



EASTERN WASTEWATER TREATMENT PLANT EXPANSION EUSTIS, FL

Data Points

- **Scope:** Design, permitting, bidding, funding, and construction services
- **Duration:** 13 months

Project Components

- Wastewater treatment
- Obtained grant funding
- Expedited schedule

Key Benefits

- New plant added capacity necessary to meet the growing demand due to extensive population growth in the area
- Prioritized funding assistance
- Cost savings from owner-direct purchase

Background

The City of Eustis was experiencing growth in the Eastern Service Area, partially due to the enhanced access from the Wekiva Parkway. The City had an existing 0.3-mgd WWTP where the capacity had already been allocated, and additional capacity was necessary to support the growth in the area. Reiss' design approach included an expansion with addition of a new 1.03-mgd WWTP utilizing a two-stage Modified Ludzack-Ettinger (MLE) process, which provides two 0.5-mgd treatment trains separate from the existing facilities, reducing costs associated with interconnection piping and multiple outages and bypasses.

Obtaining grant funding was critical to the success of the project and an important cost-saving measure for the City. A St. Johns River Water Management District (SJRWMD) Cost-Share grant funding application was prepared with a specific focus on the project's location within the Wekiva Springs Protection Area. The reclaimed water usage and level of nutrient control the project provided through wastewater collection and treatment in lieu of septic systems in the springshed resulted in the project being considered a high priority project for funding. The City received a \$2.5 million cost-share funding grant from SJRWMD.

Reiss provided engineering services, including preliminary engineering, funding assistance, permitting, design, bidding assistance, and construction administration services. The design of the wastewater treatment plant expansion included mechanically cleaned screens and compactor; grit removal and dewatering; new influent pump station wet well with variable speed submersible pumps; new MLE treatment process for nutrient removal with internal recycle; aeration system; clarifiers; return activated sludge (RAS)/waste activated sludge (WAS) pumping system; chlorine contact chambers and effluent transfer pumps; sodium hypochlorite storage and feed system; cloth disk filters; rapid infiltration basins (RIBs); biosolids holding/decanting and truck loading area. Electrical upgrades included a new generator; instrumentation and controls/SCADA; and aeration/blower building. Due to the immediate need for additional capacity, a unique design approach was necessary to expedite the project schedule, which led to the project preliminary design and final design being completed within seven months.

