NOAA Coastal Storms Initiative

Better Information

A new offshore sentinel data buoy is providing weather and ocean conditions in real time. Improved coastal weather and ocean data gathering also provides location-specific information that previously was not broadly available in emergency preparedness.

For example, when this new real-time information is combined with research on the shape of the river, including its bed, much better predictions can be made on flooding, contaminant releases, spill trajectories, and the effects of storms.

Florida Sea Grant Photo

Hurricanes and tropical storms frequently cross the Florida peninsula. These were tracked from 1891-1900.

St. Johns River Water Management District Photo

Advance Information

By knowing where and when flooding could occur, based on each storm's individual characteristics, much more precise information will be available to emergency operations managers and the general public.

Better Predictability

By gathering information specific to the St. Johns River Watershed, storm location, effects, and predictions can be tailored to a smaller "footprint." For instance, emergency managers can make better decisions on which areas to evacuate and determine the best evacuation routes.

South Florida Water Management District Photos

More and better information leads to better predictability for day-to-day weather, as well as for the effects of storms, whether they are extraordinary wind or rain events, or a combination of the two.

Where will the answers come from?

Nine projects will be completed at various locations within the St. Johns River Watershed. Three of these are:

Shallow Water Bathymetry

What's the shape of the bottom of the St. Johns River and the nearshore Atlantic? The answer helps predict the effects of high wind or heavy rain episodes and the extent of flooding. Better information for navigation will also be possible.

Risk and Vulnerability

This project identifies people and places that could be at risk during major storms. Using data and information from other Coastal Storms Initiative projects, emergency and environmental managers can make effective hazard mitigation plans and lessen storm impacts.

River and Nearshore Modeling

By knowing both the normal waterflow patterns and the changes due to storm events, managers can mitigate the effects of spills, predict contaminant flows, and make better decisions prior to and during storms. Models will be made that cover the St. Johns River, its estuaries and lakes, and the near-shore Atlantic Ocean.

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With the close cooperation of the St. Johns River Water Management District and the Florida Department of Environmental Protection, these NOAA units are participating:

- Atlantic Oceanographic & Meteorological Lab Coast Survey
- Center for Operational Oceanographic Products & Services
- National Weather Service
- National Marine Fisheries Service
- Florida Sea Grant Extension Program
- NOAA Coastal Services Center
- National Coastal Data Development Center
- National Center for Coastal Ocean Science
- Office of Response and Restoration
- Office of Weather and Air Quality Research

For information or to comment, contact:

Don Jackson
Florida Sea Grant Extension Program
dlj@mail.ifas.ufl.edu
(352) 392-1837

Visit the Coastal Storms Initiative online:
www.csc.noaa.gov/csi

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A Pilot Project in the St. Johns River Watershed

NOAA Photo

46% of all hurricanes or tropical storms that pass over Florida will touch the St. Johns River Watershed.

What will happen when the next big storm hits?