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Study spurs St. Johns County to plan for rising tides

By Tiffanie Reynolds Wed, Feb 17, 2016 @ 12:14 am

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Bob.Mack@jacksonville.com A study of sea-level rise impacts on the Guana Tolomato Matanzas National Estuarine Research Reserve found that places like Summer Haven south of Crescent Beach are in peril from changing ocean levels.

In at least 30 years, a hard rain or storm could completely close down roads in St. Augustine, forcing residents to take detours. In at least 60 years, the coastline as residents know today from St. Augustine to Palm Coast will be under water.

These are only two projections in Guana Tolomato Matanzas National Estuarine Research Reserve's and University of Florida's report "Planning for Sea Level Rise in the

Matanzas Basin: Opportunities of Adaptation," published in August 2015. The report analyzed current and potential future conditions around the Matanzas River, Pellicer Creek and the Atlantic Ocean from St. Augustine to Flagler Beach with sea level rise projections from 10 inches to eight feet by the year 2100. With those projections, the report also looks at ways the area can plan for and adapt to sea level rise.

The report is the first to look at sea level rise in the region in detail, and has sparked other sea level rise studies in St. Augustine and the Northeast Florida region.

The report's principal investigator Kathryn Frank, an assistant professor of the department of urban and regional planning at University of Florida, said that land use planning is the best first step for the report's area to get ahead of rising sea levels. The Matanzas region is in a unique position to keep its balance of developed land and conservation areas with efforts already begun by GTM Research Reserve and city governments.

St. Augustine and Palm Coast already have areas inland designated for development, called infill. Using population growth projections to 2060, Frank said that designated land would be able to hold both new residents and those relocating from shore. These areas are in existing subdivisions and neighborhoods in Palm Coast, immediately north of St. Johns County and immediately north and south of St. Augustine. Through sticking with these designated areas and platting land, both cities can build around what they have instead of clearing new land for development in the future.

Conservation areas are already taking steps to preserve their protected ecosystems and migratory bird habitats. The report revealed that GTM Research Reserve will be losing a majority of its coastal land to sea level rise, and the reserve is already working with the state to add 8,460 acres of watershed of Pellicer Creek, called Pringle Creek Forest, for surface water protection of the creek and possibly migrating salt marshes in the future. This land was

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added to the Florida Forever list.

The reserve will use the data in the report in research on marsh sustainability and track short and long-term trends in water level and sedimentation in the reserve. GTM Research Reserve Director Michael Shirley said that this tracking will serve as an early warning system for erosion and marsh elevation, helping them keep the area balanced for the wildlife it serves. The report's data will also be used in its Coastal Training Program and Environmental Education Center for visitors.

"The GTM Research Reserve Coastal Training Program will be working on trainings that incorporate some of the adaptation strategies set forth in the report such as low-impact development, living shorelines and coastal resilience to help coastal decision makers make more informed choices when looking at growing communities sustainably and positioning ourselves to be resilient," said Shirley. "The public workshop feedback received during this project will guide our education and outreach efforts toward the stakeholder priorities."

Its also working with other conservation organizations to create the Matanzas to Ocala Conservation Corridor, over 100,000 acres of conservation land spanning from St. Johns to Flagler County and connecting the Matanzas Basin to the Ocala National Forest. The land was approved as part of Florida Forever land conservation program's 2016 priority list.

The city of St. Augustine, on the other hand, is currently working on how sea level rise will affect the city as it stands, especially its historic downtown. Reuben Franklin is the city's project manager for a Department of Economic Opportunity Community Resiliency Initiative grant and White Paper study "Adapting to Rising Tides" with UF's Resilient Communities Initiative. Both began shortly after the Matanzas Basin planning report was published, and will be the first two projects to look at rising sea levels specifically for St. Augustine.

The UF White Paper study will look at sea level rise projections and its impact on cultural and historic resources, infrastructure, natural resources and public health in St. Augustine. The study is scheduled to be published and released to the public in March. Franklin said the goal of the study is to give city and county government and the community a clear picture of how rising sea levels will effect the city, and to spark conversations among the government and community on how to deal with those issues.

For DEO's Community Resiliency Initiative grant study, St. Augustine was selected as one of three Florida coastal cities to come up with strategies, tools and ideas combating rising sea levels that could be adopted in other communities. Franklin said the city is still in the vulnerability/risk assessment stage of the study. Once complete, it will give the city a more detailed look on the effects of sea level rise. He hopes both studies will spark conversation and spur action in the city.

"We're no stranger to coastal flooding," said Franklin. "But, nothing like this. Over the last about 100 years we've seen eight inches of sea level rise, and now we're looking at that increasing exponentially. And it's something that does change. As humans, we're kind of used to this short life span and shorelines and sea levels are static and they don't change. But, the fact is when you look at it in geological time-frames, they're very dynamic in change, whether it's a natural process or being sped up by humans."

Frank said that in order for the area to preserve its land and community, area communities need to start planning for sea level rise now.

"Time is of the essence," said Frank. "I think people should be working on this as much as they can right now. Because planning takes a long time, and just doing this research and outreach and having conversations and creating policies and implementing them, all of that takes time. So we need to start now."

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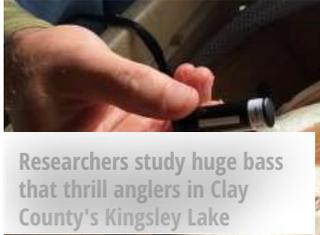
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