

As North Carolina beaches erode, debate rises

By Bruce Henderson

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NAGS HEAD A devouring sea has frayed the front lines of this old beach resort.

Kids splashed last summer in the waves under an oceanfront row of cottages on the eroding south end. Huge sandbags fortified pilings, and the steps of condemned houses dangled in the air above the sand.

"We wanted close to the beach, and that's exactly what we got," vacationer Rod Daugherty of Greenville, Pa., said as the tide lapped under the deck of his rental house.

Rising seas probably played a role in the erosion gnawing at much of the East Coast over the past century, the Intergovernmental Panel on Climate Change says. As the seas start to rise faster, it warns, erosion will only get worse.

A state science panel expects sea level on the N.C. coast to rise 1 meter by 2100. The low, flat northeastern shore, including the Outer Banks, is among the nation's most vulnerable places.

State planners are already calculating the odds of higher water in coastal road and bridge designs and in assessing property risks. Insurance rates are going up on the coast as insurers brace for the next big hurricane.

The debate on the N.C. oceanfront, meanwhile, is not why beaches are eroding but how to save them:

Who pays the millions needed to pump sand ashore?

Should the state allow structures that stabilize some stretches of beach but may starve others?

Will the urge to protect real estate destroy some public beaches?

State legislators took up the fight last week, with a bill that critics say would upset the uneasy balance between development and nature.

The bill would allow terminal groins, which jut into the sea like fingers, trapping sand along inlets. Groins could stabilize the eroding ends of barrier islands, including the tony enclaves of Bald Head Island and private Figure Eight Island near Wilmington.

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But while groins stop erosion on one side, they can magnify it on the other. North Carolina and Oregon are the only two states that forbid hard structures such as seawalls and groins, which may protect property at the expense of a natural beach. State policy holds beaches in trust for public use.

Every wave of development and every beach-gobbling nor'easter make that line harder to hold.

The barrier islands and their beaches are restless by nature. Currents, wind and storms incessantly reshape them, depositing sand here, whisking it away there. Inlets between the islands change course often, wagging back and forth like a retriever's tail.

Rooted on those islands is \$7.7 billion in insured real estate, from weathered cottages to gleaming high-rises. Preserving those buildings means trying to out-flank nature.

"If we think we can engineer our way out of it, we're on a downhill slide," said Stan Riggs, an East Carolina University geologist who has studied the N.C. coast for 40 years. "If there's one environment on our planet that has limits to growth and development, it's the barrier islands."

Is spending justified?

N.C. insured-property losses from hurricanes averaged \$10.6 million a year (in 2005 dollars) from 1949 to 1988, the Property Casualty Insurers Association of America says. As development grew and hurricane activity intensified, average losses between 1989 and 2005 soared to \$296 million a year.

Taxpayers share the burden, helping pay to repair storm damages and pump sand. The federal flood-insurance program has rebuilt homes that have been repeatedly flooded on the N.C. coast.

Beach towns argue that the spending is justified because they draw visitors from all over, fueling the state's \$20 billion tourism industry.

"I don't think anybody questions whether you should be doing these kinds of projects. The question is who should pay for it," said Harry Simmons, executive director of the N.C. Beach, Inlet & Waterway Association.

Critics counter that it's a waste of public money to try to hold in place a constantly shifting environment.

As seas rise, the barrier islands must move west and south to survive, said Sam Pearsall, an Environmental Defense Fund scientist.

"Nailing them down will kill them," he said. "Groins and seawalls and other hardened structures are basically nailing them down."

Contentious votes

Nowhere is the argument more visceral, and the costs more staggering, than in the beach towns facing sink-or-swim decisions.

A growing number of communities covering about one-third of the 320-mile N.C. oceanfront - half of it undeveloped - pump sand onto their eroding beaches or plan to. The practice, called nourishment, protects property from storms and erosion.

But it costs about \$1 million a mile and must be repeated every few years. Wrightsville Beach near Wilmington has been replenished a state-record 26 times since 1939.

Federal money for such projects has withered in the past decade, and even the property owners who would benefit are balking at paying their share. Voters in Dare and Carteret counties, along with Nags Head, have rejected beach taxes. Property owners in North Topsail Beach recently refused to pay for sand.

"What almost always happens in these votes is that it pits the oceanfront owners against everybody else," said Frank Tursi, assistant director of the N.C. Coastal Federation.

State, federal and local governments have spent \$86 million on N.C. nourishment projects over the past decade.

Opponents predict the state could end up paying for groins, too. Groins cost \$3.5 million to \$10 million to build, according to a state study, and up to \$2 million a year to maintain.

The structures hold sand in place, making beach nourishment more effective, the study said. But they can also cause erosion by impeding the flow of sand down the strand.

Last week's bill would allow groins only when other measures, including moving houses, aren't practical. It requires environmental studies, monitoring of the groins while they're in place, and steps for removing those that cause problems.

A groin measure not limited to inlets failed in 2009. This year's version has Senate majority leader Harry Brown, R-Onslow, among its primary sponsors and bipartisan support from coastal senators.

"It's just time we try something different" to control erosion, said Brown, who expects the bill to pass. Though a new Republican majority faces a \$2.7 billion budget shortfall, he predicts legislators will see groins as a local tool that won't cost the state any money.

Fighting a battle with nature

Mayor Debbie Smith of Ocean Isle Beach figures repairs, property losses and protective measures along Shallotte Inlet have cost \$62 million in private and public money in the past decade.

"We have lost streets, sewer lines, water lines," Smith said. "It just gets to the point where you need another tool to manage those shifting inlets."

Federal money helps pay to pump sand on three miles of beach, she said, but it would be fruitless near the inlet without a groin to hold sand in place.

The state has granted exceptions to its hard-structure ban, allowing groins at Oregon Inlet on the northern Banks and at the Fort Macon historic site near Morehead City.

"If you didn't have a record of these things working, and working well, we wouldn't be having this conversation," said Simmons of the beach association. He expects groins to be sought for only a handful of the state's 19 inlets.

Critics say groins would increase pressure for more such structures, leading to an N.C. shoreline that resembles New Jersey's saw-toothed coast. They predict lawsuits over erosion among property owners and local

governments.

It would be cheaper to simply let the sea take threatened homes, a recent study found.

Western Carolina University researchers say building groins at all 10 inlets where structures are at risk would save \$18 million in property tax revenues over 30 years. But a single large groin could cost up to \$54 million to build and maintain for three decades.

"There's a misperception among communities that every property that's threatened needs to be protected," said Andrew Coburn of WCU's Program for the Study of Developed Shorelines.

"If these communities are so important, why are they constantly looking for handouts?"

Repair and risk

Faced with a \$36 million bet - the cost of its first nourishment project - Mayor Bob Oakes says Nags Head has no choice but to gamble.

Seven hurricanes have lashed the town since 1995, wearing at the 10-mile beach. Hurricane Isabel took out dunes on the south end in 2003, forcing the town to abandon some beach roads. Harsh Nor'easters in late 2009 left 26 condemned homes; 15 have been moved or torn down.

"Our first priority is to keep a clean and beautiful beach, and after that, protect our tax base," Oakes said. "You have to protect the reason the tourists want to come here."

The state's most recent analysis, in 1998, found that 68 percent of the ocean beaches were eroding, at up to 15 feet a year. Sandbags now protect 352 homes and other buildings. Nags Head plans to split the cost of new sand, which it expects to last 10 years, between a Dare County beach fund and a bond to be repaid by occupancy taxes. The town still has to come up with another \$10 million, and that has fueled a furious debate.

Beach property owners were asked to help pay for the project through a special assessment. Little more than half agreed, and the town - intent on starting work in April - is now considering tax increases.

Barry Brockway, a Brooklyn lawyer who owns a house that's now oceanfront because of erosion, says it's a no-brainer to pay. Most of the money, he notes, would come from tourists renting vacation homes.

"They're all benefiting from the beach, whether or not they're oceanfront," he said of his fellow property owners. "I can't guarantee this will work, but it's a risk worth taking."

Reed and June Fisher own an oceanfront cottage built in 1866. The house has been moved back from the eroding beach at least three times, but the winter storms push the high tide perilously close. "If anybody needs nourishment, it's us," Reed Fisher said.

Instead, the Fishers were among 44 people who sued the town this month. The suit was over the town's condemnation of property to pump sand this spring, but the couple's concerns run deeper. Nor'easters could quickly wipe away the fresh sand, they say, and the town has no fallback plan.

"It's not that we're against beach nourishment; clearly it has worked in some areas," Fisher said. "The difference

here is what happens after that."

The U.S. Army Corps of Engineers, which oversees the project, says retreat is no option. Only 16 N.C. beach houses have been moved back from the sea in the past two years.

Nags Head represents so much of Dare County's tax base that loss of its oceanfront houses would drive up taxes countywide, said a Corps environmental analysis. Relocating 137 homes would cost \$474 million, it said, compared to the \$36 million to pump sand.

On the beach, vacationer Denise Carroll of Colorado Springs, Colo., said she spent summers in Nags Head as a child. Her kids like to come too for the pounding waves, which pack more beach-chewing energy than any on the East Coast.

"I'd rather (pump sand) than see the beach lined with sandbags," Carroll said. "On the other hand, it could all wash away. The ocean's going to take what it wants.

"But then, I don't have hundreds of thousands of dollars invested here."



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