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EDITOR'S PICK | CENTERPIECE

Wetlands regulation ebbs and flows like the tide

By KATHRYN EASTBURN The Daily News Feb 2, 2019

Houses in Mar Bella are located behind a wetlands preservation site in League City on Monda
KELSEY WALLING/The Daily News

Danny Moran is a businessman who banks wetlands for a living.

Moran's Baton Rouge-based company, EcoSystem Renewal LLC, buys up land from Florida to Texas that has been disturbed by agricultural or commercial activity. Moran works with the U.S. Army Corps of Engineers and the Environmental Protection Agency to turn that land back into wetlands, and sells credits to other businesses that, in the course of their enterprise, have displaced a wetland.

In the Galveston Bay area, Moran's company has been restoring acreage abutting the Anahuac National Wildlife Refuge and selling credits to businesses across the county.

Industry pays top dollar for those credits to meet requirements of the federal Clean Water Act. When companies fill in a wetland to build on top of it, because their operations need to be waterside, for example, or for other reasons government regulators deem "unavoidable," they are required by law to offset that loss through compensatory mitigation.

In other words, if you take a wetland away you must compensate by replacing it with another.

Compensatory mitigation is required when dredging or filling land in a wetland compromises the biological, chemical or physical integrity of jurisdictional waters, as determined by the U.S. Army Corps of Engineers and enforced by the Environmental Protection Agency.

Which waters are jurisdictional is often a point of disagreement between the corps and wetlands scientists, but among those wetlands recognized by the corps, compensatory mitigation is required.

NO NET LOSS

This serves to fulfill the national wetland policy of "no net loss" President George H.W. Bush voiced in 1990. The goal is to balance wetland loss with wetlands building or restoration so the total acreage of wetlands doesn't decrease, but remains constant or increases.

The Clean Water Act and no net loss policy have steadily decreased the runaway rate of wetlands loss in the United States during the past several decades.

Yet, despite the fact that no-net-loss has been the policy for almost 30 years, the reality in Galveston County has been steady net loss of wetlands driven by forces such as land subsidence, sea level rise and the introduction of invasive plant species. Those causes the government can neither regulate nor mitigate.

Wetlands loss to development, however — filling in a wetland to build a subdivision, a business or a road — does fall under the corps' jurisdiction, and examples of mitigation permitted projects are everywhere around the county.

In League City, for example, when the Texas Department of Transportation bulldozed through a section of wetlands to build state Highway 96, 44 acres of undeveloped prairie nearby became the Dick Benoit League City Prairie Preserve through a mitigation agreement. The park is an undeveloped piece of coastal prairie now and League City plans to make it a nature park for locals in the future.

BIG INDUSTRY

Mitigation banking, like EcoSystem Renewal's, is a process that's growing in popularity both in Texas and other parts of the country, a multibillion-dollar industry that proponents tout as an ideal public-private partnership that protects against wetlands loss while supporting a thriving industry.

But wetlands preservationists, including a number in the Galveston Bay area, don't necessarily agree, arguing that depending upon wetland mitigation banks to protect these fragile lands often moves the site of a restoration project far away from where the damage occurred in the first place.

"Something people don't realize is the location of the wetland really matters for the ecosystem services they provide," said Lisa Gonzalez of the Houston Advanced Research Center. Those services might be storm surge buffering, erosion control, water storage and filtration, wildlife habitat or nursery habitat for fisheries, depending on the type of wetland and where it's located.

In the middle of these two groups is the U.S. Army Corps of Engineers Galveston Division, charged with the task of giving a thumbs up or down for building permits on wetlands, and then with the task of monitoring and enforcing mitigation.

Federal regulations are the only legal protections for Texas saltwater marshes and freshwater wetlands embedded in coastal prairies, like those on the Galveston County mainland.

BANKING ON A RICE FARM

More often than not, in recent years, federally required compensatory mitigation projects fall to mitigation banks like Danny Moran's. Nationally, banking has become the de facto preferred method of compensatory mitigation, according to a mitigation banking fact sheet published by the Environmental Protection Agency.

It costs a lot of money to restore a sizable wetland and takes a lot of time to restore them in a way that meets the corps' requirements, Moran said.

Investors finance the purchase of the land and initial restoration efforts, and credits sold are expected to yield a healthy return on investment once they're all sold and the project enters a lower-cost maintenance phase. If all goes as expected, Moran's company will profit while restoring ecologically significant wetlands.

Win-win? Some say yes, some say no and some say it's the best they can do within a complex system that, like the wetlands themselves, is fluid, dependent upon an ebb and flow of ideas, physical realities and government regulations.

Gulf Coastal Plains Mitigation Bank is a 1,957-acre site on the Bolivar Peninsula, surrounded by the Anahuac National Wildlife Refuge on three sides. It used to be a rice farm and, as part of the permitting process with the corps of engineers, Moran's company had to agree to restore the acreage to its former state as an inland freshwater wetland fringed by brackish marshes.

LONG PROCESS

Moran started seeking permits for the Gulf Coastal Plains Mitigation Bank 10 years ago and finally got permits five years ago, he said.

"It was the first coastal zone bank in Texas," he said. The property, before it became a rice farm, was roughly half tidally influenced wetlands or salt marsh and half coastal prairie hosting non-tidal freshwater wetlands, Moran said.

"We had to remove anything that changed it from its original state; in this case, a levee that blocked it from tidal influence," Moran said. Construction was underway in 2017 when Hurricane Harvey dumped 50 inches of rain on the area, burying two excavating machines in the mud. But 455 acres have been restored as of two years ago, requiring consultation with hydrologists and plant scientists, clearing and planting the land and continually revisiting the terms of the permit with the corps of engineers.

Moran has come full circle from a businessman who bought timberland and cut down trees to a businessman who has planted "4 or 5 million trees" in the past 10 years, he said.

Under the corps permit, Moran's company is responsible for controlling invasive species and replacing native plants and must monitor the success of the restoration, mapping out the land in quadrants, counting plants and determining how well revegetation proceeds, he said.

"When we started in Galveston there were only seven mitigation banks in the entire district," he said. "Now there are 12 to 14."

Getting corps permission to sell the credits has been slow and only 30 percent had been released by the end of 2018, Moran said.

He sold them to companies up and down the bay.

"We banked credits for Texas Department of Transportation construction on the Bolivar Peninsula, for construction near Clear Lake, for drainage districts, for some of the large chemical plants and for several private subdivision developments," he said.

That means many of the wetlands displaced were far away from the mitigation site. The value of their services was not replaced where they formerly existed, but the banking agreement nonetheless fulfilled the no-net-loss goal.

Technically, mitigation sites must fall within the same watershed of the area of loss, but the exact parameters of those watersheds can be interpreted either broadly or narrowly, according to scientists concerned by those definitions.

'ALL WE CAN DO'

Kenny Jaynes, chief of the Compliance Branch, Regulatory Division, U.S. Army Corps of Engineers Galveston District, is in charge of seeing that permitted projects like Moran's do what they say they're going to do.

Jaynes confirmed that mitigation banking is growing in the area and that the corps is seeing an increasing number of applications for permits from prospective bankers.

Along with 10 others in his branch, Jaynes oversees compliance of all area mitigation projects and said it's "not very common and not exceptionally rare" for them to be out of compliance.

"It all goes back to their agreement," he said. "They might agree, for example, to get their excavation work done within two years, then take a year for planting. Their agreement might promise 70 percent survival within five years."

Jaynes' department regulates only wetlands defined by the federal government and not all wetlands are regulated, he said. That definition is clouded by ongoing court actions in which the feds are trying to exclude some freshwater wetlands from protection, including prairie pothole complexes found on the mainland of Galveston County.

Stretching across the county, these freshwater wetlands are being lost at a higher rate than coastal wetlands, according to the Environmental Protection Agency, in part because their protected status has been in question, allowing development to encroach on them.

The corps is constrained by a number of factors, Jaynes said.

"We're not as rapid as everybody would like," Jaynes said. "We're handling the entire Texas coast and part of Louisiana and we're understaffed."

The state of Texas has always had the capability to regulate special aquatic sites, including wetlands, Jaynes pointed out.

But as with wetlands, efforts to pass laws to protect these sites at the state level have surfaced and subsided over time at the state legislature, he said.

"We can only look at what the federal law says, at what's in our purview, and that's all we can do," Jaynes said.

RECORDS GAP

Some area scientists argue that the wetland permit process required by the Clean Water Act, Section 404, the only regulatory process in place to protect wetlands, isn't doing all it's set up to do.

Research conducted in 2014 by the Texas A&M AgriLife Extension Service and Houston Advanced Research Center looked at permits on file with the corps and found, in many cases, no documentation of evidence that the agreed-upon mitigation had been completed. In some cases, it was unclear whether any mitigation activity had taken place at all.

Jaynes said he was not aware of the study that questioned whether the record-keeping system at the corps had failed to adequately monitor mitigation projects or whether permittees were failing to do the mitigation work they promised to do.

The study concluded that "area resource managers should carefully monitor the quality of wetland mitigation the public is getting under the Clean Water Act Section 404 program."

Experts with Texas agencies — including biologists from the Department of Parks & Wildlife like Andy Sipocz, who used to review mitigation banking permits — partner with the corps in review processes of mitigation permits.

"Long story short, a lot of these banks just were not working out very well when I was doing this in the early 2000s," Sipocz said.

In response, the corps put together a mitigation action team and made recommendations on how to improve the banking process, reaching out to agencies with wetlands expertise.

“It’s a difficult thing to get this right,” Sipocz said. Re-created wetlands sometimes didn’t have the right soil types, plant species or water characteristics to fulfill traditional wetland functions, he said.

INFORMATION VACUUM

Lisa Gonzalez and Erin Kinney of the Houston Advanced Research Center have been looking at trends in wetlands loss for more than a decade and decided a few years ago that if they wanted to understand what’s going on, they needed to look closer at the regulatory process.

They discovered it was difficult to find information on required mitigation projects, Gonzalez said.

“You can usually find the location of the permit, the type of activity that’s permitted, sometimes the amount of acreage and most of the time who the applicant was, but in terms of numbers of permits and compliance, accessing that information is more difficult,” Gonzalez said.

Gonzalez cited funding and resource issues as problems as the federal government cuts back on regulatory processes.

“It’s not that the corps is not doing their job,” she said. “They’re meeting the requirements of the federal government, and they can’t exceed them.”

Still, the letter of the law is often overlooked, Gonzalez said.

In 1990, the Environmental Protection Agency and the corps agreed to define mitigation as three steps to be taken in this order: avoid, minimize, compensate. These principles are supposed to be applied to all permit decisions, but the compensation component has become the primary focus of mitigation policy development and the basis for most permitting, according to the journal Wetlands Ecology and Management.

“Wetland avoidance is preferable because it’s more likely to protect and enhance existing ecosystems services,” Gonzalez said.

‘NOTHING SIMPLE ABOUT THIS’

Attorney Jim Blackburn, of Houston, professor in the practice of environmental law in the Civil and Environmental Engineering Department at Rice University, spent many years teaching wetlands regulations for the federal government and the corps until the late 1990s, and learned a lot about how the program unfolded, he said.

“Every now and then, the Supreme Court makes an interpretation that helps or not,” he said, adding that the program was controversial from its inception and remains controversial today, especially in terms of weaknesses in regulation.

“I would say the program has been extremely successful in protecting coastal wetlands, marshes along the coast, but it has been almost spectacularly unsuccessful in protecting biological wetlands away from the coast, particularly the prairie pothole areas in our part of the world,” Blackburn said.

Different districts around the country interpret differently which wetlands fall under their jurisdiction, Blackburn said, and the Environmental Protection Agency is responsible for jurisdictional determination as well, but the corps is on the front lines, taking applications and issuing permits.

“I’d say there’s nothing simple about this,” Blackburn said.

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A spotty paper trail

• Over 7,000 mitigation permits issued from 1990 to 2012 in the eight-county area around Houston, including Galveston County, by the U.S. Army Corps of Engineers

• Of 110 requested under through the federal Freedom of Information Act, 51 were out of compliance in terms of documentation about some aspect of government's three-part definition of mitigation — avoidance, minimization or compensation.

• Of 62 permits requiring compensatory mitigation, 38 (61 percent) were out of compliance with compensatory mitigation requirements

• Three of 10 permits for mitigation banking didn't comply with regulations because they lacked evidence that credits were ever purchased.

• Most of the problems cited entailed missing monitoring reports or other required documentation.

Source: Wetland Mitigation under the Clean Water Act in the Houston-Galveston Region, published by the Texas A&M AgriLife Extension, 2014.

Note: The study concluded that it's unclear whether a lack of records means mitigation is not being done or whether records are simply missing.

Low Lands, High Stakes

A six-part series — Low Lands, High Stakes — explores challenges and opportunities facing the wetland environment in Galveston County in context of historic flooding, sea rise associated with climate change, a booming population and threatened withdrawal of wetlands protections by the federal government.

Jan. 27: Part 1, The Burden of Flat Land, examines the historic loss of wetlands in this area and why now is the time to look closely at the purpose wetlands serve in Galveston County.

Today: Part 2, The Ebb and Flow Government Oversight, will examine provisions of the federal Clean Water Act designed to protect wetlands; mitigation banking as a wetlands protection strategy; and perspectives from area scientists and government workers on the shortcomings and advantages of the system in place. Today

Feb. 10: Part 3, A Legal Swamp, will look at legal efforts surrounding wetlands protection including U.S. Supreme Court decisions, Texas cases over the last decade and cases currently being filed by area activists in the face of the Trump administration's proposed threats to wetland protection.

Feb: 17: Part 4, A Wealth of Wetland Riches, will explore wetland restoration and preservation efforts in Galveston County, what they have accomplished and the future of wetland protection.

Feb. 24: Part 5, Local Governments in the Gap, will examine the role of state and Galveston County municipalities in protecting wetlands while supporting development; what local governments can do to assist private efforts to protect wetlands; and why they should be involved.

March 3: Part 6, The Future is With Us Now, will explore creative strategies, including public policy, business and citizens' efforts aimed at a future that equally values economic development and protecting wetlands.

Kathryn Eastburn
Reporter

(6) comments

Marc Edelman Feb 3, 2019 9:00am

Thank you Kathryn for your excellent and interesting articles, Your well structured writing style makes them easy to read and understand. Galvnews needs more reporters like you.

George Croix Feb 3, 2019 10:01am

"Selling credits..."

Well, why not...it made another guy a 100 million bucks.....opportunity abounds.

Gary Miller Feb 3, 2019 10:48am

Compensatory mitigation? When mitigation is a rainwater pond to replace salt marsh destruction there is no compensation. A housing development canal through a salt marsh may only, by regularity verbosity, affect one or two acres but harmfully change drainage of hundreds of acres.

George Croix Feb 3, 2019 11:06am

Gary, there ya go screwing up perfectly good rationalized artificial equivalencies again.....

Wayne Holt Feb 4, 2019 6:51pm

This kind of in-depth reporting of issues is very helpful for the reader to gain a better understanding of all sides of often complex issues. Thank you and well done!

Chula Ross Sanchez Feb 5, 2019 2:17pm

Excellent! Information and in depth reporting. Thank you, Kathryn Eastburn. Galveston does not have a wetlands ordinance, relying on the Corps to protect our island habitat and regulate development adjacent to marsh wetlands and tidal flats. Our wetlands are Mother Nature's way of defending the barrier island we live on. We should give her a helping hand, not give away our assets.