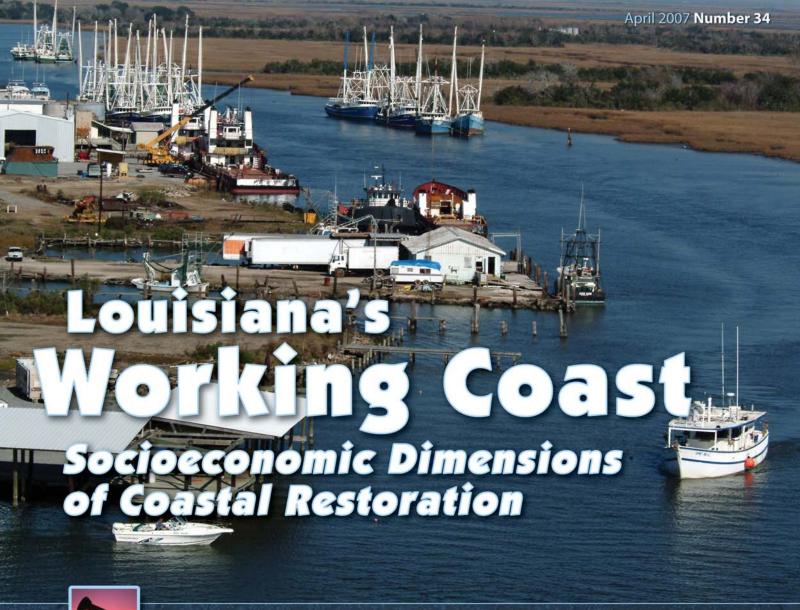
WATER MARKS

Louisiana Coastal Wetlands Planning, Protection and Restoration News





Coastal Industries Rely on Wetlands' Bounty

Lives and Livelihoods Shape Restoration on a Working Coast

WATERMARKS Interview with Helen Hoffpauir



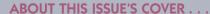
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WaterMarks is published three times a year by the Louisiana Coastal Wetlands Conservation and Restoration Task Force to communicate news and issues of interest related to the Coastal Wetlands Planning, Protection and Restoration Act of 1990. This legislation funds wetlands restoration and enhancement projects nationwide, designating approximately \$60 million annually for work in Louisiana. The state contributes 15 percent of total project costs.



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Human habitation is an integral part of coastal Louisiana's landscape. While benefiting renewable natural resources, wetland restoration projects protect the region's residents and the nationally significant industries, such as fishing, shipping, and oil and gas extraction, in which they work.

Photo courtesy of USACE, New Orleans District

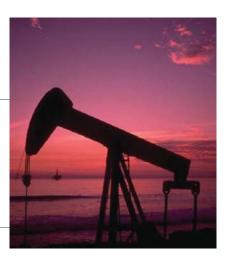


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For more information about Louisiana's coastal wetlands and the efforts planned and under way to ensure their survival, check out these sites on the World Wide Web:

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www.dnr.state.la.us/crm www.crcl.org www.louisianacoastalplanning.org

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DIVERSE NATURAL RESOURCES CONTRIBUTE TO CULTURE, ECONOMY

Coastal Industries Rely on Wetlands' Bounty

Ernest Voisin's great-great-great-grandfather came to Louisiana in 1770, drawn here from France by the region's abundant fisheries.

he family has been part of Louisiana's seafood industry ever since, says Voisin, president of Motivatit Seafoods, the Houma, La, oyster farming and processing company he founded in 1971. "My sons Mike and Steve work for the company, as do three of my grandsons. They're the eighth generation of Voisins in the seafood business."

The Voisins' story is in many ways that of southern

Louisiana. For more than three centuries, people have come to the coast to reap the region's rich natural resources. The resources-based industries they developed remain vital parts of the state's economy.

Abundant Fisheries Spawn Culture, Tourism

Early settlers of Louisiana's coast established a fishing industry that remains vibrant to this day: More than a quarter of the nation's seafood is harvested >>>

FISHERIES
Economic value



Louisiana is by far the nation's largest producer of shrimp, oysters and blue crab. The state's coastal zone provides nearly a third by weight of fish harvested in the lower 48 U.S. states. In 2003, the retail value of the state's commercial and recreational fisheries harvest was \$2.85 billion.

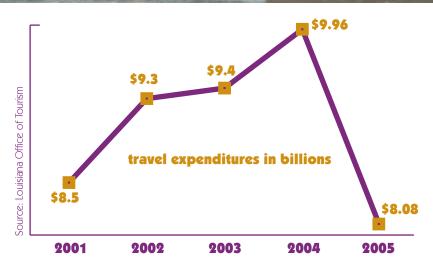
Employment



USACE, New Orleans District



Tourists spend billions in Louisiana each year, much of it on exploring the unique places and sampling the signature cuisine of the state's coastal zone. After hurricanes Katrina and Rita ravaged wetlands and flooded coastal communities, tourism plummeted; statewide, travel expenditures dropped nearly 19 percent.

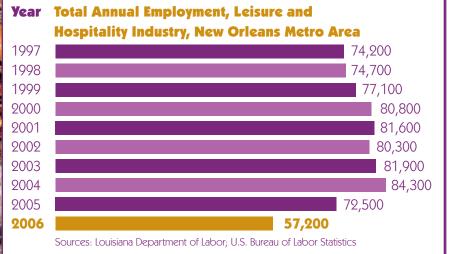


Employment

In Louisiana's coastal parishes, the lodging and food service industries employ close to 110,000 people—about 13 percent of workers in the coastal zone, or 6 percent of total state employment in 2005.



In the New Orleans metropolitan area, the leisure and hospitality industry took a heavy hit following the 2005 hurricane season, losing nearly 25,000 jobs in late 2005 and 2006.



from the state's coastal wetlands, bays and offshore waters.

Those settlers also brought with them the diverse influences that combined to create coastal Louisiana's unique cultures and cuisine. Based largely around that culture, the

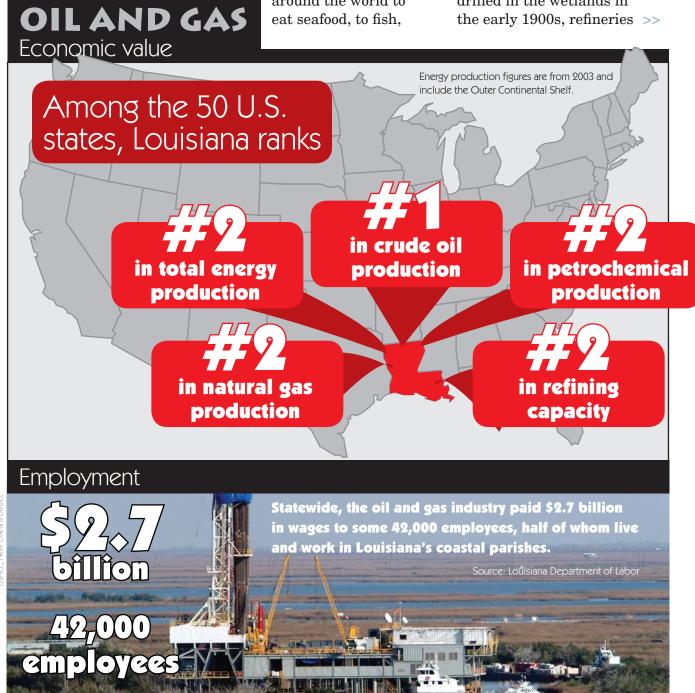
coastal zone's tourism industry today packs an economic wallop: in 2000 in the Barataria-Terrebonne estuary system, tourism brought in \$1.2 billion and supported 14,000 jobs. On the coast, tourism, culture and fisheries are inextricably linked.

"People come here from around the world to

to experience things that are unique to our way of life — such as watching an oysterman harvest his crop," says Motivatit Seafoods CEO Mike Voisin.

Oil and Gas Create **Coastal Jobs**

After the first oil wells were drilled in the wetlands in





Above: Today more than 72,000 active oil wells spike the horizon in Louisiana's coastal parishes.

Right: Diminishing coastal marshes increase the exposure of Louisiana's commercial infrastructure, such as docks, marinas, and oil and gas facilities and pipelines, to strong waves and powerful currents from the Gulf of Mexico.



sprang up along the coast. In 1939 an oil company installed the first offshore well, opening the Gulf of Mexico to the oil and gas industry. For the next 50 years the petroleum industry grew rapidly, contributing tax revenue to the state's coffers and bringing an influx of workers to coastal communities.

Oil and gas exploration and drilling in deep offshore waters continue to rely on labor from communities along Louisiana's coast. Fuel mined from the gulf is offloaded in Louisiana's ports, processed at nearby refineries, and transported from the coastal zone to points across the United States.

Healthy Wetlands Key to Resources' Survival

Sugar cane has been part of Louisiana's coastal landscape for 200 years, but like the rest of the coast's agricultural industry, sugar cane farming has changed dramatically in recent decades. "In Lafourche and Terrebonne parishes, urban growth and wetlands loss have pushed farmers farther

> north," says Herman Waguespack,

an agronomist for the American Sugar Cane League.
"Land that used to be fields is now houses or marsh, and subdivisions and industry are claiming the better-drained land, forcing agriculture onto poorer land."

"The diverse economic activities of Louisiana's coastal parishes rely on natural resources, and those resources depend on the wetlands," says John Westra of Louisiana State University's Department of Agricultural Economics and Agribusiness.

"Our wetlands provide habitat for the state's fisheries, protect farmland from saltwater intrusion and

AGRICULTURE
Economic value



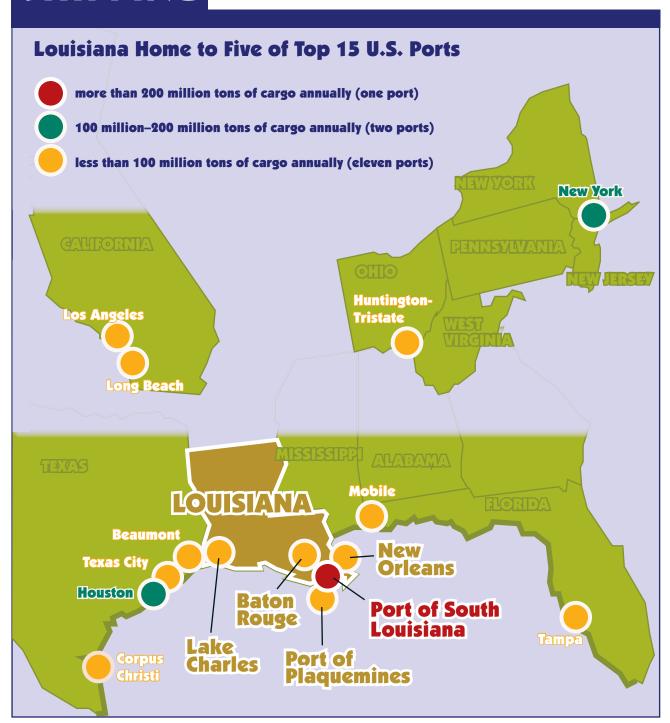
A fifth of the sugar produced in the United States comes from the sugar cane fields of southern Louisiana. As the state's leading agricultural commodity, the crop has an annual economic impact of \$1.7 billion.

attract tourists from around the world. Healthy marshes and barrier islands protect ports, communities, farms and oil and gas infrastructure from powerful storms,"

Westra explains. "As we saw after the 2005 hurricanes, disruption in those wetlanddependent industries ripples out across the entire nation's economy."

Today thousands of Louisiana residents work in industries linked to the coastal zone's natural resources. Fishing, shipping, tourism and oil and gas production have a combined economic impact of approximately \$140 billion each year, quantifying the economic value of the state's working coast. wm

SHIPPING



THE CONTEXT FOR CWPPRA

Lives and Livelihoods Shape Restoration on a Working Coast

Environmental restoration is a backyard issue in southern Louisiana.

ncroaching water threatens to swallow decks and docks, culture and commerce along with the landscape. "Coastal restoration in Louisiana doesn't just protect habitat," says Andrew MacInnes, Plaquemines Parish coastal zone administrator. "It also protects us - our homes, schools, businesses, jobs — and our infrastructure — the roads, the ports, the pipelines — that we use to supply essential resources to the nation."

Economy and Environment Twin Necessities

America's greatest catastrophe of wetland loss occurs among more than a million people, 700 schools, 900 churches, 50 hospitals, 400 shopping centers and 300 national historic sites. "When you look at coastal issues, you cannot look only at the biological and physical factors," David K. Loomis, a human dimensions researcher from the University of Massachusetts Amherst. has said. "You have to consider the social and economic aspects as well."

MacInnes understands that compromise is inevitable when reconciling economic vitality with environmental viability. His office receives permit applications from the oil and gas industry "about every day." MacInnes acknowledges this continued activity keeps the coast from healing itself, "but it's the lifeblood of our economy," he says. "It's part of the service we provide for the rest of the country."

While business pursuits may damage the environment, it is also true that altering the environment can damage business. Born in 1927, Ernest Voisin witnessed changes in oyster

farming after the Mississippi River was constrained behind levees. "Places in Terrebonne Parish that used to produce ovsters 60 or 70 years ago are too salty to be productive today," Voisin says," but new areas are thriving. Coastal restoration would probably damage these areas by increasing fresh water and reducing salinity, but it could also bring back beds that were productive years ago."

"We need to restore the coast and rebuild our marshes," says MacInnes, "but we have to allow for competing activities."

CWPPRA Builds on Community Support

Jerome Zeringue, executive director of Terrebonne Levee and Conservation District, is pragmatic about choices confronting coastal communities. "Flood protection that safeguards our



Above: Floods increasingly threaten Louisiana lives and livelihoods as wetland loss reduces the coast's protective natural buffer. **Opposite:** Coastal development inevitably alters the natural functioning of the wetlands. "We understand that healthy marshes and barrier islands

of the wetlands. "We understand that healthy marshes and barrier islands contribute significantly to our survival," says Ted Falgout, director of Port Fourchon. "For years the port has been active in restoration by mitigating marsh loss, nourishing beaches and rebuilding a maritime forest ridge."



buildings, businesses and infrastructure can compromise our capacity to restore the environment," he says. "Either we build protection and temper our expectations regarding restoration, or we implement large-scale restoration and start the process of relocating our communities. We need to come to a consensus about which approach to take. To succeed, any attempt at restoration must have the support of the community."

Involving the community in decisions about coastal restoration is fundamental in CWPPRA's project selection process. Often the result of citizens identifying a need, ideas for CWPPRA projects originate at the local level. Open meetings engage the public early and provide opportunities to resolve conflicts between restoration and socioeconomic interests.

As Dr. Robert Gramling, professor of sociology at University of Louisiana at Lafayette, writes, "Some projects cannot be done because of social considerations and stakeholder interests and some can be done more easily for the same reasons. These considerations need to be taken into account very early on ... We need first to look for opportunities where restoration and marsh creation projects ... can be allowed to function at their full restoration potential."

Not always are environmental and economic interests contradictory. For example, "Restored wetlands produce healthy fish stocks," says Loomis, "and thriving stocks support the fishing industry and tourism, resulting in job growth and expanded tax revenue. Restoration reduces storm surge and minimizes property damage; in addition to benefiting people's health and welfare, this lowers insurance costs. Protected coastal zones enjoy enhanced property values and increased community cohesion. We restore culture by restoring resources."

"The way we manage our coastal resources is a testament to our values as a people," says Mark Davis, director of Tulane Institute on Water Resources Law and Policy and past director of the Coalition to Restore Coastal Louisiana. "During the past century we converted Louisiana's coastline because it was perceived as the economically rational thing to do. Successful restoration of this region will also be predicated on doing what is economically rational, given the most current research and values of today." >>

Winds of Change

"I think, for the most part, people around here embrace the idea that the coast needs to be put back together," says Allen Estay, owner of Blue Water Shrimp Company in Dulac, Louisiana. "Hurricane Rita proved our vulnerability — there's nothing left to stop the water and prevent us from flooding. Community awareness of our situation is much

greater than before the storms in 2005."

MacInnes agrees. "Restoration is the grand theme uniting people now. Change is difficult, and not always welcome — we've built our livelihoods around how the coast is today. But we recognize restoration is for the greater good, and that point of view can reduce opposition to change."

But Estay worries that it

may already be too late. "I used to throw rocks across Whiskey Pass," he recalls. "Now you can't even see across it. Marshland I knew as pristine and beautiful has converted to open water. It's not deep, but the top layers of soil have washed away. How can we stop it? It's so far gone — if it's not past the point of return, it will be soon." wm

CWPPRA-LED CONFERENCE ESTABLISHES NATIONAL DIALOGUE

Social Scientists Measure Human Cost of Saving the Coast

Engineers, biologists, chemists and geologists are among the scientists who guide every aspect of coastal restoration, determining projects' design and projecting their benefits. As Louisiana expands the scope of its coastal rebuilding effort, a role emerges for a new group of experts: social scientists, who evaluate the effects of restoration on human communities and on commerce.

"Restoration projects can have significant socioeconomic impacts, such as property disputes, fisheries displacement, potentially even the relocation of entire communities," says Rex Caffey, director of Louisiana State University's Center for Natural Resource Economics and Policy (CNREP). "Understanding and mitigating those impacts is an important part of coastal restoration."

In 2004 CWPPRA was the lead sponsor of CNREP's national conference, Challenges of Natural Resource Economics and Policy, that drew 150 economists, social scientists, legal scholars, and resource managers. This year, CWPPRA is again a lead sponsor of the CNREP conference.

"The 2007 conference will continue to highlight social scientists' contributions to managing our coastal resources, as well as to identify areas where more research is needed," says Caffey. "By clarifying the human dimensions of land loss and restoration, social science helps us find ways to preserve the culture, economic activities and way of life that make Louisiana's coast unique."

"Good things can happen when people get together in the same room," David Loomis, from the University of Massachusetts Amherst, says of the CNREP conference. "Awareness grows. Interest is regenerated. Strengths emerge. We need to support this kind of coastal research."

For additional information about CNREP, visit their site at www.cnrep.lsu.edu.



Social scientists look beyond measures of acres restored or habitat units protected to consider the value of coastal restoration in terms such as preserving jobs, sustaining recreational opportunities and fostering community cohesion.

COMMON GOALS UNITE CITIZENS, INDUSTRY, CWPPRA AGENCIES

Landowner Support Essential to Breaux Act Projects

Across coastal Louisiana, once-thriving wetlands subside and convert to open water. Erosion unearths oil pipelines and destroys fish habitat. Barrier islands breach and wash away, exposing oyster beds to saltwater predators.

hose who live, work and play on Louisiana's coast recognize land loss as a threat to their way of life, making them "natural supporters of coastal restoration," says Joyce Montgomery, land specialist with the Office of Coastal Restoration and Management, Louisiana Department of Natural Resources (DNR).

"Landowners, leaseholders and companies that operate in the state's wetlands want to protect their investments — fishing and hunting camps, oyster leases, oil and gas infrastructure," Montgomery says. "Once they understand what a project is about — what we want to do, what benefit it will have — most of them get behind us 100 percent. That's when we begin to work together."

CWPPRA agencies communicate early and often with landowners and land users. "They give us valuable information about the property, such as locations of pipelines, old cemeteries and other sites we don't want to disturb," Montgomery explains. "We keep all stakeholders informed about a project's progress. That



On the Barataria Basin Landbridge, rock dikes slow erosion along bayou shorelines, preventing archaeological sites and hunting and fishing camps from washing away. Project planners worked with property owners and users to ensure the dikes didn't block access to the wetland.

builds good working relationships with the people who own and work the land."

Property Owners, Pipeline Companies Make Room for Shoreline Protection

In the Barataria Basin, erosion and subsidence claim wetlands at an alarming rate, as much as 100 feet per year on the banks of Bayou Perot and Bayou Rigolettes. "Land loss here threatens numerous industries — oil and gas, commercial crabbing and shrimping, fur trapping, and alligator hunting and egg collecting — as well as recreational hunting and fishing," says Quin Kinler of the Natural Resources Conservation Service (NRCS).

To slow the pace of land loss, the Barataria Basin Landbridge Shoreline Protection projects (BA-27, BA-27c and BA-27d) are installing rock dikes and concrete panel structures along 107,500 feet of bayou and lake shoreline.

Local landowners were eager to help the project succeed, obtaining signatures from the co-owners of their property and requesting cooperation from leaseholders. One camp owner assumed the cost of removing his pier to allow construction, then rebuilding it after the project was complete.

As the project began, planners were reminded of the area's long history of human habitation: At four sites lay shell middens, piles of clam >>

LANDOWNERS' COOPERATION VITAL TO MONITORING COAST

Taking the Pulse of Louisiana's Wetlands

Aerial photography and satellite images offer a wealth of information about Louisiana's wetlands, but when it comes to monitoring the health of the state's coastal marshes, there's no substitute for being there.

To track salinity levels, wetland elevation, water levels and the health of marsh vegetation, the Coastwide Reference Monitoring System (CRMS) is installing monitoring stations at 392 sites across coastal Louisiana. Each month, Louisiana Department of Natural Resources (DNR) staff members will travel to the remote monitoring sites to maintain the equipment and collect data. Following analysis by the DNR and the U.S. Geological Survey, the data will be posted on the CRMS Web site, www.lacoast.gov/crms.

"CRMS gives CWPPRA partners a way to evaluate individual coastal restoration projects and techniques," explains Jim Altman, DNR land specialist. "Most CRMS sites are on private property, which means we had to get the owners' permission to install our equipment. The landowners have agreed to participate because they've seen the effects of land loss and want to contribute to coastal restoration. The information we gather at these sites will help us determine the health of wetlands across an ecosystem, a basin, even the entire coast."



Where bayou bottoms proved too soft to support rock dikes, BA-27 installed test sections of concrete wall. Consisting of panels supported by pilings sunk deep in the mud, such structures offer more stable protection.

shells, pottery shards and other artifacts discarded thousands of years ago by Native American ancestors of the Chitimacha tribe. Erosion had already claimed one midden and severely damaged the other three.

"When construction is complete, project features will protect the artifacts that remain at each of the sites. At one of these, we re-aligned our structure to protect but not interfere with the site," Kinler says. "To preserve another midden, we changed our construction technique so we wouldn't have to dredge a channel through the site. At the other two locations, our features as originally conceived will protect the remaining artifacts."

Where a hunting lease lay behind shoreline protection, DNR and NRCS left hunters an opening in the protective structure. "We needed to leave a gap in shoreline protection to allow fish into the marsh. We met the hunters' need for access by locating that gap near a pond they use," Montgomery says.

Prior to construction, CWPPRA partners had to locate the numerous pipelines crisscrossing the project area so contractors could avoid damaging the pipes. "The oil companies lowered or removed pipelines at their own expense so we could safely access the project area," Montgomery notes. Under their agreement with DNR, the companies can temporarily move the project's protective structures when they need access to buried pipelines.

"Property owners and oil companies played such a big part in helping this project succeed," Montgomery says. "We're glad we were able to adjust project features to accommodate their needs without compromising the project's effectiveness."

Fishermen, Oil Companies Invest in Wetlands' Future

Along a stretch of dune and wetlands reaching from Pass La Mer to Chaland Pass. 2002 hurricanes Isidore and Lili breached the fragile shoreline. Powerful waves from the Gulf of Mexico tore at the foundation of an oil company's production facility, threatening to topple the structure. Saltwater intrusion changed the salinity of the marsh, exposing oncethriving oyster colonies to saltwater predators like red drum and oyster drills.

To restore the shoreline, the first phase of the Barataria Barrier Island Complex Project (BA-38) rebuilt or created more than 400 acres of dune and marsh habitat.

"Restoring the shoreline creates better oyster habitat by holding back fresh water and blocking saltwater intrusion," explains Jason Shackelford, a coastal resources scientist with DNR. "But in order to realize that benefit, we had to buy out portions of several oyster leases within the project footprint."

After adjusting the project boundaries to affect the fewest possible leases, DNR met with the fishermen. "They were willing to sell some of their leases based on the project's future benefit to the remaining oyster beds," Shackelford says. "With salinity behind the shore increasing, they had seen their leases lose productivity from year to year."

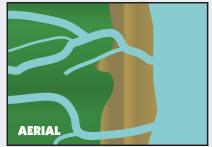
Because of the density of oil and gas infrastructure in the area, CWPPRA partners DNR and NOAA National Marine Fisheries Service (NMFS), also worked with oil companies to find the dozens of pipelines buried within the project zone.

"Some of these lines dated from the 1950s, which made finding documentation showing their locations difficult," says V.J. Marretta, DNR land specialist. "The oil companies helped us locate pipelines, then assumed responsibility for deactivating, moving or removing them so we could build the project."

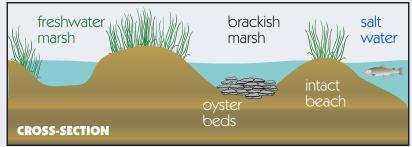
Part of one still-active oilfield canal ran through the project's marsh creation area, so DNR dredged a replacement canal outside the project area, then built marsh using the dredged material. At their own expense, the companies plugged inactive wells and removed abandoned facilities.

"The coastal wetlands protect our pipelines, employees and facilities from the rough conditions in the gulf," says a spokesman for a local oil company. "Initially we had many questions about how the project would impact us, but we were able to work with the CWPPRA agencies to resolve every problem. The benefits of this project are well worth the money and effort we invested in it." **WM**

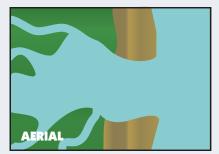
Oysters' Survival Depends on Intact Coastal Landscape



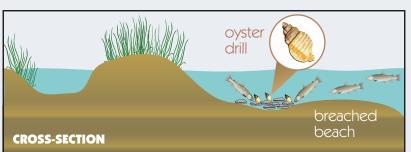
Behind an intact shoreline, salt water flows into the wetland via narrow inlets, mingling with fresh water from rain and runoff to create a brackish environment.



Brackish marshes provide ideal oyster habitat — salty enough for oysters but not for common predators.



When erosion— whether caused by normal wave action or by hurricanes— breaches the beach, large amounts of saltwater flow into the marsh.



Oysters tolerate high-salinity environments, but so do the predators that feed on them, such as red drum and oyster drills. Rebuilding the breached shoreline can restore the brackish environment and shut out predators so oysters can thrive.

WATER MARKS INTERVIEW WITH HELEN HOFFPAUIR

Helen Hoffpauir is the Land Section manager for the Coastal Restoration Division in the Office of Coastal Restoration and Management, Louisiana Department of Natural Resources. In this Water-Marks interview she discusses the issue of land rights related to the construction and maintenance of CWPPRA projects.

WATERMARKS: What role does your office play in CWPPRA projects?

HOFFPAUIR: We're part of a coastal restoration project team, just like engineers and biologists are. Our responsibility is to acquire land rights to property for coastal restoration projects. We can't go on any property, and certainly we can't build on it, without the owner's permission. It doesn't matter if the owner is a private citizen, a corporation, or a state or federal agency. For everything we do, even if we only use the site as a reference point, we have to get permission to set foot on the property.

WATERMARKS: How do you do that?

HOFFPAUIR: Unlike some agencies that buy property in fee, we depend entirely on donated easements. Granting us permission to traverse or build on their land is strictly voluntary on the part of the property owners.

Acquiring land rights is a comprehensive process. We start with a title search of all the properties the project will directly impact, as well as those on which project features are located. Then we do the legwork to find out who owns the land. Often our research turns up multiple owners, lots

of heirs. We proceed to contact them all and discuss the project, enlist their support and negotiate easements.

We must also acquire land rights from government agencies, so every piece of land involved in a project has an agreement associated with it. Generally we succeed, but it can take a lot of time.

WATERMARKS: At what point do you get involved in a project?

HOFFPAUIR: The earlier we get involved, the better it is. We actually start with candidate projects in the CWPPRA planning process, before they've been selected for the Project Priority List and authorized for engineering and design under Phase One funding. Evaluating land rights early gives us a good idea about how much time to budget and what resources we'll need. It's not the size or the cost of a project that matters to us — it's the number of landowners, the number of pipelines, rights-of-way, and hunting and other leases that we have to deal with.

Sometimes we've worked with the landowners before and can give the project's planners an idea of what to expect. Sometimes we do a little screening of landowners we know, calling to ask, "What's your impression of this candi-



date project?" Often big corporations are so familiar with the CWPPRA process, so savvy, they know about projects before we do.

WATERMARKS: What motivates landowners to cooperate with you?

HOFFPAUIR: There are many conscientious landowners in the coastal zone. Many feel desperate about losing land, seemingly overnight, that their families have held for generations. They see CWPPRA projects as their last, best hope to stop the erosion and subsidence that is destroying their land. They're stakeholders in the wetlands; they want these projects to succeed.

When landowners harbor suspicions of our intents and purposes, we work to assure them we're not trying to stop them from doing what they've always done. It's estimated that 80 percent of the Louisiana coastal zone is privately owned. People depend on their property for income, for their livelihoods. They want to know a restoration project won't limit their ability to operate.

Of course we come across hurdles, but there are many ways to overcome them and come up with something that everyone can agree on.



Recognizing that a generations-old way of life will vanish with the wetlands, landowners in coastal Louisiana increasingly work with CWPPRA agencies in support of restoration projects.

WATERMARKS: What happens when you can't come to an agreement?

HOFFPAUIR: Quite infrequently failure to acquire land rights causes a project to be withdrawn. But usually, when we can't get an easement, we're able to alter the project's design and avoid the property in question.

We've had people refuse to sign because of the longevity of the easement, usually 20 to 25 years. Recently we finished a big project for shoreline protection and marsh creation on Lake Boudreaux. Our project crossed 56 tracts laid out in typical Louisiana fashion, long and skinny to give each farmer frontage on the bayou and access to waterborne transport of their produce. Among the 300 owners we approached were two owners of one tract who refused to donate an easement. They worried it would encumber any future sale of the property. Fortunately, because of the location of their tract and the project's configuration, we could adjust its design and continue.

We try to educate landowners about the projects, to enlist them as partners. Many times landowners help us get the agreement of other landowners, volunteering to find heirs

among their families and to circulate documents. Much of the land in the coastal zone has passed down from generation to generation. Five hundred people or more may have undivided ownership of a piece of property. It can take a great deal of time and extensive research to locate them and persuade them to donate land rights.

WATERMARKS: You've been doing this work for well over a decade. What changes have you observed among Louisiana's citizens, politicians and business leaders?

HOFFPAUIR: There has always been a core group very concerned about the coastal crisis. Especially in the southern parts of Louisiana, most people are well aware of the problems of land loss and the challenges of coastal restoration. I've met a large number of people who've been really positive, who've been willing to step up to the plate and become involved. My experience has given me tremendous respect for them.

Since the hurricanes of 2005, there's been a great increase in the sense of urgency to address the problems, a huge escalation in the desire to build projects. Recognition of CWPPRA leading on the issue

of coastal protection and restoration has grown steadily over the years, but it took off like a rocket after the hurricanes. It's pretty obvious that the idea that marshes help to protect us from storms has come to the forefront, that it's on everybody's mind.

This is a pivotal point in coastal restoration. New projects will be undertaken through CPRA, LCA, WRDA, CIAP, as well as through CWPPRA.* The mission of my office is to acquire land rights; our vision is to be a contributing member of the coastal restoration system while upholding the rights of private landowners. We have to do that by law — landowners have rights, and agencies must respect them. But laws are also created for agencies to do restoration. We try to bridge the gap between landowner rights and agency responsibilities. Usually, with patience, persistence and perseverance, we come to a winwin solution that allows us to continue to build projects for the protection and restoration of our fragile coast. WM

*Louisiana Coastal Protection and Restoration Authority (CPRA), Louisiana Coastal Area - Louisiana Ecosystem Restoration (LCA), Water Resources Development Act (WRDA), Coastal Impact Assistance Program (CIAP), Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA)

ROAD IMPROVEMENTS LEAVE MARSHES INTACT

Highway to Port Essential to National Energy Supply

Located at the southern tip of Lafourche Parish, Port Fourchon services half of the oil rigs in the Gulf of Mexico, making it a critical link between the United States and its offshore oil and gas interests.

onnecting this vital port to the mainland is Louisiana Highway 1, dangerously overcrowded and the only hurricane evacuation route for oilfield workers and residents of nearby Grand Isle. Running through a wetland that subsides roughly an inch annually, Highway 1 could sink below sea level in five years.

"Given the rate of land loss, simply widening this road would be a waste of time," says Ted Falgout, executive director of the Greater Lafourche Port Commission and chairman of the Louisiana Highway 1 Coalition.

Composed of local government and industry representatives, the coalition works to secure full funding for a plan to replace 17 miles of Highway 1, from Golden Meadow to Port Fourchon. Currently in the second phase of construction, the project is building an elevated

highway over the most threatened section of wetland. Moving equipment and materials on top of the bridge as it is built limits the project's footprint in the marsh.

"This construction technique costs more than traditional methods, but it's less harmful to the wetlands," Falgout says. "Like much of our working coast, Port Fourchon and the oil and gas industry depend on wetlands for protection."



A March 2007 groundbreaking launched Phase 1A of improvements to LA Hwy 1; a new fixed-level Leeville Bridge. Shown in this artist's rendering, the new bridge will soar 73 feet above Bayou Lafourche and Boudreaux Canal.

WATER MARKS

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