

LA Wetland Education Coalition

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1. **JASON's Disappearing Wetlands Featured on National Geographic**

A wonderful story focusing on the science behind JASON's Disappearing Wetlands Expedition is now on National Geographic.com. To read the article, visit http://news.nationalgeographic.com/news/2005/02/0209_050209_wetlands.html.

2. **Understanding River Flood Stages**

From *Ask the Advocate*, 2/14/05.

'How is the "flood stage" level listed in the river stages table determined?

John W. Hall, public affairs officer for the New Orleans District of the U.S. Army Corps of Engineers' provided the following explanation:

Flood stage is a National Weather Service term that means, in a levee-protected area, the level at which areas of human activity on the river side of the levee will get wet.

At the Baton Rouge gauge, the flood stage is 35 feet (above sea level). The U.S. Army Corps of Engineers also specifies the level of protection provided by the river levee to areas on the protected side of the levee.

At Baton Rouge, the gauge is on the west bank, and the levee there protects the area to 46.1 feet. The levee at that point is up to grade, meaning that the crown of the levee is at least 49.1 feet above sea level. The difference is known as "freeboard," a safety margin to account for waves generated by navigation and other factors to protect the levee from overtopping.

It's important which side of the river one is on. On the west bank, federal levee protection extends

from Venice, where the highway ends, upriver almost to Cape Girardeau, Missouri. In Baton Rouge, the levee on the east bank ends in the heart of town where the high ground begins. Upriver in Louisiana, the only other Mississippi River levee is a 12-mile loop protecting the Louisiana State Penitentiary at Angola.

Call (504) 862-2201 for other questions about levees or visit the U.S. Army Corps of Engineers, New Orleans District, website at <http://www.mvn.usace.army.mil/>.

3. **Virtual Geology Fieldtrips**

Virtual Geology (Oxford Brookes University) allows teachers to take their students on virtual field trips to such diverse locales as the volcanoes of Alaska, the Devonian limestones of France, and the Florida Keys. Also included are images of sedimentary structures such as bedded sediments, dunes, and deltas. In addition, find online materials about sedimentology, environmental geology, and mineralogy. Visit <http://www.virtual-geology.info/index.html>.

4. **Levee project under way in S. Lafourche**

By Katina A. Gaudet

South Lafourche Bureau, *The Thibodaux Daily Comet*

GALLIANO -- A project to create levee-protecting marsh in South Lafourche is now under way and should be complete soon.

It's been a long time coming, but the federally funded South Lafourche Marsh Creation Project is in full swing, with officials anticipating its completion within the next two weeks or so.

Funded through coastal impact assistance funds Congress authorized in 2001, the project is symbolic of the collaboration needed between local, state and federal agencies, officials say.

“In the past, it was just cutting into the fat,” said Windell Curole, general manager of the South Lafourche Levee District and coastal zone manager for Lafourche Parish. “Now, it’s starting to cut into the bone.”

The bone includes the area’s primary protection - its levees.

The project aims to create 77 feet of marsh along a 2,200-foot stretch of levee in Galliano, where everyday wave action and storm events have left levees vulnerable.



A view of the marsh creation project. The picture is taken from on top the hurricane protection levee at Galliano looking eastward over the broken marsh. The new levee marks the edge of the area being infilled by dredged sediments, which can be seen starting to fill the area.

The sediment used to create the marsh apron will be dredged from nearby Catfish Lake, which has grown through the years.

Although dredging from the lake and making it deeper in some areas might appear self-defeating, some contend there are few alternatives. Local officials are using the project as a test case to gauge the effectiveness of the method in protecting coastal land.

“In some respects, we might consider this to be robbing Peter to pay Paul, but we’re putting it in a place where we think it does the most good,” said Curole.

Given the ongoing land loss and the risk it poses to levees, officials said such projects should be undertaken whenever feasible.

“We’re in such a desperate situation that if the stuff is non-toxic, we need to get it between where we live and the Gulf of Mexico,” Curole said. “We have to deal with this issue about the marshes going under water and the implication of the wave energy hitting those natural levees, our ridges, our roadways and manmade levees.”

Those involved in the project are encouraged by the results so far.

The project scope was increased after officials found the sediment was good material, holding up well under its own weight and eliminating a need for more building up of sediment.

The project contractor, Manson Gulf LLC, has completed the initial section of 1,400 feet and is working to complete the second section of about 800 feet.

The contractor could finish that work in about 10 days.

Noting that a well maintained levee can protect residents, and that a marsh apron is necessary to protect both natural features and manmade infrastructure, officials hailed the project.

“It’s a small project, but it’s also one of those great examples of the diverse concerns that all of these coastal parishes are facing,” said Tim Osborn with the Lafayette-based Gulf Operations office of the National Oceanic and Atmospheric Administration. Funding from the federal agency is helping to pay for the \$250,000 project.

“The reality today is that we have to live in a very structured environment,” Osborn said. “This whole area by and large is sitting behind levees that are well below sea level ... We have to continue to grow to be a very vigilant and a very mobile coastal population.”

5. Louisiana Youth Environmental Summit

July 25-28, 2005

Chicot State Park, Ville Platte, LA

For students entering 8th through 11th grades

Experience an intensive, free three-day summit of select middle and high school students and their adult sponsors. Students and sponsors join educators, scientists, policy makers, regulators, dynamic speakers and special guests to discuss environmental issues and actions.

Afterwards students are encouraged to work on environmental-based, community projects with the assistance of their adult sponsors. Students can apply for grants to assist their projects financially. And those students completing their projects are eligible to apply for the Louisiana YES student mentor program.

Louisiana YES sponsors, Cleco Corporation and Audubon Louisiana Nature Center, believe today's students will become tomorrow's environmental leaders. We can work together to shape Louisiana's environmental future—one project at a time.

All summit costs including meals, lodging, educational materials and supplies, field trips, entertainment, recreation and transportation are provided. The only cost not covered is transportation to and from the summit.*

Base camp is beautiful Chicot State Park in Ville Platte, but we'll also take field trips to study environmental issues in surrounding areas.

For more information contact Kathleen Welch at (504) 378-4149, or e-mail Inceducation@auduboninstitute.org.

To download a student application go to <http://www.auduboninstitute.org/lnc>

*A limited number of stipends are available to help defray these costs.

6. How Much Does Restoration Cost? Conservation advocates argue that the return on investment is vital

by Kimberly Solet; NYT Regional Newspapers Article published Feb 15, 2005, *The Thibodaux Daily Comet*

HOUMA -- More than half a billion dollars has been spent to study, document and lobby money to rebuild South Louisiana's disappearing coast since 1990.

But if the state is losing an acre of land every 35 minutes, how much swamp, marsh and wetlands has that money -- about \$50 million a year -- actually restored?

Not much, state officials say.

Since the debut of the Breaux Act 15 years ago, an assortment of projects has helped a total of 140,000 acres of starved, deteriorating shoreline. That figure includes about 9,400 acres in lower Terrebonne Parish, according to information

supplied by the state Department of Natural Resources.

Through 2003, the federal Breaux Act sent nearly \$500 million to Louisiana to help fight coastal erosion. At that rate, the state is paying about \$3,570 in federal and state money to rebuild or salvage each acre of wetlands.

That's a bad ratio, some scientists and environmental activists say, for a state that is losing 24 square miles of wetlands a year through erosion, sinking land, oil-exploration canals and saltwater intrusion.

"Restoration projects are not proportionate to land loss. Restoration projects are not keeping pace with the problem," said Shea Penland, director of the Pontchartrain Institute for Environmental Sciences at the University of New Orleans.

That's dangerous, experts say, for several reasons.

The battered coast and disappearing wetlands inside the state's 18,000-square-mile coastal zone expose nearly 2 million residents and industries and billions of dollars worth of property to increased flooding and damage risks from hurricanes, storms and high tides.

ASKING QUESTIONS

Breaux Act money is considered a partial solution to the problem.

The Coastal Wetlands Planning, Protection and Restoration Act, better known as the Breaux Act, dedicates about \$50 million a year for restoration projects and experiments.

Since the act's inception, engineers, planners and scientists have spent nearly \$700 million to resuscitate the state's tattered shoreline.

From 1990 to November 2003, about \$500 million of that money helped revive or repair 140,000 acres of wetlands, said William "Kirk" Rhinehart, administrator of the state Department of Natural Resources' Coastal Restoration Division.

Rhinehart said the numbers are small because most projects are small and many are still young. Restoring the coast is a monumental undertaking, he said, that involves myriad issues, from land rights and science to design and construction. Many want to know how many acres have been saved over the past decade, but Rhinehart said there's no clean answer.

In terms of land restored, even the 140,000-acre estimate isn't precise because the number reflects all the areas benefited by a particular coast-saving project. The figure is not rebuilt shoreline because that amount is virtually impossible to determine, said Rhinehart.

"It's really not the right question to ask," said Rhinehart. "We don't use number of wetlands restored as an indication to how we're performing as an agency because it's too difficult to track specifically and report on annually."

BUILD LAND

While that may be the case, coastal-restoration experts such as Penland, a geologist, argue that the state's calculations are misleading.

He points to a project in the Terrebonne basin as an example of the state's confusing methodology and to push for changes in the way restoration plans are implemented.

In 1993, a project was approved to restore marshes along Brady Canal, about 20 miles southwest of Houma. The narrow, eroding shoreline of Bayou DeCade was reinforced with rock, and channel banks were repaired to help restore the canal and the fragmented marshes around it.

The project area encompassed 7,653 acres. When construction wrapped up in the spring of 2000, the state reported that only 297 of those acres would benefit from the restoration effort after 20 years.

Considering the state's alarming rate of land loss, Penland said that ratio simply is not good enough. If the conversation about coastal erosion focuses on land loss, then efforts to repair the shore should focus on land gain, he said.

"You're losing a football field every 15 minutes, but are you gaining a football field every 15 minutes? Nobody is answering that question," said Penland. "If you're saying it's land loss we're fighting, you should build land."

The rate of land loss in South Louisiana has not decreased since restoration projects got under way in the 1990s. The state was losing 40 to 50 square miles of wetlands a year from 1974 to 1990, when the land-loss rate dropped to 24 or 25 square miles a year, Penland said.

"We would love to say the restoration program has done better, but it simply hasn't," he said.

NO QUICK FIXES

In many ways, the story of Louisiana's coastal-erosion crisis is a lesson in old-fashioned American civics. As restoration advocates began reporting on erosion and subsidence, forming groups to spread the word and learning to catch the attention of lawmakers, they realized what it meant to work the system and get things done.

The hope is that securing the money needed to rebuild the coast – the state estimates it will cost at least \$14 billion – won't take nearly as long.

Experts say speculators began tampering with the land more than a hundred years ago, carving up neighborhoods and towns where they had no right to be. The introduction of nutria to coastal Louisiana in the 1930s accelerated land loss as the semi-aquatic rodents rapidly multiplied and fed on marsh plants.

Construction of the major Mississippi River levee system prevented wetlands from receiving their regular diet of river water, nutrients and sediments. This combined with canals dredged for navigation and mineral extraction allowed salt water to penetrate freshwater marshes.

The state's coastal troubles are the consequence of other factors, natural and man-made, said researcher Denise Reed. Though most of the problems are the result of human interference, she said, global warming, sea-level rise, climate, storms and faults are also to blame.

Houma and eastern Terrebonne Parish are suffering the most land loss, experts say, because these marshes are a long way from the Atchafalaya and Mississippi rivers and are more difficult to rebuild.

That's why construction of the proposed Morganza-to-the-Gulf hurricane-protection system is so crucial, said Jerome Zeringue, executive director of the Terrebonne Levee and Conservation District. "Terrebonne is in a difficult position."

The Terrebonne and Barataria basins are experiencing the greatest land loss and they are the greatest challenge, he said. South Louisiana is losing 24 square miles of coastal land a year, and 16 are in the basins, said Kerry St. Pé, director of the Barataria-Terrebonne National Estuary Program.

South Louisiana's shores will never be completely restored, but, Zeringue said, the area's chances of securing money gets higher each day the nation realizes the value of state wetlands.

"We're finally getting the public conscience, the national conscience, aware of the problem, that it's beyond the scope of local and state governments," said Zeringue.

Saving 140,000 acres of wetlands with \$500 million isn't a great ratio, but Zeringue said it's better than nothing. "It's not a quick fix. It took us decades to get to this point, and it's going to take decades to hang on," he said.

7. 2005 Gulf Guardian Award Competition Announced

The 2005 Gulf Guardian Awards application is now available on the Gulf of Mexico Program web site. The deadline for entries is **May 10, 2005**. Winners will be announced in July and the awards ceremony will be in the Fall.

Each year, a first, second, and third place Gulf Guardian Award is given in six categories:

Business, Youth/Education, Partnerships, Government, Individual, and Civic/Non-Profit Organizations.

Visit <http://www.epa.gov/gmpo/gulfguard.html> for the application and information. For additional information, call 228-688-1172 or email Terry Teague at <teague.terry@epa.gov>.

8. LAWEC-L LISTSERVE INFORMATION

- **Description of this listserv:** A listserv serving educators interested in LA wetlands.
- **To send a message of your own to the listserv:** email LAWEC-L@LISTSERV.LSU.EDU and type your message into the body of the email. The message will be distributed to ALL PARTICIPANTS subscribing to the listserv. As a participant, you are welcome to send messages to educators subscribing to the LA Wetland Education Coalition listserv. We ask that participants focus their emails on educational opportunities and materials *directly related to wetland education*.
- **To UNSUBSCRIBE from this listserv:** email LAWEC-L@LISTSERV.LSU.EDU and enclose the following single line in the body of the email
unsubscribe LAWEC-L

- **To SUBSCRIBE to this listserv:** email LISTSERV@LISTSERV.LSU.EDU, with only the following line listed in the body of the email:

subscribe lawec-l YourFirstName YourLastName

For example:

subscribe lawec-l John Doe

NOTE: You should not put anything in the subject line and should remove any automatic signatures from the email, otherwise the signup process will not work. You will get a return message indicating that you have been subscribed to the listserv along with information on other listserv operations you can perform (such as unsubscribe, etc.). If you have trouble, email Dr. Pam Blanchard at <pamb@lsu.edu>.

Please do not reply to the entire list unless you want everyone to read your message!

