### **Expansion and Upgrade of Southwest Regional Wastewater Reclamation Facility**

The Volusia County Southwest Regional and Four Towns wastewater facilities provide wastewater treatment service for residents, institutions, and businesses within the cities of DeBary, Orange City and nearby unincorporated areas. Both facilities are located within the Blue Spring Basin and operate within the compliance standards of their respective Florida Department of Environmental Protection (FDEP) regulatory permits. The current permit standards require reduction of nitrogen to less than 10 Mg/L and phosphorus to less than 3 Mg/L.

#### **Current Situation**

In July 2014, the FDEP adopted new regulatory Total Maximum Daily Load (TMDL) standards for Blue Spring. The impact of the new regulatory standards will:

- Require reduction of nitrogen to less than 3 Mg/L and phosphorus to less than 1 Mg/L
- Cause significant capital investment (at both wastewater treatment facilities) in order to achieve new standards for nitrogen and phosphorus reduction
- Necessitate development of a regional plan for the conversion of septic systems to central sewer collection systems

#### **Project**

Rather than invest in expensive Advanced Wastewater Treatment (AWT) processes at both wastewater facilities, the County intends to decommission the aging Four Towns facility and direct wastewater effluent flow to the newer and more efficient Southwest Regional facility. The project scope consists of:

- Engineering, design, and construction of new infrastructure and AWT monitoring technology to achieve new standards for nitrogen and phosphorus reduction
- Expansion of the current capacity from 1.7 MGD to 2.2 MGD in order to accommodate flow from the Four Towns facility as well as increased flow from the conversion of septic systems

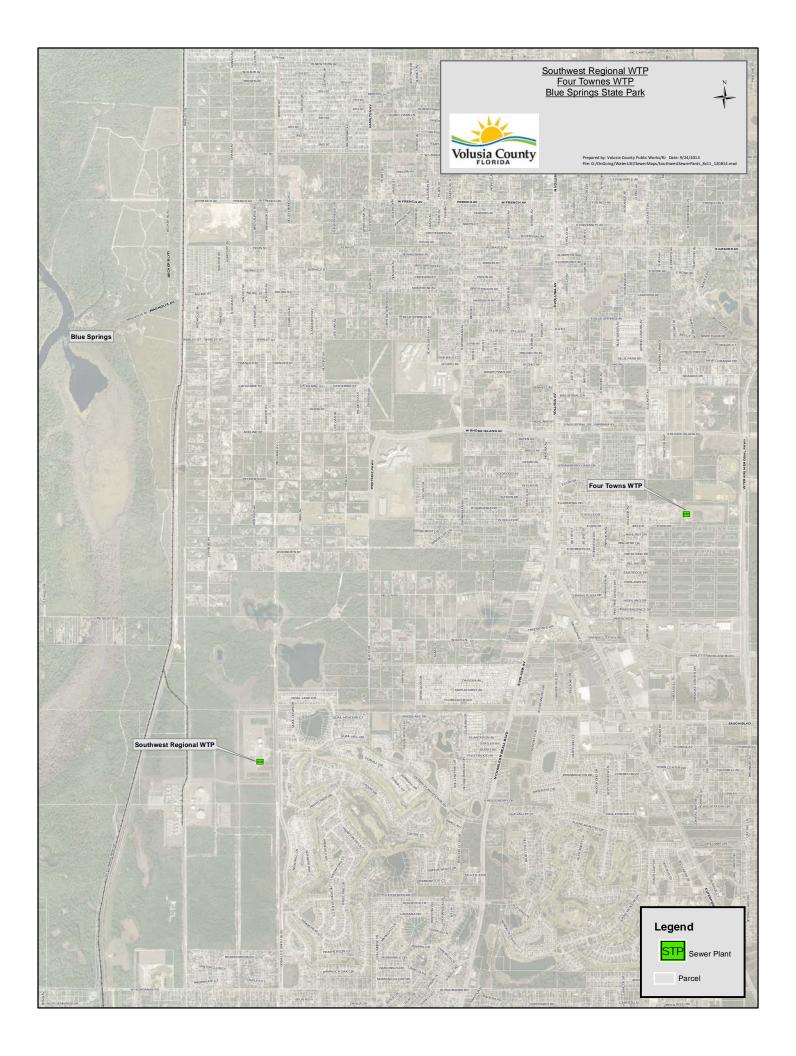
Total project costs are estimated at \$6.5 million. The County will request grant funding through state and water management district programs and fund the remaining local match through the Clean Water State Revolving Fund (SRF) program.

# **Community Impact and Benefits**

Treatment to AWT standards will:

- Reduce the loading of nitrogen between 10-12 tons/yr and phosphorus between 4-5 tons/yr within the spring basin
- Help preserve the ecosystem and natural habitat within the spring

Capital improvements at the facility will provide an efficient and cost effective means for improved water quality and the protection of Volusia Blue Springs. This project helps achieve statewide goals for improved water quality in Blue Spring through quantifiable reductions in the amount of nutrients in the Blue Spring Basin.



## **Expansion and Upgrade of Southeast Regional Wastewater Facility**

The Volusia County Southeast Regional wastewater facility provides wastewater treatment service for residents, institutions, and businesses within the cities of Oak Hill and Edgewater. The facility is located within the Mosquito Lagoon watershed and operates within the compliance standards of its Florida Department of Environmental Protection (FDEP) regulatory permits. The current permit standards require reduction of nitrogen to less than 10 Mg/L and phosphorus to less than 3 Mg/L.

### **Current Situation**

With the intent to develop a Reasonable Assurance Plan (RAP) for the protection and preservation of Mosquito Lagoon, the County seeks to improve water quality through reduction of nitrogen and phosphorus from treated effluent wastewater and the conversion of septic systems to a central sewer collection system.

To achieve these objectives, the Southeast Regional wastewater facility will require capital investment to expand existing capacity and treat effluent disposal to higher Advance Wastewater Treatment (AWT) standard.

### **Project**

The proposed project consists of:

- Engineering, design, and construction of new infrastructure and AWT monitoring technology to achieve reductions in nitrogen and phosphorus loadings
- Expansion of the current capacity from 600,000 gallons per day to 1,200,000 gallons per day in order to accommodate the flow resulting from the conversion of septic systems.

Total costs are estimated at \$9.0 million. The County will request grant funding from federal and state programs and fund the remaining local match through the Clean Water State Revolving Fund (SRF) program.

## **Community Impact and Benefits**

Treatment to AWT standards:

- Will reduce the loading of nitrogen between 2.4 2.9 tons/yr and phosphorus between 1 – 1.2 tons/yr
- Help preserve the ecosystem and natural habitat within the Mosquito/Indian River Lagoon.

Capital improvements at the Southeast Regional wastewater facility will provide an efficient and cost effective means for improved water quality and the protection of the Mosquito/Indian River Lagoon. This project helps achieve local and statewide goals for improved water quality in the Indian River Lagoon through quantifiable reductions in nutrient loading.

