

Identify Additional Water Quality Monitoring Needs

Current Situation

Volusia County Environmental Management has been conducting surface water quality monitoring since 1988. We work closely with other agencies to ensure that monitoring locations and parameters are appropriate and make the most of limited financial resources. With decades of background data, we can evaluate the priority monitoring needs, and work between County departments to identify additional needs.

Project

Staff will seek to identify specific locations with negative water quality impacts, and identify data needs related to capital projects to help determine the most effective water quality improvement solutions. In addition, staff will anticipate future regulatory requirements and tailor monitoring programming accordingly.

The project will include:

- Working with Environmental Management, Stormwater Utilities, Water Resources and Utilities to identify gaps in sampling work to determine if additional water quality parameters, or sampling locations are warranted (existing staff).
- Partnering with the St. Johns River Water Management District and the Department of Environmental Protection to acquire continuous data loggers in Mosquito Lagoon (\$300,000 one-time state funding, \$28,486 annual county funding).
- Identifying pre/post stormwater capital project sampling needs and partnering with local research institutions to create monitoring projects (existing staff, university resources).

Community Impact and Benefits

This project will:

- Create an inter-department cooperative team for identifying monitoring needs.
- Match data needs with sampling programs.
- Ensure that limited resources available for sampling and analysis are used effectively.

Seek Expansion of the Indian River Lagoon National Estuary Program boundary North to the Flagler County Line

Current Situation

The Indian River Lagoon National Estuary Program (IRLNEP) was established in 1989 as one of 28 National Estuary programs created under the Clean Water Act, administered by the US Environmental Protection Agency (EPA).

The IRLNEP's geographic boundary extends from Martin County north to Ponce Inlet in Volusia County.

National Estuary Programs were established "to protect and restore the water quality and ecological integrity of estuaries of national significance." The main goal is to implement the Comprehensive Conservation and Management Plan (CCMP), which identifies programs and projects that protect these ecologically diverse ecosystems. The IRLNEP receives federal and state funding to accomplish the CCMP goals.

Project

The coastal waters of Volusia County, including the Northern Coastal Basin north of Ponce Inlet, and the Mosquito Lagoon south of Ponce Inlet, are inter-connected and experience similar water quality issues.

County staff will work with the county's lobbyist and the IRLNEP staff to engage the Environmental Protection Agency and seek a boundary extension to include the Northern Coast Basin waters, including the Halifax and Tomoka Rivers and Spruce Creek.

Community Impact and Benefits

This project will:

- Emphasize the inter-connected nature of Volusia's surface water bodies.
- Increase the opportunity for funding of projects that implement CCMP goals.

Acquire Continuous Data Loggers in Mosquito Lagoon

Current Situation

In June 2014, the St. Johns River Water Management District and the Florida Department of Environmental Protection entered into a joint project to deploy several continuous “real-time” water quality monitoring stations in the Indian River Lagoon and elsewhere. None of the monitors fall within Volusia County’s portion of the Lagoon.

Project

Real time water quality monitoring can provide significant information to managers in assessing the impacts of nutrients and other pollutants in our water bodies. Unlike routine monitoring, real-time data can capture storm and other event based changes in water quality parameters. This type of data adds to the understanding of the entire system in a way that periodic sampling does not.

Volusia’s Mosquito Lagoon is an important part of the overall Indian River Lagoon system. Water quality measurements in Mosquito Lagoon can provide critical information that would be useful to water quality managers throughout the 128 mile long system. Recent algae blooms in the lagoon have emphasized the complexities of the lagoon ecosystem and the need for additional information.

Volusia County requests that the agency partnership be extended to include two additional data monitors in the Mosquito Lagoon. The equipment cost for two additional data loggers is approximately \$300,000. In addition, the units require significant maintenance, equivalent to ½ FTE, or \$30,000 annually in staff costs.

Community Impact and Benefits

This project will:

- Extend the knowledge of water quality in the Mosquito Lagoon by providing real-time data.
- Continue previous successful partnerships with the St. John’s River Water Management District and the Florida Department of Environmental Protection.