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# Sarasota County Watershed Management

## Sarasota County, FL



Watershed Management

**Client/Owner:** Sarasota County, FL

**Project Location:** Sarasota County, FL

### **Watershed Model Review – Sarasota County**

The GPI project team was selected by Southwest Florida Water management District to review recently completed Ad-ICPR surface water quantity and water quality models from Sarasota County. The purpose of the review is to determine if the models are suitable for use in future permitting analyses. Models will be reviewed for completeness, accurate data, and appropriate model set up and use. Watersheds reviewed included Curry Creek and Hatchett Creek.

### **Sarasota County Canals Sediment Abatement Studies**

GPI was contracted by Sarasota County to perform a series of sediment abatement analyses to determine if opportunities exist for reducing future land-based sediment accumulation in the canals. A careful investigation was required to determine the causes of sedimentation prior to recommending courses of action to reduce sedimentation in canal systems.

A field investigation and a pollutant loading analysis were performed to quantify potential land-based sediment and other pollutant loadings entering the canal. The analysis used a spreadsheet-based model, with loading estimates based on land use GIS coverage, drainage basin boundaries, stormwater treatment efficiency rates for Best Management Practices (BMPs), and annual pollutant loading unit rates. Recommendations were made for stormwater BMPs to reduce sediment and nutrient loadings to the canals and to Sarasota Bay. Recommended BMPs included ponds, swales, baffle boxes, filter strips, and other cost-effective, low maintenance alternatives.

### **Alligator Creek Water Quality Management Study**

Sarasota County has identified the reach of Alligator Creek west of US 41 as having sediment transport in the creek channel leading to shoaling as well as introduction of nutrient and other pollutants into the water column. The County is currently investigating the feasibility of dredging the creek, and also wishes to reduce the rate of sedimentation into the Creek.

GPI conducted a study to determine the efficiency and feasibility of installing a series of weirs, utilize retired wastewater treatment ponds, and use other sediment transport controls at strategic points to trap sediment prior to deposition in the lower creek reach.