*Schoenoplectus californicus*) to create a stand of emergent vegetation that will provide a living barrier against wave-induced marsh erosion, to reestablish areas of emergent vegetation in a large area of open shallow water, to provide a seed source for natural regeneration, and to evaluate the success of plugs versus trade gallons in a deepwater site.
Vegetation		Lacassine Pool Levee	VP	N/A	N/A	Theunissen	Frith	Cam.	6	2006	N/A	N/A	N/A	N/A	$2,625	The goal of this project is to plant 5,250 trees of multiple species to establish desirable woody plant species that will benefit both resident wildlife and migratory visitors.
Vegetation		Hackberry Terrace Tops	VP	N/A	N/A	Theunissen	Frith	Cam.	23	2006	N/A	N/A	N/A	N/A	$12,000	A total of 1,000 4-inch containers of marshhay cordgrass (*Spartina patens*) and 1,000 4-inch containers of saltgrass (*Distichlis spicata*) were planted to vegetate the tops of terraces to increase stability, lessen erosion, create habitat for wildlife, and provide a seed source for natural regeneration.
Vegetation		Black Lake Levee	VP	N/A	N/A	Theunissen	Frith	Cam.	23	2006	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to vegetate the sides of a newly built levee to increase stability, to lessen erosion, to create wildlife habitat, and to provide a seed source for natural regeneration.
Vegetation		Rockefeller Smooth Cordgrass	VP	N/A	N/A	Gautreaux	Frith	Cam.	23	2006	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of smooth cordgrass (*Spartina alterniflora*) were planted to establish vegetation along a recently lifted levee to control erosion, to provide wildlife habitat, and to provide a seed source for natural regeneration.
Vegetation		Little Florida	VP	N/A	N/A	Theunissen	Frith	Cam.	16	2006	N/A	N/A	N/A	N/A	$8,400	A total of 1,400 4-inch containers of bitter panicum (*Panicum amarum*) were planted to help stop erosion and build dune on the beach by trapping sand particles.
Vegetation		PDH Trees	VP	N/A	N/A	Theunissen	Frith	Cam.	20	2006	N/A	N/A	N/A	N/A	$450	The goal of this project is to plant 900 trees of various species to establish woody plant species that will benefit both resident wildlife and migratory visitors.
Vegetation		Cameron Farm Trees	VP	N/A	N/A	Theunissen	Frith	Cam.	8	2006	N/A	N/A	N/A	N/A	$750	The goal of this project is to plant 1,500 trees of multiple species to establish woody plant species that will benefit both resident wildlife and migratory visitors.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Vegetation		South Perry Ridge	VP	N/A	N/A	Theunissen	Frith	Cam.	23	2006	N/A	N/A	N/A	N/A	$16,000	A total of 2,000 trade gallon containers of giant cutgrass (*Zizaniopsis miliacea*) were planted to establish vegetation in an open deep water site to serve as a wave break to reduce wind/wave erosion, trap available sediments, and provide a seed source for natural regeneration.
Vegetation		Sand Fence Maintenance	VP	N/A	N/A	Theunissen	Frith	Cam.	23	2006	N/A	N/A	N/A	N/A	$12,000	The goal of this project is to plant 500 4-inch containers each of bitter panicum (*Panicum amarum*), seashore paspalum (*Paspalum vaginatum*), marshhay cordgrass (*Spartina patens*), and sea oats (*Uniola paniculata*) to establish vegetation on a created beach and dunes to stabilize the sand and help control erosion, to create wildlife habitat, to increase species diversity, and to provide a seed source for natural regeneration
Section 204/1135		Brown Lake	DM MC	N/A	N/A	Theunissen	Frith	Cam.	315	1999	N/A	N/A	N/A	N/A	$1,132,435	Approximately 1.6 million cubic yards of dredged material were 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, Louisiana.
Section 204/1135		Calcasieu River & Pass Phase I	DM MC	N/A	N/A	Theunissen	Frith	Cam.	1,070	1992	N/A	N/A	N/A	N/A	$1,560,804	This Section 204 project provides 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 was deposited in three phases within the Sabine National Wildlife refuge at an elevation conducive to marsh creation.
Section 204/1135		Calcasieu River & Pass Phase II	DM MC	N/A	N/A	Theunissen	Frith	Cam.	1,070	1996	N/A	N/A	N/A	N/A	$1,560,804	This Section 204 project provides 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 was deposited in three phases within the Sabine National Wildlife refuge at an elevation conducive to marsh creation.
Section 204/1135		Calcasieu River & Pass Phase III	DM MC	N/A	N/A	Theunissen	Frith	Cam.	1,070	1999	N/A	N/A	N/A	N/A	$1,560,804	This Section 204 project provides 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 was deposited in three phases 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 primarily by the State of Louisiana through the Coastal Restoration Division; PCWRP=Parish Coastal Wetlands Restoration Program (Christmas Tree 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; FEMA= Federal Emergency Managment Agency projects; CIAP= Coastal Impact Assistance Program projects.

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; OM=Outfall Management; BI=Barrier Island; SD=Sediment Diversion.

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

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

Parish: Asc.=Ascension, Asu.=Assumption, Cal.=Calcasieu, Cam.=Cameron, Ibe.=Iberia, Jef.=Jefferson, Laf.=Lafourche, Orl.=Orleans, Plaq.=Plaquemines, StB.=St. Bernard, StC.=St. Charles, StJo.=St. John the Baptist, StM.=St. Mary, StT.=St. Tammany, Tan.=Tangipahoa, Ter.=Terrebonne, Ver.=Vermilion.

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

Baseline Cost Estimates 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. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity.

N/A=Not Applicable.

Table 5. Coastwide restoration projects and programs.

Program	State Project Number (Federal)	Project Name	Project Type	PPL	Agency/Sponsor	Senator	Representative	Parish	Acres Benefited	Construction Completion Date	Engineering, Design, & Landrights Cost	Construction Cost	Operation, Maintenance, & Monitoring Cost	Baseline Cost Estimate	Current Cost Estimate	Project Summary
Breaux Act	LA-03a (CW-7)	Nutria Harvest for Wetland Restoration Demonstration	N/A	6	USFWS	N/A	N/A	N/A	N/A	N/A	$21,372	$629,036	$154,275	$2,140,000	$804,683	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.
Breaux Act	LA-03b	Coastwide Nutria Control Program	N/A	11	NRCS	N/A	N/A	N/A	14,963	N/A	$721,481	$2,362,500	$14,653,499	$68,864,870	$17,737,480	The goal of the project is to eliminate or significantly reduce damage to coastal wetlands resulting from nutria herbivory. The implementation of an incentive payment program, beginning with the 2002-2003 trapping season, will compensate licensed trappers $4 for each nutria tail delivered to a collection center. In 2003, a total of 308,160 nutria tails, worth over 1.2 million dollars in incentive payments, were collected from 342 participants.
Breaux Act	LA-05	Floating Marsh Creation Demonstration Project	N/A	12	NRCS	N/A	N/A	N/A	N/A	Pending	$276,219	$384,976	$419,696	$1,080,891	$1,080,891	The goal of this project is to develop and test unique and previously untested technologies for creating floating marsh for potential use in fresh and intermediate zones. This project is a demo project that will be used to test the feasibility of buoyant vegetated mats/artificial islands to convert open water marsh areas and canals into fresh and intermediate marsh zones.
Other		Coastal Wetlands Public Outreach	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$400,000	The DNR Public Information Office provides a variety of printed materials, educational videos and cds, fact sheets, website information, and a traveling wetlands exhibit for the public. Other department outreach efforts include participating in conferences, workshops, civic events, and school activities. Much of the agency's educational outreach is in partnership with the Breaux Act Task Force committees and the America's WETLAND campaign. As a result of working with several noted authors, writers and reporters, the Public Information Office has contributed to the publishing of hundreds of national articles over the past years. To contact the Louisiana Department of Natural Resources' Public Information Office online---info@dnr.state.la.us
Other		NRCS Biomass Production Program	VP	N/A	NRCS	N/A	N/A	N/A	N/A	N/A	N/A	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. This program is an important coastal restoration initiative that is advancing coastal wetland plant technology development and transfer.
Other		NWRC Biomass Production Program	VP	N/A	NWRC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$384,500	$1,007,600	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.

Program: Breaux Act=Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA).
Project Type: VP=Vegetation Planting.

PPL: Priority Project List (as authorized each year by the Breaux Act Task Force).
Agency/Sponsor: NRCS=Natural Resources Conservation Service; NWRC=National Wetlands Research Center; USFWS=U.S. Fish and Wildlife Service.

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

Baseline Cost Estimates 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. Baseline Cost and Current Cost Estimate both include contingency funds. Beginning with Breaux Act PPL 10, project costs are for Phase I only. Vegetation program project costs are estimated based on plant size and quantity. N/A=Not Applicable.

Table 6. Status of all authorized Breaux Act projects (as of November 2006).

	Status	Region 1	Region 2	Region 3	Region 4	Coastwide	Total
Breaux Act	*Constructed*	8	15	27	23	2	**75**
	Constructed and Deauthorized	0	0	0	2	0	**2**
	Deauthorized	4	9	4	1	0	**18**
	Engineering and Design Phase	6	25	19	9	1	**60**
	Total Authorized	**18**	**49**	**50**	**35**	**3**	**155**

Table 7. Summary of all constructed/implemented coastal restoration projects (as of November 2006).

Program		Region 1	Region 2	Region 3	Region 4	Coastwide	Total Constructed
Breaux Act*		8	15	27	25	2	**77**
Federal	*Section 204/1135*	5	3	2	4	0	**14**
	FEMA	1	0	11	0	0	**12**
	WRDA	0	2	0	0	0	**2**
	*Other***	1	2	2	0	2	**7**
State	*State*	6	10	14	8	0	**38**
	Dedicated Dredging Program	0	3	1	0	0	**4**
	Fontainebleau State Park Mitigation	1	0	0	0	0	**1**
	Coastal Wetlands Public Outreach	0	0	0	0	1	**1**
PCWRP		7	12	16	10	0	**45**
Vegetation		47	99	118	133	0	**397**
Total Constructed		**76**	**146**	**191**	**180**	**5**	**598**

* The total of 77 constructed Breaux Act projects includes 75 constructed projects and 2 constructed and deauthorized projects.

** Other Federal projects include the Lake Pontchartrain Mitigation Project, Fifi Island Restoration Project, Fisheries Habitat Restoration on West Grand Terre Island, Brown Marsh Small Dredge Marsh Creation Project, Rainey Refuge, and the NRCS and NWRC Biomass Production Programs.

Table 8. Fifteen critical LCA projects and large-scale studies.

LCA Near-Term Projects Recommended for Conditional Authorization *
Mississippi River Diversion at Hope Canal (CWPPRA project: River Reintroduction into Maurepas Swamp, PO-29)
Mississippi River Diversion at Bayou Lafourche (CWPPRA project: Mississippi River Reintroduction into Bayou Lafourche, BA-25b)
Mississippi River Diversion at Myrtle Grove with Dedicated Dredging (CWPPRA project: Delta Building Diversion at Myrtle Grove, BA-33)
Barataria Basin Barrier Shoreline Restoration (Critical Reaches)
Mississippi River Gulf Outlet Environmental Restoration Features
LCA Near-Term Projects Recommended for Future Authorization **
Multi-purpose Operation of Houma Navigation Canal Lock
Terrebonne Basin Barrier Shoreline Restoration
Maintain Land Bridge Between Caillou Lake and the Gulf of Mexico
Mississippi River Diversion at Convent/Blind River
Increase Amite River Diversion Canal Influence by Gapping Spoil Banks
Mississippi River Diversion at White's Ditch
Stabilize Gulf Shoreline at Point au Fer Island
Convey Atchaflaya River Water to Northern Terrebonne Marshes
Modification of Caernarvon Diversion
Modification of Davis Pond Diversion
Large-Scale, Long-Term Projects for Implementation **
Mississippi River Hydrodynamic Study
Mississippi River Delta Management Study
Third Delta Study
Chenier Plain Freshwater and Sediment Management and Allocation Reassessment Study
Acadiana Bays Estuarine Restoration Study
Upper Atchafalaya Basin Study/Modification of Old River Control Structures Operation

* Detailed descriptions of the five LCA projects recommended for conditional authorization can be found at http://www.lca.gov/main_report.aspx, Attachments 1-5, p. 17-174.

** Descriptions of the 10 LCA projects recommended for future authorization and the LCA large-scale studies can be found at http://www.lca.gov/main_report.aspx, Chapter 3 Plan Formulation, p. 39-58.

Table 9. Inactive state projects for which no funding exists.

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	Salvador 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 1)	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 Point Shore Protection	Orleans
PO-03-a	LaBranche Wetland Complete Management Plan	St. Charles
PO-04	Bonnet Carre´ Freshwater Diversion	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

Continued

Table 9. Continued.

Project Number	Project Name	Parish
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/Pontchartrain 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
TE-08	Bayou Pelton Wetland Protection	Terrebonne
TE-09	Bully Camp Marsh Management	Lafourche
TE-11	Isles 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 LDNR and its partners have been engaged in an effort to restore, preserve, and enhance Louisiana's coastal wetlands, which are disappearing at a current rate of 24 square miles per year. At this rate, an area the size of a football field is lost every 38 minutes. To date, 676 restoration projects have been authorized throughout the coastal zone to ameliorate the state's wetland loss. As of November 2006, the coastal restoration program has constructed 77 Breaux Act projects, 44 state projects, 35 federal projects, 397 vegetation projects, and 45 PCWRP projects. 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, sediment, and nutrients into entire basins, to small vegetation projects, which involve planting salt- and flood-tolerant marsh plants to stabilize eroding soils.

Among those projects already constructed, many 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.

The LDNR and its partners have worked tirelessly to determine the most efficient and productive manner to address Louisiana's catastrophic land loss problem. Cooperative initiatives like the Louisiana Coastal Area Ecosystem Restoration Plan and the Governor's Advisory Commission on Coastal Protection, Restoration, and Conservation are aimed at improving the ability to design and implement effective coastal restoration projects. Also, the America's WETLAND campaign will educate the nation and solicit national support for saving Louisiana's vanishing coast. Furthermore, technological advances have enabled the public and scientific professionals to acquire information and data on all restoration projects through the OCRM website. These developments, and the continued dedication of scientists, engineers, landowners, and the public will help to protect and restore Louisiana's coast.

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 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 http://dnr.louisiana.gov/crm for more information regarding LDNR coastal restoration projects. For any other information or questions, please 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.

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