La. losing ground in fight against storms

Loss of protective buffer of marshland muck—eaten away by the dredging of waterways and cutting of canals—leaves parishes vulnerable to devastation

By Howard Witt | Chicago Tribune correspondent
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POINT CELESTE, La. — About 40 miles farther inland from here, around the periphery of one of America’s most vulnerable major cities, the U.S. Army Corps of Engineers is engaged in a furious $15 billion construction effort to rebuild the ring of concrete levees and steel floodgates that are supposed to protect New Orleans from catastrophic flooding when the next big hurricane blows ashore.

But the front line in the epic and unending battle to keep the Gulf of Mexico from pouring into the below-sea-level bathtub in which New Orleans lies is really right here, along a 6-foot-high earthen berm originally built by a farmer to keep his cattle pasture dry.

The embankment is all that stands between the yawning ocean and the thin finger of sinking land known as Plaquemines Parish, yet it is so fragile no one dares drive a pickup truck on top of it. The soil from which it was made crumbles like soft meatloaf in your hands.

And last week, Hurricane Gustav, a relatively puny Category 2 storm—punched a hole in that levee the length of two old Chevy sedans, flooding hundreds of acres of land and threatening a giant oil refinery nearby. Workers struggled for days to patch the breach with sandbags dropped from Army helicopters.

"This parish has 34 holes and weak spots in levees just like this, from Gustav and previous hurricanes," Billy Nungesser, the president of Plaquemines Parish, said last week as he directed the repair effort. "You will never be able to build levees high enough and wide enough in New Orleans if we keep losing ground down here."

From marsh to open water

To understand why New Orleans remains so vulnerable to huge ocean surges kicked up by storms like Hurricane Katrina in 2005, it helps to stand atop this narrow levee and gaze across the Gulf of Mexico.

The open water didn’t used to be there. As recently as a generation ago, lush wetlands filled with grasses and plants and loamy muck spread out for dozens of miles. That provided a spongelike buffer zone that absorbed and dispersed the fierce pounding waves churned up by hurricanes long before they pushed giant walls of water farther north toward New Orleans.

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Experts have even devised a calculation to measure that buffering phenomenon: Each 2.7 miles of coastal marsh reduces the surge from a tropical storm by 1 foot.

But decades of dredging the Mississippi River delta to keep it navigable—the vital waterway lies just a few hundred feet from this levee—diverted the natural deposits of sediments that once renewed the marshlands. Instead, the Army Corps dumps the sediment far out to sea.

Even worse, expanded drilling by oil and gas companies in the energy-rich offshore waters led to 20,000 miles of channels and canals cut through the wetlands, speeding their deterioration and creating pathways for storm surges to travel.

As a result, scientists say, one-fifth of what once was the 10,000-square-mile Mississippi River delta has turned into open water.

The loss of so much protective marshland is not merely an environmental disaster and a threat to the tourist playground of New Orleans. The next huge Category 4 or 5 hurricane that comes ashore in this region could pose acute economic dangers to the United States as a whole.

That's because nearly 30 percent of the nation's oil and gas travels from drilling rigs in the Gulf of Mexico through pipelines that begin along Louisiana's coast. And more than half of the nation's grain shipments pass through the river ports at New Orleans and LaPlace.

Restoring Louisiana's shrinking wetlands has for years been a dream of ecologists, local politicians and, lately, even the oil and gas companies, which realize the vulnerability of their infrastructure. But such a project would require a mammoth engineering effort that experts say could take two decades. The bill could eventually rise to $40 billion.

Congress' focus on levees

Congress has repeatedly balked at paying for what amounts to moving millions of tons of mud and growing hundreds of miles of sea grass—and disrupting existing economic interests such as shipping routes, pipelines and fishing grounds to do it.

Instead, after Katrina, Washington opted for an equally expensive band-aid to repair New Orleans' levees. The fixes are to be completed in 2011, but even then the floodwalls will only protect against a midsize Category 3 hurricane.

"When it comes to wetlands, this country has been penny-wise and pound-foolish," said Mark Davis, a coastal policy expert at Tulane law school. "Katrina made it clear there is a price to be paid if we don't address the issue. And the threat of Gustav made it clear you can pay it again real quick."

Meanwhile, with each new incoming hurricane, the ocean hammers Plaquemines Parish harder—and the frail levees crumble even more. Already, officials are looking warily at Hurricane Ike, which could be headed toward the gulf this week.

"Once a disaster passes, we don't have an appropriate proactive mentality in this country to address the issue," said Mark Schexnayder, a coastal restoration expert at Louisiana State University's Sea Grant College. "I can guarantee you we will have more hurricanes here. And once again, we will be frantically filling up sandbags when the storm is two days away."

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