Demand Projections for Public Supply

Introduction

Chapter 373, Florida Statutes (F.S.) sets forth the requirement for regional water supply planning. Under the provisions of this chapter, the Governing Board of each water management district shall develop a Regional Water Supply Plan (RWSP) for regions within the district where existing sources of water are not adequate to supply water for all existing and future reasonable-beneficial uses and to sustain the water resources and related natural systems for the 20-year planning period. This plan shall be reevaluated every five years. In support of this effort, the Southwest Florida Water Management District (District) participated in the development of the RWSP for the Central Florida Water Initiative (CFWI) in conjunction with representatives from the Florida Department of Environmental Protection (FDEP), major public supply stakeholders and the South Florida and St. John's River water management districts. The CFWI Planning Area includes portions of Lake and Polk counties which are under District jurisdiction. Consequently, the population and water demands for Lake and Polk counties are from the 2025 CFWI RWSP.

Purpose

This appendix explains the assumptions, methodologies, and sources used to develop the public supply (PS) projections. The PS sector includes:

- Domestic self-supply (DSS) (residential dwellings systems that are provided water from a dedicated, on-site well and are not connected to a central utility)
- Water supply permittees with permitted water uses for:
    - Residential Single-family
    - Residential Multi-family
    - Residential Mobile Home
- Residential irrigation wells (on-site wells that serve the outdoor needs of individual residential dwellings that are connected to a central water utility system for their indoor needs).

Data and Information Sources

The methodology to develop PS water demand projections uses many data sources. Base information for PS water utility populations, water use, and per capita water use rates were derived from the District's Estimated Water Use Reports (SWFWMD, 2016-2020). The University of Florida's Bureau of Economic and Business Research (UF/BEBR) publications (2022) were used to gather base year population and future county population projections. The District's geographic information system (GIS) model also incorporates a large amount of data gathered from stakeholders, enabling the District to project population at the utility service area level (GIS Associates, Inc., 2022).

Methodology

2020 Base Year Population Methods and Assumptions

The base year for these PS water demand projections is 2020. The 2020 population was generated by extrapolating back from the GIS Associates, Inc. (GISA) 2021 population estimate using the compound annual growth rate between 2021 and 2025. This was performed to keep the base year consistent with the subsequent projected years. For example:

a) Utility X's 2021 population estimate is 5,704

b) Utility X's 2025 population projection is 5,984

c) Annual growth percentage over the four-year period was calculated using Microsoft® Excel's rate formula: RATE(4,,-5704,5984) = 1.21%

d) Utility X's 2020 population estimate = 5,704 * (100%–1.21%) = 5,635

Utilities with permitted quantities less than 100,000 gallons per day (gpd) are not required to report population or submit service area information. Consequently, the base year population for these permits was obtained from the application information related to the last issued permit revision.

Domestic self-supply (DSS) is defined as that portion of the county population not served by a utility. County DSS population estimates and projections were calculated as the difference between the total county population estimate or projection and the total population served by the utilities. For those counties not fully contained within the District boundaries, only that portion of the population within the District was included (Table 1 and Table 2).

2020 Base Year Water Use

The 2020 PS base year water use for each large utility is derived by multiplying the average 2016-2020 unadjusted gross per capita rate, if applicable, by the 2020 estimated population for each individual utility. In the case of small utilities, per capita information was obtained from the application information related to the last issued permit revision. If no per capita information was found in the last permit, the per capita is assumed to equal the average county unadjusted gross per capita.

Base year water use for small utilities is derived by multiplying the per capita from the last issued permit times the 2020 estimated population from the last issued permit.

Base year water use for DSS is calculated by multiplying the 2020 DSS population for each county by the average 2016-2020 residential countywide per capita water use as defined below.

2016-2020 Average per Capita Water Use Rate

Precipitation in the years 2016-2020 (average 54.51 inches) was slightly higher than the historical District average (52.82 inches). Rainfall between 2016-2019 was above the long-term District average, whereas lower than average precipitation in 2020 brought the 2016-2020 average close to the historical average. Typically, there is an inverse relationship between public supply water use and annual precipitation (i.e., less rain results in increased water use, largely due to outdoor water use). This inverse relationship is demonstrated by a lower Districtwide average gross per capita per day (gpcd) water use rate of 96 gpcd in 2018 than the Districtwide average per capita

water use rate of 99 gpcd in 2020. The per capita water use rate is the factor applied to projected population to project water demand (described below). Therefore, it is necessary for the base year per capita rate to represent water use in an average year. To address this situation, the District has calculated average five-year per capita use rates using data provided by utilities in their Public Supply Annual Reports and published in the Estimated Water Use Reports for the years 2016 through 2020. The unadjusted gross per capita rate used is calculated as *Withdrawals + Imports – Exports – Treatment Losses* divided by the *Served Functional Population.* For large utilities, this information is published in Table A-1 of the "Estimated Water Use Report" for years 2016 to 2020. For small utilities, the per capita is assumed to equal the per capita from the last issued permit or the five-year average unadjusted gross per capita for the county. Domestic self-supply (DSS) per capita was taken from the countywide residential per capita provided in Table A-2 of the "Estimated Water Use Report" for the years 2016 to 2020.

Population Projections

The population projections made by BEBR are generally accepted as the standard throughout the State of Florida (UF BEBR, 2022). However, these projections are made at the county level only. Accurately projecting future water demand requires more spatially precise data than the county-level BEBR projections. Consequently, the District's projections are BEBR projections disaggregated to land parcel level, which is the smallest area of geography possible for population studies. In turn, these parcel-level projections are normalized to the BEBR medium projection for the counties. Using this methodology, the District contracted with GISA to provide small-area population projections for the 16 counties entirely or partly within the District.

In the case of Manatee and Pinellas counties, the sum of the projections for all utilities exceeds the projected county population. Thus, the county population was increased enough to cover the deficit plus allow for self-supplied population. Thus, county total population was recalculated as follows:

Original county total + deficit + GISA self-supplied population estimate.

GIS Model Overview

This geographic information system (GIS) based model projects future Census Population Cohort population growth at the parcel level and normalizes those projections to BEBR county projections. First, a Countywide Build-Out Model is developed from the base parcel dataset. Current permanent population is estimated and then the maximum population growth is determined at the parcel level. Areas which cannot physically or lawfully sustain residential development (e.g., built-out areas, water bodies, public lands, commercial areas) are excluded from the Countywide Build-Out Model. Conversely, the model identifies areas where growth is more likely to occur based on proximity to existing infrastructure and available services such as schools, shopping centers, and entertainment opportunities.

Next, population growth is modeled between the current estimated population and the build-out population. Projections are based on a combination of historic growth trends and spatial constraints and influences, which restrict or direct growth.

The BEBR develops three projections for each county (low, medium, and high), with BEBR's medium projection widely considered to be the most likely scenario. For this reason, the District's small area projections by year are controlled by BEBR's medium projection for each county.

The base year for the projection model is 2021. Projections were made through the year 2045 in the following five-year increments: 2025 through 2030, 2030 through 2035, 2035 through 2040, and 2040 through 2045.

Finally, the parcel level projections are easily aggregated by any set of boundaries desired (e.g., PS utility service areas, municipalities, watersheds). For the District's planning efforts, parcel projections are summarized by PS utility service areas. Complete methodology, references, tables, and data sources can be found by referring to the published technical memorandums supporting the GIS Model: "The Small-Area Population Projection Methodology of The Southwest Florida Water Management District," and "Updates to The Southwest Florida Water Management District's Small-Area Population Projection Model," both dated December 15, 2022, GIS Associates, Inc.

Countywide Build-Out Models

The Countywide Build-Out Models are composed of multiple GIS data elements. Each model is based on the county's property appraiser GIS parcel database, including the associated tax roll information. Other elements incorporated into each build-out model include the 2020 U.S. Census data, District wetland data, local government future land use maps (FLU), and Development of Regional Impact (DRI) plans for the county of interest.

Parcels

Geographic Information System (GIS) parcel layers and county tax roll databases were obtained from each county's property appraiser office. Parcel geometry was checked for irregular topology, particularly overlaps and fragments. Parcel tables were checked for errors, particularly non-unique parcel identifiers and missing values. Required tax roll table fields include actual year built, Florida Department of Revenue (DOR) land use code, and the total number of existing residential units for each unique parcel. In cases where values or fields were missing, other information was extrapolated and used as a surrogate. For example, data reported by the State of Florida was used to identify the number of residential units and population in large group quarters facilities.

2020 U.S. Census Data

Some of the essential attribute information to translate parcels to population in the County Buildout Submodels were derived from 2020 Decennial Census data. Average housing unit occupancy and population per household by census tract were calculated and then transferred to each county's parcel data. When combined with parcel-level housing units from property appraiser data, these were used to estimate 2021 population in households at the parcel level. When added to our estimates of population in group quarters (estimated using property appraiser bed counts, 2021 BEBR surveys of large group quarters, and 2020 Census counts), the resulting estimates were then controlled at county and place levels to the 2021 BEBR population estimates.

Water Management District Boundaries

Each parcel in the Countywide Build-Out Models was also attributed with the District boundaries, which enable the countywide models for any counties split between two or more districts to be summarized by the District.

Wetlands

Wetlands play a large role in modeling a county's build-out. The District, along with the FDEP, has been given regulatory powers over private and public lands and is required by Chapter 373, F.S., to protect water resources of the state. However, the District and FDEP, under the auspices of the U.S. Army Corps of Engineers, have a permit process by which wetlands can be altered for development. The Countywide Build-Out Models consider the impact wetlands have on residential development.

The District maintains detailed GIS databases of wetland areas and wetland mitigation areas within its boundaries. These databases contain the location and spatial extent of the wetlands and wetland mitigation areas, as well as the specific types of wetlands, as defined by the District's land use and land cover classification system. Certain wetland types were identified that would be difficult and expensive to convert to residential development. These areas were identified in the District's wetland database and applied to the build-out model. The wetland types include streams and waterways, lakes, marshy lakes, reservoirs, bays and estuaries, slough waters, wetland hardwood forests, mangrove swamp, mixed wetland hardwoods, cabbage palm wetland, cabbage palm hammock, wetland coniferous forest, cypress, pond pine, hydric pine flatwoods, wetland forested mixed, freshwater marshes, saltwater marshes, wet prairies, emergent aquatic vegetation, mixed scrub-shrub wetland, and non-vegetated wetland.

Using GIS techniques, the area of wetlands within parcels were calculated and recorded as the water area for that parcel. If the area covered by water within a parcel exceeded 0.5 acres, it was subtracted from the total area of the parcel feature to determine the relative developable area in that parcel.

There were exceptions to this rule. In some cases, parcels with little or no developable area after wetlands were removed were already developed, thus the estimated unit total was not reduced by the wetland acreage. In other cases, inaccurate wetland delineations were overridden, such as when a newly platted residential parcel was shown to be covered by a wetland. In such a case, the parcel was considered developable by the submodel.

Future Land Use

Future Land Use (FLU) maps are essential elements of each county's build-out model, as they help guide where and at what density residential development will occur within a county. Future Land Use (FLU) maps are a part of the Local Government Comprehensive Plans required by Chapter 163, Part II, F.S. They are typically developed by the local government's planning department, or, in some cases, a regional planning council with guidance from the local government. The latest available FLU map is obtained annually and applied to the build-out model.

Future Land Use (FLU) classifications for residential land uses are assigned maximum dwelling unit densities (per acre) or density ranges. These ranges are intended to guide the type and density of development. However, development does not always occur at FLU guided densities. For this reason, the County Build-out Submodels reflect the median density of recent development for each future land use category in the specific incorporated place. For example, if a city's medium density residential future land use designation allows up to 8 housing units per acre, but the median density of units built over the last 20 years is 5.7 housing units per acre, the submodel assumed future densities at 5.7 housing units per acre for that future land use designation in that city. The median density calculation was typically limited to the last 20 years of development within

each unique combination of land use and jurisdiction, as more recent development was deemed a better proxy for future densities than older development.

In some cases, limiting the historical data to the last 20 years resulted in too small a sample, so either county average values were used (extended beyond the jurisdiction) or all historical development was used (not limited to the last 20 years). In those cases, the determination of which sample to use depended upon the heterogeneity of the category across county jurisdictions and the heterogeneity of historical densities prior to the last 20 years. Also, vacant or open parcels less than one acre in size were typically considered single family residential, with one housing unit as the maximum allowable density

Build-out Density Calculation

Using GIS overlay techniques, attributes of the census, political boundary, wetlands, and future land use data were attributed to each county's parcel data to develop the County Build-out Submodels. These submodels forecast the maximum residential population by parcel at buildout.

Census tracts where the 2020 population was zero, and therefore the average persons per housing unit was zero, were assigned the county's average persons per housing unit. Also, if there were tracts with 2020 census values for persons per housing unit greater than zero that were based on a small number of homes with greater than five persons per housing unit, the county's average persons per housing unit was typically used.

Large Planned Developments

The final step in the development of the County Build-out Submodels was adjusting build-out densities within large planned developments (e.g., Developments of Regional Impact, Sector Plans, and Rural Land Stewardship Areas) to correspond with approved development plans wherever their boundaries are available in a GIS format. Although large planned developments often do not develop as originally planned by the developer, the total number of units planned (regardless of timing) is likely to be a better forecast of the units at build-out than one based on the median historic densities. Therefore, in each of the County Build-out Submodels, parcels with centroids within a large planned development were attributed with the name of the development. The build-out densities for those parcels were adjusted so that the total build-out for the development was consistent with the development plan, and the build-out population for that area was recalculated.

Growth Drivers Model

The Growth Drivers Model is a raster (cell-based) dataset representing development potential as determined by incorporating a GIS suitability model. This model is a continuous surface of 10-meter cells containing relative values of 1 to 10, with 10 having the highest development potential and 1 having the lowest development potential. It influences the Population Projection Model by factoring in the attraction that certain spatial features, or growth drivers, have on development. These drivers are defined from transportation features and land use/cover types including:

1) Proximity to roads and interchanges prioritized by level of use (with each road type modeled separately)

2) Proximity to existing residential development

3) Proximity to existing commercial development (based on parcels with commercial land use codes deemed attractors to residential growth)

4) Proximity to coastal and inland waters

5) Proximity to large, planned developments

Each of the drivers listed above were used as independent variables in a logistic regression equation. Dependent variables included existing residential units built during or after 1995 as the measure of "presence", and large undeveloped vacant parcels outside of large planned developments were used to measure "absence". The resulting equation could then be applied back to each of the regional grids resulting in a single regional grid with values 0 through 100, for which a value of 0 represented the lowest relative likelihood of development, and a value of 100 represented the highest relative likelihood of development.

This seamless, "regional" model covers the counties whose boundaries are all or partially within the District, plus a one-county buffer to eliminate edge effects. In this case, the edge effects refer to the presence or absence of growth drivers outside the District that could influence growth within the District. This model was then used by the Population Projection Model to rank parcels in undeveloped Census blocks based on their development potential.

Population Projection Model

The Population Projection Model integrates the Countywide Build-Out Models and the Regional Growth Drivers Model with historic growth trends and county-level population controls from BEBR.

Historic Growth Trends

Historic growth trends were based on historic population counts from the 1990, 2000, 2010, and 2020 censuses. For 1990, 2000, and 2010, census block population counts were summarized at the 2020 tract level and combined with the 2020 tract population counts. These counts were used to produce eleven tract level projections using five different demographic extrapolation methods using multiple base periods. The length of the base was adjusted to roughly match the length of the projection horizon, so for a 20-year horizon, 20 years of historical data were used to establish the growth trends. The number of trend calculations varied based on the length of the base period used, and the highest and lowest calculations were discarded to moderate the effects of extreme projections. The remaining projections were then averaged.

The five demographic extrapolation methods for projecting population utilized by the model were Linear, Exponential, Constant Share, Share-of-Growth, and Shift-Share. The Linear and Exponential techniques employ a bottom-up approach, extrapolating the historic growth trends of each census tract with no consideration for the county's overall growth. The Constant Share, Share-of-Growth, and Shift-Share techniques employ a ratio allocation, or top-down approach, allocating a portion of the total projected county population or growth to each census tract based on that census tract's percentage of county population or growth over the historical period. Each of the five methods is a good predictor of growth in different situations and growth patterns, so using a combination of all five and discarding the highest and lowest results was the best way to avoid the largest possible errors resulting from the least appropriate techniques for each census tract within the six counties. This approach is similar to BEBR's county population forecast methods, but the base periods and the number of projections are somewhat different because annual estimates are not available at the tract level. This methodology is patterned after the

methodology used by BEBR and is well suited for small area population projections. The details of the methods are as follows:

Linear Projection Method
The Linear Projection Method assumes that future population change for each census block will be the same as over the base period. Three linear growth rate calculations were made, 1990 to 2020, 2000 through 2020, and 2010 through 2020.

Exponential Projection Method
The Exponential Projection Method assumes that population will continue to change at the same annual growth rate as over the base period.

Constant Share Projection Method
The Constant Share Projection Method assumes that each census tract's percentage of the county's total population will be the same as over the base period.

Share of Growth Projection Method
The Share of Growth Projection Method assumes that each census tract's percentage of the county's total growth will be the same as over the base period. Three share of growth rate calculations were made, 1990 through 2020, 2000 through 2020, and 2010 through 2020.

Shift Share Projection Method
The Shift Share Projection Method assumes that each census tract's percentage of the county's total annual growth will change by the same annual amount as over the base period. Three shift share calculations were made, 1990 through 2020, 2000 through 2020, and 2010 through 2020.

Average of the Projection Extrapolations
Because the number of trend calculations varied based on the length of the base period used, different combinations of projections were averaged for different forecast years.

1) For 2025 and 2030 projections, five calculations with base periods up to 10 years were used. The lowest and highest of the five were excluded to moderate the most extreme results, and the remaining three were averaged.

2) For 2035 and 2040, eight calculations with base periods up to 20 years were used. The two lowest and two highest of the eight were excluded, and the remaining four were averaged.

3) For 2045 and 2050, eleven calculations with base periods up to 30 years were used. The three lowest and three highest of the eleven were excluded, and the remaining five were averaged.

Growth Calculation Methodology
The Population Projection Model then automated growth calculations using the historic growth trends and queries of the County Build-out Submodels and the Growth Drivers Submodel. The methodology for calculating growth for each projection increment included the following steps:

1) Apply the tract-level projected growth to parcels within each tract, distributing growth to parcels with the highest driver values first.

2) Check growth projections against build-out population and reduce any projections exceeding build-out to equal the build-out numbers.

3) After projecting growth for all census tracts within a particular county, summarize the resulting growth and compare it against countywide BEBR target growth. For each model iteration, this step led to one of two scenarios:

    a) If the Small-Area Population Forecasting Model's projections exceeded the BEBR target growth, reduce the projected growth for all tracts by the percentage that the projections exceeded the BEBR target.

    b) If the Small-Area Population projection model's projections were less than the BEBR target, develop parcels with the highest growth driver values and available capacity until the BEBR target growth is reached.

Counties that are partially within another water management district were processed in their entirety and controlled to the BEBR-based target growth.

Non-Permanent Population Projections

In addition to the permanent population projections generated by the Population Projection Model, projections of non-permanent population were also made. Those projections include peak seasonal population, permanent plus seasonal population (or functionalized seasonal population), tourist population, and net commuter population. The methods derived by the District and implemented by GISA for projecting those population types are described in this section. For a more detailed explanation of these methods, see the District's SWUCA II Population Guidelines.

Peak Population

Seasonal population is estimated using a combination of 2010 U.S. Census data (at the Zip Code Tabulation Area [ZCTA] level) and hospital admissions data. Average 2009 to 2011 emergency room admissions data was used for a population cohort typical of seasonal residents (between the ages of 45 and 74).

A Seasonal Resident Ratio was calculated by ZCTA to estimate the proportion of peak (including seasonal) to permanent population. This 2010 U.S. Census-era ratio is held constant over time when applied to future projections of population, but it will be updated with each decennial Census. The ratio was derived using the following generalized steps:

1) Subtract total 2009 to 2011 total third quarter (Q3, or July, August and September) hospital admissions from first quarter (Q1, or January, February and March) admissions.

2) Calculate the average annual difference between Q1 and Q3 by dividing above result by three.

3) Calculate a seasonal population estimate for ZCTA by dividing above difference by the general population's probability of being admitted to the emergency room (approximately 2.23%).

4) Calculate the Seasonal Resident Ratio by adding the seasonal population to the permanent population and dividing that total by the permanent population.

This ratio can then be applied to future projections of permanent population to derive peak population projections.

Permanent plus Seasonal Population or Functionalized Seasonal Population

The functionalized seasonal population is the peak seasonal resident population adjusted downward to account for the percentage of the year seasonal residents typically reside elsewhere and the lack of indoor water use during that time. It was calculated using the following generalized steps:

1) Determine the appropriate proportion of the year seasonal residents spend in Florida. This varies from beach destination counties (44.2%) to non-beach destination counties (56.7%).
2) Develop a seasonal resident adjustment based on average per capita water use.
    a) The ten-year (1996–2006) districtwide average per capita use is 132 gallons per person per day, and 69.3 is estimated indoor per capita use (Alliance for Water Efficiency, 1999).
    b) The adjustment factor is calculated using the following equation for "beach destination" counties (Charlotte, Manatee, Pinellas and Sarasota):

        ((0.442 x 132 gpd) + ((1 – 0.442) x (132 gpd – 69.3 gpd)/132 gpd = 0.707

    c) The adjustment factor is calculated using the following equation for "non-beach destination counties":

        ((0.567 x 132 gpd) + ((1 – 0.567) x (132 gpd – 69.3 gpd)/132 gpd = 0.773
3) Calculate "functionalized" seasonal population by multiplying the seasonal population by the appropriate seasonal resident adjustment factor for the particular county (0.707 or 0.773).
4) Calculate total functional population by adding the functionalized seasonal population to the permanent population.
5) Calculate ratio of Census-era functional population to permanent population.
6) Apply above ratio to future projections of permanent population to derive functional population projections.

Tourist Population

The tourist population projections were based on 26 years (1996-2021) of county level lodging room data from the Florida Department of Business and Professional Regulation (DBPR). The District's methodology for projecting future tourist rooms by county uses two different methods and averages the two results for each county.

The first method projects the increase in rooms by county by extrapolating the linear trend using the least squares method derived from the last 26 years of county total room estimates. This was the method used by the District for the past several years.

A second method projects future rooms based on projections of employment in the Accommodation and Food Services industries (from data from Woods and Poole). This is also an extrapolation of a linear trend using the least squares method, but rooms by county are projected as a function of a county's employment projections rather than time.

District staff previously tested both methods by projecting values for the years 2007 to 2013 using room estimates from 1996 to 2006. Based on the differences between actual room estimates and projected values for 2007 to 2013, neither method was clearly superior to the other. For that reason, District staff opted to use both methods. The results of both methods were averaged, but only after adjusting for the average 2007 to 2013 error for each projection in each county.

These projections of future rooms were then converted to "functionalized" tourist populations by applying various county level average unit occupancy and party size ratios. These ratios were provided by the District, who also updated the values associated with locations identified as short-term rentals for this projection set based on District research.

These projections of tourist population were joined to the existing lodging facility locations. No attempt was made to project future locations of lodging facilities, as:

1) The precise locations would be highly speculative.
2) It was assumed that lodging facilities often are built in the general vicinity of existing lodging facilities, or at least in close enough proximity to be within the same utility service area.

Net Commuter Population

The net commuter population projections were based on special tabulations from the American Community Survey conducted in the years 2006 to 2010. For each 2010 U.S. Census tract, the ratio of net commuters to permanent population was calculated. This ratio was then applied to future projections of permanent population to derive projections for net commuter population. That population was then "functionalized" with the following ratios:

1) 8/24 (typical working hours per day)
2) 5/7 (typical working days per week)

By applying both of these ratios to the net commuter population, the resulting functional net commuter population is 23.8 percent of the actual net commuter population. This functional number better reflects the water use that is expected for net commuters.

Note that the net commuter population projection summaries by utility service area were often negative, as many utilities serve "bedroom communities" and other areas where more residents work outside the utility service area than the population (residents and non-residents) employed within it. Only positive net commuter populations were included in a utility's total functional population.

Summarize By Utility Service Areas

The parcel-level results are then summarized by PS service area boundaries for all utilities districtwide that average at least 0.1 million gallons per day (mgd) of total water use. These boundaries, maintained by the District, are overlaid with the districtwide parcel-level population projection GIS layer, and each parcel within a service area is assigned a unique identifier for that service area. The projected population can then be summarized by that identifier and joined to the District's potable service area database to produce tabular or GIS output. Note that these service areas change over time, so for any future use of these deliverables, it is important to match this projection set only with the service areas included in the GIS deliverables.

Spatial Incongruity of Boundaries

Due to mapping errors, the service area boundaries do often bisect parcel boundaries. In the present modeling activity, parcels are deemed to be within a given service area if their center points (or centroids) fell inside the service area boundaries. The error associated with this spatial incongruity at the parcel level was much smaller than would be the case with census tract level data. This is one of the primary benefits of disaggregating census tract level data to the parcel level. The percentage of parcels erroneously attributed or excluded from a service area by this process is insignificant.

Final Results

The final results are provided in tabular format (Microsoft Excel spreadsheet) and GIS format (ESRI's file geodatabase). If there are discrepancies, the spatial results (each county's parcel-level population layer) may be used in part to depict projected patterns of future growth. The spatial data is available for download from the District's demographics webpage.

The population projections detailed in Tables 3 through 19, except for Lake and Polk counties (Tables 10 and 16) are the sum of the functionalized permanent, seasonal, net commuter, and tourist populations. It should be noted that only positive net commuters were aggregated, and service areas with negative net commuters were not penalized. For Lake and Polk counties (Tables 10 and 14), the population projections represent permanent populations and are from the CFWI RWSP demand projections.

There are some uncertainties with the model projections. In some instances, the projections detailed in Tables 3 through 19 may not match the raw model output in the tabular format (Microsoft Excel spreadsheet) and the GIS format (ESRI's file geodatabase). As the parcel level projections are summarized by PS service area boundaries and the service area is incorrect or includes DSS population that is not delineated as self-served, the aggregated population could be less than or greater than what the utility is actually projected to serve. Upon review and identification of such cases (including stakeholder input), the functional population for such instances was revised to reflect the correct service area boundaries and/or reduction of DSS.

Adjusting Population Projections using 2021 Estimated Water Use

Many public supply service areas include a significant number of self-supplied and vacant parcels within their boundaries. In most cases, the service area layer does not include information on self-supplied or not-yet-served areas. The population projections generated by GISA's parcel projection model include self-supplied persons or population in parcels not yet served. GISA generates projections for 308 service areas. Ninety-four of these service areas had a 2021 population estimate that was at least ±5 percent different from the 2021 population served estimate from the Estimated Water Use Report. Here is an example on how the population estimate and projection was adjusted using the 2021 population served estimate:

a) Results from GISA's parcel level model for utility Z:

Total Functional Population 2021	Total Functional Population 2025	Total Functional Population 2030	Total Functional Population 2035	Total Functional Population 2040	Total Functional Population 2045
1,452	1,494	1,578	1,791	2,125	2,432

b) In 2021, the utility reported a population served estimate of 1,316 people

c) This population estimate is 9 percent lower than the GISA projection

d) Thus, new projections are generated by applying the GISA growth rates to the 2021 population served estimate:

Total Functional Population 2021	Total Functional Population 2025	Total Functional Population 2030	Total Functional Population 2035	Total Functional Population 2040	Total Functional Population 2045
1,316	1,353	1,430	1,623	1,926	2,204

Water Demand Projections

Water demand projections are calculated for the years 2025, 2030, 2035, 2040, and 2045. To develop these projections, the District used the 2016-2020 average unadjusted gross per capita water use rate and applied it to the projected populations, described above. In the case of small utilities (utilities permitted for less than 100,000 gpd), the 2016-2020 per capita is the per capita stated in the last issued permit or the average unadjusted gross per capita of the county.

One-in-Ten Drought Event

"The 1-in-10 year drought event is an event that results in an increase in water demand of a magnitude that would have a 10 percent probability of occurring during any given year" (1-in-10 year Drought Subcommittee of the Water Planning Coordination Group, 1998). The 1-in-10 year Drought Subcommittee of the Water Planning Coordination Group, as stated in their final report, determined that a 6.0 percent increase in demand will occur in such an event for PS water use. Therefore, the one-in-ten year water demand projections are the average year demands times 1.06.

Residential Irrigation Wells

These are defined as private wells smaller than 6 inches which do not require a Water Use Permit (WUP); however, for this analysis, wells less than 5 inches in diameter were selected because of the unlikely scenario that any residential unit has irrigation wells greater than 4 inches in diameter. These wells are used primarily for outdoor irrigation purposes at residences that are connected to a central utility system and receive potable water service for indoor use. Using the methodology described below, District staff has estimated the number of domestic irrigation wells by county

and their associated water demand. This information was updated and incorporated into the below PS demand projections (Table 23). Currently, the District estimates that approximately 332 gpd are used for each irrigation well (Dukes and Boyer, 2018).

Using the District's well construction permit GIS feature class, the following selection criteria are necessary to capture residential irrigation wells:

1) Use Type equal to 'Irrigation' or 'Irrigation – Landscape'
2) Diameter less than 5 inches
3) Only include wells that lie inside PS service areas
4) Site status description of active, inactive, proposed, or blank
5) Exclude wells that lie within WUP Control Areas - Permitted
6) Include only those wells permitted by the District (do not include those within the St. John's River Water Management District boundary)

Review

The District made available the draft document for review and comment, as each stakeholder may have a much more intimate understanding of the permits for which they are responsible. Upon receiving stakeholder comments, the District reviewed suggested changes and, if appropriate, included updates. It is important to note that this is a long-term planning effort, and methodology changes based on short term trends were unlikely to be taken into account. Comments and suggested changes were taken into consideration if they were justifiable, defensible, and supported by complete documentation. The projections contained herein were presented to District staff and the Public Supply Advisory Committee (August 8, 2023).

The District understands and shares stakeholder's concerns of how critically important accurate demand projections are; however, the District must comply with Section 373.0361, F.S., which sets forth requirements for regional water supply planning. *("Population projections used for determining public water supply needs must be based upon the best available data. In determining the best available data, the district shall consider the University of Florida's Bureau of Economic and Business Research (BEBR) medium population projections and any population projection data and analysis submitted by a local government pursuant to the public workshop described in subsection (1) if the data and analysis support the local government's comprehensive plan.")*

Tables and Figures

Tables 1 through 2 provide permanent and functional future populations for each county. Tables 3 through 19 provide county population and PS water demand estimates and projections on a countywide basis. Both average year demand and the 1-in-10 year drought demands are reflected in these tables. Table 20 presents county-level demands. Tables 21 and 22 show population and water demands by region and water use caution areas (WUCAs). Lastly, Table 23 summarizes the existing irrigation wells and the exponential growth rate used to project future irrigation wells.

Summary

Overall, for the PS sector, the District is expecting an increase in average demand of 177.2 mgd from 634.5 mgd in 2020 to 811.7 mgd in 2045 for the 16-county area. The 177.2 mgd increase by 2045 is distributed as follows: 34.4 mgd increase in the Heartland Planning Region, 35.9 mgd

increase in the Northern Planning Region, 32.2 mgd in the Southern Planning Region, and 74.7 mgd increase in the Tampa Bay Planning Region. Tables 1 through 23 start on page 17 and provide data by county, utility, and planning region.

References

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Table 1. Countywide Permanent Population Estimates and Projections

	BEBR Medium Permanent Population[1]						Permanent Population in SWFWMD[2]					
	Population inside and outside District boundaries.						Population Inside District boundaries only.					
County	2020	2025	2030	2035	2040	2045	2020	2025	2030	2035	2040	2045
Charlotte	187,536	203,000	215,700	225,800	234,300	241,900	181,830	196,755	209,006	218,751	226,954	234,304
Citrus	153,922	162,500	169,200	174,900	179,500	183,500	153,922	162,500	169,200	174,900	179,500	183,500
DeSoto	33,939	34,400	34,600	34,800	35,000	35,100	33,939	34,400	34,600	34,800	35,000	35,100
Hardee	25,261	25,300	25,200	25,000	24,900	24,700	25,261	25,300	25,200	25,000	24,900	24,700
Hernando	193,832	207,600	219,000	228,300	235,900	242,300	193,832	207,600	219,000	228,300	235,900	242,300
Highlands	101,535	104,200	106,500	108,300	109,800	111,100	93,137	95,505	97,564	99,159	100,487	101,636
Hillsborough	1,464,879	1,595,000	1,702,000	1,786,700	1,857,800	1,919,800	1,464,879	1,595,000	1,702,000	1,786,700	1,857,800	1,919,800
Lake	389,902	442,700	487,600	525,300	558,800	587,900	1,141	1,732	2,351	2,904	3,391	3,813
Levy	43,152	45,300	47,000	48,200	49,400	50,400	24,794	26,041	27,012	27,810	28,554	29,150
Manatee	402,821	445,800	481,900	511,200	536,500	558,500	402,821	445,800	481,900	511,200	536,500	558,500
Marion	375,690	403,600	426,600	444,600	459,700	472,700	124,899	137,536	147,950	156,685	164,088	170,700
Pasco	564,388	623,300	672,400	712,800	746,700	776,300	564,388	623,300	672,400	712,800	746,700	776,300
Pinellas	960,759	979,500	994,400	1,006,400	1,016,500	1,025,200	960,759	979,500	994,400	1,006,400	1,016,500	1,025,200
Polk	733,199	810,900	877,800	932,700	979,200	1,019,500	679,663	757,566	818,894	869,429	912,625	949,878
Sarasota	435,101	467,700	493,300	514,000	532,000	547,900	435,101	467,700	493,300	514,000	532,000	547,900
Sumter	129,916	154,300	175,500	192,200	206,700	219,600	129,916	154,300	175,500	192,200	206,700	219,600
Total	**6,195,832**	**6,705,100**	**7,128,700**	**7,471,200**	**7,762,700**	**8,016,400**	**4,988,790**	**5,910,536**	**6,270,277**	**6,561,039**	**6,807,598**	**7,022,380**

Reference Sources for Countywide Permanent and Permanent Population Projections

[1] 2021-2045 projections are based on The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2021-2045, Florida Population Studies, Bulletin 192, February 2022

[2] Permanent population estimates and projections were generated by GIS Associates. Source File: GISA SWFWMD PSSA Population Summaries, 2022-12-15.xlsx. Tab Name: County & WMD Summary.

Table 2. Countywide Permanent and Total Functional population

	Total Functional Population in SWFWMD[1,2,3,4,5]					
	Total Functional Population = Permanent + Seasonal+ Tourist + Net Commuters					
County	2020	2025	2030	2035	2040	2045
Charlotte	212,364	228,731	243,013	254,438	264,121	272,871
Citrus	167,827	177,044	184,319	190,521	195,544	199,922
DeSoto	35,729	36,297	36,529	36,759	36,988	37,101
Hardee	25,980	26,079	25,999	25,816	25,741	25,563
Hernando	200,486	214,720	226,606	236,409	244,506	251,387
Highlands	103,627	106,224	108,459	110,188	111,626	112,869
Hillsborough	1,623,370	1,758,982	1,871,083	1,959,337	2,033,688	2,097,710
Lake[4]	1,141	1,732	2,351	2,904	3,391	3,813
Levy	26,297	27,599	28,620	29,465	30,249	30,885
Manatee[5]	478,345	527,638	568,920	602,754	632,485	658,700
Marion	131,994	145,035	155,864	164,970	172,714	179,653
Pasco	597,017	658,896	710,484	753,095	789,013	820,522
Pinellas[5]	1,207,570	1,226,434	1,245,700	1,260,566	1,273,220	1,283,812
Polk[4]	679,663	757,566	818,894	869,429	912,625	949,878
Sarasota	521,309	555,493	584,464	608,085	628,634	646,305
Sumter	144,439	170,649	193,407	211,356	227,050	241,118
Total	**6,157,158**	**6,619,120**	**7,004,709**	**7,316,094**	**7,581,597**	**7,812,110**

Reference Sources for Countywide Permanent in SWFWMD and Functional Population Projections

[1]Total functional population comprises permanent population, functional seasonal population, functional tourist, and functional net commuters population.

[2]2021 Estimate was generated from the population projections calculated using the latest GIS Associates, Inc.'s population projection model data (December 2022) and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). Population estimates and projections were adjusted using the 2021 Public Supply Annual Report population served estimate. The 2020 estimate had to be extrapolated using the 2016-2020 growth rate for each utility. The GISA projections are based on The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2025-2050 With Estimates For 2021. Florida Population

[3]The 2025-2045 projections were generated from the latest GIS Associates, Inc.'s population projection model data (December 2022) and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). Population estimates and projections were adjusted using the 2021 Public Supply Annual Report population served estimate. The GISA projections are based on The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2025-2050 With Estimates For 2021. Florida Population Studies, Bulletin

[4]This total includes estimates and projections from District portion of county from draft 2025-2045 Regional Water Supply Plan for the Central Florida Water Initiative (July 2023).

[5]For Manatee and Pinellas County, the sum of adjusted functional population exceeds original county total. Thus, county total was recalculated as original county total plus deficit plus GIS Associates Inc.'s population projection model data (December 2022) self-supplied population estimate (ex. 2025 Manatee County Total = 500,308 + 16,048 + 11,282 = 527,638).

TABLE 3. CHARLOTTE COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD MGD	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS MGD 2025	2030	2035	2040	2045	
(6)	DSS	Domestic Self-Supply	9,563	0.622	9,925	10,153	10,865	11,342	11,761	65	0.645	0.660	0.706	0.737	0.764	
(11)	718	Gasparilla Island Water Assoc.	6,150	1.109	6,208	6,276	6,344	6,415	6,491	180	1.119	1.132	1.144	1.157	1.170	
	871	City of Punta Gorda	41,761	5.464	44,624	46,928	48,512	49,507	50,316	131	5.839	6.140	6.348	6.478	6.584	
	1512	Charlotte Harbor Water Assoc.	4,474	0.384	4,998	5,457	5,836	6,175	6,485	86	0.429	0.468	0.500	0.529	0.556	
	3522	Charlotte County Utilities / Burnt Store	7,190	0.445	8,185	9,380	9,834	10,257	10,666	62	0.507	0.581	0.609	0.635	0.661	
	7104	Charlotte County Utilities	138,929	10.590	150,366	160,278	168,406	175,688	182,323	76	11.461	12.217	12.836	13.391	13.897	PRMRWSA
(9)	8626	Homeowners of Alligator Park	664	0.057	664	665	665	666	666	86	0.057	0.057	0.057	0.057	0.057	
(10)	99913	El Jobean Water Association	1,224	0.131	1,246	1,266	1,283	1,299	1,314	107	0.133	0.135	0.137	0.139	0.141	
(10)	99916	Riverwood Development	2,409	0.258	2,514	2,610	2,694	2,772	2,848	107	0.269	0.279	0.288	0.297	0.305	
(8)		Additional Irrigation Demand		2.355							2.536	2.695	2.821	2.929	3.026	
	Total County		**212,364**	**21.414**	**228,731**	**243,013**	**254,438**	**264,121**	**272,871**		**22.996**	**24.364**	**25.448**	**26.350**	**27.161**	
(7)	1-10 Drought Year Demand										24.376	25.826	26.975	27.931	28.791	

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per day per well.

(9) This utility has a small general permit and is identified in the PS_SERVICEAREAS layer. The per capita is listed in the permit document.

(10) This service area is a wholesale importer. There is no water use permit associated with this service area. Per capita is assumed to equal to the average county per capita.

(11) Gasparilla Island Water Assoc. (WUP 718): 2020 PSAR Functional population utilized for more accurate representation of utility level growth.

TABLE 4. CITRUS COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	57,968	5.310	61,502	64,272	66,630	68,531	70,183	92	5.634	5.887	6.103	6.277	6.429
	207	City of Crystal River	5,681	0.746	5,768	5,865	5,949	6,022	6,088	131	0.757	0.770	0.781	0.791	0.799
	419	City of Inverness	9,096	0.974	9,448	9,725	9,962	10,153	10,319	107	1.011	1.041	1.066	1.087	1.104
(9)	729	Citrus Co. Utilities - Point O' Woods	895	0.077	901	906	909	912	915	86	0.077	0.078	0.078	0.078	0.079
(9)	872	Inverness Village	248	0.027	248	248	248	248	248	110	0.027	0.027	0.027	0.027	0.027
	1118	Floral City Water Association Inc	5,175	0.336	5,280	5,364	5,436	5,494	5,546	65	0.343	0.348	0.353	0.357	0.360
(10)	1345	Royal Oaks of Citrus HOA	437	0.044	437	437	437	437	437	100	0.044	0.044	0.044	0.044	0.044
	2842	Citrus Co. Utilities - Citrus Springs/Pi	20,811	2.819	22,539	23,927	25,134	26,137	27,037	135	3.053	3.241	3.405	3.540	3.662
(10)	4008	Inverness Park	238	0.017	239	240	241	242	242	70	0.017	0.017	0.017	0.017	0.017
	4153	Rolling Oaks Utilities Inc	11,227	1.502	11,878	12,339	12,712	12,998	13,229	134	1.590	1.651	1.701	1.740	1.770
	4406	Homosassa Special Water District	5,819	0.783	5,871	5,929	5,982	6,030	6,074	135	0.790	0.798	0.805	0.812	0.818
(9)	4753	Constate Utilities	599	0.067	610	619	627	633	638	112	0.068	0.069	0.070	0.071	0.071
	6691	Gulf Highway Land Corporation	584	0.061	609	629	646	659	671	104	0.064	0.066	0.067	0.069	0.070
	7121	Citrus Co. Utilities - Charles A. Black	28,209	4.654	29,939	31,301	32,455	33,381	34,180	165	4.940	5.164	5.355	5.507	5.639
(9)	7784	Citrus Co. Utilities - Water Oaks	202	0.014	204	205	206	207	208	71	0.014	0.015	0.015	0.015	0.015
(10)	8147	Oak Pond LLC	103	0.010	103	103	103	103	103	97	0.010	0.010	0.010	0.010	0.010
(10)	8623	Gulf Coast RV Resort	0	0.000	44	84	117	143	165	70	0.003	0.006	0.008	0.010	0.012
	9097	Tarawood Utilities LLC	158	0.010	160	162	164	165	166	61	0.010	0.010	0.010	0.010	0.010
(10)	9532	Greenbriar One of Citrus Hills	388	0.051	388	389	389	389	389	131	0.051	0.051	0.051	0.051	0.051
	9791	Citrus Co. Utilities - Sugarmill Woods	14,235	2.566	15,097	15,777	16,359	16,833	17,247	180	2.721	2.843	2.948	3.034	3.108
	11839	GCP Walden Woods One, LLC and C	1,021	0.152	1,021	1,021	1,021	1,022	1,022	149	0.152	0.152	0.152	0.152	0.152
	20230	Ozello Water Association Inc	4,734	0.382	4,757	4,778	4,794	4,807	4,817	81	0.384	0.386	0.387	0.388	0.389
(8)		Additional Irrigation Demand		1.078							1.137	1.184	1.223	1.256	1.284
	Total County		**167,827**	**21.679**	**177,044**	**184,319**	**190,521**	**195,544**	**199,922**		**22.897**	**23.858**	**24.678**	**25.342**	**25.921**
(7)	1-10 Drought Year Demand										24.271	25.290	26.159	26.863	27.476

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) Small general water use permits are not required to submit annual information on their per capita. Consequently, per capita information for the following small general WUPs was obtained as follows:

a) CCU - Point of Woods (WUP# 729): Per capita information obtained from permit issued in 2017.

b) Constate Utilities (WUP# 4753): Per capita information obtained from permit issued in 2017.

c) Inverness Village (WUP# 872): Per capita information was obtained from permit issued in 2022.

d) Citrus Co. Utilities - Water Oaks (WUP# 7784): Per capita and population information was obtained from permit issued in 2021.

e) Gulf Coast RV Resort (WUP# 8623): Per capita information was obtained from permit issued in 2019.

(10) These are small general public supply permits listed in the PS_SERVICEAREAS layer. If available, the permit per capita was used. Otherwise, it was assumed that the per capita was equal to the 2020 unadjusted gross per capita for the county.

TABLE 5. DESOTO COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045	
(6)	DSS	Domestic Self-Supply	15,787	0.767	16,070	16,222	16,377	16,533	16,614	49	0.781	0.788	0.796	0.803	0.807	
(10)	3318	Cross Creek Country Club	1,264	0.056	1,264	1,264	1,264	1,264	1,264	44	0.056	0.056	0.056	0.056	0.056	
	4725	Arcadia WTP	12,110	1.013	12,123	12,129	12,135	12,141	12,145	84	1.014	1.015	1.015	1.016	1.016	
(10)	6483	DeSoto Village Mobile Home Park	290	0.019	290	290	290	290	290	67	0.019	0.019	0.019	0.019	0.019	
(9)	20457	DeSoto County Utilities	6,277	0.640	6,550	6,624	6,693	6,760	6,789	102	0.667	0.675	0.682	0.689	0.692	PRMRWSA
(8)		Additional Irrigation Demand		0.082							0.084	0.084	0.085	0.085	0.085	
	Total County		**35,729**	**2.577**	**36,297**	**36,529**	**36,759**	**36,988**	**37,101**		**2.621**	**2.637**	**2.653**	**2.668**	**2.676**	
(7)	1-10 Drought Year Demand										2.779	2.796	2.812	2.829	2.836	

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) This is wholesale permit that imports supply from the PRMRWSA. The County also holds an Industrial/Commercial WUP (#6841) for the DeSoto Annex Correctional Facility which houses an average 1,540 persons. The correctional facility's population has been deducted from the wholesale permit's population

(10) Small general water use permits are not required to submit annual information on their per capita. Consequently, per capita information for the following small general WUPs was obtained as follows:

a) Cross Creek Country Club (WUP# 3318): Population and per capita information were obtained from permit issued in 2020.

b) DeSoto Village Mobile Home Park (WUP# 6483): Per capita information was obtained from permit issued in 2017.

TABLE 6. HARDEE COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	6,432	0.274	6,428	6,333	6,149	6,050	5,863	43	0.274	0.270	0.262	0.258	0.250
	30	City Of Bowling Green Municipal Wate	4,655	0.202	4,668	4,668	4,668	4,668	4,668	43	0.202	0.202	0.202	0.202	0.202
(9)	2402	Orange Blossom RV Park	189	0.013	189	189	189	189	189	70	0.013	0.013	0.013	0.013	0.013
	4461	City Of Wauchula	6,830	0.686	6,848	6,852	6,857	6,862	6,868	100	0.688	0.688	0.689	0.689	0.690
(9)	7022	MHC Peace River	27	0.001	27	27	27	27	27	20	0.001	0.001	0.001	0.001	0.001
	7658	Town Of Zolfo Springs	2,505	0.149	2,505	2,505	2,505	2,505	2,505	59	0.149	0.149	0.149	0.149	0.149
(10)	9550	Hardee Correctional Institution	1,963	0.251	1,963	1,963	1,963	1,963	1,963	128	0.251	0.251	0.251	0.251	0.251
(9)	11087	Florida SKP	306	0.014	306	306	306	306	306	47	0.014	0.014	0.014	0.014	0.014
(9)	11180	Torrey Oaks HOA	48	0.006	48	48	48	48	47	115	0.006	0.005	0.005	0.005	0.005
	13026	Hardee County BOCC	3,023	0.136	3,097	3,107	3,103	3,122	3,125	45	0.139	0.139	0.139	0.140	0.140
(8)		Additional Irrigation Demand		0.045							0.045	0.045	0.045	0.045	0.044
	Total County		**25,980**	**1.776**	**26,079**	**25,999**	**25,816**	**25,741**	**25,563**		**1.781**	**1.778**	**1.770**	**1.767**	**1.760**
(7)	1-10 Drought Year Demand										1.888	1.885	1.877	1.873	1.865

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) Small general water use permits are not required to submit annual information on their per capita. Consequently, per capita information for the following small general WUPs was obtained as follows:

a) Orange Blossom RV Park (WUP# 2402): Per capita information were obtained from permit issued in 2015.

a) MHC Peace River (WUP# 7022): Per capita information was obtained from permit issued in 2021.

b) Florida SKP (WUP# 11087): Per capita information was obtained from permit issued in 2014.

c) Torrey Oaks HOA (WUP# 11180): Per capita information were obtaind from permit issued in 2016.

(10) Although it is a general permit, Hardee Correctional Institution (WUP# 9550) is not required to submit a PSAR. Therefore, population and per captia were taken from permit issued in 2010.

TABLE 7. HERNANDO COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	30,941	2.748	32,946	36,580	40,000	43,005	45,385	89	2.926	3.248	3.552	3.819	4.030
(9)	1891	Campers Holiday Association	543	0.027	544	544	545	546	546	50	0.027	0.027	0.027	0.027	0.027
(9)	2119	Imperial Estates	255	0.012	255	255	255	255	255	48	0.012	0.012	0.012	0.012	0.012
(9)	3273	Holiday Springs RV Park	290	0.017	290	290	290	290	290	57	0.017	0.017	0.017	0.017	0.017
(9)	3720	McGist, Inc. (Frontier Campground)	364	0.017	364	364	364	364	364	46	0.017	0.017	0.017	0.017	0.017
	5789	Hernando Co Utilities	150,338	18.957	161,595	168,812	174,121	178,277	181,941	126	20.376	21.286	21.956	22.480	22.942
	7627	City Of Brooksville	17,315	1.329	18,284	19,317	20,390	21,323	22,158	77	1.403	1.482	1.565	1.636	1.700
(9)	8443	Camp-A-Wyle Condominium	440	0.040	442	444	445	447	449	90	0.040	0.040	0.040	0.040	0.040
(8)		Additional Irrigation Demand		2.992							3.204	3.382	3.528	3.649	3.752
	Total County		**200,486**	**26.137**	**214,720**	**226,606**	**236,409**	**244,506**	**251,387**		**28.022**	**29.511**	**30.713**	**31.697**	**32.537**
(7)	1-10 Drought Year Demand										29.703	31.282	32.556	33.599	34.489

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) Small general water use permits are not required to submit annual information on their per capita. Consequently, per capita information for the following small general WUPs was obtained as follows:

a) Campers Holiday Association (WUP# 1891): Per capita information was obtained from permit issued in 2020.

b) Imperial Estates (WUP# 2119): Per capita information was obtained from permit issued in 2019.

c) Holiday Springs RV Park (WUP# 3273): Per capita information was obtained from permit issued in 2019.

d) Frontier Campground (WUP# 3720): Per capita information was obtained from permit issued in 2015.

e) Camp-A-Wyle (WUP# 8443): Per capita information was obtained from permit issued in 2016.

TABLE 8. HIGHLANDS COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	19,615	1.236	20,648	21,432	22,111	22,668	23,143	63	1.301	1.350	1.393	1.428	1.458
	4167	HC Waterworks	1,402	0.128	1,411	1,418	1,425	1,430	1,436	92	0.129	0.130	0.130	0.131	0.131
	4492	City of Sebring	35,549	3.901	36,525	37,290	37,916	38,427	38,856	110	4.009	4.092	4.161	4.217	4.264
(9)	4670	Regular Baptist Fellowship, Inc.	496	0.020	507	515	521	525	528	40	0.020	0.021	0.021	0.021	0.021
	4980	Lake Placid Holding Co	4,631	0.313	4,827	4,985	5,117	5,227	5,322	68	0.326	0.337	0.346	0.353	0.359
	5270	Town Of Lake Placid	7,161	0.613	7,207	7,244	7,275	7,303	7,327	86	0.617	0.620	0.623	0.625	0.627
	6029	City Of Avon Park	22,774	1.982	22,850	23,115	23,174	23,230	23,285	87	1.988	2.011	2.016	2.021	2.026
(11)	6456	HC Waterworks	590	0.048	592	593	594	595	595	81	0.048	0.048	0.048	0.048	0.048
(11)	6804	Lake Bonnet Village MHP	86	0.004	86	86	86	86	86	42	0.004	0.004	0.004	0.004	0.004
	7139	Buttonwood Bay Utilities	1,631	0.180	1,631	1,631	1,631	1,631	1,631	110	0.180	0.180	0.180	0.180	0.180
(11)	9490	LP Utilities Corporation	418	0.045	418	418	418	418	418	107	0.045	0.045	0.045	0.045	0.045
(11)	10926	Lake Lynn Shores	30	0.005	30	30	30	30	30	150	0.005	0.005	0.005	0.005	0.005
(11)	10930	Lake Placid Campground	62	0.002	62	62	62	62	62	37	0.002	0.002	0.002	0.002	0.002
(11)	11601	Pine Ridge Park Inc	139	0.007	139	139	139	139	139	51	0.007	0.007	0.007	0.007	0.007
(11)	12846	Tropical Harbor Mobile Home Estates	815	0.092	815	815	815	815	815	113	0.092	0.092	0.092	0.092	0.092
	13099	Sun N Lake Of Sebring Impr Dist	7,986	0.669	8,216	8,412	8,586	8,743	8,890	84	0.688	0.705	0.719	0.733	0.745
(11)	13272	Lake Park Village Condo Assoc	71	0.003	71	71	71	71	71	36	0.003	0.003	0.003	0.003	0.003
(10)	13367	Silver Lake Utilities, Inc.	18	0.002	36	51	63	73	82	93	0.003	0.005	0.006	0.007	0.008
(11)	20470	Orange Blossom Park	154	0.023	154	154	154	154	154	150	0.023	0.023	0.023	0.023	0.023
(8)		Additional Irrigation Demand		3.890							3.988	4.072	4.137	4.191	4.237
	Total County		**103,627**	**13.162**	**106,224**	**108,459**	**110,188**	**111,626**	**112,869**		**13.477**	**13.750**	**13.960**	**14.135**	**14.286**
(7)	1-10 Drought Year Demand										14.286	14.575	14.798	14.983	15.143

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) Regular Baptist Fellowship, Inc. (WUP 4670): Per capita information obtained from permit issued in 2018.

(10) This is a small general permit. It is not required to submit an annual per capita report. Per capita information is from the last issued permit. If no per capita information was found in WMIS., the per capita is assumed to equal the average county per capita.

(11) Small general water use permits are not required to submit annual information on their per capita. Consequently, per capita information for the following small general WUPs was obtained as follows:

a) HC Waterworks (WUP# 6456): Per capita information was obtained from permit issued in 2018.

b) Lake Bonnet Village MHP (WUP# 6804): Per capita information were obtained from permit issued in 2021.

c) Lake Lynn Shores (WUP#10926): Per capita and population information were obtained from permit issued in 2013.

d) Lake Placid Campground (WUP#10930): Per capita information was obtained from permit issued in 2013.

e) Pine Ridge Park Inc (WUP# 11601): Per capita information was obtained from permit issued in 2017.

f) Tropical Harbor Mobile Home Estates (WUP# 12846): Per capita information was obtained from permit issued in 2017.

g) Lake Park Village Condo Assoc (WUP# 13272): Per capita information was obtained from permit issued in 2018.

h) Orange Blossom Park (WUP# 20470): Per capita information was obtained from permit issued in 2014.

i) LP Utilities Corporation (WUP #9490): Per capita information was obtained from permit issued in 2011.

TABLE 9. HILLSBOROUGH COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045	DPCWUCA	NTB	SWUCA
(6)	DSS	Domestic Self-Supply	120,119	8.673	141,815	176,066	212,637	248,942	282,818	72	10.239	12.712	15.352	17.974	20.419			
(9)	1	Park Village Hoa Of Ruskin	112	0.017	113	114	116	116	116	148	0.017	0.017	0.017	0.017	0.017			SWUCA
(9)	245	Chula Vista Mobile Home Park	282	0.026	282	282	282	282	282	93	0.026	0.026	0.026	0.026	0.026			SWUCA
(9)	435	The Wildwood Company, Inc.	690	0.100	690	690	690	690	690	145	0.100	0.100	0.100	0.100	0.100		NTB	
	450	City Of Temple Terrace	30,333	3.421	32,841	35,700	36,658	36,930	37,014	113	3.704	4.026	4.134	4.165	4.174		NTB	
(9)	1169	Briarwood Mobile Home Park	250	0.035	250	250	250	250	250	138	0.035	0.035	0.035	0.035	0.035	DPCWUCA	NTB	
	1776	City Of Plant City Utilities	41,988	6.156	45,693	54,644	67,116	78,542	86,686	147	6.699	8.011	9.840	11.515	12.709	DPCWUCA	NTB	
(9)	1787	Hillsborough County BOCC: San Remo	228	0.028	229	234	235	235	235	121	0.028	0.028	0.028	0.028	0.028		NTB	
	2062	City Of Tampa Water Dept	730,375	79.565	769,651	791,905	799,160	803,180	809,710	109	83.844	86.268	87.059	87.496	88.208		NTB	
	2285	Casa Verde MHC, LLC	1,263	0.142	1,524	1,526	1,526	1,526	1,526	112	0.171	0.171	0.171	0.171	0.171		NTB	
(9)	2860	Sunrise MHC, LLC	350	0.021	350	350	350	350	350	60	0.021	0.021	0.021	0.021	0.021		NTB	
(9)	2955	Spanish Main RV Resort	423	0.036	423	423	423	423	423	86	0.036	0.036	0.036	0.036	0.036		NTB	
(9)	3752	Citrus Knoll MHP	59	0.009	59	59	59	59	59	150	0.009	0.009	0.009	0.009	0.009	DPCWUCA	NTB	
(9)	3926	Plant Properties Corp.	436	0.060	436	436	436	436	436	138	0.060	0.060	0.060	0.060	0.060	DPCWUCA	NTB	
(9)	4757	Wilder Corporation	801	0.053	801	801	801	801	801	66	0.053	0.053	0.053	0.053	0.053			SWUCA
(9)	6542	River Palm RV Resort	413	0.012	413	413	413	413	413	30	0.012	0.012	0.012	0.012	0.012		NTB	
	6879	C W Utility Systems Llc	2,148	0.202	2,148	2,148	2,148	2,148	2,148	94	0.202	0.202	0.202	0.202	0.202	DPCWUCA	NTB	
(9)	7002	MHC FR Utility Systems, LLC	1,171	0.109	1,171	1,171	1,171	1,171	1,171	93	0.109	0.109	0.109	0.109	0.109	DPCWUCA	NTB	
(9)	7153	Parkwood Estates Mobile Home Park	474	0.066	474	474	474	474	474	140	0.066	0.066	0.066	0.066	0.066	DPCWUCA	NTB	
(9)	7213	Bay Hills Village Condominium Assoc, Inc	218	0.033	218	218	218	218	218	150	0.033	0.033	0.033	0.033	0.033		NTB	
	7637	Riverside Golf Course Comm Llc	1,315	0.555	1,315	1,315	1,315	1,315	1,315	422	0.555	0.555	0.555	0.555	0.555			SWUCA
(9)	7643	Southern Aire Mobile Home Park	292	0.026	292	292	292	292	292	90	0.026	0.026	0.026	0.026	0.026		NTB	
	7790	Uniprop Income Fund Ii (Paradise Village)	2,225	0.119	2,225	2,225	2,225	2,225	2,225	54	0.119	0.119	0.119	0.119	0.119		NTB	
(9)	8469	Bonita Bay Farmworker Housing	180	0.009	180	180	180	180	180	50	0.009	0.009	0.009	0.009	0.009			SWUCA
(9)	8579	Neptune Valley Mobile Home Park	126	0.009	126	126	126	126	126	70	0.009	0.009	0.009	0.009	0.009			SWUCA
(9)	8788	Sunset Manor Hoa	56	0.008	56	56	56	56	56	150	0.008	0.008	0.008	0.008	0.008		NTB	
(9)	8986	Bay Pointe Utilities, Inc.	85	0.009	85	85	85	85	85	110	0.009	0.009	0.009	0.009	0.009	DPCWUCA	NTB	
(9)	10066	Florida Acecapaders, Inc.	118	0.016	118	118	118	118	118	132	0.016	0.016	0.016	0.016	0.016			SWUCA
	10443	Windemere Utility Company	2,773	0.251	2,778	2,793	2,795	2,795	2,795	90	0.251	0.252	0.253	0.253	0.253		NTB	
(9)	12513	Hometown Little Manatee Springs, LLC	518	0.041	518	518	518	518	518	80	0.041	0.041	0.041	0.041	0.041			SWUCA
(9)	12621	Hideaway Partners, LLLP	657	0.021	657	657	657	657	657	32	0.021	0.021	0.021	0.021	0.021			SWUCA
(9)	13004	Eastfield Slopes Condo	252	0.034	252	255	255	255	255	134	0.034	0.034	0.034	0.034	0.034		NTB	
(9)	13063	Cax Lakeshore Villas Mhp	466	0.043	466	466	466	466	466	93	0.043	0.043	0.043	0.043	0.043		NTB	
	20141	Hillsborough County Utilities	682,173	68.822	750,332	794,092	825,086	847,414	862,802	101	75.698	80.113	83.240	85.492	87.045		NTB	SWUCA
(8)		Additional Irrigation Demand		2.446							2.651	2.819	2.952	3.064	3.161			
(7)		1-10 Drought Year Demand									196.051	207.837	216.982	224.540	230.910			
		DPCWUCA 1-10 Drought Year Demand									7.620	9.011	10.949	12.725	13.990			
		NTB 1-10 Drought Year Demand									181.597	190.582	196.787	201.447	205.122			
		SWUCA 1-10 Drought Year Demand									81.032	85.712	89.026	91.414	93.060			

Notes:
MGD = million gallons per day
(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.
(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.
(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.
(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.
(5) Computed as projected population multiplied by 2016-2020 average per capita water use.
(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.
(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.
(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.
(9) This is a small general permit. It is not required to submit an annual per capita report. Per capita information is from the last issued permit. If no per capita information was found in WMIS., the per capita is assumed to equal the average county per capita.
a) Park Village Hoa Of Ruskin (1): Per capita information was obtained from permit issued in 2018.
b) Chula Vista Mobile Home Park (245): Per capita information was obtained from permit issued in 2013.
c) The Wildwood Company, Inc. (435): Per capita information were obtained from permit issued in 2015.
d) Briarwood Mobile Home Park (1169): Per capita information was not available via the permit. The per capita is assumed to equal the average county per capita.
e) Hillsborough County BOCC: San Remo (1787): Per capita information was obtained from permit issued in 2010. Per Norm Davis at Hillsborough Co Utilities, permit has been taken over by Hillsborough Co.
f) Sunrise MHC, LLC (2860): Per capita and population information were obtained from permit issued in 2015.
g) Spanish Main RV Resort (2955): Per capita information was obtained from permit issued in 2012.
h) Citrus Knoll MHP (3752): Per capita information were obtained from draft permit in 2018.
i) Oakbrook Associates (Plant City (3926): Per capita information was obtained from permit issued in 2018.
j) Wilder Corporation (4757): Per capita information was obtained from permit issued in 2020.
k) River Palm RV Resort (6542): Per capita information was obtained from permit issued in 2021.
l) MHC FR Utility Systems, LLC (7002): Per capita information was obtained from permit issued in 2011.
m) Parkwood Estates Mobile Home Park (7153): Per capita information was obtained from permit issued in 2022.
n) Bay Hills Village Condominium Association, Inc (7213): Per capita and population information were obtained from permit issued in 2013.
o) Southern Aire Mobile Home Park (7643): Per capita information was obtained from permit issued in 2020.
p) Bonita Bay Farmworker Housing (8469): Population and per capita information was obtained from permit issued in 2016.
q) Neptune Valley Mobile Home Park (8579): Per capita information was obtained from permit issued in 2015.
r) Sunset Manor HOA (8788): Per capita information was obtained from permit issued in 2018.
s) Bay Pointe Utilities, Inc (8986): Per capita information was obtained from permit issued in 2018.
t) Florida Acecapaders, Inc. (10066): Per capita and population information were obtained from permit issued in 2022.
u) Hometown Little Manatee Springs, LLC (12513): Per capita information was obtained from permit issued in 2014.
v) Hideaway Partners, LLLP (12621): Per capita information was obtained from permit issued in 2014.
w) Eastfield Slope Condo (13004): Per capita information was obtained from permit issued in 2017.
x) Cax Lakeshore Villas Mhp (13063): Per capita information was obtained from permit issued in 2018.

TABLE 10. LAKE COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	PROJECTED POPULATION 2025	2030	2035	2040	2045	2016-2020 AVG GPCD	PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
	DSS	**Domestic Self-Supply & Small Utilities**	**1,141**	**0.140**	**1,732**	**2,351**	**2,904**	**3,391**	**3,813**	**NA**	**0.210**	**0.290**	**0.360**	**0.420**	**0.470**
	Total County in SWFWMD (all utilities and DSS)		**1,141**	**0.140**	**1,732**	**2,351**	**2,904**	**3,391**	**3,813**		**0.210**	**0.290**	**0.360**	**0.420**	**0.470**
(3)	1-10 Drought Year Demand										0.223	0.307	0.382	0.445	0.498
	CFWI Large Utilities (Public Supply)		NA	NA	NA	NA	NA	NA	NA		0.000	0.000	0.000	0.000	0.000
	CFWI Large Utilities 1-10 Drought Year Demand		NA	NA	NA	NA	NA	NA	NA		0.000	0.000	0.000	0.000	0.000

Notes:
MGD = million gallons per day
(1) Estimate & projections of domestic self-supplied & small utility population for District portion of county from draft 2025-2045 Regional Water Supply Plan for the Central Florida Water Initiative (July 2023).
(1) Estimate & projections of domestic self-supplied & small utility population for District portion of county from draft 2025-2045 Regional Water Supply Plan for the Central Florida Water Initiative (July 2023).
(3) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

TABLE 11. LEVY COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	18,754	1.028	19,728	20,505	21,152	21,747	22,196	55	1.081	1.124	1.159	1.192	1.216
	5640	City of Williston	5,007	0.748	5,274	5,486	5,617	5,744	5,882	149	0.788	0.820	0.839	0.858	0.879
(9)	7755	Town Of Yankeetown	915	0.091	918	922	922	922	922	100	0.092	0.092	0.092	0.092	0.092
	8953	Town Of Inglis	1,621	0.100	1,680	1,706	1,774	1,837	1,886	62	0.104	0.105	0.110	0.113	0.116
(8)		Additional Irrigation Demand		0.019							0.020	0.020	0.021	0.021	0.022
	Total County		**26,297**	**1.986**	**27,599**	**28,620**	**29,465**	**30,249**	**30,885**		**2.084**	**2.161**	**2.221**	**2.277**	**2.325**
(7)	1-10 Drought Year Demand										2.209	2.291	2.354	2.413	2.465

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) This is a small general permit. It is nor required to submit an annual per capita report. Per capita information is from the last issued permit. If no per capita information was found in WMIS., the per capita is assumed to equal the average county per capita.

a) Town Of Yankeetown (7755): Per capita information was obtained from the permit issued in 2014.

TABLE 12. MANATEE COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3),(11) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045	
(6),(10)	DSS	Domestic Self-Supply	10,665	0.672	11,282	11,785	12,245	12,676	13,088	63	0.711	0.742	0.771	0.799	0.825	
	6392	City Of Bradenton	74,231	6.342	79,705	82,054	83,172	83,837	84,375	85	6.810	7.010	7.106	7.163	7.209	
	10963	Town of Longboat Key	17,753	1.675	18,103	18,310	18,518	18,740	18,976	94	1.708	1.728	1.747	1.768	1.791	
(12)	11424	Pines Trailer Park	72	0.006	72	72	72	72	80	87	0.006	0.006	0.006	0.006	0.007	
	12443	City Of Palmetto	18,367	1.448	19,651	21,770	22,978	24,338	25,210	79	1.549	1.716	1.811	1.918	1.987	
(12)	13154	Lazy Acres MHP	48	0.003	48	48	48	48	48	68	0.003	0.003	0.003	0.003	0.003	
(9),(10)	13343	Manatee County Utility Operations	357,185	32.432	398,752	434,856	465,697	492,749	516,899	91	36.207	39.485	42.285	44.742	46.934	PRMRWSA
(12)	20235	ERS/Palmetto Park.	24	0.002	24	24	24	24	24	75	0.002	0.002	0.002	0.002	0.002	
(8)		Additional Irrigation Demand		1.868							2.061	2.222	2.354	2.470	2.573	
(11)	**Total County**		**478,345**	**44.449**	**527,638**	**568,920**	**602,754**	**632,485**	**658,700**		**49.056**	**52.915**	**56.086**	**58.871**	**61.330**	
(7)	1-10 Drought Year Demand										52.000	56.090	59.452	62.403	65.010	

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) Manatee County water use permits 5387,7345, and 7470 were consolidated into water use permit number 13343.

(10) The sum of the populations for each utility is greater than the total functional population from GISA. This results in negative domestic self supply populations. County totals adjusted upwards to cover deficit plus domestic self-supply.

(11) This estimates exceeds BEBR High and GISA 2022 functional population estimatates and projections for Manatee County.

(12) This is a small general permit. It is nor required to submit an annual per capita report. Per capita information is from the last issued permit. If no per capita information was found in WMIS., the per capita is assumed to equal the average county per capita.

a) Pines Trailer Park (11424): Per capita information was not available from permit. Per capita is assumed to equal the average county per capita.

b) Lazy Acres MHP (WUP# 13154): Per capita information was obtained from permit issued in 2018.

c) ERS/Palmetto Pak (WUP# 20235): Per capita information was obtained from permit issued in 2021.

TABLE 13. MARION COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	52,475	6.045	57,187	61,181	64,557	67,471	70,197	115	6.588	7.048	7.437	7.773	8.087
	1156	Bay Laurel Community Development D	15,800	3.777	19,573	22,635	25,160	27,240	28,933	239	4.678	5.410	6.014	6.511	6.916
	5643	Utilities Inc of Florida, ATTN: Patrick Fl	1,013	0.150	1,017	1,020	1,023	1,025	1,027	148	0.151	0.151	0.152	0.152	0.152
(9)	5731	Foxwood Mobile Home	517	0.058	517	517	517	517	517	112	0.058	0.058	0.058	0.058	0.058
(9)	5746	Ocala RV Campground	45	0.001	45	45	45	45	45	21	0.001	0.001	0.001	0.001	0.001
	6151	Marion Co Utilities Dept	51,506	6.827	55,444	58,700	61,467	63,839	66,011	133	7.349	7.781	8.147	8.462	8.750
(9)	6792	Saddle Oak Club MHC	736	0.101	736	736	736	736	736	137	0.101	0.101	0.101	0.101	0.101
(9)	6884	Marion Utilities Inc	101	0.007	121	137	152	164	176	70	0.008	0.010	0.011	0.011	0.012
(9)	8005	Century Fairfield Village Ltd	598	0.072	598	598	598	598	598	120	0.072	0.072	0.072	0.072	0.072
	8020	Association of Marion Landing Owners	1,102	0.136	1,102	1,102	1,102	1,102	1,102	123	0.136	0.136	0.136	0.136	0.136
(9)	8139	The Falls of Ocala HOA, Inc	213	0.025	218	221	224	227	229	119	0.026	0.026	0.027	0.027	0.027
	8339	City Of Dunnellon	6,834	1.073	7,412	7,894	8,303	8,655	8,978	157	1.164	1.239	1.303	1.359	1.409
(9)	9425	Sweetwater Oaks	370	0.050	370	370	370	370	370	136	0.050	0.050	0.050	0.050	0.050
(9)	10110	The Centers	129	0.013	129	129	129	129	129	100	0.013	0.013	0.013	0.013	0.013
(9)	10852	Dogwood Acres MHP	239	0.027	239	239	239	239	239	111	0.027	0.027	0.027	0.027	0.027
(9)	11523	Westwood MHP	144	0.018	144	144	144	144	144	125	0.018	0.018	0.018	0.018	0.018
(9)	20098	Satake Village Utilities	83	0.013	84	84	84	84	84	150	0.013	0.013	0.013	0.013	0.013
(9)	20213	City of Dunnellon - Juliette Falls	88	0.011	101	112	122	130	138	129	0.013	0.014	0.016	0.017	0.018
(8)		Additional Irrigation Demand		0.690							0.758	0.815	0.862	0.903	0.939
	Total County		**131,994**	**19.093**	**145,035**	**155,864**	**164,970**	**172,714**	**179,653**		**21.223**	**22.982**	**24.456**	**25.702**	**26.798**
(7)	1-10 Drought Year Demand										22.496	24.361	25.924	27.244	28.406

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) Small general water use permits are not required to submit annual information on their per capita. Consequently, per capita information for the following small general WUPs was obtained as follows:

a) Foxwood Mobile Home (WUP# 5731): Per capita information were obtained from permit issued in 2017.

b) Ocala RV Campground (WUP# 5746): Per capita information were obtained from permit issued in 2018.

c) Saddle Oak Club MHC (WUP # 6792): Per capita information were obtained from permit issued in 2019.

d) Marion Utilities, Inc. (WUP# 6884): Per capita information were obtained from permit issued in 2020.

e) Century Fairfield Village Ltd (WUP #8005): Per capita information were obtained from permit issued in 2017

f) The Falls of Ocala HOA, Inc (WUP# 8139): Per capita information were obtained from permit issued in 2022.

g) Sweetwater Oaks (WUP# 9425): Per capita information was obtained from permit issued in 2020.

h) The Centers (WUP# 10110): Per capita and population information were obtained from permit issued in 2010.

i) Dogwood Acres MHP (WUP# 10852): Per capita information was obtained from permit issued in 2013.

j) Westwood MHP (WUP# 11523): Per capita information was obtained from permit issued in 2018.

k) Satake Village Utilities (WUP# 20098): Per capita information was obtained from permit issued in 2020.

l) City of Dunnellon - Julliet Falls (WUP# 20213): Per capita information obtained from permit issued in 2022.

TABLE 14. PASCO COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	104,683	7.432	128,220	148,160	165,677	182,551	197,727	71	9.104	10.519	11.763	12.961	14.039
	279	Florida Governmental Utility Author	4,089	0.264	4,168	4,176	4,176	4,177	4,177	65	0.269	0.270	0.270	0.270	0.270
(10)	540	Holiday Gardens Utilities, Inc.	893	0.078	912	915	915	915	915	87	0.079	0.080	0.080	0.080	0.080
(10)	543	Crestridge Utility Corporation	1,188	0.070	1,203	1,211	1,211	1,211	1,211	59	0.071	0.071	0.071	0.071	0.071
	590	Florida Governmental Utility Author	8,352	0.882	8,520	8,586	8,605	8,618	8,629	106	0.900	0.907	0.909	0.910	0.911
(10)	923	Traveler's Rest Resort	320	0.011	320	321	321	321	321	35	0.011	0.011	0.011	0.011	0.011
	1631	City of Dade City	13,080	1.419	13,846	14,675	15,481	16,620	17,811	108	1.502	1.592	1.679	1.803	1.932
(10)	2043	Orangewood Lakes Mobile Home C	903	0.070	905	906	907	909	910	78	0.071	0.071	0.071	0.071	0.071
(10)	2319	Florida Governmental Utility Author	282	0.028	290	293	293	293	293	100	0.029	0.029	0.029	0.029	0.029
(10)	2567	Country- Aire	240	0.027	244	247	250	253	256	113	0.028	0.028	0.028	0.029	0.029
	2978	Florida Governmental Utility Author	5,446	0.645	5,663	5,839	5,991	6,073	6,090	118	0.670	0.691	0.709	0.719	0.721
	3182	Florida Governmental Utility Author	30,718	2.508	32,254	33,441	34,419	35,089	35,615	82	2.633	2.730	2.810	2.865	2.908
(10)	3273	Holiday Springs RV Park	290	0.017	290	290	290	290	290	57	0.017	0.017	0.017	0.017	0.017
(10)	3302	Baker Acres	610	0.025	610	610	610	610	610	41	0.025	0.025	0.025	0.025	0.025
(10)	3528	Tippecanoe Village Homenowners	375	0.042	375	375	375	375	375	111	0.042	0.042	0.042	0.042	0.042
	3590	Utilities Inc of Florida, ATTN: Patric	3,608	0.214	3,799	3,819	3,819	3,819	3,819	59	0.226	0.227	0.227	0.227	0.227
(10)	3619	Country Aire Service MHP	162	0.024	164	165	167	168	169	150	0.025	0.025	0.025	0.025	0.025
	3692	City Of Port Richey	7,503	0.609	8,128	8,607	8,981	9,287	9,489	81	0.659	0.698	0.729	0.753	0.770
	4550	City Of San Antonio	2,485	0.145	2,575	2,756	2,952	3,141	3,346	58	0.151	0.161	0.173	0.184	0.196
	4669	Hudson Water Works Inc	7,096	0.626	7,467	7,776	8,059	8,361	8,639	88	0.658	0.686	0.711	0.737	0.762
	4734	City Of New Port Richey	32,489	3.140	35,295	37,032	37,954	38,417	38,650	97	3.412	3.580	3.669	3.713	3.736
(10)	5294	Florida Villas Mobile Home Park	119	0.012	119	120	120	120	120	99	0.012	0.012	0.012	0.012	0.012
(10)	5953	Hacienda Utilities	942	0.081	943	944	944	945	945	86	0.081	0.081	0.081	0.081	0.081
	6040	City of Zephyrhills	28,662	2.409	30,979	32,639	33,710	34,242	34,665	84	2.604	2.744	2.834	2.878	2.914
(10)	6223	Florida Governmental Utility Author	1,146	0.080	1,180	1,209	1,235	1,269	1,301	70	0.083	0.085	0.086	0.089	0.091
(10)	6230	Settlers Rest Rv Park	344	0.021	344	344	344	344	344	62	0.021	0.021	0.021	0.021	0.021
(10)	6640	Gem Estates	388	0.058	395	401	407	407	407	150	0.059	0.060	0.061	0.061	0.061
(10)	6867	Utilities Inc of Florida	1,262	0.071	1,265	1,267	1,270	1,272	1,275	56	0.071	0.071	0.071	0.071	0.071
(10)	6881	Ramblewood Mobile Home Comm	272	0.033	272	272	272	272	272	123	0.033	0.033	0.033	0.033	0.033
(10)	6982	Seven Acres RV Park	20	0.001	20	20	20	20	21	40	0.001	0.001	0.001	0.001	0.001
(10)	7359	Timber Lake Estates	1,242	0.099	1,267	1,287	1,305	1,320	1,331	80	0.101	0.103	0.104	0.106	0.107
(10)	7588	Cav. Homeowners Cooperative	584	0.047	588	592	595	595	595	80	0.047	0.047	0.048	0.048	0.048
(10)	7718	Florida Governmental Utility Author	494	0.035	526	530	530	530	530	70	0.037	0.037	0.037	0.037	0.037
(10)	7745	Florida Governmental Utility Author	649	0.079	672	690	692	692	692	122	0.082	0.084	0.084	0.084	0.084
(10)	7773	Barrington Hills MHC	432	0.032	432	432	432	432	432	74	0.032	0.032	0.032	0.032	0.032
(10)	7982	Glendale Villas Condominium Assc	280	0.029	324	335	346	368	389	104	0.034	0.035	0.036	0.038	0.040
	7999	Florida Governmental Utility Author	2,111	0.132	2,120	2,147	2,178	2,189	2,200	63	0.133	0.134	0.136	0.137	0.138
	8417	Florida Governmental Utility Author	7,864	0.403	8,211	8,247	8,247	8,247	8,247	51	0.420	0.422	0.422	0.422	0.422
(10)	8431	Parrish Properties	469	0.015	469	469	469	469	469	33	0.015	0.015	0.015	0.015	0.015
(10)	8514	Ramblewood Village	249	0.029	253	254	254	254	254	117	0.030	0.030	0.030	0.030	0.030
(10)	9183	Sunburst Rv Park	311	0.030	311	311	311	311	311	97	0.030	0.030	0.030	0.030	0.030
(10)	9666	Southfork Mobile Home Communi	400	0.036	400	400	400	400	400	89	0.036	0.036	0.036	0.036	0.036
(10)	11082	Florida Governmental Utility Author	904	0.030	958	1,004	1,047	1,087	1,124	33	0.032	0.033	0.035	0.036	0.037
	11863	Pasco Co Utilities	321,942	34.827	350,480	375,250	395,395	410,610	423,735	108	37.914	40.594	42.773	44.419	45.839
(9)	99906	Arbor Oaks	429	0.036	431	432	432	433	434	83	0.036	0.036	0.036	0.036	0.036
(9)	99915	Orchid Lake Utilities	688	0.057	688	688	688	688	688	83	0.057	0.057	0.057	0.057	0.057
(8)		Additional Irrigation Demand		4.468							4.931	5.317	5.636	5.905	6.140
	Total County		**597,017**	**61.427**	**658,896**	**710,484**	**753,095**	**789,013**	**820,522**		**67.512**	**72.610**	**76.795**	**80.258**	**83.285**
(7)	1-10 Drought Year Demand										71.563	76.966	81.402	85.073	88.282

Notes:
MGD = million gallons per day
(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.
(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.
(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.
(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.
(5) Computed as projected population multiplied by 2016-2020 average per capita water use.
(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.
(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.
(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.
(9) This service areas is a wholesale importer. There is no water use permit associated with this service area. Per capita is assumed to equal to the average county per capita.
a) Orchid Lake Utilities (99915): Population information obtained from District's 2020 RWSP Public Supply Projections.
(10) This is a small general permit. It is not required to submit an annual per capita report. Per capita information is from the last issued permit. If no per capita information was found in WMIS., the per capita is assumed to equal the county average.
a) Holiday Gardens Utilities, LLC (WUP# 540): Per capita was obtained from permit issued in 2021.
b) Crestridge Utilities, LLC (WUP# 543): Per capita was obtained from permit issued in 2021.
c) Florida Governmental Utility Authority (WUP# 2319): Per capita was obtained from permit issued in 2014.
d) Country- Aire (WUP# 2567): Per capita was obtained from permit issued in 2012.
e) Holiday Springs RV Park (WUP# 3273): Per capita was obtained from permit issued in 2019.
f) Baker Acres (WUP# 3302): Population and per capita was obtained from permit issued in 2014.
g) Tippecanoe Village Homenowners (WUP# 3528): Per capita was obtained from permit issued in 2016.
h) Country Aire Service MHP (WUP# 3619): Per capita was obtained from permit issued in 2011.
i) Florida Villas Mobile Home Park (WUP# 5294): Per capita was obtained from permit issued in 2015.
j) Hacienda Utilities (WUP# 5953): Per capita was obtained from permit issued in 2012.
k) Florida Governmental Utility Authority (WUP# 6223): Per capita was obtained from permit issued in 2013.
l) Settlers Rest Rv Park (WUP# 6230): Per capita and population information was obtained from permit issued in 2021.
m) Gem Estates (WUP# 6640): Per capita was obtained from permit issued in 2014.
n) Utilities Inc of Florida (WUP# 6867): Per capita was obtained from permit issued in 2013.
o) Ramblewood Mobile Home Community (WUP# 6881): Per capita was obtained from permit issued in 2018.
p) Seven Acres RV Park (WUP# 6982): Per capita was obtained from permit issued in 2013.
q) Orangewood Lakes Mobile Home Community Inc (WUP# 2043): Per capita information was obtained from permit issued in 2016.
r) Timber Lake Estates (WUP# 7359): Per capita was obtained from permit issued in 2013.
s) Cav. Homeowners Cooperative (WUP# 7588): Per capita was obtained from permit issued in 2020.
t) Florida Governmental Utility Authority (WUP# 7718): Per capita was obtained from permit issued in 2014.
u) Florida Governmental Utility Authority (WUP# 7745): Per capita was obtained from permit issued in 2014.
v) Barrington Hills MHC (WUP# 7773): Population and per capita was obtained from permit issued in 2016.
w) Glendale Villas Condominium Association, Inc. (WUP# 7982): Per capita and population information were obtained from permit issued in 2018.
x) Parrish Properties (WUP# 8431): Population and per capita was obtained from permit issued in 2022.
y) Ramblewood Village (WUP# 8514): Per capita was obtained from permit issued in 2015.
z) Sunburst Rv Park (WUP# 9183): Population and per capita was obtained from permit issued in 2018.
aa) Traveler's Rest Resort (WUP# 923): Per capita was obtained from permit issued in 2014.
ab) Southfork Mobile Home Community (WUP# 9666): Per capita was obtained from permit issued in 2019.
ac) Aqua Utilities Florida Incorporated (WUP# 11082): Per capita was obtained from permit issued in 2017.

TABLE 15. PINELLAS COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	5,185	0.262	6,015	6,167	6,263	6,328	6,494	51	0.304	0.312	0.317	0.320	0.329
	742	City Of Tarpon Springs	28,778	2.560	29,552	30,165	30,987	32,508	34,351	89	2.629	2.683	2.756	2.892	3.055
	2980	City Of Dunedin	45,738	3.575	46,002	46,196	46,361	46,649	46,947	78	3.596	3.611	3.624	3.646	3.670
	2981	City of Clearwater	143,856	10.701	145,138	145,799	146,329	146,892	147,746	74	10.797	10.846	10.885	10.927	10.991
	7692	Town Of Belleair	5,939	0.822	6,170	6,338	6,342	6,343	6,345	138	0.854	0.877	0.877	0.878	0.878
(9)	9423	Southern Comfort MHP	550	0.077	550	550	550	550	550	140	0.077	0.077	0.077	0.077	0.077
(9)	10350	Utilities Inc of Florida	1,139	0.048	1,139	1,139	1,139	1,139	1,139	42	0.048	0.048	0.048	0.048	0.048
	10795	City Of Gulfport	14,881	0.942	14,962	15,038	15,175	15,376	15,499	63	0.947	0.952	0.961	0.973	0.981
	11218	City Of Oldsmar	17,436	1.386	17,902	18,285	18,779	19,184	19,481	79	1.423	1.453	1.492	1.525	1.548
	11245	City of Safety Harbor	15,667	1.400	15,956	16,255	16,612	16,880	17,574	89	1.425	1.452	1.484	1.508	1.570
	12351	City of Pinellas Park	63,692	3.748	64,904	66,069	68,256	71,243	73,010	59	3.820	3.888	4.017	4.193	4.297
	20142	Pinellas County	515,454	38.715	521,494	526,000	530,230	534,140	537,668	75	39.169	39.507	39.825	40.119	40.384
	20143	City of St. Petersburg	349,253	26.614	356,650	367,698	373,542	375,987	377,008	76	27.178	28.020	28.465	28.651	28.729
(8)		Additional Irrigation Demand		7.741							7.862	7.986	8.081	8.162	8.230
(10)	**Total County**		**1,207,570**	**98.592**	**1,226,434**	**1,245,700**	**1,260,566**	**1,273,220**	**1,283,812**		**100.128**	**101.712**	**102.910**	**103.919**	**104.786**
(7)	1-10 Drought Year Demand										106.135	107.815	109.084	110.154	111.073

Notes:
MGD = million gallons per day
(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.
(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.
(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.
(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.
(5) Computed as projected population multiplied by 2016-2020 average per capita water use.
(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.
(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.
(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.
(9) This is a small general permit. It is not required to submit an annual per capita report. Per capita information is from the last issued permit. If no per capita information was found in WMIS., the per capita is assumed to equal the average county per capita.
a) Southern Comfort MHP (WUP# 9423): Population and per capita information was obtained from permit issued in 2009.
b) Utilities Inc of Florida (WUP# 10350): Per capita information was obtained from permit issued in 2014.
(10) These estimates and projections exceed BEBR High and GISA 2022 functional population estimates and projections for Pinellas County.

TABLE 16. POLK COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	PROJECTED POPULATION 2025	2030	2035	2040	2045	(3) Gross Per Capita	(4) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045	DPCWUCA	SWUCA	SELFWF	CFWI Large
(6)		**Domestic Self-Supply & Small Utility CFWI Large Utilities (Below)**	**36,825**	**3.4**	**40,976**	**44,821**	**48,036**	**49,775**	**51,514**	**NA**	**3.88**	**4.23**	**4.52**	**4.68**	**4.84**				
	341	City Of Bartow	25,429	3.140	28,003	30,552	33,526	36,319	38,716	123	3.44	3.76	4.12	4.47	4.76		SWUCA		Yes
	587	Lelynn RV Resort	274	0.020	275	275	275	275	275	80	0.02	0.02	0.02	0.02	0.02		Not in a WUCA		
	645	City Of Fort Meade	6,912	0.570	7,007	7,084	7,152	7,212	7,265	77	0.54	0.55	0.55	0.56	0.56		SWUCA		Yes
	1616	Lake Region Mobile Home Owners Inc	1,064	0.090	1,067	1,068	1,071	1,075	1,076	91	0.10	0.10	0.10	0.10	0.10		SWUCA		Yes
	1625	Four Lakes Golf Club	1,100	0.330	1,101	1,102	1,102	1,102	1,102	328	0.36	0.36	0.36	0.36	0.36		SWUCA		
	2332	Town Of Lake Hamilton	1,539	0.300	1,688	1,856	2,109	2,371	2,577	196	0.33	0.36	0.41	0.46	0.51		SWUCA	YES	Yes
	3415	Orchid Springs Development Corp	1,087	0.070	1,122	1,139	1,139	1,139	1,139	60	0.07	0.07	0.07	0.07	0.07		SWUCA		
	4005	Crooked Lake Park Water Company	3,087	0.260	3,255	3,422	3,579	3,718	3,860	82	0.27	0.28	0.29	0.30	0.32		SWUCA		
	4607	City Of Winter Haven	85,847	10.160	95,411	102,654	107,865	112,308	115,821	124	11.83	12.73	13.38	13.93	14.36		SWUCA	YES	
	4658	City of Lake Wales	25,357	2.670	28,118	31,036	33,947	36,814	39,705	105	2.95	3.26	3.56	3.87	4.17		SWUCA	YES	
	4912	City Of Lakeland Water Utilities Water Administra	179,559	22.080	193,140	202,942	211,054	218,431	224,028	126	24.34	25.57	26.59	27.52	28.23		SWUCA		
	5251	Grenelefe Resort LLC	2,949	1.120	2,958	2,962	2,988	3,018	3,040	359	1.06	1.06	1.07	1.08	1.09		SWUCA		
	5750	City of Davenport	11,715	1.800	15,430	16,949	18,250	19,310	20,098	146	2.25	2.47	2.66	2.82	2.93		Not in a WUCA	YES	
	5870	City Of Frostproof	4,584	0.320	5,017	5,389	5,721	6,013	6,387	79	0.40	0.43	0.45	0.48	0.50		SWUCA	YES	
	5893	Town of Dundee Public Works Dept	6,230	0.780	7,292	8,145	9,146	10,132	11,441	116	0.85	0.94	1.06	1.18	1.33		SWUCA	YES	
	6023	North Pointe HOA	156	0.030	157	157	157	158	158	172	0.03	0.03	0.03	0.03	0.03		SWUCA		
	6124	City Of Mulberry	4,586	0.410	4,933	5,236	5,512	5,761	5,983	87	0.43	0.46	0.48	0.50	0.52		SWUCA		
	6174	Saddlebag Lake Resort	695	0.100	699	700	701	701	701	133	0.09	0.09	0.09	0.09	0.09		SWUCA		
	6505	Polk County Utilities - NWRSA	45,892	2.870	49,725	52,751	55,790	58,571	60,887	61	3.03	3.22	3.40	3.57	3.71	DPCWUCA	SWUCA		
	6506	Polk County Utilities -SWRSA	46,310	3.550	50,564	54,503	57,144	59,005	60,803	76	3.84	4.14	4.34	4.48	4.62	DPCWUCA	SWUCA		
	6507	Polk County Utilities -CRSA	16,414	1.210	17,818	19,612	21,159	22,733	24,084	68	1.21	1.33	1.44	1.55	1.64		SWUCA		
	6508	Polk County Utilities - SERUSA	6,294	0.640	6,437	6,561	6,704	6,845	7,056	101	0.65	0.66	0.68	0.69	0.71		SWUCA	YES	
	6509	Polk County Utilities - NERSA	57,570	8.180	69,080	78,221	82,528	85,463	87,690	147	10.15	11.50	12.13	12.56	12.89		Not in a WUCA	YES	
	6624	City of Lake Alfred	10,067	0.890	11,429	12,643	13,697	14,551	15,330	104	1.19	1.31	1.42	1.51	1.59		SWUCA	YES	
	6920	City of Eagle Lake	5,251	0.520	5,843	6,534	7,315	8,107	9,542	83	0.48	0.54	0.61	0.67	0.79		SWUCA	YES	
	7119	City of Auburndale	35,209	5.400	40,029	43,981	47,956	51,675	54,731	148	5.92	6.51	7.10	7.65	8.10		SWUCA	YES	
	7187	CHC VII Ltd Century Realty Fund	1,081	0.200	1,083	1,083	1,083	1,083	1,083	225	0.24	0.24	0.24	0.24	0.24		SWUCA		
	7328	Carefree RV Country Club	837	0.110	845	846	846	846	848	138	0.12	0.12	0.12	0.12	0.12		SWUCA		
	7878	Florida Governmental Utility Authority	2,200	0.140	2,242	2,281	2,300	2,311	2,311	67	0.15	0.15	0.15	0.15	0.15		Not in a WUCA		
	8054	Polk County Utilities - ERUSA	4,399	0.500	4,735	5,084	5,461	5,824	6,129	112	0.53	0.57	0.61	0.65	0.69		SWUCA	YES	
	8344	S V Utilities Ltd	641	0.130	644	644	644	644	644	233	0.15	0.15	0.15	0.15	0.15		SWUCA		
	8468	City Of Polk City	9,052	0.440	9,851	10,703	11,584	12,372	12,803	43	0.42	0.46	0.50	0.53	0.55		Not in a WUCA		
	8522	City of Haines City	36,933	5.080	46,538	52,580	58,205	62,998	66,779	147	6.84	7.73	8.56	9.26	9.82		SWUCA	YES	
	8967	Sweetwater Community LLC	551	0.110	552	552	552	552	552	216	0.12	0.12	0.12	0.12	0.12		SWUCA		
	12800	Hanover Jordans Grove, LLC	704	0.000	953	979	1,008	1,035	1,108	89	0.08	0.09	0.09	0.09	0.10		Not in a WUCA		
	12964	Alafia Preserve LLC; Eagle Ridge LLC; and Dona	0	0.000	248	516	764	991	1,198	135	0.03	0.07	0.10	0.13	0.16		SWUCA		
	13043	Cypress Lakes Utilities Inc	1,263	0.240	1,301	1,331	1,359	1,387	1,414	168	0.22	0.22	0.23	0.23	0.24		Not in a WUCA		
		Total County in SWFWMD (all utilities and DSS)	**679,663**	**77.860**	**757,566**	**818,894**	**869,429**	**912,625**	**949,878**		**88.610**	**95.900**	**101.800**	**106.870**	**111.180**				
		DPCWUCA	**92,202**	**6.420**	**100,289**	**107,254**	**112,934**	**117,576**	**121,690**		**6.870**	**7.360**	**7.740**	**8.050**	**8.330**				
		SWUCA	**560,060**	**63.640**	**617,458**	**663,334**	**704,089**	**740,697**	**772,665**		**71.440**	**76.760**	**81.500**	**85.790**	**89.460**				
		CFWI Large Utilities (Public Supply)	**642,838**	**74.460**	**716,590**	**774,073**	**821,393**	**862,850**	**898,364**		**84.73**	**91.67**	**97.28**	**102.19**	**106.34**				
		1-10 Drought Year Demand									93.93	101.65	107.91	113.28	117.85				
(5)		DPCWUCA 1-10 Drought Year Demand									7.28	7.80	8.20	8.53	8.83				
		SWUCA 1-10 Drought Year Demand									75.73	81.37	86.39	90.94	94.83				
		CFWI Large Utilities 1-10 Drought Year Demand									89.81	97.17	103.12	108.32	112.72				
		2001 Regional Water Supply Plan Projections	551,877	81.392	653,476	708,926					96.376	104.554							

Notes:
MGD = million gallons per day
(1) Estimate & projections of domestic self-supplied & small utility population for District portion of county from draft 2025-2045 Regional Water Supply Plan for the Central Florida Water Initiative (July 2023).
(1) Estimate & projections of domestic self-supplied & small utility population for District portion of county from draft 2025-2045 Regional Water Supply Plan for the Central Florida Water Initiative (July 2023).
(3) Unless otherwise noted, gross per capitas are from the draft 2025-2045 Regional Water Supply Plan for the Central Florida Water Initiative (July 2023).
(4) For large utilities, projected water demand is calculated as projected population times utility specific gross per capita.
(5) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

TABLE 17. SARASOTA COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045	
(6)	DSS	Domestic Self-Supply	43,291	2.268	53,766	63,186	72,280	80,899	87,238	52	2.817	3.311	3.787	4.239	4.571	
	2923	City of North Port	57,037	3.410	65,650	73,045	79,578	85,672	93,019	60	3.924	4.366	4.757	5.121	5.561	PRMRWSA
	4318	City of Sarasota Public Works	75,588	5.718	76,450	77,386	77,702	77,845	77,983	76	5.783	5.854	5.878	5.889	5.899	
	4866	Englewood Water District	37,801	2.777	40,129	42,162	44,118	45,565	47,010	73	2.948	3.098	3.241	3.348	3.454	
	5393	City Of Venice	37,372	2.368	38,808	40,164	41,222	42,172	42,753	63	2.459	2.545	2.612	2.672	2.709	
(9)	5456	Venice Ranch Mobile Home Estates	369	0.025	462	533	607	686	736	67	0.031	0.036	0.041	0.046	0.049	
	5807	Camelot Communities	1,772	0.325	1,772	1,772	1,772	1,772	1,772	183	0.325	0.325	0.325	0.325	0.325	
	7448	Royalty Resorts	1,339	0.092	1,339	1,339	1,339	1,339	1,339	69	0.092	0.092	0.092	0.092	0.092	
	8836	Sarasota County Board of County Co	255,701	20.659	265,958	273,709	278,292	281,501	283,265	81	21.487	22.114	22.484	22.743	22.886	PRMRWSA
(10)	99914	Pluris - South Gate Utilities	11,039	0.892	11,157	11,168	11,176	11,183	11,190	81	0.901	0.902	0.903	0.904	0.904	
(8)		Additional Irrigation Demand		6.379							6.797	7.152	7.441	7.692	7.909	
	Total County		**521,309**	**44.913**	**555,493**	**584,464**	**608,085**	**628,634**	**646,305**		**47.567**	**49.795**	**51.562**	**53.072**	**54.359**	
(7)	1-10 Drought Year Demand										50.421	52.783	54.655	56.256	57.621	

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) County residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2. If a county residential per capita rate was not available, the District's 2016-2020 average residential per capita rate was used.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gallons per well per day.

(9) This is a small general permit. It is not required to submit an annual per capita report. Per capita information is from the last issued permit. If no per capita information was found in WMIS., the per capita is assumed to equal the average county per capita.

a) Venice Ranch Mobile Home Estates (WUP# 5456): Per capita information were obtained from permit issued in 2017.

(10) This service areas is a wholesale importer from Sarasota County Utilities (WUP# 8836). There is no water use permit associated with this service area. Per capita is assumed to equal WUP# 8836 per capita.

TABLE 18. SUMTER COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	DSS	Domestic Self-Supply	25,079	1.705	20,411	19,812	30,138	40,465	40,464	68	1.388	1.347	2.049	2.752	2.752
	1368	Lake Panasoffkee Water Assoc Inc	4,342	0.282	4,982	5,556	6,032	6,398	6,725	65	0.323	0.361	0.392	0.415	0.437
	6519	City Of Bushnell	3,508	0.454	5,742	7,788	9,348	10,709	12,024	129	0.743	1.007	1.209	1.385	1.555
	7185	City Of Webster	936	0.079	1,339	2,338	2,991	3,465	3,925	84	0.113	0.197	0.252	0.292	0.330
(9)	7799	Cedar Acres, Inc.	532	0.066	564	564	564	564	564	125	0.071	0.071	0.071	0.071	0.071
	8135	City Of Wildwood City Mng	14,928	1.645	23,125	28,782	32,831	35,817	38,433	110	2.548	3.171	3.617	3.946	4.234
	8193	City of Center Hill	1,110	0.068	1,390	1,799	1,935	2,055	2,172	61	0.085	0.110	0.118	0.126	0.133
(9)	10488	City of Coleman	624	0.041	669	700	726	747	764	65	0.043	0.045	0.047	0.049	0.050
(9)	12434	Jumper Creek Manor	66	0.010	374	572	614	630	645	150	0.056	0.086	0.092	0.094	0.097
	12584	Village Parc Center	205	0.038	296	308	322	339	358	185	0.055	0.057	0.060	0.063	0.066
	13005	The Villages of Marion and Sumter	89,552	22.022	90,389	90,616	90,766	90,919	91,083	246	22.228	22.284	22.321	22.358	22.399
(10)	13123	Florida Grande Motor Coach Resort	1,036	0.138	1,036	1,036	1,036	1,036	1,036	133	0.138	0.138	0.138	0.138	0.138
(9)	20095	Southern Motor Coach Resort	800	0.070	64	343	790	962	1,097	88	0.006	0.030	0.070	0.085	0.097
	20721	South Sumter Utility Company	15,233	1.280	19,107	22,485	25,365	28,448	30,995	84	1.605	1.889	2.131	2.390	2.604
(11)	20901	Gibson Place Utility Company, LLC	0	0.000	1,160	27,529	53,898	55,360	55,360	71	0.082	1.955	3.827	3.931	3.931
(12)	21031	Blue Goose Utility Company, LLC	0	0.000	0	19,000	42,750	66,500	82,641	70	0.000	1.330	2.993	4.655	5.785
(8)		Additional Irrigation Demand		0.187							0.220	0.250	0.273	0.293	0.311
	Total County		**157,950**	**28.084**	**170,649**	**229,229**	**300,107**	**344,413**	**368,285**		**29.704**	**34.327**	**39.658**	**43.041**	**44.987**
(7)	1-10 Drought Year Demand										31.486	36.387	42.037	45.623	47.687

Notes:

MGD = million gallons per day

(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.

(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2016-2020 average estimated per capita water use rates, as provided in Table A-1 of the District's annual 'Estimated Water Use Report' for years 2016-2020, were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.

(5) Computed as projected population multiplied by 2016-2020 average per capita water use.

(6) Districtwide residential per capita rate from the District's annual 'Estimated Water Use Report' for years 2016-2020, was used to calculate average estimated 2016-2020 usage, Table A-2.

(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gpd per well.

(9) Small general water use permits are not required to submit annual information on their per capita. Consequently, per capita information for the following small general WUPs was obtained as follows:

a) Cedar Acres (WUP# 7799): Per capita information obtained from permit issued in 2016.

b) City of Coleman (WUP# 10488): Per capita information was obtained from permit issued in 2012.

c) Jumper Cree Manor (WUP# 12434): Per capita information were obtained from permit issued in 2013.

d) Southern Motor Coach Resort (WUP# 20095): Population and per capita information were obtained from permit issued in 2020.

(10) Florida Grande Motor Coach Resort (WUP# 13123): Population and per capita information were obtainted from permit issued in 2023.

(11) Gibson Place Utility Company (WUP# 20901): Population and per capita information were obtained from permit issued in 2023.

(12) Blue Goose Utility Company (WUP# 21031): Population and per capita information were obtained from permit issued in 2024.

TABLE 19. DISTRICT TOTAL POPULATION ESTIMATES AND WATER DEMAND PROJECTIONS

		(1) 2020 POPULATION	(2) 2020 POPULATION TIMES 2016-2020 GPCD (MGD)	(3) PROJECTED POPULATION 2025	2030	2035	2040	2045	(4) 2016-2020 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD) 2025	2030	2035	2040	2045
(6)	Domestic Self-Supply	558,522	42.582	628,649	709,027	798,020	882,373	948,498	68	47.882	53.840	60.329	66.431	71.286
	Utilities	5,612,147	557.640	5,990,471	6,331,504	6,606,824	6,816,586	6,990,779	98	598.668	632.783	659.982	681.121	698.702
(8)	Additional Irrigation Demand		34.240							36.294	38.042	39.459	40.665	41.713
	Total District	**6,170,669**	**634.462**	**6,619,120**	**7,040,532**	**7,404,844**	**7,698,959**	**7,939,277**		**682.844**	**724.664**	**759.770**	**788.217**	**811.700**
(7)	1-10 Drought Year Demand									723.814	768.144	805.356	835.510	860.403

Notes:
MGD = million gallons per day
(1) 2020 Estimate was generated using 2016-2020 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2016-2045, Florida Population Studies, Bulletin 192, February 2022.
(2) Estimated using average 2016-2020 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2016-2020.
(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (dated: 30MAR2023). The functional population estimates include seasonal residents, tourists and net commuters, if applicable to the service area.
used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and Additional Irrigation Demand.
(5) Computed as projected population multiplied by 2016-2020 average per capita water use.
available, the District's 2016-2020 average residential per capita rate was used.
(7) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.
(8) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. It is calculated based on 332 gpd per well.

See table named "IRRIGATION WELL TYPES LESS THAN 5" WITHIN SWFWMD's PSSAs AND OUTSIDE WUP CONTROL AREAS" created by R.Pearson and K.Maze (File: Additional_Irrigation_Demand_2025RWSP)

TABLE 20. DISTRICT TOTAL PUBLIC SUPPLY WATER DEMAND PROJECTIONS BY COUNTY (Includes All Utilities and Domestic Self Supply)

County	2020		2025		2030		2035		2040		2045		Change in Demand		% Change	
	Avg	1-10	Avg	1-10	Avg	1-10	Avg	1-10	Avg	1-10	Avg	1-10	Avg	1-10	Avg	1-10
Charlotte	21.414	22.699	22.996	24.376	24.364	25.826	25.448	26.975	26.350	27.931	27.161	28.791	5.747	6.092	26.8%	26.8%
Citrus	21.679	22.980	22.897	24.271	23.858	25.290	24.678	26.159	25.342	26.863	25.921	27.476	4.242	4.496	19.6%	19.6%
DeSoto	2.577	2.732	2.621	2.779	2.637	2.796	2.653	2.812	2.668	2.829	2.676	2.836	0.098	0.104	3.8%	3.8%
Hardee	1.776	1.882	1.781	1.888	1.778	1.885	1.770	1.877	1.767	1.873	1.760	1.865	-0.016	-0.017	-0.9%	-0.9%
Hernando	26.137	27.706	28.022	29.703	29.511	31.282	30.713	32.556	31.697	33.599	32.537	34.489	6.400	6.784	24.5%	24.5%
Highlands	13.162	13.951	13.477	14.286	13.750	14.575	13.960	14.798	14.135	14.983	14.286	15.143	1.124	1.191	8.5%	8.5%
Hillsborough	171.172	181.443	184.954	196.051	196.072	207.837	204.700	216.982	211.830	224.540	217.839	230.910	46.667	49.467	27.3%	27.3%
Lake	0.140	0.148	0.210	0.223	0.290	0.307	0.360	0.382	0.420	0.445	0.470	0.498	0.330	0.350	235.7%	235.7%
Levy	1.986	2.105	2.084	2.209	2.161	2.291	2.221	2.354	2.277	2.413	2.325	2.465	0.340	0.360	17.1%	17.1%
Manatee	44.449	47.116	49.056	52.000	52.915	56.090	56.086	59.452	58.871	62.403	61.330	65.010	16.881	17.894	38.0%	38.0%
Marion	19.093	20.239	21.223	22.496	22.982	24.361	24.456	25.924	25.702	27.244	26.798	28.406	7.705	8.167	40.4%	40.4%
Pasco	61.427	65.113	67.512	71.563	72.610	76.966	76.795	81.402	80.258	85.073	83.285	88.282	21.858	23.169	35.6%	35.6%
Pinellas	98.592	104.507	100.128	106.135	101.712	107.815	102.910	109.084	103.919	110.154	104.786	111.073	6.194	6.566	6.3%	6.3%
Polk	77.860	82.532	88.610	93.927	95.900	101.654	101.800	107.908	106.870	113.282	111.180	117.851	33.320	35.319	42.8%	42.8%
Sarasota	44.913	47.608	47.567	50.421	49.795	52.783	51.562	54.655	53.072	56.256	54.359	57.621	9.446	10.013	21.0%	21.0%
Sumter	28.084	29.769	29.704	31.486	34.327	36.387	39.658	42.037	43.041	45.623	44.987	47.687	16.904	17.918	60.2%	60.2%
Total	634.462	672.530	682.844	723.814	724.664	768.144	759.770	805.356	788.217	835.510	811.700	860.403	177.239	187.873	27.9%	27.9%

TABLE 21. DISTRICT TOTAL POPULATION PROJECTIONS BY REGION (Includes all Utilities and Domestic Self Supply)

Water Use by Planning Region	2020	2025	2030	2035	2040	2045	Change 2020-2045	% Change
Heartland Planning Region	809,270	889,869	953,352	1,005,433	1,049,992	1,088,310	279,040	34%
Northern Planning Region	685,695	736,779	826,989	924,376	990,818	1,033,945	348,250	51%
Southern Planning Region	1,247,747	1,348,159	1,432,925	1,502,036	1,562,228	1,614,977	367,230	29%
Tampa Bay Planning Region	3,427,957	3,644,312	3,827,266	3,972,998	4,095,922	4,202,045	774,088	23%
Districtwide	6,170,669	6,619,120	7,040,532	7,404,844	7,698,959	7,939,277	1,768,608	29%
Central Florida Water Initiative (CFWI)	680,804	759,298	821,245	872,333	916,016	953,691	272,887	40%
Dover Plant City Water Use Caution Area (DWUCA)	138,814	150,605	166,521	184,674	200,741	212,999	74,185	53%
North Central Florida Coordination Area (NCFCA)	289,945	315,684	385,093	465,077	517,127	547,938	257,994	89%
Southern Water Use Caution Area (SWUCA)	2,623,695	2,852,362	3,028,919	3,171,328	3,291,819	3,392,989	769,293	29%

Notes:

Planning Regions:

Heartland Planning Region = Hardee, Highlands, Polk

Northern Planning Region = Citrus, Hernando, Lake, Levy, Marion, Sumter

Southern Planning Region = Charlotte, DeSoto, Manatee, Sarasota

Tampa Bay Planning Region = Hillsborough, Pasco, Pinellas

TABLE 22. DISTRICT TOTAL WATER DEMAND PROJECTIONS BY REGION (Includes All Utilities and Domestic Self Supply)

Water Use by Planning Region	2020		2025		2030		2035		2040		2045		Change in Demand		% Change	
	Avg	1-in-10	Avg	1-in-10	Avg	1-in-10	Avg	1-in-10	Avg	1-in-10	Avg	1-in-10	Avg	1-in-10	Avg	1-10
Heartland Planning Region	92.8	98.4	103.9	110.1	111.4	118.1	117.5	124.6	122.8	130.1	127.2	134.9	34.4	36.5	37%	37%
Northern Planning Region	97.1	102.9	104.1	110.4	113.1	119.9	122.1	129.4	128.5	136.2	133.0	141.0	35.9	38.1	37%	37%
Southern Planning Region	113.4	120.2	122.2	129.6	129.7	137.5	135.7	143.9	141.0	149.4	145.5	154.3	32.2	34.1	28%	28%
Tampa Bay Planning Region	331.2	351.1	352.6	373.7	370.4	392.6	384.4	407.5	396.0	419.8	405.9	430.3	74.7	79.2	23%	23%
Districtwide	634.5	672.5	682.8	723.8	724.7	768.1	759.8	805.4	788.2	835.5	811.7	860.4	177.2	187.9	28%	28%
Central Florida Water Initiative (CFWI)	78.0	82.7	88.8	94.1	96.2	102.0	102.2	108.3	107.3	113.7	111.7	118.3	33.7	35.7	43%	43%
Dover Plant City Water Use Caution Area (DWUCA)	13.1	13.8	14.1	14.9	15.9	16.8	18.1	19.2	20.1	21.3	21.5	22.8	8.5	9.0	65%	65%
Northern Tampa Bay (NTB) Water Use Caution Area	319.3	338.5	339.0	359.3	354.1	375.4	365.4	387.3	374.2	396.7	381.6	404.5	62.3	66.0	19%	19%
Southern Water Use Caution Area	261.5	277.2	285.4	302.5	302.9	321.0	317.0	336.0	328.9	348.6	338.8	359.2	77.3	82.0	30%	30%

Notes:

Planning Regions:

Heartland Planning Region = Hardee, Highlands, Polk

Northern Planning Region = Citrus, Hernando, Lake, Levy, Marion, Sumter

Southern Planning Region = Charlotte, DeSoto, Manatee, Sarasota

Tampa Bay Planning Region = Hillsborough, Pasco, Pinellas

Table 23. Residential Irrigation Well Data

IRRIGATION WELL TYPES LESS THAN 5" WITHIN SWFWMD's PSSAs AND OUTSIDE WUP CONTROL AREAS (1)															
	Functional Population (2)		2020-2025 Annual Exponential Pop Growth Rate (3)	2020		2025		2030		2035		2040		2045	
				332 gpd 2020 Irrigation Wells		332 gpd 2025 Irrigation Well Estimates		332 gpd 2030 Irrigation Wells		332 gpd 2035 Irrigation Wells		332 gpd 2040 Irrigation Wells		332 gpd 2045 Irrigation Wells	
	2020	2025		# Wells	Withdrawl (mgd)	# Wells	Withdrawl (mgd)	# Wells	Withdrawl (mgd)	# Wells	Withdrawl (mgd)	# Wells	Withdrawl (mgd)	# Wells	Withdrawl (mgd)
Charlotte	212,364	228,731	0.01496	7,093	2.355	7,640	2.536	8,117	2.695	8,498	2.821	8,822	2.929	9,114	3.026
Citrus	167,827	177,044	0.01075	3,246	1.078	3,424	1.137	3,565	1.184	3,685	1.223	3,782	1.256	3,867	1.284
DeSoto	35,729	36,297	0.00316	248	0.082	252	0.084	254	0.084	255	0.085	257	0.085	258	0.085
Hardee	25,980	26,079	0.00076	136	0.045	137	0.045	136	0.045	135	0.045	135	0.045	134	0.044
Hernando	200,486	214,720	0.01381	9,012	2.992	9,652	3.204	10,186	3.382	10,627	3.528	10,991	3.649	11,300	3.752
Highlands	103,627	106,224	0.00496	11,718	3.890	12,012	3.988	12,264	4.072	12,460	4.137	12,623	4.191	12,763	4.237
Hillsborough	1,623,370	1,758,982	0.01618	7,368	2.446	7,984	2.651	8,492	2.819	8,893	2.952	9,230	3.064	9,521	3.161
Lake	1,141	2,088	0.12845	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA
Levy	26,297	27,599	0.00972	56	0.019	59	0.020	61	0.020	63	0.021	64	0.021	66	0.022
Manatee	478,345	527,638	0.01981	5,627	1.868	6,207	2.061	6,692	2.222	7,090	2.354	7,440	2.470	7,749	2.573
Marion	131,994	145,035	0.01902	2,078	0.690	2,283	0.758	2,454	0.815	2,597	0.862	2,719	0.903	2,828	0.939
Pasco	597,017	658,896	0.01992	13,457	4.468	14,852	4.931	16,015	5.317	16,975	5.636	17,785	5.905	18,495	6.140
Pinellas	1,207,570	1,226,434	0.00310	23,317	7.741	23,681	7.862	24,053	7.986	24,340	8.081	24,585	8.162	24,789	8.230
Polk	679,663	841,409	0.04362	8,661	NA	9,596	NA	10,377	NA	11,011	NA	11,552	NA	12,021	NA
Sarasota	521,309	555,493	0.01278	19,214	6.379	20,474	6.797	21,542	7.152	22,412	7.441	23,170	7.692	23,821	7.909
Sumter	144,439	170,649	0.03391	562	0.187	664	0.220	753	0.250	822	0.273	883	0.293	938	0.311
Total (6)	*6,157,158*	*6,703,319*		*111,793*	*34.240*	*118,915*	*36.294*	*124,961*	*38.042*	*129,864*	*39.459*	*134,037*	*40.665*	*137,663*	*41.713*

Notes:
(1) Additional Irrigation Demand is defined as water demand from residential irrigation wells utilized by residents that depend upon a centralized system for indoor water needs. Demand is calculated based on 332 gallons per day per well (Determination of Landscape Irrigation Water Use in Southwest Florida, May 31, 2018, Michael Dukes & Mackenzie Boyer).
(2) Countywide permanent and total functional population in SWFWMD.
(3) 2020-2025 population growth rate used to estimate 2025-2045 well count.
(4) Analysis of District well inventory conducted July 2023.
(5) Additional irrigation demand was not calculated in the draft Regional Water Supply Plan for the Central Florida Water Initiative (July 2023).
(6) Total Withdrawals exclude Lake and Polk amounts