

# Hernando County 10-Year Water Supply Facilities Work Plan

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## Hernando County 2022 Water Supply Plan

### Introduction

To ensure adequate water supplies, the Florida Legislature has established a coordinated planning process between regional water supply plans prepared by the water management districts pursuant to Chapter 373, F.S., and comprehensive plans prepared by local governments pursuant to Chapter 163, Part II, F.S. Under these laws, local governments must address in their comprehensive plans the water supply sources necessary to meet and achieve existing and projected water use demand for the established planning period, considering the applicable regional water supply plan prepared pursuant to Section 373.709, F.S.

Section 163.3177(6)(c)3, F.S., requires local governments to amend their comprehensive plan: (1) to incorporate alternative water supply projects that the local government identifies or selects from those identified in the regional water supply plan for their region; and (2) to adopt a work plan, covering at least a 10-year planning period, for building public, private, and regional water supply facilities, including the development of alternative water supply projects, conservation projects and reclaimed water projects, which are necessary to serve existing and new development. The 10-year water supply facilities work plan (work plan) must be reviewed and updated approximately every five years, corresponding with the update to the regional water supply plan.

In November 2020 the Southwest Florida Water Management District (District) adopted the Regional Water Supply Plan (RWSP) for the Northern Planning Region of the District, including Hernando County. Consistent with state law, the Hernando County Comprehensive Plan must be updated to reflect the adopted Regional Water Supply Plan, pursuant to Florida Statutes.

### SWFWMD Regional Water Supply Plan Demand Analysis

According to the Southwest Florida Water Management District, Hernando County and its utilities will have the following anticipated demand up to and through the 2040 Planning Horizon.

**TABLE 1: DEMAND ANALYSIS<sup>1</sup>**

	2020	2025	2030	2035	2040
County Population	187,965	201,758	213,697	224,493	233,764
Total Demand (MGD) (County)	22.435	23.958	25.240	26.378	27.339
Total Demand (MGD) (Utilities)	20.098	21.050	21.760	22.350	22.813

According to the Southwest Florida Water Management District, Hernando County has the potential to increase its benefits to water supply from reclaimed water to 2.910 mgd by 2040. This in combination with the potential benefits from water conservation (2.644 mgd) totals 5.55 mgd in available water resources for the County.

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<sup>1</sup> Southwest Florida Water Management District Community Sheets – Northern Planning Region (November 2020)

## Hernando County Conditions

### Potable Water

The potable water needs of the residents and businesses in Hernando County are currently served by the City of Brooksville (City), Hernando County Utilities Department (HCUD), and private wells. The City and HCUD water supply systems operate independently from each other and are not connected, with the exception of one existing interconnect. This interconnect allows water to flow from the City's system to the HCUD system when the distribution system pressure drops below a pre-determined set point such as during a fire-flow event.

HCUD has consolidated various water supply facilities scattered throughout the County into six water supply systems. They are known as the West Hernando, East Hernando, Seville, Royal Oaks, Dogwood Estates, and Cedar Lane water supply systems. The West Hernando System is the largest and serves the Spring Hill community in Southwest Hernando County. The East Hernando System is the second largest and it serves the eastern areas of the County. The Seville System is considerably smaller and is located in the northwest part of the County. The three remaining systems are small and essentially serve the communities of Royal Oaks, Dogwood Estates, and Cedar Lane, which are centrally located. All together the permitted HCUD water supply systems consist of twenty-three (23) water treatment plants with a total permitted annual average capacity of 23.3 million gallons per day (mgd). Accordingly, HCUD's most recent Water Use Permit (WUP), issued on August 25, 2015, combines all County water systems into one permit with the average daily withdrawal (ADW) at approximately 23.3 mgd.

On August 24, 2021, the Hernando County Utilities Department updated its Potable Water Master Plan which provided an analysis of potential growth areas throughout the County through 2040.

**TABLE 2: ALLOCATED AND TOTAL HCUD SERVICE AREA POPULATION ESTIMATES<sup>2</sup>**

Service Area	2017	2020	2025	2030	2035	2040
West	134,705	140,982	147,948	153,849	158,805	162,757
East	7,048	8,355	11,649	14,588	17,211	19,500
North/Northwest/Seville	55	86	887	1847	2808	3769
Cedar Lane	280	281	282	283	285	288
Dogwood Estates	772	784	803	824	848	872
Royal Oaks	164	165	166	167	167	168
<b>Total</b>	<b>143,024</b>	<b>150,653</b>	<b>161,734</b>	<b>171,558</b>	<b>180,124</b>	<b>187,354</b>

Additionally, HCUD developed average day demand (millions gallons per day) were developed, using a planning value of 130 gallons per capita per day through 2040.

**TABLE 3: HCUD DEMAND ANALYSIS<sup>3</sup>**

Service area	2020	2025	2030	2035	2040
West	18.33	19.23	20.00	20.64	21.16
East	1.09	1.51	1.90	2.24	2.54
North/Northwest/Seville	.01	.12	.24	.37	.49

<sup>2</sup> Hernando County Utilities Department 2021 Potable Water Master Plan

<sup>3</sup> Hernando County Utilities Department 2021 Potable Water Master Plan

Cedar Lane	.04	.04	.04	.04	.04
Dogwood Estates	.10	.10	.11	.11	.11
Royal Oaks	.02	.02	.02	.02	.02
Total	19.58	21.03	22.30	23.42	24.36

### Reclaimed Water

The current wastewater treatment system includes a total of 306 pumping stations, 350 miles of force mains and gravity sewers, and a total of four water reclamation facilities (WRFs). The four active WRFs in the County have permitted capacities ranging from .75 to 3.5 MGD and each serve a defined sewer service area. The County currently provides 1.7 million gallons per day (mgd) annual average daily flow of reclaimed water to the Timber Pines golf course and subdivision. This currently comes from the Spring Hill and The Glen WRFs. Upon decommissioning of the Spring Hill WRF, the flow will be provided solely by The Glen WRF. Over the next ten years, it is forecasted that the Glen WRF will have 2.5 mgd of flow used for reclaimed water purposes.

In December 2018, the Hernando County Utilities Department adopted the Reclaimed Water Master Plan. Subsequently, on December 18, 2018, the Board of County Commissioners adopted Ordinance 2018-28 that establishes the areas within the County that shall have a reclaimed water system.

- Within the Ridge Manor service area located east of I-75, west of the Withlacoochee State Trail, north of the Hernando County line, and south of State Road 50; and
- Within The Glen service area located north of the Hernando County line, south of Hexam Road, and within 0.50 miles east or west of US 19.

In addition to the Reclaimed Water System, Hernando County has implemented a direct aquifer recharge system at the Airport WRF (currently being expanded to 6 mgd capacity). This Facility lies within in the Spring Hill area which has no confining clay layer that separates the Upper Floridan Aquifer with the surficial aquifer. Therefore, this facility utilizes aquifer recharge ponds that infiltrate the treated water directly into the Upper Floridan aquifer, providing 100% recharge benefits. This facility currently generates approximately 2 mgd in recharge to the aquifer. The planned decommissioning of the Spring Hill WRF will increase this recharge to approximately 2.8 mgd in 2023. Over the next ten years, it is forecasted that the Airport WRF will provide 3.5 mgd of recharge through the infiltration ponds with the ability to process up to 6 mgd.

### Conservation

Water conservation is not only a means of reducing water use but can be considered as a new source of supply to meet future needs. Combined with continued water supply efficiency upgrades, conservation can provide significant cost savings over the long term. Hernando County continues to have an outstanding water conservation program. The latest HCUD Water Conservation Plan covering the period of 2014 to 2025 outlines continued incentive programs, regulatory programs, water loss controls, school funding, educational programming and outreach efforts to achieve or exceed the water conservation goals set by the RWSP.

The main objectives of Hernando County's five-year water conservation plan are to reduce interior and exterior potable water demand of existing customers, educate new customers regarding water quality and water use efficiencies, and, ensure the sustainability of Hernando County's future potable water

supply. The RWSP targets the potential yield of Hernando County's water conservation at 2.644 mgd of savings by 2040.

## Proposed Revisions to the Comprehensive Plan

### Reclaimed Water

**Strategy 6.03D(1):** ~~Implement a strategy to expand capacity of reclaimed water infrastructure to three (3) million gallons per day by 2020 and identify new users of reclaimed water for irrigation purposes.~~ The Southwest Florida Water Management District's Regional Water Supply Plan sets a long-term goal of providing at least 2.91-3.17 million gallons per day of reclaimed water by the year ~~2035~~ 2040.

~~**Strategy 6.03D(2):** Expand the existing reclaimed water system distribution network to serve additional large consumers to reduce potable water usage for irrigation.~~

**Strategy 6.03D(3):** The County will support the Southwest Florida Water Management District's reclaimed water projects and the implementation of new regulations and programs designed to increase the volume of reclaimed water used.

**Strategy 6.03D(4):** Maintain and periodically update the wastewater plan reclaimed water component to assess and improve existing wastewater reclamation and reuse operations, and, to identify new opportunities.

**Strategy 6.03D(5):** Hernando County should consider regulatory criteria for new subdivisions for use of reclaimed water in golf courses, ~~residential irrigation,~~ common areas and other appropriate uses in accordance with the standards and recommendations of the reclaimed water ordinance ~~master plan~~.