As king tide season arrives, more South Florida cities brace for sea-level rise

By DAVID LYONS
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King tides are expected to bring flooding to low-lying areas in South Florida cities again this fall and many local governments say they are actively planning for the rising waters.



It's king tide season again in South Florida, when an intrusive sea lifts fancy boats to street levels, forces tourists to slosh their way through thoroughfares, and sends cities rushing to erect barricades.

Increasingly, local governments appear to be growing more proactive about <u>protecting their citizens and property</u> from adverse forces of nature. <u>All around South Florida</u>, cities and counties are acting not only on

their own initiatives, but in concert with others to find ways to defend against sealevel rise and the high seasonal tides that accompany it.



It's not that they need to be reminded about the sense of urgency. In June, the National Oceanic and Atmospheric Administration reported that rising sea levels and frequent storms set **flood records across the United States in 2017** — and warned that 2018 could be worse. That poses an increasing challenge for Fort Lauderdale, Miami Beach and other South Florida cities where high tides can inundate low-lying neighborhoods.

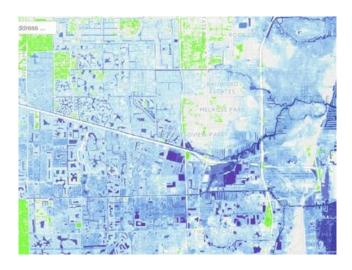
"As relative sea level increases, it no longer takes a strong storm or a hurricane to cause coastal high tide flooding," the agency's report said. "High tide flooding causes frequent road closures, overwhelmed storm drains, and compromised infrastructure."

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Also in June, the Union of Concerned Scientists said a new study it conducted found that a million Florida homes worth \$351 billion will be at risk from tidal flooding by the year 2100, with 64,000 of today's residential properties statewide "at risk of chronic inundation" by 2045.

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"Once market risk perceptions catch up with reality, the potential drop in Florida's coastal property values could have reverberations throughout the economy — affecting banks, insurers, investors, and developers — potentially triggering regional housing market crises," the nonprofit U.S.-based group said in a statement.



Whether local policymakers are responding directly to the latest alarm bells, or to a growing perception that existing infrastructures and property values cannot withstand many more years of passive policy-making — anecdotal evidence shows that local

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on flooded streets.

governments are taking heed. A sampling:

Fort Lauderdale's

preparations this year include the installation of more tidal valves (it now has 152), completing designs for stormwater projects in seven neighborhoods, expediting new seawalls in vulnerable island areas, lining stormwater pipes and piloting a project to install high water signs

The mayors of the inland cities of Oakland Park and Wilton Manors say they are collaborating to find ways to study and deflect overflowing tidal waters from the north fork of the Middle River. "Wilton Manors has 13 miles of waterfront property," said the city's mayor, Gary Resnick. "We have done a lot with respect to our drainage, as has Oakland Park. It's a serious issue. We're going to have to pay attention to it."

In Hollywood, the City Commission is poised Wednesday to authorize a vulnerability study and mitigation plan for the city, said Mayor Josh Levy. The effort would create a benchmark from which the city can operate, "even though it's obvious" that the **coastal areas repeatedly flooded by high tides** are a priority.

In Palm Beach County, planners and resiliency officers from a consortium of coastline cities including Boca Raton, Delray Beach, Boynton Beach, Lantana and Lake Worth met Aug. 24 to discuss how to deal with infrastructure vulnerabilities from encroaching waters, said Megan Houston, director of the county's Office of Resilience. She said she walked away optimistic that the cities will be able to work in concert.

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Miami Beach, Miami, and West Palm Beach jointly signed up in early August for help from Columbia University's Center for Resilient Cities and Landscapes to advance existing infrastructure projects. Some include areas vulnerable to rising waters such as Monceau Park in West Palm Beach, West Avenue in Miami Beach and Brickell Bay Drive in Miami, where aging seawalls and streets have proven themselves unable to handle surging stormwaters.

The Southeast Florida Regional Climate Change Compact has scheduled an annual summit for Oct. 24-25 in Miami Beach, marking a decade of collaborative work in identifying the threats of rising seas and finding ways to deal with them.



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"Local governments have been hyper-responsive," said Jennifer Jurado, Broward County's chief resiliency officer and director of the Environmental Planning and Community Resilience Division. "We are on the front lines. Our counties have been the earlier leaders."

Jurado said Broward has been working on sea-level and climatechange issues since the 1990s, setting standards, devising models to assess sea-level rise, gauging the impact of climate change on water

supplies, and updating a 100-year community flood map.

She has 12 municipal partners on a project aimed at setting new flood elevations for infrastructure. "It demonstrates that our cities understand the importance of planning for future conditions and working to protect our infrastructure as it relates to flood insurance," she said.

Flooding is a chronic problem regionwide, agreed Jayantha Obeysekera, director of the Sea Level Solutions Center at Florida International University. "Seawalls will stop storm surge and sea-level rise, but you need to think about the flood control on the interiors."

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Another early respondent was Miami Beach, which has committed close to a half-billion dollars on pumps, valves and other measures to keep rising waters out of the man-made barrier island.

"We probably got in as early as anyone," said Miami Beach Mayor Dan Gelber of his city's efforts to cope with sea-level rise. "We try to do our street raising program in the areas where the challenges are most acute. We have raised the roads. We're well into it. We've done 3 or 4 miles of roads. We're trying to build our resiliency features."



SUN SENTINEL EDITORIALS

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Fort Lauderdale City Commissioner Steve Glassman, whose district is filled with islands where flooding is MAY 04, 2018 AT 8:00 AM

routine, said sea-level rise and the preservation of infrastructure stood out as a major concern among voters

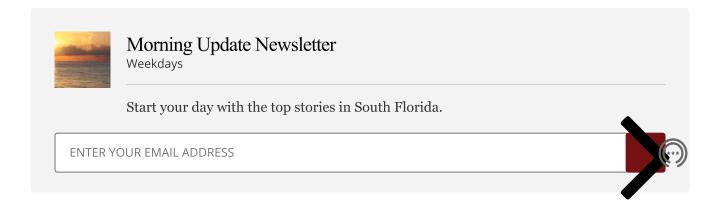
in the city's municipal elections this year.

"Infrastructure and resiliency and sea-level rise were all huge issues for this campaign," he said. "Those of us elected to the City Commission expressed that concern as to how [sea-level rise] affected the infrastructure. I didn't see how we could continue to grow and build if our foundation wasn't ... secure."

While he said he appreciates the steady improvements made thus far, "we have a long way to go."

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Academics say that although South Florida has received a more glaring media spotlight over high tides and flooding than many other areas in the country, the region's local governments deserve more credit for their responses than they're receiving.



"It's actually something we should be particularly proud of compared to the national scene where the exposed communities may be showing less proactive action than what we see here," said Colin Polsky, professor of geosciences and director of the Florida Center for Environmental Studies at Florida Atlantic University.

"One of the main things is, whether it's Jurado's office or the city, there is really good [work] being done beneath the radar to prepare the region from a policy

perspective and from a monitoring perspective and actually doing things to help keep the streets dry." Polsky said

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"Fort Lauderdale is way out ahead as far as municipalities go and it's kind of a shame it's not so evident because what they are doing is not the flashiest of things, but they're helpful and it's efficient and it's exactly what they should be doing," he added.