

PUBLIC FACILITIES REPORT UPDATE
Cedar Key Water and Sewer District
August 2015

INTRODUCTION

This report was prepared to satisfy the requirements of Section 189.415, Florida Statutes, and is provided to the City of Cedar Key according to the schedule published by the Department of Economic Opportunity.

EXISTING FACILITIES: WASTEWATER

Description

The wastewater treatment plant is classified as a water reclaiming facility by the Florida Department of Environmental Protection (DEP) since it is designed to treat the wastewater to a degree where it can be reused for irrigation purposes. The water reclaiming facilities are located at C and 3rd Streets in Cedar Key. The treatment plant consists of screening, grit removal, aeration, settling, filters and disinfection. Unit processes consist of dual tanks or equipment, providing class 1 reliability. A propane fueled motor generator set is also provided to generate electricity in case of power failure. High level disinfection is included to destroy bacteria, and dechlorination facilities dechlorinate the effluent during periods of effluent discharge into the back bayou.

The primary effluent disposal of the reclaimed water is at the 50,000 sq ft block surrounded by “G” St., “H” St., 8th St. and Whiddon Ave. This area is approved for 166,000 gpd. Effluent disposal utilizes leaching chambers installed slightly below grade and is classified by the DEP as an adsorption field. Additional areas approved for 14,000 gpd of effluent disposal by spray irrigation are the cemetery, the School, the City Park and some R/W areas along 1st Street.

Cedar Key’s wastewater collection system consists of gravity sewer collection areas discharging into pumping stations and a force main network discharging to the treatment plant. A low pressure sewer system was constructed in 2000-2001, connecting all remaining buildings on the island to the existing sewer system.

Current Capacity

Effective in 2003, the DEP approved the reclaiming facilities for an average annual flow of 180,000 gpd with an instantaneous peak capacity of 400 gpm, or 576,000 gpd. The wastewater treatment plant operating permit was renewed on July 30, 2013, at the same flow and capacity. The District continues to operate the wastewater treatment plant well within approved flows, and that is anticipated to be true even with projected population growth over the next 10 years.

Wastewater System Modifications

No substantial improvements to the wastewater system are planned.

EXISTING FACILITIES: POTABLE WATER

Description

The District's existing public water supply system includes:

1. Two wells located at a wellfield off of State Road 24 on the mainland.
2. A MIEX pre-treatment unit and lime softening water treatment plant—all located on the mainland at SR 24 and CR 347.
3. A reverse osmosis treatment facility available in case of a recurrence of saltwater intrusion into the wellfield
4. A 250,000 gallon elevated steel water storage tank located at 8th and G Streets.
5. A distribution system consisting of galvanized steel, asbestos cement, cast iron and PVC piping ranging in size between ¾ inches to 8 inches in diameter.

Current Capacity

The capacity of a water system, as determined by the Florida DEP is its maximum 24-hour supply or treatment capability, whichever is less. In the case of Cedar Key, the limiting factor is the water treatment plant, rated at 250 gpm or 360,000 gpd. The capacity of the water system is more than sufficient to serve all current and projected needs for water within the District.

Potable Water System Modifications

The following improvements to the potable water system are in the planning stages:

1. A new well at the State Road 24 wellfield to be completed in 2015. This well will replace current Well 3 so that the District will continue to have two wells. This project is being financed by a legislative appropriation by the Florida Legislature, and is currently under construction. This well will not increase the capacity of the District, nor will it impose any new demands on other facilities.
2. A new water treatment plant using Greensand and nanofiltration to replace the current water treatment plant with completion anticipated in 2017. This project will be funding through a variety of sources including Florida legislative appropriation, federal Rural Development grant/loan, and state Revolving Loan Fund grant. This new plant will not increase the capacity of the District, nor will it impose any new demands on other public facilities except for a moderate increase in electrical usage.

Report prepared by:

Cedar Key Water and Sewer District
John K. McPherson, General Manager
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