

GUEST ESSAYS

We can protect Long Island from storm surge

Movable storm surge barriers and newly fortified dunes will keep flooding at bay

BY JOHN D. CAMERON JR.
Guest essay

The devastating effects of hurricanes Helene and Milton had many Long Islanders remembering past storms that hit the region, most recently in 2012 with Superstorm Sandy. But for many veteran Long Islanders, memories go back much further.

My first introduction to a major Long Island storm was in 1960 with Hurricane Donna. My family was living in the West End of Long Beach when we watched the ocean and bay waters come down Ohio Avenue and meet in front of our house. While there are differences between storm events, a most damaging aspect common

to each is the element of storm surge.

Storm surge can wreak havoc a thousand miles away from the center of the storm. That was the case with Sandy which, contrary to popular belief, was not a worst-case storm. Sandy made initial landfall in New Jersey, was a non-rain event, and its wind speeds were insufficient to be classified as a hurricane. And still, Sandy caused billions of dollars of damage to the Island, New York City and New Jersey.

Most of us have come to accept that hurricanes and major storm events are inevitable, though their frequency and intensity and the devastation they leave behind certainly appear to be growing.

While Long Island is fortunate to be located more than 1,000 miles from the Gulf of Mexico and the Caribbean, it also possesses a unique geological formation that could provide critical protection.

The South Shore of Long Island is bounded by a series of barrier islands. Those islands, if properly utilized as barriers — essentially, a “dike” — can serve to protect the mainland. The only “holes in the dike” are the six inlets from East Rockaway Inlet by Atlantic Beach all the way east to Shinnecock Inlet.

Those openings can be equipped with movable storm surge barriers activated before an impending storm. The barriers would function similar to ones constructed in many areas around the world such as the Thames River in London, the Maeslant in Amsterdam, and the Neva Bay in St. Petersburg, Russia. To ensure that the bar-

rier islands are not “overtopped,” with the surge flooding the islands from the south and nullifying the value of the surge barriers, the barrier islands would need to be equipped with a properly engineered dune system.

The U.S. Army Corps of Engineers is presently constructing its FIMP (Fire Island to Montauk Point) dune project, the dunes being a key component of an effective surge protection program. The Jones Beach and Long Beach islands also have dune systems, though the areas west of the City of Long Beach in Atlantic Beach do not; they will need to be constructed to protect against overtopping of the barrier island and allowing water to bypass a potential inlet barrier. An integrated Island-wide solution would include equipping a few of the cross-bay bridges with barriers to inter-

cept any east-west movement of water caused by major winds.

As many of us in the engineering and environmental world say, “It’s not what happens if we get Sandy II, but when!” While the cost of protecting the Island would be in the tens of billions of dollars, the long-term cost of not protecting it would be far greater.

Long Island is a major economic generator for Washington as well as Albany, so it is not just Long Islanders who depend upon our economic well-being. It’s been 12 years since Sandy. How much longer do we tempt fate?

■ **THIS GUEST ESSAY** reflects the views of John D. Cameron Jr., executive principal with IMEG



Corp. and chairman of the Long Island Regional Planning Council.