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3-Year Effort by Stetson University Professor Results in 35% Discount in Flood Insurance for Residents of Monroe County, Florida

Watershed Management Plan inventories flood risks due to sea-level rise, storm surge

DELAND, Florida, March 29, 2021 – For nearly three years, the [Institute for Water and Environmental Resilience \(IWER\)](#) at [Stetson University](#) assisted [Monroe County](#) in the Florida Keys with its watershed management plan.

[Jason Evans, PhD](#), executive director of IWER, is the lead author of the Monroe County Watershed Management Plan. His efforts paid off for more than 14,000 National Flood Insurance Program (NFIP) policyholders in unincorporated Monroe County, who received a Community Rating System (CRS) Class 3 rating and 35% premium discount on their flood insurance, which begins on April 1, 2022.

“The watershed management plan provides Monroe County with a very comprehensive inventory of its vulnerabilities for current and future flood risks associated with storm surge and sea-level rise,” said Evans.

“Watershed management plans, especially for coastal areas, are typically quite difficult to develop,” added Evans, who is also an associate professor of environmental science and studies at Stetson University. “Monroe County could not have achieved a CRS Class 3 rating without this project.”

The more than \$300,000 project was funded by a partnership between the [National Oceanic and Atmospheric Administration \(NOAA\) Coastal Management Program](#); [South Atlantic Sea Grant](#) programs in [Florida](#), [Georgia](#), [North Carolina](#) and [South Carolina](#); and Monroe County, including the community of [Islamorada, Village of Islands](#).

“This partnership’s funded project was established to increase information sharing and the reach and value of collaborative resilience programming in southeastern coastal communities,” said [Charles Sidman, PhD](#), associate director for research at Florida Sea Grant. “Monroe County’s achievement for improving its Community Rating System classification and yielding significant flood insurance savings for homeowners is one example of how a participating community has benefited from a regional partnership.”

A watershed or land area channels rainfall and snowmelt to creeks, rivers and streams, and eventually drains to other bodies of water like bays, reservoirs and the ocean.

Watershed management plans provide cities and counties with information and a strategy for achieving water resource goals.

During the watershed management plan project, Evans worked closely with Monroe County's staff, a consulting team, Florida Sea Grant personnel and numerous [Environmental Science and Studies Department](#) students at Stetson to inventory a wide variety of current and future floodplain risks within the county. This included impact models of sea-level rise, storm surge and changing habitats undergoing different climate-change scenarios as well as categorizing risks to critical infrastructure, roads and private property.

The impact models were created by using geographic information systems (GIS) technology. Clearview Geographic's CEO and President and Stetson alumnus [Alex Zelenski](#), who has a Bachelor of Science in environmental science and geography, assisted Evans and played a pivotal role in the GIS model development and map-making process. He also is credited as a second author of the Monroe County Watershed Management Plan.

Infrastructure components of stormwater drainage systems were also evaluated, which included catch basins, manholes, injection wells and trench drains. These essential elements will help protect developed areas of unincorporated Monroe County and the watershed from flooding, but require careful long-term assessment and maintenance.

"The watershed management plan and other flood mitigation measures taken by Monroe County government officials should reduce flooding to residential property," said Evans. "This project helped raise awareness and assisted policymakers with the implementation of forward-thinking regulations and programs that went above and beyond the minimum regulatory requirements of the National Flood Insurance Program."

About Stetson University

Founded in 1883, [Stetson University](#) is the oldest private university in Central Florida. Stetson focuses on intense learning experiences in a supportive community that allows students to develop their voice in a connected, inclusive environment. Stetson University ranks No. 4 on U.S. News & World Report's 2021 list of Best Regional Universities (South), and has been recognized as one of The Princeton Review's 386 Best Colleges, 2021 edition. [Stay connected](#) with Stetson on social media.

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