



# PW/WW

**PLAN Pinellas \_ POTABLE WATER, WASTEWATER, AND REUSE  
SUPPLEMENTAL**



# POTABLE WATER, WASTEWATER AND REUSE SUPPLEMENTAL [ PW/WW ]

## INTRODUCTION

In Pinellas County many of our vital services are often unseen, but improve the quality-of-life for our residents and visitors by ensuring the distribution of safe drinking water and the collection and treatment of wastewater. The County oversees the planning, assessment, and maintenance of the infrastructure that supports these services through the following:

- 10-Year Water Supply Facilities Work Plan

The 10-Year Water Supply Facilities Work Plan has key objectives to ensure the construction of water facilities, alternative sources to offset potable water use, and conservation and reuse programs necessary to serve existing and new development for at least a 10-year planning period. This plan is reviewed and updated approximately every 5 years.

- Wastewater Master Plan and Program

The Wastewater Master Plan and Program addresses the County's current and projected wastewater infrastructure needs.

To ensure quality water and wastewater practices are met, Pinellas County relies on strong coordination with local, state, and federal partners. PLANPinellas supports the safe and environmentally sound delivery of services to meet the needs of all citizens.

*The maps provided as part of this supplemental chapter are valid as of the date identified on the respective map. Please visit the County's Geographic Information System (GIS) tool for the latest information as linked here: <https://egis.pinellas.gov/apps/egis/>*

## UPDATES SINCE 2008

This PLANPinellas supplemental section includes information that has been updated from the 2008 Pinellas County Comprehensive Plan. These updates are intended to replace, where necessary, the outdated information related to this chapter. Each update is referenced by page and title.

The original support information for this Chapter can be found online at: <https://plan.pinellas.gov/2008-comprehensive-plan-potable-water-supply-wastewater-and-reuse-element/>. The following support information has been updated:

# **CHAPTER 1 – POTABLE WATER SUPPLY**

## **PAGE 1-1: THE LIFECYCLE OF WATER: WHERE OUR WATER COMES FROM AND WHERE IT GOES**

Today, the County has little vacant land left for development and future water demand is not expected to increase at the same rates as in the past.

## **PAGE 1-1: THE HYDROLOGIC CYCLE**

The Hydrologic Cycle is based on condensation, precipitation, infiltration, runoff, and evapotranspiration. Water vapor condenses, forms clouds which create precipitation; the precipitation falls to the Earth's surface, infiltrates the soil, and flows back to the ocean as runoff.

## **PAGE 1-1: PINELLAS COUNTY DEPENDS ON RAINFALL FOR WATER**

Neither surface water nor ground water can naturally cross this hydrologic divide.

## **PAGE 1-4: THE INCEPTION OF TAMPA BAY WATER AND ITS RESPONSIBILITIES'**

Since October 1, 1998, Tampa Bay Water has been the sole and exclusive water provider to five of the six governments it serves; (the City of Tampa continues to maintain separate surface water withdrawal rights).

## **PAGE 1-4: PINELLAS COUNTY WATER DEMAND PLANNING AREA**

The Pinellas County Water Demand Planning Area (WDPA) may be broken up into two categories: 1) Wholesale Potable Water Customers in the Wholesale Water Service Area; and 2) Retail Potable Water Customers in the Retail Water Service Area. Wholesale customers include the cities of Belleair, Clearwater, Oldsmar, Pinellas Park, Safety Harbor, and Tarpon Springs. The cities of Belleair, Clearwater, Dunedin, Oldsmar, and Tarpon Springs receive wholesale water but also operate their own water systems.

Retail customers that are served directly by Pinellas County include much of the unincorporated area as well as the cities of Belleair Beach, Belleair Bluffs, Belleair Shore, Indian Rocks Beach, Indian Shores, Kenneth City, Largo, Madeira Beach, North Redington Beach, Redington Beach, Redington Shores, Seminole, St. Pete Beach, and Treasure Island. The Pinellas County WDPA does not include Dunedin, Gulfport, South Pasadena, St. Petersburg, and those portions of Unincorporated Pinellas County served by these municipalities and by Holiday Utilities. The Cities of Dunedin and St. Petersburg are interconnected to the Pinellas County water system and can receive wholesale water for emergency purposes only.

# POTABLE WATER, WASTEWATER AND REUSE SUPPLEMENTAL [ PW/WW ]

PAGE 1-5:

TABLE 1 – PINELLAS COUNTY WHOLESALE AND RETAIL POTABLE WATER CUSTOMERS												
	Service Provider/Service Recipient Relationship – Potable Water Systems											
Pinellas County Jurisdiction	Belleair	Clearwater	Dunedin	Gulfport	Oldsmar	Pinellas Park	Pinellas Co. Retail	Pinellas Co. Wholesale	Safety Harbor	St. Petersburg	St. Petersburg Wholesale	Tarpon Springs
Belleair*	X											
Belleair Beach							X					
Belleair Bluffs							X					
Belleair Shore							X					
Clearwater		X						X				
Dunedin*			X									
Gulfport											X	
Indian Rocks Beach							X					
Indian Shores							X					
Kenneth City							X					
Largo							X					
Madeira Beach							X					
N. Redington Beach							X					
Oldsmar*					X							
Pinellas Park								X				
Redington Beach							X					
Redington Shores							X					
Safety Harbor								X			X	
St. Petersburg*										X		
Tarpon Springs*												X

\* Pinellas County maintains emergency connections.

## **PAGE 1-6: CITY OF CLEARWATER WATER SYSTEM**

According to the City of Clearwater's 2018 Consumer Confidence Report, Clearwater uses approximately 11.5 million gallons of potable water every day, and 60% (7 million gallons per day) is from City owned and operated groundwater wells. The remaining 40% of the daily demand is supplied by water purchased on a wholesale basis from Pinellas County. A portion of the groundwater that the City of Clearwater withdraws from the Floridan Aquifer is treated using reverse osmosis technology.

## **PAGE 1-7: CITY OF DUNEDIN WATER SYSTEM**

According to the City of Dunedin's 2016 Consumer Confidence Report, their Water Division distributed 1.38 billion gallons of water to City of Dunedin customers. That is an average of 62.0 gallons per person per day.

## **PAGE 1-7: CITY OF ST. PETERSBURG WATER SYSTEM**

The second largest distributor of water in Pinellas County is the City of St. Petersburg. Prior to the formation of Tampa Bay Water, the City of St. Petersburg operated three wellfields: Cosme-Odessa, Section 21, and South Pasco. A fourth wellfield, Cypress Creek, had been developed jointly by St. Petersburg and Pinellas County. Today, the City is a member government of Tampa Bay Water and as such has relinquished its wellfields to the regional water utility. The St. Petersburg Water System distributes potable water on both a wholesale and retail basis. It retails water to the residents of St. Petersburg, South Pasadena, and portions of Lealman.

## **PAGE 1-7: TAMPA BAY WATER AS THE REGIONAL WATER SUPPLIER**

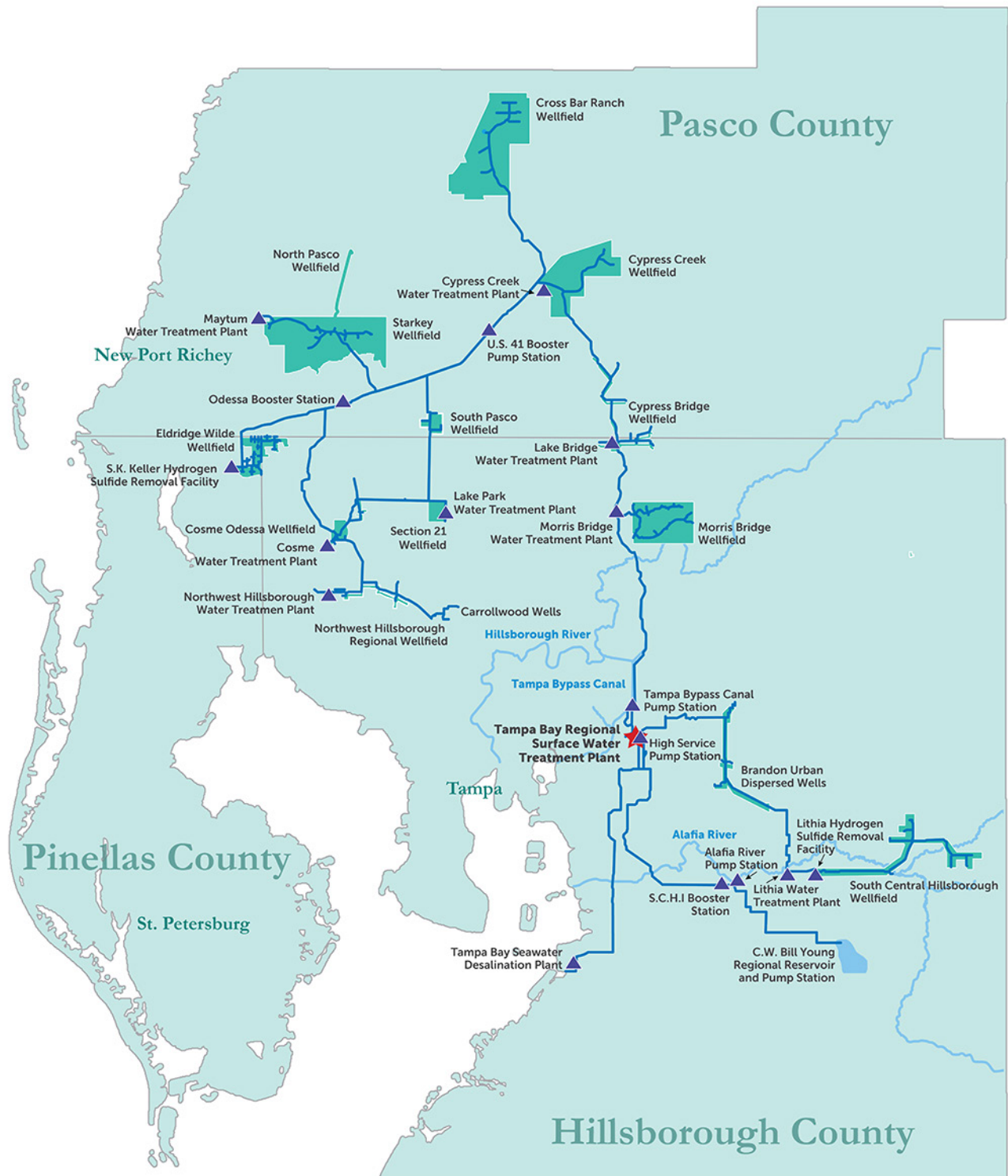
Tampa Bay Water supplies wholesale potable water to Hillsborough, Pasco, and Pinellas counties and the cities of New Port Richey, St. Petersburg, and Tampa, via an Interlocal Agreement and Master Water Supply Contract.

## **PAGE 1-7: MASTER WATER PLAN AND POTABLE WATER FACILITIES**

Tampa Bay Water has ownership of all wells and permits previously held by Pinellas County as well as the facilities held by the other member governments, except for some facilities in the City of Tampa as outlined previously.

# POTABLE WATER, WASTEWATER AND REUSE SUPPLEMENTAL [ PW/WW ]

PAGE 1-9: FIGURE 1 – TAMPA BAY WATER POTABLE FACILITIES



**TABLE 2 – EXISTING TAMPA BAY WATER POTABLE WATER SUPPLY FACILITIES PROVIDING WATER TO PINELLAS COUNTY**

Facility	Current Permitted Capacity / Ann. Avg. (mgd)	Current Water Use Permit	Location
Cross Bar Ranch Wellfield	Consolidated Permit Wellfield *	Consolidated Water Use Permit Issued Jan. 25, 2022 Expires Jan. 25, 2032. Permitee – Tampa Bay Water	North-Central Pasco County, east of US 41, north of SR 52 and south of CR 578.  17 dispersed wells
Cypress Bridge Wellfield	Consolidated Permit Wellfield *	Consolidated Water Use Permit Issued Jan. 25, 2022 Expires Jan. 25, 2032 Permitee – Tampa Bay Water	South-Central Pasco County, Wesley Chapel Area, and North-Central Hillsborough County in the vicinity of I-75 and CR 581.  10 dispersed wells
Cypress Creek Wellfield	Consolidated Permit Wellfield *	Consolidated Water Use Permit Issued Jan. 25, 2022 Expires Jan. 25, 2032 Permitee – Tampa Bay Water	Central Pasco County, east of US 41 and SR 583, south of SR 52.  13 dispersed wells, pump station site and storage facilities.
Cypress Creek Pump Station and Water Treatment Plant	110	N/A	Central Pasco County, east of US 41 and SR 583, south of SR 52.
Eldridge-Wilde Wellfield	Consolidated Permit Wellfield *	Consolidated Water Use Permit Issued Jan. 25, 2022 Expires Jan. 25, 2032 Permitee – Tampa Bay Water	Northeast corner of Pinellas County and northwest corner of Hillsborough County at the Pasco County line.  34 dispersed wells.
Tampa Bypass Canal at Harney Road Pumping Station	20.00	WUP 20006675.006 Issued. May 26, 2011 Expires May 26, 2031. Permitee – Tampa Bay Water	Central Hillsborough County. Tampa Bypass Canal at Harney Road.
Tampa Bypass Canal Water Supply	Up to 259 mgd (max) withdrawal capacity	WUP 20011796.02. Expires Dec. 31, 2030.	Tampa Bypass Canal at Martin Luther King Boulevard in Hillsborough County.
Alafia River Project	Up to 52 mgd (max) withdrawal capacity	WUP 20011794.002. Expires Nov. 27, 2032. Permitee – Tampa Bay Water	Bell Shoals Road at the Alafia River in Hillsborough County.
Tampa Bay Desalination	28.75	N/A	Apollo Beach area, Hillsborough County
C.W. Bill Young Regional Reservoir	15.5 billion gallons	N/A	South Hillsborough County between CR 39 and Boyette Road.

# POTABLE WATER, WASTEWATER AND REUSE

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### PAGE 1-11:

TABLE 3 – 2016 NON-HOUSEHOLD ESTIMATED WATER WITHDRAW AND USE	
Use Category	Total Estimated Use
Agricultural	0.000 mgd
Landscape/Recreation	2.860 mgd
Industrial/Commercial	0.155 mgd
Mining/Dewatering	0.000 mgd
Total	3.015 mgd

### PAGE 1-12:

TABLE 4 – ESTIMATED AND PROJECTED POPULATION OF THE PINELLAS COUNTY WATER DEMAND PLANNING AREA (WDPA) AND ASSOCIATED PERCENT OF TOTAL COUNTY POPULATION			
Year	Estimated or Projected Total County Population	Estimated and Projected Population Served by Pinellas County WDPA <sup>1</sup>	Percent of Total County Population
2012	1,085,109	688,355	63.4%
2015	947,535	583,124 <sup>2</sup>	61.5%
2020	1,099,402	697,735	63.4%
2025	1,107,396	702,832	63.4%
2030	1,116,091	708,308	63.4%
2045	1,008,000	633,152 <sup>2</sup>	62.8%
Source (Years 2012, 2020, 2025, 2030): Pinellas County Planning Department, November 2012. Projection Methodology/Updated Pop Proj by Sector final 082604, Rev. 2010			
Source (Years 2015, 2045): WDPA: Pinellas County Utilities; Population: Socio-Economic (SE) Data, Forward Pinellas. 2019			

1. The Pinellas County WDPA does not include Oldsmar, Belleair, Dunedin, Gulfport, South Pasadena, St. Petersburg, and those portions of Unincorporated Pinellas County served by these municipalities and by Holiday Utilities.

2. The Pinellas County WDPA does not include Belleair, Dunedin, Gulfport, South Pasadena, St. Petersburg, Tarpon Springs and those portions of Unincorporated Pinellas County served by these municipalities and by Utilities, Inc. of Florida.

### PAGE 1-15: THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT REGIONAL WATER SUPPLY PLAN

The Southwest Florida Water Management District (SWFWMD) completed its update of their RWSP in 2020.



## **PAGE 1-16: TAMPA BAY WATER’S MASTER WATER PLAN**

TBW updates its Master Water Plan every five years; it is currently in its 2018 version.

## **PAGE 1-17: SURFACE WATER WITHDRAWALS**

According to Tampa Bay Water’s 2018 Long-Term Water Master Plan, potable water sources include groundwater, desalinated seawater from Tampa Bay, and surface water.

## **PAGE 1-18: PINELLAS COUNTY COMMITMENTS TO REDUCING POTABLE DEMAND AND DEVELOPING ALTERNATIVE SOURCES**

Planning for conservation, reuse, and alternative water sources is a crucial aspect of potable water supply planning in Pinellas County. Pinellas County is working to address resource uncertainty through the use of reclaimed water that offsets the use of potable water consumption, conservation programs that prevent the waste of potable water and the development of alternative sources of potable water supply and storage methods.

Pinellas County has developed an extensive reclaimed water system that conserves potable water by offsetting the use of potable water. For details about Pinellas County’s reclaimed water system and other alternative sources, please refer to the Reclaimed Water and Alternative Sources chapter in this Element. (End of paragraph and Figure 2 deleted.)

## **PAGE 1-19: PINELLAS COUNTY POTABLE WATER CONSERVATION PROGRAM**

Water conservation is a crucial aspect of potable water supply planning for Pinellas County. Pinellas County’s conservation programs currently address such things as: the reduction of system losses; the protection of groundwater against development practices that might cause degradation of quality and yield; and the installation of devices, processes and methods to reduce water consumption. A primary component of the County’s conservation program is the availability of reclaimed water to reduce demands on the potable water system. Additionally, the establishment of rate structures to decrease demand, and the restriction of water use during water shortage occurrences are integral to the County’s conservation strategy.

Education about groundwater protection and potable water conservation has been a major initiative of the Board of County Commissioners since the 1980s. Because of its multi-faceted program, overall water use, and the per capita water consumption have reduced consistently since 1989. This places the Pinellas County WDPA among the lowest in per capita water consumption within the Tampa Bay Area and well below the state and national averages. The County’s innovative conservation programs, public education initiatives and utilization of alternate water supplies to meet irrigation needs are central to this accomplishment.

Pinellas County’s conservation initiatives include educational outreach efforts as well as incentives and special events designed to highlight the importance of conservation and waste reduction. Education targeting potable water conservation, for example, has been a major initiative of Pinellas County. Irrigation restrictions, landscaping regulations, and information newsletters are a few of the conservation programs and initiatives Pinellas County has utilized in conserving the region’s precious potable water resources.

## **PAGE 1-20: PINELLAS COUNTY CONSERVATION USING ULTRA LOW VOLUME TOILET (ULV) REBATES**

*Section deleted*

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## **PAGE 1-20: PINELLAS COUNTY IRRIGATION RESTRICTIONS**

Pinellas County has irrigation restrictions, landscaping regulations, and provides residents with educational information. Water restrictions require residents to water their lawns only during early morning or late afternoon (windows of time when evaporation is lowest) and on assigned days. Mandatory sprinkling bans are implemented during drought periods by the Board of County Commissioners. This restriction of nonessential water use has prompted many customers to install equipment and landscaping which is less dependent on potable water. The implementation of water restrictions as a means of conserving water is consistent with the RWSP, as it is one of the recommended options in the RWSP.

*(Second paragraph deleted.)*

## **PAGE 1-21: INDUSTRIAL/COMMERCIAL SPRAY VALVES**

*Section deleted*

## **PAGE 1-21: WATER-CONSERVING RAIN SENSOR SHUT-OFF GAUGE PROGRAM AND/OR SOIL MOISTURE SENSOR PROGRAM**

*Section deleted*

## **PAGE 1-21: FREE INDOOR PLUMBING RETROFIT KITS**

*Section deleted*

## **PAGE 1-22: WATER CONSERVATION PUBLIC SERVICE AND INFORMATIONAL NEWSLETTERS**

Public service and informational newsletters are made available at various locations and included in bimonthly utility bills to outline water conservation and water management issues. They explain how citizens can assist in Pinellas County's conservation efforts. Conservation messages are also communicated to employees via a monthly employee newsletter.

## **PAGE 1-22: ALTERNATE WATER SOURCES REBATE PROGRAM**

*Section deleted*

## **PAGE 1-22: SHALLOW WELL REQUIREMENTS**

*Section deleted*

## **PAGE 1-23: CONSERVATION EDUCATION PROGRAMMING AT COUNTY FACILITIES**

Cross Bar and Al-Bar Ranches. The 12,000-acre Cross Bar Ranch is operated by Pinellas County in a manner that embraces a total ecosystem management philosophy. The ranch has successfully merged wellfield production, cattle ranching, forest production, natural wildlife habitat enhancement, and education and outreach programs. For example, 5,000 acres formerly utilized for ranching was converted to forestry production. This change reduced water evaporation rates compared to pasture grassland uses. Six thousand acres of Cross Bar Ranch have been managed for wildlife preservation and habitat enhancement. The ranch has been listed as one of the “Important Birding Areas of Florida” by the Audubon of Florida. The education facility has also provided an outreach to students and environmental groups with classroom instruction enhanced by field studies demonstrating the importance of responsible environmental management.

South Cross Bayou Education Center. Pinellas County and the Pinellas County School Board collaborate in a partnership to provide hands-on learning opportunities at the South Cross Bayou Advanced Water Reclamation Facility. Activities targeting both adults and children include guided tram-based tours of the working facility and hands-on models demonstrating the water cycle, water supply and distribution, and water conservation.

## **PAGE 1-23: SPEAKERS BUREAU AND OUTREACH**

*Section deleted*

## **PAGE 1-24: SPEAKERS BUREAU AND OUTREACH**

In order to help assure a continued supply of safe and reliable potable water, Pinellas County maintains a Capital Improvements Program which includes on-going repairs, maintenance, upgrades and expansion of the water supply system and uses. Refer to Appendix A, the 10- Year Potable Water Supply Facilities Plan, for more information. *(Table 6 deleted.)*

## **PAGE 1-24: PLANNING BEYOND A SIX-YEAR HORIZON**

The Work Plan includes those facilities and projects and programs required to meet the needs of the County’s wholesale and retail customers. *(Last two paragraphs deleted.)*

# **CHAPTER 2: WASTEWATER**

## **PAGE 2-1: PINELLAS COUNTY UTILITIES SERVICE AREAS FOR COLLECTION AND TREATMENT**

Pinellas County Utilities (PCU) operates over 1,458 miles of sewer line in Pinellas County. The North County sewer system collects and transmits domestic wastewater to the William E. Dunn Advanced Water Reclamation Facility. The south sewer system collects and transmits domestic wastewater to the South Cross Bayou Advanced Water Reclamation Facility. The County also operates and maintains sewer lines in the municipalities of Belleair, Belleair Beach, Belleair Bluffs, Belleair Shore, Indian Rocks Beach, Indian Shores, Kenneth City, Madeira Beach, Redington Beach, and Seminole. Additionally, Pinellas County Utilities operates a collection system in the unincorporated Bear Creek area. Sewage in the unincorporated Bear Creek area is treated at the City of St. Petersburg’s Northwest Wastewater Treatment Plant.



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The wastewater initially flows through gravity sewers to larger collectors and interceptors. Pump stations move the wastewater through force mains to the wastewater treatment plants.

Pinellas County Utilities maintains and operates over 299 pump stations, and there are over 22,297 manholes in the collection system.

### PAGE 2-3:

TABLE 7 – MUNICIPAL CUSTOMERS RECEIVING WASTEWATER COLLECTION AND/OR TREATMENT FROM PINELLAS COUNTY UTILITIES			
Municipality	Number of Permanent Residents (2017)	Service Provided	Service Area
Belleair	3,982	Treatment (R)	South Cross Bayou
Belleair Beach	1,562	Treatment (R)	South Cross Bayou
Belleair Bluffs	2,296	Collection and Treatment (R)	South Cross Bayou
Belleair Shore	86	Collection and Treatment (R)	South Cross Bayou
Indian Rocks Beach	4,192	Treatment (R)	South Cross Bayou
Indian Shores	1,354	Collection and Treatment (R)	South Cross Bayou
Kenneth City	5,052	Collection and Treatment (R)	South Cross Bayou
Madeira Beach	4,352	Treatment (W)	South Cross Bayou
North Redington Beach	1,417	Collection and Treatment (W)	South Cross Bayou
Pinellas Park	51,788	Treatment (W)	South Cross Bayou
Redington Beach	1,518	Collection and Treatment (R)	South Cross Bayou
Redington Shores	2,222	Treatment (W)	South Cross Bayou
Seminole	18,206	Collection and Treatment (R)	South Cross Bayou
<b>Total Number Municipal Collection and Treatment Customers (R)</b>	42,600		
<b>Total Number Municipal Treatment Customers (W)</b>	55,427		
<b>Total Municipal Customers</b>	98,027		
<p>Note: (R) = retail service; (W) = wholesale service  A small portion of Industrial Land in St. Petersburg is served by South Cross Bayou.  Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates</p>			

