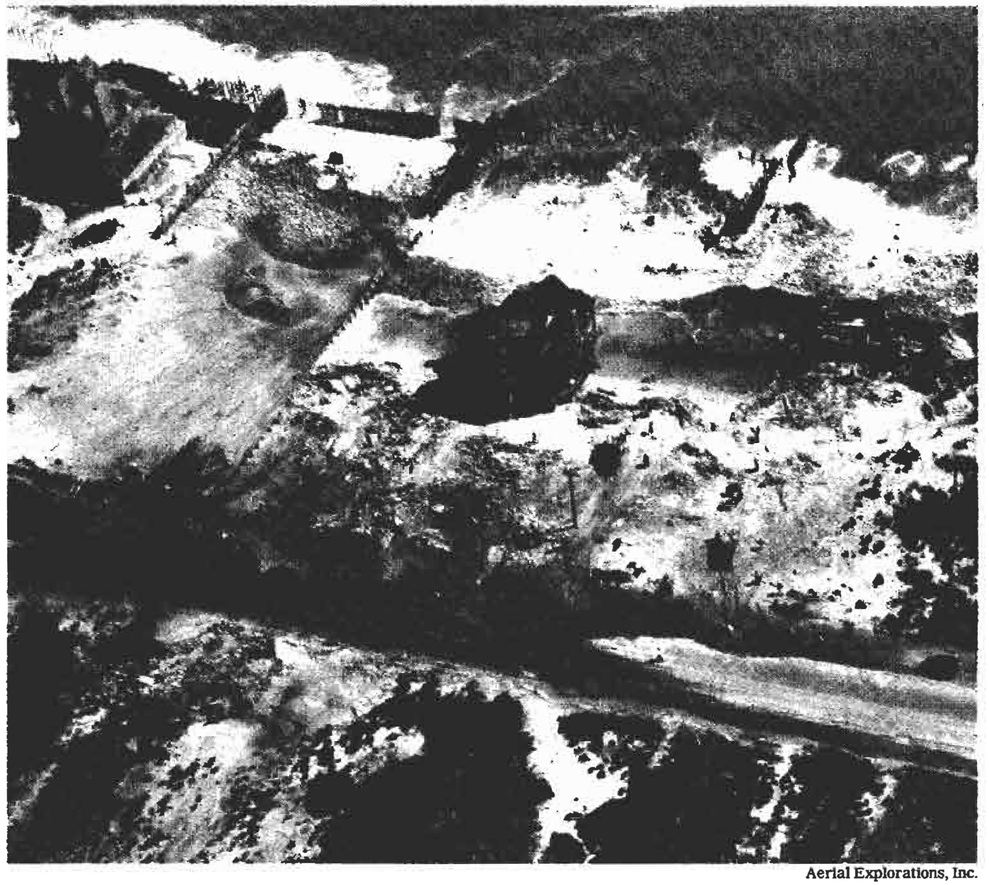
NEWS AND TOPICS

Floodwaters cut off Wildwood. Absecon Island and Ocean City. Atlantic City had tides 6 feet above normal, with waves 25 feet high under winds that gusted to 84 miles per hour. Wreckage from a 100-foot barge plowed through the center of the Steel Pier . . . In Long Branch, 1,000 feet of boardwalk were carried away "as if it were made of pick-up sticks" . . . In Ventnor, the entire boardwalk was destroyed . . . In Point Pleasant, the Lovelandtown Bridge collapsed into the canal . . . The Passaic River rose, halting train service on the Hudson and Manhattan Line.

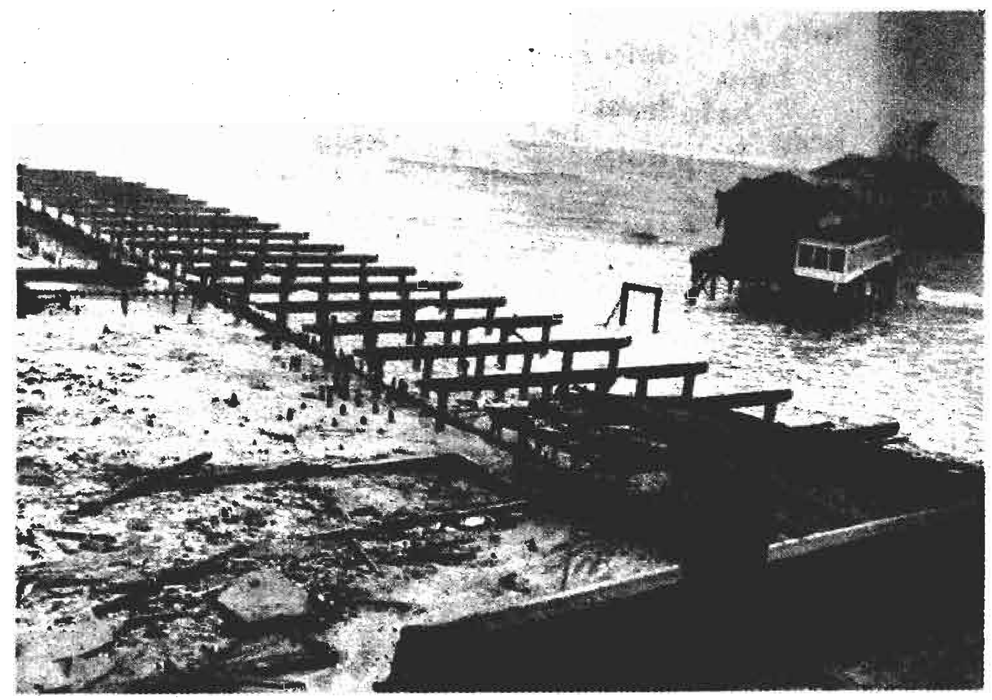
Passages from "Great Storms of the Jersey Shore," Down the Shore Press



Aerial Explorations, Inc.

Photographs by Association Press

The aftermath of storms past: the shoreline in 1936 between Sea Bright and Monmouth Beach, far left; a battered boardwalk in Asbury Park in 1954, left; and what remained of Heinz Pier in Atlantic City in 1944.



Storm Warnings

Worrying About What Might Happen Here, Because It Wouldn't Be the First Time

By ROBERT STRAUSS

FOR those who insist that the devastation that has engulfed New Orleans can't happen along New Jersey's 127-mile-long coastline, all it takes is a look back to March 1962, when a massive storm battered the state for more than a week.

According to "Great Storms of the Jersey Shore" (Down the Shore Press), the storm combined wind, rain, snow, hail, cold and monstrous high tides and leveled much in its path, primarily on the barrier islands of New Jersey.

The sea broke through Island Beach in eight places, virtually wiping out the beach. Most of the boardwalk in Seaside Heights was uprooted, and almost 100 homes in West Wildwood were torn from their foundations.

While the storm's intensity surprised meteorologists, most residents heeded calls for evacuation. And because it was a winter storm, the islands were virtually unpopulated.

But the New Jersey Shore is a much different place today than it was four decades ago. Except for Island Beach State Park and other smaller wetlands and parks, it is virtually all built up. And although it is unlikely that a hurricane packing the ferocity of Katrina would slam the coast full force, there could easily be a repeat of the 1962 storm, a tropical storm or northeaster of substantial magnitude.

The question is: if there was such a storm, would the state be as ill-prepared as Louisiana and Mississippi?

vens Institute of Technology and New Jersey's Sea Grant Coastal Specialist. "We would certainly have a large storm surge and a lot of the Jersey coast, even inland, would flood, but we wouldn't have that sandy water like in New Orleans because no place in New Jersey is under sea level.

search on hurricanes, said that tropical waters in the Atlantic have turned warmer in recent years, perhaps through global warming, and storms have become more intense so that in the future storms that reach New Jersey may well be more intense "But we just don't have enough data yet," he said.

"But if a storm came up through Monmouth County and caused a 20-foot storm surge into the 'V' that is formed by Staten Island and Long Island around New York, well that might be something," he said.

Over the last decade, the Army Corps of Engineers has built up dune structures and

ifications to the plan and, if pressed, we think we can do it in 12 hours."

If necessary, Mr. McCall said, the Garden State Parkway, Route 47, and the Atlantic City Expressway would be turned completely north and west away from the coast. Buses, trucks, and emergency vehicles would go

ana and Mississippi?

"Frankly, what we have learned from Katrina is, first, there are so many variables in catastrophic events that we need flexibility in our response and actions we take," said Mariana Leckner, the principal planner for the State Office of Emergency Management. "No. 2, what we have learned is that public needs to be better educated. Emergency management workers at all levels of government need to help the public learn what hazards might affect them and what the response might be."

There are a variety of reasons — climatological, physical, sociological — why experts say it is unlikely that New Jersey would suffer a New Orleans-like disaster. And there is a lot of higher land, even along the coast, which makes evacuation a less serious problem.

"Right along the coast, the impact might be devastating," said Tom Herrington, associate professor of Ocean Engineering at Ste-

place in New Jersey is under sea level. There would be no filling of the water with mud and debris like there."

In addition, the general path of hurricanes that come up the Atlantic Coast takes them along the Gulf Stream, a warm current that keeps them intensified. When these storms do hop the Gulf Stream toward New Jersey, they hit colder water, which serves, in essence, to start killing them off.

That said, experts say they simply do not know what a "100-year storm," the general rubric for the most intense storm, is and whether it might be coming.

"Statistically, we don't have enough data," said Stewart F. Farrell, director of the coastal research center at Richard Stockton College in Pomona. "In order to know what a 100-year storm is, you probably need 1,000 years of data. Katrina should give everyone pause in that regard."

Michael G. Mann, a professor of meterology at Penn State who is compiling re-

just don't have enough data yet," he said. "You can't do this by five or six storms. The truth is that we just don't know, and that may be the most worrisome thing."

Experts do agree that winter storms, like the northeaster of 1962, could be far more threatening than a hurricane in terms of size and staying power.

"In fact, it wasn't that much of a northeaster in 1962," Dr. Farrell said. "The average wind was only 38 miles per hour, but it was for six days."

The problem, he said, was the continuous high tides. "The first high tide chews up the beach," he explained. "The second one cuts into the dunes. The third breeches the dunes. The fourth one runs into the town. Then there is nothing to save the infrastructure."

Indeed, Dr. Farrell said there have been some close calls. He said that in 1992, a northeaster forced the closing of the entrance to the Lincoln Tunnel, which was closed and sandbagged to prevent flooding.

Engineers has built up dune structures and beaches from Monmouth to Cape May Counties, but the agency concedes that it could not spare New Jersey from devastation in the event of a 1962-like northeaster or Category III hurricane.

"It is not economically feasible to protect against a 500-year storm," said Merv Brokke, a spokesman for the Corps. "You have to weigh the benefits against cost and aesthetics. The new Atlantic City dunes should protect against a 20-year storm, but even at that, it would provide some protection against greater storm surges. It would provide management people time."

Those emergency management people say that when it comes to evacuation, time is of the essence.

"We work on a worst-case scenario that we can evacuate Cape May County in 36 hours," said Frank McCall, director of the county's Emergency Management Communications Center. "But we have made mod-

es, trucks, and emergency vehicles would go through coastal towns picking up residents who could not leave on their own.

The best thing New Jersey has going for it, though, said Lee Clarke, a sociology professor at Rutgers and the author of "Worst Cases" (University of Chicago Press), is that the state has an affluent and educated population.

"In New Orleans, what you saw was the result of grinding poverty for generations, people who never trusted their government to help them because it never had," said Dr. Clarke. "Here we live in the state with the highest per capita income. We pay for services and we expect to get them. Even the poorest people here, I would suggest, are more likely to, say, have cars and would be available to drive away if necessary."

As he put it: "This doesn't mean that if there is a disaster, everything will be fine. But I don't foresee thousands of corpses piling up along the beaches at the Shore."