STAYING ABOVE WATER

Developers are building new projects with protections against flooding

BY MAURA MCDERMOTT

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Long Island developers are making multimillion-dollar investments to protect new projects — waterfront and in-land alike — from rising sea levels and the risk of major storms.

In Glen Cove, RXR Realty said it is raising the ground level of its 56-acre waterfront development, Garvies Point, by 6 to 10 feet. The effort required enough soil, sand and gravel to fill 40 Olympic-sized swimming pools. It also is constructing \$15 million steel and reinforced concrete bulkheads along the waterfront, and spending roughly \$10 million on storm-water management and \$5 million on generators to provide full power to all 569 condominiums if electricity gets knocked out.

These and other steps to make the property storm-resilient will add roughly \$40 million to the \$1 billion cost of the project, which in addition to the condos includes 541 rental apartments as well as a restaurant, shops, offices and parks, the Uniondalebased developer said.

In East Rockaway, the Beechwood Organization is elevating 84 new condos over parking spaces at its waterfront property, adding a new bulkhead, docks and oversized drainage systems, and placing all mechanical equipment on roofs. The 2.7-acre site was previously occupied by a marina that was devastated by superstorm Sandy in 2012. Jerichobased Beechwood said it spent roughly \$5 million going be-



yond state building codes and local requirements to protect the property from storms.

Virginia-based AvalonBay Communities is raising the land near Manhasset Bay in Great Neck where it is constructing a 191-unit apartment building, elevating the structure over parking and installing utilities 16 feet high, at the top level of its garage, said Chris Capece, senior development di-

Tritec Real Estate Co. is elevating the 112 apartments in its

FLOOD MAP

Zoom in or enter your address to see LI, NYC areas at various rises of the sea level.

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Frank Haftel, far left, and Joe Graziose, both of RXR, which is raising the ground level of its Garvies Point project.

AvalonBay is raising land at its complex in Great Neck, right. **Builders' investments come** amid reports of rising sea levels.

Shipyard project in Port Jefferson over a parking garage and installing drainage pumps in the garage, even though the waterfront complex is located outside the designated flood plain, said Robert Kent, vice president and general counsel at the East Setauket-based company.

"In a post-superstorm Sandy Long Island, there is a heightened awareness of where the high-risk flood zones are," said Kyle Strober, executive director of the Association for a Better Long Island, a builders' trade group. "The 100-year flood storms are happening every 10 years now, and that means only the very forgetful or the highstakes gamblers are building on the ground level today."

Exceeding requirements

Under state building codes and local laws, developers are required to protect buildings in high-risk flood zones by constructing strong foundations, elevating buildings and electrical systems and using storm-resistant materials, among other measures. But developers say they are going beyond those requirements.

The builders' investments come as climate scientists report that sea levels have risen over the last century and are expected to continue rising. A study released last month by the Union of Concerned Scientists examined the U.S. coastline and found that by 2100 nearly 500 communities - including many along Long Island's South Shore — could face "chronic flooding" so severe that residents could be displaced if communities do not take steps to protect themselves.

Global sea levels have risen by 7 to 8 inches since 1900, a team of scientists wrote in a 673-page draft government re-

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port dated June 28, The New York Times reported recently. Sea levels are "very likely" to rise another 3 to 6 inches by 2030, due mainly to increasing temperatures and melting ice, and the effects could include more floods and major storms, the draft report found.

Some scientists and elected officials debate the extent, severity and causes of the changes.

But on Long Island, major developers and small-scale builders say they are responding to a growing incidence of routine floods, as well as major storms like Sandy.

In RXR's Glen Cove complex, all residences will be located 18 to 22 feet above the level reached by a so-called 100-year storm — that is, a storm with a 1 percent chance of happening in a given year, the developer said. Even at RXR's Ritz-Carlton develop-

ment in North Hills — more than 2 miles from Manhasset Bay — the developer is girding for storms. Two tractortrailer-sized generators can provide full power to the first 110 condominiums, and another three will be added as the complex grows to 230 units. The generators are expected to cost \$3.5 million, said Joe Graziose, senior vice president at RXR.

Protecting investments

RXR chief executive Scott Rechler was determined to make the Ritz-Carlton "Sandyproof," despite the added cost, since many buyers lived on the North Shore and lost power when Sandy hit, Graziose said.

Developers say their primary concern is protecting their own investments and those of prospective buyers.

"The last person you're going

to talk about being a tree-hugger is me," Graziose said. "This is all about infrastructure. At the end of the day, you want to build something that's going to last a long time."

In East Rockaway, Beechwood said all residences will be almost 13 feet above the highwater mark from Sandy.

"The key is just to build higher," said Steven Dubb, a principal with the company and son of its founder, Michael Dubb. "We want to make sure we can survive superstorm Sandy, or worse."

In downtown Riverhead, the Community Development Corp. of Long Island and Conifer Realty are building 45 apartments that will be on the second floor or higher to protect them from floods, said Gwen O'Shea, chief executive of the Centereach development corporation. The electrical systems will be at least 2 feet

above the height of a 100-year storm.

The same developers also are building 90 apartments in Copiague. At both complexes, builders are using materials designed to protect against floods and major storms, such as hurricane-resistant windows. Both complexes will rent to residents with low to moderate incomes.

"We have such a limited number of affordable housing options on Long Island that as we rehabilitate or develop new properties, doing so in a way that is resilient allows the investment to be that much more sustainable and long-term," O'Shea said.

The Governor's Office of Storm Recovery contributed \$4.55 million to the cost of the Riverhead project and \$8.75 million for the apartments in Copiague. Those awards were part of a \$79.2 million program to replace affordable housing throughout the state in areas hit by Sandy and other storms, an agency spokeswoman said.

Protecting new residences from storms "makes good economic and business sense and thoughtful social policy," Lisa Bova-Hiatt, executive director of the recovery office, said in a statement.

In Long Beach, new singlefamily homes also include protection from floods.

Added cost, added value

Making homes storm-resilient by building strong foundations, elevating living spaces over garages, and in some cases installing elevators, can easily cost an extra \$100,000 for a single-family home, said Anthony Rector, a builder and lifelong Long Beach resident

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Conifer Realty's Copiague Commons, where builders are using materials designed to protect against flooding and major storms.

Builders factor climate

FLOOD from A3

who has constructed six new homes there since Sandy. However, such measures can add roughly \$250,000 to the value of a property, he said. Protecting homes from storms also reduces flood insurance costs.

Rector said he elevated his own bayfront home over a garage after Sandy flooded it with 5 feet of water. "My living space is never going to be hit again, unless of course there's something out there that we can't foresee or control," he said. "I love living on the water, and this is just part of the protocol."

The recent report by the Union of Concerned Scientists predicts that even under an optimistic scenario for rising sea levels, more than 10 percent of Long Beach could face routine floods — twice a month, on average — by the end of the century. If the ocean rises sharply, Long Island coastal communities

from the Town of Hempstead to East Hampton would face routine inundation of onetenth or more of their land, the group predicts.

Local climate scientists said large-scale studies, such as the one by the Union of Concerned Scientists, cannot account for characteristics of individual communities, such as flood-mitigation measures.

Nevertheless, those local experts said the recent study is based on solid scientific analysis. More detailed local data show that communities such as Long Beach and the Town of Hempstead "definitely have to be concerned about rising sea levels over the next 20 to 40 years," said Larry Swanson, interim dean of the School of Marine and Atmospheric Sciences at Stony Brook University.

Sea levels continue to rise

Research by the National Oceanic and Atmospheric Administration shows that on Long Island, sea levels have risen by 0.8 to 1.3 feet over the last century, said Nelson Vaz, coastal services team leader for the National Weather Service.

A team of 300 experts guided by a 60-member federal advisory committee has concluded that a further rise of 1 to 4 feet in global sea levels is expected by 2100, but the increase in New York could be even greater, Vaz said.

The gradual rise in sea levels will lead to more damaging storms, since floodwaters will reach farther inland, said Jay Tanski, a coastal geologist with the New York Sea Grant program. And that will force more Long Island communities to adapt by elevating roads and buildings above the reach of floodwaters, as Freeport and other municipalities have already begun to do, he said.

On Long Island, developers and public officials alike said the Island already faces more frequent flooding and more needs to be done to protect residents.

Rep. Lee Zeldin (R-Shirley) said he has worked with local governments seeking federal grants for storm mitigation and advocated for coastal and wetlands restoration projects that "will use the natural environment to reduce flooding, erosion and storm damage."

In Long Beach, local officials have secured more than \$200 million in state and federal funding to protect the city from flooding, said City Manager Jack Schnirman, a Democrat. City residents "are justifiably afraid," Schnirman said.

Many builders say they are taking action to allay those fears.

"I'm not going to speak to global warming and things of that nature," Graziose said. "[But] we've seen more storms in the last 25 years than we did when we were kids, so as a builder we've got to address them head on."