

Florida Trend

Paving Paradise: Florida's Vanishing Wetlands and the Failure of No Net Loss

By Craig Pittman and Matthew Waite

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Read an excerpt of the new book 'Paving Paradise: Florida's Vanishing Wetlands and the Failure of No Net Loss' by Craig Pittman and Matthew Waite. It's an expose of state and national wetland protection laws.

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Ch. 9: The Myth of Mitigation

This is how no net loss really works:

Florida's Panhandle is known for its sugar-white beaches and its picturesque dunes. But amid the dunes on Pensacola Beach lie scattered marshlands, lush with saltmeadow cordgrass and pennywort. These marshes are vital to the purity and health of the emerald green waters of nearby Santa Rosa Sound, home to a plethora of sea trout, redfish, ladyfish, and jack crevalle.

In 1997, a development company with control of 28 acres of the beach proposed building a \$250-million luxury condominium project called Portofino. The plans called for building five towers, each with 150 units, each 21 stories tall. The Portofino condos would be the tallest buildings between Tallahassee and New Orleans.

The two main partners in the company building Portofino were lawyer Fred Levin, a leading Democratic Party fundraiser with close friends at all levels of government, and his brother Allen, one of the Panhandle's most successful developers. Fred Levin's name carried a lot of weight in Florida. He used his political contacts to score a multimillion-dollar fee from a major tobacco case, and then made such a hefty donation to the University of Florida that the law school was named in his honor. He gained further fame by helping to manage the career of boxing champion Roy Jones Jr.



[Photo: Lara Cerri, St. Petersburg Times]

Clean Water Network activist Linda Young walks through sparsely vegetated man-made marshes on Pensacola Beach that were supposed to mitigate the destruction of wetlands to build the Portofino condominiums, seen in the background

Fred and Allen Levin grew up on Pensacola Beach, where their father once held the exclusive concession contract for selling snacks and souvenirs to the tourists. Back then Pensacola Beach was a sleepy little resort village with scattered mom-and-pop motels and lots of one-story concrete-block homes available for rent by the week or month.

But the Levins' minds were not fogged by nostalgia. They saw the beach as a resource to be exploited. Still, they appreciated the role nature played in making the property attractive to buyers. So they planned to preserve several of the picturesque dunes as part of their project—but not the marshes that were so important to the sound. Those did not fit the Levins' aesthetic vision. "When we did our development, we could not do a development on this acreage without impacting some wetlands," Allen Levin told us. They did not want to shift their buildings around to keep the marshes intact, he said, "because then the buildings would be right on top of each other, and we liked the distance."

Of the 11 acres of marsh on the site, the Levins asked the Corps for a permit to dump fill into 6.5 acres—in other words, more than half.

Other federal agencies lined up to oppose the Levins' plans. The U.S. Fish and Wildlife Service strongly objected to wiping out the marshes. So did the EPA and the National Marine Fisheries Service. They all said those wetlands were too important to keeping Santa Rosa Sound clean and full of fish.

Beach residents opposed the Levins' project too. It was too big, too gaudy, too vulnerable to hurricanes, they said. It didn't fit their low-profile neighborhood and would cause all kinds of traffic problems, they warned. A residents' group even sued the developers over whether they could alter the land. Shortly after the Corps published a public notice in 1998 about Portofino's 404 application, the residents petitioned the Corps to hold a public hearing.

"We kept writing, we kept calling," recalled beach resident Jean Kuttina, who led the neighborhood opposition. "We had several letters of objection, we had the lawsuit going. None of it did any good."

In 1999 an environmental activist named Linda Young, a Panhandle native who headed up the

Florida chapter of the Clean Water Network, persuaded a top Pentagon official in the Clinton Administration to tour the site. She was hoping to persuade him to block the project. She recalls Deputy Assistant Secretary of the Army Michael Davis walking around the beach as she talked to him. Then, she said, Davis told her, "This project does not need to happen."

"He was adamantly opposed to it," Young recalled. "But then he went back to D.C. A few weeks went by, and I called him. And he said, 'I can't stop this project. These people are too powerful.'"

Davis remembers the tour and remembers thinking Portofino was a bad idea. But he denies telling Young the well-connected Levins were too powerful to stop. "I would've never said those words," he insisted. Instead, he said, he probably made some comment about the permitting process being too far along for even the Pentagon to halt it.

Allen Levin told the Pensacola News Journal that the last thing he wanted to leave behind was a legacy of environmental destruction.

"Somebody would have to be a total jerk to want to hurt the environment," he said. "It doesn't make sense. Good developers won't do that. I really believe in this project we are putting more back in than we are taking out."

The Levins promised to build new man-made wetlands to replace the ones they were destroying. The mitigation would make it all okay, they said. However the wildlife service predicted the beach wetlands were just too delicate to be duplicated. That's why the agency urged the Corps to say no to the permit.

"We told them it would be almost impossible to mitigate," said Hildreth Cooper, a Fish and Wildlife Service biologist. "We told them they should either deny the permit or admit they can't mitigate for it." Even trying to preserve some of the wetlands on the site wouldn't work, the wildlife agency predicted. Past attempts by beach developers to save a few marshes while destroying others had cut off the flow of water, starving the marshes that remained.

The Corps permit reviewer in the Pensacola office, a dutiful bureaucrat named Lyal "Clif" Payne, spent two years struggling to save the wetlands and still make the developers happy. He didn't want to approve the permit the way it was, but he didn't want to deny it either. So he kept suggesting changes that might make the Levins' project more palatable: Cut the number of buildings back to three? Add even more mitigation? Nothing worked.

The developers weren't too thrilled with even preserving some of the marsh in its natural state, telling Payne at one point that the wetlands "would be managed to remove the unsightly effect they have on (their) surroundings."

Finally, frustrated with what he saw as Payne's hemming and hawing, Allen Levin had a heart-to-heart conversation with Payne's bosses in Jacksonville.

"When it finally got to the very higher-ups, we were finally able to get some relief," he said.

Corps officials decided the agencies objecting to the project were off base, and so in August 2000 they approved the permit. The Corps did order two small marshes on the project site to be preserved. They allowed the rest to be wiped out by the

Levins' condo project.

For mitigation, the Corps approved the creation of man-made wetlands on county-owned land, along with a little something extra. In October 1995, when Hurricane Opal made landfall at Pensacola Beach, the storm had knocked down most of the big dunes and washed them across the island, leaving a thick layer of sand across the property next door to Portofino. Requiring the Levins to build their mitigation there would not only replace the natural marshes, the Corps concluded. It would also result in all that sand being dug up and used to rebuild the destroyed dunes, thus benefiting the whole island.

On the same day the Corps issued the permit, its top official in Florida, Col. Joe Miller, notified all the residents who had asked for a public hearing that there wouldn't be one. The next day, Miller retired from the Army.

The Corps' behavior left a bad taste in Kuttina's mouth.

"They're destructive people," she said. "They're not really going to save anything." By July 2004, when we toured the site with Linda Young, three of the towers had been built and occupied and the other two were under construction. They loomed above one-story houses next door. Sales were brisk, with some units selling for more than \$500,000.

But the man-made wetlands that the Levins had built looked nothing like the lush natural ones they had wiped out. Most of the year they were bone dry, until heavy rains hit. Then stagnant water puddled up two inches deep, the surface broken every foot or so by a few strands of thin brown grass.

"There's no way that mitigates for the adverse impacts that project is having," grumbled Young. She slipped off her shoes and splashed through the standing water, then giggled and pointed out that the straggly sprigs of grass looked like a bald man's hair implants.

"It's not exactly what you'd call thriving," she said.

Two months later, something entirely predictable happened.

On September 16, 2004, Hurricane Ivan roared through the Panhandle. The storm knocked down the dunes that Portofino had recreated, sweeping the sand across the highway and deep into the lobby of the condos. The sand also spread across the same areas of the beach that Opal had covered a decade before. The thick layer of sand that Ivan dumped on the man-made marshes smothered them. It was as if they had never been built.

Since the man-made wetlands were destroyed through a natural disaster, the Corps would not make the Levins rebuild them, Payne told us. The failure was not the Levins' fault, he said. Actually, he explained, the Corps considered it an act of God.

So to sum up: wetlands that were crucial to the health of Santa Rosa Sound and its sea life were filled in and paved over because saving them didn't fit the plans of some powerful people. The federal agency that was supposed to save them instead bent over backwards to aid their destruction. The developers' attempt to make up for the damage failed, and their failure carried no consequences.

Yet in the Corps' recordkeeping, the Portofino project was a success. There was no net loss of wetlands.

What happened at Portofino illustrates both the myth of mitigation and its consequences.

On paper, filled-in wetlands are being replaced and everything balances out. In reality, they are swept aside by the works of man and nothing makes up for them. Development races across the land with all the speed and power of a hurricane hitting a beach, and the attempts to replace what it destroys usually result in expensive failures.

"Mitigation," Vic Anderson said with his usual bluntness, "is a fraud." In the case of Portofino, the loss of wetlands was on a small scale. Many man-made wetlands are what are commonly called "postage stamp wetlands"—small mitigation sites, often built in a new subdivision near the site where the natural wetlands were destroyed. Those used to be the standard requirement for 404 permits, but not any more.

"A lot of the postage-stamp wetlands have not proven viable," veteran Corps biologist Chuck Schnepel told us. Ultimately, he said, "they're used as a playground, or as dumping grounds. Or they become invaded by noxious or exotic vegetation." Usually the developer dumps the job of maintaining them on a homeowners association, which has no idea that it's responsible or what to do about it. Eventually the man-made marsh becomes a cattail-choked mud puddle.

When the panel from the National Research Council reviewed the sorry state of mitigation in America, the panel declared in its 2001 report: "In many cases this approach has resulted in the creation of open water areas as compensation for loss of intermittently inundated or saturated wetlands. . . . The stable-water pond has come to typify mitigation efforts in many parts of the country."

Such ponds—the same ones that Gale Norton insisted were being given a bad rap—"will not replace the functions provided" by natural wetlands, the NRC concluded. According to the flawed survey produced for Gale Norton's announcement, quite a few of those ponds started off as Florida mitigation wetlands.

Those are the small mitigation projects. But now look what happens when phosphate mining companies spend 30 years digging up thousands of acres of Central Florida land to get the ingredients for fertilizer—and then try to make up for such vast destruction.

First discovered by a Corps of Engineers captain in 1881, Florida's phosphate deposits today form the basis of an \$85-billion industry that supplies threefourths of the phosphate used in the United States.

To get at the underground deposits, the miners use a dragline with a bucket the size of a truck. It scoops up the top 30 feet of earth and dumps it to the side of the mine pit. Then the dragline scoops out the underlying section of earth, which contains phosphate rocks mixed with clay and sand. The bucket dumps this in a pit where high-pressure water guns create a slurry that can then be pumped to a plant up to 10 miles away.

At the plant, the phosphate is separated from the sand and clay. The clay slurry is pumped to a settling pond, and the phosphate is sent to a chemical processing plant where it is processed for use in fertilizer and other products. The sand is sent back to the mine site to fill in the hole after all the phosphate is dug out.

A byproduct of the processing, called phosphogypsum, is slightly radioactive so it cannot be disposed of easily. The only thing the miners can do with it is stack it into mountainous piles next to the plant. Florida is such a flat state that the 150-foot-tall "gyp stacks" are usually the highest point in the landscape for miles around.

When phosphate miners destroy a wetland, they promise to replace it a few decades later when they're finished—a seemingly impossible task. After all, as Florida wetlands expert Kevin Erwin told us, "You're really talking about creating wetlands after 60 to 80 feet of earth have been souffléed."

The odds against success are higher than any gyp stack. Forty percent of the land that's left behind after mining is covered by the clay settling ponds. Within five years a crust forms on top of the ponds, but the stuff under the crust remains about as hard as a bowl of chocolate pudding. That means the old clay settling areas are too unstable for building or for anything else. Meanwhile the sand-filled pits drain too fast to hold water—a serious problem for any would be wetland.

The idea of requiring the miners to try to re-create wetlands seemed reasonable in the late 1970s. Col. James W. R. Adams, the district engineer in Jacksonville from 1978 to 1981, told us he had denied 404 permits for several phosphate mining companies and was catching a lot of heat for it because phosphate was viewed as important to maintaining the nation's balance of trade.

"I had all kinds of people calling me saying, 'Jim, be reasonable,'" Adams recalled. So he proposed that, in exchange for getting their permits, the phosphate miners restore the wetlands they destroyed. After all, they had the money to do it right. "We worked out something very concrete, and we had a historic and great agreement. Everybody was really happy about it," Adams said.

Since then, Florida phosphate companies have spent millions of dollars recreating thousands of acres of wetlands wiped out by mining in Polk, Hillsborough, and Manatee counties—or rather, attempting to re-create them. One of the earliest phosphate mitigation sites in Florida was Hooker's Prairie, the mine site in Hillsborough County that Vic Anderson tried to save by suggesting the miners get their phosphate from Morocco instead.

"It was like Payne's Prairie near Gainesville—before W. R. Grace proposed mining it," Anderson told us. "It was a sawgrass prairie . . . I said, 'We ought to deny this permit.' . . . Instead we decided to mitigate." Anderson urged his bosses at the Corps to monitor the mitigation closely, in a rigorous scientific fashion, to see if it really worked. But Anderson's boss, John Adams (no relation to the colonel), told him the Corps had no time for that.

"John Adams said no, you've got to process these permits," Anderson said. As a result, "we're making these same mistakes 30 years hence."

Anderson didn't get the chance to check on what happened to Hooker's Prairie until years later. When he drove out there, what he found was not a sawgrass prairie but something far less complex, a broom sedge marsh—and thus not something that truly replaces what the miners destroyed.

The track record for phosphate mitigation hasn't improved since Hooker's Prairie was mined. In 2002, in preparation for a lawsuit in which he was listed as an expert witness, consultant Kevin Erwin toured several wetland mitigation sites built by IMC-Agrico, then the largest phosphate company in the world (it has since merged with another company, Cargill, to form an even larger company called Mosaic). Erwin found that virtually all the wetlands the company built were deep marshes, with standing water two to four feet deep.

"We didn't see an acre, let alone the hundreds of thousands of acres, of pine flatwoods that they had mined," Erwin said.

Erwin said he asked his IMC tour guides to show him how the company had recreated a wet prairie. That particular type is extremely difficult to rebuild, he said, but the site the mining officials showed him surprised him. The vegetation looked perfect, as if it had been growing there for decades. But then Erwin looked a little closer and discovered that this wet prairie had no roots.

"What they'd done is gone out in a wet prairie before it was mined and used a sod cutter," Erwin said.

After slicing a swath of vegetation from one location, he said, the company brought the swath out to its mitigation site and rolled it out like a section of carpet. But the miners forgot something important.

"I took some borings and the water table was several feet below the surface," Erwin said. Since wetlands need water flowing through them to survive, these were unlikely to last long.

Erwin's testimony helped convince a judge to rule against IMC, which had sought a permit to mine 2,300 acres in Manatee County. Mining the IMC property would destroy 600 acres of wetlands that form the headwaters of Horse Creek, one of the cleanest streams in the state. Horse Creek is also a major tributary of the Peace River, which supplies drinking water for 100,000 people and ultimately gushes into the state's most productive estuary, Charlotte Harbor, itself the center of a billion-dollar tourism and recreation industry.

Although IMC had promised to build new wetlands to replace the ones it had destroyed, the judge found that those man-made wetlands would differ too much from the ones there now. The mine site boasts a variety of wetlands, some shallow, some deeper, but IMC planned to build just one big, deep wetland, the judge found.

The company tried to show the judge that it has rebuilt other wetlands it damaged by mining. But the evidence Erwin presented showed those mitigation wetlands are not working as well as natural swamps, "despite the fact that most of them have been in existence for more than 15 years," the judge wrote in his decision.

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Although the phosphate miners had destroyed thousands of acres of wetlands, they did it over three decades. According to John Hall and Bob Barron, year in and year out the greatest destroyer of wetlands in Florida is the state itself—or rather, one agency: the Department of Transportation, commonly known as the DOT.

With a \$7-billion budget, the DOT is Florida's most powerful state agency. Its nearly 7,500 employees oversee more than 12,000 miles of highways. It can condemn property and force the owners to move. And every year it kills lots of wetlands.

The DOT doesn't just kill wetlands by paving them over. When a new road is built, then-DOT Secretary Denver Stutler told us in 2005, "it's going to open up corridors for potential growth." In other words, development follows the roads, wiping out still more wetlands all along the route.

Stutler, who previously worked in a mitigation-related business, said destroying wetlands for roads is the price Florida pays for continued growth.

"To me, transportation is the backbone of our economy," Stutler told DOT employees in a 2005 speech in Sarasota. "And it takes a strong economy to afford the environmentalism we ascribe to here in Florida."

We discovered that DOT officials did not keep track of all the wetlands they destroyed each year. They were too busy building new roads. But agency records we reviewed showed the DOT wiped out more than 1,000 acres of swamps, bogs, and marshes between 1997 and 2005.

The DOT has to go through the same permitting process as the average developer and thus has repeatedly tried to make up for the damage it does through mitigation. DOT officials also didn't know exactly how much of the taxpayers' money they had spent on mitigation, but agency records showed it was more than \$62 million during that same eight-year period. How much more we simply could not determine, because the documentation did not exist.

We spent months digging through boxes and boxes of DOT mitigation records, squirreled away in places like Bartow and Palatka and Brooksville. We pored over monitoring reports and interviewed DOT staffers and visited mitigation sites. We found that whenever the DOT has built its own wetlands, they failed, over and over.

"It's not easy to re-create what God put here," said Sue Moore, who oversees the maintenance of dozens of the DOT-built wetlands in the Tampa Bay region.

Yet the DOT kept trying. One seven-acre wetland the DOT built off State Road 44 in Crystal River in 1990 was planted with trees that an expert later found were doomed by root problems. Water management officials warned the DOT in 1992 that the site was too dry—in fact, the wetland was built on sand, with the water table some four feet down. The DOT nevertheless planted 3,000 more trees. Still, no wetland. Finally, in 1998, the DOT abandoned the effort and the site is now overgrown with upland vegetation.

Then there was the man-made wetland in Polk County that got too wet. In 1994, the DOT planned to widen U.S. 17 where it crosses the Polk-Hardee county line. Because that would destroy about 2.5 acres of wetlands adjacent to the road, the DOT proposed as mitigation turning five acres of pasture by the Peace River into new wetlands. A consultant hired by the state predicted that the new, man-made wetland would be better than the destroyed one.

By July 1995, the DOT had planted cypress, sweetgum, red maple, and other wetland trees, grasses, and shrubs. In the next three months, though, the river overflowed, killing them. So the DOT replanted.

But in late 1997, a storm put the man-made wetland under six feet of water, wiping out hundreds of the new trees. When consultants checked the site in April 1998, they reported finding "no living vegetation." The water was so deep that they found fish jumping as if it were part of the river. When the DOT's consultants checked in again in August 2004, they found it underwater again. Dead trees were sticking out of the water, they reported, "and many more were detected below the water surface."

So after spending 10 years and \$242,000, the DOT had not only failed to build a wetland that was superior to the one destroyed—it had failed to replace the natural wetland at all. Rob Dwyer, the DOT employee who oversees the Peace River mitigation area, calls the site "problematic."

"I would think we would have to throw in the towel at some point," he said, though he wasn't sure when that point would be reached.

This sort of thing happened all over the state. Down in the Keys, the DOT spent \$66,000 planting

thousands of mangroves on a half-acre site in Whale Harbor. They kept dying. The agency replanted the mangroves four times. It even dug out the soil and put in fresh muck. Nothing worked.

At one point, the DOT dropped the ball for a while, failing to plant more mangroves or report on its progress. The Florida Department of Environmental Protection (which had replaced the old DER) didn't notice. Then, in 1995, a DOT employee reviewing the files discovered the problem and asked the DEP what to do.

The response: forget it. The regulators asked, "If FDEP isn't asking for it to be fixed, why is FDOT pursuing it?"

Yet the DOT persisted for another four years, spending even more taxpayer dollars on planting more mangroves. In 1999, after 11 years of trying, the DOT finally gave up and declared Whale Harbor a failure.

We found numerous examples of DOT mitigation failures, but our favorite by far was the one connected to the bridge over the Withlacoochee River in Citrus County in 1990. The new State Road 44 bridge destroyed less than an acre of wetlands. The DOT's efforts to build a new wetland to replace it ran into repeated problems. Then, after nine years of trying, it began at last to flourish. That's when the DOT widened the road, destroying the man-made wetland it had worked so hard to create.

A DOT employee asked if the agency needed to build new wetlands to replace the man-made wetlands that replaced the natural wetland—in other words, should they mitigate for the mitigation?

In response, a Southwest Florida Water Management District wetlands expert named Mark Brown fired off an e-mail that said: "STOP THE MADNESS!!!"

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That mitigation fails should come as no surprise to anyone involved in wetlands regulation. The failures have been obvious to wetland scientists for 30 years.

The practice of requiring mitigation for wetland impacts began in the late 1970s. At the time, it seemed to federal regulators like a way to hold the destroyers of the environment to a higher standard, forcing them to give something back to nature in exchange for getting their permits.

By 1981, the Corps was requiring 5,000 acres of new wetlands to be created or old wetlands to be restored nationwide—though that fell far short of the 50,000 acres of wetlands the Corps allowed to be wiped out. But soon scientists were questioning whether mitigation could really replace what was being destroyed.

In 1987, when the National Wetlands Policy Forum was coming up with the no-net-loss policy, wetland experts handed the committee members briefing papers on various issues they ought to consider. Among the briefing papers was a prescient warning against relying too heavily on mitigation to save the day.

The warning, written by Jon Kusler, chairman of the Association of State Wetland Managers, noted the need for more research but pointed out that the limited surveys of mitigation wetlands done so far had found that that "about half of the projects

failed in one or more respects.”

In fact, Kusler wrote, “wetlands scientists seem to agree that no wetland can be duplicated or replicated exactly. Most natural systems are far too complex, and represent thousands of years of geologic and hydrologic processes with resulting accumulations of soil profiles and ecologic niches of plant and animal species.”

Kusler told us that as early as 1977 wetland experts from around the nation were aware that man-made wetlands often failed. “Even back then, people were saying hey, some of this works, some doesn’t,” he said.

The members of the wetlands forum saw Kusler’s report and knew what it meant, he said. But “remember, there were lots of people on there, homebuilders and everybody else was on that forum,” he explained. “The feeling was: better to get half a pie than no pie at all.”

In other words, they felt it would be better to get lots of mitigation, even if much of it fails, than to get little or none. The reason, Kusler explained, is simple: while scientists may know that reproducing natural wetlands is virtually impossible, and thus wiping them out causes damage that can’t be repaired, “it’s one thing to know, and another to have a political will.” And there was no political will for declaring all wetlands off-limits.

So the forum’s final report still listed mitigation as a way for the nation to hit its no-net-loss target, contending that “achieving the goal will require increased compensation for wetlands alterations through a higher rate of restoration of former and degraded wetlands and, where feasible, creation of new wetlands.”

Somehow, though, that call for restoration over creation got lost as the proposal was turned into a policy.

In 1990, when the no-net-loss policy was adopted by the Corps and EPA, the two agencies agreed to follow a three-step process with each 404 permit application: First, try to avoid building anything in wetlands. Second, if wetlands couldn’t be avoided, try to minimize the impact on them as much as possible.

Third, if the wetlands couldn’t be avoided and the impact was as minimal as possible, then and only then could the Corps consider requiring mitigation for the damage.

Today, though, mitigation has gone beyond merely making up for lost wetlands. Now it’s used as a justification for wiping out natural wetlands. Mitigation has jumped to the head of the line for the state agencies issuing wetland permits—and that limits what the Corps can do, Corps biologist Steven Brooker told us.

“They’ve stopped doing avoidance,” he said. “Now they’re hardly doing minimization. They’re going straight to mitigation.” Developers submit plans with “ridiculous impacts,” he said, and instead of denying the permits “you just throw a lot of mitigation at it.”

A prime example of that is a highway project in the Keys known as the 18-Mile Stretch. The two-lane road runs from the southern Everglades to Key Largo, and there have been car crashes at night along its more isolated stretches. In 1988 the DOT proposed widening the road to four lanes, destroying 164 acres of wetlands. It said widening the road would ease hurricane evacuation, improve safety, and accommodate growth.

But Keys residents feared it also could pave the way for a population boom in the fragile Keys. Brooker was the permit reviewer at the time, and he passed along those concerns to Col. Terry Rice, then in charge of the Corps in Florida.

"I was half a week in the Keys with Col. Rice—he saw what was going on. I had his support after that," Brooker said. "It would've been a better highway, but the secondary and cumulative impacts—a term everybody was afraid of then—were really huge."

Rice said he kept asking state officials, "What are you doing to make sure this is not going to inspire more growth in the Keys that's going to outrun your hurricane evacuation plans?" He never got a satisfactory answer, he said. So Rice told state officials he was going to deny their federal wetlands permit. Instead the DOT withdrew its application and revamped its plans.

By then, though, the DOT already had begun building 385 acres of wetlands to make up for the damage it expected to cause by widening the road. In 1995 it filled in more than 6 miles of an old canal, making it more like the Everglades, and tried to create 12 tree islands like the ones dotting the River of Grass. The DOT also filled in an area that had been illegally dredged and planted thousands of mangroves there.

In 2003 the DOT scaled back the highway project and asked for a new 404 permit—and now Brooker was no longer the permit reviewer. Instead of four lanes, the DOT application called for a wider paved shoulder and a threefoot concrete barrier between the two lanes. But the new highway plan still called for destroying 103 acres of wetlands. So DOT promised even more mitigation to make up for the damage. It pledged to build another 41 acres of wetlands, although some of that would be at the U.S. Navy base in Key West, 100 miles away.

The Corps approved the permit in 2004, even though Corps officials wrote that the project "does not increase hurricane evacuation." Although Keys activists had suggested several ways to improve traffic safety while avoiding destroying so many wetlands, the Corps did not even consider those alternatives, noting only that the agency "typically defers to the FDOT . . . in highway safety issues."

In the official record of decision, the Corps wrote that its staff was particularly impressed with the DOT's mitigation, which it said would "outweigh the minimal detrimental impacts" of destroying wetlands in the Everglades and the Keys. The mitigation became the justification for issuing the permit.

However, when we looked at the DOT's monitoring reports on the mitigation it had already built, here's what we found: after struggling for a decade and spending more than \$1 million of the taxpayers' money, the DOT's mitigation was a failure any way you looked at it.

"So often the best-laid plans just don't work," said John Palenchar of the DOT's Miami office, who oversaw the mitigation projects.

Many of the mangroves the DOT planted a decade ago are still only two feet high. Mature mangroves should be 30 feet high. These were so short, Vic Anderson called them "bonsai mangroves." They probably will never get any bigger. Because they were planted in fill dirt instead of natural muck, "you get a dwarf-type mangrove," Palenchar said. "They don't die, but they don't really flourish."

As for the dozen tree islands the DOT built—well, the trees aren't there anymore. Palenchar said

the tree islands weren't built high enough to keep the trees out of the water: "They were too soggy and most of them died."

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The problem of mitigation failure might not be so bad if someone were requiring developers, miners, and roadbuilders to start over and do things right.

"We only care about it working if compliance inspections are at such a level that if people screw up, they get caught," said Roy "Robin" Lewis, an environmental consultant in Florida for 30 years. "That's not taking place. The regulators need to be on everybody's tail. Instead, developers hire the cheapest landscaper they can find to do their mitigation, and then the site goes bad. That happens every time."

As a result, Lewis said, "there isn't any significant incentive to make sure the process works."

This is not a new problem. In 1988, the investigative arm of Congress, the General Accounting Office, issued a report pointing out that the Corps was placing little emphasis on making sure mitigation actually occurred. In 1993, the GAO pointed it out again.

But the Corps' attitude remained the same: we're too busy cranking out new permits. That's particularly understandable in Florida, where the permit reviewers are constantly on the verge of drowning in permit applications, Rice told us.

"People are calling and writing every day: 'Where's my permit?' So that's what you focus on," Rice told us. "Meanwhile enforcement is out of sight, out of mind, unless somebody brings something to your attention."

That's fine with the Corps' leaders. In 1999, Maj. Gen. Russell Furman sent a memo to all Corps commanders outlining what their priorities should be. He told them to think of a dividing line separating their most pressing duties from the ones that could be postponed indefinitely. Above the line: making "timely" decisions on permit applications, he said. Below the line—to be done after everything else—he listed compliance inspections for mitigation.

Two years later the National Research Council panel wrote that "the cumulative effect of these policy decisions indicates that . . . issuing permits takes priority over careful evaluation of mitigation projects."

When the National Research Council report came out in 2001, the Corps trumpeted its intention to mend its ways and make mitigation meaningful. Corps leaders joined with the EPA and other federal agencies to prepare a "Mitigation Action Plan" that would fix everything the report had pointed out as wrong.

But four years later, in 2005, the GAO issued a new report that said the same old attitude still prevailed.

"The Corps' Section 404 program is crucial to the nation's efforts to protect wetlands and achieve the national goal of no net loss," GAO investigators wrote. "Although Corps officials acknowledge that compensatory mitigation is a key component of this program, the Corps has consistently neglected to ensure that the mitigation it has required as a condition of obtaining a permit has been completed. The Corps' priority has been and continues to be processing permit applications. . . . The Corps continues to provide limited oversight of compensatory mitigation, largely relying on

the good faith of permittees to comply with compensatory mitigation requirements.”

Unless the Corps starts doing its job, the GAO investigators wrote, “it . . . will be unable to ensure that the section 404 program is contributing to the national goal of no net loss of wetlands.”

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Think about the cost of all this failure, not just in the loss of wetlands and the broken promises to the voters, but in actual dollars.

Trying to create new mangrove and tidal wetlands costs about \$50,000 an acre, Lewis estimated when we talked to him in 2005. Trying to create freshwater wetlands costs a little more “because you’re dealing with water control structures,” he said, so figure \$75,000 to \$100,000 an acre for those.

Now add up all the acres of mitigation built all across Florida—by the DOT, by miners, by developers.

“You’re in the tens of millions of dollars,” Lewis pointed out. “How much tax money goes into attempts to do this stuff that doesn’t work? And when it’s private developers doing it, that winds up affecting the cost of a house.”

But don’t count on any effort by the government to stop relying on mitigation to prop up the politicians’ promise of no net loss.

In 2005, we talked to James Connaughton, who as chairman of the White House Council on Environmental Quality is President George W. Bush’s top environmental adviser. We pointed out all the mitigation failures throughout Florida, and Connaughton acknowledged that “sometimes some of these projects don’t work out the way we think they should.”

But mitigation remains a crucial part of the permitting process, he said, because it offers a way to balance wetlands protection with continued development.

“People need homes to live in, hospitals to go to when they’re sick, and stores to buy food,” Connaughton told us. “As long as we support a growing population in America, there will be a need for land. We need to minimize the impact to valuable wetlands, but where we do have impact, mitigation is the answer.”

Yet it’s hard to see it that way when you’ve visited the Wal-Mart store in Oldsmar, a small town between Tampa and Clearwater.

In 1999, Wal-Mart proposed building a supercenter on 28 acres near the aptly named Cypress Lakes subdivision development in Oldsmar. Smack in the middle of the site was a five-acre cypress dome that Wal-Mart said had to go. As mitigation, Wal-Mart dug out holes around its parking lot to create three new wetlands. One was built on a site that, before Wal-Mart arrived, held some dumpy apartment buildings.

To show its environmental sensitivity, the retail giant didn’t just kill off all the plants in the cypress dome. Instead, the company transplanted the vegetation from the natural wetland it was destroying, even 70-foot-tall cypress trees.

Wal-Mart’s environmental consultant, Kimley-Horn and Associates, promised the mitigation sites would soon become a “mini-ecosystem” with a “dense canopy.” As further mitigation, Wal-Mart also promised to preserve 26 acres of wetlands north of the store by donating them to the public.

The Corps approved the permit in 2000. Five years later, we toured the Wal-Mart mitigation site with a former state wetlands expert named Sydney Bacchus who does freelance work for environmental groups. As we slogged through the thigh-deep water, we found that many of the transplanted trees were dead. Bacchus pointed out a lot more were showing signs of severe stress.

Every rainstorm sends polluted water from the parking lot flowing into the largest man-made wetland, which doubles as a retention pond. Cypress can tolerate standing in a few inches of water with an occasionally deeper inundation, but Wal-Mart's man-made wetlands always hold three feet or more of water. In other words, these wetland trees were too wet. They were drowning.

To make matters worse, Bacchus pointed out, the transplanting process severed the tangle of roots that bind one cypress to the trees surrounding it. When a high wind hits the dying trees, they topple easily, their root balls popping out of the muck like a giant divot. At one point we scrambled up on top of one such root ball protruding from the water. It was as big as a retail executive's desk.

So many transplanted trees died in one area that biologists at the Southwest Florida Water Management District, after reading the company's monitoring reports, recommended Wal-Mart replace them with new plantings, in the hopes the new trees might do better than the transplants.

And what of the wetland that Wal-Mart was supposed to donate? Instead, the company tried to sell it for development.

The Cypress Lakes Homeowners Association found out about the sale and sent a letter to the Corps protesting that Wal-Mart was violating its permit. Only then did the Corps take action, forcing Wal-Mart to give the undeveloped wetland to Pinellas County.

Yet in 2005, Wal-Mart trumpeted the news that its Oldsmar mitigation work had won an Award of Excellence from the National Arbor Day Foundation. When we looked at the company's submittal for the award, we found that Wal-Mart had inflated the number of trees that survived the transplant. National Arbor Day Foundation Vice President Dan Lambe said the contest judges— like the Corps—simply took Wal-Mart's word for how well its mitigation worked.

While troubled by the news of the falsified application, he said the foundation could not give the award to anyone else for one simple reason: Wal-Mart was the only entry.

Regardless of whether a mitigation project like Wal-Mart's is successful, the accounting on wetlands creation is simple. There are acres to measure, costs to total up. The concept is easy to grasp: you wipe out a few acres here; you build a few acres there.

But as creation's failures became glaringly obvious, regulatory agencies turned to other forms of mitigation.

And then the accounting got downright creative.

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