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More Coastal Nuisance Flooding Forecast for Coming Months

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More coastal nuisance flooding forecast for coming months



1 OF 3 PHOTOS: Priscilla James examines the flooding around her apartment on Brambleton Avenue in Norfolk on July 11, 2015. James said the streets around her apartment flood nearly every time it rains. (Brianna Soukup | The Virginian-Pilot)

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The Associated Press
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Federal scientists said Wednesday that they expect nuisance flooding to more than double in Norfolk in the coming months.

Sea level rise from global warming and the giant weather system El Niño will likely combine to increase the street flooding that causes inconvenience but no major damage, according to the National Oceanic and Atmospheric Administration.

In 10 of the 27 coastal communities that NOAA examined, scientists predict the number of nuisance flood days will increase between 33 and 125 percent with El Niño. And it's likely to be the worst in the mid-Atlantic region, from New Jersey to North Carolina, where nuisance floods could happen about once a week. The nuisance flood season runs mostly from fall to early spring.

NOAA oceanographer William Sweet is forecasting that Norfolk's nuisance flood days will increase to 18 this fall, winter and spring, more than double the eight flood days observed last year.

Sweet examined data going back to 1920 in some cases and found that the flooding is increasing with climate change and rising seas, but "some of these areas you can get it with no rain at all - high-tide flooding."

These "sunny day flooding" events are becoming more common.

The findings aren't a surprise to many in Hampton Roads trying to figure out how to respond to rising sea levels, said Ray Toll, director of coastal resilience research at Old Dominion University.

"We know it's happening, so what are we going to do about it? We need a community action plan," Toll said.

He is spearheading a two-year pilot project for local, state and federal government agencies - including the military - to develop a unified response to coastal flooding. It needs to draw in residents as well, he said.

By next summer, Toll said, the group hopes to start experimenting with responses to specific, long-lasting changes.

ODU is working with Virginia to apply for a portion of \$1 billion in grants from The Rockefeller Foundation and the federal government that could be used to help Hampton Roads adapt to rising waters.

"What we're doing is taking the longer-term view," Toll said. "None of these things are happening overnight."

El Niño - a general warming of parts of the Pacific that changes weather worldwide - brings nuisance flooding to a new level. That's because in the Pacific, the ocean is warmer, and warm water expands, Sweet said. In the Atlantic, the phenomenon brings more coast-hugging storms and wind.

"Expect that sea level rise will progress like steps of a kitten, punctured by swipes of a lion," said Donald Boesch, president of the University of Maryland Center for Environmental Science, who wasn't part of the report.

The report by Sweet is not published in a peer-reviewed journal, but four outside scientists examined it for The Associated Press and praised the work.

NASA oceanographer Bill Patzert, who wasn't part of the research, said the NOAA forecast "shows that the natural hazards don't necessarily have to be catastrophic like (hurricanes) Katrina or Sandy. They can creep up on you today. What is a nuisance today, in a couple decades, will be a serious problem for some communities."

Many studies have been done on Norfolk's vulnerability to sea level rise.

Last summer, [ODU scientists published a study](#) in the online journal Earth's Future that found Norfolk is flooding more than it used to.

Using tide gauge data, professors Larry Atkinson and Tal Ezer calculated the increase in hours of flooding for 11 coastal cities.

Norfolk saw one of the highest jumps. Before 1971, the city averaged about 20 hours of annual minor flooding. Over the next 20 years, that number doubled, and since the early 1990s, Norfolk has averaged about 130 hours of flooding a year.

The scientists defined minor flooding as at least 1 foot of water above a normal high tide as measured by a tidal gauge in the Elizabeth River near Sewells Point.

In 2013, the Army Corps of Engineers released a three-year case study of Norfolk Naval Station. The Corps found that the naval base's infrastructure wouldn't survive the kind of power storms and wide-scale flooding that rising seawaters are expected to bring by the second half of the century.

The study examined the effects of five types of storms on the naval station, based on varying increments of sea level rise up to about 6 feet.

The team mapped the base down to 30-foot increments and documented every piece of infrastructure, said Kelly Burks-Copes, a Corps research ecologist who led the study.

The study found that at some point between a 1.5- and 3-foot rise of the sea, the Navy base - and much of Hampton Roads - would be submerged for hours or even days by a big storm. Without proper planning, the base would be unable to function.

This story is compiled from reports by The Associated Press and Pilot writer Bill Bartel.

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