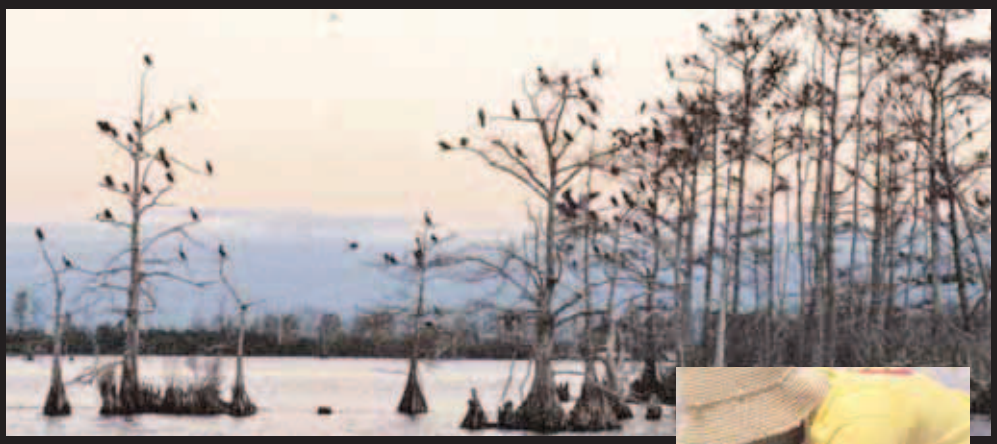
2008 Stakeholders' Report

BTNEP



BARATARIA-TERREBONNE NATIONAL ESTUARY PROGRAM

committed to providing comprehensive management for every stakeholder

BTNEP
BARATARIA-TERREBONNE NATIONAL ESTUARY PROGRAM

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stake•hold•er
noun
a person with an interest or concern in something
•[as adj.] denoting a type of organization or system in which all the members or participants are seen as having an interest in its success.

Dear Friends
of the Estuary,

The Barataria-Terrebonne National Estuary Program (BTNEP) is one of 28 National Programs set up to develop and implement a Comprehensive Estuary Conservation and Management Plan (CCMP) for the particular region chosen to be a national estuary. In 1991, we began the process of convening a large group of local governments, state and federal agencies, business and agricultural interests, scientists, environmental groups, fishermen, educators and citizens to build a plan that could be implemented to restore this nationally significant region threatened by coastal land loss.

Collectively, these are our stakeholders; people who have a vested interest in the outcome of a restoration movement; people who want to see this place restored to a former state where we were reasonably protected from storm surges; a place where natural ridges were populated with old, massive live oaks; a place with broad expanses of healthy freshwater, brackish, and salt marshes and barrier islands.

Over the next five years, there were multitudes of meetings and discussions held to reach a consensus agreement on what we as a region held to be important and what changes to our estuary we were willing to accept to restore it. In 1996, a suite of 51 Action Plans were agreed upon and were included in the final plan . . . the Comprehensive Conservation and Management Plan. This was no easy feat.

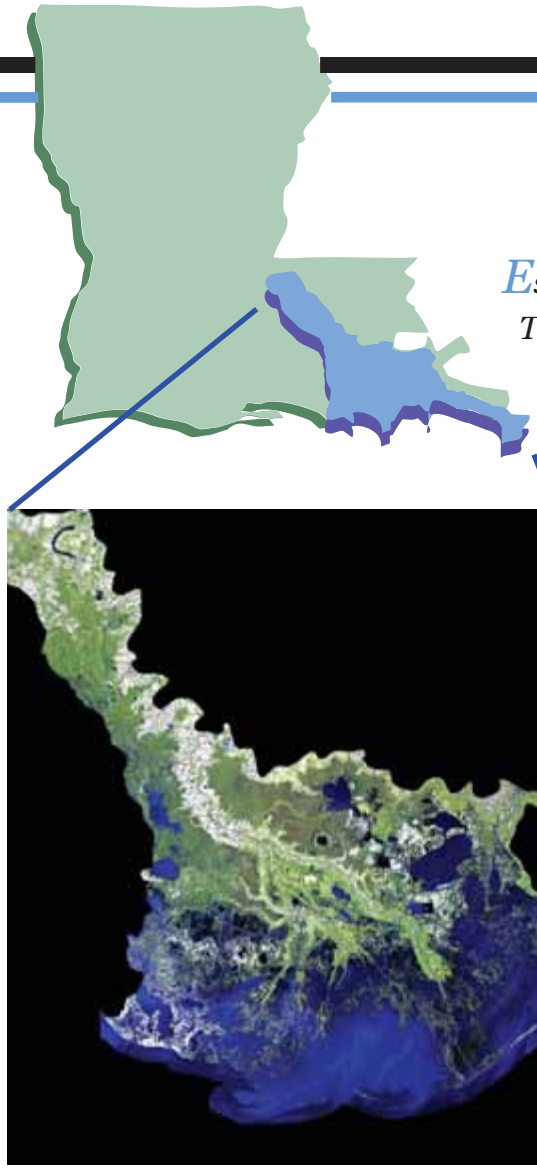
There are many things that can be done to restore a system as complex as ours if we had the time that it took the Mississippi River to build it in the first place. There are fewer, but definite things that can be done to restore our system that will accommodate our current life style. We can harvest the sediment from the bottom of the Mississippi and Atchafalaya, as well as from offshore sources, to rebuild our wetlands and we can use small to medium river water diversions to sustain them.

The CCMP is as valid today as it was when it was completed in 1996. The decisions that were made then are constantly being re-affirmed by our stakeholders today. BTNEP currently works to implement the original 51 Action Plans of our CCMP. There is much work to be done.

We have created this stakeholders report to highlight some of the projects we have worked on in recent years. The program office is a busy place and we can only highlight a few of the projects that consume our time. We hope you enjoy it.

With Warm Regards,

Kerry M. St.Pé
Program Director
Barataria-Terrebonne National Estuary Program



Established in 1991, the mission of the Barataria-Terrebonne Estuary Program (BTNEP) is the preservation and restoration of the estuarine system, the 4.2 million acre region between the Atchafalaya and Mississippi Rivers. BTNEP strives to rebuild and protect the estuary for future generations through the implementation of a science-based, consensus-driven plan that utilizes partnerships focused on the estuary's cultural, economic and natural resources.

Satellite image of the Barataria-Terrebonne National Estuary

2008 BTNEP Management Conference Members

The Management Conference communicates and collaborates among its members to build consensus for recommended actions and is responsible for day-to-day decisions and activities within the estuary.

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Reestablishment of a Chenier Ridge and Adjacent Marsh Habitats at Port Fourchon, LA

In early 2001, the Barataria-Terrebonne National Estuary Program and the Greater Lafourche Port Commission fostered a partnership with other organizations to reestablish a chenier ridge and adjacent coastal marsh habitats in southeast Louisiana. This partnership was born from a desire to further the knowledge and expand the focus of habitat restoration in coastal Louisiana from a vision that supported marsh restoration to one that encompassed other natural landscape features. Louisiana's unparalleled coastal wetland loss problem means dire consequences for many species of fish and wildlife. But equally important are the distributary ridges and chenier ridges that are also being lost at an alarming rate. These ridge habitats and associated wetlands are extremely important to many terrestrial animals including the millions of migrating Neotropical songbirds that cross the Gulf of Mexico in the spring each year on their way back to their breeding grounds in the eastern United States and Canada. This is especially true when migrating birds encounter inclement weather over the Gulf. Exhausted birds must immediately feed and rest at the first land they encounter. That first land in many cases, are these cheniers.

This coastal restoration project involves pumping earthen material via hydraulic dredge and placing it in shallow open water. The project will be constructed in three phases and will restore over 100 acres of chenier ridge/marsh habitat that will encompass some 12,000 linear feet in length by 400 feet in width, once completed. Phases one and two are currently under construction, representing the western reach of this project. Some areas have already been shaped to the desired geometry including flanking marsh and ridge habitats. The marsh elevation was shaped at a plus 1.6 feet elevation with the crown of the ridge at a plus 8 feet. Herbaceous grasses and woody plants that tolerate the harsh growing conditions of coastal Louisiana are currently being planted. Some of the species of grasses being planted include smooth cordgrass, marshhay cordgrass, salt grass, and others. Woody plants that are being used include those that are known to be important to Neotropical migrant songbirds including live oak, red mulberry, hackberry, yaupon, and others. Through a partnership with the Natural Resources Conservation Service's Plant Materials Center, we are evaluating many different species of plants to determine their ability to grow at different elevations and salinity concentrations. Lessons learned here can be applied to other similar coastal restoration projects. This restoration project has occurred largely through the generous contributions and grants of numerous funding partners. **Shell Oil Company**, the most generous contributor to this project, has provided a substantial grant to the Barataria-Terrebonne National Estuary Program and its Foundation that directly contributed to the ground work.

Shell Oil Company volunteers help with a vegetative planting on the ridge.

Port Fourchon Maritime Ridge

The Nature Conservancy, Terrebonne Bird Club, and Orleans Audubon Society have also provided valuable input to the project. They bring a specific expertise, knowledge, and desire and have claimed a strong interest in seeing this project concept come to fruition. Just recently identified as a sanctuary where no consumptive use is allowed, the area once finished will be one of the premier birding destinations in the State of Louisiana. Boardwalks, foot bridges, observation platforms, signage, and an interpretive center will be constructed to promote avian tourism at the site.

To date, project partners include the following:

Greater Lafourche Port Commission

National Oceanic and Atmospheric Administration

Louisiana Department of Natural Resources

Natural Resource Conservation Service

Shell Oil Company

Gulf of Mexico Foundation

Gulf of Mexico Program

Barataria-Terrebonne National Estuary Program

Project partners have provided funding/labor resources to make this project a reality.

A bucket dredge shapes newly pumped material on the Port Fourchon Maritime Ridge.

An adult female Snowy Plover protects her eggs. *photo by Margo Zdravkovic*

Implementation of the Coastal Bird Conservation Program in Louisiana

Throughout the spring and early summer of 2005, BTNEP worked in collaboration with the National Audubon Society and the Louisiana Department of Wildlife and Fisheries to initiate ***National Audubon's Coastal Bird Conservation Program*** along the entire Louisiana coast. The initial phases of this program included developing a baseline of information on certain species of beach nesting birds including Wilson's and Snowy Plovers, American Oyster Catchers, and Least Terns. This survey represents the first time that a holistic effort to cover the entire Louisiana coast has ever been undertaken.

The purpose of the Coastal Bird Conservation Program is to identify and prioritize threatened coastal bird species, complete a census to help map populations of priority species, monitor and protect important nesting and foraging sites, and establish long-term protection programs for these birds and sites with the express purpose of maintaining or increasing their populations. Each of the species mentioned above fit these criteria. The Gulf and Caribbean population of Snowy Plover is estimated at between 2,200 and 2,800 individuals and is listed in the U. S. Shorebird Conservation Plan as "highly imperiled." Wilson's Plover estimates suggest that approximately 6,000 individuals nest along the coast of the United States, however, low confidence is placed in this estimate. The U.S. Shorebird Conservation Plan lists Wilson's Plover as "species of high concern."

Beginning in April 2005, teams of biologists and research assistants combed the headland and barrier island beaches across the coast from the Chandeleur Islands in the east to the Sabine River in the west locating breeding pairs of these birds and using GPS to identify their locations. Results were rather surprising. Only two pair of Snowy Plover were identified in the state near Cameron, while over 700 pair of Wilson's Plover were recorded across the coast. As expected, American Oyster Catcher numbers were low with some 40+ nesting pair predominantly along the eastern half of the coast. Least Tern numbers were surprisingly low when compared to past estimates with over 750 pair identified. These numbers will be combined with efforts from other states along the northern gulf and southern Atlantic. Rather than estimates, we will then have real numbers revealing much about the breeding abundance and distribution of these birds, putting us in better shape to manage these "species of concern."

This project, like other BTNEP collaborations, depends upon the generosity of the people involved. Too many to thank here, they spent many days afield, walking miles sometimes on very steamy days. Also important are the folks who helped logistically by supporting this effort. Getting to many of the sites along the Louisiana Coast required the help and use of equipment from numerous individuals. And lastly, the approval of landowners across the coast and their willingness to help made this project a reality.

For more information about this project or to receive a copy of the report, please visit: www.BTNEP.org.

Pointe aux Chenes Stormwater Redirection Project

The Pointe aux Chenes Stormwater Redirection Project is a water quality, shellfish protection, and wetland enhancement project.

The way that water flows in the Barataria-Terrebonne system is highly altered from a natural system. There are over 256 stormwater pumping stations in the Barataria-Terrebonne basins associated with levee systems. Levees protect communities from wind-blown water and stormwater pumps drain rainwater from the inside of the levee system by pumping it over the levees into canals. This method of pumping stormwater into canals has the negative effect of delivering polluted stormwater directly to shellfish growing areas and bypasses wetlands that are in need of freshwater, nutrients, and sediment.

Stormwater Redirection is the use of these pumping stations as miniature freshwater diversions to wetlands and is described in *BTNEP Comprehensive Conservation and Management Plan (CCMP) Action Plan EM-12*, which calls for alternative stormwater management practices. Redirection of stored water into adjacent wetlands can be achieved by discharging the outfall directly into wetlands or blocking the outfall canal to force sheet flow through adjacent wetlands. Pumps can deliver freshwater, nutrients, and sediment to nourish the adjacent wetlands, re-establish the salinity gradient, and increase the residence time of the water in the wetlands, thereby increasing the die-off of pathogenic bacteria and improve the water quality of oyster-growing waters. A stormwater redirection project was initiated by BTNEP in the Pointe aux Chenes Wildlife

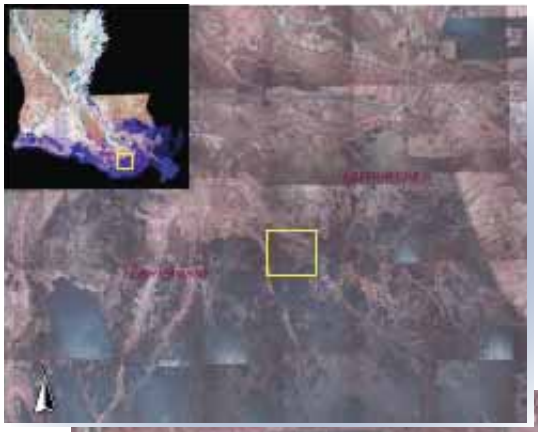


Figure 1. Location of Pointe aux Chenes site in south Louisiana.

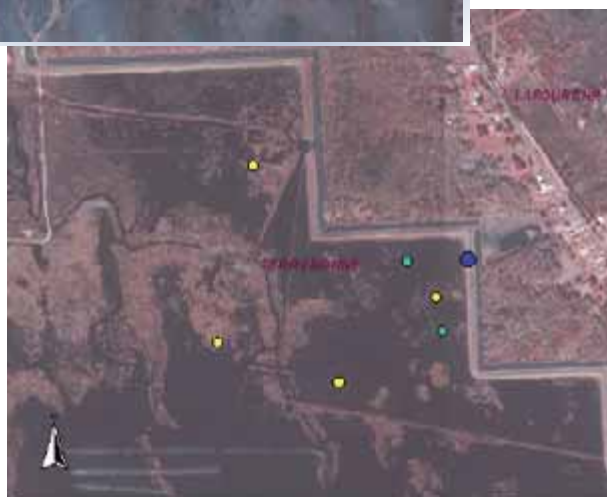


Figure 2. Map of sampling area. Blue dot represents station outfall; yellow dots represent sediment elevation tables, water level recorders, and water quality stations; green dots represent water quality stations.

Pointe Aux Chenes Project Partners

Gulf of Mexico Program
LSU Coastal Ecology Institute
LDWF Pointe aux Chenes Wildlife Management Area
Terrebonne Parish Consolidated Government

Funding Sources

EPA, Gulf of Mexico Program
Shellfish Challenge Initiative Program
EPA, 320 Clean Water Act
National Estuary Program Funds

Management Area (WMA). This site provided a great opportunity to collect data before and after a pump station was installed to provide drainage for the community of Pointe au Chien. The receiving area and sampling sites are distributed in the western portion of the WMA north of the Isle de Jean Charles Road, which forms an impounded area (Figures 1 through 3). Data being collected include water levels, total suspended solids, nutrients, fecal coliform bacteria, salinity, vegetative response, vegetative composition, soil composition, and sedimentation. All pre-stormwater pump installation data collection has been completed and the post-pump phase of the project will be completed in late 2008. Preliminary results indicate decreased salinity, fecal coliform, and nutrients near the outlet under the Isle de Jean Charles Road, and increased biomass and sedimentation near the outfall of the pumps. The decrease in salinity throughout the receiving area results from water control

Figure 3. Vegetation at Pointe Aux Chenes Wildlife Management Area. The stormwater pumping station is in the background.

flap gates put in place by the WMA, in addition to the freshwater added by the Pointe Aux Chenes stormwater pumping station. Figures 4 and 5 are a selected subset of draft data for total suspended solids and salinity. With the help of our exceptional partners, this project will provide data that helps BTNEP meet the goal of stormwater redirection for wetland enhancement. It is an example of the BTNEP process, hereby scientific data gathering and outreach is used to change public perception.

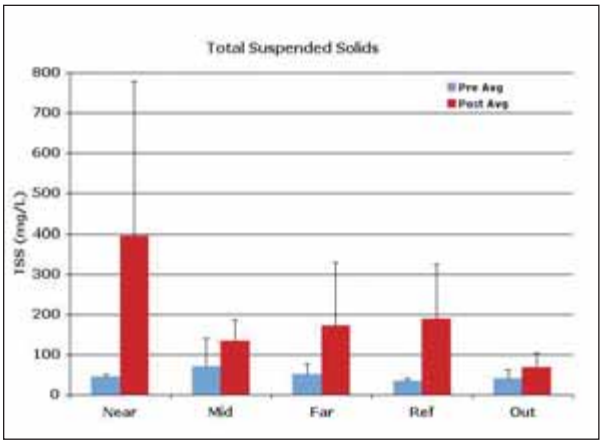


Figure 4. Draft total suspended solids data at sampling locations in the Pointe Aux Chenes Wildlife Management Area prior to (pre) and after (post) discharge of stormwater.

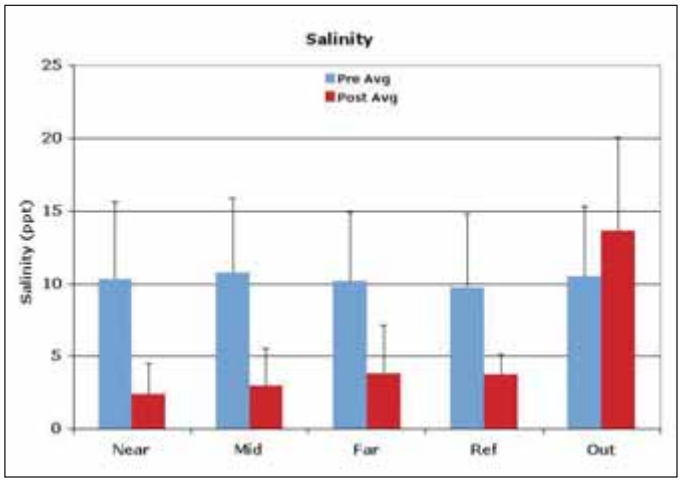


Figure 5. Draft salinity data at sampling locations in the Pointe Aux Chenes Wildlife Management Area prior to (pre) and after (post) discharge of stormwater.

Mississippi River Water Reintroduction into Bayou Lafourche

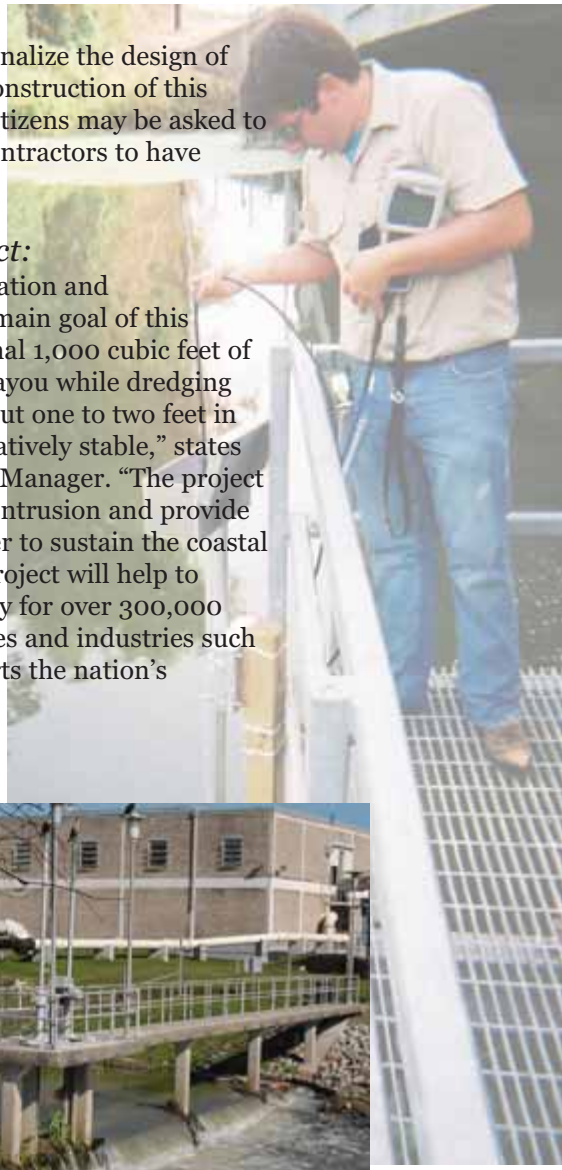
Bayou Lafourche is scheduled to be part of a major coastal restoration project: the "Mississippi River Water Reintroduction into Bayou Lafourche." The goal of this project is to increase the amount of fresh water in the bayou. The State of Louisiana Department of Natural Resources (DNR) is the central agency for bringing the project to completion.

While there are many reasons for sending fresh Mississippi River water down Bayou Lafourche, there are two that are more important than any others. The first benefit of the completed project will be for coastal restoration and therefore the protection of approximately 120,000 acres in the Barataria-Terrebonne Estuary region. The Barataria Terrebonne National Estuary is currently the fastest disappearing land mass on Earth. The second benefit is to improve the water quality in Bayou Lafourche, by reducing the saltwater intrusion from the Gulf of Mexico. Water from the bayou is used by over 300,000 residents as their sole source of potable or drinking water.

The Louisiana Department of Natural Resources is currently working on the project in a variety of ways. The tasks currently being conducted involve: surveying land, gathering cross sectional data, performing soil samples, preparing aerial photography, and collecting samples using borings along the banks of Bayou Lafourche. Citizens will notice employees and contractors in the areas up and down Bayou Lafourche performing these project duties. These activities are all required to finalize the design of the project and prepare for construction of this coastal restoration project. Citizens may be asked to allow these employees and contractors to have access to their property.

Importance of the Project:

"This project is coastal restoration and conservation at its best. The main goal of this project is to bring an additional 1,000 cubic feet of water per second down the bayou while dredging the current water bottom about one to two feet in order to keep water levels relatively stable," states Robert Routon, DNR Project Manager. "The project will help to reduce saltwater intrusion and provide desperately needed freshwater to sustain the coastal marshes. Additionally, the project will help to stabilize the freshwater supply for over 300,000 residents and many businesses and industries such as Port Fourchon that supports the nation's energy needs."



Bringing more fresh water down Bayou Lafourche is also vital for economic growth and development and to help increase tourism in this area. The bayou was once a main transportation route for business and is still the backbone for progress.

Bayou Lafourche Reintroduction

Special Changes to Bayou Lafourche:

As the Bayou Lafourche project moves forward, there will be a few structural changes to water control devices in the bayou. There will be a new water control structure added in Donaldsonville and inflatable weirs will be added to the bayou's channel. The weir in Thibodaux will eventually be removed. This is a huge, multi-year project that will require us to pull together as a community that wants to help protect our wetlands. This unique project is an opportunity of Louisiana citizens to pull together to show the nation our commitment to coastal restoration. It is coastal restoration in our back yards.

"Bayou Lafourche, say Louisianians, is the longest village street in the world; and I don't know of any place that has attempted to refute that claim. It covers 120 curling miles and along practially all that length it is impossible to ride or walk and be out of sight or hearing of a house or houseboat, both filled with people. For mile on mile, a single line of homes hugs the waterway on one bank, and sometimes on the other as well. Here and there towns appear, but often it cannot be determined when a town ends and mere residences on the bayou begin. The string becomes double for a time, the second following the curve of the stream like the first; and then it thins again. How many houses stand in this file, nobody knows. Some have declared that not even Holland of the old days had a greater multiplicity of rural people per linear mile."
Louisiana author- Harnett Kane
The Bayous of Louisiana (1943)

Note: This project began as a study through the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA or Breaux Act) in 1990. Since April, 2007 the Louisiana Department of Natural Resources has taken the lead on the project and it has now become an engineering reality.

Create Your Own Urban Forest

BTNEP is proud to introduce the first two installments of a series of booklets designed to provide estuary residents with helpful information about how best to preserve, protect, and enjoy the local environment. BTNEP Residents' Guide series begins with Booklets 1 and 2, *Attracting Wildlife with Native Plants* and *Landscaping with Native Plants,* respectively.

These two booklets explain to the general public the benefits of using native plant materials on their property to help create a functioning urban forest. Urban forests contribute to a healthier overall ecosystem. Since native plants grow here naturally, they are tolerant of our climatic conditions and require little maintenance to thrive. Native plants are the foundation of our state's natural heritage. They define and delineate our natural ecosystems. They not only provide a source of food and shelter for our insects, birds, and other wildlife, but also provide us with our unique cultural sense of place.

Attracting Wildlife with Native Plants gives specific suggestions for plants that are known to have high habitat value in this region. There is a heavy emphasis on birds; but butterflies, reptiles, amphibians, and mammals including bats, are also discussed. *Landscaping with Native Plants* gives a primer on yard design as well as specific plant suggestions for various landscaping uses. All suggested plants in both booklets are native to south Louisiana, with the vast majority native to the Barataria-Terrebonne National Estuary.

Developed in cooperation with Villere Town Planning Associates and Dianne Madden Graphics, the booklets feature full color photographs and a wealth of information to help citizens maximize the benefits of native plants to improve the health of the estuary in a manner consistent with the mission of BTNEP. We would also like to acknowledge the invaluable assistance with facts and photographs provided by members of the Louisiana Native Plant Society and the Department of Wildlife and Fisheries Natural Heritage Program.

This Louisiana Blue Flag Iris is featured in the *Residents' Guide to Landscaping with Native Plants*.

At least three future editions in the Residents' Guide series are currently planned. One will be a homeowner's guide to improving water quality in the estuary. It will highlight best management practices for managing storm water runoff and will describe composting and other eco-friendly practices. The second guide will be a guide to invasive species. It will describe the major pathways for their introduction, and list many of the most effective options for management, control, and prevention. The third will be a guide to coastal restoration. It will explain the causes of coastal land loss, highlight the various tools available for restoration, and describe the projects and responsibilities of the various entities responsible for protecting our coastal resources. As with all of BTNEP's products, the Residents' Guides will be available to the general public at no charge. Electronic copies will be available on our website, www.BTNEP.org.

The Ruby-throated hummingbird feeding on a Maypop flower and the American beautyberry are both featured in the *Residents' Guide to Attracting Wildlife with Native Plants."*

Photo by Joathan Traviesa

Invasive Species Workshops

Efforts in the realm of invasive species were aided greatly in 2002 when a grant for EPA's Gulf of Mexico Program was awarded to BTNEP to help deal with invasives in the estuary. The grant provided funds for a variety of projects including assessments in the field, native plant demonstration gardens, and educational outreach. One facet of the grant was to make possible a series of educational workshops for the general public. BTNEP has now hosted six such workshops.

The first Invasive Species Workshop was held in April 2005 at Brechtel Park in Algiers, New Orleans. The park was an ideal setting not only for its natural beauty, but also for its obvious problem with catclaw vine, an invasive plant from South America. Other invasive plants, especially aquatic varieties in the park's lagoons, made the setting a veritable outdoor lab for invasive species science. Much the same can be said for the second workshop, held in May 2005 at the Jean Lafitte National Historical Park and Preserve in Barataria. The preserve has a problem particularly with salvinia, a floating invasive fern. Workshop attendees got a firsthand look at the preserve's experimental work with the salvinia weevil, a beetle, which is a promising new biocontrol agent.

Local experts treated attendees at both workshops to presentations on some of the finer points of the invasive species problem. These included the buying habits of nursery customers, the threat invasives pose to rare and endangered plants and animals, the spread of invasive fish previously thought to live strictly in freshwater into the saltier estuaries, and the effect of hunting and trapping subsidies on the nutria population. Presentations were accompanied by lively question and answer sessions, then followed by nature walks where attendees could get a first-hand look at many of the region's most problematic invasive plants.

Andrew Barron, BTNEP Water Quality Coordinator, demonstrates edible native plants to workshop attendees at the National Park Service Jean Lafitte Wetlands Acadian Cultural Center in Thibodaux, Louisiana.

Promoting native plants is the all-important flipside to combatting invasive ones, and in the fall of 2007 BTNEP hosted four more workshops with this goal, two of which were targeted specifically at nursery owners, landscapers, and professional gardeners. Attendees were treated to presentations on the threat of invasive species, landscape and wildlife value of native plants, and state efforts to protect our rarer native species and communities. A hands-on demonstration of useful and edible natives was also featured. The newly produced Residents' Guide booklets and a beautiful poster of *Native Plants of Louisiana,* among other materials, were distributed at the workshops. The strength of our partnerships is both an effective tool for the protection of the estuary and a source of pride for BTNEP. These partnerships were palpable and visible at the Invasive Species Workshops. Experts from a wide range of fields came together to bring this issue into greater public light. BTNEP would like to specifically thank Scott Edwards of the Acadiana RC&D, Dr. Charles Allen and Rick Webb of the Louisiana Native Plant Society, John Clark of

Invasive Species Workshops

Iberville Parish, Garret Thomassie of the NRCS Plant Materials Center, Dr. Marty O'Connell of the University of New Orleans, Marilyn O'Leary of the Southeast Aquatic Resources Partnership, Dr. Hallie Dozier and Barton Joffrion of the LSU Ag Center, Gary Lester, Patti Faulkner and Chris Reid of the Department of Wildlife and Fisheries, Keith Bleichner and Ann MacDonald of the New Orleans Parks & Parkways Department, and Nancy Walters, Angela Rathle, and Allyn Rodriguez of the National Park Service for their enthusiastic participation.

Michael Massimi, BTNEP Invasive Species Coordinator, presents to workshop attendees at the Iberville Parish Library in Plaquemine, Louisiana.

Although beautiful, the water hyacinth is an invasive species. ***photo by Sue Ellen Lyons***

The invasive plants *common salvinia* (left) and *giant salvinia* (right).

An Important Nursery Habitat for Young Blue Crab and White Shrimp

In March of 2001, the Barataria Terrebonne National Estuary Program and the National Marine Fisheries Service began a project to evaluate the role of *Vallisneria* beds in providing nursery habitat for fishery species. *Vallisneria americana* is a common species of submerged aquatic vegetation (SAV) that is widespread in low-salinity estuarine areas. Although the total area coverage of *Vallisneria* in estuaries along the northern Gulf coast is unknown, this plant species may occupy large areas at some locations. Estuaries in Louisiana, particularly those receiving freshwater from the Mississippi River, contain sizable shallow, low-salinity areas where *Vallisneria* can exist. For example, extensive areas of *Vallisneria* beds occur in the Barataria estuary within embayments and tidal channels located along the shores of Little Lake and Bay L'Ours.

Restoration efforts in Louisiana could have a positive effect on *Vallisneria* habitat. Small to medium river water diversions planned to combat coastal land loss may significantly increase the size of the area in which *Vallisneria* can exist by freshening coastal waters previously too saline to support this vegetation. An assessment of the nursery value of *Vallisneria* habitat is required to determine its role in supporting coastal fisheries and necessary to develop sound management plans for estuaries and estuarine-dependent fishery species.

Due to drought conditions in the years 2000 and 2001, the *Vallisneria* beds in the sampling area were damaged because of higher than normal salinities that occur in drought conditions. Field surveys in the spring of 2003 showed some recovery of the beds. As a result, sampling for the project started in the fall of 2003.

Densities of fishery species were compared among *Vallisneria* beds, natural marsh, and shallow non-vegetated bottom. The samples were taken using a round 1^{m2} drop sampler. In two seasons (fall— September 2003, spring—May 2004) when the abundance of fisheries is highest, 120 samples were collected in six habitat types. The six habitat types include:

1. marsh edge
2. submerged aquatic vegetation (SAV) inside edge
3. submerged aquatic vegetation (SAV) interior
4. submerged aquatic vegetation (SAV) outside edge
5. subtidal non-vegetated bottom (SNB) near
6. subtidal non-vegetated bottom (SNB) far

Species richness and the size of selected species was compared among habitat types. Mean densities of most abundant species were significantly different among habitat types, and densities were generally much higher in vegetated habitat types than over subtidal non-vegetated bottom sites. Species richness also was greater at vegetated than non-vegetated sites.

The project results show that *Vallisneria* beds provide an important nursery habitat for young blue crab and white shrimp that use low salinity estuarine areas. *Vallisneria* beds can provide an important alternative structural habitat to emergent vegetation during periods of low water, because this habitat type occurs in the subtidal and generally persists throughout the year on the Gulf coast. Species whose young thrive in low salinity and also depend on structure would benefit most from *Vallisneria* habitat.

Sampling occurred in *Vallisneria* beds along the shores of Little Lake and Bay L'Ours.

Scientists collect many samples and record data to better understand the habitat importance of SAV.

Annual Estuary Community Events

Paddle Bayou Lafourche

A Backyard Adventure

Beginning in Donaldsonville, the 52-mile, four-day adventure down Bayou Lafourche winds its way through a number of rural communities, through the shade of old oaks, around the bends of the bayou all the way to Lockport. Paddlers are treated not only to scenic natural vistas, but also to a fascinating "backyard view" of the inhabitants of this historic bayou region.

Bayou Lafourche has consistently served as the primary lifeline for people of the Barataria-Terrebonne National Estuary for centuries by providing food, transportation and more, but this is not the case today. As technology has advanced, so have the system of roads and highways that connect vital areas of the estuary. These roads and highways are used today, instead of the bayou, but Bayou Lafourche still has much to offer and is standing by attentively, as it always has been. Paddle Bayou Lafourche brings people back to the bayou to show them all of the amazing qualities the bayou offers today, and what it could possibly offer in the future.

Paddlers may pick and choose which day(s) to participate (from one to four days) and enjoy the bonding, camaraderie and sense of accomplishment that comes from going the distance—Donaldsonville to Lockport. During the paddling trip, paddlers participate in outstanding nightly entertainment.

For those who cannot paddle, many choose to support the event by cheering on paddlers from the banks of Bayou Lafourche. In the past, many have greeted paddlers with signs of encouragement, food, cheers and smiles. Some supporters also play traditional Cajun music from the bank, while others make a donation to the Barataria-Terrebonne Estuary Foundation in the name of Paddle Bayou Lafourche. However, everyone is encouraged to clean up the bayou side for these paddling visitors, and to keep it clean throughout the year for the benefit of the community.

The 2008 paddling trip was a huge success with 167 individual paddlers participating, averaging roughly 100 paddlers per day. This is a testament to the magic of the trip as paddlers from around the nation learn to appreciate the splendid countryside, dynamic ecosystem, and unique culture of the Estuary.

For more information, please visit http://paddling.BTNEP.org, which has the latest paddling trip information and can answer many questions.

La Fête d' Ecologie

Nestled among cypress knees along the bank of historic Bayou Lafourche in Thibodaux is the home of "La Fête d' Ecologie" (la-fét day-kolojee), an annual, free, one-day festival with a distinct Louisiana flair. The amazing environment, rich history, and unique blend of cultures found in the Barataria-Terrebonne National Estuary are all mixed together in one spot, with a pinch of filé and a dash of hot sauce for extra Louisiana flavor. Delicious food, lively music, contests and educational activities are all part of the festival traditionally held the last Saturday of September in Thibodaux. La Fête not only offers great food and music, but also reminds visitors why the Barataria-Terrebonne National Estuary is an exceptional region to work and play in. The festival is all about music, ecology, heritage, home...it's about all of us.

Children of all ages enjoy the events of the day from exploring science in hands-on experiments to testing their skills and imagination in physical events.

La Fête d'Ecologie

There are not many other places on Earth, if any, where visitors can try their luck in a pirogue race and show off their skills in a cast net throwing contest. And it is a well-known fact that La Fête is the only festival attended by the "Cast Net King." This is the only time of year anyone can catch a glimpse of the mythological king who lives in the swamp, 45 minutes south of Thibodaux. He emerges from the swamp to enter the cast net throwing competition to demonstrate the proper way to throw a cast net and raise awareness of Louisiana's disappearing wetlands. The Cast Net King also likes to eat the delicious food at the festival, like crab cakes, jambalaya, poboys and bread pudding. There are many different foods to sample, all of which are native dishes of Louisiana.

Traditional folk crafters, government agencies, non-profits and educational groups participate every year to teach children and adults about the history, culture and bounty of the environment, as well as their efforts to restore Louisiana's wetlands. Visitors may learn about traditional wooden toys, how to carve a duck decoy, recane a chair, and make a cypress paddle. They may also see how to make primitive weapons and hone the skills required to use them or make their own cast net. Festival-goers may also touch live animals, clean up a mock oil spill, and watch a falcon soar high over Bayou Lafourche.

Music is a cornerstone of life in South Louisiana, as well as at La Fête. All of the live music performed at the festival is native to Louisiana and may feature the rhythmic beat of an African drumline, the strings of an authentic Cajun band, or the spice of a Zydeco groove.

The festival was started in 1996 by BTNEP to educate while entertaining festival-goers about the rich resources and heritage that blankets the Barataria-Terrebonne National Estuary. This national estuary is the 4.2 million acre area between the Mississippi and Atchafalaya Rivers.

The Cast Net King demonstrates the proper way to throw a cast net.

It is the most rapidly disappearing area on earth and is one of the world's richest natural resources providing fisheries, rich farmland and oil and gas resources to the nation.

"La Fête d'Ecologie" is made possible through The BTNEP and its Foundation and its generous sponsors and donors. For more information, please visit http://lafete.BTNEP.org, which has the latest festival information and can answer many questions.

The Grand Isle Migratory Bird Celebration Event

Now in preparation for its ninth year, the annual Grand Isle Migratory Bird Celebration has grown from a one-day event in the late 1990's to a three-day event that offers Grand Isle residents and birders from around the nation numerous opportunities to see and learn about many different species of birds. Additionally, this celebration provides an opportunity to learn of the uniqueness and importance of Grand Isle's habitats and their relationship to these birds.

The event's birding tours offer opportunities to visit chenier woods, back barrier marshes, beaches and mudflats, and nearby islands. Educational information addressing birds and bird management is distributed by numerous partners. Historical tours are offered to learn more about the history of Grand Isle, and informational presentations are made regarding current topics. Hundreds of people now attend this annual event.

Grand Isle is Louisiana's biggest and only inhabited barrier island. It also is the only barrier island large enough to support "chenier" forests. "Chenier" is a French word meaning live oak forest. The forests, back barrier marshes, and sandy beaches of Grand Isle are considered one of the premiere birding destinations in North America.

Grand Isle is one location where you can see songbirds, colonial nesting birds, shorebirds, waterfowl, and raptors all in a very short distance from one another. The island's hackberry, live oak, and red

Chenier forest *Photo by Dennis Demcheck*

mulberry forests are particularly important to many species of colorful songbirds including tanagers, buntings, grosbeaks, warblers, vireos, thrushes, and many others. These forests are especially important during spring, when migrating birds encounter inclement weather as they fly northward over the Gulf of Mexico. Exhausted, birds land at the first place they see, which is often the forests of Grand Isle, Louisiana. A red mulberry tree with ripe fruits may be filled with a kaleidoscope mix of birds, including blood-red Summer Tanagers, velvety-red Scarlet Tanagers, orange Baltimore Orioles, burnt-orange Orchard Orioles, deep-blue Indigo Buntings, and multi-hued Painted Buntings. Intent on feeding and drinking, fall-out birds often seem unconcerned with the attention of birdwatchers, and allow close study.

The Barataria-Terrebonne National Estuary Program, a member of the Sanctuary Group that hosts this bird celebration, has been a significant donor to this event for

Grand Isle Migratory Bird Festival

the last few years and plays an important role in its planning and execution. The Sanctuary Group is a collaboration of many organizations all working to promote the celebration and the acquisition of the last remaining maritime forest "chenier" on Grand Isle. Today, the remaining forests on the island represent only ten percent of what once was. Sanctuary group members include the Barataria-Terrebonne National Estuary Program and its Foundation, Grand Isle Port Commission, Grand Isle School, Grand Isle Tourist Commission, Landry House Bed & Breakfast, Louisiana Ornithological Society, Orleans Audubon Society, Terrebonne Bird Club, The Nature Conservancy of Louisiana, Town of Grand Isle and many others. It is this partnership that makes the Grand Isle Migratory Bird Celebration the success that it is.

The spectacular color of the male Indigo Bunting's breeding plumage is a common site at the Grand Isle Migratory Bird Festival. *Photo by David Cagnolatti*

Birdwatchers from across the nation seize a viewing and photo opportunity of migrating birds. *People photos by Dennis Demcheck*

Restoring Louisiana's Barrier Islands

A three-year cooperative agreement between BTNEP, Louisiana Universities Marine Consortium (LUMCON) and the USDA Department of Natural Resources Conservation Service (NRCS) began an initiative to identify native woody plant species suitable for coastal restoration and remediation activities. The overall goal was to implement an accelerated program to develop woody plant species technology; to provide plant species information to coastal wetland managers; and to demonstrate methods for improving plant species diversity and improve wildlife habitat.

Currently, there is an accelerated initiative to restore Louisiana's barrier islands and other outer-marsh habitats. To date, most of the barrier islands have undergone some level of restoration and, to a limited extent, revegetation. Plantings following restoration, however, typically consist primarily of grass species and result in monocultures with minimal wildlife value. In addition, there is little information available for the selection, propagation, and establishment of woody plants applicable to highly disturbed and saline soils. Consequently, most restored sites will continue to lack plant species diversity and therefore have limited wildlife habitat value.

To meet the goals of this project, several steps were involved:

1. Identify, select, propagate, and test native woody plant species that have wildlife value and are applicable to specialized coastal habitat such as barrier islands, dedicated sediment, restored marsh, and spoil disposal sites.

2. Develop seed harvesting, handling, and seed and vegetative propagation techniques.

3. Produce select plant materials for field trials and other demonstration sites.

4. Evaluate plant establishment and management procedures.

5. Assist in advancement of the knowledge base through a program of publications, demonstrations, and information exchange.

The project, completed in 2008, identified ten native woody and shrub species for planting and evaluation. The ten species included:

Scientific Name	Common Name
Acacia farnesiana	**Sweet acacia**
Callicarpa americana	**American beautyberry**
Celtis laevigata	**Sugarberry**
Diospyros virginiana	**Persimmon**
Gleditsia triacanthos	**Honey locust**
Ilex vomitoria	**Yaupon**
Morella cerifera	**Wax myrtle**
Morus rubra	**Red mulberry**
Quercus virginiana	**Live oak**
Zanthoxylum clava-herculis	**Hercules club**

Assemblies of seeds were collected from the above species. Seeds were germinated and established seedlings were transplanted to gallon containers for grow out and preparation for field planting. Replicated plantings were established at five locations:

Port Fourchon	dedicated sediments
Barataria Waterway	spoil bank
LUMCON	developed site
Grande Isle	barrier island
Trinity Island	barrier island

The Woody Species Plant Project

Performance and adaptation data was collected from each field planting site during May and October of each year. Quantitative data was collected for survival and growth measurements of plant height, basal stem diameter, and plant canopy spread. Qualitative data was collected for plant vigor, noticeable disease, and pests.

The last step was completed after Hurricanes Katrina and Rita made landfall, a natural part of the ecosystem process that affected this project. This accelerated program developed improved woody plant species technology that may prove to be important in future research.

Dean Blanchard, BTNEP Habitat Enhancement Coordinator, evaluating plant establishment in the field.

This Red mulberry tree has grown over ten feet since it was planted on the ridge in Port Fourchon in December 2002.

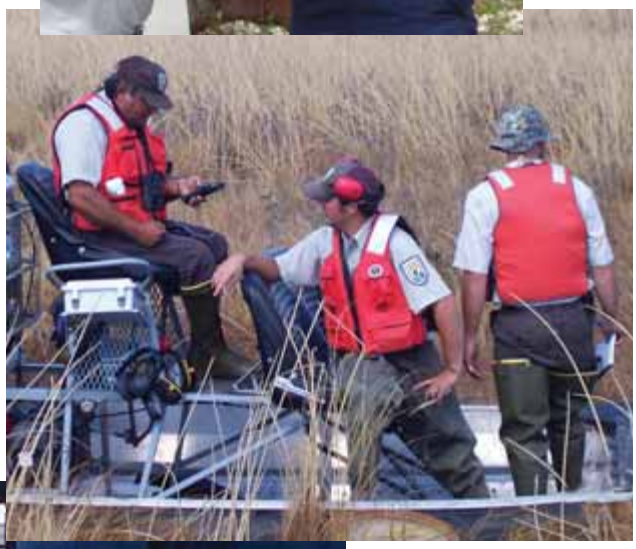
Project partners layout tree plots on Grand Isle. Each yellow flag represents where a tree will be planted.

A Calendar That Teaches

In an effort to raise awareness of preventative measures to detect and stop oil and produced water spills, BTNEP developed a 2007 calendar that contains a total of twelve storylines depicting common sense cost-effective measures associated with oil and produced water spill prevention and early detection measures.

The calendar identified and disseminated these prevention measures, most of which are in fact regulatory requirements in the oil industry. Concentrating on physical facility prevention measures and the implementation of crucial self-inspection programs, it makes these key items available at a glance for those involved in this field.

This continued outreach education publication is applicable for use by the large number of oil & gas exploration & production, pipeline, and service companies located within the Barataria-Terrebonne National Estuary Program's boundaries. It assists facility operators in the implementation of established company specific spill prevention programs. The Oil Spill Calendar is published every other year. The next publication wil be available in 2009.



Pictures from the 2007 Oil Spill Prevention Calendar.

From the 2007 Oil Spill Prevention Calendar

Improving in the aftermath of the storms

Plans of Action

Hurricanes Katrina and Rita caused catastrophic damage to Louisiana's coastline, coastal communities, and infrastructure, with our important oil and gas industry sustaining severe physical facility and pipeline damage, along with displacement of its most important asset, its employees. Many were unprepared for the damage resulting from Katrina and Rita, leaving communities and industries in a state of disarray. The aftermaths took their toll on all of us and made us realize that we desperately needed **a better plan of action.**

While a paper document may not save you from storm surge or tornadoes, a good plan of action will help you limit your environmental liability caused by significant spills and it will also assist you in safely evaluating your properties once the immediate danger has passed.

Many different plans are required from oil & gas regulatory agencies. Some of the more common plans are the Operations Manual, Facility Response Plan, and Spill Prevention, Control & Countermeasures. One important plan to remember when your operations are along the Gulf Coast is the **Hurricane Contingency Plan!**

The Hurricane Contingency Plan is a document that should outline the "who, what, when, where and why" of Hurricane Preparedness and Response. Many companies are currently implementing entire company-wide Hurricane Contingency Plans, encompassing all of their assets—from their facilities and pipelines to every company employee. The primary considerations in implementing a Hurricane Contingency Plan should be:

- Safety of Personnel
- Prevention of Pollution
- Protection of Equipment
- Maintenance of Production

Take the time to learn from the 2005 hurricane season and check your Hurricane Plan today!

“ Disappearing Wetlands ”

Bob Ballard, Discoverer of the H.M.S. Titanic, Links Students and Researchers in the Exploration of Louisiana Wetlands

During 2005, BTNEP partnered with the Jason Foundation for Education to help deliver the “JASON EXPEDITION—DISAPPERING WETLANDS,” an interactive program to help middle school students around the world learn about Louisiana’s vanishing coast. Dr. Bob Ballard, most noted for his work with the *Titanic* and also the founder of JASON, along with a team of scientists from Louisiana, created a year-long supplementary science curriculum that trained 800 Louisiana teachers and provided wetland education to nearly 1.7 million students and 33,000 teachers in classrooms and educational institutions across the globe.

“There has never been a more broad-reaching mechanism to speak to the world about Louisiana’s dilemma than this. We have had many hundreds of requests for our educational materials from teachers across the continent, and quite a few visitors as well. We have been able to establish pen pal relationships between Louisiana classrooms and classrooms throughout the world. The partnership with JASON has been extremely rewarding for our program and for Louisiana,” says Kerry St. Pé, BTNEP Director.

Ongoing research and efforts to save Louisiana’s disappearing wetlands was the focus of the international science expedition. Students and teachers participated using student activity books; videos; “Team JASON Online”—a gated Web site; LIVE broadcasts from Jean Lafitte National Historical Park and Preserve, Barataria Preserve in Marrero and the Louisiana Universities Marine Consortium (LUMCON) in Coocodrie, and Port Fourchon.

The Jason Project brings the following South Louisiana wetland issues inside the classrooms of 1.7 million students worldwide

- geologic processes
- restoration
- conservation
- swamp ecosystems
- marsh ecosystems
- saltwater intrusion
- invasive species impact

Jason project live broadcast

Estuary Education Programs

Students and teachers studied such topics as delta formation, erosion and deposition, wetland ecosystems, effects of salinity on organisms, wetland food chains and webs, wetland resources and values. The curriculum was aligned with US national educational standards in science, math, geography, English language arts and technology. This project offered a thematic and lab-based approach to teaching as students met a few of Louisiana wetland champions including: Dr. Earl Melancon, Dr. Jacoby Carter, Dr. Don Davis, Rachel Sweeney, Dr. Marco Giardino, Dr. Denise Reed, Kerry St. Pé, and Mark Schexnayder.

BTNEP continues to provide wetland education to teachers and students through a variety of opportunities.

To learn more about JASON visit the Web at www.JASON.org or to learn more about BTNEP educational opportunities visit the Web at www.educators.BTNEP.org

Jason project activities

Funding Opportunities for Restoration, Outreach, and Education Projects

BTNEP created the Mini-Grant Program in January 2005 to support community-based restoration, outreach and education projects. Through the Mini-Grant Program, citizens can gain a greater awareness and understanding of the issues facing the Barataria-Terrebonne Estuary System (BTES) and join with BTNEP in creating effective solutions.

The Mini-Grant Program also helps BTNEP foster creative partnerships among community groups and broadens the ability to connect with as many people as possible in preserving our homeland.

Available Funding

BTNEP has $20,000 available annually for eligible Mini-Grant Program projects, with a minimum of $1,000 and a maximum of $5,000 for any one proposal.

Who Can Apply

All schools, organizations, individuals, non-profits, government, churches, businesses, or other community groups may apply for Mini-Grant funding, provided that the project takes place within the Barataria-Terrebonne Estuary System (BTES).

Important Dates

The request for proposals for the Mini-Grant Program takes place from the beginning of March to the beginning of April. Grant winners are awarded at the end of April.

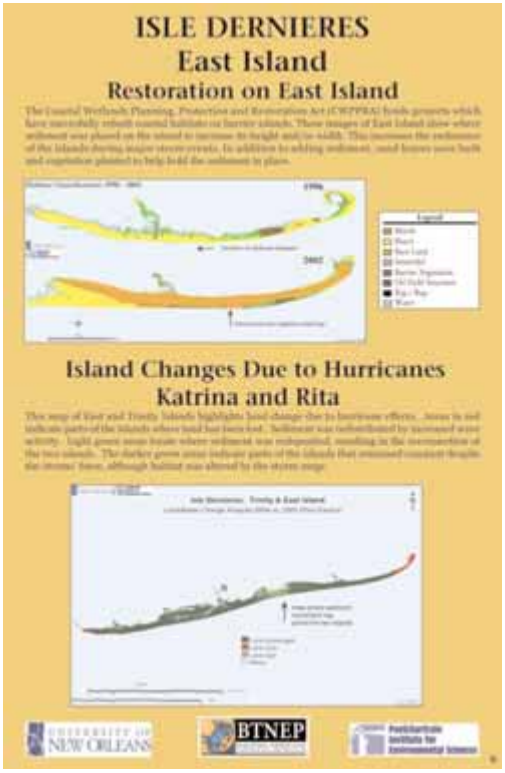
How to Apply

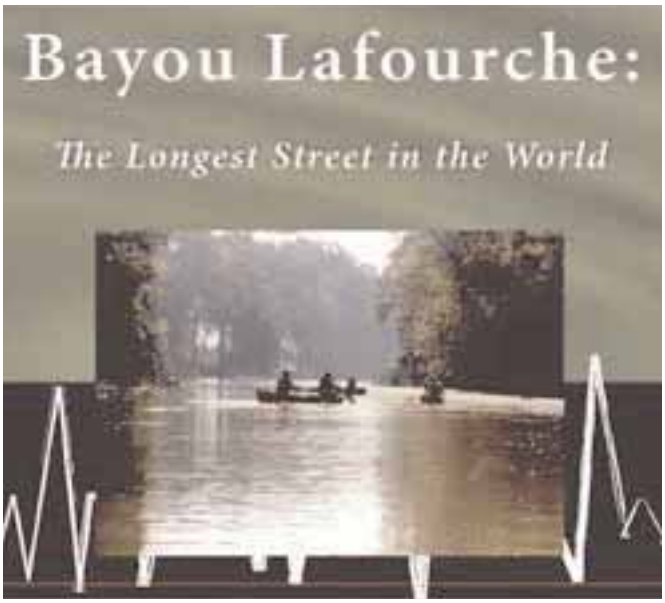
Visit the Web at http://grant.BTNEP.org/ to learn more and download an application and information packet.

A Fisherman and his Wife **puppet show (above) traveled with estuary, and Wendy Wilson Billot (left) taught students through the BTNEP mini-grant program.**

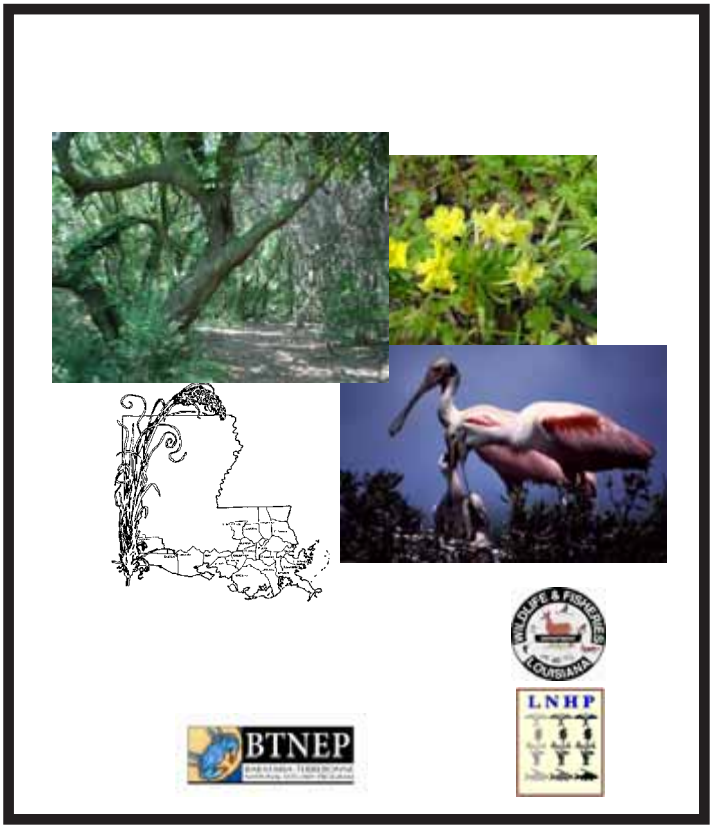
Products of the Mini-Grant Program

An eight poster series on barrier islands





A new documentary on Bayou Lafourche



***"Rare Plants, Animals and Communities of the Louisiana Coastal Zone"* fact sheets and book was completed in partnership with the Louisiana Department of Wildlife and Fisheries**

Hard Work Does Not Deter BTNEP Volunteers

Since its inception, the Barataria-Terrebonne National Estuary Program has been working with our partners and a host of local, state, and community groups to enhance our formal volunteer program and these efforts are paying off for the good of the estuary!

The BTNEP Volunteer Program provides participants the opportunity to work shoulder-to-shoulder with the agency employees, engineers, scientists and field agents who play a vital role in the fight to resolve the problems of coastal land loss and to restore a healthy, sustainable estuarine ecosystem for this and future generations.

The BTNEP volunteer program continues to annually recruit hundreds of devoted citizens from throughout the United States, who offer their time and talents at various events and volunteer opportunities year-long. Volunteers can sign up for projects and events via the BTNEP Volunteer Program website, or at many events in the Barataria-Terrebonne National Estuary.

The BTNEP Volunteer Program is continuously identifying potential volunteer projects with a variety of skill levels, environments, and geographic locations within the estuary. This means that BTNEP is working closer than ever before with our many partner agencies throughout the estuary to provide a multitude of potential volunteer opportunities.

The BTNEP volunteer program has worked with its many partners to give hundreds of volunteers the chance to work on a variety of projects in the estuary. The future holds even more promise for this growing program to continue moving forward in the important work of fostering active stewardship in our estuary communities, and performing important habitat restoration and cultural stewardship work throughout the system.

One of the most important roles of the BTNEP Volunteer Program is to ensure that residents and visitors have open access to natural areas so that we can continue to educate the nation on the importance of our fragile ecosystem. Our national, state, and local parks provide an excellent opportunity for local, regional, and national visitors to learn about the history, culture, and environment of South Louisiana.

Estuary Volunteer Program

Many of our public access areas were heavily damaged by the catastrophic 2005 hurricane season. While much attention has been focused on the plight of humans and urban areas, our natural environments continue to await much-needed recovery effort. In addition, limited resources make it difficult to sustain the progress that has been made. Continued maintenance is necessary to keep trails clear and to allow visitors access to this beautiful and educational wilderness.

Volunteer program update:

The Barataria-Terrebonne National Estuary Program has teamed with the National Oceanic and Atmospheric Administration (NOAA), the Gulf of Mexico Foundation (GOMF), the Louisiana Department of Natural Resources (LDNR), the National Park Service, and the Louisiana Office of State Parks to provide concerned citizens with a way to help give something back to our critically important public lands. Work days are being regularly scheduled to provide stewardship opportunities to individuals, schools, and civic groups. Efforts include invasive species removal, trail clearing and reconstruction, and general trail maintenance. Labor levels can be tailored to individual participants by allowing them to choose the type of work and tools they wish to utilize. Tools include everything from gas powered chainsaws to small pruning shears. All levels of skill and effort are necessary to continue to improve and sustain our public access areas.

By providing reliable access to natural areas, the Barataria-Terrebonne National Estuary Program, and our partners can continue to increase awareness of the challenges that face the environment and people of Coastal Louisiana and the potential long-term solutions to those challenges. With this knowledge, visitors can return to their homes across the nation and share the importance of our environment, our economy, and our culture.

Other past and upcoming volunteer opportunities include invasive species removal, native garden plantings, vegetative marsh plantings on newly restored wetlands, clerical support, and outreach assistance.

For more information on specific volunteer opportunities, a calendar of events, or to sign up to become a BTNEP Volunteer, visit the Volunteer Program's website at http://volunteer.BTNEP.org or contact the Volunteer Program coordinator, Mel Landry, at 1-800-259-0869 or via email at mel@BTNEP.org

Continuing our Mission

Our heartfelt thanks goes to the many organizations and individuals who have made this work possible through their generous donations and countless man hours.

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