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TO: Interested Parties

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SUBJECT: 2015 Regional Water Supply Plan: Public Water Supply Demand Projections

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 (DEP), major public supply stakeholders and the South Florida and St. John's River water management districts. The CFWI region 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 Volume 2 of the Draft RWSP for the CFWI (May 2015).

Purpose

This memo explains the assumptions, methodologies, and sources used to develop the projections for the Public Supply component. The Public Supply sector includes:

- Domestic self-supply (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 public supply water demand projections utilizes many data sources. The District's Estimated Water Use Reports (2008-2012) were used to gather base information for public supply water utility populations, water use, and per capita water use rates (SWFWMD, 2008-2012). The University of Florida's Bureau of Economic and Business Research (BEBR) publications (2012) 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., 2012).

Methodology

2010 Base Year Population Methods and Assumptions

The base year for these public supply water demand projections is 2010. The 2010 population was generated by extrapolating back from the GIS Associates, Inc. (GISA) 2012 population estimate. For example:

- a) Utility X's 2012 population estimate is 5,704
- b) Utility X's 2015 population projection is 5,984
- c) Growth rate over the three year period was calculated using Microsoft® Excel's Rate formula: $RATE(3,,-5984,5704)= 1.61\%$
- d) Utility X's 2011 population estimate = $5,704 - (5,704 \times 1.61\%) = 5,612$
- e) Utility X's 2010 population estimate = $5,612 - (5,612 \times 1.61\%) = 5,522$

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 is defined as that portion of the county population not served by a utility. County domestic self-supply 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).

2010 Base Year Water Use

The 2010 Public Supply base year water use for each large utility is derived by multiplying the average 2008-2012 unadjusted gross per capita rate, if applicable, by the 2010 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 2010 estimated population from the last issued permit.

Base year water use for domestic self-supply is calculated by multiplying the 2010 domestic self-supply population for each county by the average 2008-2012 residential countywide per capita water use as defined below.

2008-2012 Average per Capita Water Use Rate

Precipitation in the years 2008-2012 was lower than average, except in 2010, which was a relatively wet year (53.35"). The year 2011 was the driest (46.61") within that time range. The rain deficit was nearly 12 percent (SWFWMD, 2013). 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 in 2010 of 98 gpcd than the Districtwide average per capita water use rate of 101 gpcd in 2011. The per capita water use rate is the factor applied to the 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 in the Estimated Water Use Reports for the years 2008 through 2012. 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 provided in Table A-1 of "Estimated Water Use Reports 2008-2012." 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 per capita was taken from the countywide residential per capita provided in Tables 2 and A-2 of the "Estimated Water Use Reports for the Years 2008-2012".

Population Projections

The population projections made by BEBR are generally accepted as the standard throughout the State of Florida (BEBR, 2013). 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 GIS Associates, Inc. (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 permanent population growth at the U.S. Census block level, distributes that growth to parcels within each block, 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 (built-out areas, water bodies, public lands, commercial areas, etc.) 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.

BEBR develops three projections for each county: “low”, “medium”, and “high”. BEBR’s medium projection is 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 2012. Projections were made through the year 2035 in the following five-year increments: 2015 through 2020, 2020 through 2025, 2025 through 2030, and 2030 through 2035.

Finally, the parcel level projections are easily aggregated by any set of boundaries desired (Public Supply utility service areas, municipalities, watersheds, etc.). For the District’s planning efforts, parcel projections are summarized by Public Supply 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,” September 29, 2008 and “Updates to The Southwest Florida Water Management District’s Small-Area Population Projection Model,” September 29, 2008 and April 17, 2009, GISA.

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 2010 U.S. Census block-level data, District wetland data, local government land use data, and Development of Regional Impact (DRI) plans for the county of interest.

A. Parcels

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, when dwelling unit information was

absent, records with the same subdivision header were tallied and applied to the existing dwelling unit count of a multi-family residential parcel.

B. 2010 U.S. Census Block Data

Some of the essential attribute information contained in the Countywide Build-Out Models was derived from the 2010 U.S. Census data at the Census block-level geography. Census blocks are the smallest geographic unit for which the U.S. Census Bureau tabulates data (as small as a city block in urban areas), but these entities are almost always larger than parcels. Existing and projected population occurring in parcels within a Census block are assigned the average values (persons per household) of that block from the 2010 U.S. Census values. This Census block-level data is utilized by the model to translate parcels to population and includes total population, the average housing unit vacancy ratio, and average household size.

In cases where property appraiser data were missing or incomplete, Census block-level data was used. For example, Census block data includes the number of mobile homes within a block. The number of mobile homes within parcels identified as mobile home parks can then be estimated using block-level data.

C. 2010 U.S. Census Place Data

Each parcel in the Countywide Build-Out Models was attributed with the Incorporated Place (IP) or Census Designated Place (CDP) in which it is located. The IP includes incorporated cities or towns. The CDP "are the statistical counterparts of incorporated places and are delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located" (U.S. Census Place Data, 2010). These IP or CDP attributes are used to aggregate parcels for density calculations by future land use code. They can also be used for quality assurance checks of model population estimates against population estimates from BEBR, as those are available by both County and IP.

D. 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.

E. Wetlands

Wetlands play a large role in modeling a county's build-out. The District, along with the DEP, 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 DEP, 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, wetland polygons exceeding one-acre were removed from the net buildable area for parcels in the Countywide Build-Out Models.

There were exceptions to this procedure. Some parcels had little or no developable area or were already developed, thus the wetland calculation was modified. In other cases, mapping inaccuracies of the wetlands map and/or property parcels led to modifications to the wetland calculations.

F. 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. 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.

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 example, a FLU classification targeted at 5.0 dwelling units per acre may only develop at 2.6 dwelling units per acre. For this reason, the build-out model reflects the 10-year average densities of the specific incorporated place or CDP instead of the FLU maximum density. The assumption is that densities over the last ten years will be a better indicator of future densities.

To allow for the accommodation of infrastructure needs, such as water retention and detention, the FLU classifications for residential land uses include a reduction of the buildable area over five acres and under 25 acres by 10 percent, and a reduction of the buildable area over 25 acres by 25 percent.

As an exception, some FLU and CDP combinations have an insufficient sample size to create average density values. In these cases, the countywide average density was applied for that FLU class. Vacant or open parcels less than one acre are considered single family residential and calculated with a population of one dwelling unit.

Each parcel feature in the build-out model received a FLU designation. In places where features overlapped multiple FLU areas, the feature was assigned the FLU class that its center point fell within. Build-out population was only modeled for residential FLU types. FLU classes including agricultural, low density residential, medium density residential, high density residential, and mixed use were assigned residential densities in the build-out models.

G. Build-out Density Calculation

For each county, the above data layers were overlaid with the parcel layer to assign attributes to the parcels and make the build-out calculations. For the purposes of this model, the build-out population represents the total permanent residential population (existing and future) that can inhabit a parcel. Permanent population is calculated by multiplying the parcel-level dwelling units by the Census block's average persons per dwelling unit, and then multiplying that result by the Census block's average housing unit occupancy.

For areas developed after the 2010 U.S. Census and where the 2010 average persons per dwelling unit may not represent the new development, the county's average persons per dwelling unit was used. An example of this is a largely undeveloped Census block in 2010 that had perhaps one or two homes with an average of 4.8 persons per dwelling unit. If after 2010, a large multi-family development was built, the block-level average persons per dwelling unit would likely be too high. For this reason, the county's average persons per dwelling unit was used instead of the Census block-based numbers.

H. Developments of Regional Impact

The final step in the development of the Countywide Build-Out Models is adjusting build-out densities to reflect approved DRIs, or other large development plans (where available). DRI plans are another component of Florida's growth management legislation required by Chapter 380, F.S. The State annually updates population-based thresholds by county to determine when a development must undergo the DRI review process. For residential DRIs, dwelling unit thresholds range from 250 units (in counties with fewer than 25,000 people) to 3,000 units (in counties with more than 500,000 people). A DRI plan delineates the boundaries of a DRI, the number of dwelling units within the boundaries, and the projected timing of when these units will be built. Although DRIs often do not develop as originally planned by the developer, the total number of units planned (regardless of timing) is likely to be a more accurate control for the build-out of that DRI than the average historic densities. Therefore, in each of the build-out models, parcel features that are within a DRI are attributed with the name of the DRI. Parcels within a particular DRI are then controlled to the DRI development plan and the build-out population for that area is recalculated.

Regional Growth Drivers Model

The Regional 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 1-10, 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 of certain spatial features, or growth drivers, have on development. These drivers are defined from transportation features and land use/cover types including:

1. Distance from roads grouped by four levels of use, with each road type modeled separately. Additionally, one of the levels of use included limited access interchanges (data is obtained from the Florida Department of Transportation (FDOT) Road Characteristics Inventory (RCI) Database),
2. Distance from existing residential development prior to 1995 (data is obtained from County Property Appraiser Parcel Data),
3. Distance from/to existing commercial centers selected from parcels with commercial land use codes deemed attractors to residential growth (data is obtained from County Property Appraiser Parcel Data),
4. Distance from/to coastal and inland waters (data is obtained from the District's Land Cover Data), and
5. Distance from active DRIs and Planned Unit Developments (PUDs) (data is obtained from GISA Compiled Data).

Each of the drivers listed above were used as independent variables in a logistic regression equation. Dependent variables included existing residential built after 1994 as the measure of "presence", and large undeveloped vacant parcels outside of DRIs or PUDs 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 of 0 through 1. These were scaled up to a range of 0 through 10 in the resulting grid, for which a value of 0 represented the lowest relative likelihood of development, and a value of 10 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.

A. Historic Growth Trends

Historic growth trends are based on historic population estimates at the 2010 U.S. Census block level of geography. The population estimates for 2000 and 2010 are from the U.S. Census Bureau, and a 2012 estimate is derived from property parcel data summarized by Census block. These estimates are used to produce six projection calculations using four different methods. The minimum and maximum calculations are discarded, and the remaining four are averaged.

The four methods utilized by the model include: Linear, Exponential, Share of Growth, and Shift Share. The Linear and Exponential techniques employ a "bottom-up" approach, extrapolating the historic growth trends of each census block with no consideration for the county's overall growth. The Share of Growth and Shift Share techniques employ a "top-down" approach, allocating a portion of the total projected county growth to each census block based on that census block's percentage of county growth over the historical period.

Each of the four methods is a good predictor of growth in different situations and growth patterns, so an average of the four was the best way to avoid the largest possible errors resulting from the least appropriate techniques for each census block within the 16 county area.

This methodology is patterned after that 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 historic period. Two linear growth rate calculations were made, one from 2000 through 2012, and one from 2004 through 2012.

Exponential Projection Method

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

Share of Growth Projection Method

The Share of Growth Projection Method assumes that each Census block's percentage of the county's total growth will be the same as over the historic period. Two share of growth rate calculations were made, one from 2000 through 2012, and one from 2004 through 2012.

Shift Share Projection Method

The Shift Share Projection Method assumes that each Census block's percentage of the county's total annual growth will change by the same annual amount as over the historic.

By their definitions, the "Share of Growth" and the "Shift Share" Methods will project Census block-level population that will add up to the BEBR projected county totals.

Average of the Projection Extrapolations

The minimum and maximum of the six extrapolations are dropped to reduce errors resulting from the "worst" techniques for each census block. The four remaining extrapolations are then averaged to account for the considerable variation in growth rates and patterns over all of the census blocks within the 16 county area.

The averaging of the four remaining projection methods reduces the errors associated with using various techniques for each census block.

B. Growth Calculation Methodology

The methodology for calculating growth within the Population Model includes the following steps:

1. Apply Census block-level average historical growth rate to parcels within that block.
2. Check growth projections against build-out population, and reduce any projections exceeding build-out to the build-out numbers.

3. After projecting growth for all Census blocks within the particular county, summarize the resulting growth and compare against the Countywide BEBR target growth.
 - a. If the Model's projections exceed the BEBR target (which is unlikely), reduce the projected growth for all Census blocks by the percentage that the projections exceeded the BEBR target, and go on to the next time increment.
 - b. If the Model's projections are less than the BEBR target (which is typical due to high growth areas building out), continue growing the county using the Growth Drivers.
4. Select parcels in undeveloped Census blocks with the highest Growth Driver value and develop them. (Note: Most parcels are projected to completely build out in this step, which represents a five-year interval; however, some large parcels may require two or more five-year intervals to build out.) Summarize growth and check against build-out. Continue this process until the county build-out growth target is reached.

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 Southern Water Use Caution Area Population Guidelines (SWUCA II).

A. Peak Population

Seasonal population is estimated using a combination of 2010 U.S. Census data (at the Zip Code Tabulation Area or ZCTA level) and hospital admissions data. Average 2009-2011 emergency room admissions data was utilized 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 2009–2011 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.
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.

B. 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 percent) to non-beach destination counties (56.7 percent).
2. Develop a seasonal resident adjustment based on average per capita water use.
 - a. The six-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):
$$((0.442 \times 132) + ((1 - 0.442) \times (132 - 69.3))) / 132 = 0.707$$
 - c. The adjustment factor is calculated using the following equation for “non-beach destination counties”:
$$((0.567 \times 132) + ((1 - 0.567) \times (132 - 69.3))) / 132 = 0.773$$
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.

C. Tourist Population

The tourist population projections were based on 15 years (1996–2011) of county-level lodging room data from the Florida Department of Business and Professional Regulation. This data was used to extrapolate a linear trend for the increase in rooms by county. This linear trend was then applied to existing lodging facility locations. This projection on future rooms was then converted to tourist population by applying county-level average unit occupancy and party size ratios developed by the District.

D. Net Commuter Population

The net commuter population projections were based on special tabulations from the U.S. Census Bureau American Community Surveys conducted in the years 2006-2010. 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.

Summarize By Utility Service Areas

The parcel-level results are then summarized by public supply 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.

Spatial Incongruity of Boundaries

Due to mapping errors, the service area boundaries do often bisect parcel boundaries. However, the error associated with this spatial incongruity at the parcel level is inconsequential. (This is one of the benefits of disaggregating Census block-level data to the parcel level.) Parcels are deemed to be within a given service area if its center point (or “centroids”) falls inside the service area boundary. 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). The utility-level spreadsheets were distributed by District staff to utilities for comparison with their own and/or other projections for their service areas. 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 website.

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. Service areas with negative net commuters were not penalized. For Lake and Polk counties (Tables 10 and 16), the population projections represent permanent populations and are from Volume 2 of the Draft RWSP for the CFWI (May 2015).

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-based geodatabase). As the parcel level projections are summarized by public supply service area boundaries and the service area is incorrect or includes domestic self-supply 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 domestic self-supply.

Adjusting Population Projections using 2012 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 233 service areas. One hundred twenty-two of these service areas had a 2012 population estimate that was at least ±5 percent different from the 2012 population served estimate from the Estimated Water Use Report. Here is an example on how population estimate and projection was adjusted using the 2012 population served estimate:

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

Total Functional Population 2012	Total Functional Population 2015	Total Functional Population 2020	Total Functional Population 2025	Total Functional Population 2030	Total Functional Population 2035
1,452	1,494	1,578	1,791	2,125	2,432

- b) In 2012, 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 2012 population served estimate:

Adjusted Total Functional Population 2012	Adjusted Total Functional Population 2015	Adjusted Total Functional Population 2020	Adjusted Total Functional Population 2025	Adjusted Total Functional Population 2030	Adjusted Total Functional Population 2035
1,316	1,353	1,430	1,623	1,926	2,204

Water Demand Projections

Water demand projections are calculated for the years 2015, 2020, 2025, 2030, and 2035. To develop these projections, the District used the 2008-2012 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 2008-2012 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 one-in-ten "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" (SWFWMD, 2001). The One-in-Ten 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 public supply 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" which do not require a Water Use Permit (WUP); however, for this analysis, wells less than 5" in diameter were selected because of the unlikely scenario that any residential unit has irrigation wells greater than 4" 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 attached Public Supply demand projections (See Table 23 in Appendix A). Currently, the District estimates that approximately 300 gpd are used for each irrigation well. The District, in cooperation with the University of Florida Institute of Food and Agricultural Sciences, is currently undergoing a five-year study to determine more accurately how much water is used for outdoor irrigation in the different regions of the District.

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

- Use Type equal to 'Irrigation'
- Diameter less than 5"
- Only include wells that lie inside public supply service areas
- Exclude wells that lie within WUP Control Areas - Permitted
- 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 has provided this technical memorandum and demand projection tables to WUP staff and public supply use sector stakeholders for review and comment, as each permitting staff and 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, methodology changes based on short-term trends were not taken into account. Comments and suggested changes were only taken into consideration if they were justifiable, defensible, based on historical regression data and long term trends, and supported by complete documentation.

The District understands and shares stakeholder's concerns of how critically important accurate demand projections are, however the District must comply with Chapter 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 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 public supply water demand estimates and projections on a countywide basis. Both average year demand and the one-in-ten 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 caution areas. Lastly, Table 23 summarizes the existing irrigation wells and the exponential growth rate used to project future irrigation wells.

Summary

Overall, for the public supply sector, the District is expecting an increase in average demand of 202 mgd from 577 mgd in 2010 to 779 mgd in the 16 county area. The 200 mgd increase by 2035 is distributed as follows: 39 mgd increase in the Heartland Planning Region, 51 mgd increase in the Northern Planning Region, 29 mgd in the Southern Planning Region, and 83 mgd increase in the Tampa Bay Planning Region. Even though the District is expecting an overall increase in the public supply sector, the projected demands have decreased from those projected in the 2010 RWSP. Partial reasons for this reduction include slower population immigration, the economic downturn and District outreach efforts that improve the efficiency of water use. Appendix A (Tables 1 through 23) starts on page 16 and provides data by county, utility, and planning region.

References

Alliance for Water Efficiency, 1999. *Residential End Uses of Water Study*,
www.allianceforwaterefficiency.org/residential-end-uses-of-water-study-1999.aspx

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SWFWMD, 2008-2012. *Estimated Water Use Reports* for the years 2008-2012.

SWFWMD, 2013. *Summary Rainfall Data by Region. 2010*
www.swfwmd.state.fl.us/data/hydrologic/rainfall_data_summaries.

U.S. Census Place Data, 2010; www.census.gov/geo/www/2010census/gtc/gtc_place.html.

Appendix A

Public Supply Data Tables

Population and Demand Projections

Irrigation Well Projections

Table 1. Countywide Permanent Population Estimates and Projections

County	BEBR Medium Permanent Population ^{1,2}						Permanent Population in SWFWMD ³					
	Population inside and outside District boundaries.						Population inside District boundaries only.					
	2010	2015	2020	2025	2030	2035	2010	2015	2020	2025	2030	2035
Charlotte	160,695	167,400	176,100	183,900	190,500	196,500	158,158	164,745	173,290	180,948	187,426	193,315
Citrus	138,467	145,700	156,300	166,000	174,600	182,200	137,525	145,700	156,300	166,000	174,600	182,200
DeSoto	33,847	34,800	35,700	36,500	37,300	38,000	34,148	34,800	35,700	36,500	37,300	38,000
Hardee	27,310	27,900	28,200	28,500	28,700	29,000	27,670	27,900	28,200	28,500	28,700	29,000
Hernando	170,283	182,400	201,000	218,500	234,800	249,600	167,068	182,400	201,000	218,500	234,800	249,600
Highlands	97,342	101,600	107,200	112,300	116,700	120,400	88,991	92,807	97,673	102,107	105,935	109,153
Hillsborough	1,235,645	1,314,000	1,432,500	1,543,100	1,643,500	1,736,200	1,218,396	1,314,000	1,432,500	1,543,100	1,643,500	1,736,200
Lake	294,793	318,800	358,800	395,800	429,200	458,100	886	1,069	1,300	1,534	1,756	1,966
Levy	39,682	41,700	44,400	47,100	49,900	52,700	21,709	23,093	24,703	26,314	27,984	29,654
Manatee	324,919	365,400	408,800	451,500	492,200	530,900	320,907	344,700	375,000	403,100	428,000	449,900
Marion	327,562	350,000	384,700	417,200	447,200	474,000	98,636	111,061	126,482	141,395	155,178	169,308
Pasco	460,925	495,400	549,500	600,200	647,200	690,100	451,166	495,400	549,500	600,200	647,200	690,100
Pinellas	905,380	921,000	922,400	923,600	924,700	925,600	919,968	921,000	922,400	923,600	924,700	925,600
Polk	596,997	636,100	695,100	750,500	801,600	848,000	559,109	600,257	653,286	704,985	752,590	797,830
Sarasota	377,411	395,800	422,200	446,200	467,300	485,600	375,699	395,800	422,200	446,200	467,300	485,600
Sumter	98,565	111,100	132,500	152,900	171,600	188,600	93,302	111,100	132,500	152,900	171,600	188,600
Total	5,289,821	5,609,100	6,055,400	6,473,800	6,857,000	7,205,500	4,673,338	4,965,832	5,332,035	5,675,883	5,988,569	6,276,026

Reference Sources for Countywide Permanent and Permanent Population Projections

¹ 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

² 2015-2035 projections are based on The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

³ Permanent population estimates and projections were generated by GIS Associates. Source File: GISA 2013 SWFWMD PSSA Population Summaries, Version 2013-10-15.xlsx.Tab Name: County & WMD Summary.

Table 2. Countywide Permanent and Total Functional population

County	Total Functional Population in SWFWMD ^{1,2,3}					
	Total Functional Population = Permanent + Seasonal+ Tourist + Net Commuters					
	2010	2015	2020	2025	2030	2035
Charlotte	185,995	193,550	203,349	212,131	219,654	226,725
Citrus	150,309	159,011	170,286	180,604	189,752	197,879
DeSoto	36,018	36,740	37,698	38,553	39,409	40,164
Hardee	28,464	28,711	29,041	29,371	29,599	29,929
Hernando	173,147	188,757	207,708	225,676	242,619	258,147
Highlands	99,939	104,107	109,422	114,266	118,527	122,128
Hillsborough	1,313,505	1,417,947	1,545,681	1,666,551	1,773,747	1,872,223
Lake ⁴	1,028	1,247	1,500	1,745	1,993	2,235
Levy	23,130	24,543	26,187	27,831	29,536	31,241
Manatee ⁵	412,930	441,644	477,351	510,546	540,304	566,908
Marion	103,648	116,819	132,818	148,296	162,612	177,287
Pasco	481,383	526,963	582,867	635,315	684,081	728,634
Pinellas ⁵	1,090,237	1,101,358	1,102,843	1,104,095	1,105,231	1,106,132
Polk ⁴	574,932	622,926	679,796	736,066	790,183	841,366
Sarasota	456,930	483,060	512,270	538,749	562,053	582,282
Sumter	105,016	128,911	152,552	174,978	195,676	214,658
Total	5,236,610	5,576,294	5,971,369	6,344,774	6,684,977	6,997,940

Reference Sources for Countywide Permanent in SWFWMD and Functional Population Projections

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

² 2010 Estimate was generated from the population projections calculated using the latest GIS Associates, Inc.'s population projection model data (October 2013) and the PS_SERVICEAREAS GIS layer (dated: 04DEC2013). Population estimates and projections were adjusted using the 2012 Public Supply Annual Report population served estimate. The 2010 estimate had to be extrapolated using the 2012-2015 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, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

³ The 2015-2035 projections were generated from the latest GIS Associates, Inc.'s population projection model data (October 2013) and the PS_SERVICEAREAS GIS layer (dated: 04DEC2013). Population estimates and projections were adjusted using the 2012 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, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

⁴ This total includes estimates and projections from Volume 2 of the 2014 Regional Water Supply Plan for the Central Florida Water Initiative (April 2014). http://cfwiwater.com/pdfs/CFWI_RWSP_FinalDraft_Vol2.pdf

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 GISA self-supplied population estimate (2010 Pinellas County Total = 1,030,276 + 54,686 + 5,275 = 1,090,237). GISA self-supplied population estimate is the sum of the populations for parcels outside service

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TABLE 3. CHARLOTTE COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD MGD	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS MGD				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	13,530	0.858	13,548	13,968	14,487	14,991	15,498	63	0.859	0.886	0.918	0.950	0.983
718 Gasparilla Island Water Assoc.	5,522	1.000	5,984	6,295	6,436	6,517	6,617	181	1.083	1.140	1.165	1.180	1.198
871 City of Punta Gorda	35,654	4.120	36,397	37,083	37,646	38,131	38,611	116	4.205	4.285	4.350	4.406	4.461
1512 Charlotte Harbor Water Assoc.	4,409	0.338	4,744	5,193	5,598	5,943	6,260	77	0.364	0.398	0.429	0.456	0.480
3522 Charlotte County Utilities / Burnt Store	6,268	0.393	6,904	7,673	8,371	8,971	9,520	63	0.433	0.481	0.525	0.562	0.597
7104 Charlotte County Utilities	115,516	8.753	120,716	127,667	133,931	139,274	144,243	76	9.147	9.673	10.148	10.553	10.929
7768 Island Harbor Beach Club	602	0.067	650	713	770	818	863	112	0.073	0.080	0.086	0.092	0.097
(9) 8626 Homeowners of Alligator Park	902	0.078	902	902	902	902	902	86	0.078	0.078	0.078	0.078	0.078
(10) 99913 El Jobean Water Association	1,395	0.145	1,410	1,431	1,450	1,466	1,481	104	0.147	0.149	0.151	0.152	0.154
(10) 99916 Riverwood Development	2,197	0.228	2,295	2,425	2,542	2,641	2,731	104	0.239	0.252	0.264	0.275	0.284
(8) Additional Irrigation Demand		1.797							1.870	1.965	2.050	2.122	2.191
Total County	185,995	17.776	193,550	203,349	212,131	219,654	226,725		18.496	19.385	20.164	20.825	21.450
(7) 1-10 Drought Year Demand									19.606	20.548	21.373	22.075	22.737

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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.

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TABLE 4. CITRUS COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP	(2) 2010 POPULATION TIMES		(3) PROJECTED POPULATION					(5) PROJECTED WATER DEMANDS (MGD)					
		(1) 2010 POPULATION	2008-2012 GPCD (MGD)	2015	2020	2025	2030	2035	(4), (11), (12) 2008-2012 AVG GPCD	2015	2020	2025	2030	2035
(6)	DSS Domestic Self-Supply	52,201	5.972	55,126	58,803	62,174	65,168	67,822	114	6.306	6.727	7.113	7.455	7.759
207	City of Crystal River	6,179	0.755	6,186	6,196	6,205	6,213	6,235	122	0.756	0.757	0.758	0.759	0.762
419	City of Inverness	8,973	1.183	9,194	9,480	9,742	9,975	10,181	132	1.212	1.250	1.284	1.315	1.342
(10)	729 Citrus Co. Utilities - Point O' Woods	710	0.061	710	710	710	710	710	86	0.061	0.061	0.061	0.061	0.061
(10)	872 Inverness Village	256	0.028	256	256	256	256	256	110	0.028	0.028	0.028	0.028	0.028
1118	Floral City Water Association Inc	4,600	0.270	4,685	4,795	4,895	4,984	5,063	59	0.275	0.281	0.287	0.292	0.297
(11)	1345 Royal Oaks of Citrus HOA	433	0.054	433	433	433	433	433	126	0.054	0.054	0.054	0.054	0.054
2842	Citrus Co. Utilities - Citrus Springs/Pink	16,408	2.501	19,408	23,407	27,065	30,305	33,167	152	2.958	3.567	4.125	4.618	5.055
(11)	4008 Inverness Park	193	0.027	193	193	193	193	193	138	0.027	0.027	0.027	0.027	0.027
4153	Rolling Oaks Utilities Inc	11,249	1.553	11,356	11,519	11,666	11,793	11,904	138	1.568	1.590	1.611	1.628	1.644
4406	Homosassa Special Water District	5,456	0.751	5,558	5,665	5,763	5,850	5,935	138	0.765	0.779	0.793	0.805	0.817
(11)	4753 Constata Utilities	590	0.084	598	609	619	627	635	143	0.085	0.087	0.088	0.090	0.091
(10)	6291 Citrus Co. Utilities - Rosemont/Rolling	318	0.048	318	318	318	318	318	150	0.048	0.048	0.048	0.048	0.048
6691	Gulf Highway Land Corporation	527	0.095	548	577	603	627	647	181	0.099	0.104	0.109	0.113	0.117
7121	Citrus Co. Utilities - Charles A. Black	24,367	3.787	25,578	27,123	28,540	29,799	30,922	155	3.975	4.215	4.435	4.631	4.805
(10)	7295 Citrus Co. Utilities - Golden Terrace	259	0.020	259	259	260	260	260	76	0.020	0.020	0.020	0.020	0.020
(10)	7784 Citrus Co. Utilities - Water Oaks	310	0.040	310	310	310	310	310	130	0.040	0.040	0.040	0.040	0.040
(10)	7879 Citrus Co. Utilities - Oak Forest	385	0.033	386	387	389	390	391	86	0.033	0.033	0.033	0.034	0.034
(11)	8147 Oak Pond LLC	96	0.014	96	96	96	96	96	143	0.014	0.014	0.014	0.014	0.014
(11)	9097 Tarawood Utilities LLC	139	0.020	141	144	147	149	151	143	0.020	0.021	0.021	0.021	0.022
(11)	9532 Greenbriar One of Citrus Hills	401	0.057	410	420	430	439	446	143	0.058	0.060	0.061	0.063	0.064
9791	Citrus Co. Utilities - Sugarmill Woods	10,753	2.138	11,747	13,056	14,250	15,305	16,235	199	2.335	2.596	2.833	3.043	3.227
(11)	10966 South Dunnellon Water Association	506	0.048	506	506	506	506	506	95	0.048	0.048	0.048	0.048	0.048
11839	GCP Walden Woods One, LLC and GC	947	0.174	947	947	947	947	947	184	0.174	0.174	0.174	0.174	0.174
(9)	20230 Ozello Water Association Inc	4,053	0.474	4,064	4,076	4,088	4,098	4,116	117	0.475	0.477	0.478	0.479	0.482
(8)	Additional Irrigation Demand		0.930							0.984	1.054	1.118	1.174	1.225
	Total County	150,309	21.116	159,011	170,286	180,604	189,752	197,879		22.419	24.112	25.661	27.035	28.254
(7)	1-10 Drought Year Demand									23.764	25.559	27.201	28.657	29.949

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 gallons per well per day.

(9) Population served and per capita was reported for first the time in 2011. Source file: 2011_P SAR_Data_Entry.xlsx (Date: 02/06/2013)

(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) CCU - Point of Woods (WUP# 729): Per capita information obtained from permit issued in 1993.

b) CCU - Rosemont (WUP# 6291): Per capita information was obtained from permit issued in 1997.

c) CCU - Golden Terrace (WUP# 7295): Per capita information was obtained from application submitted in 1991.

d) CCU - Oak Forest (WUP# 7879): Per capita information was obtained from the 2011 public supply annual report. The annual report is not required for this small general permit.

e) Inverness Village (WUP# 872): Per capita and population information was obtained from permit issued in 2012.

f) Citrus Co. Utilities - Water Oaks (WUP# 7784): Per capita and population information was obtained from permit issued in 2011.

g) South Dunnellon Water Association (WUP# 10966): Per capita and population information was obtained from permit issued in 1993.

(11) 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 2010 unadjusted gross per capita for the county.

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TABLE 5. DESOTO COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	18,329	1.233	18,928	19,734	20,451	21,169	21,798	67	1.273	1.327	1.375	1.424	1.466
4725 Arcadia WTP	10,332	0.875	10,417	10,511	10,598	10,684	10,763	85	0.883	0.891	0.898	0.905	0.912
(10) 6483 DeSoto Village Mobile Home Park	246	0.027	246	246	246	246	246	110	0.027	0.027	0.027	0.027	0.027
(9) 99917 DeSoto County Utilities	5,055	0.428	5,086	5,132	5,174	5,217	5,256	85	0.431	0.435	0.438	0.442	0.445
(11) 99912 DeSoto County Utilities - Lake Suzy	2,056	0.184	2,064	2,075	2,084	2,093	2,100	89	0.185	0.186	0.186	0.187	0.188
(8) Additional Irrigation Demand		0.069							0.070	0.072	0.074	0.076	0.077
Total County	36,018	2.816	36,740	37,698	38,553	39,409	40,164		2.869	2.938	2.999	3.061	3.115
(7) 1-10 Drought Year Demand									3.041	3.114	3.179	3.244	3.302

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 gallons per well per day.

(9) This permit is wholesale supplied by the Peace River Manasota RWSA. Per discussion with WUP Regulation staff, we using Arcadia's (WUP#4725) 2008-2012 gross per capita average.

Staff spoke with staff at DeSoto Annex on 2/28/2014. They explained that the facilities population fluctuates between 1,525 and 1,560. Since DeSoto Annex has its own industrial/commercial permit an average of 1,540 was deducted from the population total.

(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) DeSoto Village Mobile Home Park (WUP# 6483): Population and per capita information were obtained from permit issued in 2007.

(11) 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.

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TABLE 6. HARDEE COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	13,401	0.716	13,627	13,925	14,223	14,426	14,724	53	0.728	0.744	0.760	0.770	0.786
30 City Of Bowling Green Municipal Water	2,566	0.160	2,566	2,566	2,566	2,566	2,566	62	0.160	0.160	0.160	0.160	0.160
(9) 2402 Orange Blossom RV Park	354	0.025	354	354	354	354	354	70	0.025	0.025	0.025	0.025	0.025
4461 City Of Wauchula	6,484	0.737	6,499	6,521	6,542	6,559	6,581	114	0.738	0.741	0.743	0.745	0.748
7658 Town Of Zolfo Springs	2,465	0.223	2,466	2,467	2,468	2,468	2,469	90	0.223	0.223	0.223	0.223	0.223
(9) 11087 Florida SKP	127	0.006	127	127	127	127	127	47	0.006	0.006	0.006	0.006	0.006
(9) 11180 Torrey Oaks HOA	112	0.013	112	112	112	112	112	112	0.013	0.013	0.013	0.013	0.013
(9) 11352 Crystal Lake Village	541	0.054	541	541	541	541	541	100	0.054	0.054	0.054	0.054	0.054
13026 Hardee County BOCC	2,413	0.138	2,419	2,428	2,437	2,446	2,455	57	0.138	0.138	0.139	0.139	0.140
(8) Additional Irrigation Demand		0.037							0.037	0.038	0.038	0.039	0.039
Total County	28,464	2.107	28,711	29,041	29,371	29,599	29,929		2.121	2.141	2.160	2.174	2.193
(7) 1-10 Drought Year Demand									2.249	2.269	2.290	2.304	2.325

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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 and population information were obtained from permit issued in 2005.

b) Florida SKP (WUP# 11087): Per capita and population information were obtained from permit issued in 2004.

c) Torrey Oaks HOA (WUP# 11180): Per capita and population information were obtained from permit issued in 2013.

d) Crystal Lake Village (WUP# 11352): Per capita and population information were obtained from permit issued in 2005.

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TABLE 7. HERNANDO COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4), (10) 2008-2012 AVG GPCD					(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035	2015	2020	2025	2030	2035	2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	22,518	2.409	28,761	36,725	45,044	53,389	61,491	107	3.077	3.930	4.820	5.713	6.580				
(9) 2119 Imperial Estates	200	0.009	200	200	200	200	200	45	0.009	0.009	0.009	0.009	0.009				
2179 Hernando Co Utilities - Dogwood	755	0.106	760	766	772	778	784	140	0.106	0.107	0.108	0.109	0.110				
2983 Hernando Co Utilities - West	124,724	17.980	132,974	142,562	150,585	155,926	159,183	144	19.169	20.552	21.708	22.478	22.948				
(9) 3720 McGist, Inc. (Frontier Campground)	346	0.027	346	346	346	346	346	79	0.027	0.027	0.027	0.027	0.027				
5789 Hernando Co Utilities - East	7,121	0.862	7,396	7,714	8,138	9,058	10,241	121	0.895	0.934	0.985	1.097	1.240				
(9) 5817 Hernando Co Utilities - Cedar Lane	281	0.063	282	283	284	285	285	225	0.063	0.064	0.064	0.064	0.064				
7627 City Of Brooksville	16,633	1.465	17,277	18,019	18,880	20,892	23,563	88	1.522	1.587	1.663	1.840	2.075				
(9) 8443 Camp-A-Wyle Condominium	430	0.043	430	430	430	430	430	100	0.043	0.043	0.043	0.043	0.043				
12011 Hernando Co Utilities - Seville	8	0.001	198	532	864	1,183	1,489	151	0.030	0.080	0.130	0.178	0.224				
13286 Hernando Co Utilities - Royal Oaks	132	0.019	132	133	133	133	134	142	0.019	0.019	0.019	0.019	0.019				
(8) Additional Irrigation Demand		2.376							2.590	2.850	3.097	3.329	3.543				
Total County	173,147	25.361	188,757	207,708	225,676	242,619	258,147		27.552	30.201	32.673	34.906	36.881				
(7) 1-10 Drought Year Demand									29.205	32.013	34.633	37.000	39.094				

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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) Imperial Estates (WUP# 2119): Per capita and population information were obtained from permit issued in 2010.

b) HCU - Cedar Lane (WUP# 5817): Per capita information obtained from permit issued in 2006.

c) Frontier Campground (WUP# 3720) is the only utility in Hernando County with a small general permit. Per capita information was obtained from permit issued in 1994.

d) Camp-A-Wyle (WUP# 8443): Per capita and population information were obtained from permit issued in 2006.

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TABLE 8. HIGHLANDS COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP		(2) 2010 POPULATION TIMES		(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
		(1) 2010 POPULATION	2008-2012 GPCD (MGD)	2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6)	DSS Domestic Self-Supply	20,613	1.352	22,078	23,898	25,559	27,001	28,220	66	1.448	1.568	1.677	1.771	1.851
	4167 HC Waterworks	1,243	0.087	1,275	1,316	1,353	1,385	1,413	70	0.090	0.092	0.095	0.097	0.099
	4492 City of Sebring	33,029	3.468	34,158	35,580	36,884	38,049	39,037	105	3.587	3.736	3.873	3.995	4.099
(9)	4670 Maranatha Baptist Church	548	0.054	548	548	548	548	548	99	0.054	0.054	0.054	0.054	0.054
	4980 Lake Placid Holding Co	4,507	0.324	4,678	4,890	5,083	5,250	5,392	72	0.336	0.351	0.365	0.377	0.387
	5270 Town Of Lake Placid	4,089	0.546	4,185	4,305	4,413	4,512	4,597	133	0.558	0.574	0.589	0.602	0.613
	6029 City Of Avon Park	20,423	1.956	20,591	20,810	21,010	21,205	21,375	96	1.972	1.993	2.012	2.031	2.047
	6326 Town Of Lake Placid	2,297	0.171	2,325	2,360	2,392	2,422	2,449	75	0.173	0.176	0.178	0.181	0.183
(12)	6456 HC Waterworks	552	0.039	553	555	556	558	559	70	0.039	0.039	0.039	0.039	0.039
(13)	6804 Lake Bonnet Village MHP	500	0.050	500	500	500	500	500	100	0.050	0.050	0.050	0.050	0.050
	7139 Buttonwood Bay Utilities	1,616	0.150	1,616	1,616	1,616	1,616	1,616	93	0.150	0.150	0.150	0.150	0.150
	7704 Country Club Utilities Inc	861	0.219	877	896	914	929	942	254	0.222	0.227	0.232	0.236	0.239
(9)	9140 Sebring 365, LLC	0	0.000	13	39	64	85	103	99	0.001	0.004	0.006	0.008	0.010
	9490 LP Utilities Corporation	518	0.045	519	519	520	520	520	88	0.046	0.046	0.046	0.046	0.046
	10926 Lake Lynn Shores	30	0.005	30	30	30	30	30	150	0.005	0.005	0.005	0.005	0.005
(13)	10930 Lake Placid Campground	140	0.005	140	140	140	140	140	37	0.005	0.005	0.005	0.005	0.005
(13)	11601 Pine Ridge Park Inc	570	0.040	570	570	570	570	570	70	0.040	0.040	0.040	0.040	0.040
(11)	11609 Town Of Lake Placid	849	0.018	850	853	855	857	859	22	0.019	0.019	0.019	0.019	0.019
(13)	12846 Tropical Harbor Mobile Home Estates	876	0.088	876	876	876	876	876	100	0.088	0.088	0.088	0.088	0.088
	13099 Sun N Lake Of Sebring Impr Dist	6,586	0.541	7,633	9,030	10,292	11,379	12,289	82	0.627	0.742	0.846	0.935	1.010
(10)	13367 Silver Lake Utilities, Inc.	93	0.010	93	93	93	93	93	105	0.010	0.010	0.010	0.010	0.010
(8)	Additional Irrigation Demand		2.745							2.860	3.006	3.139	3.256	3.355
	Total County	99,939	11.913	104,107	109,422	114,266	118,527	122,128		12.379	12.974	13.516	13.995	14.399
(7)	1-10 Drought Year Demand									13.122	13.753	14.327	14.834	15.263

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 gallons per well per day.

(9) According to a letter from the permittee, there has been no public supply water use in this permit since 2010. The per capita is the average residential per capita for the county.

(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 WMS., the per capita is assumed to equal the average county per capita.

(11) The per capita for this permit is based on the years 2011 and 2012.

(12) This is small general permit. There is not per capita information available in WMS. The per capita is assumed to be equal to that of WUP# 4167.

(13) 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) Lake Bonnet Village MHP (WUP# 6804): Per capita and population information were obtained from permit issued in 2011.

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

c) Lake Placid Campground (WUP#10930): Per capita and population information were obtained from permit issued in 2013.

d) Pine Ridge Park Inc (WUP# 11601): Per capita and population information were obtained from permit issued in 2007.

e) Tropical Harbor Mobile Home Estates (WUP# 12846): Per capita and population information were obtained from permit issued in 2006.

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TABLE 9. HILLSBOROUGH COUNTY POPULATION ESTIMATES AND PROJECTIONS

(1)	(2)	(3)					(4)					(5)						
		POPULATION	2010	2008-2012	PROJECTED POPULATION				PROJECTED WATER DEMANDS (MGD)									
WUP	POPULATION	2010	GPCD	2015	2020	2025	2030	2035	AVG GPCD					2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	93,998	6.411	107,502	130,129	156,551	192,092	227,214	68	7.332	8.875	10.677	13.101	15.496					
(1) Park Village Hoa Of Ruskin	126	0.013	126	126	126	126	126	100	0.013	0.013	0.013	0.013	0.013					
(9) 245 Chula Vista Mobile Home Park	258	0.024	258	258	258	258	258	93	0.024	0.024	0.024	0.024	0.024					
(9) 435 The Wildwood Company, Inc.	700	0.088	700	700	700	700	700	125	0.088	0.088	0.088	0.088	0.088					
450 City Of Temple Terrace	29,857	3.161	31,786	34,321	37,038	37,998	38,818	106	3.365	3.634	3.921	4.023	4.110					
(9) 990 Balm Estates	18	0.003	18	18	18	18	18	150	0.003	0.003	0.003	0.003	0.003					
(9) 1169 Briarwood Mobile Home Park	217	0.016	217	217	217	217	217	74	0.016	0.016	0.016	0.016	0.016					
1776 City Of Plant City Utilities	37,648	5.161	40,417	46,369	53,979	67,776	82,499	137	5.540	6.356	7.399	9.290	11.309					
(9) 1787 Paradise Lakes Utility, Llc	221	0.027	221	222	223	224	224	121	0.027	0.027	0.027	0.027	0.027					
2062 City Of Tampa Water Dept	602,499	68.168	631,788	662,512	686,862	697,108	705,252	113	71.481	74.958	77.713	78.872	79.793					
2285 Charles Springner	1,163	0.120	1,226	1,308	1,346	1,348	1,349	104	0.127	0.135	0.139	0.140	0.140					
2707 Utilities, Inc.	2,983	0.197	2,991	3,001	3,015	3,022	3,030	66	0.198	0.198	0.199	0.200	0.200					
(9) 2888 Little Manatee Isle Mhp	210	0.000	210	210	210	210	210	0	0.000	0.000	0.000	0.000	0.000					
(9) 2990 Said I Hakky & Barbara Janet	25	0.003	25	25	25	25	25	100	0.003	0.003	0.003	0.003	0.003					
(9) 3704 Valrico Hills	1,040	0.156	1,040	1,040	1,040	1,040	1,040	150	0.156	0.156	0.156	0.156	0.156					
(9) 3752 Abd Properties Inc D/B/A	60	0.004	60	60	60	60	60	74	0.004	0.004	0.004	0.004	0.004					
(9) 3926 Oakbrook Associates (Plant City)	200	0.015	200	200	200	200	200	74	0.015	0.015	0.015	0.015	0.015					
(10) 4757 Wilder Corporation	1,422	0.046	1,422	1,422	1,422	1,422	1,422	32	0.046	0.046	0.046	0.046	0.046					
(9) 6542 Camp Lemora Rv Park	596	0.030	596	596	596	596	596	50	0.030	0.030	0.030	0.030	0.030					
6879 C W Utility Systems Llc	2,106	0.211	2,106	2,106	2,106	2,106	2,106	100	0.211	0.211	0.211	0.211	0.211					
(9) 7002 Malco Industries Inc.	1,082	0.144	1,082	1,082	1,082	1,082	1,082	133	0.144	0.144	0.144	0.144	0.144					
(9) 7153 Parkwood Estates Mobile Home Park	540	0.076	540	540	540	540	540	140	0.076	0.076	0.076	0.076	0.076					
7637 Riverside Golf Course Comm Llc	1,039	0.481	1,039	1,039	1,039	1,039	1,039	463	0.481	0.481	0.481	0.481	0.481					
(9) 7643 Southern Aire Mobile Home Park	300	0.030	300	300	300	300	300	100	0.030	0.030	0.030	0.030	0.030					
7790 Uniprop Income Fund Ii (Paradise Villaç	830	0.054	830	830	830	830	830	65	0.054	0.054	0.054	0.054	0.054					
(9) 8440 Sun City Mobile Home Park	400	0.060	400	400	400	400	400	150	0.060	0.060	0.060	0.060	0.060					
(9) 8469 Bonita Bay Farmworker Housing	90	0.005	90	90	90	90	90	50	0.005	0.005	0.005	0.005	0.005					
(9) 8579 Neptune Valley Mobile Home Park	286	0.020	286	286	286	286	286	70	0.020	0.020	0.020	0.020	0.020					
(9) 8788 Sunset Manor Hoa	74	0.013	74	74	74	74	74	176	0.013	0.013	0.013	0.013	0.013					
(9) 8847 Frank Prael	50	0.004	50	50	50	50	50	75	0.004	0.004	0.004	0.004	0.004					
8986 Allied Utilities, Inc.	85	0.013	85	85	85	85	85	150	0.013	0.013	0.013	0.013	0.013					
(9) 10066 Florida Acecapaders, Inc.	152	0.022	152	152	152	152	152	147	0.022	0.022	0.022	0.022	0.022					
(9) 10443 Windemere Utility Company	2,781	0.285	2,783	2,789	2,798	2,801	2,804	102	0.285	0.286	0.287	0.287	0.287					
(9) 10543 Cici Trailer Town Mobile Home	90	0.014	90	90	90	90	90	150	0.014	0.014	0.014	0.014	0.014					
(9) 10817 Farmland Reserve Inc	187	0.019	187	187	187	187	187	100	0.019	0.019	0.019	0.019	0.019					
(9) 10986 The Excellence	438	0.064	438	438	438	438	438	145	0.064	0.064	0.064	0.064	0.064					
12994 Pluris Pou Inc	3,481	0.410	3,487	3,487	3,487	3,487	3,487	118	0.411	0.411	0.411	0.411	0.411					
(9) 13063 Cax Lakeshore Villas Mhp	400	0.045	400	400	400	400	400	113	0.045	0.045	0.045	0.045	0.045					
20141 Hillsborough County Utilities	525,852	51.606	582,725	648,521	708,229	754,869	794,526	98	57.188	63.645	69.504	74.081	77.973					
(8) Additional Irrigation Demand		1.873							2.022	2.204	2.376	2.529	2.669					
Total County	1,313,505	139.088	1,417,947	1,545,681	1,666,551	1,773,747	1,872,223		149.644	162.397	174.323	184.630	194.085					
DPCWUCA	0	0	0	0	0	0	0		0.000	0.000	0.000	0.000	0.000					
NTB	1,214,279	130	1,305,217	1,410,323	1,504,771	1,576,426	1,639,780		139.443	150.471	160.422	168.153	175.072					
SWUCA	530,681	52	587,554	653,349	713,057	759,698	799,354		57.975	64.432	70.292	74.869	78.761					
(7) 1-10 Drought Year Demand									158.623	172.141	184.782	195.708	205.730					
DPCWUCA 1-10 Drought Year Demand									0.000	0.000	0.000	0.000	0.000					
NTB 1-10 Drought Year Demand									147.810	159.499	170.048	178.242	185.576					
SWUCA 1-10 Drought Year Demand									61.454	68.298	74.509	79.361	83.487					

Notes:

- MGD = million gallons per day
- (1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.
- (2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.
- (3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24/JAN/2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.
- (4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.
- (5) Computed as projected population multiplied by 2008-2012 average per capita water use.
- (6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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 WMS, the per capita is assumed to equal the average county per capita.
- a) Park Village Hoa Of Ruskin (1): Per capita and population information were obtained from permit issued in 1997.
- b) Chula Vista Mobile Home Park (245): Per capita and population information were obtained from permit issued in 2013.
- c) The Wildwood Company, Inc. (435): Per capita and population information were obtained from permit issued in 1992.
- d) Balm Estates (990): Per capita and population information were obtained from permit issued in 1998.
- e) Briarwood Mobile Home Park (1169): Per capita and population information were obtained from permit issued in 2003.
- f) Said I Hakky & Barbara Janet (2990): Per capita and population information were obtained from permit issued in 1998.
- g) Valrico Hills (3704): Per capita and population information were obtained from permit issued in 2011.
- h) Abd Properties Inc D/B/A (3752): Per capita and population information were not available for this permit. I counted mobile homes and trailers visible in the aerial photograph. Per capita is the average county per capita.
- i) Oakbrook Associates (Plant City) (3926): Per capita and population information were not available for this permit. I counted mobile homes and trailers visible in the aerial photograph. Per capita is the county average.
- j) Camp Lemora Rv Park (6542): Per capita and population information were obtained from permit issued in 2020.
- k) Parkwood Estates Mobile Home Park (7153): Per capita and population information were obtained from permit issued in 2011.
- l) Southern Aire Mobile Home Park (7643): Per capita and population information were obtained from permit issued in 2010.
- m) Sun City Mobile Home Park Water Plant (8440): Per capita and population information were obtained from permit issued in 1992.
- n) Bonita Bay Farmworker Housing (8469): Per capita and population information were obtained from permit issued in 2012.
- o) Neptune Valley Mobile Home Park (8579): Per capita and population information were obtained from permit issued in 2012.
- p) Sunset Manor Hoa (8788): Per capita and population information were obtained from permit issued in 2007.
- q) Frank Prael (8847): Per capita and population information were obtained from permit issued in 1993.
- r) Florida Acecapaders, Inc. (10066): Per capita and population information were obtained from permit issued in 2013.
- s) Cici Trailer Town Mobile Home (10543): Per capita and population information were obtained from permit issued in 1991.
- t) Farmland Reserve Inc (10817): Per capita and population information were obtained from permit issued in 1993.
- u) The Excellence (10986): Per capita and population information were obtained from permit issued in 1993.
- v) Cax Lakeshore Villas Mhp (13063): Per capita and population information were obtained from permit issued in 2008.
- (10) This is a small general permit. The permittee did submit a 2011 Public Supply Annual Report. Population and per capita information were obtained from this report.

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TABLE 10. LAKE COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2006-2010 GPCD (MGD)	PROJECTED POPULATION					PROJECTED WATER DEMANDS (MGD)					
			2015	2020	2025	2030	2035	AVG GPCD	2015	2020	2025	2030	2035
DSS Domestic Self-Supply & Small Utilities	1,028	0.100	1,247	1,500	1,745	1,993	2,235	NA	0.120	0.140	0.160	0.190	0.210
Total County in SWFWMD (all utilities and DSS)	1,028	0.100	1,247	1,500	1,745	1,993	2,235		0.120	0.140	0.160	0.190	0.210
(3) 1-10 Drought Year Demand									0.127	0.148	0.170	0.201	0.223
CFWI Large Utilities (Public Supply)	NA	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	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 Volume 2 of 2014 Regional Water Supply Plan for the Central Florida Water Initiative (April 2014).
http://cfwiwater.com/pdfs/CFWI_RWSP_FinalDraft_Vol2.pdf

(2) Estimate & projections of domestic self-supplied & small utility demand for District portion of county from Volume 2 of 2014 Regional Water Supply Plan for the Central Florida Water Initiative (April 2014).
http://cfwiwater.com/pdfs/CFWI_RWSP_FinalDraft_Vol2.pdf

(3) 1-10 Drought Year Demand is calculated as 1.06 x Projected Future Water Use.

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TABLE 11. LEVY COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	17,501	1.229	18,803	20,372	21,940	23,566	25,192	70	1.320	1.430	1.540	1.654	1.769
5640 City of Williston	3,195	0.423	3,305	3,381	3,456	3,534	3,612	132	0.438	0.448	0.458	0.468	0.478
7755 Town Of Yankeetown	901	0.070	901	901	901	901	901	78	0.070	0.070	0.070	0.070	0.070
(9) 7825 Oak Avenue Water System	58	0.009	58	59	60	61	62	150	0.009	0.009	0.009	0.009	0.009
8953 Town Of Inglis	1,475	0.131	1,475	1,475	1,475	1,475	1,475	89	0.131	0.131	0.131	0.131	0.131
(8) Additional Irrigation Demand		0.015							0.016	0.017	0.018	0.019	0.021
Total County	23,130	1.877	24,543	26,187	27,831	29,536	31,241		1.984	2.105	2.226	2.352	2.478
(7) 1-10 Drought Year Demand									2.103	2.231	2.360	2.493	2.626

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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.

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TABLE 12. MANATEE COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3),(11) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6),(10) DSS Domestic Self-Supply	9,467	0.591	10,306	11,511	12,736	14,007	15,225	62	0.643	0.718	0.795	0.874	0.950
6392 City Of Bradenton	65,412	6.087	65,918	66,517	66,751	67,090	67,475	93	6.134	6.190	6.212	6.243	6.279
10963 Town of Longboat Key	17,955	1.678	18,528	18,785	19,061	19,362	19,681	93	1.731	1.755	1.781	1.809	1.839
12443 City Of Palmetto	17,416	1.444	17,621	17,927	18,295	18,763	19,252	83	1.461	1.487	1.517	1.556	1.597
(12) 13154 Walker Communities	25	0.002	25	25	25	25	25	93	0.002	0.002	0.002	0.002	0.002
(9),(10) 13343 Manatee County Utility Operations	302,634	29.234	329,224	362,563	393,656	421,036	445,228	97	31.803	35.024	38.027	40.672	43.009
(13) 20235 ERS/Palmetto Park	22	0.003	22	22	22	22	22	150	0.003	0.003	0.003	0.003	0.003
(8) Additional Irrigation Demand		1.562							1.670	1.805	1.931	2.043	2.144
(11) Total County	412,930	40.601	441,644	477,351	510,546	540,304	566,908		43.448	46.985	50.268	53.203	55.823
(7) 1-10 Drought Year Demand									46.055	49.804	53.284	56.395	59.172

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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 2013 functional population estimates and projections for Manatee County.

(12) 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) Walker Communities (WUP# 13154): Population information was obtained from permit issued in 2008. Per capita is the countywide per capita average.

b) ERS/Palmetto Pak (WUP# 20235): Per capita and population information was obtained from permit issued in 2011.

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TABLE 13. MARION COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	43,582	5.823	48,261	53,714	58,992	64,056	69,074	134	6.448	7.176	7.881	8.558	9.228
1156 Bay Laurel Community Development Di	8,764	2.149	11,075	13,979	16,841	19,268	21,184	245	2.716	3.428	4.129	4.724	5.194
2999 Marion Utilities Inc	1,169	0.139	1,179	1,192	1,205	1,218	1,230	119	0.140	0.141	0.143	0.144	0.146
5643 Utilities Inc of Florida, ATTN: Patrick FI	1,090	0.158	1,108	1,131	1,153	1,174	1,202	145	0.161	0.164	0.167	0.170	0.174
(9) 5731 Foxwood Mobile Home	504	0.081	504	504	504	504	504	161	0.081	0.081	0.081	0.081	0.081
6151 Marion Co Utilities Dept	30,057	4.946	34,963	41,013	46,963	52,788	59,563	165	5.753	6.748	7.727	8.686	9.801
(9) 6574 Marion Utilities, Inc. - Libra Oaks	320	0.032	320	320	320	320	320	100	0.032	0.032	0.032	0.032	0.032
(9) 6619 Windstream Utilities Company	418	0.063	418	418	418	418	418	150	0.063	0.063	0.063	0.063	0.063
6792 Sun Communities Saddle Oak	622	0.099	622	622	622	622	622	159	0.099	0.099	0.099	0.099	0.099
(9) 6884 Marion Utilities Inc	350	0.053	350	350	350	350	350	150	0.053	0.053	0.053	0.053	0.053
8005 Marion Utilities Inc	1,041	0.158	1,093	1,194	1,281	1,286	1,287	152	0.166	0.181	0.195	0.196	0.196
8020 Century Fairfield Village Ltd	500	0.058	500	500	500	500	500	116	0.058	0.058	0.058	0.058	0.058
8020 Association of Marion Landing Owners,	1,127	0.164	1,127	1,127	1,127	1,127	1,127	146	0.164	0.164	0.164	0.164	0.164
(9) 8189 Hamic Estates	8	0.001	8	8	8	8	8	150	0.001	0.001	0.001	0.001	0.001
8339 City Of Dunnellon	6,288	0.799	6,671	7,131	7,588	8,038	8,480	127	0.847	0.906	0.964	1.021	1.077
8481 Marion Utilities Inc & Spruce Creek De	4,227	0.680	4,856	5,626	6,212	6,504	6,772	161	0.781	0.905	0.999	1.046	1.089
9360 Windstream Utilities Company	2,071	0.503	2,254	2,480	2,703	2,922	3,139	243	0.548	0.603	0.657	0.710	0.763
(9) 9425 Sweetwater Oaks	500	0.075	500	500	500	500	500	150	0.075	0.075	0.075	0.075	0.075
(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	409	0.045	409	409	409	409	409	111	0.045	0.045	0.045	0.045	0.045
(9) 11523 Westwood MHP	262	0.026	262	262	262	262	262	100	0.026	0.026	0.026	0.026	0.026
(9) 20098 Satake Village Utilities	96	0.014	96	96	96	96	96	150	0.014	0.014	0.014	0.014	0.014
(9) 20213 City of Dunnellon - Juliette Falls	113	0.017	113	113	113	113	113	150	0.017	0.017	0.017	0.017	0.017
(8) Additional Irrigation Demand		0.311							0.350	0.398	0.445	0.488	0.532
Total County	103,648	16.406	116,819	132,818	148,296	162,612	177,287		18.651	21.392	24.048	26.484	28.941
(7) 1-10 Drought Year Demand									19.770	22.675	25.491	28.073	30.677

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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 is the countywide average per capita.

b) Marion Utilities, Inc. (WUP# 6574): Per capita and population information were obtained from permit issued in 1994.

c) Windstream Utilities Company (WUP# 6619): Per capita and population information were obtained from permit issued in 1994.

d) Marion Utilities, Inc. (WUP# 6884): Per capita and population information were obtained from permit issued in 1994.

e) Hamic Estates (WUP# 8189): Per capita and population information were obtained from permit issued in 1995.

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

g) Dogwood Acres MHP (WUP# 10852): Per capita and population information were obtained from permit issued in 2013.

h) Westwood MHP (WUP# 11523): Per capita and population information were obtained from permit issued in 1996.

i) Sweetwater Oaks (WUP# 9425): Per capita and population information were obtained from permit issued in 2010.

j) Satake Village Utilities (WUP# 20098): Per capita and population information were obtained from permit issued in 2010.

k) City of Dunnellon - Juliet Falls (WUP# 20213): Per capita information obtained from permit issued in 2012.

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TABLE 14. PASCO COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(2) 2010 POPULATION TIMES		(3) PROJECTED POPULATION					(5) PROJECTED WATER DEMANDS (MGD)						
	(1) 2010 POPULATION	2008-2012 GPCD (MGD)	2015	2020	2025	2030	(4) 2008-2012 AVG GPCD	2015	2020	2025	2030	2035		
(6) DSS	Domestic Self-Supply	98,118	7.928	118,607	144,553	171,194	199,206	225,421	81	9.583	11.680	13.832	16.096	18.214
279	Florida Governmental Utility Authority	3,536	0.270	3,547	3,547	3,547	3,547	3,547	76	0.271	0.271	0.271	0.271	0.271
540	Holiday Gardens Utilities, Inc.	1,005	0.076	1,012	1,013	1,013	1,013	1,013	76	0.077	0.077	0.077	0.077	0.077
543	Crestridge Utility Corporation	1,345	0.086	1,345	1,346	1,346	1,347	1,347	64	0.086	0.086	0.086	0.086	0.086
590	Florida Governmental Utility Authority	7,971	0.978	8,902	9,539	10,109	10,169	10,187	123	1.093	1.171	1.241	1.248	1.250
(10) 923	Traveler's Rest Resort	1,200	0.096	1,200	1,200	1,200	1,200	1,200	80	0.096	0.096	0.096	0.096	0.096
964	C S Water Company Inc.	898	0.096	913	932	952	979	1,006	106	0.097	0.099	0.101	0.104	0.107
1631	City of Dade City	11,827	1.373	12,044	12,323	12,646	13,012	13,366	116	1.398	1.430	1.468	1.510	1.551
2043	Orangewood Lakes Mobile Home Comr	1,037	0.081	1,037	1,037	1,038	1,039	1,041	78	0.081	0.081	0.081	0.081	0.081
(10) 2319	Florida Governmental Utility Authority	284	0.016	288	289	289	290	290	56	0.016	0.016	0.016	0.016	0.016
(10) 2567	Country- Aire	624	0.071	624	624	624	624	624	113	0.071	0.071	0.071	0.071	0.071
2978	Florida Governmental Utility Authority	5,712	0.545	5,811	5,937	6,059	6,177	6,267	95	0.555	0.567	0.578	0.590	0.598
3182	Florida Governmental Utility Authority	29,130	3.111	31,438	34,403	36,329	36,769	37,109	107	3.358	3.674	3.880	3.927	3.963
(10) 3528	Tippecanoe Village Homenowners	473	0.037	473	473	473	474	474	78	0.037	0.037	0.037	0.037	0.037
3590	Utilities Inc of Florida, ATTN: Patrick FI	2,201	0.108	2,212	2,226	2,235	2,235	2,235	49	0.108	0.109	0.109	0.109	0.109
(10) 3619	Country Aire Service MHP	289	0.043	290	290	290	290	291	150	0.043	0.043	0.044	0.044	0.044
3668	Utilities Inc of Florida, ATTN: Patrick FI	2,419	0.161	2,626	2,859	2,920	2,929	2,929	66	0.174	0.190	0.194	0.195	0.195
3677	Florida Governmental Utility Authority	1,574	0.100	1,574	1,574	1,575	1,575	1,575	64	0.100	0.100	0.100	0.100	0.100
3692	City Of Port Richey	14,579	0.988	14,619	14,686	14,743	14,802	14,858	68	0.991	0.996	1.000	1.004	1.007
4550	City Of San Antonio	1,291	0.130	1,353	1,430	1,623	1,926	2,204	101	0.136	0.144	0.164	0.194	0.222
4668	Utilities Inc of Florida, ATTN: Patrick FI	1,221	0.067	1,237	1,239	1,239	1,239	1,239	55	0.068	0.068	0.068	0.068	0.068
4669	Hudson Water Works Inc	7,044	0.623	7,150	7,284	7,507	7,823	8,135	88	0.632	0.644	0.664	0.692	0.719
4734	City Of New Port Richey	31,285	2.781	31,626	32,095	32,281	32,452	32,613	89	2.812	2.853	2.870	2.885	2.899
(10) 5294	Florida Villas Mobile Home Park	105	0.008	105	105	105	105	105	75	0.008	0.008	0.008	0.008	0.008
(10) 5953	Hacienda Utilities	1,033	0.089	1,033	1,033	1,033	1,033	1,033	86	0.089	0.089	0.089	0.089	0.089
6040	City of Zephyrhills	22,484	2.484	23,609	25,018	26,148	27,193	28,193	111	2.609	2.765	2.889	3.005	3.115
(10) 6223	Florida Governmental Utility Authority	1,099	0.077	1,099	1,099	1,099	1,099	1,099	70	0.077	0.077	0.077	0.077	0.077
(10) 6230	Settlers Rest Rv Park	331	0.033	331	331	331	331	331	100	0.033	0.033	0.033	0.033	0.033
(10) 6640	Gem Estates	440	0.066	440	440	440	440	440	150	0.066	0.066	0.066	0.066	0.066
(10) 6867	Utilities Inc of Florida	1,791	0.100	1,791	1,791	1,791	1,791	1,791	56	0.100	0.100	0.100	0.100	0.100
(10) 6881	Ramblewood Mobile Home Community	360	0.060	360	360	360	360	360	167	0.060	0.060	0.060	0.060	0.060
(10) 6982	Jeffery A. Cole	350	0.013	350	350	350	350	350	36	0.013	0.013	0.013	0.013	0.013
7299	L W V Utilities Inc	984	0.103	986	989	1,003	1,030	1,056	105	0.103	0.104	0.105	0.108	0.111
(10) 7359	Timber Lake Estates	1,200	0.096	1,200	1,200	1,200	1,200	1,200	80	0.096	0.096	0.096	0.096	0.096
(10) 7588	Cav. Homeowners Cooperative	700	0.050	700	700	700	700	700	72	0.050	0.050	0.050	0.050	0.050
(10) 7718	Florida Governmental Utility Authority	877	0.075	877	877	877	877	877	85	0.075	0.075	0.075	0.075	0.075
(10) 7745	Florida Governmental Utility Authority	800	0.091	800	800	800	800	800	114	0.091	0.091	0.091	0.091	0.091
(10) 7982	Land O' Lakes Village Apartments	640	0.064	640	640	640	640	640	100	0.064	0.064	0.064	0.064	0.064
7999	Florida Governmental Utility Authority	1,937	0.139	1,952	1,972	1,996	2,024	2,047	72	0.140	0.141	0.143	0.145	0.147
(10) 8134	Spanish Trails W Mobile Home	879	0.065	879	879	879	879	879	74	0.065	0.065	0.065	0.065	0.065
8417	Florida Governmental Utility Authority	7,516	0.379	7,521	7,528	7,532	7,535	7,539	50	0.379	0.379	0.380	0.380	0.380
(10) 8491	Parrish Properties	956	0.060	956	956	956	956	956	63	0.060	0.060	0.060	0.060	0.060
(10) 9125	Conner Properties	188	0.028	188	188	188	188	188	150	0.028	0.028	0.028	0.028	0.028
(10) 9183	Sunburst Rv Park	156	0.016	156	156	156	156	156	100	0.016	0.016	0.016	0.016	0.016
(10) 9666	Southfork Mobile Home Community	434	0.061	434	434	434	434	434	140	0.061	0.061	0.061	0.061	0.061
(10) 11082	Florida Governmental Utility Authority	934	0.027	934	934	934	934	934	29	0.027	0.027	0.027	0.027	0.027
11863	Pasco Co Utilities	209,105	25.998	228,670	252,170	273,107	290,887	306,535	124	28.430	31.352	33.955	36.166	38.111
(9) 99906	Arbor Oaks	344	0.029	344	344	344	344	344	86	0.029	0.029	0.029	0.029	0.029
(9) 99915	Orchid Lake Utilities	677	0.058	677	677	677	677	677	86	0.058	0.058	0.058	0.058	0.058
(8)	Additional Irrigation Demand		3.667							4.014	4.440	4.840	5.211	5.551
Total County		481,383	53.702	526,963	582,867	635,315	684,081	728,634		58.726	64.851	70.526	75.682	80.365
(7)	1-10 Drought Year Demand									62.250	68.742	74.758	80.222	85.186

Notes:

- MGD = million gallons per day
- (1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.
- (2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.
- (3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.
- (4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.
- (5) Computed as projected population multiplied by 2008-2012 average per capita water use.
- (6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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.
- (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 WMS, the per capita is assumed to equal the county average.
- a) Country- Aire (WUP# 2567): Per capita and population information were obtained from permit issued in 2012.
- b) Florida Villas Mobile Home Park (WUP# 5294): Per capita and population information were obtained from permit issued in 2005.
- c) Settlers Rest Rv Park (WUP# 6230): Per capita and population information were obtained from permit issued in
- d) Ramblewood Mobile Home Community (WUP# 6881): Per capita and population information were obtained from permit issued in 2009.
- e) Timber Lake Estates (WUP# 7359): Per capita and population information were obtained from permit issued in 2009.
- f) Land O' Lakes Village Apartments (WUP# 7982): Per capita and population information were obtained from permit issued in 1995.
- g) Spanish Trails W Mobile Home (WUP# 8134): Per capita and population information were obtained from permit issued in 1995.
- h) Conner Properties (WUP# 9125): Per capita and population information were obtained from permit issued in 1998.
- i) Sunburst Rv Park (WUP# 9183): Per capita and population information were obtained from permit issued in 1998.
- j) Traveler's Rest Resort (WUP# 923): Per capita and population information were obtained from permit issued in 2009.
- k) Florida Governmental Utility Authority (WUP# 2319): Permittee in the process of renewing permit. Per capita and population information were obtained from proposed per capita and population numbers.
- l) Tippecanoe Village Homenowners (WUP# 3528): Per capita is the countywide average per capita.
- m) Country Aire Service MHP (WUP# 3619): Per capita and population information were obtained from permit issued in 2011.
- n) Hacienda Utilities (WUP# 5953): Per capita and population information were obtained from permit issued in 2012.
- o) Florida Governmental Utility Authority (WUP# 6223): Per capita and population information were obtained from permit issued in 2013.
- p) Gem Estates (WUP# 6640): Per capita and population information were obtained from permit issued in 1994.
- q) Utilities Inc of Florida (WUP# 6867): Per capita and population information were obtained from permit issued in 2013 (draft).
- r) Jeffery A. Cole (WUP# 6982): Per capita and population information were obtained from permit issued in 2009.
- s) Cav. Homeowners Cooperative (WUP# 7588): Per capita and population information were obtained from permit issued in 2012.
- t) Florida Governmental Utility Authority (WUP# 7718): Per capita and population information were obtained from permit issued in 2002.
- u) Florida Governmental Utility Authority (WUP# 7745): Per capita and population information were obtained from permit issued in 2010.
- v) Parrish Properties (WUP# 8491): Per capita and population information were obtained from permit issued in 2012.
- w) Southfork Mobile Home Community (WUP# 9666): Per capita and population information were obtained from permit issued in 2009.
- x) Aqua Utilities Florida Incorporated (WUP# 11082): Per capita and population information were obtained from 2010 Public Supply Annual Report.

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TABLE 15. PINELLAS COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	5,275	0.311	5,298	5,316	5,331	5,344	5,355	59	0.313	0.314	0.315	0.315	0.316
742 City Of Tarpon Springs	29,820	2.667	30,004	30,175	30,331	30,485	30,623	89	2.684	2.699	2.713	2.727	2.739
2980 City Of Dunedin	41,914	3.688	42,077	42,105	42,124	42,137	42,145	88	3.703	3.705	3.707	3.708	3.709
2981 City of Clearwater	131,351	11.712	133,180	133,301	133,386	133,453	133,496	89	11.876	11.886	11.894	11.900	11.904
7692 Town Of Belleair	4,308	0.601	4,314	4,314	4,314	4,314	4,314	140	0.602	0.602	0.602	0.602	0.602
(9) 9423 Southern Comfort MHP	550	0.077	550	550	550	550	550	140	0.077	0.077	0.077	0.077	0.077
10350 Utilities Inc of Florida	846	0.035	846	846	846	846	846	42	0.035	0.035	0.035	0.035	0.035
10795 City Of Gulfport	14,440	1.015	14,468	14,471	14,473	14,474	14,474	70	1.017	1.017	1.017	1.018	1.017
11218 City Of Oldsmar	15,380	1.353	15,564	15,658	15,744	15,819	15,871	88	1.369	1.377	1.385	1.391	1.396
11245 City of Safety Harbor	17,287	1.673	17,373	17,374	17,373	17,373	17,372	97	1.682	1.682	1.682	1.682	1.682
12351 City of Pinellas Park	76,713	4.625	77,018	77,194	77,354	77,506	77,630	60	4.643	4.654	4.663	4.672	4.680
20142 Pinellas County	479,999	41.464	486,642	487,294	487,836	488,329	488,723	86	42.038	42.094	42.141	42.183	42.217
20143 City of St. Petersburg	272,355	24.642	274,023	274,245	274,433	274,600	274,732	90	24.793	24.813	24.830	24.845	24.857
(8) Additional Irrigation Demand		5.635							5.692	5.700	5.706	5.712	5.717
(10) Total County	1,090,237	99.499	1,101,358	1,102,843	1,104,095	1,105,231	1,106,132		100.523	100.656	100.767	100.868	100.948
(7) 1-10 Drought Year Demand									106.554	106.695	106.813	106.920	107.005

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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): Per capita and population information were obtained from permit issued in 2009.

(10) These estimates and projections exceed BEBR High and GISA 2013 functional population estimates and projections for Pinellas County.

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TABLE 16. POLK COUNTY POPULATION ESTIMATES AND PROJECTIONS

(6)	WUP	(2) 2010 POPULATION TIMES		PROJECTED POPULATION					(3) Gross Per Capita	(4) PROJECTED WATER DEMANDS (MGD)				
		(1) 2010 POPULATION	2006-2010 GPCD (MGD)	2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
	Domestic Self-Supply & Small Utility	41,418	4.16	46,868	53,891	60,527	68,064	76,409	NA	4.66	5.3	5.9	6.59	7.35
	CFWI Large Utilities (Below)													
	143 Mountain Lake Corporation	345	0.130	351	357	364	370	377	369	0.13	0.13	0.13	0.14	0.14
	341 City Of Bartow	24,281	3.278	25,734	27,722	30,219	32,997	35,850	135	3.47	3.74	4.08	4.45	4.84
	645 City Of Fort Meade	7,988	0.831	8,158	8,406	8,750	9,155	9,613	104	0.85	0.87	0.91	0.95	1.00
	1616 Lake Region Mobile Home Owners Inc	1,191	0.368	1,191	1,192	1,192	1,193	1,193	309	0.37	0.37	0.37	0.37	0.37
	2332 Town Of Lake Hamilton	1,260	0.186	1,261	1,266	1,281	1,303	1,331	148	0.19	0.19	0.19	0.19	0.20
	4005 Crooked Lake Park Water Company	2,527	0.293	2,795	3,123	3,469	3,822	4,175	116	0.32	0.36	0.40	0.44	0.48
	4607 City Of Winter Haven	67,596	10.748	72,542	78,444	84,566	90,168	95,203	159	11.53	12.47	13.45	14.34	15.14
	4658 City of Lake Wales	23,588	3.184	25,310	27,431	29,653	31,907	34,162	135	3.42	3.70	4.00	4.31	4.61
	4912 City Of Lakeland Water Utilities Water A	158,608	24.426	166,521	175,480	184,846	194,676	203,345	154	25.64	27.02	28.47	29.98	31.32
	5251 Grenelefe Resort LLC	2,520	0.870	2,529	2,541	2,553	2,564	2,576	355	0.87	0.87	0.88	0.88	0.89
	5750 City of Davenport	5,284	0.793	5,900	6,667	7,485	8,317	9,141	150	0.89	1.00	1.12	1.25	1.37
	5870 City Of Frostproof	4,516	0.772	4,538	4,578	4,648	4,740	4,852	171	0.78	0.78	0.79	0.81	0.83
	5893 Town of Dundee Public Works Dept	4,868	0.691	5,200	5,620	6,085	6,571	7,067	142	0.74	0.80	0.86	0.93	1.00
	6124 City Of Mulberry	4,528	0.385	4,528	4,528	4,528	4,528	4,528	85	0.38	0.38	0.38	0.38	0.38
	6505 Polk County Utilities - NWRUSA	42,779	5.347	47,263	52,726	58,236	63,092	67,667	125	5.91	6.59	7.28	7.89	8.46
	6506 Polk County Utilities -SWRUSA	38,214	4.051	43,591	49,796	54,959	58,649	61,849	106	4.62	5.28	5.83	6.22	6.56
	6507 Polk County Utilities -CRUSA	11,422	0.994	12,204	13,275	14,700	16,336	18,109	87	1.06	1.15	1.28	1.42	1.58
	6508 Polk County Utilities - SERUSA	5,606	0.678	5,670	5,803	6,064	6,412	6,836	121	0.69	0.70	0.73	0.78	0.83
	6509 Polk County Utilities - NERUSA	34,290	6.549	40,100	46,918	51,855	55,399	58,237	191	7.66	8.96	9.90	10.58	11.12
	6624 City of Lake Alfred	8,049	1.304	8,746	9,382	10,008	10,632	11,230	162	1.42	1.52	1.62	1.72	1.82
	6920 City of Eagle Lake	6,248	0.674	6,610	7,078	7,620	8,197	8,794	108	0.71	0.76	0.82	0.89	0.95
	7119 City of Auburndale	32,014	5.795	33,507	35,388	37,614	39,535	41,472	181	6.06	6.41	6.81	7.16	7.51
	7187 CHC VII Ltd Century Realty Fund	1,086	0.222	1,124	1,169	1,214	1,258	1,260	204	0.23	0.24	0.25	0.26	0.26
	7878 Florida Governmental Utility Authority	1,828	0.223	1,857	1,889	1,913	1,933	1,953	122	0.23	0.23	0.23	0.24	0.24
	8054 Polk County Utilities - ERUSA	5,863	0.528	8,037	10,187	12,349	14,497	16,597	90	0.72	0.92	1.11	1.30	1.49
	8344 S V Utilities Ltd	900	0.130	900	900	900	900	900	144	0.13	0.13	0.13	0.13	0.13
	8468 City Of Polk City	7,177	0.660	7,676	8,305	9,024	9,791	10,577	92	0.71	0.76	0.83	0.90	0.97
	8522 City of Haines City	26,207	3.983	29,462	32,952	36,624	40,314	43,153	152	4.48	5.01	5.57	6.13	6.56
	13043 Cypress Lakes Utilities Inc	2,731	0.139	2,753	2,782	2,820	2,863	2,910	51	0.14	0.14	0.14	0.15	0.15
	Total County in SWFWMD (all utilities and DSS)	574,932	82.392	622,926	679,796	736,066	790,183	841,366		89.005	96.806	104.478	111.773	118.537
	DPCWUCA	42,779	5.347	47,263	52,726	58,236	63,092	67,667		5.91	6.59	7.28	7.89	8.46
	SWUCA	499,456	71.958	535,039	576,632	619,751	661,138	699,465		76.82	82.50	88.44	94.16	99.43
	CFWI Large Utilities (Public Supply)	533,514	78.232	576,058	625,905	675,539	722,119	764,957		84.34	91.51	98.58	105.18	111.19
(5)	1-10 Drought Year Demand									94.34	102.61	110.75	118.48	125.65
	DPCWUCA 1-10 Drought Year Demand									6.26	6.99	7.72	8.36	8.97
	SWUCA 1-10 Drought Year Demand	574,932								81.43	87.45	93.75	99.81	105.40
	CFWI Large Utilities 1-10 Drought Year Demand									89.41	97.00	104.49	111.49	117.86

Notes:

MGD = million gallons per day

(1) Estimate & projections of domestic self-supplied & utility population for District portion of county from Volume 2 of 2014 Regional Water Supply Plan for the Central Florida Water Initiative (April 2014).

http://cfwiwater.com/pdfs/CFWI_RWSP_FinalDraft_Vol2.pdf

(2) Estimate & projections of domestic self-supplied & utility demand for District portion of county from Volume 2 of 2014 Regional Water Supply Plan for the Central Florida Water Initiative (April 2014).

http://cfwiwater.com/pdfs/CFWI_RWSP_FinalDraft_Vol2.pdf

(3) Unless otherwise noted, gross per capitas are from the 2014 Regional Water Supply Plan for the Central Florida Water Initiative (April 2014). http://cfwiwater.com/pdfs/CFWI_RWSP_FinalDraft_Vol2.pdf.

(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.

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TABLE 17. SARASOTA COUNTY POPULATION ESTIMATES AND PROJECTIONS

WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6) DSS Domestic Self-Supply	52,465	2.854	59,709	69,968	79,478	88,135	95,517	54	3.248	3.806	4.324	4.795	5.196
2923 City of North Port	41,761	2.719	49,016	60,114	70,611	80,286	89,087	65	3.192	3.914	4.598	5.228	5.801
4318 City of Sarasota Public Works	72,636	6.493	74,713	75,468	75,820	76,072	76,300	89	6.679	6.747	6.778	6.801	6.821
(9) 4774 Japanese Gardens Homeowners Inc	823	0.029	823	823	823	823	823	35	0.029	0.029	0.029	0.029	0.029
4866 Englewood Water District	34,375	2.112	35,419	36,179	36,928	37,638	38,358	61	2.177	2.223	2.269	2.313	2.357
5393 City Of Venice	32,633	2.119	34,129	35,143	35,925	36,628	37,251	65	2.216	2.281	2.332	2.378	2.418
(9) 5456 Venice Ranch Mobile Home Estates	336	0.024	336	336	336	336	336	70	0.024	0.024	0.024	0.024	0.024
5807 Camelot Communities	1,794	0.188	1,794	1,794	1,794	1,794	1,794	105	0.188	0.188	0.188	0.188	0.188
7448 Royalty Resorts	1,254	0.090	1,254	1,254	1,254	1,254	1,254	72	0.090	0.090	0.090	0.090	0.090
8836 Sarasota County Board of County Com	208,810	17.029	215,758	221,079	225,662	228,966	231,439	82	17.596	18.030	18.404	18.673	18.875
(10) 99914 Pluris - South Gate Utilities	10,043	0.819	10,109	10,113	10,117	10,120	10,122	82	0.824	0.825	0.825	0.825	0.826
(8) Additional Irrigation Demand		4.890							5.170	5.482	5.766	6.015	6.232
Total County	456,930	39.367	483,060	512,270	538,749	562,053	582,282		41.432	43.639	45.626	47.358	48.856
(7) 1-10 Drought Year Demand									43.918	46.258	48.364	50.199	51.787

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 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) Japanese Gardens (WUP# 4774): Population and per capita information were obtained from the 2008 Public Supply Annual Report.

b) Venice Ranch Mobile Home Estates (WUP# 5456): Population and per capita information were obtained from permit issued on 2008.

(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.

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TABLE 18. SUMTER COUNTY POPULATION ESTIMATES AND PROJECTIONS

	WUP	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
				2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
(6)	DSS Domestic Self-Supply	18,362	3.177	25,869	34,733	44,571	53,645	62,051	173	4.475	6.009	7.711	9.281	10.735
(9)	1368 Lake Panasoffkee Water Assoc Inc	3,673	0.238	3,796	5,355	6,422	7,375	8,202	65	0.246	0.347	0.416	0.478	0.532
	2622 Continental Country Club Rd Inc	1,596	0.345	1,601	1,706	1,721	1,734	1,747	216	0.346	0.369	0.372	0.375	0.378
(9)	6519 City Of Bushnell	2,626	0.382	2,767	3,967	5,222	6,369	7,413	145	0.402	0.577	0.759	0.926	1.078
	7185 City Of Webster	1,020	0.101	1,022	1,026	1,269	1,491	1,693	99	0.102	0.102	0.126	0.148	0.168
	7799 Cedar Acres, Inc.	543	0.041	606	643	643	643	643	75	0.045	0.048	0.048	0.048	0.048
(11)	8135 City Of Wildwood City Mng	13,164	1.977	18,994	23,282	30,850	37,846	44,276	150	2.853	3.497	4.634	5.684	6.650
(12)	8193 City of Center Hill	1,426	0.170	1,437	1,525	2,630	3,640	4,558	119	0.171	0.181	0.313	0.433	0.542
(12)	10488 City of Coleman	637	0.041	638	800	1,029	1,240	1,434	65	0.041	0.052	0.067	0.081	0.093
(12)	12434 Jumper Creek Manor	233	0.035	233	233	233	233	233	150	0.035	0.035	0.035	0.035	0.035
(12)	12584 Village Parc Center	197	0.017	197	197	197	197	197	84	0.017	0.017	0.017	0.017	0.017
(10)	13005 The Villages of Marion and Sumter	60,741	16.342	70,951	78,284	79,392	80,462	81,412	269	19.089	21.062	21.360	21.648	21.903
(12)	20095 Southern Motor Coach Resort	800	0.070	800	800	800	800	800	88	0.070	0.070	0.070	0.070	0.070
(8)	Additional Irrigation Demand		0.133							0.163	0.193	0.221	0.247	0.271
	Total County	105,016	23.068	128,911	152,552	174,978	195,676	214,658		28.056	32.558	36.149	39.471	42.520
(7)	1-10 Drought Year Demand									29.739	34.512	38.318	41.839	45.071

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal, year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) County residential per capita rate from the District's reports titled Estimated Water Use, 2008-2012 was used to calculate average estimated 2008-2012 usage, Table A-2. If a county residential per capita rate was not available, the District's 2008-2012 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 300 gallons per well per day.

(9) The population estimate is from the Table A-1 of the 2010 Estimated Water Use. The projections are based on the 2010 population served estimated and growth from the 20

The growth rates are from GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013).

(10) At a meeting on the Withlacoochee Regional Water Supply Authority on April 24, 2012, Trey Arnett stated The Villages is scheduled to built out at 92,152 by 2017.

(11) Per Susan Farnsworth, Sumter County Planner, projections for the years 2020, 2025, 2030, and 2035, are from *City of Wildwood Residential Needs Analysis for 2008 Comprehensive Plan* by Fishkind & Associates, Inc. (August 26, 2008).

(12) 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) City of Center Hill (WUP# 8193): Per capita information obtained from permit issued in 2012.

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

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

d) Village Parc Center (WUP# 12584): Population and per capita information were obtained from permit issued in 2010.

e) Southern Motor Coach Resort (WUP# 20095): Population and per capita information were obtained from permit issued in 2010.

(13) 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.

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TABLE 19. DISTRICT TOTAL POPULATION ESTIMATES AND WATER DEMAND PROJECTIONS

	(1) 2010 POPULATION	(2) 2010 POPULATION TIMES 2008-2012 GPCD (MGD)	(3) PROJECTED POPULATION					(4) 2008-2012 AVG GPCD	(5) PROJECTED WATER DEMANDS (MGD)				
			2015	2020	2025	2030	2035		2015	2020	2025	2030	2035
Domestic Self-Supply	521,806	45.122	594,540	692,739	795,003	906,254	1,013,247	72	51.834	60.629	69.797	79.537	88.888
Utilities	4,714,804	532.067	4,981,754	5,278,630	5,549,771	5,778,723	5,984,693	105	538.081	573.427	605.131	632.207	656.602
(6) Additional Irrigation Demand		26.040							27.510	29.225	30.819	32.262	33.565
Total District	5,236,610	577.189	5,576,294	5,971,369	6,344,774	6,684,977	6,997,940		617.424	663.280	705.746	744.006	779.055
(7) 1-10 Drought Year Demand									654.470	703.077	748.091	788.646	825.798
									617.424	663.280	705.746	744.006	779.055

Notes:

MGD = million gallons per day

(1) 2010 Estimate was generated using 2012-2015 growth rates from The University of Florida Bureau of Economic and Business Research, Projections of Florida Population by County, 2015-2040, with Estimates for 2012, Florida Population Studies, Bulletin 165, March 2013.

(2) Estimated using average 2008-2012 GPCD, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012.

(3) Source: Population Projections calculated using GIS Associates, Inc.'s population projection model data and the PS_SERVICEAREAS GIS layer (Date: 24JAN2013). These total functional population estimates includes tourists and net commuters, if applicable to your service area.

(4) For utilities with at least 0.1 mgd average annual withdrawal (i.e., the utilities individually listed in the table), year 2008-2012 average estimated per capita water use rates, as provided in Table A-1 of the District's reports titled Estimated Water Use, 2008-2012 were used to project demands. See footnotes 6 and 8 for descriptions of the per capita used for the Domestic Self-Supply and small general permits.

(5) Computed as projected population multiplied by 2008-2012 average per capita water use.

(6) 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 300 gallons per well per day.

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

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

County	2010		2015		2020		2025		2030		2035		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	17.776	18.843	18.496	19.606	19.385	20.548	20.164	21.373	20.825	22.075	21.450	22.737	3.674	3.895	20.7%	20.7%
Citrus	21.116	22.383	22.419	23.764	24.112	25.559	25.661	27.201	27.035	28.657	28.254	29.949	7.138	7.566	33.8%	33.8%
DeSoto	2.816	2.985	2.869	3.041	2.938	3.114	2.999	3.179	3.061	3.244	3.115	3.302	0.299	0.317	10.6%	10.6%
Hardee	2.107	2.233	2.121	2.249	2.141	2.269	2.160	2.290	2.174	2.304	2.193	2.325	0.086	0.091	4.1%	4.1%
Hernando	25.361	26.882	27.552	29.205	30.201	32.013	32.673	34.633	34.906	37.000	36.881	39.094	11.521	12.212	45.4%	45.4%
Highlands	11.913	12.628	12.379	13.122	12.974	13.753	13.516	14.327	13.995	14.834	14.399	15.263	2.486	2.635	20.9%	20.9%
Hillsborough	139.088	147.433	149.644	158.623	162.397	172.141	174.323	184.782	184.630	195.708	194.085	205.730	54.997	58.297	39.5%	39.5%
Lake	0.100	0.106	0.120	0.127	0.140	0.148	0.160	0.170	0.190	0.201	0.210	0.223	0.110	0.117	110.0%	110.0%
Levy	1.877	1.989	1.984	2.103	2.105	2.231	2.226	2.360	2.352	2.493	2.478	2.626	0.601	0.637	32.0%	32.0%
Manatee	40.601	43.037	43.448	46.055	46.985	49.804	50.268	53.284	53.203	56.395	55.823	59.172	15.222	16.135	37.5%	37.5%
Marion	16.406	17.390	18.651	19.770	21.392	22.675	24.048	25.491	26.484	28.073	28.941	30.677	12.535	13.287	76.4%	76.4%
Pasco	53.702	56.924	58.726	62.250	64.851	68.742	70.526	74.758	75.682	80.222	80.365	85.186	26.662	28.262	49.6%	49.6%
Pinellas	99.499	105.469	100.523	106.554	100.656	106.695	100.767	106.813	100.868	106.920	100.948	107.005	1.449	1.536	1.5%	1.5%
Polk	82.392	87.335	89.005	94.345	96.806	102.615	104.478	110.747	111.773	118.479	118.537	125.649	36.145	38.314	43.9%	43.9%
Sarasota	39.367	41.729	41.432	43.918	43.639	46.258	45.626	48.364	47.358	50.199	48.856	51.787	9.489	10.059	24.1%	24.1%
Sumter	23.068	24.452	28.056	29.739	32.558	34.512	36.149	38.318	39.471	41.839	42.520	45.071	19.452	20.619	84.3%	84.3%
Total	577.189	611.820	617.424	654.470	663.280	703.077	705.746	748.091	744.006	788.646	779.055	825.798	201.866	213.978	35.0%	35.0%

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

Water Use by Planning Region	2010	2015	2020	2025	2030	2035	Change 2010-2035	% Change
Heartland Planning Region	703,334	755,745	818,259	879,703	938,309	993,423	290,089	41%
Northern Planning Region	556,278	619,288	691,051	759,130	822,189	881,448	325,170	58%
Southern Planning Region	1,091,872	1,154,994	1,230,668	1,299,980	1,361,420	1,416,080	324,207	30%
Tampa Bay Planning Region	2,885,126	3,046,268	3,231,391	3,405,961	3,563,060	3,706,989	821,864	28%
Districtwide	5,261,585	5,601,284	5,996,380	6,369,806	6,710,022	7,022,989	1,761,404	33%
Central Florida Water Initiative (CFWI)	575,960	624,173	681,296	737,811	792,176	843,601	267,641	46%
Dover Plant City Water Use Caution Area (DWUCA)	42,779	47,263	52,726	58,236	63,092	67,667	24,888	58%
North Central Florida Coordination Area (NCFCA)	208,664	245,730	285,369	323,274	358,289	391,946	183,282	88%
Southern Water Use Caution Area (SWUCA)	2,285,397	2,604,491	2,826,871	3,035,170	2,930,381	3,066,956	781,559	34%

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

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

Water Use by Planning Region	2010		2015		2020		2025		2030		2035		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	96.4	102.2	103.5	109.7	111.9	118.6	120.2	127.4	127.9	135.6	135.1	143.2	38.7	41.0	40%	40%
Northern Planning Region	87.9	93.2	98.8	104.7	110.5	117.1	120.9	128.2	130.4	138.3	139.3	147.6	51.4	54.4	58%	58%
Southern Planning Region	100.6	106.6	106.2	112.6	112.9	119.7	119.1	126.2	124.4	131.9	129.2	137.0	28.7	30.4	29%	29%
Tampa Bay Planning Region	292.3	309.8	308.9	327.4	327.9	347.6	345.6	366.4	361.2	382.9	375.4	397.9	83.1	88.1	28%	28%
Districtwide	577.2	611.8	617.4	654.5	663.3	703.1	705.7	748.1	744.0	788.6	779.1	825.8	201.9	214.0	35%	35%
Central Florida Water Initiative (CFWI)	82.5	87.4	89.1	94.5	96.9	102.8	104.6	110.9	112.0	118.7	118.7	125.9	36.3	38.4	44%	44%
Dover Plant City Water Use Caution Area (DWUCA)	5.3	5.7	5.9	6.3	6.6	7.0	7.3	7.7	7.9	8.4	8.5	9.0	3.1	3.3	58%	58%
Northern Tampa Bay (NTB) Water Use Caution Area	283.2	300.1	298.7	316.6	316.0	334.9	331.7	351.6	344.7	365.4	356.4	377.8	73.2	77.6	26%	26%
Southern Water Use Caution Area	243.3	257.9	282.9	299.8	307.5	325.9	330.6	350.4	309.6	328.2	324.0	343.5	80.8	85.6	33%	33%

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)		2010-2015 Population Growth Rate (3)	2010 Irrigation Well Estimates		2012 Irrigation Wells (4)		2015 Irrigation Well Estimates		
	2010	2015		# Wells	Withdrawal (mgd)	# Wells	Withdrawal (mgd)	# Wells	Withdrawal (mgd)	
Charlotte	185,995	193,550	0.041	5,991	1.797	6,088	1.826	6,234	1.870	
Citrus	150,309	159,011	0.058	3,101	0.930	3,173	0.952	3,281	0.984	
DeSoto	36,018	36,740	0.020	230	0.069	232	0.070	235	0.070	
Hardee	28,464	28,711	0.009	124	0.037	124	0.037	125	0.037	
Hernando	173,147	188,757	0.090	7,920	2.376	8,206	2.462	8,634	2.590	
Highlands	99,939	104,107	0.042	9,150	2.745	9,303	2.791	9,532	2.860	
Hillsborough	1,313,505	1,417,947	0.080	6,242	1.873	6,441	1.932	6,739	2.022	
Lake (5)	1,028	1,247	0.213	0	N/A	0	N/A	0	N/A	
Levy	23,130	24,543	0.061	51	0.015	52	0.016	54	0.016	
Manatee	412,930	441,644	0.070	5,205	1.562	5,350	1.605	5,567	1.670	
Marion	103,648	116,819	0.127	1,036	0.311	1,089	0.327	1,168	0.350	
Pasco	481,383	526,963	0.095	12,224	3.667	12,687	3.806	13,381	4.014	
Pinellas	1,090,237	1,101,358	0.010	18,782	5.635	18,859	5.658	18,974	5.692	
Polk (5)	599,907	647,916	0.080	6,608	N/A	6,820	N/A	7,137	N/A	
Sarasota	456,930	483,060	0.057	16,300	4.890	16,673	5.002	17,232	5.170	
Sumter	105,016	128,911	0.228	443	0.133	483	0.145	543	0.163	
Total (6)	5,261,585	5,601,284		86,800	26.040	88,760	26.63	91,700	27.510	

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 300 gallons per day per well (Southwest Florida Water Management District Irrigation Well Inventory , August 12, 2004, D.L. Smith and Associates).
- (2) Countywide permanent and total functional population in SWFWMD.
- (3) 2010 - 2015 population growth rate used to estimate 2010 and 2015 well estimates from 2012 well inventory
- (4) Analysis of District well inventory conducted December 2012.
- (5) Additional irrigation demand was not calculated in the 2014 Regional Water Supply Plan for the Central Florida Water Initiative (April 2014).
- (6) Total excludes Lake and Polk number of wells.