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YEAR LATER

SANDY

Few long-term fixes in place

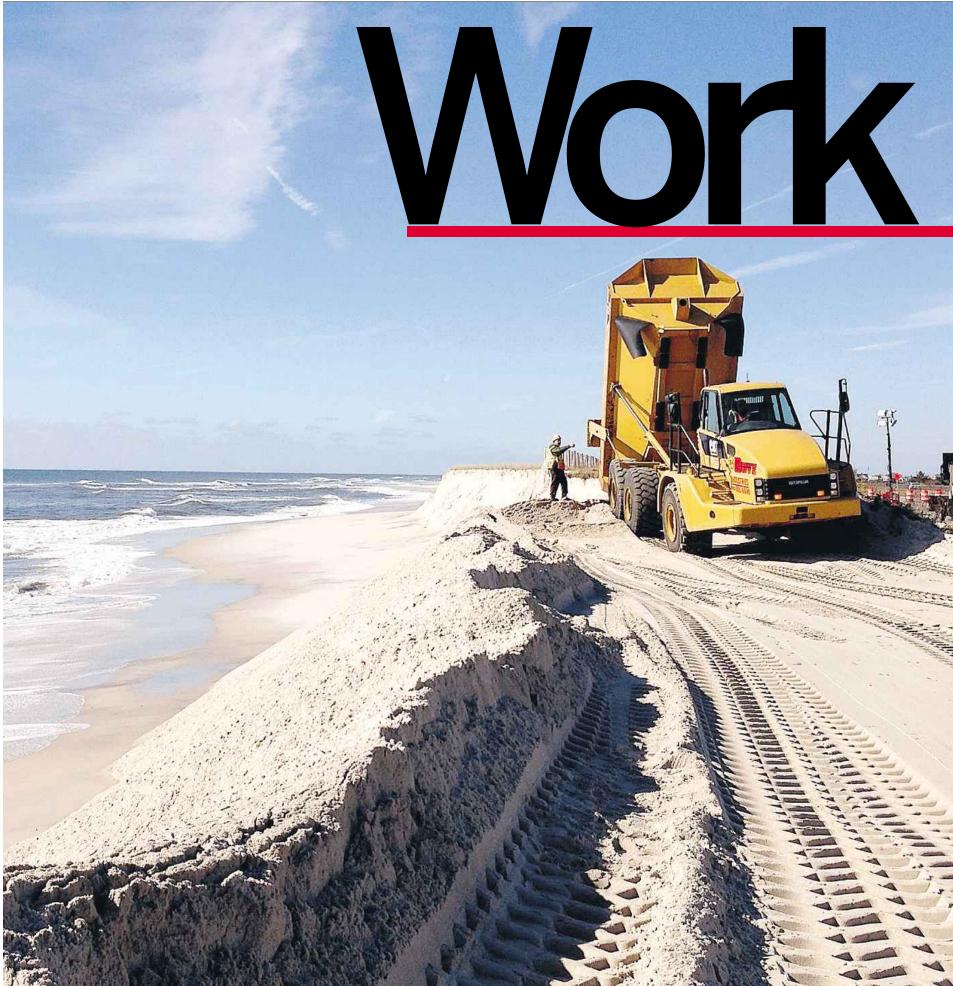
Perils remain for tens of thousands near shore

FIRST OF A SERIES | A2-5 | INTERACTIVE GALLERY OF SANDY'S AFTERMATH AT NEWSDAY.COM



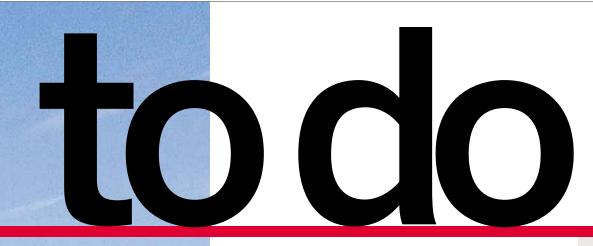
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ONE YEAR LATER



Many parts of the Island still await resiliency work that will stand up to storms. Above, Ocean Parkway is rebuilt recently for the second time. • Year after Sandy, in

SANDY



Patchwork repairs in place for coast, but more lasting solutions remain under debate

BY JO NAPOLITANO jo.napolitano@newsday.com

Long Island is at risk for major damage a year after superstorm Sandy because its infrastructure has not been strengthened, leaving tens of thousands of residents vulnerable.

Major resiliency measures, the types that will make the region better prepared to withstand severe weather, are years off, leaving homes and streets exposed, officials and experts say.

Upgrades to the Long Island Rail Road's Long Beach line portions of which were underwater during Sandy — won't be finished until 2018.

The Long Island Power Authority has erected temporary barriers to keep water away from its critical equipment, but a permanent solution won't be finished until mid-2015.

The state last week began announcing a series of major infrastructure-strengthening outlays — including \$897 million to improve sewers, some bridges and the power grid — but those allocations reflect just a fraction of what the region needs.

Local municipalities, looking to seal off portions of their communities to keep water out or elevate roads that flood in high tide or during minor storms, are still waiting for answers.

"We are almost at the oneyear anniversary and we are no better off today than we were last year," Mastic Beach Mayor Bill Biondi said.

State officials, largely in charge of disbursing the federal dollars that could make the Island stronger, say they need time to vet the hundreds of infrastructure proposals rushing in from both counties through myriad programs.

And the bottom-up method they've chosen — praised by some and reviled by others which mandates that all local affected municipalities help craft

photos: newsday.com/sandy

the projects, has slowed the planning process, officials said.

Vanessa Lockel, who spearheads the state effort to distribute federal Housing and Urban Development funds in Suffolk County, encountered a skeptical crowd at an Aug. 16 meeting in Amityville.

"This initiative is about visionary planning," she said. "It's about where we see this community going. It's about taking this federal funding and doing something with it that is resilient."

Lockel told residents they weren't creating a plan that will sit on a shelf, but a practical document that will guide municipalities as they deal with severe weather.

"We are dedicated to making sure this works," she said. "This is a grassroots, start-up initiative. We have to be patient."

Recovery experts say that it is normal for major infrastructure projects to still be in the planning stage one year after a disaster; and officials point out that the process is deliberate because they don't want this influx to be misspent.

"The worst thing we could do is try to spend a whole bunch of money as quickly as possible without doing the proper planning and engineering work — and end up wasting precious resources that actually could have protected us for the future," Suffolk County Executive Steve Bellone said.

\$8.4 billion in losses

Sandy damaged or destroyed more than 95,000 buildings on Long Island, leaving 4.4 million cubic yards of debris and causing \$8.4 billion in property and economic losses for Nassau and Suffolk.

After the storm, politicians at every level said the region's infrastructure must be made more resistant to future storms.

Gov. Andrew M. Cuomo pledged to "build back better,"

TODAY

Long Island remains at risk for major damage a year after superstorm Sandy as few measures to better protect the region's infrastructure have been put in place.

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saying "protecting this state from coastal flooding is a massive, massive undertaking. But it's a conversation I think is overdue."

Federal money started flowing to the region soon after the storm. Most was devoted to cleanup and emergency repair, which was funded by the Federal Emergency Management Agency. As of mid-October, the agency has committed \$299.6 million to Nassau and \$117.3 million to Suffolk through its public assistance program.

That program, plus some of FEMA's \$1 billion Hazard Mitigation Grant program, will be providing money for hardening infrastructure.

Other infrastructure funding will be arriving through the NY Rising Community Reconstruction Program, which is financed by FEMA and the U.S. Department of Housing and Urban Development. In addition, the U.S. Department of Transportation has committed \$1.3 billion for regional infrastructure hardening and the U.S. Corps of Engineers wants to spend at least \$700 million to \$800 million to strengthen portions of Long Island's South Shore.

Last week, the state announced it will spend \$900 million on new infrastructurestrengthening projects, including sewage facilities and South Shore bridges.

What's been done so far

Some resiliency measures are already in place:

• The Long Island Power Authority has built temporary barriers around the seven substations that flooded during Sandy — such protection didn't exist last year, LIPA officials said, and they've lifted some critical infrastructure off the ground.

• New state regulations will force many Island gas stations to have access to a generator during power outages, by April of next year.

Others projects will start soon:

• The Army Corps of Engineers is to begin adding more sand to sections of Fire Island in January as part of a \$700 million to \$800 million effort to strengthen Suffolk County's shoreline.

• The Long Island Rail Road has planned projects to make

2013

Residents look for faster fixes

SANDY from A3

the Long Beach line more resilient, replacing its antiquated equipment and elevating key structures.

SANDY

Despite this, some local officials say the state has moved too slowly. They question why, for example, New York Rising only recently took shape.

Assemb. Harvey Weisenberg (D-Long Beach) called the state's plan "frustrating" and bureaucratic.

"We are not where we should be or could be," he said on a recent afternoon. "New York Rising is wonderful on paper but I don't see the money. We still have a lot of pain and suffering going on. It's not the best this government can do."

Weisenberg understands the state's desire to have a bottomup approach, but said there are too many people involved.

"Why don't they just get the money to the people who reside in these communities, have life experience and know what the priorities will be?" he said.

Bayville Mayor Doug Watson wants federal funding for a \$2 million project to install sheet piling in sections of the village and has turned to Rep. Steve Israel (D-Huntington) to support the plan.

"I'm advancing it the best way I know how — through a U.S. congressman," Watson said. "When the action starts, you want to be in the front."

But even with the support, Watson thinks his plan is at least three years from becoming a reality.

Is that fast enough?

"Not for me," he said.

Quick action 'not that easy'

Those who want change now are understandably checking their calendars, but their criticism isn't entirely warranted, said Rep. Tim Bishop (D-Southampton).

"If people say, 'God, it's taken a long time and . . . what do you have to show for it?" It's not unreasonable — and not entirely accurate," he said. "I understand that people wanted to see dredges offshore by Valentine's Day, but it's not that easy." Everyone involved in the process wants it to move faster, he said, but they also want the work to be scientifically, administratively and environmentally sound.

Still, Bishop said, "We are, right now, significantly exposed to a storm of the magnitude of Sandy or even a storm to a lesser magnitude. Fire Island lost 54 percent of its sand. There are some real infrastructure issues."

Mary Comerio, a professor of architecture at the College of Environmental Design at the University of California, Berkeley, said that while she understands Island residents' desire to move quickly, it's just not realistic.

In 2009-10, she served as a consultant for a United Nations program on rebuilding after disasters in China and Haiti.

Comerio said infrastructure change is "a big, expensive proposition," even under normal circumstances.

"I feel like people in disaster areas have these incredibly unrealistic expectations post-disaster that somehow these giant construction projects can happen fast, but they can't," she said. "They have to be planned and approved and reviewed and funded and built, and all of those things take time. Four or five years is kind of normal; you are doing well if you can do it in that amount of time."

And there's no benefit to moving too quickly, she said, as in the case for Wenchuan, China, struck by an earthquake in 2008.

"Believe me, you don't want what China's got," she said, adding that the 5 million homes built there after the quake were so hastily constructed that many have already suffered damage — seemingly without provocation. "Going fast isn't always the right answer."

Large-scale infrastructure change is "a very incremental process and rarely achieves its official goals," said Daniel Aldrich, associate professor of public policy at Purdue University.

Even after its work in New Orleans in the aftermath of Katrina was completed, the Army Corps' levee efforts weren't considered a complete success, he said.

"When observers rated its

Some of the plans to make the Island better able to resist a major storm

SHORELINE

massive effort to strengthen 83 miles of shoreline between Fire Island and Montauk Point won't start until early next year and will take years to finish. The project, expected to cost between \$700 million and \$800 million, extends as far north as Sunrise and Montauk highways, and the funding is not guaranteed. The plan has structural features, such as dunes and beach berms, as well as environmental elements, including ecosystem restoration, which can include the rebuilding of marshes. It also calls for the flood-proofing and raising of homes on the

main island. The project will start with emergency stabilization efforts in two of the most vulnerable regions, one covering the length of Fire Island and the other focused on downtown Montauk. Also, a Long Beach resiliency project is in the planning stages and could cost roughly \$200 million. And the agency in late September awarded a \$6.9 million contract to Great Lakes Dredge & Dock of Oakbrook, Ill., to strengthen the shoreline west of the Shinnecock Inlet by adding 450,000 cubic yards of sand. The project is expected to begin this fall and be completed next year.

LONG ISLAND RAIL ROAD

here are four Long Beach projects slated to make the branch more resilient. Two of the more extensive plans — one to replace the branch's substations and the other to give the entire system a massive upgrade — are scheduled for completion in 2018. The Long Beach Branch Systems Restoration, now in design, will include the replacement of switches, signals, communications and third rail equipment. And critical components such as signal and communication huts will be rebuilt on platforms to better protect them from future flooding. Design work for upgrades to the Wreck Lead Bridge, which supports the train as it makes its way over a portion of Reynolds Channel, will soon be underway and that project should be finished by April 2017. Transportation officials say they'll replace platform lighting at Oceanside and Island Park stations by January 2016. The MTA is also seeking funding for a second track between Farmingdale and Ronkonkoma, saying the extra capacity on the Main Line would be crucial for commuters if a storm once again disrupts service on South Shore lines.

SEWERS

he state will provide \$455 million for the rehabilitation and mitigation of the Bay Park plant in Nassau County, using money from its Environmental Facilities Corp. The money will be repaid from various federal sources, officials said. The project will be managed by Nassau County and will include the building of a system of dikes, levees, and movable flood walls around the plant to provide protection against a "500-year storm." It will also account for anticipated sea level rise, state officials said. The plan calls for the elevation and hardening of critical equipment and of its 57 pump stations. The money will also fund, among other improvements, the building of a larger sewage collection line to accommodate increased flow levels during storm surges. The state will also fund a \$242 million makeover for the Bergen Point Wastewater Treatment Facility in Suffolk. That plan calls for the replacement of the plant's ocean outfall pipe that runs beneath the Great South Bay, widening it from 72 to 120 inches.

quality, they assigned it a failing grade," Aldrich said.

Some experts say the levies are already outdated, poorly constructed and not high enough.

And while Long Island might have a plan to upgrade portions of its coastline, "the reality is that engineers often have a really challenging time successfully channeling nature the way they hope it will go," he said.

Long Beach City Manager Jack Schnirman is optimistic that his region will get what it needs. His city was particularly hard hit; Sandy destroyed its iconic boardwalk, sent waves rushing through the streets, leaving four-foot-high watermarks on hundreds of homes, apartments and businesses.

'Easy for things to get lost'

There's a pent-up need to fix the shore, he said, coupled with a persistence in the community that will not wane. But, he said, all municipalities must be vigilant because "it's too easy for things to get lost in the back-and-forth between all of the different layers of government."

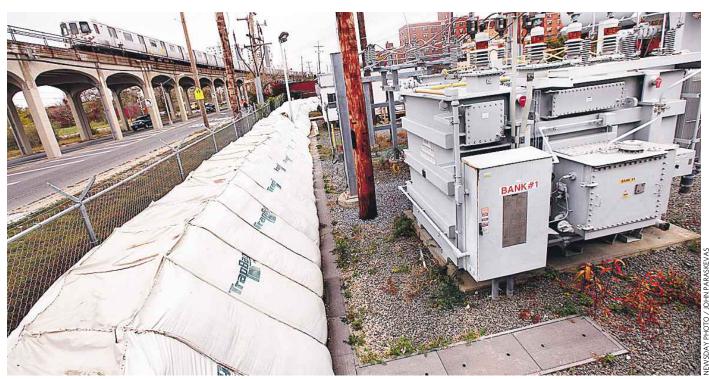
Schnirman doesn't think all of the region's infrastructure wishes will come true, saying, "Only time will tell."

For some, the wait is excruciating.

Freeport Mayor Robert Kennedy worries about anoth-

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LIPA has placed 6-foot-tall sandbags around the Arverne substation in Far Rockaway to prevent damage from storm flooding.

UTILITIES

IPA has installed temporary barriers - 4 to 6 feet tall, some made of giant sandbags — around the seven Long Island substations Sandy flooded last October. A permanent solution will be in place in mid-2015. The utility removed 1,000 trees that threatened its power lines, and trimmed scores more. Gov. Andrew M. Cuomo on Friday announced \$72 million in funding to raise those seven substations and an additional 25 that are now in the flood zone. The day before, the state announced a \$20 million competition to create new microgrids in Nassau and Suffolk counties — the winner of each county contest will receive \$10 million. These grids would allow each community to store power from the wider electric grid for use when power from the main grid is interrupted. The state also pledged \$51 million for a new "outage management system" to restore power faster.

GASOLINE

ince Sandy, the state has imposed new regulations to ensure gasoline availability in major crises to avoid the lines the superstorm brought. Under the law, most gas stations on Long Island located within a half-mile of highway exits or hurricane evacuation routes are required to have a transfer switch by April 1, 2014, to allow connection to a generator, and to deploy and install a generator within 24 hours of losing power during an emergency. Chains of gas stations must have a transfer switch installed at an additional 30 percent of their sites under the same criteria by Aug. 1, 2015. The state has pledged up to \$17 million in grants to help defray the costs. The governor yesterday announced the creation of a "strategic gasoline reserve" expected to hold 3 million gallons of gas for motorists on Long Island. The \$10 million pilot program will release fuel as needed in an emergency. Also, the state is conducting a fuel terminal hardening study to examine gas distribution.

ROADS

o major projects to safeguard roads from severe storm flooding have begun. The state announced last week that \$47 million would be spent to make eight bridges more resilient. A seawall has been built to protect West Shore Road in Mill Neck. Officials also want to raise Dune Road in the Town of Southampton and are working with the U.S. Army Corps of Engineers on a plan.

er storm hitting. Sandy flooded residences with 5 feet of water, tossed boats onto the street and made home heating oil tanks spill and float away. A handful of homes and businesses, including an iconic fish market, burned.

"I can tell you probably 3,000 people would move out of the Village of Freeport" if a similar storm struck, he said. "The loss would be astronomical. Taxes would go up 20 to 25 percent." The state's approach to many mitigation projects — heavily reliant on community input — requires numerous meetings with local officials to craft infrastructure-strengthening plans.

For example, NY Rising calls for eight months of discussions with local residents and officials before a proposal can be submitted for approval. A draft version of each plan is due at the end of October.

Mastic Beach's Biondi wants

the state to move faster.

Driving with a reporter through his community on a rainy summer afternoon, Biondi pointed out areas where the beach shrank from 50 feet down to just a sliver. Much of the roads are level with the water and need to be raised, he said.

"Anytime there is a rain event or nor'easter, the roads that run along the waterfront get washed out," he said. At high tide, cars drive over saltwater. "It comes over the sand, the rocks and the bulkheading. It happens quite often since superstorm Sandy. The state is taking too long in helping out our village."

But Lindenhurst Deputy Mayor Kevin J. McCaffrey, who said this summer that the state's efforts were "overanalyzed, overcommitted and overdone," since has been won over.

The New York Rising meetings he's attended make him feel as though a workable plan is taking shape.

"I think we are moving along on the right track," he said.

'Needs to be a process'

Kevin Law, president of the Long Island Association, the region's biggest business group, defended the process and said having a plan in place is essential. "There are always Monday-

"There are always Mondaymorning quarterbacks and second guesses, but there needs to be a process," Law said. "That sounds bureaucratic, but at the end of the day, we have to make sure these funds are not wasted."

Of all the federal pots of money for Sandy aid, municipalities are looking to FEMA's Hazard Mitigation Grant Program to help solve at least some of their infrastructure problems.

The state received 2,466 letters from counties, municipalities and other taxing districts seeking money for "mitigation planning, property acquisition, backup power and a variety of other project types," a spokeswoman said.

The state received 322 letters from Nassau seeking \$2.5 billion in aid and 364 from Suffolk asking for more than \$1 billion.

Long Beach sent off five such letters, including one for floodgates to close off the canals.

The \$1 billion grant program won't have nearly all the money to fund the requests.

The next deadline in the Hazard Mitigation Grant process is Oct. 30, the date by which formal applications must be submitted for review.

The state is required to provide FEMA with a list of approvable projects by Jan. 27, 2014; FEMA will then review and begin to obligate funds, they said.

Brian Zitani, waterways management supervisor for the Town of Babylon, said the grants aren't designed to be specific to storm recovery and therefore move slower than some would prefer.

"I would like to see the process go quicker," he said. "We have an immediate need for it, which it really wasn't designed for. You have to understand that and take that along with the process."

And unlike Hurricane Katrina, he said, where levee repair addressed much of New Orleans' vulnerability, there is no one solution for the Island.

"This is a situation where there is no levee," he said. "There are a limited amount of infrastructure improvements that can be made. There is nothing that could be done for a Sandy-level storm."