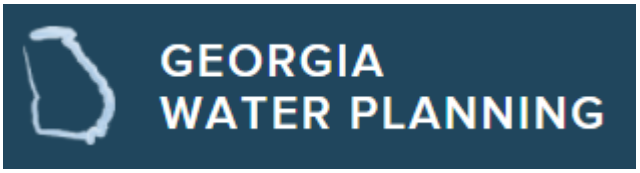
MUNICIPAL WATER DEMAND AND WASTEWATER FLOW FORECASTING METHODS REPORT



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PREPARED FOR

Regional Water Planning Councils

ON BEHALF OF

Georgia Environmental Protection Division

4 MAY 2021

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1.0 Introduction

The 2004 Comprehensive State-wide Water Management Planning Act authorized the development of the State Water Plan. The State Water Plan in turn, calls for state-wide regional water planning to provide the necessary local and regional perspectives to ensure each of Georgia's ten water planning region's water resources are sustainably managed. The inaugural Regional Water Plans were adopted in 2011 and were since reviewed and revised in updates adopted in 2017. Since that time, planning efforts have continued to position the Regional Water Planning Councils for the next plan update. Foundational to the plan updates is an update of the water demand and wastewater flow projections through the planning horizon, currently 2060. The water demand and wastewater flow projections are being updated for agricultural, thermoelectric power generation (energy), industrial, and municipal water-using sectors separately. This methods report describes the data sources, update process, methodology, and results of the municipal projection updates.

Work on the updated municipal water demand and wastewater flow projections began by gathering updated data on existing withdrawals, discharges, and permitted utilities, as well as population projection updates prepared for the Governor's Office of Planning and Budget. The projection effort continued with the development of a stakeholder review and input process and their review of the updated data and the projection methodology to be used. The review and input process and updated data is described in the following sections, followed by a summary of the input received, the incorporation of input in the forecasting process, and the results of the forecasts for water demands and for wastewater flows on a county basis. Following public review and comment on the draft report, the final *Municipal Water Demand and Wastewater Flow Forecasting Methods Report* was prepared for the Regional Water Planning Councils.

2.0 Stakeholder Review and Input Process

A municipal forecasting stakeholder group was formed as a liaison between the municipal forecasting team and the Regional Water Planning Councils. Each of the ten councils appointed a council member to the stakeholder group. While the Metro Water District has a separate forecasting effort, a Metro Water District representative was invited to attend as well. Members of the stakeholder group had the following responsibilities:

- Participate in stakeholder group meetings to review updated information sources, forecast methodology, and draft forecasts
- Review and provide input on the methodology for the municipal water and wastewater forecasts
- Interface with the Regional Water Planning Council members to solicit regional feedback
- Review draft and final water demand and wastewater flow forecasts

Three municipal forecasting stakeholder group meetings were held during the municipal forecasting effort. The first meeting was used to review the data sources and assumptions and inquire about

adjustments specific to the planning regions. Resources were provided as handouts in preparation for the meeting to highlight information including historic wastewater flows and water demands, previous per capita demand values, percent of septic users in a County, and the water demand and wastewater flow forecasts developed for the 2017 Regional Water Plans.

Following the initial stakeholder group meeting, the municipal forecasting team sent emails to all water withdrawal and wastewater discharge permittees in the state to solicit feedback about their specific systems. Separate emails were sent to the withdrawal permittees and wastewater discharge permittees, broken down by planning region, and the stakeholder group member for each region was copied on the emails to assist in the collection of input. The types of information that was solicited from the water withdrawal and wastewater discharge permittees that could contribute to the demand forecasts included:

- Recent, large commercial or industrial demands supplied from the municipal system – or wastewater contributions from such entities – that would not be reflected in recent water use or discharge data;
- Changes in transient population (military bases, tourism, colleges, prisons, etc.) that may have significant impacts on the system and may not be proportional to residential population change;
- Major shifts between self-supplied users (either private wells or septic tanks) and municipal system users;
- Interconnections between systems in neighboring counties; or
- Other factors that are relevant to forecasts for the system, such as planned expansions.

Following the receipt of additional input on factors affecting the municipal forecasts, draft water demand and wastewater flow forecasts were developed using the proposed methodology, the updated data sources and the input received. The draft forecasts were discussed at the second municipal stakeholder group meeting to receive additional feedback. Additional input was provided by the stakeholder group members after reviewing the draft forecasts.

In addition to the input from the municipal forecasting group, the industrial forecasting team, working in parallel to produce industrial water and wastewater forecasts, solicited information from a stakeholder group of industry leaders in Georgia. While many industries have separate water withdrawal and wastewater discharge permits, there are some industrial users that purchase water from municipalities. Industries grow and develop independently from factors such as population and employment change in a County. Therefore, it is important that industrial flows be forecasted separately from municipal flows. The municipal forecasting team relied on information received from the industrial stakeholder group to separate the larger municipally-supplied industrial flows (0.2 MGD or larger) for the purposes of forecasting. The specific information received and adjustments made are discussed in more detail in Section 4.

Following the preparation of the updated forecasts, the draft forecast results were noticed for public review and comment. Comments received were incorporated into the updated forecasts. The final stakeholder meeting was held to discuss the finalized municipal water demand and wastewater flow forecasts prior to sharing them during the Regional Water Planning Council meetings.

3.0 Discussion of Updated Data Sources

3.1 OPB October 2019 Population Projections

The municipal water demand and wastewater flow projections rely on population projections. In the State of Georgia, the Governor's Office of Planning and Budget (OPB) is responsible for preparing and maintaining official demographic data for the state (O.C.G.A. § 45-12-171). Population projections for the state and its 159 counties were prepared for OPB by the University of Georgia's Carl Vinson Institute of Government's Applied Demography Program. The most current projection data were published in June 2019 and then revised in October 2019.

The population projections published in October 2019 were derived from post-recession data in an effort to capture new trends not influenced by the disruptions observed during the 2007-2009 recession. The June 2019 projections relied upon data from the years 2013 to 2017, and those have been updated with information on births, deaths, and migration counts from the period 2014 to 2018.

The population projections show the following general trends statewide, with variation by county:

1. Sub-replacement fertility rates - births are lower than necessary to replenish the population.
2. Lower pace of natural increase - rapidly aging Baby Boomer generation and higher levels of mortality, together with lower births results in a lower rate of increase in population.
3. Reliance on migration to the state, primarily domestic but including foreign, to increase population growth.
4. Racial and ethnic diversification.
5. Continued rural depopulation and urban expansion.

The population projections for each planning region, by county, are shown in the "[Region] Population Projections" tables in Appendices 1-10.

3.2 Georgia Water Loss Audit Data

The Georgia Water Stewardship Act (2010) mandated that, starting in 2011, water providers serving a population of 3,300 or more must conduct an annual water system audit following the guidelines in the Georgia Water System Audit and Water Loss Control Manual (Georgia Department of Natural Resources [DNR], 2016) and submit it to EPD for posting on their website. Subsequently, a Qualified Water Loss Auditor training program was developed, and utilities performing the water audit were required to submit information validated by a responsible Qualified Water Loss Auditor (QWLA).

The information provided in the water loss audits was used to calculate the per capita water use for each county. The water audits have a "Water Supplied" input which represents the volume of water entering the water distribution system for use by their customers. This value includes water losses in the distribution and metering system and accounts for any imports and/or exports to and from other systems. The total per capita water use of the water system can be calculated using the "Water Supplied" value and dividing it by the population served from the EPA's Safe Drinking Water Information System (SDWIS) database, maintained by Georgia EPD. If there is more than one system in a county with a submitted water loss audit, a weighted average per capita was calculated for that county based on the population served. A weighted average using four years of water loss audit data (2015-2018) was used in the calculation of the per capita water use for this forecasting effort. Surface water treatment plants typically have in-plant water use that requires greater water withdrawals than the water produced; therefore, 3 percent was added as a reasonable estimate to counties that have surface water sources to account for treatment losses.

Some counties throughout Georgia only have water systems that serve less than 3,300 people and are not required to submit audits to EPD. Alternate methods were used to calculate those water systems' per capita water use for forecasting, such as using their withdrawal information divided by the population served value that was obtained from the EPA SDWIS database.

The per capita information (presented as a weighted average per capita for each county), by region, is included in the "[Region] Per Capita Water Demand (gpcd)" tables in Appendices 1-10. In those tables, the updated per capita information (based on the 2015-18 water audits, where available) is compared to the per capita values used for each county in the prior 2011 and 2017 Regional Water Plans.

3.3 USGS 2015 Report

In 2019, the USGS published the Estimated Use of Water in Georgia for 2015 and Water-Use Trends, 1985-2015 (USGS 2015 Report), which presents information such as withdrawals, consumptive use, return flows, and losses. Selected data from this report was used as reference for the municipal water and wastewater forecasting efforts. For this update, the USGS 2015 Report was used to obtain the self-supplied portion of the population for each county as observed in 2015. This ratio was maintained throughout the planning horizon unless additional, more detailed input was received. Information about self-supplied estimates for each planning region, by county, as shown in the "[Region] Self-Supplied Percent Ratio and Per Capita (gpcd)" tables in Appendices 1-10.

3.4 Surface Water and Groundwater Withdrawal Data

Any entity that withdraws more than 100,000 gallons per day (gpd) from a groundwater source or more than 100,000 gpd as a monthly average from a surface water source is required to obtain a water withdrawal permit from EPD. Permit holders are then required to submit a monthly water withdrawal report. EPD submitted the following information to the forecasting team and key components were used during the forecasting process:

1. Active surface water and groundwater permits. The data summarized the permit limits per County and Region.

2. Monthly surface water and groundwater withdrawal data from 2015 through 2019 per permit holder were summarized per County and Region. The 2019 annual average day demand (AADD) was used to establish the baseline withdrawal per water source and permit holder. The baseline split within each county was kept constant throughout the planning horizon unless additional, more detailed information was received through input from a water system.

The permitted withdrawal limits and 2019 withdrawal values for permitted municipal groundwater and surface water withdrawals are shown, by region and county, in the "[Region] Municipal Groundwater Withdrawals and Forecast" and "[Region] Municipal Surface Water Withdrawals and Forecast" tables in Appendices 1-10.

3.5 Georgia Department of Public Health Septic Information

The Georgia Department of Public Health (GA DPH) tracks septic tank installations and repairs in Georgia by month. This information is tracked on a County basis and builds on a 2007 Georgia Environmental Protection Division (EPD) estimate of the number of septic tanks in the state. However, these estimates provide an incomplete picture of the number of septic tanks in the state as the baseline estimate has some margin of error and decommissioning of septic tanks is not accurately tracked. Due to these variables, the septic tank estimates from GA DPH appear erroneous for some counties, with some county data showing more septic users than residents in 2020.

For the wastewater flow forecasts, the GA DPH septic tank estimates were used for counties where the septic percentages from DPH data were similar to previously used septic estimates and were validated with information about treatment facilities in a County. Where the septic tank population appeared higher than the current population estimates, the percentage of septic tank population was adjusted based on information on existing treatment facilities and previous estimates, such as the 1990 U.S. Census report information.

3.6 1990 U.S. Census of Population and Housing Summary Social, Economic, and Housing Characteristics

The 1990 U.S. Census was the most recent census that included a question inquiring about the use of public sewer at a person's place of residence. The 1990 U.S. Census of Population and Housing provides the percentage of population on public sewer by County in Georgia. The inverse of this statistic provides the percentage of the population on septic tanks in 1990. This septic percentage by County was used in conjunction with the GA DPH septic estimates to determine an accurate percentage of the current population on septic.

Information about estimates of septic tank use in each region, by county, are shown in the "[Region] Septic Users" tables in Appendices 1-10. The footnotes to those tables indicate which data source, GA DPH or 1990 U.S. Census, were used.

3.7 NPDES Permit Data

National Pollutant Discharge and Elimination System (NPDES) permits for point source discharges in Georgia are issued and regulated by EPD. The permittee is required to send monthly reports to EPD to show compliance with permit limits pertaining to discharge, monitoring, and reporting requirements.

EPD provided the reported NPDES discharge flow data for the years 2015-2019. The historic permit flow data was used in the forecasting effort as the base, and proportionately adjusted based on the population change in the respective county. This methodology is described in Section 5. The permitted flow limits and 2019 discharge values for the NPDES permitted facilities are shown, by region and county, in the "[Region] Municipal Point Source Facilities" tables in Appendices 1-10.

3.8 LAS Permit Data

Land Application System (LAS) permits are also tracked and regulated by EPD. EPD provided LAS discharge data to the forecasting team for 2015-2019. Through discussions with EPD, expanding point source discharges was considered generally more likely than expanding existing LAS permits in the future. While LAS permits may be expanded in certain cases, this assumption was made for conservative forecasting purposes, since the point source discharge flows will be utilized for the water quality resource assessment modeling analysis. In the wastewater discharge forecast, if future flow forecasts exceed existing LAS permit limits, the flow exceeding the permit limit is assigned to a point source discharge in the same county. The permitted application limits and 2019 application values for LAS permitted facilities are shown, by region and county, in the "[Region] Municipal Land Application System (LAS) Facilities" tables in Appendices 1-10.

3.9 Additional Data Sources

Data and housing statistics obtained from the US Census Bureau (2000) were used to calculate the plumbing code adjustment per county. The calculations assume an annual toilet replacement rate of 2 percent. This calculation was originally generated for the 2009 Regional Water Planning effort and updated for the 2017 Regional Plans. For this update, the plumbing code adjustment was extrapolated using the plumbing code adjustment calculated for the 2017 Regional Water Plans. The plumbing code adjustment was applied to both the self-supplied water demand projections and the municipally-supplied water demand projections.

The SDWIS is an EPA database that provides summarizing information for a water system, including population served and withdrawal data. The population served was used as described in Section 3.2 with water audits to calculate the per capita water use by county.

4.0 Municipal Water Demand Forecasts

Municipal water demand includes residential, commercial, and light industrial water users who are self-supplied (by a private well) or are served by a public water provider. Publicly supplied water users obtain their water from centralized municipal or large private suppliers, such as county or city water treatment plants or groundwater wells; self-supplied users are assumed to obtain their water from private groundwater wells. The completion of these forecasts required assumptions and adjustments to account for variations in demand, usage, and the effects of water conservation practices. County representatives and municipal and private water suppliers were given the opportunity to review and provide input and feedback during the development of the water and wastewater forecasts. The following sections describe these aspects of the forecasting in detail.

4.1 Municipal Water Forecasting Methodology

Municipal water forecasting relies on population projections and the development of a baseline per capita for each county. The county's population projections were split into publicly supplied and self-supplied populations for planning purposes. Municipal and private water suppliers were given an opportunity to provide input and feedback during the development of the water and wastewater forecasts. Adjustments to these population projections are discussed under item 4 in Section 4.2.

Since 1994, the national plumbing codes have mandated lower maximum flush rates for toilets available in the US, which has resulted in significant reductions in water demand in Georgia and nationwide, and will continue to do so over the planning period through 2060 for this forecasting. In 2010, the Georgia Water Stewardship Act further reduced the maximum flush rates for toilets sold in Georgia. Therefore, per capita water demand rates were adjusted for plumbing efficiency savings. The adjustment is applied in all future planning years to reflect the replacement of existing toilets with more efficient toilets over time. This methodology was developed for the initial Regional Water Plans in Georgia and has been updated for this forecasting effort. They are specific to each Georgia county's specific demographic profile. The plumbing code water efficiency adjustment is then applied to the municipal water demand forecasts through 2060.

The percentage of self-supplied users was obtained from the data presented in the USGS 2015 Report. These self-supplied percentages were held consistent throughout the 40-year planning horizon, unless otherwise specified. In cases where the self-supplied ratio was significantly higher than the ratio used in 2011, a new self-supplied ratio was calculated using the publicly-supplied population provided by EPD and the total population of the county. Consistent with the 2015 USGS Report, an initial per capita water use rate of 75 gallons per capita per day (gpcd) was assigned for self-supplied water users as the 2020 baseline. For every planning period from 2020 to 2060, the plumbing code water efficiency adjustment was subtracted from the 2020 self-supplied per capita demand and then multiplied by the planning period's total self-supplied population to yield the self-supplied demand for each county. The forecasted 2060 self-supplied water demands for each county are presented in the "[County] – Water Demands and Withdrawals" tables in Appendices 11-20.

Publicly supplied water demand was calculated similarly to the self-supplied water demand. Each county's publicly supplied per capita demands were calculated for the 2020 baseline year via one of several methods. For most counties, the per capita demands were calculated by averaging the per capita water use values calculated using water loss audits submitted to EPD from 2015 to 2018. For some counties, the per capita demands were calculated using the withdrawal data submitted to EPD and the population stated in the SDWIS database. In cases where the total withdrawals included a combination of large systems with water loss audits and small systems that do not submit water loss audits, the per capita was calculated using the average withdrawal from 2018 and 2019 for each water supplier and dividing it by the total population served for each water provider. The population served for each water supplier was provided by EPD in the SDWIS database. For every planning period from 2020 to 2060, the plumbing code water efficiency adjustment was subtracted from the 2020 publicly supplied per capita demand and then multiplied by the planning period's total publicly supplied population to yield the publicly supplied demand for each county. Counties with calculated per capita demands above 200 gpcd or below 75 gpcd are highlighted in the "Updated Plan Per Capita Demand" in the "[Region] Per Capita

Water Demand (gpcd)" tables in Appendices 1-10. For per capita values outside of this range, further information was requested from the water systems in these Counties to determine if the per capita values need further adjustment. The forecasted 2060 publicly supplied water demands for each county are presented as the "Total Projected Demand from Municipal Facilities" in the "[County] – Water Demands and Withdrawals" tables in Appendices 11-20.

Figure 1 depicts the water demand forecasting methodology where the publicly supplied municipal water demands were divided into separate forecasts based on surface water and groundwater sources, as well as by permit holder. The forecasted water demand per source type was calculated by multiplying the 2019 average monthly withdrawal ratio for each source type in the county by the county's publicly supplied demand. The forecasted water demand per source type is shown, by county, as the "2060 Forecasted Annual Average Demand (MGD)" in the "[Region] Municipal Groundwater Withdrawals and Forecast" and "[Region] Municipal Surface Water Withdrawals and Forecast" tables in Appendices 1-10.

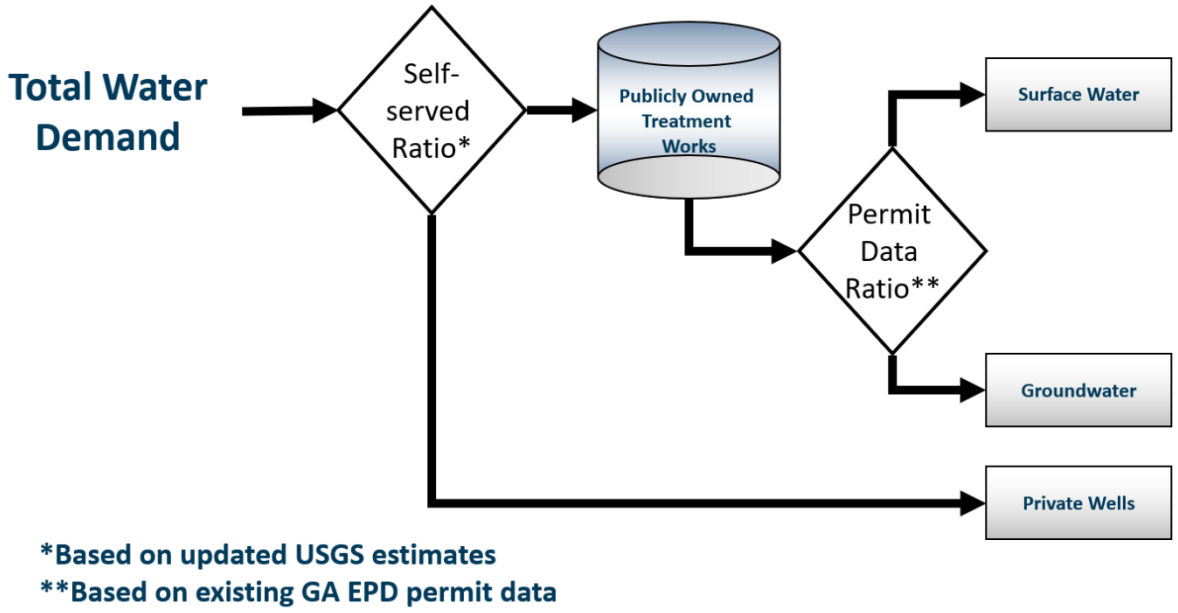

Figure 1 – Water Demand Forecast Methodology

Each county's demand was forecasted separately. Municipal and private water suppliers were given the opportunity to provide input and feedback during the development of the water and wastewater forecasts.

4.2 Input Received and Adjustments Made

The municipal water demand projections have been refined further through initial feedback from Regional Water Planning Council members, county and city officials, and local planning and water provider personnel. As a result, adjustments were made to baseline per capita demand for some counties, publicly supplied and self-supplied percentages, and future projections. Detailed descriptions of the adjustments by County are included in Appendices 11-20. A summary of the initial feedback received is shown in **Table 1**.

Per capita adjustments included:

1. Wholesale transactions with neighboring counties for water. If a county sold to or purchased more than 200,000 gpd of water from another county on a wholesale basis, then that amount of water was allocated to the county where the actual use was taking place. These changes affected the per capita demands of both the selling and purchasing counties.
2. Large industrial customers served by municipal water facilities. Large industrial demands (0.2 MGD or larger) supplied by municipal systems were moved into the industrial forecast in order to project the demand under the industrial forecasting effort rather than with county population. Per capita adjustments were made to account for the reallocation of the demand.
3. Changes in the current or future percentage of a county's population served by public supply. If the publicly served population number reported in the USGS publication for 2015 was not representative of the actual county population served by the public water system or the 2015 number was inaccurate due to future changes in service strategies, an effort was made to more accurately represent the population served by public supply in both the baseline year and the future forecast. Adjustments were provided by the stakeholders or made with guidance of utility representatives.

Table 1 – Water Demand Forecast Input Received

Water Planning Region	Municipality	Input Received	Adjustment/ Incorporation
Coastal Georgia	City of Savannah	Savannah sent total 2019 withdrawals by system. Each of the systems retains individual operating permits, but the withdrawal permits were combined in the mid-1990s. Taken together the average daily withdrawal is 21.51 MGD.	The 2019 withdrawal value was revised accordingly.
Coosa-North Georgia	Etowah Water & Sewer Authority (Dawson County)	Water: 2060 Forecasted Annual Average Demand – This should be 6.72 MGD; based on 67,974,104 gpcd/1,000,000*0.95	104 gpcd is the 2020 per capita for Dawson County; this has been noted on the appendix table. The demands calculation includes a per capita demand that slightly decreases over time due to the implementation of plumbing code requirements and conservation practices to 98.2 gpcd in 2060.
Middle Chattahoochee	Carroll County Water Authority (CCWA)	CCWA has experienced a significant trend of self-supplied users (i.e. private wells) connecting to the municipal water system customers. Previous evaluation determined that the conversion rate was 78% of new customers were existing homes with wells. CCWA believes that 50% or greater of self-supplied users should be assumed to convert to public water supply over time.	Self-supplied percentages were adjusted to reflect a progressive conversion from self-supplied to municipally-supplied.
Middle Chattahoochee	City of Richland	The City of Richland is under a Consent Decree program that allows 0.5 MGD water withdrawals (permit is 0.1 MGD) through 2024. This provides time to address infrastructure leakage and reduce existing high per capita demand.	Will use a per capita of 151 gpcd for the water demand forecasts.

Water Planning Region	Municipality	Input Received	Adjustment/ Incorporation
		Consent decree mandates future per capita reduction to 151 gpcd or lower.	
Middle Chattahoochee	Columbus Water Works	Consider interconnections	Interconnections that sell more than 0.1 MGD were used to adjust withdrawal and are shown in the County-level summary for Muscogee County.
Middle Ocmulgee	Macon Water Authority	In Bibb County, there is a new industrial demand of 1.5 MGD, with planned doubling by 2022 to 3 MGD.	Water demand projections adjusted to reflect new industrial needs.
Savannah-Upper Ogeechee	Augusta Utilities	Per capita water demand: Draft forecast per capita water demand in 2017 shown as 217 gpcd. A quick look using the 2017 Water Audit shows that number to be around 149.5 (and that is without removing large industrial customers and Fort Gordon from the total).	Revised methodology is based on 2015-2018 water audit data and was adjusted to remove industrial use.
Savannah-Upper Ogeechee	Council member on stakeholder group	Per capita values for Lincoln, Screven and Wilkes Counties are believed to be high; values appear to not reflect adjustments for Columbia County from the last round of planning	The utility-submitted water loss audits were used to calculate per capita demands for forecasting as shown in report appendix.
Savannah-Upper Ogeechee	City of Elberton	The City of Elberton completed an interconnection of the water system to Madison County in the summer of 2019 and began selling water to Madison County on July 11, 2019. Currently the average water sales to Madison County are 260,000 gallons per day. The City of Elberton is contracted to provide a maximum 30-day average of 400,000 gallons per day. In the course of the next 5-10 years we would like to perform the	This county to county interconnection has been noted on the county-specific tables in the report appendix.

Water Planning Region	Municipality	Input Received	Adjustment/ Incorporation
		necessary upgrades to bring the permitted flow of 3.1 MGD up to match the withdrawal of 4.1 MGD.	
Savannah-Upper Ogeechee	Hart County	Hart County does not have any water permits; they are served by others (including Lavonia and Hartwell).	Interconnections that sell more than 0.1 MGD were used to adjust withdrawal and are shown in the County-level summary for Hart County.
Savannah-Upper Ogeechee	Madison County	Biomass plant in that County led to an increase of 0.5 to 0.7 MGD in Madison County; Madison Co's water sources include Commerce, Franklin County and Elbert County.	Interconnections that sell more than 0.1 MGD were used to adjust withdrawal and are shown in the County-level summary for Madison County.
Upper Flint	City of Griffin	Water withdrawals are in two counties, Pike and Spalding.	Water withdrawals will reflect location and projections will reflect county population. City of Griffin is noted as a wholesale provider.
Upper Oconee	City of Monroe	City of Monroe is in the process of placing a water main and pumping station to sell water to the City of Loganville. Agreement in place with Loganville to provide 3 MGD. City of Monroe is also in negotiations to sell up to 2 MGD of water to the City of Social Circle. In addition, Publix is currently building a shopping center for which the City of Monroe will provide water. At this time, these three comprise the major changes which the City is involved in that will impact their municipal water demand.	Withdrawals by source within Walton County will change as the result of these agreements; the total demand within the County is projected based on County population.
Upper Oconee	Walton County	Walton County noted that the projections do not incorporate that 72% of new growth in Walton County is occurring in unincorporated areas, within the	The per capita for Walton County Water Department was revised to 112 gpcd to be consistent with the per capita used during the recent permitting process. The per capita for

Water Planning Region	Municipality	Input Received	Adjustment/ Incorporation
		Walton County Water Service area. Walton County requests EPD's reassessment of these projections. Walton County's per capita water demand is currently 128. The draft plan lists Walton's per capita demand as 102, which is significantly lower than reported totals.	the county was recalculated as the weighted average of all the water providers within the County. During a follow-up meeting, representatives with Walton County concurred with the self-supplied water demand estimates.

4.3 Regional Water Demand Forecasts

Table 2 provides the total municipal water demand forecast (all sources), totaled for all ten regions. The water demand forecasts for each of the Georgia Water Planning Regions are displayed in **Tables 5-14**. Each Water Planning Region's water demand forecasts are organized by county and divided by groundwater, surface water, and self-supplied sources. Additional county-level details for the year 2060 are provided in Appendices 11-20.

Table 2 – Municipal Water Demand Forecasts for all Regions (AADD-MGD)

Regional Council	2030	2040	2050	2060
Altamaha	26.40	25.71	24.82	24.11
Coastal Georgia	116.45	118.43	119.73	121.38
Coosa-North Georgia	116.75	118.92	119.65	121.28
Lower Flint-Ochlockonee	44.61	42.71	40.51	38.79
Middle Chattahoochee	69.34	68.14	66.53	65.32
Middle Ocmulgee	89.55	93.39	97.01	102.38
Savannah-Upper Ogeechee	98.50	99.15	98.86	99.31
Suwannee-Satilla	58.79	58.57	57.62	56.77
Upper Flint	29.89	29.36	28.49	27.97
Upper Oconee	78.14	85.99	94.23	104.42
Total	**728.43**	**740.39**	**747.44**	**761.73**

Table 5 – Altamaha Municipal Water Demand Forecasts (AADD-MGD)

Table 6 – Coastal Georgia Municipal Water Demand Forecasts (AADD-MGD)

Table 7 – Coosa-North Georgia Municipal Water Demand Forecasts (AADD-MGD)

Table 8 – Lower Flint-Ochlockonee Municipal Water Demand Forecasts (AADD-MGD)

Table 9 – Middle Chattahoochee Municipal Water Demand Forecasts (AADD-MGD)

Table 10 – Middle Ocmulgee Municipal Water Demand Forecasts (AADD-MGD)

Table 11 – Savannah-Upper Ogeechee Municipal Water Demand Forecasts (AADD-MGD)

Table 12 – Suwannee-Satilla Municipal Water Demand Forecasts (AADD-MGD)

Table 13 – Upper Flint Municipal Water Demand Forecasts (AADD-MGD)

Table 14 – Upper Oconee Municipal Water Demand Forecasts (AADD-MGD)

5.0 Municipal Wastewater Flow Forecasts

5.1 Municipal Wastewater Forecasting Methodology

The municipal wastewater flow forecasts were developed using 2019 discharge flow data and the population change in each county. Estimates of municipal wastewater disposal were determined for each county and watershed within a planning region. Discharge data provided by EPD for 2019 was utilized for forecasting future wastewater flows by county. The percent change between the updated population projection base year (2019) and each planning year (2020, 2030, 2040, 2050, and 2060) was applied to the wastewater discharge totals for each county from 2019 to obtain estimated total county discharge flows for each planning year. For the forecasting effort, the conservative assumption that no reduction in discharge flow from water conservation efforts was made, which should slightly overestimate discharge flow. Future forecasts were assumed to maintain the same split between point source discharges and LAS discharges in each county in the absence of additional information. Where forecasted LAS flow increases exceeded current permit limits, it was assumed that flow over the current limits will be routed to point source discharge(s) in the county. **Figure 2** depicts the municipal wastewater flow forecasting methodology.

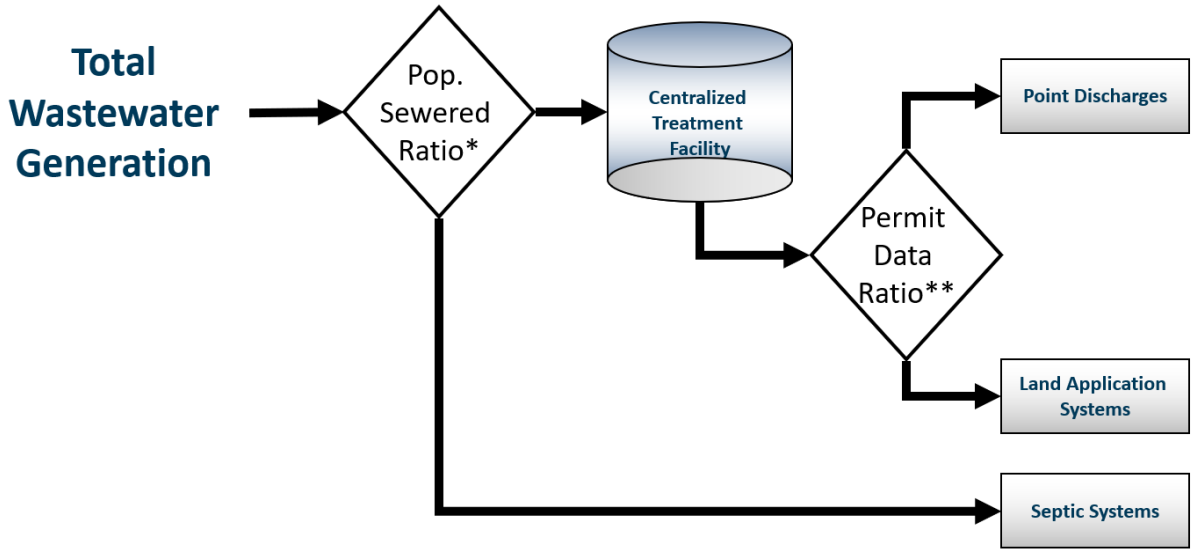

Figure 2 – Wastewater Flow Forecast Methodology

Inflow and infiltration, commonly referred to as I&I, is a term used to describe the ways that groundwater and stormwater enter into dedicated wastewater or sanitary sewer systems. Inflow is stormwater that enters into sanitary sewer systems at points of direct connection to the systems while infiltration is groundwater that enters sanitary sewer systems through cracks and/or leaks in the sanitary sewer pipes. Because the updated forecasts are based on reported discharge information, infiltration and inflow is inherently accounted for in the projections. Typically, as systems age, I/I tends to increase. However, many utilities have ongoing I/I reduction programs to reduce infiltration and inflow from aging pipes. There is a lack of consistent information on I/I reduction and there is a wide

variation between utilities from a number of factors including geography, groundwater levels, age, and material of collection system infrastructure. Therefore, as a conservative assumption for the forecasting effort, the potential increase in I/I was assumed to be offset by the decreased flow due to utilities' ongoing I/I reduction programs.

Septic users were estimated based on GA DPH estimates of septic systems installed by county or based on 1990 U.S. census data for percentage of homes on septic systems. The septic flows in each county were determined using the percentage of population on septic and a 75 gallons per capita unit water demand rate associated with the surficial aquifer, of which 80% is discharge flow to the septic systems (assuming the remainder used for outdoor watering or other non-discharge purposes). The septic estimates in each county could potentially be improved in future forecasting efforts by using utility connection data. The utility connection data would require information about the number of customers only served with water compared to the number of customers served by both water and sewer. The difficulty in a more detailed statewide effort is the range of service delivery areas and responsibilities, interconnections, and lack of comprehensive flow data at the customer level.

5.2 Input Received and Adjustments Made

Through the stakeholder review process outlined in Section 2, input was provided to the forecasting team to incorporate into the flow projections. **Table 3** shows the input received regarding the wastewater flow forecasts and how the comments were incorporated into the projections.

Additionally, the industrial forecasting team provided information received from the industrial forecasting stakeholder group about industrial flows larger than 0.2 MGD that are treated at the municipal wastewater facilities. These industrial flows were removed from the current flows at the facilities and added back into the future (2060) municipal forecasts in order to project the flows under the industrial forecasting effort rather than with county population.

It should also be noted that EPD does not track the wastewater interconnections between counties in the state. Flows generated in a county may be treated at a neighboring county's facility through interconnections in the wastewater systems. Where input was received regarding interconnections, adjustments were made to the forecasts.

Table 3 – Wastewater Flow Forecast Input Received

Water Planning Region	Municipality	Input Received	Adjustment/Incorporation
Middle Ocmulgee	Macon Water Authority	In Bibb County, there is a new industrial wastewater flow of 0.9 mgd, with planned doubling by 2022 to 1.8 mgd.	Wastewater projections adjusted to reflect new industrial impact on municipal system.
Upper Flint	City of Griffin	Portions of the City of Griffin discharge to different basins and demands have been estimated	Discharges are tracked via facility county of origin and basin so this information can be compared to previous projections. Potato Creek flow discharges in the Middle Ocmulgee region, in Lamar County. Lamar County and Spalding County have similar population increase rates over the planning horizon, so the increased flow for the facility is reflected in the projections.
Coosa-North Georgia	City of Dawsonville	The City of Dawsonville's existing 0.4 MGD LAS is in the planning and permitting stages of growing to a 0.8 MGD direct discharge (the 0.4 MGD LAS will go away).	The future LAS:Point Source ratio for Dawson County has been changed to reflect this input.
Coosa-North Georgia	Etowah County Water & Sewer Authority (Dawson Co.)	Septic Users for Dawson County (based on population): 2020 – 83% 2060 – 79% EWSA's Dawson Forest WRF – Moving to a Direct Discharge	Septic percentages adjusted and the Dawson Forest WRF information is shown on the County-level forecasts for Dawson County.

Water Planning Region	Municipality	Input Received	Adjustment/Incorporation
		in 2025 and abandon the land application system. The projected 2050 annual average flow is 1.966 mgd and the projected 2060 annual average flow is 2.796 mgd.	
Middle Chattahoochee	Columbus Water Works	Columbus Water Works (CWW) has one sewer interconnection with Harris County and an intergovernmental agreement to provide up to 2 MGD of sewer conveyance and treatment within Muscogee County. CWW has a 50-year wastewater contract with Fort Benning to provide wastewater conveyance and treatment up to 12.2 MGD. CWW also has an inactive wastewater connection with Phenix City, AL with capacity of 6 MGD. Industrial Growth- CWW has 6 MGD of sewer capacity available to new industry in Muscogee Technology Park.	Interconnections are noted on the County-level forecasts for Muscogee County.

5.3 Regional Wastewater Flow Forecasts

Table 4 provides the total municipal wastewater flow forecasts (all flows), totaled for all ten regions. The municipal wastewater flow forecasts for each of the Georgia Water Planning Regions are displayed in **Tables 15-24**. In Tables 15-24, each Water Planning Region's municipal wastewater flow forecasts are organized by county and divided by point source, land application system (LAS), and septic flows.

County by county summaries have also been prepared to document flow projections and to compare current flows with permit limits so that, from a planning perspective, general areas of increased future wastewater capacity needs can be identified. These county-level details for the year 2060 are provided in Appendices 11-20.

Future permitted increases in wastewater discharge flow were identified by comparing the projected flows to existing permit capacity. A typical industry ratio of 1.25 was used to estimate maximum month average daily flow from projected annual average daily flow to reflect the seasonality of wastewater flow. Regional planning level needs for additional future wastewater treatment capacity can be identified where the maximum monthly average daily flow projection at the County level is below the existing monthly average daily discharge permit limits.

Table 4 –Municipal Wastewater Flow Forecasts for all Regions (MGD)

Regional Council	2030	2040	2050	2060
Altamaha	24.94	24.95	24.74	24.68
Coastal Georgia	92.93	96.46	99.49	103.36
Coosa-North Georgia	86.77	89.27	91.04	93.75
Lower Flint-Ochlockonee	42.92	41.27	39.49	38.29
Middle Chattahoochee	68.64	67.89	66.91	66.51
Middle Ocmulgee	81.38	84.62	87.74	91.92
Savannah-Upper Ogeechee	83.84	84.37	84.27	85.03
Suwannee-Satilla	55.61	56.26	56.38	56.74
Upper Flint	25.55	25.45	25.15	25.20
Upper Oconee	70.92	79.38	88.38	99.43
Total	**633.49**	**649.93**	**663.58**	**684.91**

Table 15 – Altamaha Municipal Wastewater Flow Forecasts (MGD)

Table 16 – Coastal Georgia Municipal Wastewater Flow Forecasts (MGD)

Table 17 – Coosa-North Georgia Municipal Wastewater Flow Forecasts (MGD)

Table 18 – Lower Flint-Ochlockonee Municipal Wastewater Flow Forecasts (MGD)

Table 19 – Middle Chattahoochee Municipal Wastewater Flow Forecasts (MGD)

Table 20 – Middle Ocmulgee Municipal Wastewater Flow Forecasts (MGD)

Table 21 – Savannah-Upper Ogeechee Municipal Wastewater Flow Forecasts (MGD)

Table 22 – Suwannee-Satilla Municipal Wastewater Flow Forecasts (MGD)

Table 23 – Upper Flint Municipal Wastewater Flow Forecasts (MGD)

Table 24 – Upper Oconee Municipal Wastewater Flow Forecasts (MGD)

Table 5 – Altamaha Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Appling County	Groundwater	0.82	0.82	0.82	0.82
	Self-Supplied	0.94	0.93	0.91	0.89
Bleckley County	Groundwater	0.87	0.87	0.87	0.87
	Self-Supplied	0.49	0.48	0.47	0.46
Candler County	Groundwater	0.59	0.58	0.56	0.56
	Self-Supplied	0.31	0.30	0.29	0.29
Dodge County	Groundwater	1.25	1.15	1.04	0.95
	Self-Supplied	0.73	0.66	0.59	0.53
Emanuel County	Groundwater	1.77	1.76	1.74	1.72
	Self-Supplied	0.71	0.70	0.67	0.65
Evans County	Groundwater	0.80	0.80	0.78	0.77
	Self-Supplied	0.31	0.31	0.29	0.29
Jeff Davis County	Groundwater	1.04	1.04	1.03	1.02
	Self-Supplied	0.65	0.64	0.62	0.60
Johnson County	Groundwater	0.57	0.55	0.53	0.51
	Self-Supplied	0.38	0.36	0.34	0.33
Montgomery County	Groundwater	0.66	0.65	0.64	0.63
	Self-Supplied	0.39	0.37	0.36	0.35
Tattnall County	Groundwater	1.45	1.42	1.37	1.32
	Self-Supplied	1.15	1.10	1.04	0.98
Telfair County	Groundwater	1.22	1.12	1.02	0.95
	Self-Supplied	0.57	0.51	0.46	0.41
Toombs County	Groundwater	2.76	2.71	2.63	2.54
	Self-Supplied	0.64	0.62	0.59	0.56
Treutlen County	Groundwater	0.31	0.31	0.30	0.30
	Self-Supplied	0.32	0.31	0.30	0.29
Wayne County	Groundwater	1.69	1.67	1.64	1.62
	Self-Supplied	1.19	1.17	1.13	1.09
Wheeler County	Groundwater	0.50	0.50	0.49	0.49
	Self-Supplied	0.25	0.25	0.25	0.24

County	Source	2030	2040	2050	2060
Wilcox County	Groundwater	0.83	0.82	0.83	0.86
	Self-Supplied	0.22	0.22	0.22	0.22
Total	**Groundwater**	**17.13**	**16.78**	**16.30**	**15.94**
	Self-Supplied	**9.27**	**8.93**	**8.52**	**8.18**

Table 6 – Coastal Georgia Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Bryan County	Groundwater	3.810	4.014	4.108	4.093
	Self-Supplied	1.106	1.162	1.186	1.178
Bulloch County	Groundwater	5.836	5.524	5.091	4.736
	Self-Supplied	1.779	1.689	1.562	1.458
Camden County	Groundwater	4.172	4.129	4.062	4.007
	Self-Supplied	0.722	0.717	0.707	0.699
Chatham County	Surface Water	36.792	37.197	37.569	38.086
	Groundwater	27.670	27.974	28.254	28.643
	Self-Supplied	0.472	0.482	0.490	0.502
Effingham County	Groundwater	8.897	9.338	9.418	9.304
	Self-Supplied	2.444	2.544	2.544	2.491
Glynn County	Groundwater	9.705	10.143	10.619	11.247
	Self-Supplied	1.024	1.066	1.111	1.171
Liberty County	Groundwater	6.573	6.401	6.263	6.104
	Self-Supplied	0.454	0.441	0.430	0.418
Long County	Groundwater	1.633	2.021	2.468	3.005
	Self-Supplied	1.776	2.175	2.626	3.159
McIntosh County	Groundwater	0.938	0.838	0.723	0.640
	Self-Supplied	0.651	0.580	0.498	0.439
Total	**Surface Water**	**36.79**	**37.20**	**37.57**	**38.09**
	Groundwater	**69.23**	**70.38**	**71.01**	**71.78**
	Self-Supplied	**10.43**	**10.85**	**11.15**	**11.52**

Table 7 – Coosa-North Georgia Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Catoosa County	Surface Water	6.89	6.65	6.21	5.67
	Groundwater	-	-	-	-
	Self-Supplied	0.26	0.25	0.23	0.21
Chattooga County	Surface Water	2.23	2.20	2.15	2.12
	Groundwater	1.06	1.05	1.03	1.01
	Self-Supplied	0.09	0.09	0.09	0.08
Dade County	Surface Water	2.03	1.96	1.88	1.83
	Groundwater	0.08	0.08	0.07	0.07
	Self-Supplied	-	-	-	-
Dawson County	Surface Water	2.79	3.64	4.60	5.87
	Groundwater	0.31	0.41	0.52	0.66
	Self-Supplied	0.49	0.40	0.32	0.24
Fannin County	Surface Water	1.86	1.62	1.35	1.18
	Groundwater	0.09	0.07	0.06	0.05
	Self-Supplied	0.76	0.65	0.54	0.47
Floyd County	Surface Water	11.69	11.08	10.22	9.34
	Groundwater	0.87	0.82	0.76	0.69
	Self-Supplied	0.39	0.37	0.33	0.30
Gilmer County	Surface Water	3.03	3.09	3.04	2.99
	Groundwater	-	-	-	-
	Self-Supplied	1.26	1.14	1.01	0.92
Gordon County	Surface Water	8.24	8.47	8.60	8.71
	Groundwater	2.16	2.23	2.26	2.29
	Self-Supplied	0.18	0.18	0.18	0.18
Habersham County	Surface Water	5.99	6.61	7.07	7.49
	Groundwater	0.92	1.01	1.08	1.14
	Self-Supplied	0.59	0.57	0.54	0.51
Lumpkin County	Surface Water	2.05	2.64	3.24	3.98
	Groundwater	0.39	0.50	0.62	0.76
	Self-Supplied	1.81	1.76	1.72	1.68

County	Source	2030	2040	2050	2060
Murray County	Surface Water	1.80	1.85	1.87	1.90
	Groundwater	1.51	1.55	1.57	1.60
	Self-Supplied	0.73	0.71	0.69	0.67
Pickens County	Surface Water	2.79	2.92	3.01	3.16
	Groundwater	1.66	1.74	1.79	1.88
	Self-Supplied	0.39	0.38	0.37	0.36
Polk County	Surface Water	4.27	4.18	3.97	3.72
	Groundwater	1.83	1.79	1.70	1.59
	Self-Supplied	0.10	0.09	0.08	0.07
Towns County	Surface Water	1.39	1.56	1.83	2.21
	Groundwater	0.20	0.23	0.27	0.32
	Self-Supplied	0.15	0.17	0.20	0.24
Union County	Surface Water	1.73	1.81	1.89	2.07
	Groundwater	0.54	0.56	0.59	0.65
	Self-Supplied	0.03	0.03	0.03	0.04
Walker County	Surface Water	1.28	1.26	1.24	1.23
	Groundwater	5.78	5.72	5.62	5.59
	Self-Supplied	0.49	0.48	0.46	0.45
White County	Surface Water	1.33	1.47	1.62	1.81
	Groundwater	1.13	1.25	1.38	1.54
	Self-Supplied	1.41	1.55	1.69	1.87
Whitfield County	Surface Water	27.30	27.70	27.69	27.50
	Groundwater	-	-	-	-
	Self-Supplied	0.37	0.37	0.36	0.35
Total	**Surface Water**	**88.70**	**90.72**	**91.49**	**92.80**
	Groundwater	**18.55**	**19.02**	**19.32**	**19.85**
	Self-Supplied	**9.50**	**9.19**	**8.84**	**8.63**

Table 8 – Lower Flint-Ochlockonee Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
	Groundwater	0.13	0.11	0.10	0.09

County	Source	2030	2040	2050	2060
Baker County	Self-Supplied	0.18	0.16	0.13	0.11
Calhoun County	Groundwater	0.62	0.61	0.59	0.58
	Self-Supplied	0.21	0.20	0.19	0.18
Colquitt County	Groundwater	3.68	3.58	3.42	3.25
	Self-Supplied	1.68	1.60	1.49	1.39
Decatur County	Groundwater	2.60	2.47	2.32	2.19
	Self-Supplied	0.82	0.76	0.70	0.64
Dougherty County	Groundwater	10.48	9.58	8.74	8.13
	Self-Supplied	0.26	0.23	0.21	0.19
Early County	Groundwater	1.05	1.02	0.99	0.96
	Self-Supplied	0.36	0.34	0.32	0.30
Grady County	Groundwater	1.64	1.56	1.48	1.41
	Self-Supplied	0.94	0.88	0.82	0.77
Lee County	Groundwater	2.15	2.18	2.17	2.17
	Self-Supplied	0.82	0.82	0.82	0.81
Miller County	Groundwater	0.28	0.26	0.23	0.21
	Self-Supplied	0.28	0.25	0.22	0.19
Mitchell County	Groundwater	4.49	4.78	4.88	4.91
	Self-Supplied	0.78	0.72	0.66	0.61
Seminole County	Groundwater	0.50	0.44	0.38	0.35
	Self-Supplied	0.28	0.24	0.21	0.18
Terrell County	Groundwater	1.34	1.22	1.11	1.05
	Self-Supplied	0.18	0.16	0.14	0.13
Thomas County	Groundwater	5.88	5.74	5.57	5.47
	Self-Supplied	0.98	0.94	0.89	0.85
Worth County	Groundwater	1.22	1.15	1.08	1.04
	Self-Supplied	0.78	0.72	0.66	0.62
Total	**Groundwater**	36.06	34.69	33.06	31.81
	Self-Supplied	8.55	8.02	7.45	6.98

Table 9 – Middle Chattahoochee Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Carroll County	Surface Water	13.23	14.52	15.66	16.82
	Groundwater	0.02	0.02	0.03	0.03
	Self-Supplied	1.29	1.16	1.03	0.91
Chattahoochee County	Surface Water	-	-	-	-
	Groundwater	0.28	0.27	0.27	0.26
	Self-Supplied	0.56	0.54	0.53	0.51
Clay County	Surface Water	-	-	-	-
	Groundwater	0.29	0.27	0.25	0.25
	Self-Supplied	0.05	0.05	0.04	0.04
Haralson County	Surface Water	2.97	3.15	3.28	3.35
	Groundwater	0.15	0.16	0.16	0.17
	Self-Supplied	0.45	0.48	0.49	0.50
Harris County	Surface Water	3.27	3.56	3.75	3.92
	Groundwater	0.20	0.22	0.23	0.24
	Self-Supplied	0.63	0.65	0.67	0.70
Heard County	Surface Water	1.68	1.77	1.82	1.86
	Groundwater	0.08	0.08	0.08	0.09
	Self-Supplied	0.18	0.19	0.19	0.19
Muscogee County	Surface Water	32.04	29.23	26.43	24.02
	Groundwater	-	-	-	-
	Self-Supplied	-	-	-	-
Quitman County	Surface Water	-	-	-	-
	Groundwater	-	-	-	-
	Self-Supplied	0.16	0.15	0.15	0.15
Randolph County	Surface Water	-	-	-	-
	Groundwater	0.83	0.78	0.75	0.74
	Self-Supplied	0.14	0.13	0.12	0.12
Stewart County	Surface Water	-	-	-	-
	Groundwater	0.76	0.70	0.65	0.61
	Self-Supplied	0.06	0.05	0.05	0.04

County	Source	2030	2040	2050	2060
Troup County	Surface Water	8.48	8.49	8.42	8.38
	Groundwater	-	-	-	-
	Self-Supplied	1.53	1.50	1.46	1.42
Total	**Surface Water**	**61.67**	**60.73**	**59.37**	**58.36**
	Groundwater	**2.62**	**2.51**	**2.42**	**2.38**
	Self-Supplied	**5.06**	**4.90**	**4.73**	**4.58**

Table 10 – Middle Ocmulgee Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Bibb County	Surface Water	22.60	22.46	22.21	23.27
	Groundwater	-	-	-	-
	Self-Supplied	1.42	1.30	1.19	0.54
Butts County	Surface Water	2.57	2.73	2.84	2.91
	Groundwater	0.09	0.09	0.09	0.10
	Self-Supplied	0.01	0.01	0.01	0.01
Crawford County	Surface Water	-	-	-	-
	Groundwater	0.33	0.31	0.29	0.28
	Self-Supplied	0.63	0.59	0.55	0.54
Houston County	Surface Water	-	-	-	-
	Groundwater	28.04	29.58	30.78	32.17
	Self-Supplied	0.67	0.69	0.71	0.73
Jasper County	Surface Water	0.57	0.60	0.62	0.65
	Groundwater	0.46	0.48	0.49	0.52
	Self-Supplied	0.49	0.50	0.51	0.53
Jones County	Surface Water	-	-	-	-
	Groundwater	2.12	2.07	2.01	1.99
	Self-Supplied	0.61	0.59	0.57	0.56
Lamar County	Surface Water	2.44	2.63	2.84	3.11
	Groundwater	-	-	-	-
	Self-Supplied	0.88	0.93	0.98	1.04
	Surface Water	2.48	2.52	2.53	2.59

County	Source	2030	2040	2050	2060
Monroe County	Groundwater	-	-	-	-
	Self-Supplied	0.99	0.99	0.98	0.98
Newton County	Surface Water	15.77	17.95	20.45	23.42
	Groundwater	-	-	-	-
	Self-Supplied	1.55	1.75	1.97	2.23
Peach County	Surface Water	-	-	-	-
	Groundwater	2.21	2.16	2.09	2.05
	Self-Supplied	0.44	0.43	0.41	0.40
Pulaski County	Surface Water	-	-	-	-
	Groundwater	0.84	0.83	0.83	0.85
	Self-Supplied	0.48	0.39	0.30	0.21
Twiggs County	Surface Water	-	-	-	-
	Groundwater	0.48	0.45	0.42	0.41
	Self-Supplied	0.40	0.36	0.33	0.31
Total	**Surface Water**	**46.43**	**48.90**	**51.49**	**55.94**
	Groundwater	**34.56**	**35.96**	**37.01**	**38.36**
	Self-Supplied	**8.56**	**8.53**	**8.51**	**8.08**

Table 11 – Savannah-Upper Ogeechee Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Banks County	Surface Water	3.74	4.27	4.82	5.47
	Groundwater	-	-	-	-
	Self-Supplied	0.54	0.61	0.68	0.75
Burke County	Surface Water	-	-	-	-
	Groundwater	1.04	1.01	0.97	0.94
	Self-Supplied	1.04	0.99	0.94	0.90
Columbia County	Surface Water	20.76	22.12	22.71	22.84
	Groundwater	0.03	0.04	0.04	0.04
	Self-Supplied	1.67	1.31	0.96	0.63
	Surface Water	1.73	1.72	1.69	1.71

Elbert County	Groundwater	-	-	-	-
	Self-Supplied	0.69	0.62	0.55	0.49
Franklin County	Surface Water	1.66	1.77	1.87	2.01
	Groundwater	0.48	0.51	0.54	0.58
	Self-Supplied	0.51	0.54	0.56	0.60
Glascock County	Surface Water	-	-	-	-
	Groundwater	-	-	-	-
	Self-Supplied	0.22	0.20	0.18	0.15
Hart County	Surface Water	1.97	2.20	2.44	2.72
	Groundwater	0.17	0.19	0.21	0.23
	Self-Supplied	0.87	0.73	0.60	0.47
Jefferson County	Surface Water	-	-	-	-
	Groundwater	1.49	1.40	1.30	1.23
	Self-Supplied	1.01	0.95	0.88	0.84
Jenkins County	Surface Water	-	-	-	-
	Groundwater	0.45	0.45	0.46	0.47
	Self-Supplied	0.28	0.22	0.16	0.10
Lincoln County	Surface Water	0.56	0.52	0.47	0.43
	Groundwater	0.06	0.05	0.05	0.04
	Self-Supplied	0.21	0.19	0.17	0.15
Madison County	Surface Water	-	-	-	-
	Groundwater	1.45	2.00	2.60	3.28
	Self-Supplied	1.37	1.15	0.95	0.76
McDuffie County	Surface Water	2.09	2.10	2.09	2.12
	Groundwater	-	-	-	-
	Self-Supplied	0.25	0.21	0.18	0.15
Oglethorpe County	Surface Water	0.58	0.78	0.98	1.19
	Groundwater	-	-	-	-
	Self-Supplied	0.62	0.46	0.30	0.16
Rabun County	Surface Water	2.13	2.16	2.24	2.37
	Groundwater	0.14	0.15	0.15	0.16
	Self-Supplied	0.41	0.41	0.42	0.44

Richmond County	Surface Water	34.06	33.22	32.13	31.41
	Groundwater	6.25	6.10	5.90	5.77
	Self-Supplied	0.30	0.28	0.26	0.25
Screven County	Surface Water	-	-	-	-
	Groundwater	0.83	0.78	0.73	0.69
	Self-Supplied	0.66	0.61	0.56	0.52
Stephens County	Surface Water	4.04	4.17	4.33	4.57
	Groundwater	0.16	0.16	0.17	0.18
	Self-Supplied	0.09	0.10	0.10	0.11
Taliaferro County	Surface Water	-	-	-	-
	Groundwater	-	-	-	-
	Self-Supplied	0.12	0.10	0.09	0.07
Warren County	Surface Water	0.46	0.43	0.41	0.40
	Groundwater	-	-	-	-
	Self-Supplied	0.12	0.11	0.10	0.10
Wilkes County	Surface Water	0.93	0.85	0.74	0.65
	Groundwater	-	-	-	-
	Self-Supplied	0.26	0.23	0.20	0.17
Total	**Surface Water**	**74.72**	**76.31**	**76.93**	**77.90**
	Groundwater	**12.54**	**12.82**	**13.09**	**13.61**
	Self-Supplied	**11.24**	**10.02**	**8.84**	**7.80**

Table 12 – Suwannee-Satilla Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Atkinson County	Groundwater	0.48	0.47	0.46	0.44
	Self-Supplied	0.40	0.39	0.37	0.36
Bacon County	Groundwater	0.73	0.70	0.65	0.60
	Self-Supplied	0.67	0.64	0.59	0.54
Ben Hill County	Groundwater	1.95	1.85	1.72	1.62
	Self-Supplied	0.41	0.38	0.35	0.33
Berrien County	Groundwater	0.99	0.98	0.97	0.95
	Self-Supplied	1.18	1.16	1.13	1.11

County	Source	2030	2040	2050	2060
Brantley County	Groundwater	0.29	0.28	0.26	0.23
	Self-Supplied	1.73	1.65	1.50	1.32
Brooks County	Groundwater	1.26	1.18	1.05	0.94
	Self-Supplied	0.80	0.74	0.65	0.58
Charlton County	Groundwater	0.83	0.78	0.70	0.62
	Self-Supplied	0.62	0.58	0.52	0.46
Clinch County	Groundwater	0.53	0.53	0.54	0.56
	Self-Supplied	0.29	0.28	0.29	0.30
Coffee County	Groundwater	5.34	5.58	5.67	5.68
	Self-Supplied	2.14	2.08	2.00	1.92
Cook County	Groundwater	1.58	1.51	1.38	1.24
	Self-Supplied	0.85	0.80	0.73	0.64
Echols County	Groundwater	-	-	-	-
	Self-Supplied	0.38	0.35	0.31	0.28
Irwin County	Groundwater	0.55	0.56	0.56	0.56
	Self-Supplied	0.64	0.63	0.63	0.62
Lanier County	Groundwater	0.40	0.40	0.39	0.38
	Self-Supplied	0.61	0.60	0.59	0.58
Lowndes County	Groundwater	16.61	17.03	17.36	17.79
	Self-Supplied	2.56	2.60	2.62	2.66
Pierce County	Groundwater	0.60	0.59	0.58	0.57
	Self-Supplied	1.15	1.16	1.15	1.14
Tift County	Groundwater	5.01	5.02	4.98	4.94
	Self-Supplied	1.34	1.33	1.30	1.27
Turner County	Groundwater	1.14	1.07	0.98	0.90
	Self-Supplied	0.28	0.26	0.23	0.21
Ware County	Groundwater	4.16	4.16	4.13	4.14
	Self-Supplied	0.29	0.29	0.28	0.28
Total	**Groundwater**	**42.46**	**42.67**	**42.37**	**42.16**
	Self-Supplied	**16.33**	**15.91**	**15.25**	**14.61**

Table 13 – Upper Flint Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Crisp County	Surface Water	-	-	-	-
	Groundwater	2.22	2.07	1.90	1.76
	Self-Supplied	0.53	0.48	0.43	0.39
Dooly County	Surface Water	-	-	-	-
	Groundwater	2.47	2.67	2.74	2.76
	Self-Supplied	0.33	0.29	0.25	0.22
Macon County	Surface Water	-	-	-	-
	Groundwater	1.04	0.93	0.83	0.76
	Self-Supplied	0.30	0.26	0.23	0.21
Marion County	Surface Water	-	-	-	-
	Groundwater	0.95	0.89	0.82	0.78
	Self-Supplied	0.21	0.20	0.18	0.16
Meriwether County	Surface Water	1.31	1.26	1.20	1.17
	Groundwater	0.19	0.18	0.17	0.17
	Self-Supplied	0.74	0.70	0.66	0.63
Pike County	Surface Water	-	-	-	-
	Groundwater	0.39	0.41	0.42	0.44
	Self-Supplied	1.30	1.34	1.36	1.39
Schley County	Surface Water	-	-	-	-
	Groundwater	0.47	0.48	0.48	0.48
	Self-Supplied	0.08	0.08	0.08	0.08
Spalding County	Surface Water	7.82	8.24	8.54	8.88
	Groundwater	-	-	-	-
	Self-Supplied	0.26	0.28	0.28	0.29
Sumter County	Surface Water	-	-	-	-
	Groundwater	2.47	2.23	2.00	1.81
	Self-Supplied	0.77	0.69	0.60	0.53
Talbot County	Surface Water	1.08	0.93	0.78	0.70
	Groundwater	0.10	0.08	0.07	0.06

County	Source	2030	2040	2050	2060
	Self-Supplied	0.04	0.03	0.02	0.02
Taylor County	Surface Water	-	-	-	-
	Groundwater	0.63	0.59	0.55	0.52
	Self-Supplied	0.26	0.24	0.22	0.20
Upson County	Surface Water	2.64	2.58	2.50	2.44
	Groundwater	0.44	0.44	0.42	0.41
	Self-Supplied	0.65	0.63	0.59	0.56
Webster County	Surface Water	-	-	-	-
	Groundwater	0.10	0.08	0.07	0.07
	Self-Supplied	0.10	0.09	0.07	0.07
Total	**Surface Water**	**12.84**	**13.01**	**13.02**	**13.19**
	Groundwater	**11.47**	**11.05**	**10.48**	**10.02**
	Self-Supplied	**5.58**	**5.30**	**4.99**	**4.76**

Table 14 – Upper Oconee Municipal Water Demand Forecasts (AADD-MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Baldwin County	Surface Water	5.92	5.50	5.00	4.61
	Groundwater	-	-	-	-
	Self-Supplied	0.27	0.24	0.22	0.20
Barrow County	Surface Water	10.23	12.86	15.92	19.72
	Groundwater	-	-	-	-
	Self-Supplied	1.37	1.72	2.12	2.62
Clarke County	Surface Water	12.75	13.71	14.30	14.93
	Groundwater	-	-	-	-
	Self-Supplied	0.11	0.12	0.12	0.12
Greene County	Surface Water	1.31	1.41	1.53	1.73
	Groundwater	1.54	1.65	1.79	2.03
	Self-Supplied	0.35	0.36	0.39	0.43
Hancock County	Surface Water	1.35	1.22	1.13	1.10
	Groundwater	-	-	-	-
	Self-Supplied	0.05	0.04	0.04	0.04

County	Source	2030	2040	2050	2060
Jackson County	Surface Water	9.16	10.88	12.73	14.76
	Groundwater	1.02	1.21	1.42	1.65
	Self-Supplied	1.29	1.52	1.76	2.02
Laurens County	Surface Water	2.20	2.14	2.06	1.99
	Groundwater	1.88	1.83	1.76	1.71
	Self-Supplied	1.66	1.58	1.50	1.41
Morgan County	Surface Water	2.02	2.16	2.31	2.48
	Groundwater	-	-	-	-
	Self-Supplied	0.86	0.90	0.94	0.99
Oconee County	Surface Water	4.46	5.27	6.13	7.04
	Groundwater	0.07	0.08	0.10	0.11
	Self-Supplied	1.25	1.46	1.69	1.91
Putnam County	Surface Water	1.86	1.82	1.80	1.81
	Groundwater	0.04	0.04	0.04	0.04
	Self-Supplied	0.18	0.18	0.17	0.17
Walton County	Surface Water	8.55	9.60	10.76	12.12
	Groundwater	-	-	-	-
	Self-Supplied	2.28	2.54	2.82	3.16
Washington County	Surface Water	-	-	-	-
	Groundwater	2.60	2.49	2.35	2.26
	Self-Supplied	0.58	0.54	0.50	0.47
Wilkinson County	Surface Water	-	-	-	-
	Groundwater	0.78	0.74	0.70	0.67
	Self-Supplied	0.17	0.15	0.13	0.12
Total	**Surface Water**	**59.80**	**66.58**	**73.67**	**82.30**
	Groundwater	**7.93**	**8.05**	**8.17**	**8.46**
	Self-Supplied	**10.41**	**11.36**	**12.39**	**13.66**

Table 15 – Altamaha Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
	Point Source	1.33	1.37	1.39	1.42

County	Source	2030	2040	2050	2060
Appling County	LAS	0.00	0.00	0.00	0.00
	Septic	0.83	0.85	0.86	0.88
Bleckley County	Point Source	0.71	0.73	0.74	0.76
	LAS	0.00	0.00	0.00	0.00
	Septic	0.63	0.64	0.65	0.67
Candler County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.41	0.41	0.42	0.42
	Septic	0.39	0.40	0.40	0.41
Dodge County	Point Source	0.68	0.64	0.59	0.55
	LAS	0.28	0.26	0.25	0.23
	Septic	0.79	0.74	0.68	0.64
Emanuel County	Point Source	1.05	1.07	1.08	1.10
	LAS	0.11	0.11	0.11	0.11
	Septic	0.83	0.85	0.85	0.87
Evans County	Point Source	0.02	0.02	0.02	0.02
	LAS	0.06	0.06	0.06	0.06
	Septic	0.57	0.58	0.58	0.58
Jeff Davis County	Point Source	0.91	0.93	0.93	0.94
	LAS	0.00	0.00	0.00	0.00
	Septic	0.77	0.78	0.79	0.79
Johnson County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.00	0.00	0.00	0.00
	Septic	0.42	0.41	0.40	0.40
Montgomery County	Point Source	0.23	0.23	0.23	0.23
	LAS	0.03	0.03	0.03	0.03
	Septic	0.33	0.33	0.33	0.33
Tattnall County	Point Source	1.72	1.71	1.68	1.66
	LAS	0.32	0.32	0.31	0.31
	Septic	1.18	1.18	1.15	1.14
Telfair County	Point Source	0.60	0.56	0.52	0.49
	LAS	0.56	0.52	0.48	0.46

County	Source	2030	2040	2050	2060
	Septic	0.51	0.48	0.44	0.42
Toombs County	Point Source	1.25	1.25	1.24	1.22
	LAS	1.22	1.22	1.21	1.19
	Septic	1.17	1.17	1.16	1.14
Treutlen County	Point Source	0.36	0.37	0.37	0.37
	LAS	0.00	0.00	0.00	0.00
	Septic	0.23	0.24	0.24	0.24
Wayne County	Point Source	1.71	1.73	1.73	1.74
	LAS	0.07	0.07	0.07	0.07
	Septic	1.08	1.10	1.10	1.11
Wheeler County	Point Source	0.30	0.30	0.31	0.32
	LAS	0.12	0.12	0.12	0.13
	Septic	0.41	0.42	0.42	0.44
Wilcox County	Point Source	0.33	0.34	0.35	0.37
	LAS	0.00	0.00	0.00	0.00
	Septic	0.40	0.40	0.42	0.44
Total	**Point Source**	**11.22**	**11.25**	**11.18**	**11.18**
	LAS	**3.19**	**3.14**	**3.07**	**3.02**
	Septic	**10.54**	**10.55**	**10.48**	**10.48**

Table 16 – Coastal Georgia Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Bryan County	Point Source	1.79	1.91	1.99	2.01
	LAS	0.43	0.46	0.48	0.48
	Septic	1.92	2.05	2.13	2.16
Bulloch County	Point Source	10.17	9.87	9.32	8.90
	LAS	0.10	0.10	0.09	0.09
	Septic	3.91	3.79	3.59	3.42
Camden County	Point Source	5.44	5.49	5.51	5.56
	LAS	0.80	0.81	0.82	0.82

County	Source	2030	2040	2050	2060
	Septic	1.33	1.34	1.35	1.36
Chatham County	Point Source	38.63	40.52	42.43	44.77
	LAS	0.85	0.89	0.94	0.99
	Septic	2.61	2.74	2.87	3.02
Effingham County	Point Source	1.02	1.08	1.10	1.09
	LAS	0.61	0.65	0.66	0.66
	Septic	3.43	3.64	3.70	3.69
Glynn County	Point Source	12.06	12.87	13.76	14.89
	LAS	0.00	0.00	0.00	0.00
	Septic	2.89	3.08	3.30	3.57
Liberty County	Point Source	0.72	0.71	0.71	0.70
	LAS	0.32	0.32	0.32	0.31
	Septic	1.45	1.44	1.44	1.42
Long County	Point Source	0.19	0.24	0.29	0.36
	LAS	0.00	0.00	0.00	0.00
	Septic	1.25	1.56	1.92	2.35
McIntosh County	Point Source	0.30	0.28	0.24	0.22
	LAS	0.01	0.01	0.00	0.00
	Septic	0.69	0.63	0.56	0.50
Total	**Point Source**	**70.32**	**72.95**	**75.35**	**78.50**
	LAS	**3.13**	**3.24**	**3.31**	**3.36**
	Septic	**19.49**	**20.27**	**20.84**	**21.50**

Table 17 – Coosa-North Georgia Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Catoosa County	Point Source	0.01	0.01	0.01	0.01
	LAS	0.00	0.00	0.00	0.00
	Septic	2.97	2.93	2.81	2.63
Chattooga County	Point Source	5.84	5.89	5.88	5.93
	LAS	0.03	0.03	0.03	0.03
	Septic	0.99	0.99	0.99	1.00
Dade County	Point Source	0.48	0.47	0.46	0.46
	LAS	0.00	0.00	0.00	0.00
	Septic	0.80	0.79	0.77	0.77
Dawson County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.84	1.09	1.40	1.84
	Septic	1.78	2.16	2.61	3.22
Fannin County	Point Source	0.40	0.35	0.30	0.26
	LAS	0.00	0.00	0.00	0.00
	Septic	1.36	1.20	1.01	0.90
Floyd County	Point Source	5.91	5.74	5.41	5.07
	LAS	0.00	0.00	0.00	0.00
	Septic	2.83	2.75	2.59	2.43
Gilmer County	Point Source	1.75	1.70	1.63	1.59
	LAS	0.00	0.00	0.00	0.00
	Septic	1.73	1.60	1.45	1.35
Gordon County	Point Source	5.84	6.08	6.25	6.42
	LAS	0.00	0.00	0.00	0.00
	Septic	2.62	2.73	2.80	2.88
Habersham County	Point Source	4.45	4.88	5.31	5.78
	LAS	0.01	0.01	0.02	0.02
	Septic	2.17	2.31	2.45	2.62
Lumpkin County	Point Source	0.88	0.98	1.08	1.20
	LAS	0.02	0.03	0.03	0.03
	Septic	2.03	2.24	2.47	2.75

County	Source	2030	2040	2050	2060
Murray County	Point Source	1.76	1.82	1.87	1.92
	LAS	0.00	0.00	0.00	0.00
	Septic	2.09	2.17	2.22	2.29
Pickens County	Point Source	0.87	0.92	0.95	1.01
	LAS	0.02	0.02	0.02	0.02
	Septic	2.03	2.13	2.22	2.34
Polk County	Point Source	3.51	3.46	3.34	3.19
	LAS	0.00	0.00	0.00	0.00
	Septic	2.00	1.96	1.85	1.72
Towns County	Point Source	0.42	0.48	0.57	0.70
	LAS	0.00	0.00	0.00	0.00
	Septic	0.73	0.83	0.99	1.21
Union County	Point Source	0.43	0.46	0.49	0.55
	LAS	0.00	0.00	0.00	0.00
	Septic	1.62	1.73	1.85	2.08
Walker County	Point Source	4.17	4.23	4.26	4.35
	LAS	0.00	0.00	0.00	0.00
	Septic	3.46	3.51	3.54	3.61
White County	Point Source	0.65	0.73	0.81	0.92
	LAS	0.03	0.04	0.04	0.05
	Septic	2.03	2.28	2.54	2.88
Whitfield County	Point Source	0.18	0.18	0.18	0.18
	LAS	11.18	11.42	11.51	11.54
	Septic	3.86	3.96	4.00	4.02
Total	**Point Source**	**37.55**	**38.37**	**38.82**	**39.54**
	LAS	**12.14**	**12.64**	**13.05**	**13.53**
	Septic	**37.08**	**38.26**	**39.17**	**40.68**

Table 18 – Lower Flint-Ochlockonee Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
	Point Source	0.00	0.00	0.00	0.00

County	Source	2030	2040	2050	2060
Baker County	LAS	0.00	0.00	0.00	0.00
	Septic	0.18	0.16	0.14	0.12
Calhoun County	Point Source	0.41	0.41	0.40	0.40
	LAS	0.24	0.24	0.24	0.23
	Septic	0.20	0.20	0.20	0.20
Colquitt County	Point Source	2.68	2.64	2.57	2.48
	LAS	0.00	0.00	0.00	0.00
	Septic	2.14	2.11	2.05	1.98
Decatur County	Point Source	1.07	1.03	0.98	0.94
	LAS	0.00	0.00	0.00	0.00
	Septic	0.95	0.92	0.87	0.84
Dougherty County	Point Source	14.01	13.10	12.23	11.65
	LAS	0.00	0.00	0.00	0.00
	Septic	1.42	1.32	1.24	1.18
Early County	Point Source	2.02	1.99	1.95	1.93
	LAS	0.00	0.00	0.00	0.00
	Septic	0.34	0.33	0.32	0.32
Grady County	Point Source	1.29	1.26	1.21	1.18
	LAS	0.00	0.00	0.00	0.00
	Septic	0.84	0.82	0.78	0.76
Lee County	Point Source	1.32	1.36	1.37	1.39
	LAS	0.09	0.09	0.10	0.10
	Septic	1.36	1.40	1.41	1.43
Miller County	Point Source	0.25	0.24	0.22	0.19
	LAS	0.00	0.00	0.00	0.00
	Septic	0.24	0.22	0.20	0.18
Mitchell County	Point Source	0.09	0.08	0.08	0.08
	LAS	1.74	1.67	1.58	1.52
	Septic	0.65	0.63	0.59	0.57
Seminole County	Point Source	0.52	0.47	0.41	0.38
	LAS	0.00	0.00	0.00	0.00

County	Source	2030	2040	2050	2060
	Septic	0.34	0.30	0.27	0.25
Terrell County	Point Source	1.20	1.09	1.01	0.97
	LAS	0.00	0.00	0.00	0.00
	Septic	0.22	0.20	0.18	0.18
Thomas County	Point Source	3.97	3.93	3.87	3.85
	LAS	0.05	0.05	0.05	0.05
	Septic	2.00	1.99	1.95	1.94
Worth County	Point Source	0.06	0.06	0.05	0.05
	LAS	0.23	0.22	0.21	0.21
	Septic	0.80	0.77	0.73	0.72
Total	**Point Source**	**28.89**	**27.64**	**26.35**	**25.49**
	LAS	**2.36**	**2.27**	**2.18**	**2.11**
	Septic	**11.67**	**11.35**	**10.96**	**10.68**

Table 19 – Middle Chattahoochee Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Carroll County	Point Source	2.32	2.53	2.73	2.95
	LAS	6.43	6.92	7.41	7.95
	Septic	5.97	6.49	7.01	7.59
Chattahoochee County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.00	0.00	0.00	0.00
	Septic	0.20	0.20	0.21	0.21
Clay County	Point Source	0.09	0.08	0.08	0.08
	LAS	0.00	0.00	0.00	0.00
	Septic	0.09	0.09	0.08	0.08
Haralson County	Point Source	0.87	0.95	1.02	1.07
	LAS	0.21	0.22	0.24	0.25
	Septic	1.74	1.89	2.02	2.12
Harris County	Point Source	1.86	1.96	2.05	2.17
	LAS	0.00	0.00	0.00	0.00
	Septic	1.89	2.01	2.12	2.27

County	Source	2030	2040	2050	2060
Heard County	Point Source	0.14	0.15	0.16	0.16
	LAS	0.00	0.00	0.00	0.00
	Septic	0.77	0.83	0.87	0.90
Muscogee County	Point Source	35.30	32.74	30.10	27.83
	LAS	0.00	0.00	0.00	0.00
	Septic	0.49	0.45	0.41	0.38
Quitman County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.08	0.08	0.08	0.09
	Septic	0.13	0.12	0.12	0.13
Randolph County	Point Source	0.29	0.28	0.27	0.27
	LAS	0.00	0.00	0.00	0.00
	Septic	0.28	0.26	0.26	0.26
Stewart County	Point Source	0.58	0.54	0.51	0.49
	LAS	0.00	0.00	0.00	0.00
	Septic	0.17	0.16	0.15	0.14
Troup County	Point Source	5.29	5.39	5.44	5.51
	LAS	0.45	0.46	0.47	0.47
	Septic	3.01	3.07	3.10	3.14
Total	**Point Source**	**46.73**	**44.62**	**42.35**	**40.53**
	LAS	**7.17**	**7.69**	**8.20**	**8.76**
	Septic	**14.73**	**15.58**	**16.36**	**17.22**

Table 20 – Middle Ocmulgee Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Bibb County	Point Source	33.93	33.82	33.55	33.51
	LAS	0.00	0.00	0.00	0.00
	Septic	1.82	1.78	1.73	1.70
Butts County	Point Source	0.72	0.79	0.84	0.88
	LAS	0.63	0.69	0.73	0.77
	Septic	1.24	1.35	1.43	1.50
	Point Source	0.14	0.13	0.13	0.13

County	Source	2030	2040	2050	2060
Crawford County	LAS	0.00	0.00	0.00	0.00
	Septic	0.63	0.61	0.59	0.58
Houston County	Point Source	12.94	13.82	14.56	15.40
	LAS	0.01	0.01	0.01	0.01
	Septic	3.43	3.66	3.86	4.08
Jasper County	Point Source	0.16	0.17	0.18	0.19
	LAS	0.00	0.00	0.00	0.00
	Septic	0.67	0.71	0.75	0.80
Jones County	Point Source	0.38	0.38	0.38	0.38
	LAS	0.00	0.00	0.00	0.00
	Septic	1.33	1.32	1.32	1.33
Lamar County	Point Source	4.19	4.56	4.98	5.50
	LAS	0.00	0.00	0.00	0.00
	Septic	1.07	1.17	1.28	1.41
Monroe County	Point Source	1.48	1.52	1.55	1.61
	LAS	0.09	0.09	0.09	0.09
	Septic	1.21	1.24	1.27	1.31
Newton County	Point Source	0.05	0.05	0.06	0.07
	LAS	5.71	6.57	7.57	8.78
	Septic	5.18	5.97	6.88	7.97
Peach County	Point Source	1.00	1.00	0.98	0.99
	LAS	0.00	0.00	0.00	0.00
	Septic	1.11	1.11	1.10	1.10
Pulaski County	Point Source	1.35	1.24	1.14	1.05
	LAS	0.00	0.00	0.00	0.00
	Septic	0.42	0.38	0.35	0.33
Twiggs County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.11	0.10	0.10	0.10
	Septic	0.39	0.37	0.35	0.34
Total	**Point Source**	**56.34**	**57.49**	**58.35**	**59.72**
	LAS	**6.55**	**7.46**	**8.50**	**9.74**

County	Source	2030	2040	2050	2060
	Septic	**18.49**	**19.68**	**20.89**	**22.46**

Table 21 – Savannah-Upper Ogeechee Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Banks County	Point Source	0.09	0.10	0.12	0.14
	LAS	0.13	0.15	0.17	0.20
	Septic	1.34	1.54	1.76	2.02
Burke County	Point Source	1.77	1.75	1.71	1.70
	LAS	0.03	0.03	0.03	0.03
	Septic	0.88	0.87	0.85	0.84
Columbia County	Point Source	10.33	10.79	10.94	10.88
	LAS	0.38	0.40	0.40	0.40
	Septic	2.15	2.25	2.28	2.26
Elbert County	Point Source	1.05	1.02	0.99	0.96
	LAS	0.00	0.00	0.00	0.00
	Septic	0.68	0.65	0.63	0.61
Franklin County	Point Source	0.95	1.03	1.12	1.23
	LAS	0.00	0.00	0.00	0.00
	Septic	1.15	1.25	1.36	1.49
Glascock County	Point Source	0.05	0.05	0.04	0.04
	LAS	0.00	0.00	0.00	0.00
	Septic	0.14	0.13	0.12	0.10
Hart County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.82	0.84	0.85	0.88
	Septic	1.25	1.27	1.29	1.33
Jefferson County	Point Source	3.20	3.05	2.89	2.78
	LAS	0.00	0.00	0.00	0.00
	Septic	0.48	0.45	0.43	0.41
Jenkins County	Point Source	0.53	0.49	0.45	0.42
	LAS	0.00	0.00	0.00	0.00
	Septic	0.40	0.37	0.34	0.32

County	Source	2030	2040	2050	2060
Lincoln County	Point Source	0.23	0.22	0.20	0.19
	LAS	0.00	0.00	0.00	0.00
	Septic	0.41	0.39	0.36	0.34
Madison County	Point Source	0.05	0.06	0.07	0.08
	LAS	0.01	0.01	0.01	0.01
	Septic	1.85	2.04	2.27	2.57
McDuffie County	Point Source	3.21	3.23	3.23	3.28
	LAS	0.11	0.11	0.11	0.11
	Septic	1.05	1.05	1.05	1.07
Oglethorpe County	Point Source	0.07	0.08	0.08	0.09
	LAS	0.00	0.00	0.00	0.00
	Septic	0.91	0.97	1.03	1.11
Rabun County	Point Source	1.55	1.60	1.69	1.83
	LAS	0.35	0.37	0.39	0.42
	Septic	0.90	0.93	0.98	1.07
Richmond County	Point Source	36.16	35.78	35.11	34.84
	LAS	0.00	0.00	0.00	0.00
	Septic	2.55	2.53	2.48	2.46
Screven County	Point Source	2.07	1.97	1.87	1.81
	LAS	0.00	0.00	0.00	0.00
	Septic	0.58	0.56	0.53	0.51
Stephens County	Point Source	1.51	1.58	1.68	1.81
	LAS	0.00	0.00	0.00	0.00
	Septic	1.01	1.06	1.12	1.21
Taliaferro County	Point Source	0.03	0.03	0.02	0.02
	LAS	0.00	0.00	0.00	0.00
	Septic	0.07	0.07	0.06	0.05
Warren County	Point Source	0.25	0.24	0.23	0.23
	LAS	0.02	0.02	0.02	0.02
	Septic	0.19	0.18	0.17	0.17
Wilkes County	Point Source	0.54	0.50	0.45	0.41

County	Source	2030	2040	2050	2060
	LAS	0.00	0.00	0.00	0.00
	Septic	0.34	0.32	0.28	0.26
Total	**Point Source**	**63.65**	**63.57**	**62.89**	**62.73**
	LAS	**1.86**	**1.93**	**1.99**	**2.08**
	Septic	**18.32**	**18.87**	**19.39**	**20.22**

Table 22 – Suwannee-Satilla Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Atkinson County	Point Source	0.22	0.22	0.22	0.21
	LAS	0.09	0.09	0.09	0.09
	Septic	0.31	0.31	0.31	0.30
Bacon County	Point Source	0.33	0.32	0.31	0.29
	LAS	0.36	0.36	0.34	0.32
	Septic	0.62	0.61	0.58	0.55
Ben Hill County	Point Source	2.13	2.05	1.95	1.86
	LAS	0.24	0.23	0.22	0.21
	Septic	0.81	0.77	0.74	0.70
Berrien County	Point Source	0.88	0.89	0.89	0.90
	LAS	0.00	0.00	0.00	0.00
	Septic	0.94	0.95	0.95	0.96
Brantley County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.02	0.02	0.02	0.02
	Septic	1.12	1.09	1.02	0.92
Brooks County	Point Source	0.00	0.00	0.00	0.00
	LAS	1.76	1.66	1.51	1.38
	Septic	0.66	0.62	0.56	0.51
Charlton County	Point Source	0.45	0.43	0.39	0.36
	LAS	0.00	0.00	0.00	0.00
	Septic	0.67	0.64	0.59	0.54
Clinch County	Point Source	0.57	0.58	0.60	0.64
	LAS	0.00	0.00	0.00	0.00

County	Source	2030	2040	2050	2060
	Septic	0.30	0.31	0.32	0.34
Coffee County	Point Source	3.84	3.82	3.79	3.76
	LAS	0.53	0.53	0.52	0.52
	Septic	1.58	1.57	1.55	1.53
Cook County	Point Source	1.23	1.18	1.10	1.01
	LAS	0.00	0.00	0.00	0.00
	Septic	0.51	0.49	0.46	0.42
Echols County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.00	0.00	0.00	0.00
	Septic	0.23	0.22	0.20	0.19
Irwin County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.65	0.67	0.68	0.70
	Septic	0.52	0.53	0.54	0.56
Lanier County	Point Source	0.15	0.15	0.15	0.15
	LAS	0.00	0.00	0.00	0.00
	Septic	0.56	0.57	0.57	0.57
Lowndes County	Point Source	17.44	18.13	18.74	19.48
	LAS	2.00	2.08	2.15	2.23
	Septic	3.16	3.28	3.39	3.53
Pierce County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.29	0.30	0.31	0.31
	Septic	0.81	0.83	0.85	0.87
Tift County	Point Source	4.52	4.60	4.63	4.66
	LAS	0.09	0.09	0.09	0.09
	Septic	0.98	0.99	1.00	1.01
Turner County	Point Source	0.64	0.60	0.56	0.52
	LAS	0.07	0.07	0.06	0.06
	Septic	0.37	0.35	0.32	0.30
Ware County	Point Source	1.33	1.36	1.39	1.43
	LAS	0.00	0.00	0.00	0.00
	Septic	1.65	1.69	1.72	1.77

County	Source	2030	2040	2050	2060
Total	**Point Source**	**33.72**	**34.34**	**34.72**	**35.27**
	LAS	**6.10**	**6.09**	**5.99**	**5.92**
	Septic	**15.79**	**15.83**	**15.68**	**15.56**

Table 23 – Upper Flint Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Crisp County	Point Source	2.98	2.83	2.64	2.49
	LAS	0.01	0.01	0.01	0.01
	Septic	0.60	0.56	0.53	0.50
Dooly County	Point Source	0.06	0.06	0.05	0.05
	LAS	1.81	1.65	1.49	1.37
	Septic	0.38	0.35	0.31	0.29
Macon County	Point Source	0.16	0.15	0.13	0.12
	LAS	0.00	0.00	0.00	0.00
	Septic	0.40	0.37	0.33	0.31
Marion County	Point Source	0.22	0.21	0.20	0.19
	LAS	0.00	0.00	0.00	0.00
	Septic	0.39	0.37	0.35	0.33
Meriwether County	Point Source	0.27	0.26	0.26	0.26
	LAS	0.86	0.85	0.83	0.82
	Septic	0.78	0.77	0.75	0.74
Pike County	Point Source	0.07	0.07	0.07	0.08
	LAS	0.00	0.00	0.00	0.00
	Septic	1.14	1.20	1.26	1.31
Schley County	Point Source	0.43	0.45	0.46	0.48
	LAS	0.00	0.00	0.00	0.00
	Septic	0.26	0.27	0.28	0.29
Spalding County	Point Source	2.14	2.32	2.47	2.64
	LAS	2.39	2.58	2.75	2.94
	Septic	3.25	3.51	3.74	4.00

County	Source	2030	2040	2050	2060
Sumter County	Point Source	2.21	2.03	1.86	1.71
	LAS	0.00	0.00	0.00	0.00
	Septic	0.71	0.65	0.60	0.55
Talbot County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.00	0.00	0.00	0.00
	Septic	0.27	0.23	0.20	0.18
Taylor County	Point Source	0.34	0.33	0.31	0.30
	LAS	0.19	0.18	0.17	0.17
	Septic	0.27	0.25	0.24	0.23
Upson County	Point Source	1.91	1.90	1.87	1.86
	LAS	0.00	0.00	0.00	0.00
	Septic	0.92	0.91	0.90	0.89
Webster County	Point Source	0.00	0.00	0.00	0.00
	LAS	0.00	0.00	0.00	0.00
	Septic	0.13	0.12	0.10	0.10
Total	**Point Source**	**10.80**	**10.60**	**10.32**	**10.17**
	LAS	**5.27**	**5.27**	**5.24**	**5.31**
	Septic	**9.49**	**9.58**	**9.59**	**9.73**

Table 24 – Upper Oconee Municipal Wastewater Flow Forecasts (MGD) (Back to Report)

County	Source	2030	2040	2050	2060
Baldwin County	Point Source	3.16	2.99	2.76	2.60
	LAS	0.00	0.00	0.00	0.00
	Septic	1.70	1.60	1.48	1.39
Barrow County	Point Source	2.79	3.57	4.52	5.72
	LAS	0.65	0.83	1.05	1.34
	Septic	4.76	6.09	7.70	9.76
Clarke County	Point Source	16.97	18.54	19.83	21.35
	LAS	0.01	0.01	0.01	0.01
	Septic	1.98	2.15	2.29	2.45

County	Source	2030	2040	2050	2060
Greene County	Point Source	0.33	0.35	0.39	0.45
	LAS	0.51	0.56	0.61	0.71
	Septic	0.87	0.95	1.05	1.20
Hancock County	Point Source	0.05	0.04	0.04	0.04
	LAS	0.39	0.36	0.33	0.33
	Septic	0.38	0.34	0.32	0.32
Jackson County	Point Source	7.17	8.64	10.26	12.08
	LAS	0.27	0.33	0.39	0.46
	Septic	4.25	5.12	6.08	7.16
Laurens County	Point Source	3.64	3.60	3.53	3.47
	LAS	0.23	0.22	0.22	0.21
	Septic	1.51	1.50	1.47	1.44
Morgan County	Point Source	0.65	0.70	0.76	0.83
	LAS	0.02	0.02	0.02	0.02
	Septic	0.84	0.90	0.98	1.06
Oconee County	Point Source	2.43	2.92	3.45	4.02
	LAS	0.07	0.09	0.11	0.12
	Septic	2.76	3.31	3.91	4.56
Putnam County	Point Source	0.39	0.39	0.39	0.40
	LAS	0.12	0.12	0.13	0.13
	Septic	0.96	0.96	0.97	1.00
Walton County	Point Source	3.62	4.14	4.71	5.40
	LAS	0.01	0.02	0.02	0.02
	Septic	4.67	5.33	6.07	6.95
Washington County	Point Source	1.36	1.33	1.27	1.23
	LAS	0.18	0.18	0.17	0.16
	Septic	0.71	0.69	0.66	0.64
Wilkinson County	Point Source	0.12	0.11	0.10	0.10
	LAS	0.00	0.00	0.00	0.00
	Septic	0.38	0.35	0.32	0.30
	Point Source	**42.69**	**47.34**	**52.02**	**57.68**

County	Source	2030	2040	2050	2060
Total	LAS	2.47	2.73	3.06	3.51
	Septic	25.76	29.31	33.30	38.24

APPENDIX 1 – ALTAMAHA INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Altamaha Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Appling County	18,561	19,346	19,853	20,138	20,577
Bleckley County	12,838	13,243	13,576	13,789	14,084
Candler County	10,837	11,101	11,194	11,278	11,489
Dodge County	20,385	19,500	18,327	17,003	15,822
Emanuel County	22,664	23,564	24,037	24,228	24,591
Evans County	10,687	10,920	11,092	11,094	11,181
Jeff Davis County	15,148	15,681	15,943	16,040	16,096
Johnson County	9,661	9,499	9,280	9,085	9,045
Montgomery County	9,224	9,374	9,378	9,332	9,332
Tattnall County	25,411	25,591	25,460	25,001	24,641
Telfair County	15,644	14,736	13,742	12,735	12,020
Toombs County	26,983	27,477	27,507	27,171	26,821
Treutlen County	6,829	6,917	6,970	6,978	7,096
Wayne County	29,974	30,798	31,180	31,233	31,436
Wheeler County	7,909	8,097	8,304	8,464	8,675
Wilcox County	8,790	8,824	8,945	9,254	9,734
TOTAL	**251,545**	**254,668**	**254,788**	**252,823**	**252,640**

Altamaha Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Appling County	140	133	129
Bleckley County [2]	115	113	136
Candler County	105	99	90
Dodge County	174	176	136
Emanuel County	169	161	132
Evans County	95	92	124
Jeff Davis County	195	193	160
Johnson County	121	122	140
Montgomery County [3]	112	112	166
Tattnall County [2]	121	118	152
Telfair County [2]	140	141	182
Toombs County	147	146	151
Treutlen County [3]	128	128	127
Wayne County	171	164	120
Wheeler County	141	143	111
Wilcox County [3]	139	133	147

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation.

[2] Per capita was calculated using water withdrawals from large and small systems and population served data provided by EPD.

[3] Water Loss Audits not available. Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

Altamaha Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Appling County	63%	75	67%	67%	10.1	64.9
Bleckley County [3]	56%	75	58%	51%	10.5	64.5
Candler County	58%	75	39%	39%	10.3	64.7
Dodge County	63%	75	52%	52%	10.7	64.3
Emanuel County	46%	75	42%	42%	11.4	63.6
Evans County	49%	75	39%	39%	10.0	65.0
Jeff Davis County	52%	75	58%	58%	10.3	64.7
Johnson County	58%	75	56%	56%	10.8	64.2
Montgomery County	39%	75	57%	57%	9.8	65.2
Tattnall County	60%	75	62%	62%	10.8	64.2
Telfair County [3]	31%	75	43%	54%	11.3	63.7
Toombs County	33%	75	32%	32%	10.8	64.2
Treutlen County	54%	75	64%	64%	10.7	64.3
Wayne County	57%	75	53%	53%	10.0	65.0
Wheeler County	67%	75	43%	43%	10.5	64.5
Wilcox County	43%	75	35%	35%	10.9	64.1

NOTES:

[1] Ratios as shown in Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment applied to volume of water used over time due to the installation of new and water efficient appliances and fixtures.

[3] Self-supplied percent ratio was calculated by subtracting the municipally-supplied population served, provided by EPD, from the total population within the County.

Altamaha Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
001-0002	Baxley, City of	Appling	Floridan	1.40	1.40	0.76	
			Appling County Total	1.40	1.40	0.76	0.82
012-0001	Cochran, City of	Bleckley	Floridan	2.00	2.00	0.76	
012-0002	Middle Georgia State University	Bleckley	Floridan	0.21	0.15	0.14	
			Bleckley County Total	2.21	2.15	0.90	0.87
021-0001	Metter, City of	Candler	Floridan	1.20	0.90	0.44	
			Candler County Total	1.20	0.90	0.44	0.56
045-0001	Eastman, City of	Dodge	Floridan	3.00	2.80	1.04	
045-0003	Chester, City of	Dodge	Floridan	0.25	0.25	0.21	
045-0004	Rhine, City of	Dodge	Floridan	0.45	0.35	0.26	
			Dodge County Total	3.70	3.40	1.51	0.95
053-0001	Swainsboro, City of	Emanuel	Floridan	1.80	1.70	1.25	
053-0003	Twin City, City of	Emanuel	Floridan	0.38	0.33	0.23	
			Emanuel County Total	2.18	2.03	1.48	1.72
054-0001	Claxton, City of	Evans	Floridan	0.50	0.50	0.44	
			Evans County Total	0.50	0.50	0.44	0.77
080-0002	Hazlehurst, City of	Jeff Davis	Floridan	1.01	0.85	0.80	
			Jeff Davis County Total	1.01	0.85	0.80	1.02
083-0001	Wrightsville, City of	Johnson	Cretaceous Sand	1.00	0.85	0.49	
			Johnson County Total	1.00	0.85	0.49	0.51
103-0001	Mount Vernon, City of	Montgomery	Floridan	0.80	0.80	0.40	
			Montgomery County Total	0.80	0.80	0.40	0.63
132-0001	Georgia Department of Corrections - Rogers State Prison	Tattnall	Floridan	1.50	1.25	0.73	
132-0002	Glennville, City of	Tattnall	Floridan	1.20	1.12	0.71	
132-0003	Reidsville, City of	Tattnall	Floridan	1.00	1.00	0.29	
			Tattnall County Total	3.70	3.37	1.73	1.32
134-0001	McRae-Helena, City of	Telfair	Floridan	1.70	1.60	1.02	
134-0003	Lumber City, City of	Telfair	Floridan	0.25	0.25	0.19	
134-0006	Milan, City of	Telfair	Floridan	0.18	0.18	0.16	
			Telfair County Total	2.13	2.03	1.38	0.95
138-0001	Vidalia, City of	Toombs	Floridan	5.00	4.00	1.70	

Altamaha Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
138-0002	Lyons, City of	Toombs	Floridan	1.50	1.00	1.31	
			Toombs County Total	6.50	5.00	3.01	2.54
140-0001	Soperton, City of	Treutlen	Floridan	0.75	0.65	0.36	
			Treutlen County Total	0.75	0.65	0.36	0.30
151-0002	Jesup, City of	Wayne	Floridan	3.00	2.50	1.24	
151-0003	Screven, City of	Wayne	Floridan	0.13	0.13	0.06	
			Wayne County Total	3.13	2.63	1.31	1.62
153-0001	Glenwood, City of	Wheeler	Floridan	0.50	0.40	0.10	
			Wheeler County Total	0.50	0.40	0.10	0.49
156-0002	Rochelle, City of	Wilcox	Floridan	0.28	0.23	0.35	
156-0003	Abbeville, City of	Wilcox	Floridan	0.86	0.68	0.37	
			Wilcox County Total	1.14	0.91	0.72	0.86
TOTAL				31.84	27.85	15.84	15.94

Altamaha Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Appling County	71%	71%
Bleckley County	79%	79%
Candler County	59%	59%
Dodge County	67%	67%
Emanuel County	59%	59%
Evans County	87%	87%
Jeff Davis County	82%	82%
Johnson County	74%	74%
Montgomery County	59%	59%
Tattnall County	77%	77%
Telfair County	58%	58%
Toombs County	71%	71%
Treutlen County	57%	57%
Wayne County	59%	59%
Wheeler County	84%	84%
Wilcox County	75%	75%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018

2. Shaded septic percentages are from the 1990 census information of septic values

3. Percent of septic users will stay constant in the future unless further input received

Altamaha Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0038725	Baxley, City of (Baxley WPCP)	Appling	2	1.28	
GAG550076	Georgia Baptist Children's Home WPCP	Appling	Report	0	
		Appling County Total	**> 2**	**1.28**	**1.42**
GA0032107	Cochran, City of (Cochran WPCP)	Bleckley	1	0.69	
		Bleckley County Total	**1**	**0.69**	**0.76**
GA0046485	Eastman, City of (Sugar Creek WPCP)	Dodge	1.8	0.71	
		Dodge County Total	**1.8**	**0.71**	**0.55**
GA0039225	Swainsboro, City of (Yam Grandy Creek WPCP)	Emanuel	3	1.01	
		Emanuel County Total	**3**	**1.01**	**1.10**
GA0038351	Claxton, City of (Claxton WPCP)	Evans	Report	0.02	
		Evans County Total	**Report**	**0.02**	**0.02**
GA0036765	Hazlehurst, City of (Bully Creek WPCP)	Jeff Davis	1.5	0.88	
		Jeff Davis County Total	**1.5**	**0.88**	**0.94**
GA0050251	Wrightsville, City of (Ohoopee WPCP)	Johnson	1	0	
GA0031551	Johnson County LTC, LLC (Scott Health & Rehabilitation WPCP)	Johnson	0.01	0	
		Johnson County Total	**1.01**	**0**	**0.00**
GA0033758	Mount Vernon, City of (Mount Vernon WPCP)	Montgomery	0.27	0.2	
GA0049247	Ailey, City of (Ailey WPCP)	Montgomery	0.08	0.03	
		Montgomery County Total	**0.35**	**0.23**	**0.23**
GA0022900	Georgia Department of corrections (Rogers State Prison WPCP)	Tattnall	0.85	1.26	
GA0037982	Glennville, City of (Glennville WPCP)	Tattnall	2	0.45	

		Tattnall County Total	**2.85**	**1.71**	**1.66**
GA0032344	Scotland, City of (Scotland WPCP)	Telfair	0.18	0.01	
GA0048674	McRae-Helena, City of (McRae-Helena WPCP)	Telfair	0.8	0.44	
GA0050199	Lumber City (Lumber City WPCP)	Telfair	0.5	0.19	
		Telfair County Total	**1.48**	**0.64**	**0.49**
GA0025488	Vidalia, City of (Swift Creek WPCP)	Toombs	1.88	0.33	
GA0033391	Lyons, City of (Lyons North WPCP)	Toombs	0.67	0.42	
GA0033405	Lyons, City of (Lyons East WPCP)	Toombs	0.67	0.48	
		Toombs County Total	**3.22**	**1.23**	**1.22**
GA0020826	Soperton, City of (Soperton WPCP)	Treutlen	0.6	0.36	
		Treutlen County Total	**0.6**	**0.36**	**0.37**
GA0026000	Jesup, City of (Jesup WPCP)	Wayne	2.5	1.66	
GAG550161	Georgia Department of Corrections (Wayne County State Prison WPCP)	Wayne	Report	0	
		Wayne County Total	**>2.5**	**1.66**	**1.74**
GA0037753	Alamo, City of (Alamo WPCP)	Wheeler	0.38	0.27	
GA0021377	Glenwood, City of (Glenwood WPCP)	Wheeler	0.11	0.02	
		Wheeler County Total	**0.49**	**0.29**	**0.32**
GA0034291	Crossview Care Center WPCP	Wilcox	0.01	0	
GA0047643	Abbeville, City of (Abbeville WPCP)	Wilcox	0.28	0.27	
GA0024236	Rochelle, City of (Southeast WPCP)	Wilcox	0.04	0.04	
GA0024244	Rochelle, City of (Northwest WPCP)	Wilcox	0.34	0.02	
		Wilcox County Total	**0.67**	**0.33**	**0.37**
		TOTAL	**22.47**	**11.04**	**11.18**

Altamaha Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ020185	Metter, City of (Metter WPCP)	Candler	1	0.40	
		Candler County Total	**1**	**0.40**	**0.42**
GAJ020086	Milan	Dodge	0.2	0.06	
GAJ020202	Chester, City of	Dodge	0.3	0.23	
		Dodge County Total	**0.5**	**0.29**	**0.23**
GAJ020021	Twin City (Twin City WPCP)	Emanuel	0.2	0.09	
GAJ020075	Stillmore, City of (Stillmore WPCP)	Emanuel	0.05	0.02	
		Emanuel County Total	**0.25**	**0.11**	**0.11**
GAJ020042	Hagan, City of (Hagan WPCP)	Evans	0.15	0.05	
		Evans County Total	**0.15**	**0.05**	**0.06**
GAJ020040	Uvalda, City of (Uvalda WPCP)	Montgomery	0.15	0.03	
		Montgomery County Total	**0.15**	**0.03**	**0.03**
GAJ020255	Department of Natural Resources (Lynntown Road at Gordonia-Altamaha State Park)	Tattnall	0.18	0.00	
GAJ020058	Reidsville, City of (Sherwood Forest WPCP)	Tattnall	0.5	0.27	
GAJ040012	Collins, City of (Collins WPCP)	Tattnall	0.06	0.05	
		Tattnall County Total	**0.74**	**0.32**	**0.31**
GAJ020248	McRae-Helena, City of	Telfair	1.75	0.58	
GAJ030842	Telfair State Prison	Telfair	0.045	0.01	
		Telfair County Total	**1.795**	**0.60**	**0.46**
GAJ020100	Vidalia (South WPCP)	Toombs	1.8	1.20	
		Toombs County Total	**1.8**	**1.20**	**1.19**
GAJ020140	Screven, City of	Wayne	0.1	0.04	
GAJ020027	Odum, City of (Odum WPCP)	Wayne	0.085	0.03	
		Wayne County Total	**0.185**	**0.07**	**0.07**
GAJ020301	Glenwood, City of (Glenwood WPCP)	Wheeler	0.1	0.12	
		Wheeler County Total	**0.1**	**0.12**	**0.13**
	TOTAL		**6.67**	**3.14**	**3.02**

APPENDIX 2 – COASTAL GEORGIA INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Coastal Georgia Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Bryan County	39,137	44,300	47,361	49,194	49,755
Bulloch County	79,467	86,066	83,487	78,905	75,322
Camden County	53,924	55,715	56,272	56,512	56,948
Chatham County	292,176	313,387	328,655	344,151	363,173
Effingham County	64,026	72,294	76,579	77,957	77,734
Glynn County	86,047	93,084	99,312	106,185	114,913
Liberty County	61,904	62,286	61,727	61,485	61,018
Long County	19,915	25,096	31,324	38,558	47,328
McIntosh County	14,567	14,707	13,394	11,784	10,633
TOTAL	**711,163**	**766,935**	**798,111**	**824,731**	**856,824**

Coastal Georgia Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Bryan County	138	138	117
Bulloch County	138	138	88
Camden County [2]	138	133	88
Chatham County [3]	138	136	106
Effingham County	138	140	189
Glynn County	138	135	120
Liberty County [2]	138	136	87
Long County [4]	138	137	235
McIntosh County [2]	138	132	119

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation. Per capita values below 75 gpcd and over 200 gpcd were highlighted because they are outside the typical range and more information is being sought from the water systems in these Counties.

[2] Per capita was calculated using water withdrawals from large and small systems and population served data provided by EPD.

[3] Industrial demand for Savannah and Port Wentworth are fulfilled directly from the Savannah I&D permit and those flows were not reported in the water audits nor considered when developing the Chatham County per capita. After forecasting municipal water demands based on population, the forecasted industrial demand was added to the Chatham County demand.

[4] Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

Coastal Georgia Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita [1]	Updated Percent Population Self Supplied [2]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [3]	2060 Self Supplied Per Capita
Bryan County	36%	100	25%	25%	6.70	93.30
Bulloch County	21%	100	21%	21%	8.33	91.67
Camden County [4]	32%	100	13%	13%	6.94	93.06
Chatham County [4]	12%	100	2%	2%	10.60	89.40
Effingham County	45%	100	34%	34%	6.87	93.13
Glynn County	13%	100	11%	11%	9.60	90.40
Liberty County [4]	16%	100	7%	7%	7.93	92.07
Long County	70%	100	72%	72%	7.47	92.53
McIntosh County [4]	51%	100	45%	45%	8.74	91.26

NOTES:

[1] During the Coastal Georgia Regional Water Planning Council's municipal ad hoc group meeting held on February 25, 2010, it was decided that the group would rather use 100 GPCD for self-supplied domestic water users. The basis for adjusting the number is that it is commonly used by engineers for planning for water use.

[2] Ratios as shown in the Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[3] Adjustment applied to volume of water used over time due to the installation of new and water efficient appliances and fixtures.

[4] Self-supplied percent ratio was calculated by subtracting the municipally-supplied population served, provided by EPD, from the total population within the County.

Coastal Georgia Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
051-0115-01	Savannah Industrial & Domestic Water System [2]	Chatham	Abercorn Creek	50	41.667	37.33	
Chatham County Total				**50**	**41.667**	**37.33**	**38.09**
TOTAL				**50**	**41.667**	**37.33**	**38.09**

NOTES:

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Surface water withdrawal for City of Savannah (Chatham County) is located in Effingham County.

Coastal Georgia Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
015-0001	Richmond Hill, City of	Bryan	Upper Floridan	1.712	1.71	0.98	
015-0002	Pembroke, City of	Bryan	Floridan	0.36	0.27	0.17	
015-0005	South Atlantic Utilities - Waterford Landing	Bryan	Upper Floridan	0.18	0.12	0.08	
015-0007	Bryan County Board of Commissioners	Bryan	Upper Floridan	1.6	1.60	0.38	
015-0008	Richmond Hill, City of	Bryan	Lower Floridan	1.568	1.57	0.47	
015-0009	South Atlantic Utilities - Buckhead Subdivision	Bryan	Upper Floridan	0.7	0.70	0.26	
015-0010	South Atlantic Utilities - Mill Hill, Strathy Hall I, Strathy Hall II	Bryan	Upper Floridan	0.26	0.17	0.14	
015-0011	South Atlantic Utilities - Cape Hardwicke / Fort McAllister	Bryan	Upper Floridan	0.161	0.16	0.10	
015-0012	South Atlantic Utilities – Black Creek Golf Course / Hidden Creek / Brewton Acres / Park Place Community Water System	Bryan	Floridan	0.154	0.15	0.08	
			Bryan County Total	**6.70**	**6.45**	**2.67**	**4.09**
016-0001	Georgia Southern University	Bulloch	Floridan	1	0.50	0.31	
016-0002	Statesboro, City of	Bulloch	Floridan	7.345	5.88	3.47	
016-0003	Brooklet, Town of	Bulloch	Floridan	0.265	0.25	0.19	
016-0008	Forest Heights Water Works, Inc	Bulloch	Upper Floridan	0.256	0.26	0.11	
016-0009	Pembroke, City of	Bulloch	Floridan	0.25	0.18	0.03	
			Bulloch County Total	**9.12**	**7.06**	**4.12**	**4.74**
020-0001	Kingsland, City of	Camden	Floridan	4	3.00	1.56	
020-0002	St. Marys, City of	Camden	Floridan	6	5.00	1.28	
020-0006	Woodbine, City of	Camden	Floridan	0.8	0.80	0.14	
020-0010	Naval Submarine Base Kings Bay	Camden	Floridan	2.9	2.90	0.74	
020-0013	Chatham Water Utility, LLC - Sanctuary Cove	Camden	Floridan	1	1.00	0.19	
020-0014	Chatham Water Utility, LLC - Elliot's Bluff	Camden	Upper Floridan	0.15	0.15	0.04	
			Camden County Total	**14.85**	**12.85**	**3.95**	**4.01**
025-0005	Pooler, City of	Chatham	Upper Floridan	0.763	0.28	0.18	
025-0007	Garden City, City of	Chatham	Upper Floridan	2	1.14	0.93	
025-0018	Savannah, City of	Chatham	Upper Floridan	38.05	19.90	21.53	
025-0021	Port Wentworth, City of	Chatham	Upper Floridan	0.94	0.27	0.14	
025-0022	Thunderbolt, Town of	Chatham	Upper Floridan	0.4	0.21	0.15	
025-0023	Savannah Health Services, LLC	Chatham	Floridan	0.258	0.14	0.17	

Coastal Georgia Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
025-0027	Tybee Island, City of	Chatham	Upper Floridan	1.6	0.92	0.77	
025-0028	Utilities, Inc. of Georgia	Chatham	Upper Floridan	2.61	1.70	1.43	
025-0034	DPW Environmental Division - Hunter Army Airfield	Chatham	Upper Floridan	1.17	0.66	0.30	
025-0035	Bloomingdale, City of	Chatham	Upper Floridan	0.256	0.19	0.11	
025-0040	Chatham Water Company - Glen of Robin Hood & Montgomery Area	Chatham	Upper Floridan	1.007	0.63	0.56	
025-0041	Consolidated Utilities, Inc.	Chatham	Upper Floridan	0.379	0.18	0.17	
025-0045	Chatham Water Company - Hunter's Ridge	Chatham	Floridan	0.1	0.09	0.05	
025-0046	Candler Hospital	Chatham	Floridan	0.1	0.09	0.08	
025-0054	Skidaway Institute of Oceanography	Chatham	Floridan	0.12	0.12	0.02	
025-0056	South Atlantic Utilities	Chatham	Upper Floridan	0.194	0.17	-	
025-0057	Consolidated Utilities, Inc.	Chatham	Miocene	2	2.00	0.23	
025-0060	Consolidated Utilities, Inc.	Chatham	Lower Floridan	0.921	0.80	0.69	
025-0061	DPW Environmental Division - Hunter Army Airfield	Chatham	Lower Floridan	0.72	-	0.06	
025-0062	Coastal Georgia Water Company - Ogeechee Farms	Chatham	Upper Floridan	0.151	0.13	0.08	
025-0063	Chatham Water Company - Parkersburg	Chatham	Upper Floridan	0.56	0.36	0.17	
025-0064	South Atlantic Utilities - Scarborough Cove & Talahi Island Community	Chatham	Upper Floridan	0.329	0.15	0.15	
025-0065	Chatham Water Company - Burnside & Rio Vista Community Water System	Chatham	Upper Floridan	0.183	0.11	0.10	
025-0066	Pooler, City of	Chatham	Lower Floridan	1.13	0.98	0.85	
025-0067	South Atlantic Utilities - Harbour Creek Community Water System	Chatham	Upper Floridan	0.12	0.10	0.03	
			Chatham County Total	**56.06**	**31.32**	**28.92**	**28.64**
051-0001	Rincon, City of	Effingham	Upper Floridan	1.401	0.88	0.91	
051-0005	Guyton, City of	Effingham	Floridan	0.765	0.72	0.28	
051-0010	Coastal Water & Sewerage Company	Effingham	Upper Floridan	0.3	0.11	0.08	
051-0011	Effingham County Board of Commissioners	Effingham	Floridan	0.539	0.37	0.06	
051-0012	Springfield, City of	Effingham	Floridan	1.2	1.20	0.64	
051-0013	Coastal Water Company - Westwood Heights	Effingham	Miocene	0.1	0.10	0.02	
051-0014	Chatham Water Utility, LLC - Lakeside Farms	Effingham	Floridan	0.121	0.08	0.07	
051-0015	Rincon, City of	Effingham	Lower Floridan	1.25	0.86	-	

Coastal Georgia Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
051-0016	South Atlantic Utilities - Azalea Point / Barrister Crossing / Kingsley Plantation / Lonesome Oak CWS	Effingham	Upper Floridan	0.235	0.20	0.09	
051-0017	South Atlantic Utilities - Goshen Villas Water System	Effingham	Upper Floridan	0.125	0.11	0.04	
			Effingham County Total	**6.04**	**4.63**	**2.19**	**9.30**
063-0002	Jekyll Island State Park Authority - Public Water System	Glynn	Floridan	2.15	1.85	0.59	
063-0009	Sewer and Wells, LLC - Cloister Complex	Glynn	Floridan	2.2	1.60	0.30	
063-0010	Brunswick-Glynn County JWSC – St. Simons District	Glynn	Floridan	5.95	4.52	2.70	
063-0011	Brunswick-Glynn County JWSC – Brunswick District	Glynn	Floridan	9.45	8.79	3.63	
063-0019	Georgia Ports Authority - Colonel's Island	Glynn	Floridan	0.15	0.15	0.01	
063-0025	Brunswick-Glynn County JWSC – I-95 & US 17 Interchange System	Glynn	Floridan	1.3	1.30	0.15	
063-0026	Georgia Ports Authority - Colonel's Island	Glynn	Miocene	0.2	0.20	0.04	
063-0038	Brunswick-Glynn County JWSC – Golden Isles	Glynn	Miocene	2	2.00	1.30	
063-0042	Glynn County Board of Commissioners - North Recreation Complex	Glynn	Miocene	0.63	0.63	0.05	
063-0045	Brunswick-Glynn County JWSC – Fancy Bluff	Glynn	Miocene	1	1.00	0.14	
063-0046	Oak Grove Utility Company Inc.	Glynn	Floridan	0.26	0.20	0.20	
063-0050	Epworth Acres Water System	Glynn	Floridan	0.3	0.25	0.07	
			Glynn County Total	**25.59**	**22.49**	**9.19**	**11.25**
089-0002	Hinesville, City of	Liberty	Floridan	4.5	4.00	3.45	
089-0003	DPW Environmental Division - Fort Stewart	Liberty	Upper Floridan	5.231	4.23	1.64	
089-0004	Walthourville, City of	Liberty	Floridan	0.2	0.15	0.00	
089-0005	Liberty County Development Authority	Liberty	Floridan	1.1	1.10	0.05	
089-0006	Midway, City of	Liberty	Floridan	0.32	0.30	0.24	
089-0007	Riceboro, City of	Liberty	Floridan	0.525	0.53	0.91	
089-0008	Liberty County Development Authority - Business Park	Liberty	Miocene, Surficial	0.3	0.30	-	
089-0010	Walthourville, City of	Liberty	Miocene	0.7	0.70	0.30	
089-0011	DPW Environmental Division - Fort Stewart	Liberty	Lower Floridan	0.768	0.77	0.01	
089-0012	South Atlantic Utilities - Lake George / Twin Rivers	Liberty	Upper Floridan	0.145	0.11	0.08	
089-0013	Chatham Water Company - Isle of Wight	Liberty	Upper Floridan	0.2	0.20	0.08	

Coastal Georgia Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
089-0014	Liberty County Board of Commissioners	Liberty	Miocene	0.45	0.30	0.04	
			Liberty County Total	**14.44**	**12.68**	**6.82**	**6.10**
091-0002	Ludowici, City of	Long	Miocene	0.3	0.30	0.30	
091-0003	Ludowici, City of	Long	Floridan	0.3	0.30	0.19	
			Long County Total	**0.60**	**0.60**	**0.48**	**3.00**
098-0001	Darien, City of	McIntosh	Floridan	0.66	0.59	0.29	
098-0003	McIntosh County Industrial Development Authority	McIntosh	Floridan	0.15	0.15	0.03	
098-0005	Darien, City of	McIntosh	Miocene	0.315	0.21	0.11	
098-0006	McIntosh County Board of Commissioners - Crescent Community / Forest Marsh / Coastal Pine Forest	McIntosh	Floridan	0.45	0.45	0.33	
098-0007	Chatham Water Utility, LLC - John Alford Subdivision	McIntosh	Floridan	0.15	0.15	0.11	
098-0008	South Atlantic Utilities - Cooper's Point / Sutherland Bluff	McIntosh	Floridan	0.23	0.23	0.07	
098-0009	Riceboro, City of - McIntosh County Operations	McIntosh	Floridan	1.1	1	0.00	
			McIntosh County Total	**3.06**	**2.78**	**0.93**	**0.64**
TOTAL				**136.44**	**100.86**	**59.27**	**71.78**

NOTES:

[1] Portions of Bryan, Chatham, Effingham, and Liberty Counties are located within the sub-regions (Red and Yellow Zones) that are most vulnerable to salt water intrusion. There are restrictions in place that limit the withdrawal of water from the Floridan Aquifer.

Coastal Georgia Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Bryan County	72%	72%
Bulloch County	76%	76%
Camden County	40%	40%
Chatham County	14%	14%
Effingham County	79%	79%
Glynn County	52%	52%
Liberty County	39%	39%
Long County	83%	83%
McIntosh County	79%	79%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018

2. Shaded septic percentages are from the 1990 census information of septic values

3. Percent of septic users will stay constant in the future unless further input received

Coastal Georgia Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0037648	Richmond Hill, City of (Sterling Creek WRF)	Bryan	3	1.35	
GA0038377	Pembroke, City of (Pembroke WPCP)	Bryan	Report	0.23	
		Bryan County Total	**>3**	**1.58**	**2.01**
GA0023108	Statesboro, City of (Statesboro WPCP)	Bulloch	10	9.39	
		Bulloch County Total	**10**	**9.39**	**8.90**
GA0027707	US Department of the Navy (Naval Submarine Base Kings Bay)	Camden	0.5	0.12	
GA0023701	Woodbine, City of (Woodbine WPCP)	Camden	0.37	0.15	
GA0035599	River Oaks Mobile Home Park WPCP	Camden	0.01	0	
GA0037931	Saint Marys, City of (Scrubby Bluff WPCP)	Camden	0.5	0	
GA0037800	Kingsland, City of (Kingsland WPCP)	Camden	2.2	1.63	
GA0039047	Saint Marys, City of (Point Peter WPCP)	Camden	4	3.36	
		Camden County Total	**7.58**	**5.26**	**5.55**
GA0027588	United States Army Hunter Army Airfield WWTP	Chatham	1.5	0.34	
GA0034819	Consolidated Utilities, Inc. (Larchmont Estates WPCP)	Chatham	1	0.96	
GA0046418	Savannah, City of (Georgetown WPCP)	Chatham	2.45	1.89	
GA0047066	Pooler, City of (Bloomingdale Regional WPCP)	Chatham	2.5	4.5	
GA0049506	Garden Acres Estates WPCP	Chatham	0.05	0.03	
GAG550101	Nassau Woods Mobile Home Park	Chatham	Report	0	

Coastal Georgia Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GAG550127	Savannah Pines Mobile Home Park	Chatham	Report	0.05	
GA0020061	Tybee Island, City of (Tybee Island WPCP)	Chatham	1.15	0.69	
GA0020427	Savannah, City of (Travis Field WPCP)	Chatham	4	0	
GA0020443	Savannah, City of (Wilshire WPCP)	Chatham	4.5	2.75	
GA0025348	Savannah, City of (President Street WRF)	Chatham	27	15.8	
GA0031038	Garden City (Garden City WPCP)	Chatham	2	2.28	
GA0033189	Savannah Yacht Club WPCP	Chatham	0.01	0.01	
GA0038326	Savannah, City of (Crossroads WPCP)	Chatham	3	5.9	
GA0038814	Port Wentworth, City Of (Port Wentworth WPCP)	Chatham	2	0.82	
GA0050240	Cretaceous Aquifer Deep Well Project	Chatham	Report	0	
		Chatham County Total	**>51.16**	**36.02**	**44.77**
GA0020770	Springfield, City of (Springfield WPCP)	Effingham	2.5	0.32	
GA0046442	Rincon, City of (Rincon WPCP)	Effingham	1	0.58	
		Effingham County Total	**3.5**	**0.9**	**1.09**
GA0020508	Jekyll Island State Park Authority WPCP	Glynn	1	0.25	
GA0021521	Brunswick-Glynn County Water and Sewer Commission (Saint Simons Island WPCP)	Glynn	4	2.9	
GA0022489	Brunswick Shady Acres Mobile Home Park WPCP	Glynn	0.04	0.01	
GA0025313	Brunswick-Glynn County JWSC (Academy Creek WPCP)	Glynn	13.5	7.58	
GA0034754	Sterling Mobile Home Park WPCP	Glynn	0.01	0	
GA0038938	Brunswick-Glynn County JWSC (Exit 29 WPCP)	Glynn	1.5	0.4	
GAG550111	Golden Isles Marina Master Association	Glynn	Report	0.01	
GAG550139	New Hope Plantation Mobile Home Park	Glynn	Report	0	
		Glynn County Total	**>20.05**	**11.15**	**14.89**

Coastal Georgia Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0004308	United States Department of the Army (Fort Stewart)	Liberty	0.04	0.25	
GA0038491	Riceboro, City of (Riceboro WPCP)	Liberty	Report	0.004	
GA0038792	Hinesville, City of (Peacock Creek WRF)	Liberty	0.5	0.46	
		Liberty County Total	**>1.08**	**0.714**	**0.70**
GA0049166	Ludowici, City of (Ludowici WPCP)	Long	0.24	0.15	
		Long County Total	**0.24**	**0.15**	**0.36**
GA0033529	Darien, City of (Darien WPCP)	McIntosh	0.6	0.28	
GA0029874	McIntosh County (McIntosh County WPCP)	McIntosh	0.03	0.02	
		McIntosh County Total	**0.63**	**0.3**	**0.22**
TOTAL			**>97.73**	**75.11**	**78.50**

Coastal Georgia Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ030332	United States Army (Fort Stewart)	Bryan	0.035	0.025	
GAJ020229	Bryan County Board of Commissioners (Interstate Center WPCP)	Bryan	0.04	0.023	
GAJ020024	Bryan County Water and Sewer Utility Department (South Bryan County WPCP)	Bryan	0.2	0.084	
GAJ020011	Dunham Marsh Plantation	Bryan	0.062	0.19683	
GAJ030768	South Atlantic Utilities, Inc. (Waterford Landing WPCP)	Bryan	0.104	0.05208	
		Bryan County Total	**0.441**	**0.38091**	**0.48**
GAJ020041	Portal, Town of (Portal WPCP)	Bulloch	0.1	0.071	
GAG278082	Bulloch County Board Of Education	Bulloch	Report	0.005	
GAG278007	Hendley Properties (Planters Row WPCP)	Bulloch	Report	0.005	
GAG278031	Ashford Subdivision	Bulloch	Report	0.001	
GAG278039	Langley Pond	Bulloch	Report	0.006	
GAG278049	The Hammocks Subdivision On-Site System	Bulloch	Report	0.004	
GAG278088	Planters Row Phase 2	Bulloch	Report	0	
		Bulloch County Total	**>0.1**	**0.092**	**0.09**
GAJ030751	United States Department of the Navy (Naval Submarine Base Kings Bay)	Camden	1.5	0.748	
GAJ030984	W&D Investments, Inc. (River Place Plantation WPCP)	Camden	0.1	0.01	
GAJ030797	Sanctuary Cove at St. Andrews Sound Urban WRF	Camden	0.133	0.02	
		Camden County Total	**1.733**	**0.778**	**0.82**
GAJ020285	Chatham County (Pine Barren Road LAS)	Chatham	0.06	0.04459	
GAJ030941	Skidaway Island	Chatham	1.25	0.751	
		Chatham County Total	**1.31**	**0.79559**	**0.99**
GAJ040010	Guyton, City of (Guyton WPCP)	Effingham	0.25	0.085	
GAJ020032	Effingham County Board of Commissioners (Industrial Park WRF)	Effingham	0.09	0	
GAG278089	Rabun Estate WPCP	Effingham	Report	0.003	
GAJ020016	Effingham County (South WRF)	Effingham	1	0.336	
GAJ030952	Stonegate Subdivision WPCP	Effingham	0.0405	0	

Coastal Georgia Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ020234	Coastal Water & Sewerage Company (Westwood Height & Mill Creek WPCP)	Effingham	0.04	0.119	
		Effingham County Total	**>1.42**	**0.543**	**0.66**
GAJ030325	Fort Stewart, Evans Army Airfield	Liberty	0.05	0.032	
GAJ030834	Wright Army Airfield	Liberty	0.01	0.00617	
GAJ020094	Liberty County DA (Midway Industrial Park WPCP)	Liberty	0.1	0.013	
GAJ020131	Midway, City Of (Midway WPCP)	Liberty	0.5	0.256	
GAJ030933	Village at Sunbury Subdivision WPCP	Liberty	0.013	0.004	
GAJ030710	Dolphin Island WPCP	Liberty	0.032	0	
GAG278050	Yellow Bluff Development WPCP	Liberty	Report	0.008	
		Liberty County Total	**>0.705**	**0.31917**	**0.31**
GAG278034	UGA Marine Institute	McIntosh	Report	0.006	
		McIntosh County Total	**Report**	**0.006**	**0.004**
	TOTAL		**> 5.71**	**2.955**	**3.36**

APPENDIX 3 – COOSA-NORTH GEORGIA INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Coosa North Georgia Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Catoosa County	68,771	73,567	72,695	69,633	65,174
Chattooga County	24,766	25,326	25,534	25,508	25,721
Dade County	16,162	16,198	15,956	15,624	15,554
Dawson County	27,021	36,078	44,489	54,433	67,974
Fannin County	26,320	26,726	23,592	19,913	17,719
Floyd County	99,916	105,145	102,003	96,266	90,096
Gilmer County	31,417	32,902	30,444	27,601	25,700
Gordon County	58,049	61,448	63,974	65,751	67,485
Habersham County	45,800	49,137	52,289	55,490	59,312
Lumpkin County	33,802	38,311	42,370	46,634	51,945
Murray County	40,261	42,099	43,551	44,730	46,047
Pickens County	33,530	38,936	40,965	42,585	44,999
Polk County	43,482	45,871	44,865	42,390	39,341
Towns County	12,034	13,362	15,215	18,145	22,226
Union County	25,335	30,234	32,310	34,454	38,705
Walker County	69,610	71,128	72,128	72,701	74,184
White County	31,758	38,852	43,588	48,727	55,215
Whitfield County	104,672	108,534	111,541	112,706	113,041
TOTAL	**792,706**	**853,854**	**877,509**	**893,291**	**920,438**

Coosa - North Georgia Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Catoosa County	121	114	98
Chattooga County	164	165	137
Dade County [2]	134	124	129
Dawson County	160	157	104
Fannin County	150	150	117
Floyd County	133	134	125
Gilmer County [3]	141	142	120
Gordon County	159	158	174
Habersham County [3]	170	174	119
Lumpkin County	166	167	176
Murray County	145	134	104
Pickens County	133	144	132
Polk County [3]	167	170	101
Towns County [2]	141	139	139
Union County	149	141	76
Walker County	145	145	112
White County	150	150	126
Whitfield County [3]	224	230	228

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation. Per capita values below 75 gpcd and over 200 gpcd were highlighted because they are outside the typical range and more information is being sought from the water systems in these Counties.

[2] Per capita was calculated using water withdrawals from large and small systems and population served data provided by EPD.

[3] Adjusted to reflect municipally-supplied industrial demand

Coosa - North Georgia Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Catoosa County	16%	75	5%	5%	8.9	66.1
Chattooga County	14%	75	5%	5%	11.3	63.7
Dade County [3]	0%	75	0%	0%	9.8	65.2
Dawson County [4]	32%	75	29%	5%	5.8	69.2
Fannin County	46%	75	39%	39%	6.9	68.1
Floyd County	1%	75	5%	5%	10.9	64.1
Gilmer County	55%	75	52%	52%	6.4	68.6
Gordon County [5]	25%	75	4%	4%	8.4	66.6
Habersham County [6]	44%	75	18%	13%	8.4	66.6
Lumpkin County [7]	82%	75	73%	47%	6.8	68.2
Murray County [7]	60%	75	25%	22%	8.3	66.7
Pickens County [7]	26%	75	16%	12%	6.9	68.1
Polk County	12%	75	3%	3%	10.4	64.6
Towns County [5]	7%	75	16%	16%	7.3	67.7
Union County	35%	75	1%	1%	6.6	68.4
Walker County	0%	75	10%	10%	10.7	64.3
White County	47%	75	50%	50%	7.0	68.0
Whitfield County	1%	75	5%	5%	9.6	65.4

NOTES:

[1] Ratios as shown in Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment made over time to the amount of water used due to the installation of new and water efficient appliances and fixtures.

[3] Per comments received during the previous forecast, Dade County is supplied with municipal sources only.

[4] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 5% of the population by 2060.

[5] Self-supplied percent ratio was calculated by subtracting the municipally-supplied population served, provided by EPD, from the total population within the County.

[6] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 13% of the population by 2060.

[7] Per comments received during the previous forecast, started with the 2015 USGS ratio and held self-supplied population constant through the forecasting period.

Coosa - North Georgia Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD) [1]	Permitted Annual Average Day (MGD) [1,2]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
023-1506-01	Ringgold, City of	Catoosa	South Chickamauga Creek	1.00	0.83	0.35	
023-1506-02	Catoosa Utility District Authority	Catoosa	Yates Spring	7.00	5.83	3.86	
			Catoosa County Total	**8.00**	**6.67**	**4.21**	**5.67**
027-1402-02	Summerville, City of	Chattooga	Racoon Creek	2.50	2.08	1.96	
027-1402-04	Summerville, City of	Chattooga	Lowe Spring	0.50	0.42	0.21	
			Chattooga County Total	**3.00**	**2.50**	**2.17**	**2.12**
041-1508-02	Dade Co Water & Sewer Authority	Dade	Lookout Creek	3.80	3.17	2.09	
			Dade County Total	**3.80**	**3.17**	**2.09**	**1.83**
042-1415-01	Etowah Water & Sewer Authority	Dawson	Etowah River	6.00	4.30	1.58	
042-1415-02	Etowah Water & Sewer Authority	Dawson	Etowah River	15.00	12.50	-	
			Dawson County Total	**6.00**	**4.30**	**1.58**	**5.87**
055-1505-01	McCaysville, City Of	Fannin	Toccoa River	1.00	0.83	0.81	
055-1505-02	Blue Ridge, City Of	Fannin	Toccoa River	1.30	1.08	1.00	
			Fannin County Total	**2.30**	**1.92**	**1.81**	**1.18**
057-1414-02	Floyd County - Woodward Creek	Floyd	Woodward Creek	0.70	0.58	0.35	
057-1428-06	Cave Spring, City of	Floyd	Cave Spring	1.30	1.08	0.85	
057-1428-08	Floyd County - Old Mill Spring	Floyd	Old Mill Spring	3.50	2.92	2.16	
057-1429-01	Berry Schools, The (Berry College)	Floyd	Berry (formerly Possum Trot) Reservoir	0.70	0.58	0.23	
057-1492-01	Rome, City Of	Floyd	Oostanaula & Etowah R	16.40	13.67	7.80	
			Floyd County Total	**22.60**	**18.83**	**11.40**	**9.34**
061-1407-01	Ellijay-Gilmer County Water and Sewerage Authority	Gilmer	Ellijay River	0.45	0.38	0.06	
061-1408-01	Ellijay-Gilmer Co W & S Auth	Gilmer	Cartecay River	4.00	3.33	2.34	
			Gilmer County Total	**4.45**	**3.71**	**2.40**	**2.99**
064-1411-03	Calhoun, City Of	Gordon	Big Spring	6.00	5.00	2.09	
064-1412-01	Calhoun, City Of	Gordon	Calhoun Spring	0.54	0.45	-	
064-1492-02	Calhoun, City Of	Gordon	Oostanaula River	3.00	2.50	-	
064-1493-01	Calhoun, City Of	Gordon	Coosawattee River	16.00	13.33	6.33	
			Gordon County Total	**22.00**	**18.33**	**8.42**	**8.71**
068-1201-01	Cornelia, City Of	Habersham	Hazel Creek,Camp Cr Res, Emergency Camp Cr	4.00	3.33	2.88	
068-1201-03	Clarkesville, City Of	Habersham	Soque River	1.00	0.83	0.58	

Coosa - North Georgia Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD) [1]	Permitted Annual Average Day (MGD) [1,2]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
068-1201-04	Baldwin, City of	Habersham	Chattahoochee River	3.00	2.50	1.69	
			Habersham County Total	**8.00**	**6.67**	**5.15**	**7.49**
093-1204-03	Dahlonega, City of	Lumpkin	Yahoola Creek Reservoir	6.80	5.67	1.13	
			Lumpkin County Total	**6.80**	**5.67**	**1.13**	**3.98**
105-1405-01	Chatsworth Water Works Commission	Murray	Holly Creek	1.00	0.83	-	
105-1405-02	Chatsworth Water Works Commission	Murray	Eton Springs	1.80	1.50	0.59	
105-1409-01	Chatsworth Water Works Commission	Murray	Carters Lake	2.30	1.92	0.41	
105-1493-02	Chatsworth Water Works Commission	Murray	Coosawattee River	2.00	1.67	-	
			Murray County Total	**7.10**	**5.92**	**1.01**	**1.90**
112-1417-02	Jasper, City of	Pickens	Long Swamp Creek	1.00	0.83	1.00	
112-1417-03	Bent Tree Community	Pickens	Chestnut Cove Creek	0.23	0.19	-	
112-1417-04	Bent Tree Community	Pickens	Lake Tamarack	0.23	0.19	0.05	
112-1417-06	Utilities, Inc. of Georgia	Pickens	Blackwell Creek	2.65	2.21	0.87	
112-1417-08	Pickens County	Pickens	Grandview Lake on Champion Creek	0.33	0.28	-	
			Pickens County Total	**4.21**	**3.51**	**1.92**	**3.16**
115-1428-04	Cedartown, City of	Polk	Big Spring	2.60	2.17	1.39	
115-1428-05	Polk County Water, Sewage and Solid Waste Authority	Polk	Aragon, Ammons, and Mulco Springs	1.10	0.92	0.75	
115-1428-07	Polk County Water, Sewage and Solid Waste Authority	Polk	Deaton Springs	4.00	3.33	1.83	
			Polk County Total	**7.70**	**6.42**	**3.97**	**3.72**
139-1502-01	Hiawassee, City Of	Towns	Lake Chatuge	2.04	1.70	1.24	
			Towns County Total	**2.04**	**1.70**	**1.24**	**2.21**
144-1503-01	Blairsville, City of	Union	Nottley River	1.23	1.03	0.42	
144-1503-02	Notla Water Authority	Union	Lake Nottley	2.00	1.67	0.82	
			Union County Total	**3.23**	**2.69**	**1.24**	**2.07**
146-1401-01	Lafayette, City of	Walker	Dry Creek	0.90	0.75	-	
146-1401-02	LaFayette, City of	Walker	Big Spring	1.31	1.09	1.23	

Coosa - North Georgia Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD) [1]	Permitted Annual Average Day (MGD) [1,2]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
146-1507-04	Walker County Water & Sewer Authority	Walker	Crawfish Spring Lake	4.00	3.33	-	
			Walker County Total	**5.31**	**4.43**	**1.23**	**1.23**
154-1202-02	White County Water & Sewerage Authority	White	Turner Creek	1.80	1.50	0.84	
			White County Total	**1.80**	**1.50**	**0.84**	**1.81**
155-1404-01	Dalton Utilities	Whitfield	Conasauga River - River Road Reservoir?)	40.30	33.58	21.59	
155-1404-02	Dalton Utilities	Whitfield	Mill Creek	7.50	6.25	3.99	
155-1404-03	Dalton Utilities	Whitfield	Coahulla Creek	5.00	4.17	0.61	
155-1404-05	Dalton Utilities	Whitfield	Conasauga River	18.00	15.00	-	
155-1506-03	Dalton Utilities	Whitfield	Freeman Spring	1.50	1.25	0.95	
			Whitfield County Total	**54.30**	**45.25**	**27.13**	**27.50**
TOTAL				**172.64**	**143.17**	**78.95**	**92.80**

NOTES:

[1] Withdrawal permits for sources that feed reservoirs are listed but were not added to the county total.

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

Coosa - North Georgia Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
023-0002	Ringgold, City of	Catoosa	Paleozoic Limestone	1.44	1.44	-	
			Catoosa County Total	**1.44**	**1.44**	**-**	**-**
027-0001	Chattooga County Water District No.1	Chattooga	Paleozoic Limestone	1.205	0.861	0.89	
027-0002	Lyerly, Town of	Chattooga	Conasauga FM, Knox Group	0.28	0.25	0.12	
027-0003	Menlo, City of	Chattooga	Knox Group	0.187	0.187	0.05	
			Chattooga County Total	**1.672**	**1.298**	**1.07**	**1.01**
041-0001	Dade County Water & Sewer Authority	Dade	Paleozoic Limestone	0.432	0.36	0.08	
			Dade County Total	**0.432**	**0.36**	**0.08**	**0.07**
042-0001	Dawsonville, City of	Dawson	Crystalline Rock	0.5	0.5	0.18	
			Dawson County Total	**0.5**	**0.5**	**0.18**	**0.66**
055-0001	Morganton, City of	Fannin	Crystalline Rock	0.225	0.225	0.09	
			Fannin County Total	**0.225**	**0.225**	**0.09**	**0.05**
057-0001	Floyd County Water	Floyd	Knox Group	1.3	1.037	0.87	
			Floyd County Total	**1.3**	**1.037**	**0.87**	**0.69**
064-0002	Calhoun, City of	Gordon	Paleozoic Limestone	5.8	5.8	2.28	
			Gordon County Total	**5.8**	**5.8**	**2.28**	**2.29**
068-0001	Alto, Town of	Habersham	Crystalline Rock	0.9	0.7	0.35	
068-0004	Demorest, City of	Habersham	Crystalline Rock	1.203	1.203	0.38	
068-0005	Mount Airy, Town of	Habersham	Crystalline Rock	0.15	0.15	0.08	
			Habersham County Total	**2.253**	**2.053**	**0.81**	**1.14**
093-0002	Lumpkin County Water and Sewerage Authority	Lumpkin	Crystalline Rock	0.395	0.345	0.22	
			Lumpkin County Total	**0.395**	**0.345**	**0.22**	**0.76**
105-0001	Chatsworth Water Works Commission	Murray	Conasauga FM	1.764	1.764	0.87	
			Murray County Total	**1.764**	**1.764**	**0.87**	**1.60**
112-0001	Big Canoe Utilities Company, Inc.	Pickens	Crystalline Rock	0.3	0.3	-	
112-0002	Jasper, City of	Pickens	Crystalline Rock	1.33	1.33	1.18	
			Pickens County Total	**1.63**	**1.63**	**1.18**	**1.88**
115-0004	Rockmart, City of	Polk	Newala LS	2.59	2.59	1.75	
			Polk County Total	**2.59**	**2.59**	**1.75**	**1.59**
139-0002	Young Harris, City of	Towns	Crystalline Rock	0.5	0.5	0.19	

Coosa - North Georgia Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
			Towns County Total	**0.5**	**0.5**	**0.19**	**0.32**
144-0001	Notla Water Authority	Union	Crystalline Rock	0.8	0.7	0.15	
144-0002	Blairsville, City of	Union	Crystalline Rock	0.4	0.4	0.17	
144-0003	Coosa Water Authority	Union	Crystalline Rock	0.39	0.39	0.08	
			Union County Total	**1.59**	**1.49**	**0.40**	**0.65**
146-0003	Walker County Water & Sewerage Authority - Coke Oven	Walker	Knox Group	2.8	2.8	1.65	
146-0004	Walker County Water & Sewerage Authority - Kensington	Walker	Paleozoic Limestone	1	1	0.55	
146-0005	Walker County Rural Water & Sewer Authority	Walker	Newala LS	0.55	0.55	0.37	
146-0006	Chickamauga, City of	Walker	Knox Group	1.8	1.8	0.84	
146-0009	LaFayette, City of - Dixon Springs	Walker	Knox Group	0.85	0.75	0.00	
146-0010	LaFayette, City of - (Wells 3 & 5)	Walker	Knox Group	1.1	1	0.94	
146-0011	Walker County Water & Sewerage Authority - Water Treatment Plant	Walker	Knox Group	4.5	4.5	1.36	
			Walker County Total	**12.6**	**12.4**	**5.72**	**5.59**
154-0001	Helen, City of	White	Crystalline Rock	0.4	0.4	0.30	
154-0002	Cleveland, City of	White	Crystalline Rock	0.841	0.841	0.44	
			White County Total	**1.24**	**1.24**	**0.74**	**1.54**
TOTAL				**35.93**	**34.67**	**16.45**	**19.85**

Coosa North Georgia Septic Users [1, 2]

County	% Septic Users in 2020	% Septic Users in 2060 [3]
Catoosa County	67%	67%
Chattooga County	65%	65%
Dade County	83%	83%
Dawson County	83%	79%
Fannin County	85%	85%
Floyd County	45%	45%
Gilmer County	88%	88%
Gordon County	71%	71%
Habersham County	74%	74%
Lumpkin County	88%	88%
Murray County	83%	83%
Pickens County	87%	87%
Polk County	73%	73%
Towns County	91%	91%
Union County	89%	89%
Walker County	81%	81%
White County	87%	87%
Whitfield County	59%	59%

Notes

1. Septic user percentages of total county population were estimated using GA Department of Public Health data, including installation of septic tanks data in each county through 2018.

2. Shaded septic user percentages of total county population are from the US 1990 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics : Georgia, 1990 CPH-5-12.

3. Percent septic users of total county population are assumed constant for future year projections in the absence of additional stakeholder input.

Coosa North Georgia Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GAG550158	Hochman Family Partners, LP (Cloud Springs Lodge WPCP)	Catoosa	Report	0.01	
		Catoosa County Total	**Report**	**0.01**	**0.00**
GA0025607	Trion, Town of (Trion WPCP)	Chattooga	5	3.64	
GA0025704	Summerville, City of (Summerville WPCP)	Chattooga	2	2.05	
GA0034631	Silverleaf Farm WPCP	Chattooga	0.02	0	
GA0047023	Menlo, City of (Menlo WPCP)	Chattooga	0.1	0.02	
		Chattooga County Total	**7.12**	**5.71**	**5.93**
GA0026221	Trenton, City of (Trenton WPCP)	Dade	0.95	0.47	
GAG550155	Dade Health & Rehabilitation Center	Dade	Report	0.01	
		Dade County Total	**>0.95**	**0.48**	**0.46**
GA0022225	Ninth District Opportunity, Inc (Ninth District WPCP)	Fannin	0.01	0	
GA0037583	Blue Ridge, City of (Blue Ridge WPCP)	Fannin	1	0.39	
GAG550055	Morganton Baptist Church	Fannin	Report	0	
		Fannin County Total	**>1.01**	**0.39**	**0.26**
GA0024112	Rome, City of (Rome WRF)	Floyd	18	4.24	
GA0024341	Rome, City of (Coosa WRF)	Floyd	2	1.08	
GA0025721	Cave Spring, City Of (Cave Spring WPCP)	Floyd	0.22	0.3	
		Floyd County Total	**20.22**	**5.62**	**5.07**
GA0021369	Ellijay WPCP	Gilmer	2.5	1.72	
GAG550162	Oakland Elementary School	Gilmer	Report	0	
		Gilmer County Total	**>2.5**	**1.72**	**1.59**
GA0030333	Calhoun, City of (Calhoun WPCP)	Gordon	16	5.5	

Coosa North Georgia Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0035947	Georgia Cumberland Academy WPCP	Gordon	0.02	0.01	
GA0046388	Fairmount, City of (Fairmount WPCP)	Gordon	0.14	0.01	
GAG550058	Gordon County Board Of Education (W.L. Swain Elementary School WPCP)	Gordon	Report	0	
		Gordon County Total	**>16.16**	**5.52**	**6.42**
GA0021504	Cornelia, City of (Cornelia WPCP)	Habersham	3	2.55	
GA0032506	Demorest, City of (Demorest WPCP)	Habersham	0.4	0.31	
GA0032514	Clarkesville, City of (Clarkesville WPCP)	Habersham	0.75	0.36	
GA0033243	Baldwin, City of (Baldwin WPCP)	Habersham	0.8	0.76	
GA0035441	Tallulah Falls School WPCP	Habersham	0.01	0.0035	
		Habersham County Total	**4.96**	**3.9835**	**5.78**
GA0026077	Dahlonega, City of (Dahlonega WPCP)	Lumpkin	1.44	0.77	
GA0034207	Haggai Realty LLC (Oak Grove Mobile Home Park WPCP)	Lumpkin	0.01	0.01	
		Lumpkin County Total	**1.45**	**0.78**	**1.20**
GA0032492	Chatsworth, City of (Judson Vick WPCP)	Murray	3	1.67	
GAG550118	Cohutta Springs Conference Center	Murray	Report	0.01	
		Murray County Total	**>3**	**1.68**	**1.92**
GA0030252	Big Canoe WPCP	Pickens	0.25	0.04	
GA0032204	Jasper, City of (Jasper WPCP)	Pickens	0.8	0.68	
GAG550021	Jasper, City Of (Tate Housing Project Sewer Plant)	Pickens	Report	0.03	
		Pickens County Total	**>1.05**	**0.75**	**1.01**
GA0024074	Cedartown, City of (Cedartown WPCP)	Polk	3.5	1.69	
GA0026042	Rockmart, City of (Rockmart WPCP)	Polk	3	1.63	
GA0026182	Polk County Water, Sewage, and Solid Waste Authority (Aragon WPCP)	Polk	0.17	0.07	
		Polk County Total	**6.67**	**3.39**	**3.19**
GA0022462	Young Harris, City of (Young Harris WPCP)	Towns	0.24	0.12	

Coosa North Georgia Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0050181	Hiawassee, City of (Hiawassee WPCP)	Towns	0.3	0.26	
		Towns County Total	**0.54**	**0.38**	**0.70**
GA0031313	Georgia Department of Natural Resources (Vogel State Park)	Union	0.07	0.02	
GA0033375	Blairsville, City of (Blairsville WPCP)	Union	0.4	0.34	
		Union County Total	**0.47**	**0.36**	**0.55**
GA0025712	LaFayette, City of (LaFayette WPCP)	Walker	3.5	2.73	
GA0020478	Walker County WPCP	Walker	3.5	1.35	
		Walker County Total	**7**	**4.08**	**4.35**
GA0036820	Cleveland, City of (Cleveland WPCP)	White	0.75	0.52	
GA0046400	Mountain Lake Resort WPCP	White	0.01	0.01	
		White County Total	**0.76**	**0.53**	**0.92**
GA0034002	Whitfield County Board of Education (Dawnville Elementary School WPCP)	Whitfield	0.01	0.01	
GA0038946	Dalton Utilities (Mill Creek WPCP)	Whitfield	0.15	0.07	
GA0047848	Dalton Utilities (Whitfield Mountain View Acres WPCP)	Whitfield	0.08	0.05	
GA0048887	America's Best Value Inn & Suites WPCP	Whitfield	0.03	0.02	
GA0049158	Whitfield County Board Of Education (Westside Elementary School)	Whitfield	0.02	0.01	
GAG550099	Westside Middle School	Whitfield	Report	0.01	
		Whitfield County Total	**>0.29**	**0.17**	**0.18**
	TOTAL		**>74.13**	**35.51**	**39.53**

Coosa North Georgia Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ020277	Lyerly, Town of (Lyerly WPCP)	Chattooga	0.05	0.027	
		Chattooga County Total	**0.05**	**0.027**	**0.03**
GAJ020192	Chestatee Development Corporation (Chestatee Development WPCP)	Dawson	0.075	0.057	
GAJ020045	Georgia Department of Natural Resources (Amicalola Falls State Park WPCP)	Dawson	0.0143	0.005	
GAJ020179	Dawsonville, City of (Dawsonville WPCP)	Dawson	0.4	0.137	
GAJ020232	Etowah Water & Sewer Authority (Dawson Forest WRF)	Dawson	1	0.393	
GAJ020025	Dawsonville, City of (Gold Creek WRF)	Dawson	0.5	0	
		Dawson County Total	**1.9893**	**0.592**	**1.84**
GAJ030657	Blue Ridge Golf and River Club WPCP	Fannin	0.1	0	
		Fannin County Total	**0.1**	**0**	**0.00**
GAJ020218	Gordon County Board of Education (Max Tolbert Elementary School WPCP)	Gordon	0.013	0	
		Gordon County Total	**0.013**	**0**	**0.00**
GAJ030887	Orange Lake Resorts (Apple Mountain Resort (2) WPCP)	Habersham	0.096	0	
GAJ030772	Orange Lake Resorts (Apple Mountain Resort (1) WPCP)	Habersham	0.03	0.013	
		Habersham County Total	**0.126**	**0.013**	**0.02**
GAJ030972	Ranch Owner's Association, Inc. (R-Ranch in the Mountains WPCP)	Lumpkin	0.1	0.003	
GAJ030857	North Georgia Water Reuse Facility	Lumpkin	1.25	0.017	
		Lumpkin County Total	**1.35**	**0.02**	**0.03**
GAJ030782	Bent Tree Community, Inc. (Bent Tree Community WPCP)	Pickens	0.0175	0.006	
GAJ030954	Young Life Properties (Sharp Top Cove WPCP)	Pickens	0.05	0.01	
		Pickens County Total	**0.0675**	**0.016**	**0.02**
GAJ030676	Crossing Creeks RV Resort WPCP	Union	0.0426	0.003	
		Union County Total	**0.0426**	**0.003**	**0.00**

Coosa North Georgia Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ030708	Dade County Water and Sewer Authority (Canyon Ridge WRF)	Walker	0.034	0	
		Walker County Total	**0.034**	**0**	**0.00**
GAJ030731	URJ Camp Coleman WPCP	White	0.025	0.007	
GAJ020066	Georgia Department of Natural Resources (Unicoi State Park WPCP)	White	0.0582	0.017	
GAJ020157	Helen, City of (Helen WPCP)	White	0.5	0	
GAJ040027	Marcus Jewish Community Center (Camp Barney Medintz WPCP)	White	0.027	0.003	
		White County Total	**0.6102**	**0.027**	**0.05**
GAJ020056	Dalton Utilities - Riverbend LAS	Whitfield	33	10.877	
GAJ020254	Northwest Whitfield County High School	Whitfield	0.032	0	
		Whitfield County Total	**33.032**	**10.877**	**11.54**
TOTAL			**37.41**	**11.575**	**13.53**

APPENDIX 4 – LOWER FLINT-OCHLOCKONEE INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Lower Flint Ochlockonee Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Baker County	3,116	3,106	2,838	2,489	2,190
Calhoun County	6,317	6,238	6,171	6,091	6,079
Colquitt County	45,393	45,486	44,883	43,657	42,241
Decatur County	26,322	25,804	24,898	23,719	22,711
Dougherty County	89,905	86,199	80,586	75,255	71,666
Early County	10,146	10,064	9,884	9,681	9,578
Grady County	24,540	24,243	23,545	22,657	22,028
Lee County	29,971	31,139	31,999	32,415	32,897
Miller County	5,764	5,759	5,431	4,958	4,479
Mitchell County	22,056	21,405	20,499	19,459	18,749
Seminole County	8,140	7,360	6,537	5,824	5,369
Terrell County	8,467	7,793	7,129	6,557	6,291
Thomas County	44,431	44,532	44,128	43,420	43,201
Worth County	20,142	19,424	18,561	17,720	17,375
TOTAL	**344,710**	**338,552**	**327,089**	**313,902**	**304,854**

Lower Flint-Ochlockonee Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Baker County [2]	129	133	193
Calhoun County [2]	151	144	186
Colquitt County	158	153	168
Decatur County	199	187	181
Dougherty County	181	173	130
Early County	277	277	209
Grady County	143	147	148
Lee County	119	117	109
Miller County [2]	282	145	153
Mitchell County [3]	172	175	234
Seminole County [2]	159	154	148
Terrell County	176	183	258
Thomas County	171	170	192
Worth County	133	142	143

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation. Per capita values below 75 gpcd and over 200 gpcd were highlighted because they are outside the typical range and more information is being sought from the water systems in these Counties.

[2] Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

[3] Adjusted to reflect municipally-supplied industrial demand

Lower Flint-Ochlockonee Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Baker County	80%	75	79%	79%	10.2	64.8
Calhoun County	13%	75	46%	46%	11.2	63.8
Colquitt County	45%	75	51%	51%	10.7	64.3
Decatur County	50%	75	44%	44%	10.0	65.0
Dougherty County	4%	75	4%	4%	11.3	63.7
Early County	49%	75	49%	49%	10.6	64.4
Grady County	47%	75	53%	53%	9.9	65.1
Lee County	51%	75	36%	36%	6.4	68.6
Miller County	61%	75	68%	68%	11.5	63.5
Mitchell County	46%	75	50%	50%	10.3	64.7
Seminole County	57%	75	53%	53%	10.9	64.1
Terrell County	30%	75	32%	32%	10.8	64.2
Thomas County	27%	75	30%	30%	10.3	64.7
Worth County	54%	75	55%	55%	10.3	64.7

NOTES:

[1] Ratios as shown in Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment applied to volume of water used over time due to the installation of new and water efficient appliances and fixtures.

Lower Flint-Ochlockonee Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
004-0001	Newton, City of	Baker	Banks	0.25	0.25	0.13	
			Baker County Total	**0.25**	**0.25**	**0.13**	**0.09**
019-0001	Leary, City of	Calhoun	Claiborne	0.30	0.30	0.07	
019-0002	Edison, City of	Calhoun	Clayton	0.30	0.20	-	
019-0003	Arlington, City of	Calhoun	Floridan	0.30	0.30	0.22	
019-0004	Morgan, City of	Calhoun	Clayton	0.35	0.30	0.25	
			Calhoun County Total	**1.25**	**1.10**	**0.54**	**0.58**
035-0005	Moultrie, City of	Colquitt	Floridan	5.20	4.50	2.90	
035-0006	Norman Park, City of	Colquitt	Floridan	0.40	0.35	0.14	
			Colquitt County Total	**5.60**	**4.85**	**3.03**	**3.25**
043-0003	Bainbridge, City of	Decatur	Floridan	5.00	4.40	2.68	
043-0004	Decatur County Industrial Airpark	Decatur	Floridan	0.65	0.55	0.18	
			Decatur County Total	**5.65**	**4.95**	**2.86**	**2.19**
047-0002	Albany, City of Utility Board	Dougherty	Floridan	36.00	24.00	11.51	
047-0008	Marine Corps Logistics Base	Dougherty	Floridan	2.00	1.50	0.30	
			Dougherty County Total	**38.00**	**25.50**	**11.81**	**8.13**
049-0003	Blakely, City of	Early	Claiborne	2.70	2.70	0.94	
049-0005	Damascus, City of	Early	Floridan	0.18	0.18	0.17	
			Early County Total	**2.88**	**2.88**	**1.10**	**0.96**
065-0001	Cairo, City of	Grady	Floridan	3.50	3.00	1.47	
			Grady County Total	**3.50**	**3.00**	**1.47**	**1.41**
088-0001	Leesburg, City of	Lee	Tallahatta	0.50	0.45	0.48	
088-0002	Lee County Utilities Authority	Lee	Claiborne	3.00	2.50	1.59	
088-0003	Georgia Department of Corrections - Lee State Prison	Lee	Floridan	0.18	0.18	0.11	
088-0004	Smithville, City of	Lee	Claiborne	0.20	0.20	0.19	
			Lee County Total	**3.88**	**3.33**	**2.38**	**2.17**
100-0001	Colquitt, City of	Miller	Floridan	1.00	0.80	0.29	
100-0002	Golden Triangle RCD	Miller	Floridan	1.30	1.30	-	
			Miller County Total	**2.30**	**2.10**	**0.29**	**0.21**
101-0001	Pelham, City of	Mitchell	Floridan	1.00	0.90	0.56	
101-0002	Camilla, City of	Mitchell	Floridan	5.50	5.00	3.19	

Lower Flint-Ochlockonee Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
101-0003	Mitchell County Board of Commissioners	Mitchell	Floridan	0.30	0.30	0.35	
			Mitchell County Total	**6.80**	**6.20**	**4.10**	**4.91**
125-0001	Donalsonville, City of	Seminole	Floridan	1.00	0.80	0.41	
			Seminole County Total	**1.00**	**0.80**	**0.41**	**0.35**
135-0001	Dawson, City of	Terrell	Clayton	1.93	1.42	1.18	
			Terrell County Total	**1.93**	**1.42**	**1.18**	**1.05**
136-0002	Meigs, City of	Thomas	Floridan	0.20	0.20	0.12	
136-0004	Thomasville, City of - Thomasville Utilities	Thomas	Floridan	8.00	6.50	5.34	
136-0005	Thomasville, City of - Waverly / Four Corners Water System	Thomas	Floridan	0.17	0.17	0.005	
136-0006	Boston, City of	Thomas	Floridan	0.30	0.24	0.16	
136-0010	Coolidge, City of	Thomas	Floridan	0.14	0.10	0.06	
			Thomas County Total	**8.82**	**7.21**	**5.67**	**5.47**
159-0001	Sylvester, City of	Worth	Floridan	2.00	1.60	0.97	
			Worth County Total	**2.00**	**1.60**	**0.97**	**1.04**
TOTAL				**83.85**	**65.18**	**35.95**	**31.81**

Lower Flint Ochlockonee Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Baker County	95%	95%
Calhoun County	54%	54%
Colquitt County	78%	78%
Decatur County	61%	61%
Dougherty County	27%	27%
Early County	56%	56%
Grady County	58%	58%
Lee County	73%	73%
Miller County	68%	68%
Mitchell County	51%	51%
Seminole County	78%	78%
Terrell County	47%	47%
Thomas County	75%	75%
Worth County	69%	69%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018
2. Shaded septic percentages are from the 1990 census information of septic values
3. Percent of septic users will stay constant in the future unless further input received

Lower Flint Ochlockonee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0026204	Arlington, City of (Arlington WPCP)	Calhoun	0.4	0.1	
GA0026212	Leary, City of (Leary WPCP)	Calhoun	0.1	0.05	
GA0037427	Edison, City of (Edison WPCP)	Calhoun	0.25	0.27	
		Calhoun County Total	**0.75**	**0.42**	**0.40**
GA0021717	Doerun, City of (Doerun WPCP)	Colquitt	0.15	0.11	
GA0024660	Moultrie, City of (Moultrie WPCP)	Colquitt	4	2.35	
GA0025879	Moultrie, City of (Spence Field WPCP)	Colquitt	0	0.07	
GA0033600	Norman Park (Norman Park WPCP)	Colquitt	0.2	0.14	
		Colquitt County Total	**4.35**	**2.67**	**2.48**
GA0024678	Bainbridge, City of (Bainbridge WPCP)	Decatur	2.5	0.96	
GA0033511	Decatur County (Industrial Airpark WPCP)	Decatur	1.5	0.13	
		Decatur County Total	**4**	**1.09**	**0.94**
GA0022675	Water Service Company of Georgia (Holland's Folly Subdivision WPCP)	Dougherty	0.05	0.02	
GA0036854	Albany, City of (Albany CSO)	Dougherty	Report	1.77	
GA0037222	Albany, City of (Joshua Street WPCP)	Dougherty	32	14.59	
		Dougherty County Total	**>32.05**	**14.61**	**11.65**
GA0025585	Blakely, City of (Blakely WPCP)	Early	2	2.04	
		Early County Total	**2**	**2.04**	**1.93**
GA0025771	Cairo, City of (Cairo WPCP)	Grady	3	1.31	

Lower Flint Ochlockonee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GAG550047	Pinewood Nursing Center	Grady	Report	0	
		Grady County Total	**>3**	**1.31**	**1.18**
GA0026603	Lee County Utilities Authority (Kinchafoonee Creek WPCP)	Lee	0.7	0.58	
GA0026638	Leesburg, City Of (Leesburg Pond WPCP)	Lee	1.2	0.61	
GA0047422	Smithville, City of (Smithville WPCP)	Lee	0.12	0.08	
		Lee County Total	**2.02**	**1.27**	**1.39**
GA0047252	Colquitt, City of	Miller	0.4	0.25	
		Miller County Total	**0.4**	**0.25**	**0.19**
GA0037737	Baconton, City of (Baconton WPCP)	Mitchell	0.1	0.09	
		Mitchell County Total	**0.1**	**0.09**	**0.08**
GA0026123	Donalsonville, City of (Donalsonville WPCP)	Seminole	1	0.58	
		Seminole County Total	**1**	**0.58**	**0.38**
GA0021326	Dawson, City of (Dawson WPCP)	Terrell	2.5	1.3	
		Terrell County Total	**2.5**	**1.3**	**0.97**
GA0024082	Thomasville, City of (Oquina Creek WPCP)	Thomas	6.5	3.73	
GA0033715	Boston, City of (Boston WPCP)	Thomas	0.21	0.13	
GA0046370	Ochlocknee, Town of (Ochlocknee WPCP)	Thomas	0.05	0.04	
GA0048178	Meigs, City of (Meigs WPCP)	Thomas	0.15	0.06	
		Thomas County Total	**6.91**	**3.96**	**3.85**
GA0026891	Worthy Manor Subdivision WPCP	Worth	0.08	0.06	
		Worth County Total	**0.08**	**0.06**	**0.05**
TOTAL			**>59.15**	**33.17**	**25.49**

Lower Flint Ochlockonee Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ020076	Morgan, City of (Morgan WPCP)	Calhoun	0.32	0.244	
		Calhoun County Total	**0.32**	**0.244**	**0.23**
GAJ030894	Po Boys BBQ, Inc. (Wingate's Lodge and Marina WPCP)	Decatur	0.01	0.0004	
		Decatur County Total	**0.01**	**0.0004**	**0.00**
GAJ020284	Georgia Department of Corrections (Lee State Prison WPCP)	Lee	0.134	0.0884	
		Lee County Total	**0.134**	**0.0884**	**0.10**
GAJ020088	Camilla, City of (Camilla WPCP)	Mitchell	3.8	1.108	
GAJ030740	Mitchell County Board of Commissioners (Autry Correctional Institute WPCP)	Mitchell	0.3	ND	
GAJ020161	Pelham, City of (Pelham WPCP)	Mitchell	1.5	0.686	
		Mitchell County Total	**5.6**	**1.794**	**1.52**
GAJ020145	Coolidge, City of (Coolidge WPCP)	Thomas	0.083	0.050	
		Thomas County Total	**0.083**	**0.050**	**0.05**
GAJ020132	Sylvester, City of (Sylvester WPCP)	Worth	0.64	0.243	
		Worth County Total	**0.64**	**0.243**	**0.21**
TOTAL			**6.79**	**2.42**	**2.11**

APPENDIX 5 – MIDDLE CHATTAHOOCHEE INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Middle Chattahoochee Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Carroll County	120,119	133,363	145,151	156,752	169,579
Chattahoochee County	10,749	10,890	10,966	11,273	11,418
Clay County	2,855	2,705	2,527	2,423	2,421
Haralson County	30,722	35,829	38,981	41,665	43,669
Harris County	34,712	37,327	39,640	41,902	44,818
Heard County	12,370	14,339	15,343	16,048	16,693
Muscogee County	191,626	179,704	166,681	153,247	141,670
Quitman County	2,294	2,251	2,195	2,212	2,319
Randolph County	6,754	6,425	6,145	5,947	5,986
Stewart County	6,129	5,784	5,434	5,103	4,878
Troup County	70,414	72,836	74,307	74,975	75,970
TOTAL	**488,744**	**501,453**	**507,370**	**511,547**	**519,421**

Middle Chattahoochee Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Carroll County [2]	146	145	104
Chattahoochee County	94	95	91
Clay County [3]	141	140	149
Haralson County	84	80	105
Harris County [2]	171	169	86
Heard County	129	137	147
Muscogee County [4]	194	197	176
Quitman County [2]	79	79	75
Randolph County	179	168	189
Stewart County [3,5]	260	265	155
Troup County [2]	206	200	147

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits.

[2] Per capita adjusted to reflect municipally-supplied industrial demand

[3] Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

[4] Per capita was calculated using the population served provided by EPD and withdrawals from City of Columbus and Fort Benning.

[5] Weighted average using 151 gpcd for City of Richland per their consent order.

Middle Chattahoochee Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Carroll County [3]	21%	75	16%	8%	8.15	66.85
Chattahoochee County	2%	75	71%	71%	11.65	63.35
Clay County	43%	75	26%	26%	10.57	64.43
Haralson County	1%	75	18%	18%	9.99	65.01
Harris County	38%	75	23%	23%	7.85	67.15
Heard County	28%	75	17%	17%	9.11	65.89
Muscogee County	0%	75	0%	0%	11.32	63.68
Quitman County	23%	75	100%	100%	9.21	65.79
Randolph County	27%	75	30%	30%	11.35	63.65
Stewart County	11%	75	13%	13%	11.52	63.48
Troup County	19%	75	29%	29%	10.32	64.68

NOTES:

[1] Ratios as shown in the Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment made over time to the amount of water used due to the installation of new and water efficient appliances and fixtures.

[3] Carroll County Water Authority provided information to request the self supplied ratio be reduced to 8% of the total population by 2060.

Middle Chattahoochee Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
022-1217-01	Carroll County Water Authority	Carroll	Snake Creek Reservoir	11.00	8.00	5.19	
022-1302-01	Bowdon, City of	Carroll	Indian Creek	0.36	0.30	-	
022-1302-04	Villa Rica, City Of	Carroll	Lake Paradise & Cowens Lake	1.50	1.25	1.16	
022-1302-05	Carrollton, City of	Carroll	Little Tallapoosa River	12.00	10.00	5.57	
022-1302-06	Bowdon, City Of	Carroll	Tysinger Reservoir	3.50	2.90	0.51	
			Carroll County Total	**28.36**	**22.45**	**12.41**	**16.82**
071-1301-01	Haralson County Water Authority	Haralson	Tallapoosa River	3.75	3.13	2.23	
071-1301-02	Bremen, City of	Haralson	Beech Creek & Bremen Reservoir (Bush Creek)	0.58	0.48	0.24	
			Haralson County Total	**4.33**	**3.61**	**2.47**	**3.35**
072-1224-01	Harris County Water Works	Harris	Bartletts Ferry	3.00	2.50	1.86	
072-1224-02	Pine Mountain Valley Water Association	Harris	X Street Springs (3)	0.50	0.42	0.43	
			Harris County Total	**3.50**	**2.92**	**2.28**	**5.17**
074-1220-02	Heard County Water Authority	Heard	Centralhatchee Creek	3.10	2.58	0.93	
074-1220-03	Heard County Water Authority	Heard	Hillabahatchee Creek	3.10	2.58	0.83	
			Heard County Total	**6.20**	**5.17**	**1.76**	**1.86**
026-1225-01	Fort Benning	Muscogee	Chattahoochee River	10.00	8.33	1.55	
106-1293-05	Columbus, City Of	Muscogee	Lake Oliver	90.00	75.00	33.24	
			Muscogee County Total	**100.00**	**83.33**	**34.79**	**24.02**
141-1292-01	Lagrange, City of	Troup	West Point Lake Reservoir	20.00	16.67	7.34	
141-1292-02	West Point, City Of	Troup	Chattahoochee River	1.80	1.50	1.26	
			Troup County Total	**21.80**	**18.17**	**8.59**	**8.38**
TOTAL				**164.19**	**135.64**	**62.31**	**59.61**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

Middle Chattahoochee Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
022-0001	Carroll County Water Authority	Carroll	Crystalline Rock	0.75	0.75	0.02	
			Carroll County Total	**0.75**	**0.75**	**0.02**	**0.03**
026-0001	Unified Government of Cusseta-Chattahoochee County Water System	Chattahoochee	Cretaceous Sand	0.64	0.59	0.29	
			Chattahoochee County Total	**0.64**	**0.59**	**0.29**	**0.26**
030-0001	Fort Gaines, City of	Clay	Providence Sand	0.4	0.4	0.23	
			Clay County Total	**0.4**	**0.4**	**0.23**	**0.25**
071-0001	Haralson County Water Authority	Haralson	Crystalline Rock	0.82	0.82	0.13	
			Haralson County Total	**0.82**	**0.82**	**0.13**	**0.17**
072-0001	Callaway Gardens Resort, Inc.	Harris	Crystalline Rock	0.5	0.4	0.05	
072-0002	Hamilton, City of	Harris	Crystalline Rock	0.303	0.303	0.09	
			Harris County Total	**0.803**	**0.703**	**0.15**	**0.32**
074-0002	Ephesus Water System	Heard	Crystalline Rock	0.19	0.19	0.08	
			Heard County Total	**0.19**	**0.19**	**0.08**	**0.09**
120-0001	Cuthbert, City of	Randolph	Clayton	1	0.8	0.60	
120-0002	Shellman, City of	Randolph	Clayton	0.18	0.15	0.15	
			Randolph County Total	**1.18**	**0.95**	**0.75**	**0.74**
128-0001	Richland, City of	Stewart	Cretaceous Sand	0.5	0.5	0.27	
128-0002	Lumpkin, City of	Stewart	Cretaceous Sand	0.25	0.25	0.27	
128-0003	Stewart County Water Authority	Stewart	Cretaceous Sand	0.5	0.5	0.29	
			Stewart County Total	**1.25**	**1.25**	**0.83**	**0.61**
TOTAL				**6.033**	**5.653**	**2.47**	**2.46**

Middle Chattahoochee Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Carroll County	75%	75%
Chattahoochee County	31%	31%
Clay County	57%	57%
Haralson County	81%	81%
Harris County	85%	85%
Heard County	90%	90%
Muscogee County	5%	5%
Quitman County	94%	94%
Randolph County	72%	72%
Stewart County	49%	49%
Troup County	69%	69%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018
2. Shaded septic percentages are from the 1990 census information of septic values
3. Percent of septic users will stay constant in the future unless further input received

Middle Chattahoochee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0027171	Villa Rica, City of (North Sweetwater WPCP)	Carroll	0.52	0.77	
GA0038512	Pentagon Properties, Inc (Cedar Village Manufactured Home Community WPCP)	Carroll	0.03	0.01	
GA0023493	Bowdon, City of (Bowdon WPCP)	Carroll	0.4	0.24	
GA0027162	Villa Rica, City of (Tallapoosa West WPCP)	Carroll	2.15	1.07	
GAG550110	Mount Zion United Methodist Church Ministries	Carroll	Report	0	
		Carroll County Total	**>3.1**	**2.09**	**2.95**
GA0026191	Fort Gaines, City of (Fort Gaines WPCP)	Clay	0.3	0.09	
		Clay County Total	**0.3**	**0.09**	**0.08**
GA0020982	Tallapoosa, City of (Tallapoosa WPCP)	Haralson	1	0.31	
GA0021008	Bremen, City of (Baxter Creek WPCP)	Haralson	0.2	0.11	
GA0037435	Bremen, City of (Buck Creek WPCP)	Haralson	0.9	0.25	
GA0021512	Buchanan, City of (Buchanan WPCP)	Haralson	0.17	0.08	
		Haralson County Total	**2.27**	**0.75**	**1.07**
GA0020052	West Point, City of (West Point WPCP)	Harris	2	1.42	
GA0022527	Callaway Gardens Resort, Inc. WPCP	Harris	0.5	0.12	
GA0025691	Pine Mountain, Town of (Pine Mountain WPCP)	Harris	0.3	0	
GA0031208	Oak View Home, Inc (Oak View Home WPCP)	Harris	0.01	0.01	
GA0033618	Hamilton, City of (Hamilton WPCP)	Harris	0.2	0.2	
GAG550013	Department of Natural Resources (Franklin D. Roosevelt State Park)	Harris	Report	0	
GAG550151	Acres of Shade MHP	Harris	Report	0	
		Harris County Total	**>3.01**	**1.75**	**2.17**

Middle Chattahoochee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0021148	Heard County Water Authority (Heard County Water Authority WPCP)	Heard	0.16	0.12	
		Heard County Total	**0.16**	**0.12**	**0.16**
GA0020516	Columbus Water Works (South WRF)	Muscogee	Report	37.64	
GA0036838	Columbus Water Works CSO	Muscogee	Report	18.33	
		Muscogee County Total	**Report**	**37.64**	**27.83**
GAG550109	Randolph County Board of Education (Randolph / Clay High School WPCP)	Randolph	Report	0.01	
GA0037249	Cuthbert, City of (Cuthbert WPCP)	Randolph	0.6	0.3	
		Randolph County Total	**>0.6**	**0.31**	**0.27**
GA0021032	Lumpkin, City of (Lumpkin WPCP)	Stewart	0.43	0.19	
GAG550016	Department of Natural Resources (Florence Marina State Park)	Stewart	Report	0	
GA0021539	Richland, City of (Richland WPCP)	Stewart	0.3	0.42	
		Stewart County Total	**>0.73**	**0.61**	**0.49**
GA0036951	LaGrange, City of (Long Cane Creek WPCP)	Troup	12.5	5.11	
GA0050218	Hogansville, City Of (Hogansville WPCP)	Troup	1.5	0	
		Troup County Total	**14**	**5.11**	**5.51**
	TOTAL		**>24.17**	**48.47**	**40.53**

Middle Chattahoochee Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ030722	Indian Lake Subdivison	Carroll	0.0624	0.01	
GAJ030661	Carroll County Schools (Villa Rica Middle School WPCP)	Carroll	0.0114	Not Available	
GAJ020134	City of Temple LAS	Carroll	1	0.40975	
GAJ020071	Carroll County Water Authority (Fairfield Plantation)	Carroll	0.45	0.5	
GAJ020126	Carrollton, City Of (Carrollton WPCP)	Carroll	7	4.9511	
		Carroll County Total	**8.5238**	**5.87085**	**7.95**
GAJ020224	Cusseta-Chattahoochee County (Chattahoochee County Industrial Park WPCP)	Chattahoochee	0.0225	0.00442	
		Chattahoochee County Total	**0.0225**	**0.00442**	**0.0047**
GAJ020251	Waco, City of (Waco WPCP)	Haralson	0.1	0.0285	
GAJ020142	Bremen, City of (Turkey Creek WPCP)	Haralson	0.2	0.14779	
		Haralson County Total	**0.3**	**0.17629**	**0.25**
GAJ020010	Georgetown-Quitman County Water Pollution Control Plant	Quitman	0.3	0.086	
		Quitman County Total	**0.3**	**0.086**	**0.09**
GAJ020019	Hogansville, City of (Hogansville WPCP)	Troup	0.65	0.43742	
		Troup County Total	**0.65**	**0.43742**	**0.47**
TOTAL			**9.80**	**6.57**	**8.76**

APPENDIX 6 – MIDDLE OCMULGEE INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Middle Ocmulgee Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Bibb County	152,150	151,845	148,802	144,734	142,159
Butts County	25,174	29,426	31,968	33,957	35,674
Crawford County	12,228	12,052	11,689	11,243	11,160
Houston County	157,039	169,507	180,954	190,663	201,754
Jasper County	14,199	15,147	16,096	16,945	18,033
Jones County	28,591	28,729	28,701	28,521	28,857
Lamar County	19,347	21,228	23,110	25,219	27,856
Monroe County	27,727	28,871	29,702	30,296	31,391
Newton County	112,354	128,770	148,303	170,860	197,976
Peach County	27,375	27,802	27,796	27,506	27,598
Pulaski County	10,893	10,121	9,332	8,548	7,924
Twiggs County	8,086	7,604	7,111	6,719	6,616
TOTAL	**595,163**	**631,102**	**663,564**	**695,211**	**736,998**

Middle Ocmulgee Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Bibb County [2]	177	171	136
Butts County	117	120	90
Crawford County [3]	101	107	96
Houston County [4]	168	166	177
Jasper County	138	139	121
Jones County	90	91	106
Lamar County	188	193	263
Monroe County	185	191	160
Newton County	121	122	144
Peach County [4]	126	125	104
Pulaski County	140	146	164
Twiggs County [3]	125	125	227

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation. Per capita values below 75 gpcd and over 200 gpcd were highlighted because they are outside the typical range and more information is being sought from the water systems in these Counties.

[2] Adjusted to reflect municipally-supplied industrial demand.

[3] Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

[4] Per capita was calculated using water withdrawals from large and small systems and population served data provided by EPD.

Middle Ocmulgee Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Bibb County [3]	6%	75	14%	6%	11.30	63.70
Butts County	18%	75	0.3%	0.3%	8.02	66.98
Crawford County	79%	75	71%	71%	7.65	67.35
Houston	3%	75	5%	5%	8.41	66.59
Jasper County	64%	75	44%	44%	8.26	66.74
Jones County [4]	54%	75	29%	29%	8.71	66.29
Lamar County	56%	75	57%	57%	9.51	65.49
Monroe County	65%	75	47%	47%	8.54	66.46
Newton County	31%	75	16%	16%	6.43	68.57
Peach County [4]	31%	75	22%	22%	9.35	65.65
Pulaski County [5]	40%	100	53%	30%	10.74	89.26
Twiggs County	77%	75	72%	72%	9.92	65.08

NOTES:

[1] Ratios as shown the Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment applied to volume of water used over time due to the installation of new and water efficient appliances and fixtures.

[3] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 6% of the population by 2060.

[4] Self-supplied percent ratio was calculated by subtracting the municipally-supplied population served, provided by EPD, from the total population within the County.

[5] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 30% of the population by 2060. A Pulaski County representative also requested a per capita value of 100 gpcd.

Middle Ocmulgee Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD) [1]	Permitted Annual Average Day (MGD) [1,2]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
011-0590-02	Macon Water Authority [3]	Bibb	Ocmulgee River	110.00	91.67	-	
			Bibb County Total	**-**	**-**	**-**	**23.27**
018-0501-02	Jackson, City Of - Towaliga R	Butts	Towaliga River	1.00	0.83	0.25	
018-0501-11	Butts County, et al. W&S Authority	Butts	Ocmulgee River	9.70	8.08	2.39	
			Butts County Total	**10.70**	**8.92**	**2.64**	**2.91**
079-0311-01	Monticello, City of	Jasper	City Reservoir, Lowry Branch	0.50	0.42	0.34	
			Jasper County Total	**0.50**	**0.42**	**0.34**	**0.65**
084-0504-01	Macon Water Authority	Jones	Town Creek Reservoir	63.00	52.50	26.53	
			Jones County Total	**63.00**	**52.50**	**26.53**	**-**
085-0501-03	Barnesville, City of	Lamar	Eady Creek Reservoir	4.00	3.33	1.88	
085-0501-06	Barnesville, City of	Lamar	Big Towaliga Creek	0.50	0.42	-	
085-0501-10	Barnesville, City of	Lamar	Little Towaliga River	1.00	0.83	-	
			Lamar County Total	**4.00**	**3.33**	**1.88**	**3.11**
102-0501-05	Forsyth, City of	Monroe	Rocky Creek	1.50	1.25	-	
102-0501-07	Forsyth, City of	Monroe	Tobesofkee Creek Reservoir	4.00	4.00	1.36	
			Monroe County Total	**4.00**	**4.00**	**1.36**	**2.59**
107-0410-03	Covington, City of - Newton County Water System	Newton	Alcovy River	4.00	3.33	0.32	
107-0410-04	Newton County Board Of Commissioners	Newton	Cornish Cr. Reservoir	28.00	23.00	14.67	
107-0410-06	Newton County Board Of Commissioners	Newton	Alcovy River (Pumps to Cornish Creek Res.)	35.00	29.17	-	
107-0411-01	Newton County	Newton	Alcovy River (Pumps to Bear Creek Res.)	35.00	29.17	-	
107-0411-02	Newton County	Newton	Bear Creek Reservoir	34.00	28.00	-	
			Newton County Total	**66.00**	**54.33**	**14.99**	**23.42**
TOTAL				**148.20**	**123.50**	**47.74**	**55.94**

NOTES:

[1] Withdrawal permits for sources that feed reservoirs are listed but were not added to the county total.

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[3] Surface water withdrawal for Macon Water Authority is located in Jones County.

Middle Ocmulgee Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
018-0001	Georgia Department of Corrections - Georgia Diagnostic Prison	Butts	Crystalline Rock	0.3	0.3	0.09	
			Butts County Total	**0.3**	**0.3**	**0.09**	**0.10**
039-0001	Roberta, City of	Crawford	Cretaceous Sand	0.24	0.18	0.12	
039-0002	Crawford County Board of Commissioners	Crawford	Cretaceous Sand	0.375	0.3	0.14	
			Crawford County Total	**0.615**	**0.48**	**0.26**	**0.28**
076-0002	Warner Robins, City of	Houston	Cretaceous Sand	14.5	10.8	7.58	
076-0003	Perry, City of	Houston	Cretaceous Sand	6.15	4.5	2.16	
076-0004	Centerville, City of	Houston	Cretaceous Sand	2.5	1.8	1.16	
076-0005	Houston County Water - Hayneville Section	Houston	Cretaceous Sand	0.252	0.168	0.16	
076-0006	Houston County Water - Feagin Mill / Elberta / Dunbar System	Houston	Cretaceous Sand	27.2	18.4	15.79	
076-0008	Houston County Water - Henderson Section	Houston	Cretaceous Sand	0.25	0.165	0.22	
076-0009	Robins Air Force Base	Houston	Cretaceous Sand	5.01	3.87	1.43	
076-0012	Robins Air Force Base - Luna Lake	Houston	Cretaceous Sand	0.18	0.18	-	
			Houston County Total	**56.042**	**39.883**	**28.50**	**32.17**
079-0002	Monticello, City of	Jasper	Crystalline Rock	0.375	0.375	0.16	
079-0003	Turtle Cove Property Owners Association	Jasper	Crystalline Rock	0.25	0.25	0.12	
			Jasper County Total	**0.625**	**0.625**	**0.28**	**0.52**
084-0001	Jones County Water System	Jones	Cretaceous Sand, Crystalline Rock	2.5	2.5	2.59	
084-0002	Gray, City of	Jones	Crystalline Rock	0.75	0.7	0.34	
			Jones County Total	**3.25**	**3.2**	**2.93**	**1.99**
111-0001	Fort Valley, City of - Utility Commission	Peach	Cretaceous Sand	4	2.5	1.50	
111-0002	Byron, City of	Peach	Cretaceous Sand	1.3	1.2	0.87	
			Peach County Total	**5.3**	**3.7**	**2.37**	**2.05**
116-0001	Hawkinsville, City of	Pulaski	Cretaceous Sand	1.85	1.6	0.88	
			Pulaski County Total	**1.85**	**1.6**	**0.88**	**0.85**
143-0006	Jeffersonville, City of	Twiggs	Cretaceous Sand	0.35	0.3	-	
143-0010	Twiggs County Board of Commissioners	Twiggs	Cretaceous Sand	0.5	0.5	0.09	
			Twiggs County Total	**0.85**	**0.8**	**0.09**	**0.41**
TOTAL				**68.832**	**50.588**	**35.39**	**38.36**

Middle Ocmulgee Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Bibb County	20%	20%
Butts County	70%	70%
Crawford County	87%	87%
Houston County	34%	34%
Jasper County	74%	74%
Jones County	77%	77%
Lamar County	84%	84%
Monroe County	70%	70%
Newton County	67%	67%
Peach County	66%	66%
Pulaski County	68%	68%
Twiggs County	86%	86%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018

2. Shaded septic percentages are from the 1990 census information of septic values

3. Percent of septic users will stay constant in the future unless further input received

Middle Ocmulgee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0024538	Macon Water Authority (Lower Poplar WRF)	Bibb	20	13.86	
GA0024546	Macon Water Authority (Rocky Creek WPCP)	Bibb	28	19.73	
		Bibb County Total	**48**	**33.59**	**33.51**
GA0021831	Jackson, City of (Yellow Water Creek WPCP)	Butts	0.75	0.34	
GA0022284	Forest Glen Estates Mobile Home Park WPCP	Butts	0.03	0.02	
GA0023931	Jackson, City of (Southside WPCP)	Butts	0.7	0.15	
GA0032719	Jackson, City of (Northeast WPCP)	Butts	0.14	0.11	
		Butts County Total	**1.62**	**0.62**	**0.88**
GA0020834	Roberta, City of (Roberta WPCP)	Crawford	0.44	0.14	
		Crawford County Total	**0.44**	**0.14**	**0.13**
GA0002852	Robins Air Force Base	Houston	Report	0.43	
GA0021334	Perry, City of (Frank Satterfield Road WWTF)	Houston	3	2.44	
GA0022594	Davis Oil Company (Shell Food Mart WPCP)	Houston	0.01	0	
GA0030325	Warner Robins, City of (Sandy Run Creek WPCP)	Houston	12	7.69	
GA0037796	Warner Robins, City of (Ocmulgee River WPCP)	Houston	3	1.43	
		Houston County Total	**>18.01**	**11.99**	**15.40**
GA0020141	Monticello, City of (Pearson Creek WPCP)	Jasper	0.17	0.1	
GA0020150	Monticello, City of (White Oak Creek WPCP)	Jasper	0.12	0.05	
		Jasper County Total	**0.29**	**0.15**	**0.19**
GA0026085	Gray, City of (Wolf Creek WPCP)	Jones	0.4	0.38	
		Jones County Total	**0.4**	**0.38**	**0.38**
GA0030791	Griffin, City of (Potato Creek WPCP) [1]	Lamar	2	1.08	
GA0021041	Barnesville, City of (James A. King WWTF)	Lamar	2.4	3.82	
		Lamar County Total	**2.4**	**3.82**	**5.50**
GA0024732	Forsyth, City of (South WPCP)	Monroe	0.6	0.39	
GA0031801	Forsyth, City of (Northeast WPCP)	Monroe	1.4	1.02	

Middle Ocmulgee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0034100	Rumble Road BP Service Station WPCP	Monroe	0.0046	0.000875	
GAG550075	Department of Natural Resources (High Falls State Park)	Monroe	Report	0	
GAG550145	Rumble Road WPCP	Monroe	Report	0	
GAG550147	Pruitt Health of Monroe	Monroe	Report	0.01	
GAG550152	Bolingreen Nursing Center WPCP	Monroe	Report	0	
		Monroe County Total	**>2**	**1.420875**	**1.61**
GA0047759	Mansfield, City of (Mansfield WPCP)	Newton	0.06	0.04	
		Newton County Total	**0.06**	**0.04**	**0.07**
GA0031046	Fort Valley, City of (Fort Valley WPCP)	Peach	2.2	0.98	
		Peach County Total	**2.2**	**0.98**	**0.99**
GA0020338	Hawkinsville, City of (South WPCP)	Pulaski	1.3	1.12	
GA0046027	Hawkinsville, City of (North WPCP)	Pulaski	1	0.33	
		Pulaski County Total	**2.3**	**1.45**	**1.05**
TOTAL			**>77.72**	**56.1**	**59.72**

[1] Potato Creek serves the City of Griffin in Spalding County, but discharges in Lamar County. Forecasts are associated with Spalding County.

Middle Ocmulgee Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ030799	Flying J Travel Plaza	Butts	0.06	0.028	
GAJ020038	Butts County, et al. Water & Sewer Authority (Bucksnort Ranch WPCP)	Butts	0.5	0.266	
GAJ020245	Georgia Department Of Corrections (Diagnostic & Classification Prison WPCP)	Butts	0.4	0.248	
		Butts County Total	**0.96**	**0.542**	**0.77**
GAJ030623	Winding River Development WPCP	Houston	2	0	
GAJ030962	Christ Sanctified Holy Church	Houston	0.018	0.007	
		Houston County Total	**2.018**	**0.007**	**0.01**
GAJ020201	Georgia Department of Public Safety (Georgia Public Safety Training Center WPCP)	Monroe	0.12	0.082	
		Monroe County Total	**0.12**	**0.082**	**0.09**
GAJ020013	Newton County (Yellow River WPCP)	Newton	3.2	2.391	
GAJ020055	Covington, City of (Covington WRF)	Newton	5.6	2.58	
GAJ020005	Newton County Board of Education (Alcovy High School WPCP)	Newton	0.0264	0.008	
GAJ030736	Brick Store Utility Company	Newton	0.035	0.002	
		Newton County Total	**8.8614**	**4.981**	**8.78**
GAJ020050	Jeffersonville, City of (Jeffersonville WPCP)	Twiggs	0.7	0.118	
		Twiggs County Total	**0.7**	**0.118**	**0.10**
TOTAL			**12.66**	**5.729**	**9.74**

APPENDIX 7 – SAVANNAH-UPPER OGEECHEE INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Savannah-Upper Ogeechee Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

	2020	2030	2040	2050	2060
Banks County	19,982	24,827	28,650	32,701	37,420
Burke County	22,342	22,600	22,350	21,841	21,695
Columbia County	158,631	177,910	185,922	188,389	187,389
Elbert County	18,945	18,581	17,982	17,304	16,913
Franklin County	23,329	25,652	27,876	30,277	33,246
Glascock County	3,025	3,065	2,911	2,628	2,315
Hart County	26,107	26,772	27,170	27,657	28,635
Jefferson County	15,313	14,828	14,146	13,405	12,909
Jenkins County	8,576	8,044	7,419	6,838	6,371
Lincoln County	8,125	8,534	8,086	7,465	7,096
Madison County	30,177	33,121	36,518	40,691	46,076
McDuffie County	21,597	21,951	22,058	22,054	22,403
Oglethorpe County	15,240	16,237	17,242	18,353	19,824
Rabun County	16,986	17,641	18,198	19,221	20,867
Richmond County	202,240	204,904	202,735	198,965	197,404
Screven County	13,900	13,558	12,902	12,238	11,860
Stephens County	26,328	27,927	29,381	31,126	33,544
Taliaferro County	1,632	1,609	1,452	1,283	1,143
Warren County	5,210	5,002	4,816	4,639	4,601
Wilkes County	10,014	10,037	9,302	8,295	7,483
TOTAL	**647,699**	**682,800**	**697,116**	**705,370**	**719,194**

Savannah - Upper Ogeechee Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Banks County	101	102	101
Burke County	132	129	128
Columbia County	153	134	132
Elbert County	102	105	190
Franklin County	164	161	115
Glascock County	73	73	75
Hart County	154	158	143
Jefferson County [2]	169	163	171
Jenkins County	101	107	110
Lincoln County [3]	67	66	109
Madison County [2]	107	104	104
McDuffie County	139	141	112
Oglethorpe County	94	100	75
Rabun County [4]	168	164	155
Richmond County [3,4]	221	217	197
Screven County	161	160	189
Stephens County [3]	144	146	155
Taliaferro County	71	71	75
Warren County [3]	73	72	137
Wilkes County	156	156	143

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation.

[2] Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

[3] Per capita was calculated using water withdrawals from large and small systems and population served data provided by EPD.

[4] Adjusted to reflect municipally-supplied industrial demand.

Savannah - Upper Ogeechee Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Banks County [3]	57%	75	49%	30%	8.31	66.69
Burke County	64%	75	63%	63%	9.75	65.25
Columbia County [4]	13%	75	17%	5%	7.24	67.76
Elbert County [5]	51%	75	54%	45%	11.07	63.93
Franklin County	51%	75	27%	27%	9.77	65.23
Glascock County	60%	75	100%	100%	10.67	64.33
Hart County [6]	66%	75	52%	25%	9.36	65.64
Jefferson County	47%	75	40%	40%	10.59	160.41
Jenkins County [7]	23%	75	54%	25%	10.96	64.04
Lincoln County	29%	75	31%	31%	10.18	64.82
Madison County [8]	20%	75	70%	25%	9.21	65.79
McDuffie County [9]	53%	75	18%	10%	10.25	64.75
Oglethorpe County [10]	83%	75	69%	12%	8.95	66.05
Rabun County	27%	75	32%	32%	8.44	66.56
Richmond County [3]	2%	75	2%	2%	11.22	63.78
Screven County	59%	75	67%	67%	10.13	64.87
Stephens County [3]	10%	75	4%	4%	10.55	64.45
Taliaferro County	62%	75	100%	100%	11.21	63.79
Warren County	44%	75	33%	33%	10.62	64.38
Wilkes County [3]	51%	75	36%	36%	11.09	63.91

NOTES:

[1] Ratios as shown in Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment applied to volume of water used over time due to the installation of new and water efficient appliances and fixtures.

[3] Self-supplied percent ratio was calculated by subtracting the municipally-supplied population served, provided by EPD, from the total population within the County.

[4] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 5% of the population by 2060.

[5] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 45% of the population by 2060.

[6] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 25% of the population by 2060.

[7] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 25% of the population by 2060.

[8] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 25% of the population by 2060.

[9] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 10% of the population by 2060.

[10] Per comments received during the previous forecast, started with the 2015 USGS ratio and decreased progressively to 12% of the population by 2060.

Savannah - Upper Ogeechee Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD) [1]	Permitted Annual Average Day (MGD) [1,2]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
006-0106-05	Banks County Board Of Commissioners	Banks	Mtn. Creek Reservoir	1.00	0.83	0.73	
Banks County Total				**1.00**	**0.83**	**0.73**	**2.50**
036-0109-04	Columbia County Water System	Columbia	Clarks Hill Reservoir	8.00	6.67	2.58	
036-0110-01	Columbia County Water System	Columbia	Stevens Creek Reservoir (Savannah River)	45.90	38.25	15.69	
Columbia County Total				**53.90**	**44.92**	**18.27**	**22.84**
052-0104-01	Elberton, City of	Elbert	Beaverdam Creek	1.70	1.42	-	
052-0104-04	Elberton, City of	Elbert	Lake Russell	3.70	3.08	1.86	
Elbert County Total				**3.70**	**3.08**	**1.86**	**1.71**
059-0102-01	Lavonia, City of	Franklin	Crawford Creek Reservoir	1.50	1.25	-	
059-0102-04	Lavonia, City Of	Franklin	Lake Hartwell	3.00	2.50	1.31	
059-0103-01	Royston, City of	Franklin	North Fork Broad River	1.00	0.83	0.37	
Franklin County Total				**4.00**	**3.33**	**1.67**	**2.01**
073-0190-01	Hartwell, City Of	Hart	Lake Hartwell	3.50	2.92	1.60	
Hart County Total				**3.50**	**2.92**	**1.60**	**2.72**
090-0108-01	Lincolnton, City Of	Lincoln	Clarks Hill Reservoir	0.63	0.53	0.54	
Lincoln County Total				**0.63**	**0.53**	**0.54**	**0.43**
097-0109-05	Thomson/ McDuffie Water & Sewer Commission	McDuffie	Clarks Hill Reservoir	3.10	2.58	1.80	
097-0111-03	Thomson/ McDuffie Water & Sewer Commission	McDuffie	Usry's Lake on Sweetwater Creek	1.50	1.25	0.53	
McDuffie County Total				**4.60**	**3.83**	**2.33**	**2.12**
109-0105-01	Crawford, City of	Oglethorpe	Tributary To Long Creek	0.25	0.21	0.13	
Oglethorpe County Total				**0.25**	**0.21**	**0.13**	**1.19**

Savannah - Upper Ogeechee Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD) [1]	Permitted Annual Average Day (MGD) [1,2]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
119-0101-03	Rabun County Water & Sewer Authority f/k/a Clayton-Rabun County Water & Sewer Authority	Rabun	Lake Rabun (Savannah River Basin) and Little TN River (TN River Basin)	3.50	2.92	1.58	
119-1501-02	Clayton, City of	Rabun	Black Creek	0.70	0.58	-	
Rabun County Total				**4.20**	**3.50**	**1.58**	**2.37**
121-0191-06	Augusta-Richmond County	Richmond	Augusta Canal	45.00	37.50	28.04	
121-0191-09	Augusta Utilities Department	Richmond	Savannah River	15.00	12.50	7.21	
Richmond County Total				**60.00**	**50.00**	**35.24**	**31.41**
127-0102-02	Toccoa, City Of - Lake Toccoa	Stephens	Lake Toccoa	9.00	7.50	3.88	
127-0102-05	Toccoa, City Of	Stephens	Lake Yonah	6.00	5.00	0.07	
Stephens County Total				**15.00**	**12.50**	**3.95**	**4.62**
149-0202-01	Warrenton, City Of	Warren	Rocky Comfort Creek Reservoir	0.75	0.63	0.43	
Warren County Total				**0.75**	**0.63**	**0.43**	**0.40**
157-0109-01	Washington, City of	Wilkes	Clarks Hill Reservoir	2.00	1.67	0.66	
157-0109-03	Washington, City of	Wilkes	Little Beaverdam Creek and Beaverdam Creek	1.80	1.50	0.28	
Wilkes County Total				**3.80**	**3.17**	**0.94**	**0.65**
TOTAL				**153.13**	**127.61**	**67.42**	**74.98**

NOTES:

[1] Withdrawal permits for sources that feed reservoirs are listed but were not added to the county total.

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

Savannah - Upper Ogeechee Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
017-0002	Waynesboro, City of	Burke	Cretaceous Sand	4	3.5	0.77	
017-0005	Sardis, City of	Burke	Cretaceous Sand	0.4	0.4	0.11	
			Burke County Total	**4.4**	**3.9**	**0.88**	**0.94**
036-0001	Harlem, City of	Columbia	Crystalline Rock	0.28	0.25	-	
036-0002	Grovetown, City of	Columbia	Crystalline Rock	0.9	0.9	0.03	
			Columbia County Total	**1.18**	**1.15**	**0.03**	**0.04**
059-0003	Franklin County	Franklin	Crystalline Rock	1.545	1.545	0.49	
			Franklin County Total	**1.545**	**1.545**	**0.49**	**0.58**
073-0003	Royston, City of	Hart	Crystalline Rock	0.341	0.341	0.14	
			Hart County Total	**0.341**	**0.341**	**0.14**	**0.23**
081-0002	Wadley, City of	Jefferson	Cretaceous Sand, Eocene Sand	0.45	0.45	0.41	
081-0003	Louisville, City of	Jefferson	Cretaceous Sand	2	2	0.54	
081-0004	Wrens, City of	Jefferson	Cretaceous Sand	0.8	0.65	0.30	
081-0010	Louisville, City of - Grange Road Water System	Jefferson	Cretaceous Sand	0.9	0.9	0.53	
			Jefferson County Total	**4.15**	**4**	**1.79**	**1.23**
082-0002	Millen, City of	Jenkins	Upper Floridan	1	1	0.52	
			Jenkins County Total	**1**	**1**	**0.52**	**0.47**
090-0002	Lincoln County Water System	Lincoln	Crystalline Rock	0.35	0.3	0.06	
			Lincoln County Total	**0.35**	**0.3**	**0.06**	**0.05**
095-0001	Danielsville, City of	Madison	Crystalline Rock	0.3	0.3	0.22	
095-0002	Comer, City of	Madison	Crystalline Rock	0.25	0.25	0.12	
			Madison County Total	**0.55**	**0.55**	**0.34**	**3.28**
119-0002	Sky Valley, City of	Rabun	Crystalline Rock	0.3	0.3	0.11	
			Rabun County Total	**0.3**	**0.3**	**0.11**	**0.16**
121-0003	Hephzibah, City of	Richmond	Cretaceous Sand	1.2	1.2	0.68	
121-0007	Augusta Utilities Department	Richmond	Cretaceous Sand	18.4	18.4	5.90	
121-0019	Blythe, City of	Richmond	Cretaceous Sand	0.25	0.25	0.08	
			Richmond County Total	**19.85**	**19.85**	**6.66**	**5.77**
124-0002	Sylvania, City of	Screven	Floridan	1.5	1.3	0.69	
			Screven County Total	**1.5**	**1.3**	**0.69**	**0.69**

Savannah - Upper Ogeechee Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
127-0001	Martin, Town of	Stephens	Crystalline Rock	0.2	0.2	0.16	
			Stephens County Total	**0.2**	**0.2**	**0.16**	**0.18**
TOTAL				**35.37**	**34.44**	**11.87**	**13.61**

Savannah Upper Ogeechee Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Banks County	90%	90%
Burke County	65%	65%
Columbia County	20%	20%
Elbert County	61%	61%
Franklin County	75%	75%
Glascock County	74%	74%
Hart County	78%	78%
Jefferson County	54%	54%
Jenkins County	84%	84%
Lincoln County	81%	81%
Madison County	93%	93%
McDuffie County	80%	80%
Oglethorpe County	94%	94%
Rabun County	85%	85%
Richmond County	21%	21%
Screven County	72%	72%
Stephens County	60%	60%
Taliaferro County	76%	76%
Warren County	62%	62%
Wilkes County	57%	57%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018
2. Shaded septic percentages are from the 1990 census information of septic values
3. Percent of septic users will stay constant in the future unless further input received

Savannah Upper Ogeechee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0032905	Maysville, City of (Maysville WPCP)	Banks	0.06	0.04	
GA0032638	Commerce, City of (Holiday Inn WPCP)	Banks	0.04	0	
GA0032646	Commerce, City of (Davis House WPCP)	Banks	0.07	0.03	
GA0050215	Banks County Board of Commissioners (Hudson River WPCP)	Banks	0.13	0	
GAG550044	Homer Housing WPCP	Banks	Report	0	
GAG550080	Old Banks County Elementary School WPCP	Banks	Report	0	
		Banks County Total	**>0.3**	**0.07**	**0.13**
GA0020028	Midville, City of (Midville WPCP)	Burke	0.17	0.02	
GA0020893	Sardis, City of (Sardis WPCP)	Burke	0.2	0.04	
GA0038466	Waynesboro, City of (Brier Creek WPCP)	Burke	2	1.69	
		Burke County Total	**2.37**	**1.75**	**1.70**
GA0020389	Harlem, City of (Harlem WPCP)	Columbia	0.25	0.41	
GA0031984	Columbia County (Crawford Creek WPCP)	Columbia	1.5	0.99	
GA0031992	Columbia County (Reed Creek WPCP)	Columbia	4.6	3.32	
GA0038342	Columbia County (Kiokee Creek WPCP)	Columbia	0.3	0.04	
GA0047775	Columbia County (Little River WPCP)	Columbia	6	4.45	
GA0050246	Grovetown, City of (Grovetown WPCP)	Columbia	3	0	
GAG550011	Georgia Department of Natural Resources (Mistletoe State Park)	Columbia	Report	0	
		Columbia County Total	**>15.65**	**9.21**	**10.88**
GA0021067	Bowman, City of (Bowman WPCP)	Elbert	0.09	0.02	
GA0025631	Elberton, City of (Fortson Creek WPCP)	Elbert	0.6	0.31	
GA0025682	Elberton, City of (Falling Creek WPCP)	Elbert	0.9	0.74	

Savannah Upper Ogeechee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GAG550148	Nancy Hart Nursing Center	Elbert	Report	0	
GAG550160	Heardmont Healthcare (Heardmont Nursing Home WPCP)	Elbert	Report	0	
		Elbert County Total	**>1.59**	**1.07**	**0.97**
GA0021491	Royston, City of (Royston WPCP)	Franklin	0.5	0.24	
GA0038661	Lavonia, City of (Lavonia WPCP)	Franklin	0.75	0.4	
GA0050172	Franklin Springs, City of (Franklin Springs WPCP)	Franklin	0.1	0.07	
GA0050249	Franklin County Board of Commissioners (Franklin County WPCP - NPDES)	Franklin	0.3	0.15	
GAG550012	Georgia Department of Natural Resources (Tugaloo State Park WPCP)	Franklin	Report	0	
		Franklin County Total	**>1.65**	**0.86**	**1.23**
GA0021849	Gibson, City of (Gibson WPCP)	Glascock	0.21	0.05	
		Glascock County Total	**0.21**	**0.05**	**0.04**
GAG550082	The New Harbor Light Marina, Inc.	Hart	Report	0	
		Hart County Total	**Report**	**0**	**0.00**
GA0021024	Wadley, City of (Wadley WPCP)	Jefferson	0.22	0.25	
GA0050243	Louisville, City of (Forstmann WPCP)	Jefferson	1	2.07	
GA0021857	Wrens, City of (Wrens WPCP)	Jefferson	1	0.98	
		Jefferson County Total	**2.22**	**3.3**	**2.78**
GA0038750	Millen, City of (Millen WPCP)	Jenkins	0.95	0.57	
		Jenkins County Total	**0.95**	**0.57**	**0.42**
GA0049450	Lincolnton, City of (Lincolnton WPCP)	Lincoln	0.52	0.22	

Savannah Upper Ogeechee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GAG550019	DNR Elijah Clark State Park	Lincoln	Report	0	
		Lincoln County Total	**>0.52**	**0.22**	**0.19**
GA0021598	Comer, City of (Comer WPCP)	Madison	0.09	0.03	
GA0048224	Danielsville, City of (Danielsville WPCP)	Madison	0.08	0.02	
		Madison County Total	**0.17**	**0.05**	**0.08**
GA0020974	Thomson, City of (Thomson WPCP)	McDuffie	2.5	3.16	
		McDuffie County Total	**2.5**	**3.16**	**3.28**
GA0039144	Crawford, City of (Crawford WPCP)	Oglethorpe	0.18	0.07	
		Oglethorpe County Total	**0.18**	**0.07**	**0.09**
GA0020923	Clayton, City of (Clayton WPCP)	Rabun	1	1.27	
GAG550004	Athens Y Camp for Boys	Rabun	Report	0	
GAG550102	Center for Spiritual Awareness	Rabun	Report	0	
GAG550128	Athens Y Camp Chattooga	Rabun	Report	0	
GA0039152	Rabun County Water & Sewer Authority (Rabun County WRF)	Rabun	0.5	0.16	
GA0047139	Dillard, City Of (Dillard WPCP)	Rabun	0.2	0.06	
		Rabun County Total	**>1.7**	**1.49**	**1.83**
GA0037621	Augusta, City of (J.B. Messerly WPCP)	Richmond	46.1	35.66	
GA0047147	Augusta, City of (Spirit Creek WPCP)	Richmond	2.24	0	
GA0049433	Hephzibah, City of (Hephzibah WPCP)	Richmond	0.09	0.03	
		Richmond County Total	**48.43**	**35.69**	**34.84**
GA0050202	Newington, Town Of (Newington WPCP)	Screven	0.05	0	
GA0021385	Sylvania, City of (Sylvania WPCP)	Screven	1.51	2.12	
GA0030287	Georgia Visitor Center (Sylvania)	Screven	0.02	0	
		Screven County Total	**1.58**	**2.12**	**1.81**
GA0021806	Toccoa, City Of (Toccoa Creek WPCP)	Stephens	0.41	0.36	

Savannah Upper Ogeechee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0021814	Toccoa, City of (EastaNollee Creek WPCP)	Stephens	2	1.01	
GA0025798	Toccoa Falls College WPCP	Stephens	0.09	0.05	
GAG550043	Georgia Baptist Conference Center WPCP	Stephens	Report	0	
GAG550077	Stephens County Schools (Old Big A Elementary School WPCP)	Stephens	Report	0	
GAG550078	Stephens County Schools (Old Middle School Site WPCP)	Stephens	Report	0	
Stephens County Total			**>2.5**	**1.42**	**1.81**
GA0020915	Crawfordville, City of (Crawfordville WPCP)	Taliaferro	0.1	0.03	
GAG550017	Department of Natural Resources (A. H. Stephens State Park)	Taliaferro	Report	0	
Taliaferro County Total			**>0.1**	**0.03**	**0.02**
GA0050233	Warrenton, City of (Warrenton WPCP)	Warren	0.5	0.26	
Warren County Total			**0.5**	**0.26**	**0.23**
GA0031101	Washington, City of (Rocky Creek WPCP)	Wilkes	4	0.54	
GA0046141	Tignall, Town of (Tignall WPCP)	Wilkes	0.08	0	
Wilkes County Total			**4.08**	**0.54**	**0.40**
TOTAL			**>87.16**	**61.93**	**62.72**

Savannah Upper Ogeechee Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ030613	North Georgia Church Of God (Legacy Retreat Center WPCP)	Banks	0.01	0	
GAJ020023	Banks County Board Of Commissioners (Atlanta International Dragway WPCP)	Banks	0.27	0.097	
GAJ040033	Banks County Golf, LLC (Chimney Oaks WPCP)	Banks	0.072	0.001	
GAJ020181	Banks County Board of Commissioners (Industrial Park WPCP)	Banks	0.045	0.007	
		Banks County Total	**0.397**	**0.105**	**0.20**
GAJ020155	Keysville, City of (Keysville WPCP)	Burke	0.0596	0.029	
		Burke County Total	**0.0596**	**0.029**	**0.03**
GAJ020222	Grovetown, City of	Columbia	0.58	0.341	
		Columbia County Total	**0.58**	**0.341**	**0.40**
GAJ020065	Franklin County Board of Commissioners (Franklin County WPCP - LAS)	Franklin	0.075	0	
		Franklin County Total	**0.075**	**0**	**0.00**
GAJ020114	Hartwell, City of (Hartwell WRF)	Hart	1.75	0.803	
		Hart County Total	**1.75**	**0.803**	**0.88**
GAJ020215	Bartow, Town Of (Bartow WPCP)	Jefferson	0.05	0	
		Jefferson County Total	**0.05**	**0**	**0.00**
GAJ020039	Madison County Industrial Development and Building Authority (Madison County Industrial Development and Building Authority WPCP)	Madison	0.05	0.009	
		Madison County Total	**0.05**	**0.009**	**0.01**
GAJ020007	Thomson, City of (Dearing WPCP)	McDuffie	0.09	0.04	
GAJ020252	Thomson, City of (Mattox Creek WPCP)	McDuffie	0.171	0.069	
		McDuffie County Total	**0.261**	**0.109**	**0.11**
GAJ030794	Waterfall Property Owners Association (Waterfall at Lake Burton	Rabun	0.075	0.003	
GAJ030753	Camp Ramah Darom	Rabun	0.025	0.338	
		Rabun County Total	**0.1**	**0.341**	**0.42**
GAJ020033	Hiltonia, Town of (Hiltonia WPCP)	Screven	0.0468	0	

Savannah Upper Ogeechee Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
		Screven County Total	**0.0468**	**0**	**0.00**
GAJ020258	Norwood, City Of (Norwood WPCP)	Warren	0.05	0.025	
		Warren County Total	**0.05**	**0.025**	**0.02**
TOTAL			**3.419**	**1.762**	**2.08**

APPENDIX 8 – SUWANNEE-SATILLA INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Suwannee-Satilla Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Atkinson County	8,330	8,560	8,607	8,545	8,459
Bacon County	11,404	12,157	11,927	11,364	10,720
Ben Hill County	16,645	16,361	15,722	14,920	14,286
Berrien County	19,276	19,932	20,219	20,243	20,370
Brantley County	19,202	20,326	19,836	18,495	16,678
Brooks County	15,727	16,164	15,270	13,921	12,681
Charlton County	13,251	13,751	13,116	12,133	11,008
Clinch County	6,656	6,859	6,999	7,260	7,718
Coffee County	43,042	43,555	43,277	42,714	42,169
Cook County	17,437	18,202	17,574	16,369	14,929
Echols County	3,969	3,861	3,668	3,380	3,087
Irwin County	9,433	9,815	10,050	10,240	10,484
Lanier County	10,351	10,402	10,473	10,479	10,575
Lowndes County	117,878	125,675	130,605	134,992	140,334
Pierce County	19,545	20,362	20,967	21,429	21,894
Tift County	40,830	42,209	42,983	43,212	43,510
Turner County	8,076	8,334	7,865	7,330	6,795
Ware County	35,853	37,027	37,923	38,636	39,738
TOTAL	**416,905**	**433,552**	**437,081**	**435,662**	**435,435**

Suwannee - Satilla Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Atkinson County [2]	112	111	109
Bacon County	170	177	141
Ben Hill County	180	177	163
Berrien County	131	128	128
Brantley County [2]	93	96	115
Brooks County	137	147	162
Charlton County	123	128	115
Clinch County	148	140	137
Coffee County [3]	153	139	179
Cook County [4]	142	131	183
Echols County	96	96	75
Irwin County [2]	152	148	170
Lanier County	153	143	99
Lowndes County	133	129	169
Pierce County	127	131	73
Tift County	156	153	179
Turner County	140	140	212
Ware County [4]	114	109	125

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation. Per capita values below 75 gpcd and over 200 gpcd were highlighted because they are outside the typical range and more information is being sought from the water systems in these Counties.

[2] Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

[3] Adjusted by subtracting municipally supplied industrial demands.

[4] Per capita was calculated using water withdrawals from large and small systems and population served data provided by EPD.

Suwannee - Satilla Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita [1]	Updated Percent Population Self Supplied [2]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [3]	2060 Self Supplied Per Capita
Atkinson County	53%	100	47%	47%	10.2	89.8
Bacon County	67%	100	57%	57%	11.4	88.6
Ben Hill County	21%	100	26%	26%	10.7	89.3
Berrien County	55%	100	60%	60%	9.9	90.1
Brantley County	86%	100	87%	87%	9.2	90.8
Brooks County	57%	100	51%	51%	10.2	89.8
Charlton County	59%	100	47%	47%	9.4	90.6
Clinch County	53%	100	43%	43%	10.4	89.6
Coffee County	58%	100	50%	50%	9.4	90.6
Cook County	43%	100	48%	48%	10.3	89.7
Echols County	79%	100	100%	100%	9.2	90.8
Irwin County	63%	100	66%	66%	10.2	89.8
Lanier County	61%	100	60%	60%	9.0	91.0
Lowndes County	17%	100	21%	21%	9.1	90.9
Pierce County	72%	100	58%	58%	10.1	89.9
Tift County	28%	100	33%	33%	10.2	89.8
Turner County	34%	100	34%	34%	10.9	89.1
Ware County [4]	15%	100	8%	8%	11.7	88.3

NOTES:

[1] During the Suwanee-Satilla Regional Water Planning Coincil's municipal in 2010 ad hoc group meeting, the group decided to use 100 gpcd for self-supplied domestic water users. The basis for adjusting the number is that this value is commonly used internally for water use planning.

[2] Ratios as shown in Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[3] Adjustment applied to volume of water used over time due to the installation of new and water efficient appliances and fixtures.

[4] Self-supplied percent ratio was calculated by subtracting the municipally-supplied population served, provided by EPD, from the total population within the County.

Suwannee - Satilla Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
002-0001	Pearson, City of	Atkinson	Floridan	0.4	0.4	0.32	
002-0002	Willacoochee, City of	Atkinson	Floridan	0.5	0.5	0.24	
		Atkinson County Total		**0.9**	**0.9**	**0.56**	**0.44**
003-0001	Alma, City of	Bacon	Floridan	1.5	1.5	0.57	
		Bacon County Total		**1.5**	**1.5**	**0.57**	**0.60**
009-0001	Fitzgerald Water, Light, & Bond Commission	Ben Hill	Floridan	6	5.5	2.42	
		Ben Hill County Total		**6**	**5.5**	**2.42**	**1.62**
010-0001	Nashville, City of	Berrien	Floridan	1.5	1.5	0.55	
010-0003	Enigma, Town of	Berrien	Floridan	0.25	0.225	0.09	
010-0004	Ray City, City of	Berrien	Floridan	0.2	0.2	0.08	
		Berrien County Total		**1.95**	**1.925**	**0.72**	**0.95**
013-0001	Nahunta, City of	Brantley	Floridan	0.225	0.2	0.13	
		Brantley County Total		**0.225**	**0.2**	**0.13**	**0.23**
014-0001	Quitman, City of	Brooks	Floridan	1.5	1.4	0.88	
014-0004	Water Service Company of Georgia, Inc.	Brooks	Floridan	0.19	0.145	0.08	
		Brooks County Total		**1.69**	**1.545**	**0.97**	**0.94**
024-0001	Folkston, City of	Charlton	Floridan	1.5	1.25	0.69	
024-0005	Homeland, City of	Charlton	Floridan	0.15	0.15	0.07	
		Charlton County Total		**1.65**	**1.4**	**0.76**	**0.62**
032-0001	Homerville, City of	Clinch	Floridan	0.75	0.75	0.41	
		Clinch County Total		**0.75**	**0.75**	**0.41**	**0.56**
034-0001	Douglas, City of	Coffee	Floridan	6	5.75	3.45	
034-0002	Broxton, City of	Coffee	Floridan	0.28	0.25	-	
034-0003	Nicholls, City of	Coffee	Floridan	0.5	0.5	0.34	
034-0004	Holiday Beach, Inc.	Coffee	Floridan	0.5	0.5	0.09	
034-0005	Coffee County Board of Commissioners	Coffee	Floridan	0.35	0.3	0.16	
034-0007	Ambrose, City of	Coffee	Floridan	0.15	0.1	0.10	
		Coffee County Total		**7.78**	**7.4**	**4.12**	**5.68**
037-0001	Adel, City of	Cook	Floridan	4.312	3.3	0.98	
037-0003	Sparks, City of	Cook	Floridan	0.6	0.55	0.48	
037-0005	Lenox, City of	Cook	Claiborne	0.175	0.15	0.14	
		Cook County Total		**5.087**	**4**	**1.60**	**1.34**
077-0001	Ocilla, City of	Irwin	Floridan	1	0.7	0.47	

Suwannee - Satilla Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
			Irwin County Total	**1**	**0.7**	**0.47**	**0.56**
086-0001	Lakeland, City of	Lanier	Floridan	0.7	0.7	0.27	
			Lanier County Total	**0.7**	**0.7**	**0.27**	**0.38**
092-0003	Hahira, City of	Lowndes	Floridan	0.6	0.4	0.18	
092-0004	Valdosta, City of	Lowndes	Floridan	15.3	11.4	8.79	
092-0006	Moody Air Force Base	Lowndes	Floridan	0.9	0.8	0.32	
092-0009	Lowndes County Board of Commissioners - Sou	Lowndes	Floridan	8.291	4.416	0.89	
092-0011	Lowndes County Board of Commissioners - Nor	Lowndes	Floridan	2.5	2.02	1.03	
			Lowndes County Total	**27.591**	**19.036**	**11.22**	**17.79**
113-0001	Blackshear, City of	Pierce	Floridan	0.75	0.68	0.49	
113-0004	Chatham Water Utility, LLC - Okefenokee Coun	Pierce	Floridan	0.15	0.15	0.06	
			Pierce County Total	**0.9**	**0.83**	**0.55**	**0.57**
137-0001	Tifton/Tift County Water System	Tift	Floridan	11	8.36	5.32	
137-0002	Abraham Baldwin Agricultural College	Tift	Floridan	0.5	0.5	0.21	
137-0003	Omega, City of	Tift	Floridan	0.37	0.32	0.10	
			Tift County Total	**11.87**	**9.18**	**5.63**	**4.94**
142-0001	Ashburn, City of	Turner	Floridan	1.728	1.728	0.64	
142-0002	Sycamore, City of	Turner	Floridan	0.2	0.175	0.08	
			Turner County Total	**1.928**	**1.903**	**0.72**	**0.90**
148-0001	Waycross, City of	Ware	Floridan	3.16	2.6	2.42	
148-0004	Waycross, City of - Ware County Industrial Park	Ware	Floridan	3.4	3	0.62	
148-0005	Satilla Regional Water and Sewer Authority	Ware	Floridan	2.2	1.8	1.10	
			Ware County Total	**8.76**	**7.4**	**4.14**	**4.14**

Suwannee Satilla Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Atkinson County	60%	60%
Bacon County	85%	85%
Ben Hill County	82%	82%
Berrien County	78%	78%
Brantley County	92%	92%
Brooks County	68%	68%
Charlton County	81%	81%
Clinch County	74%	74%
Coffee County	61%	61%
Cook County	47%	47%
Echols County	100%	100%
Irwin County	89%	89%
Lanier County	90%	90%
Lowndes County	42%	42%
Pierce County	66%	66%
Tift County	39%	39%
Turner County	73%	73%
Ware County	74%	74%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018
2. Shaded septic percentages are from the 1990 census information of septic values
3. Percent of septic users will stay constant in the future unless further input received

Suwannee Satilla Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0038334	Pearson, City of (Pearson WPCP)	Atkinson	0.9	0.21	
		Atkinson County Total	**0.9**	**0.21**	**0.21**
GA0032328	Alma, City of (Alma WPCP)	Bacon	0.75	0.31	
		Bacon County Total	**0.75**	**0.31**	**0.29**
GA0047236	Fitzgerald, City of (C.A. Newcomer)	Ben Hill	6	2.17	
		Ben Hill County Total	**6**	**2.17**	**1.86**
GA0033553	Ray City (Ray City WPCP)	Berrien	0.1	0.14	
GA0033596	Alapaha, Town of (Alapaha WPCP)	Berrien	0.1	0.05	
GA0039365	Nashville, City of (Nashville WPCP)	Berrien	1	0.66	
		Berrien County Total	**1.2**	**0.85**	**0.90**
GA0027189	Folkston, City of (Folkston WPCP (Pond))	Charlton	0.28	0.04	
GA0037613	Folkston, City of (Folkston WPCP Wetlands)	Charlton	0.5	0.39	
		Charlton County Total	**0.78**	**0.43**	**0.36**
GA0031828	Homerville, City of (Homerville WPCP)	Clinch	0.5	0.55	
GA0037460	Homerville, City of (Industrial Park WPCP)	Clinch	0.25	0	
GAG550009	Stephen Foster State Park WPCP	Clinch	Report	0	
		Clinch County Total	**>0.75**	**0.55**	**0.64**
GA0024431	Douglas, City of (Southeast WPCP)	Coffee	6	3.81	
		Coffee County Total	**6**	**3.81**	**3.76**
GA0021563	Sparks, City of (Sparks WPCP)	Cook	0.5	0.32	
GA0024911	Adel, City of (Adel WPCP)	Cook	2.5	0.75	
GA0031950	Lenox, City of (Lenox WPCP)	Cook	0.17	0.1	
GA0034738	Mishel Hospitality Group, Inc (Economy Inn WPCP)	Cook	0.02	0.0047	

Suwannee Satilla Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
		Cook County Total	**3.19**	**1.1747**	**1.01**
GA0021296	Lakeland, City of (Lakeland WPCP)	Lanier	0.5	0.15	
		Lanier County Total	**0.5**	**0.15**	**0.15**
GA0020001	US Department of the Air Force (Moody Air Force Base)	Lowndes	0.75	0.29	
GA0020222	Valdosta, City of (Mud Creek WPCP)	Lowndes	3.22	2.36	
GA0030104	Stoker Utilities, LLC (Oak Street Subdivision WPCP)	Lowndes	0.1	0.02	
GA0033235	Valdosta, City Of (Withlacoochee WPCP)	Lowndes	12	13.5	
GA0037974	Hahira, City of (Hahira WPCP)	Lowndes	0.28	0.19	
GA0047228	Georgia Sheriffs' Boys Ranch WPCP	Lowndes	0.03	0	
		Lowndes County Total	**16.38**	**16.36**	**19.48**
GA0037206	Patterson, City of (Patterson WPCP)	Pierce	0.21	0.0015	
		Pierce County Total	**0.21**	**0.0015**	**0.0017**
GA0024465	OM, Inc. (EcoNomy Inn WPCP)	Tift	0.02	0	
GA0025500	Ty Ty, City of (Ty Ty WPCP)	Tift	0.08	0.03	
GA0033928	Magnolia Plantation WPCP	Tift	0.01	0.000333	
GA0048470	Tifton, City of (New River WPCP)	Tift	8	4.34	
		Tift County Total	**8.11**	**4.370333**	**4.66**
GA0025852	Ashburn, City of (Airport WPCP)	Turner	1.16	0.61	
GAG550093	JIM-N-I Water & Sewer System	Turner	Report	0.01	
GAG550163	Maria's Rentals, LLC (Ashburn Inn and RV Park WPCP)	Turner	Report	0	
		Turner County Total	**>1.16**	**0.62**	**0.52**
GA0020966	Waycross, City of (Waycross WPCP)	Ware	6.7	1.29	
		Ware County Total	**6.7**	**1.29**	**1.43**
TOTAL			**>52.6**	**32.31**	**35.27**

Suwannee Satilla Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ020164	Willacoochee, City of (Willacoochee WPCP)	Atkinson	0.355	0.09	
		Atkinson County Total	**0.355**	**0.09**	**0.09**
GAJ020044	Alma, City of	Bacon	0.75	0.34	
		Bacon County Total	**0.75**	**0.34**	**0.32**
GAJ020240	Fitzgerald	Ben Hill	0.3	0.242	
		Ben Hill County Total	**0.3**	**0.242**	**0.21**
GAJ020062	Nahunta, City of (Nahunta WPCP)	Brantley	0.12	0.02	
		Brantley County Total	**0.12**	**0.02**	**0.02**
GAJ020022	Quitman, City of (Quitman WPCP)	Brooks	1.3	1.703	
GAJ030963	Brookside Choice Properties (Fellowship Home At Brookside WPCP)	Brooks	0.015	0.007	
		Brooks County Total	**1.315**	**1.71**	**1.38**
GAJ020124	Broxton	Coffee	0.162	0.13	
GAJ020267	Nicholls, City of	Coffee	0.5	0.398	
		Coffee County Total	**0.662**	**0.528**	**0.52**
GAJ020180	Ocilla, City of (Ocilla WPCP)	Irwin	0.85	0.626	
		Irwin County Total	**0.85**	**0.626**	**0.70**
GAJ020030	Stoker Utilities, LLC (Hamilton Point/Heather Woods Subdivision LAS)	Lowndes	0.05	0.032	
GAJ020294	Lowndes County (South Regional WPCP)	Lowndes	2	1.842	
		Lowndes County Total	**2.05**	**1.874**	**2.23**
GAJ020001	Blackshear, City of	Pierce	0.5	0.28	
		Pierce County Total	**0.5**	**0.28**	**0.31**
GAJ020219	Omega, City of	Tift	0.131	0.084	
		Tift County Total	**0.131**	**0.084**	**0.09**
GAJ020067	Sycamore	Turner	0.082	0.067	
		Turner County Total	**0.082**	**0.067**	**0.06**
TOTAL			**7.115**	**5.86**	**5.92**

APPENDIX 9 – UPPER FLINT INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Upper Flint Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Crisp County	22,289	21,462	20,318	18,978	17,921
Dooly County	13,400	12,337	11,233	10,118	9,306
Macon County	12,988	12,170	11,175	10,180	9,505
Marion County	8,293	7,984	7,586	7,058	6,750
Meriwether County	21,020	20,895	20,467	19,983	19,883
Pike County	18,860	20,147	21,335	22,276	23,262
Schley County	5,275	5,494	5,744	5,949	6,126
Spalding County	69,110	80,827	87,491	93,135	99,563
Sumter County	29,399	27,810	25,619	23,413	21,579
Talbot County	6,158	5,572	4,857	4,143	3,740
Taylor County	7,958	7,620	7,249	6,865	6,663
Upson County	26,277	26,583	26,461	26,023	25,829
Webster County	2,550	2,276	2,030	1,816	1,697
TOTAL	**243,577**	**251,177**	**251,565**	**249,937**	**251,824**

Upper Flint Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Crisp County	122	118	160
Dooly County [2]	163	151	130
Macon County [3]	162	166	132
Marion County	191	188	190
Meriwether County	143	131	138
Pike County [4]	142	153	171
Schley County [4]	183	189	110
Spalding County	163	148	101
Sumter County	143	142	147
Talbot County [3]	132	128	228
Taylor County	166	160	159
Upson County [3]	233	241	174
Webster County [4]	137	132	109

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation. Per capita values below 75 gpcd and over 200 gpcd were highlighted because they are outside the typical range and more information is being sought from the water systems in these Counties.

[2] Adjusted to reflect municipally-supplied industrial demand.

[3] Per capita was calculated using water withdrawals from large and small systems and population served data provided by EPD.

[4] Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

Upper Flint Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Crisp County [3]	22%	75	34%	34%	10.59	64.41
Dooly County	34%	75	37%	37%	10.56	64.44
Macon County	80%	75	34%	34%	10.81	64.19
Marion County [3]	28%	75	37%	37%	8.84	66.16
Meriwether County	57%	75	49%	49%	10.12	64.88
Pike County	78%	75	89%	89%	7.72	67.28
Schley County	16%	75	21%	21%	10.46	64.54
Spalding County	19%	75	5%	5%	10.27	64.73
Sumter County	37%	75	39%	39%	10.65	64.35
Talbot County [3]	28%	75	9%	9%	10.12	64.88
Taylor County	47%	75	47%	47%	10.53	64.47
Upson County [3]	56%	75	34%	34%	10.98	64.02
Webster County	46%	75	61%	61%	10.63	64.37

NOTES:

[1] Ratios as shown in Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment made over time to the amount of water used due to the installation of new and water efficient appliances and fixtures.

[3] Self-supplied percent ratio was calculated by subtracting the municipally-supplied population served, provided by EPD, from the total population within the County.

Upper Flint Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
099-1106-02	Woodbury, City of	Meriwether	Cane Creek Watershed Reservoir (Lake Meriwether)	0.50	0.42	0.19	
099-1106-04	Roosevelt Warm Springs Institute	Meriwether	Cascade Creek	0.14	0.12	0.14	
099-1106-07	Warm Springs, City of	Meriwether	Cold Springs	0.24	0.20	0.21	
			Meriwether County Total	**0.88**	**0.74**	**0.55**	**1.17**
114-1104-03	Griffin, City of [2]	Pike	Still Branch Reservoir	42.00	35.00	6.38	
114-1191-02	Griffin, City of [2]	Pike	Flint River (Still Branch)	50.00	41.67	-	
			Pike County Total	**42.00**	**35.00**	**6.38**	**-**
126-1190-01	Griffin, City of	Spalding	Flint River	12.00	10.00	2.82	
			Spalding County Total	**12.00**	**10.00**	**2.82**	**8.88**
130-1106-05	Manchester, City of	Talbot	Rush Creek Reservoir	1.44	1.20	1.26	
130-1106-06	Manchester, City of	Talbot	Lazer Creek	3.70	3.08	-	
			Talbot County Total	**3.70**	**3.08**	**1.26**	**0.70**
145-1105-01	Thomaston, City Of	Upson	Potato Creek	3.40	2.83	-	
145-1105-02	Thomaston, City Of	Upson	Potato Creek	0.40	0.33	-	
145-1105-03	Thomaston, City Of	Upson	Raw Water Cr Res	4.30	3.58	2.28	
			Upson County Total	**4.30**	**3.58**	**2.28**	**2.44**
TOTAL				**62.88**	**52.40**	**13.28**	**13.19**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Surface water withdrawal for City of Griffin (Spalding County) is located in Pike County.

Upper Flint Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
040-0001	Cordele, City of	Crisp	Floridan, Claiborne (Tallahatta), Wilcox	4.1	3.00	1.76	
040-0004	Crisp County Board of Commisioners	Crisp	Claiborne	1	0.80	0.27	
040-0005	Arabi, City of	Crisp	Floridan	0.2	0.15	0.11	
			Crisp County Total	**5.30**	**3.95**	**2.15**	**1.76**
046-0002	Vienna, City of	Dooly	Cretaceous Sand	2.609	2.15	2.07	
046-0003	Unadilla, City of	Dooly	Claiborne (Tallahatta)	1.15	1.13	0.49	
046-0006	Pinehurst, City of	Dooly	Claiborne	0.2	0.20	0.10	
			Dooly County Total	**3.959**	**3.48**	**2.66**	**2.76**
094-0001	Montezuma, City of	Macon	Cretaceous Sand	1.25	0.81	0.49	
094-0003	Marshallville,City of	Macon	Cretaceous Sand	0.155	0.12	0.16	
094-0006	Oglethorpe, City of	Macon	Cretaceous Sand	0.75	0.70	0.55	
			Macon County Total	**2.155**	**1.63**	**1.20**	**0.76**
096-0001	Buena Vista, City of	Marion	Cretaceous Sand	2	1.75	-	
096-0002	Marion County Water System	Marion	Cretaceous Sand	1.3	1.00	0.80	
			Marion County Total	**3.3**	**2.75**	**0.80**	**0.78**
099-0004	Luthersville, City of	Meriwether	Crystalline Rock	0.432	0.43	0.08	
			Meriwether County Total	**0.432**	**0.43**	**0.08**	**0.17**
114-0001	Pike County Water & Sewer Authority	Pike	Crystalline Rock	0.207	0.21	0.07	
			Pike County Total	**0.207**	**0.21**	**0.07**	**0.44**
123-0001	Ellaville, City of	Schley	Cretaceous Sand	0.35	0.28	0.16	
123-0002	Schley County Utilities	Schley	Cretaceous Sand	0.6	0.45	0.29	
			Schley County Total	**0.95**	**0.73**	**0.45**	**0.48**
129-0001	Americus, City of	Sumter	Cretaceous Sand	4.2	3.75	2.33	
129-0005	Plains, City of	Sumter	Cretaceous Sand	0.2	0.15	0.16	
			Sumter County Total	**4.4**	**3.90**	**2.49**	**1.81**
130-0001	Talbotton, City of	Talbot	Crystalline Rock	0.2	0.20	0.12	
			Talbot County Total	**0.2**	**0.20**	**0.12**	**0.06**
133-0002	Reynolds, City of	Taylor	Cretaceous Sand	0.45	0.26	0.18	
133-0003	Butler, City of	Taylor	Cretaceous Sand	2.2	1.80	0.56	

Upper Flint Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
			Taylor County Total	**2.65**	**2.06**	**0.73**	**0.52**
145-0001	Upson County Water Department	Upson	Crystalline Rock	0.47	0.47	0.40	
			Upson County Total	**0.47**	**0.47**	**0.40**	**0.41**
152-0001	Unified Government of Webster County	Webster	Cretaceous Sand	0.25	0.15	0.12	
			Webster County Total	**0.25**	**0.15**	**0.12**	**0.07**
TOTAL				**24.27**	**19.95**	**11.26**	**10.02**

Upper Flint Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Crisp County	46%	46%
Dooly County	51%	51%
Macon County	54%	54%
Marion County	82%	82%
Meriwether County	62%	62%
Pike County	83%	83%
Schley County	79%	79%
Spalding County	67%	67%
Sumter County	43%	43%
Talbot County	80%	80%
Taylor County	59%	59%
Upson County	58%	58%
Webster County	95%	95%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018
2. Shaded septic percentages are from the 1990 census information of septic values
3. Percent of septic users will stay constant in the future unless further input received

Upper Flint Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0024503	Cordele, City of (Gum Creek WPCP)	Crisp	5	3.1	
		Crisp County Total	**5**	**3.1**	**2.49**
GA0025623	Byromville, Town of (Byromville WPCP)	Dooly	0.1	0.01	
GA0038075	Pinehurst, City of (Pinehurst WPCP)	Dooly	0.12	0.06	
		Dooly County Total	**0.22**	**0.07**	**0.05**
GA0047431	Marshallville, City Of (Marshallville WPCP)	Macon	0.12	0.17	
GA0048011	Ideal, City of (Ideal WPCP)	Macon	0.08	0	
GAG550001	The Oaks Nursing Home	Macon	Report	0	
		Macon County Total	**>0.2**	**0.17**	**0.12**
GA0023710	Buena Vista, City of (Buena Vista WPCP)	Marion	0.4	0.23	
GAG550106	Former Tri-County High School WPCP	Marion	Report	0	
		Marion County Total	**>0.4**	**0.23**	**0.19**
GA0001601	Warm Springs, City of (Warm Springs WPCP)	Meriwether	0.4	0.1	
GA0047813	Greenville, City of (Kennel Creek WPCP)	Meriwether	0.25	0.17	
		Meriwether County Total	**0.65**	**0.27**	**0.26**
GA0022314	Georgia Baptist Children's Home and Family Ministries, Inc. (Meansville Campus WPCP)	Pike	0.01	0	
GA0024031	Molena Health & Rehab, LLC (Molena Extended Care WPCP)	Pike	0.01	0.01	
GA0025461	Concord, City of (North WPCP)	Pike	0.04	0.02	
GA0025470	Concord, City of (South WPCP)	Pike	0.1	0.0334	
GA0049476	Zebulon, City of (Zebulon WPCP)	Pike	0.2	0	
		Pike County Total	**0.36**	**0.0634**	**0.08**
GA0050105	Ellaville, City of (Ellaville WPCP)	Schley	0.4	0.41	
		Schley County Total	**0.4**	**0.41**	**0.48**

Upper Flint Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GAG550057	Griffin Moose Family Center #1503	Spalding	Report	0	
GAG550107	Griffin-Spalding County School System (Beaver Brook School WPCP)	Spalding	Report	0	
GAG550146	Timbercreek Mobile Home Park WPCP	Spalding	Report	0.01	
GA0003409	Spalding County Wsfa (Springs WPCP)	Spalding	Report	0.03	
GA0020214	Griffin, City of (Cabin Creek WPCP)	Spalding	1.5	0.68	
GA0025305	South Hampton Mobile Home Community WPCP	Spalding	0.1	0.03	
GA0030791	Griffin, City of (Potato Creek WPCP) [1]	Lamar	2	1.08	
GA0050274	Community Services, LLLP - Troublesome Creek WRF	Spalding	0.69	0	
		Spalding County Total	**>4.29**	**1.83**	**2.64**
GA0020931	Plains, City of (Plains WPCP)	Sumter	0.12	0.04	
GA0033669	Andersonville, City of (Andersonville WPCP)	Sumter	0.03	0.01	
GA0047767	Americus, City Of (Mill Creek WPCP)	Sumter	4.4	2.28	
		Sumter County Total	**4.55**	**2.33**	**1.71**
GAG550074	Tri-City Housing Authority	Talbot	Report	0	
		Talbot County Total	**Report**	**0**	**0.00**
GA0000302	Taylor County Board of Commissioners (Plant Laurel WPCP)	Taylor	0.12	0	
GA0020729	Reynolds, City of (Reynolds WPCP)	Taylor	0.16	0.36	
		Taylor County Total	**0.28**	**0.36**	**0.30**
GA0020079	Thomaston, City of (Bell Creek WPCP)	Upson	2	1.01	
GA0030121	Thomaston, City of (Town Branch WPCP)	Upson	2	0.88	
		Upson County Total	**4**	**1.89**	**1.86**
TOTAL			**>18.35**	**10.73**	**10.17**

[1] Potato Creek serves the City of Griffin, but discharges in Lamar County

Upper Flint Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ020298	Georgia Department of Natural Resources (The Retreat at Lake Blackshear WPCP)	Crisp	0.015	0.01	
		Crisp County Total	**0.015**	**0.01**	**0.01**
GAJ020167	Vienna, City of (North WPCP)	Dooly	1.6	1.24	
GAJ020244	Vienna, City of (South WPCP)	Dooly	0.75	0.55	
GAJ020151	Unadilla, City of (Unadilla WPCP)	Dooly	0.62	0.18	
		Dooly County Total	**2.97**	**1.97**	**1.37**
GAJ020079	Woodbury, City of (Woodbury WPCP)	Meriwether	0.325	0.15	
GAJ020081	Manchester, City of (Pigeon Creek WPCP)	Meriwether	0.812	0.72	
		Meriwether County Total	**1.137**	**0.87**	**0.82**
GAJ020036	Griffin, City of (Shoal Creek WPCP)	Spalding	2.25	1.88	
GAJ030905	Troublesome Creek WRF	Spalding	0.275	0.16	
		Spalding County Total	**2.525**	**2.04**	**2.94**
GAJ020074	Butler, City of (Butler WPCP)	Taylor	0.5	0.2	
		Taylor County Total	**0.5**	**0.2**	**0.17**
TOTAL			**7.15**	**5.09**	**5.31**

APPENDIX 10 – UPPER OCONEE INPUT DATA FOR WATER DEMANDS AND WASTEWATER FLOWS

Upper Oconee Population Projections

State of Georgia Population Projections October 2019

UGA Carl Vinson Institute of Government

County	2020	2030	2040	2050	2060
Baldwin County	44,428	43,637	41,221	38,125	35,806
Barrow County	86,383	116,916	149,706	189,385	239,941
Clarke County	129,779	146,104	158,840	168,872	181,071
Greene County	18,717	22,546	24,505	27,014	30,982
Hancock County	8,193	7,637	7,004	6,557	6,482
Jackson County	74,700	95,493	115,088	136,627	160,808
Laurens County	47,296	47,405	46,964	45,989	45,193
Morgan County	19,138	20,757	22,438	24,206	26,328
Oconee County	41,737	52,926	63,566	75,060	87,460
Putnam County	21,885	22,308	22,341	22,478	23,209
Walton County	95,814	109,179	124,621	141,993	162,652
Washington County	20,302	20,009	19,452	18,595	18,066
Wilkinson County	8,919	8,361	7,791	7,095	6,665
TOTAL	**617,291**	**713,278**	**803,537**	**901,996**	**1,024,663**

Upper Oconee Per Capita Water Demand (gpcd)

County	2011 Plan Per Capita Demand	2017 Plan Per Capita Demand	Updated Per Capita Demand [1]
Baldwin County	140	137	146
Barrow County [2]	153	153	99
Clarke County [2]	157	167	93
Greene County	153	160	160
Hancock County	125	120	192
Jackson County	111	110	129
Laurens County	157	153	166
Morgan County	164	163	220
Oconee County	142	136	125
Putnam County [3]	131	129	95
Walton County	138	142	108
Washington County	195	191	219
Wilkinson County [2,4]	132	135	65

NOTES:

[1] Weighted average per capita calculated using the available 2015-2018 Water Loss Audits. Per capita demand for forecast years beyond 2020 is reduced over time to reflect conservation. Per capita values below 75 gpcd and over 200 gpcd were highlighted because they are outside the typical range and more information is being sought from the water systems in these Counties.

[2] Adjusted to reflect municipally-supplied industrial demand.

[3] Per capita was calculated by adding the water purchased by Eatonton-Putnam County Water and Sewer Authority from Sinclair Water Authority and the withdrawals from Piedmont Water, then dividing that by the population served provided by EPD.

[3] Per capita was calculated using the population stated in SDWIS and the reported water withdrawals.

Upper Oconee Self-Supplied Percent Ratio and Per Capita (gpcd)

County	2017 Plan Percent Population Self Supplied	Self Supplied Per Capita	Updated Percent Population Self Supplied [1]	2060 Percent Population Self Supplied	Plumbing Code Adjustment [2]	2060 Self Supplied Per Capita
Baldwin County	1%	75	8%	8%	9.87	65.13
Barrow County [3]	47%	75	16%	16%	6.67	68.33
Clarke County	0%	75	1%	1%	9.50	65.50
Greene County [3]	24%	75	21%	21%	8.34	66.66
Hancock County	37%	75	9%	9%	10.27	64.73
Jackson County	5%	75	19%	19%	7.31	67.69
Laurens County	47%	75	48%	48%	10.23	64.77
Morgan County	54%	75	57%	57%	8.76	66.24
Oconee County	40%	75	32%	32%	7.28	67.72
Putnam County	40%	75	11%	11%	7.71	67.29
Walton County	46%	75	28%	28%	6.75	68.25
Washington County	46%	75	40%	40%	10.58	64.42
Wilkinson County	30%	75	28%	28%	10.42	64.58

NOTES:

[1] Ratios as shown the Estimated Use of Water in Georgia for 2015 and Water Use Tends, 1985-2015 (USGS, 2019).

[2] Adjustment applied to volume of water used over time due to the installation of new and water efficient appliances and fixtures.

[3] Self-supplied percent ratio was calculated by subtracting the municipally-supplied population served, provided by EPD, from the total population within the County.

Upper Oconee Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD) [1]	Permitted Annual Average Day (MGD) [1,2]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
005-0391-02	Milledgeville, City of	Baldwin	Oconee River	12.44	10.37	4.53	
005-0391-03	Milledgeville, City of	Baldwin	Oconee River	3.00	2.50	-	
			Baldwin County Total	**12.44**	**10.37**	**4.53**	**4.61**
007-0303-01	Winder, City of	Barrow	Mulberry River	5.10	4.25	4.76	
007-0303-05	Winder, City of	Barrow	Mulberry River	12.60	4.10	-	
007-0303-06	Winder, City of	Barrow	Little Mulberry River	4.50	1.40	-	
007-0303-07	Auburn, City of	Barrow	Rock Creek at Parks Mill Road (1), and Rock Creek at Reservoir (2)	7.20	3.90	-	
007-0304-04	Statham, City Of	Barrow	NRCS Reservoir #6 @ Barber Creek	0.80	0.67	0.04	
007-0304-07	Statham, City Of	Barrow	Oak Street Spring	0.14	0.11	0.06	
			Barrow County Total	**6.04**	**5.03**	**4.86**	**19.72**
029-0301-03	Athens-Clarke County	Clarke	North Oconee River	25.50	21.25	9.86	
029-0304-02	Athens-Clarke County	Clarke	Middle Oconee River	16.00	13.33	1.38	
			Clarke County Total	**41.50**	**34.58**	**11.24**	**14.93**
066-0109-02	Union Point, City of	Greene	Sherrill Creek Reservoir	0.33	0.28	0.22	
066-0390-03	Greensboro, City of	Greene	Lake Oconee	3.00	2.50	0.69	
066-0390-05	Piedmont Water Resources	Greene	Lake Oconee	2.00	1.67	-	
			Greene County Total	**5.33**	**4.44**	**0.91**	**1.73**
070-0390-04	Sparta, City Of	Hancock	Lake Sinclair	1.30	1.08	1.22	
			Hancock County Total	**1.30**	**1.08**	**1.22**	**1.10**
006-0106-01	Commerce, City of	Jackson	Grove Creek Reservoir	4.20	3.50	2.09	
078-0301-01	Jefferson, City of	Jackson	Big Curry Creek Reservoir	1.75	1.46	1.50	
078-0301-06	Jefferson, City of	Jackson	North Oconee River	4.00	3.33	-	
078-0301-07	Jefferson, City of	Jackson	Parks Creek Reservoir	4.60	3.83	-	
078-0304-05	Upper Oconee Basin Water Authority	Jackson	Middle Oconee River	60.00	50.00	-	
078-0304-06	Upper Oconee Basin Water Authority [3]	Jackson	Bear Creek Reservoir	58.00	48.33	11.47	
			Jackson County Total	**68.55**	**57.12**	**15.05**	**14.76**
087-0391-01	Dublin, City of	Laurens	Oconee River	5.00	4.17	2.02	
			Laurens County Total	**5.00**	**4.17**	**2.02**	**1.99**
104-0307-01	Madison, City Of - Hard Labor	Morgan	Hard Labor Creek	1.50	1.25	0.52	

Upper Oconee Municipal Surface Water Withdrawals and Forecast

Permit Number	Permit Holder	County	Source	Permitted Monthly Average Day (MGD) [1]	Permitted Annual Average Day (MGD) [1,2]	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
104-0307-02	Madison, City Of	Morgan	Lake Oconee	2.00	1.67	0.80	
			Morgan County Total	**3.50**	**2.92**	**1.33**	**2.48**
078-0304-06	Upper Oconee Basin Water Authority [3]	Jackson	Bear Creek Reservoir	NA	NA	11.47	
			Oconee County Total	**NA**	**NA**	**3.19**	**7.04**
117-0390-06	Sinclair Water Authority	Putnam	Lake Sinclair	6.65	5.54	3.70	
			Putnam County Total	**6.65**	**5.54**	**3.70**	**1.81**
147-0305-03	Walton County Water & Sewerage Authority	Walton	Apalachee River	60.00	50.00	-	
147-0307-03	Walton County Water & Sewerage Authority	Walton	Hard Labor Creek Reservoir	51.80	43.17	-	
147-0410-01	Social Circle, City of	Walton	Alcovy River	1.00	0.83	0.54	
147-0410-02	Monroe, City of	Walton	Alcovy River	10.00	8.33	1.33	
147-0410-05	Monroe, City of	Walton	John T. Briscoe. Jr Reservoir	12.00	10.00	1.40	
			Walton County Total	**74.80**	**62.33**	**3.27**	**12.12**
TOTAL				**225.11**	**187.59**	**48.13**	**82.30**

NOTES:

[1] Withdrawal permits for sources that feed reservoirs are listed but were not added to the county total.

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[3] Bear Creek Regional Reservoir is located in Jackson County and managed by the Upper Oconee Basin Water Authority (UOBWA). Yields are allocated between UOBWA members according to the following schedule: Athens-Clarke County 44%, Barrow County 19%, Jackson County 25%, and Oconee County 12%.

Upper Oconee Municipal Groundwater Withdrawals and Forecast

Permit Number	Permit Holder	County	Aquifer	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	2019 Annual Average Day Withdrawal (MGD)	2060 Forecasted Annual Average Day Demand (MGD)
066-0002	Piedmont Water Company - Reynolds Plantation	Greene	Crystalline Rock	1.652	0.944	1.00	
066-0003	Piedmont Water Company - Harbor Club	Greene	Crystalline Rock	0.138	0.115	0.10	
			Greene County Total	**1.79**	**1.059**	**1.10**	**2.03**
078-0002	Braselton, Town of	Jackson	Crystalline Rock	1.12	0.895	0.60	
078-0003	Hoschton, City of	Jackson	Crystalline Rock	0.15	0.15	0.005	
078-0005	Nicholson Water Authority	Jackson	Crystalline Rock	0.233	0.233	0.24	
			Jackson County Total	**1.503**	**1.278**	**0.84**	**1.65**
087-0001	East Dublin, City of	Laurens	Cretaceous Sand	2	1.5	0.47	
087-0003	Dublin, City of	Laurens	Dublin - Midville	2	1.6	1.26	
087-0009	Dexter, Town of	Laurens	Claiborne	0.14	0.14	0.06	
			Laurens County Total	**4.14**	**3.24**	**1.78**	**1.71**
108-0001	Oconee County Utility Department	Oconee	Crystalline Rock	2.8	2.8	0.05	
			Oconee County Total	**2.8**	**2.8**	**0.05**	**0.11**
117-0002	Piedmont Water Company - Oconee Crossing	Putnam	Crystalline Rock	0.5	0.5	-	
117-0003	Piedmont Water Company - Long Shoals Plantation & River Bend / Horseshoe Bend Water Systems	Putnam	Crystalline Rock	0.4	0.4	0.08	
117-0004	Piedmont Water Company - Great Waters at Reynolds Plantation	Putnam	Crystalline Rock	0.256	0.164	-	
117-0005	Wildwood Water LLC	Putnam	Crystalline Rock	0.35	0.35	-	
			Putnam County Total	**1.506**	**1.414**	**0.08**	**0.04**
150-0012	Tennille, City of	Washington	Cretaceous Sand	0.435	0.435	-	
150-0014	Sandersville, City of	Washington	Cretaceous Sand	4.5	3.5	2.20	
150-0019	Davisboro, Town of	Washington	Cretaceous Sand	0.5	0.5	0.33	
			Washington County Total	**5.435**	**4.435**	**2.52**	**2.26**
158-0005	Gordon, City of	Wilkinson	Cretaceous Sand	0.4	0.4	0.43	
158-0006	McIntyre, City of	Wilkinson	Cretaceous Sand	0.22	0.22	0.09	
158-0009	Irwinton, City of	Wilkinson	Cretaceous Sand	0.32	0.25	0.20	
			Wilkinson County Total	**0.94**	**0.87**	**0.72**	**0.67**
TOTAL				**18.114**	**15.096**	**7.10**	**8.46**

Upper Oconee Septic Users

County	% Septic Users in 2020	% Septic Users in 2060
Baldwin County	65%	65%
Barrow County	68%	68%
Clarke County	23%	23%
Greene County	65%	65%
Hancock County	82%	82%
Jackson County	74%	74%
Laurens County	53%	53%
Morgan County	67%	67%
Oconee County	87%	87%
Putnam County	72%	72%
Walton County	71%	71%
Washington County	59%	59%
Wilkinson County	76%	76%

Notes

1. Septic percentages were estimated using Department of Public Health installation data of septic tanks in each County through 2018
2. Shaded septic percentages are from the 1990 census information of septic values
3. Percent of septic users will stay constant in the future unless further input received

Upper Oconee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0030775	Milledgeville, City of (Milledgeville WPCP)	Baldwin	10.5	3.22	
GAG550068	Lake Laurel Complex (GCSU East Campus) WPCP	Baldwin	Report	0	
GAG550068	Lake Laurel Complex (GCSU East Campus) WPCP	Baldwin	Report	0	
		Baldwin County Total	**> 10.5**	**3.22**	**2.60**
GA0023191	Winder, City of (Marburg Creek WPCP)	Barrow	0.6	0.36	
GA0038733	Barrow County Board of Commissioners (Barber Creek WRF)	Barrow	1.5	0.17	
GA0038776	Winder, City of (Cedar Creek WPCP)	Barrow	4	1.53	
GA0039314	Barrow County Board of Commissioners (Tanners Bridge WRF)	Barrow	5	0	
		Barrow County Total	**11.1**	**2.06**	**5.72**
GA0021725	Athens-Clarke County (North Oconee WPCP)	Clarke	14	5.85	
GA0021733	Athens-Clarke County (Middle Oconee WPCP)	Clarke	10	7.25	
GA0034223	Pinewood Estates North Mobile Home Park WPCP	Clarke	0.04	0.02	
GA0034584	Athens-Clarke County (Cedar Creek WPCP)	Clarke	4	1.82	
GAG550141	Country Corners Community	Clarke	Report	0.03	
GAG550143	Hallmark Mobile Home Park	Clarke	Report	0.031	
		Clarke County Total	**> 28.04**	**15.001**	**21.35**
GA0021351	Greensboro, City of (South WPCP)	Greene	1	0.07	
GA0025429	Union Point, City of (Union Point WPCP)	Greene	0.45	0.2	
		Greene County Total	**1.45**	**0.27**	**0.45**
GA0021873	Mayfield WPCP	Hancock	0.06	0.05	
		Hancock County Total	**0.06**	**0.05**	**0.04**
GA0002712	Jackson County Water & Sewer Authority (Middle OconeeWPCP)	Jackson	0.5	0.48	
GA0023132	Jefferson, City of (Central City WPCP)	Jackson	1	0.58	

Upper Oconee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0035980	Hoschton, City of (Hoschton WPCP)	Jackson	0.1	0.21	
GA0038857	Braselton, Town of (Braselton WRF)	Jackson	1.27	3.51	
GA0039110	Arcade, City of (Arcade WRF)	Jackson	0.25	0	
GA0026247	Commerce, City of (Northside WPCP)	Jackson	1.05	0.83	
		Jackson County Total	**4.17**	**5.61**	**12.08**
GA0025887	Cadwell, Town of (Cadwell WPCP)	Laurens	0.05	0.02	
GA0023957	Dudley, City of (Dudley WPCP)	Laurens	0.12	0.14	
GA0025569	Dublin, City of (Dublin WPCP)	Laurens	6	3.37	
GA0037630	Rentz, Town of (Rentz WPCP)	Laurens	0.12	0.02	
GA0048682	Dexter, City of (Dexter WPCP)	Laurens	0.08	0.08	
GAG550156	West Laurens Middle/High School	Laurens	Report	0	
		Laurens County Total	**> 6.37**	**3.63**	**3.47**
GA0023141	Madison, City of (Southside WPCP)	Morgan	0.66	0.35	
GA0025895	Rutledge, City of (Rutledge WPCP)	Morgan	0.05	0.02	
GA0038741	Madison, City of (Indian Creek WRF)	Morgan	1	0.23	
GAG550020	Department of Natural Resources (Hard Labor Creek State Park)	Morgan	Report	0	
GAG550153	Department of Transportation Rest Area 53	Morgan	Report	0	
		Morgan County Total	**> 1.71**	**0.6**	**0.83**
GA0038806	Oconee County Board of Commissioners (Rocky Branch WRF)	Oconee	1	0	
GA0050211	Oconee County (Calls Creek WPCP)	Oconee	1.5	1.92	
		Oconee County Total	**2.5**	**1.92**	**4.02**
GA0032263	Eatonton - Putnam Water & Sewer Authority (Westside WPCP)	Putnam	0.55	0.17	
GA0032271	Eatonton - Putnam Water & Sewer Authority (Eastside WPCP)	Putnam	0.55	0.2	
GAG550144	University of Georgia (Rock Eagle 4-H Center)	Putnam	Report	0.01	
		Putnam County Total	**> 1.1**	**0.38**	**0.40**

Upper Oconee Municipal Point Source Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Daily Discharge Flow (MGD)	2060 Forecasted Average Daily Discharge Flow (MGD)
GA0020788	Loganville, City of (Big Flat Creek WPCP)	Walton	1.75	1.27	
GA0026107	Social Circle, City of (Little River WPCP)	Walton	0.65	0.25	
GA0047171	Monroe, City of (Jack's Creek WPCP)	Walton	3.4	1.66	
		Walton County Total	**5.8**	**3.18**	**5.40**
GA0037338	Harrison, City of (Harrison WPCP)	Washington	0.07	0.03	
GA0032051	Sandersville, City Of (Sandersville WPCP)	Washington	1.7	1.15	
GA0035238	Oconee Health Care Center	Washington	0.01	0	
GA0039357	Tennille, City of (Buffalo Creek WPCP)	Washington	0.45	0.2	
		Washington County Total	**2.23**	**1.38**	**1.23**
GA0020397	Gordon, City of (Gordon WPCP)	Wilkinson	0.75	0.12	
GA0031291	Wilkinson County Board of Education (Wilkinson County Senior High School WPCP)	Wilkinson	0.02	0.01	
GA0031305	Wilkinson County Board of Education (Wilkinson County Elementary School WPCP)	Wilkinson	0.02	0	
		Wilkinson County Total	**0.79**	**0.13**	**0.10**
	TOTAL		**> 75.8**	**37.371**	**57.67**

Upper Oconee Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ030942	Bethlehem Elementary School LAS	Barrow	0.014	0.005	
GAJ020271	Barrow County Board of Commissioners (Tanners Bridge WRF)	Barrow	0.5	0.307	
GAJ020158	Winder, City of (Marburg Creek WRF)	Barrow	0.9	0.169	
		Barrow County Total	**1.414**	**0.481**	**1.34**
GAJ020191	University of Georgia (Composting Facility)	Clarke	0.01	0.007	
		Clarke County Total	**0.01**	**0.007**	**0.01**
GAJ030897	Reynolds Plantation Urban WRF	Greene	0.15	0.074	
GAJ030883	Carey Station Urban WRF	Greene	0.5	0.352	
		Greene County Total	**0.65**	**0.426**	**0.71**
GAJ040002	Sparta, City of (Sparta WPCP)	Hancock	0.8	0.417	
		Hancock County Total	**0.8**	**0.417**	**0.33**
GAJ020006	Jefferson, City of (Central City WPCP)	Jackson	0.38	0	
GAJ020230	Jefferson, City of (I85 North WPCP)	Jackson	0.287	0.212	
GAJ030983	Arcade Meadows (formerly, 4W ARCADE)	Jackson	0.25	0	
		Jackson County Total	**0.917**	**0.212**	**0.46**
GAJ020270	East Dublin, City Of (East Dublin WPCP)	Laurens	0.75	0.225	
		Laurens County Total	**0.75**	**0.225**	**0.21**
GAJ030965	Madison Lakes	Morgan	0.1	0.017	
		Morgan County Total	**0.1**	**0.017**	**0.02**
GAJ020176	Oconee County Board of Commissioners (Rocky Branch WPCP)	Oconee	0.4	0.053	
GAJ030928	High Shoals Health & Rehabilitation	Oconee	0.012	0.005	
GAJ040036	Oconee County Schools (Dove Creek Elementary School WPCP)	Oconee	0.0102	0.001	
		Oconee County Total	**0.4222**	**0.059**	**0.12**
GAJ020072	Great Waters at Reynolds Plantation WRF	Putnam	0.07	0.031	
GAJ030632	Oconee Crossing	Putnam	0.5	0.091	
		Putnam County Total	**0.57**	**0.122**	**0.13**

Upper Oconee Municipal Land Application System (LAS) Facilities

Permit Number	Permit Holder	County	Permitted Monthly Average Flow (MGD)	2019 Average Flows (MGD)	2060 Forecasted Average Flow (MGD)
GAJ040018	Walton County Board of Education (Loganville Middle School WPCP)	Walton	0.03	0.007	
GAJ030776	Walton County Board of Education (Youth Middle School WPCP)	Walton	0.0225	0.003	
GAJ020174	Loganville	Walton	0.25	0.003	
GAJ040019	Walnut Grove, City of (Walnut Grove WPCP)	Walton	0.05	0	
		Walton County Total	**0.3525**	**0.013**	**0.02**
GAJ020242	Davisboro, City of (Davisboro WPCP)	Washington	0.3	0.183	
		Washington County Total	**0.3**	**0.183**	**0.16**
TOTAL			**6.29**	**2.16**	**3.51**

APPENDIX 11 – ALTAMAHA COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Appling County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Baxley, City of	1.40	1.40		
Total Withdrawal		**1.40**	**1.40**	**0.82**	**1.31**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.71	2.73
Self Supplied	0.89	1.43
Total Projected Demand from Municipal Facilities [1]	**0.82**	**1.31**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Appling County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Baxley, City of (Baxley WPCP)	2
Georgia Baptist Children's Home WPCP	Report
Total Permitted Monthly Average Flow (MGD)	**> 2**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.77
Septic Flows (AADF, MGD)	0.88

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Bleckley County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Cochran, City of	2.00	2.00		
Floridan	Middle Georgia State University	0.21	0.15		
Total Withdrawal		**2.21**	**2.15**	**0.87**	**1.39**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.33	2.13
Self Supplied	0.46	0.74
Total Projected Demand from Municipal Facilities [1]	**0.87**	**1.39**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Bleckley County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Cochran, City of (Cochran WPCP)	1
Total Permitted Monthly Average Flow (MGD)	**1**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.95
Septic Flows (AADF, MGD)	0.67

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Candler County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Metter, City of	1.20	0.90		
Total Withdrawal		**1.20**	**0.90**	**0.56**	**0.89**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.85	1.35
Self Supplied	0.29	0.46
Total Projected Demand from Municipal Facilities [1]	**0.56**	**0.89**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Candler County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Metter, City of (Metter WPCP)	1
Total Permitted Monthly Average Flow (MGD)	**1**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.53
Septic Flows (AADF, MGD)	0.41

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Dodge County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Eastman, City of	3.00	2.80		
Floridan	Chester, City of	0.25	0.25		
Floridan	Rhine, City of	0.45	0.35		
Total Withdrawal		**3.70**	**3.40**	**0.95**	**1.52**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.48	2.37
Self Supplied	0.53	0.85
Total Projected Demand from Municipal Facilities [1]	**0.95**	**1.52**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Dodge County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Eastman, City of (Sugar Creek WPCP)	1.8
Milan	0.2
Chester, City of	0.3
Total Permitted Monthly Average Flow (MGD)	**2.3**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.97
Septic Flows (AADF, MGD)	0.64

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Emanuel County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Swainsboro, City of	1.8	1.7		
Floridan	Twin City, City of	0.375	0.325		
	Total Withdrawal	**2.18**	**2.03**	**1.72**	**2.75**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.37	3.80
Self Supplied	0.65	1.05
Total Projected Demand from Municipal Facilities [1]	**1.72**	**2.75**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Emanuel County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Swainsboro, City of (Yam Grandy Creek WPCP)	3
Twin City (Twin City WPCP)	0.2
Stillmore, City of (Stillmore WPCP)	0.05
Total Permitted Monthly Average Flow (MGD)	**3.25**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.51
Septic Flows (AADF, MGD)	0.87

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Evans County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Claxton, City of	0.50	0.50		
Total Withdrawal		**0.50**	**0.50**	**0.77**	**1.24**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.06	1.70
Self Supplied	0.29	0.46
Total Projected Demand from Municipal Facilities [1]	**0.77**	**1.24**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Evans County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Claxton, City of (Claxton WPCP)	Report
Hagan, City of (Hagan WPCP)	0.15
Total Permitted Monthly Average Flow (MGD)	**> 0.15**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.10
Septic Flows (AADF, MGD)	0.58

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Jeff Davis County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Hazlehurst, City of	1.01	0.85		
Total Withdrawal		**1.01**	**0.85**	**1.02**	**1.63**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.62	2.59
Self Supplied	0.60	0.96
Total Projected Demand from Municipal Facilities [1]	**1.02**	**1.63**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Jeff Davis County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Hazlehurst, City of (Bully Creek WPCP)	1.5
Total Permitted Monthly Average Flow (MGD)	**1.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.17
Septic Flows (AADF, MGD)	0.79

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Johnson County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Wrightsville, City of	1.00	0.85		
Total Withdrawal		**1.00**	**0.85**	**0.51**	**0.82**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.84	1.34
Self Supplied	0.33	0.52
Total Projected Demand from Municipal Facilities [1]	**0.51**	**0.82**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Johnson County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Wrightsville, City of (Ohoopee WPCP)	1
Johnson County LTC, LLC (Scott Health & Rehabilitation WPCP)	0.01
Total Permitted Monthly Average Flow (MGD)	**1.01**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.00
Septic Flows (AADF, MGD)	0.40

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Montgomery County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Mount Vernon, City of	0.80	0.80		
Total Withdrawal		**0.80**	**0.80**	**0.63**	**1.01**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.98	1.56
Self Supplied	0.35	0.55
Total Projected Demand from Municipal Facilities [1]	**0.63**	**1.01**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Montgomery County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Mount Vernon, City of (Mount Vernon WPCP)	0.27
Ailey, City of (Ailey WPCP)	0.08
Uvalda, City of (Uvalda WPCP)	0.15
Total Permitted Monthly Average Flow (MGD)	**0.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.33
Septic Flows (AADF, MGD)	0.33

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Tattnall County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Georgia Department of Corrections - Rogers State Prison	1.50	1.25		
Floridan	Glennville, City of	1.20	1.12		
Floridan	Reidsville, City of	1.00	1.00		
Total Withdrawal		**3.70**	**3.37**	**1.32**	**2.12**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.30	3.69
Self Supplied	0.98	1.57
Total Projected Demand from Municipal Facilities [1]	**1.32**	**2.12**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Tattnall County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Georgia Department of corrections (Rogers State Prison WPCP)	0.85
Glennville, City of (Glennville WPCP)	2
Department of Natural Resources (Lynntown Road at Gordonia-Altamaha State Park)	0.18
Reidsville, City of (Sherwood Forest WPCP)	0.5
Collins, City of (Collins WPCP)	0.06
Total Permitted Monthly Average Flow (MGD)	**3.59**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.46
Septic Flows (AADF, MGD)	1.14

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Telfair County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	McRae-Helena, City of	1.70	1.60		
Floridan	Lumber City, City of	0.25	0.25		
Floridan	Milan, City of	0.18	0.18		
Total Withdrawal		**2.13**	**2.03**	**0.95**	**1.52**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.36	2.18
Self Supplied	0.41	0.66
Total Projected Demand from Municipal Facilities [1]	**0.95**	**1.52**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Telfair County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Scotland, City of (Scotland WPCP)	0.18
McRae-Helena, City of (McRae-Helena WPCP)	0.8
Lumber City (Lumber City WPCP)	0.5
McRae-Helena, City of	1.75
Telfair State Prison	0.045
Total Permitted Monthly Average Flow (MGD)	**3.275**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.19
Septic Flows (AADF, MGD)	0.42

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Toombs County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Vidalia, City of	5.00	4.00		
Floridan	Lyons, City of	1.50	1.00		
Total Withdrawal		**6.50**	**5.00**	**2.54**	**4.07**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.10	4.96
Self Supplied	0.56	0.89
Total Projected Demand from Municipal Facilities [1]	**2.54**	**4.07**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Toombs County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Vidalia, City of (Swift Creek WPCP)	1.88
Lyons, City of (Lyons North WPCP)	0.67
Lyons, City of (Lyons East WPCP)	0.67
Vidalia (South WPCP)	1.8
Total Permitted Monthly Average Flow (MGD)	**5.02**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	3.02
Septic Flows (AADF, MGD)	1.14

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Truetlen County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Soperton, City of	0.75	0.65		
Total Withdrawal		**0.75**	**0.65**	**0.30**	**0.48**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.59	0.95
Self Supplied	0.29	0.46
Total Projected Demand from Municipal Facilities [1]	**0.30**	**0.48**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Treutlen County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Soperton, City of (Soperton WPCP)	0.6
Total Permitted Monthly Average Flow (MGD)	**0.6**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.47
Septic Flows (AADF, MGD)	0.24

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Wayne County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Jesup, City of	3.00	2.50		
Floridan	Screven, City of	0.13	0.13		
Total Withdrawal		**3.13**	**2.63**	**1.62**	**2.58**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.71	4.33
Self Supplied	1.09	1.75
Total Projected Demand from Municipal Facilities [1]	**1.62**	**2.58**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Wayne County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Jesup, City of (Jesup WPCP)	2.5
Georgia Department of Corrections (Wayne County State Prison WPCP)	Report
Screven, City of	0
Odum, City of (Odum WPCP)	0.085
Total Permitted Monthly Average Flow (MGD)	**>2.585**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.27
Septic Flows (AADF, MGD)	1.11

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Wheeler County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Glenwood, City of	0.50	0.40		
	Total Withdrawal	**0.50**	**0.40**	**0.49**	**0.79**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.74	1.18
Self Supplied	0.24	0.39
Total Projected Demand from Municipal Facilities [1]	**0.49**	**0.79**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Wheeler County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Alamo, City of (Alamo WPCP)	0.38
Glenwood, City of (Glenwood WPCP)	0.11
Glenwood, City of (Glenwood WPCP)	0.1
Total Permitted Monthly Average Flow (MGD)	**0.59**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.56
Septic Flows (AADF, MGD)	0.44

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Wilcox County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Rochelle, City of	0.28	0.23		
Floridan	Abbeville, City of	0.86	0.68		
	Total Withdrawal	**1.14**	**0.91**	**0.86**	**1.38**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.08	1.73
Self Supplied	0.22	0.35
Total Projected Demand from Municipal Facilities [1]	**0.86**	**1.38**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Wilcox County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Crossview Care Center WPCP	0.01
Abbeville, City of (Abbeville WPCP)	0.28
Rochelle, City of (Southeast WPCP)	0.04
Rochelle, City of (Northwest WPCP)	0.34
Total Permitted Monthly Average Flow (MGD)	**0.67**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.46
Septic Flows (AADF, MGD)	0.44

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

APPENDIX 12 – COASTAL GEORGIA COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Bryan County - Water Demands and Withdrawals

Summary of Permitted Sources

Source [1]	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Upper Floridan	Richmond Hill, City of	1.71	1.71		
Floridan	Pembroke, City of	0.36	0.27		
Upper Floridan	South Atlantic Utilities - Waterford Landing	0.18	0.12		
Upper Floridan	Bryan County Board of Commissioners	1.60	1.60		
Lower Floridan	Richmond Hill, City of	1.57	1.57		
Upper Floridan	South Atlantic Utilities - Buckhead Subdivision	0.70	0.70		
Upper Floridan	South Atlantic Utilities - Mill Hill, Strathy Hall I, Strathy Hall II	0.26	0.17		
Upper Floridan	South Atlantic Utilities - Cape Hardwicke / Fort McAllister	0.16	0.16		
Floridan	South Atlantic Utilities – Black Creek Golf Course / Hidden Creek / Brewton Acres / Park Place Community Water System	0.15	0.15		
Total Withdrawal		**6.70**	**6.45**	**4.09**	**6.55**

NOTES:

[1] Portions of Bryan, Chatham, Effingham, and Liberty Counties are located within the sub-regions (Red and Yellow Zones) that are most vulnerable to salt water intrusion. There are restrictions in place that limit the withdrawal of water from the Floridan Aquifer.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	5.27	8.43
Self Supplied	1.18	1.89
Total Projected Demand from Municipal Facilities [1]	**4.09**	**6.55**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Bryan County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Richmond Hill, City of (Sterling Creek WRF)	3
Pembroke, City of (Pembroke WPCP)	Report
United States Army (Fort Stewart)	0.035
Bryan County Board of Commissioners (Interstate Center WPCP)	0.04
Bryan County Water and Sewer Utility Department (South Bryan County WPCP)	0.2
Dunham Marsh Plantation	0.062
South Atlantic Utilities, Inc. (Waterford Landing WPCP)	0.104
Total Permitted Monthly Average Flow (MGD)	**> 3.441**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	3.12
Septic Flows (AADF, MGD)	2.16

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Bulloch County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Georgia Southern University	1.00	0.50		
Floridan	Statesboro, City of	7.35	5.88		
Floridan	Brooklet, Town of	0.27	0.25		
Upper Floridan	Forest Heights Water Works, Inc	0.26	0.26		
Floridan	Pembroke, City of	0.25	0.18		
Total Withdrawal		**9.12**	**7.06**	**4.74**	**7.58**

NOTES:

[1] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	6.19	9.91
Self Supplied	1.46	2.33
Total Projected Demand from Municipal Facilities [1]	**4.74**	**7.58**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Bulloch County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Statesboro, City of (Statesboro WPCP)	10
Portal, Town of (Portal WPCP)	0.1
Bulloch County Board Of Education	Report
Hendley Properties (Planters Row WPCP)	Report
Ashford Subdivision	Report
Langley Pond	Report
The Hammocks Subdivision On-Site System	Report
Planters Row Phase 2	Report
Total Permitted Monthly Average Flow (MGD)	**> 10.1**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	11.23
Septic Flows (AADF, MGD)	3.42

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Camden County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Kingsland, City of	4.00	3.00		
Floridan	St. Marys, City of	6.00	5.00		
Floridan	Woodbine, City of	0.80	0.80		
Floridan	Naval Submarine Base Kings Bay	2.90	2.90		
Floridan	Chatham Water Utility, LLC - Sanctuary Cove	1.00	1.00		
Upper Floridan	Chatham Water Utility, LLC - Elliot's Bluff	0.15	0.15		
Total Withdrawal		**14.85**	**12.85**	**4.01**	**6.41**

NOTES:

[1] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.71	7.53
Self Supplied	0.70	1.12
Total Projected Demand from Municipal Facilities [1]	**4.01**	**6.41**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Camden County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
US Department of the Navy (Naval Submarine Base Kings Bay)	0.5
Woodbine, City of (Woodbine WPCP)	0.37
River Oaks Mobile Home Park WPCP	0.01
Saint Marys, City of (Scrubby Bluff WPCP)	0.5
Kingsland, City of (Kingsland WPCP)	2.2
Saint Marys, City of (Point Peter WPCP)	4
W&D Investments, Inc. (River Place Plantation WPCP)	0.1
Sanctuary Cove at St. Andrews Sound Urban WRF	0.133
United States Department of the Navy (Naval Submarine Base Kings Bay)	1.5
Total Permitted Monthly Average Flow (MGD)	**9.313**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	7.97
Septic Flows (AADF, MGD)	1.36

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Chatham County - Water Demands and Withdrawals

Summary of Permitted Sources

Source [1]	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [2]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Upper Floridan	Pooler, City of	0.763	0.28		
Upper Floridan	Garden City, City of	2	1.141		
Upper Floridan	Savannah, City of	38.05	19.899		
Upper Floridan	Port Wentworth, City of	0.94	0.268		
Upper Floridan	Thunderbolt, Town of	0.4	0.213		
Floridan	Savannah Health Services, LLC	0.258	0.144		
Upper Floridan	Tybee Island, City of	1.6	0.916		
Upper Floridan	Utilities, Inc. of Georgia	2.61	1.695		
Upper Floridan	DPW Environmental Division - Hunter Army Airfield	1.17	0.664		
Upper Floridan	Bloomingdale, City of	0.256	0.192		
Upper Floridan	Chatham Water Company - Glen of Robin Hood & Montgomery Area	1.007	0.63		
Upper Floridan	Consolidated Utilities, Inc.	0.379	0.184		
Floridan	Chatham Water Company - Hunter's Ridge	0.1	0.086		
Floridan	Candler Hospital	0.1	0.086		
Floridan	Skidaway Institute of Oceanography	0.12	0.12		
Upper Floridan	South Atlantic Utilities	0.194	0.168		
Miocene	Consolidated Utilities, Inc.	2	2		
Lower Floridan	Consolidated Utilities, Inc.	0.921	0.796		
Lower Floridan	DPW Environmental Division - Hunter Army Airfield	0.72	0		
Upper Floridan	Coastal Georgia Water Company - Ogeechee Farms	0.151	0.13		
Upper Floridan	Chatham Water Company - Parkersburg	0.56	0.363		
Upper Floridan	South Atlantic Utilities - Scarborough Cove & Talahi Island Community	0.329	0.152		
Upper Floridan	Chatham Water Company - Burnside & Rio Vista Community Water System	0.183	0.11		
Lower Floridan	Pooler, City of	1.13	0.976		

Chatham County - Water Demands and Withdrawals

Summary of Permitted Sources

Source [1]	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [2]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Upper Floridan	South Atlantic Utilities - Harbour Creek Community Water System	0.12	0.104		
Abercorn Creek	Savannah Industrial & Domestic Water System [4,5]	50	41.667		
Total Withdrawal		**106.06**	**72.98**	**69.59**	**111.35**

NOTES:

[1] Portions of Bryan, Chatham, Effingham, and Liberty Counties are located within the sub-regions (Red and Yellow Zones) that are most vulnerable to salt water intrusion. There are restrictions in place that limit the withdrawal of water from the Floridan Aquifer.

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[3] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

[4] Surface water withdrawal for Savannah I&D is located in Effingham County.

[5] Includes demands from Effingham County, which purchases water (>0.1 AAD-MGD) from Savannah I&D.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	67.23	107.57
Self Supplied	0.50	0.80
Total Projected Demand from Municipal Facilities [2]	**66.73**	**106.77**

NOTES:

[1] Includes municipally -supplied industrial demand

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Chatham County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
United States Army Hunter Army Airfield WWTP	1.5
Consolidated Utilities, Inc. (Larchmont Estates WPCP)	1
Savannah, City of (Georgetown WPCP)	2.45
Pooler, City of (Bloomingdale Regional WPCP)	2.5
Garden Acres Estates WPCP	0.05
Nassau Woods Mobile Home Park	Report
Savannah Pines Mobile Home Park	Report
Tybee Island, City of (Tybee Island WPCP)	1.15
Savannah, City of (Travis Field WPCP)	4
Savannah, City of (Wilshire WPCP)	4.5
Savannah, City of (President Street WRF)	27
Garden City (Garden City WPCP)	2
Savannah Yacht Club WPCP	0.01
Savannah, City of (Crossroads WPCP)	3
Port Wentworth, City Of (Port Wentworth WPCP)	2
Cretaceous Aquifer Deep Well Project	Report
Chatham County (Pine Barren Road LAS)	0.06
Skidaway Island	1.25
Total Permitted Monthly Average Flow (MGD)	**> 52.47**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	57.20
Septic Flows (AADF, MGD)	3.02

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Effingham County - Water Demands and Withdrawals

Summary of Permitted Sources

Source [1]	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Upper Floridan	Rincon, City of	1.40	0.88		
Floridan	Guyton, City of	0.77	0.72		
Upper Floridan	Coastal Water & Sewerage Company	0.30	0.11		
Floridan	Effingham County Board of Commissioners [3]	0.54	0.37		
Floridan	Springfield, City of	1.20	1.20		
Miocene	Coastal Water Company - Westwood Heights	0.10	0.10		
Floridan	Chatham Water Utility, LLC - Lakeside Farms	0.12	0.08		
Lower Floridan	Rincon, City of	1.25	0.86		
Upper Floridan	South Atlantic Utilities - Azalea Point / Barrister Crossing / Kingsley Plantation / Lonesome Oak CWS	0.24	0.20		
Upper Floridan	South Atlantic Utilities - Goshen Villas Water System	0.13	0.11		
Total Withdrawal		**6.04**	**4.63**	**6.44**	**10.30**

NOTES:

[1] Portions of Bryan, Chatham, Effingham, and Liberty Counties are located within the sub-regions (Red and Yellow Zones) that are most vulnerable to salt water intrusion. There are restrictions in place that limit the withdrawal of water from the Floridan Aquifer.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

[3] Effingham County purchases water (>0.1 AAD-MGD) from Savannah I&D (Chatham County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	11.79	18.87
Self Supplied	2.49	3.98
Total Projected Demand from Municipal Facilities [1]	**9.30**	**14.89**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Effingham County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Springfield, City of (Springfield WPCP)	2.5
Rincon, City of (Rincon WPCP)	1
Total Permitted Monthly Average Flow (MGD)	**3.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.19
Septic Flows (AADF, MGD)	3.69

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Glynn County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Jekyll Island State Park Authority - Public Water System	2.15	1.85		
Floridan	Sewer and Wells, LLC - Cloister Complex	2.20	1.60		
Floridan	Brunswick-Glynn County JWSC – St. Simons District	5.95	4.52		
Floridan	Brunswick-Glynn County JWSC – Brunswick District	9.45	8.79		
Floridan	Georgia Ports Authority - Colonel's Island	0.15	0.15		
Floridan	Brunswick-Glynn County JWSC – I-95 & US 17 Interchange System	1.30	1.30		
Miocene	Georgia Ports Authority - Colonel's Island	0.20	0.20		
Miocene	Brunswick-Glynn County JWSC – Golden Isles	2.00	2.00		
Miocene	Glynn County Board of Commissioners - North Recreation Complex	0.63	0.63		
Miocene	Brunswick-Glynn County JWSC – Fancy Bluff	1.00	1.00		
Floridan	Oak Grove Utility Company Inc.	0.26	0.20		
Floridan	Epworth Acres Water System	0.30	0.25		
Total Withdrawal		**25.59**	**22.49**	**11.25**	**18.00**

NOTES:

[1] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	12.42	19.87
Self Supplied	1.17	1.87
Total Projected Demand from Municipal Facilities [1]	**11.25**	**18.00**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Glynn County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Jekyll Island State Park Authority WPCP	1
Brunswick-Glynn County Water and Sewer Commission (Saint Simons Island WPCP)	4
Brunswick Shady Acres Mobile Home Park WPCP	0.04
Brunswick-Glynn County JWSC (Academy Creek WPCP)	13.5
Sterling Mobile Home Park WPCP	0.01
Brunswick-Glynn County JWSC (Exit 29 WPCP)	1.5
Golden Isles Marina Master Association	Report
New Hope Plantation Mobile Home Park	Report
Total Permitted Monthly Average Flow (MGD)	**> 20.05**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	18.61
Septic Flows (AADF, MGD)	3.57

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Liberty County - Water Demands and Withdrawals

Summary of Permitted Sources

Source [1]	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Floridan	Hinesville, City of	4.50	4.00		
Upper Floridan	DPW Environmental Division - Fort Stewart	5.23	4.23		
Floridan	Walthourville, City of	0.20	0.15		
Floridan	Liberty County Development Authority	1.10	1.10		
Floridan	Midway, City of	0.32	0.30		
Floridan	Riceboro, City of	0.53	0.53		
Miocene, Surficial	Liberty County Development Authority - Business Park	0.30	0.30		
Miocene	Walthourville, City of	0.70	0.70		
Lower Floridan	DPW Environmental Division - Fort Stewart	0.77	0.77		
Upper Floridan	South Atlantic Utilities - Lake George / Twin Rivers	0.15	0.11		
Upper Floridan	Chatham Water Company - Isle of Wight	0.20	0.20		
Miocene	Liberty County Board of Commissioners	0.45	0.30		
Total Withdrawal		**14.44**	**12.68**	**6.10**	**9.77**

NOTES:

[1] Portions of Bryan, Chatham, Effingham, and Liberty Counties are located within the sub-regions (Red and Yellow Zones) that are most vulnerable to salt water intrusion. There are restrictions in place that limit the withdrawal of water from the Floridan Aquifer.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	6.52	10.43
Self Supplied	0.42	0.67
Total Projected Demand from Municipal Facilities [1]	**6.10**	**9.77**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Liberty County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
United States Department of the Army (Fort Stewart)	0.04
Riceboro, City of (Riceboro WPCP)	Report
Hinesville, City of (Peacock Creek WRF)	0.5
Fort Stewart, Evans Army Airfield	0.05
Wright Army Airfield	0.01
Liberty County DA (Midway Industrial Park WPCP)	0.1
Midway, City Of (Midway WPCP)	0.5
Village at Sunbury Subdivision WPCP	0.013
Dolphin Island WPCP	0.032
Yellow Bluff Development WPCP	Report
Total Permitted Monthly Average Flow (MGD)	**> 1.245**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.27
Septic Flows (AADF, MGD)	1.42

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Long County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Miocene	Ludowici, City of	0.30	0.30		
Floridan	Ludowici, City of	0.30	0.30		
Total Withdrawal		**0.60**	**0.60**	**3.00**	**4.81**

NOTES:

[1] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	6.16	9.86
Self Supplied	3.16	5.05
Total Projected Demand from Municipal Facilities [1]	**3.00**	**4.81**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Long County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Ludowici, City of (Ludowici WPCP)	0.24
Total Permitted Monthly Average Flow (MGD)	**0.24**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.45
Septic Flows (AADF, MGD)	2.35

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

McIntosh County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Darien, City of	0.66	0.59		
Floridan	McIntosh County Industrial Development Authority	0.15	0.15		
Miocene	Darien, City of	0.32	0.21		
Floridan	McIntosh County Board of Commissioners - Crescent Community / Forest Marsh / Coastal Pine Forest	0.45	0.45		
Floridan	Chatham Water Utility, LLC - John Alford Subdivision	0.15	0.15		
Floridan	South Atlantic Utilities - Cooper's Point / Sutherland Bluff	0.23	0.23		
Floridan	Riceboro, City of - McIntosh County Operations	1.10	1.00		
	Total Withdrawal	**3.06**	**2.78**	**0.64**	**1.02**

NOTES:

[1] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.08	1.73
Self Supplied	0.44	0.70
Total Projected Demand from Municipal Facilities [1]	**0.64**	**1.02**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

McIntosh County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Darien, City of (Darien WPCP)	0.6
McIntosh County (McIntosh County WPCP)	0.03
UGA Marine Institute	Report
Total Permitted Monthly Average Flow (MGD)	**> 0.63**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.28
Septic Flows (AADF, MGD)	0.50

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

APPENDIX 13 – COOSA-NORTH GEORGIA COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Catoosa County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Paleozoic Limestone	Ringgold, City of	1.44	1.44		
South Chickamauga Creek	Ringgold, City of	1.00	0.83		
Yates Spring	Catoosa Utility District Authority	7.00	5.83		
Total Withdrawal		**9.44**	**8.11**	**5.67**	**9.08**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	5.88	9.41
Self Supplied	0.21	0.33
Total Projected Demand from Municipal Facilities [1]	**5.67**	**9.08**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Catoosa County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Hochman Family Partners, LP (Cloud Springs Lodge WPCP)	Report
Total Permitted Monthly Average Flow (MGD)	**Report**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.00
Septic Flows (AADF, MGD)	2.63

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Chattooga County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Paleozoic Limestone	Chattooga County Water District No.1	1.21	0.86		
Conasauga FM, Knox Group	Lyerly, Town of	0.28	0.25		
Knox Group	Menlo, City of	0.19	0.19		
Racoon Creek	Summerville, City of	2.50	2.08		
Lowe Spring	Summerville, City of	0.50	0.42		
Total Withdrawal		**4.67**	**3.80**	**3.13**	**5.01**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.21	5.14
Self Supplied	0.08	0.13
Total Projected Demand from Municipal Facilities [1]	**3.13**	**5.01**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Chattooga County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Trion, Town of (Trion WPCP)	5
Summerville, City of (Summerville WPCP)	2
Silverleaf Farm WPCP	0.02
Menlo, City of (Menlo WPCP)	0.1
Lyerly, Town of (Lyerly WPCP)	0.05
Total Permitted Monthly Average Flow (MGD)	**7.17**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	7.45
Septic Flows (AADF, MGD)	1.00

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Dade County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Paleozoic Limestone	Dade County Water & Sewer Authority	0.43	0.36		
Lookout Creek	Dade Co Water & Sewer Authority	3.80	3.17		
Total Withdrawal		**4.23**	**3.53**	**1.91**	**3.05**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.91	3.05
Self Supplied	0.00	0.00
Total Projected Demand from Municipal Facilities [1]	**1.91**	**3.05**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Dade County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Trenton, City of (Trenton WPCP)	0.95
Dade Health & Rehabilitation Center	Report
Total Permitted Monthly Average Flow (MGD)	**> .95**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.58
Septic Flows (AADF, MGD)	0.77

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Dawson County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Dawsonville, City of	0.50	0.50		
Etowah River	Etowah Water & Sewer Authority	6.00	4.30		
Etowah River	Etowah Water & Sewer Authority	15.00	12.50		
Total Withdrawal		**21.50**	**17.30**	**5.87**	**9.38**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	6.10	9.76
Self Supplied	0.24	0.38
Total Projected Demand from Municipal Facilities [1]	**5.87**	**9.38**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Dawson County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Chestatee Development Corporation (Chestatee Development WPCP)	0.075
Georgia Department of Natural Resources (Amicalola Falls State Park WPCP)	0.0143
Dawsonville, City of (Dawsonville WPCP)	0.4
Etowah Water & Sewer Authority (Dawson Forest WRF)	1
Dawsonville, City of (Gold Creek WRF)	0.5
Total Permitted Monthly Average Flow (MGD)	**1.9893**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.30
Septic Flows (AADF, MGD)	3.22

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Dawson Forest WRF will move to a Direct Discharge in 2025 and abandon the land application system.

Fannin County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Morganton, City of	0.23	0.23		
Toccoa River	McCaysville, City Of	1.00	0.83		
Toccoa River	Blue Ridge, City Of	1.30	1.08		
Total Withdrawal		**2.53**	**2.14**	**1.84**	**2.94**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.30	3.69
Self Supplied	0.47	0.75
Total Projected Demand from Municipal Facilities [1]	**1.84**	**2.94**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Fannin County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Ninth District Opportunity, Inc (Ninth District WPCP)	0.01
Blue Ridge, City of (Blue Ridge WPCP)	1
Morganton Baptist Church	Report
Blue Ridge Golf and River Club WPCP	0.1
Total Permitted Monthly Average Flow (MGD)	**> 1.11**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.33
Septic Flows (AADF, MGD)	0.90

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Floyd County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Knox Group	Floyd County Water	1.30	1.04		
Woodward Creek	Floyd County - Woodward Creek [3]	0.70	0.58		
Cave Spring	Cave Spring, City of	1.30	1.08		
Old Mill Spring	Floyd County - Old Mill Spring	3.50	2.92		
Berry (formerly Possum Trot) Reservoir	Berry Schools, The (Berry College)	0.70	0.58		
Oostanaula & Etowah R	Rome, City Of	16.40	13.67		
Total Withdrawal		**23.90**	**19.87**	**8.59**	**13.74**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Floyd County - Woodward Creek purchases water (>0.1 AAD-MGD) from City of Calhoun (Gordon County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	9.63	15.41
Self Supplied	0.24	0.38
Total Projected Demand from Municipal Facilities [1]	**9.40**	**15.03**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Floyd County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Rome, City of (Rome WRF)	18
Rome, City of (Coosa WRF)	2
Cave Spring, City Of (Cave Spring WPCP)	0.22
Total Permitted Monthly Average Flow (MGD)	**20.22**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	6.33
Septic Flows (AADF, MGD)	2.43

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Gilmer County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Ellijay River	Ellijay-Gilmer County Water and Sewerage Authority	0.45	0.38		
Cartecay River	Ellijay-Gilmer Co W & S Auth	4.00	3.33		
Total Withdrawal		**4.45**	**3.71**	**3.68**	**5.89**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	4.60	7.36
Self Supplied	0.92	1.47
Total Projected Demand from Municipal Facilities [2]	**3.68**	**5.89**

NOTES:

[1] Includes municipally -supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Gilmer County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Ellijay WPCP	2.5
Oakland Elementary School	Report
Total Permitted Monthly Average Flow (MGD)	**> 2.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.99
Septic Flows (AADF, MGD)	1.35

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow
1.01 MGD from a poultry processing industry forecasted separately; industrial flows projected to remain constant through 2060

Gordon County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Paleozoic Limestone	Calhoun, City of	5.80	5.80		
Big Spring	Calhoun, City Of	6.00	5.00		
Calhoun Spring	Calhoun, City Of	0.54	0.45		
Oostanaula River	Calhoun, City Of	3.00	2.50		
Coosawattee River	Calhoun, City Of [3]	16.00	13.33		
Total Withdrawal		**31.34**	**27.08**	**11.81**	**18.90**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Includes demand for Floyd County - Woodward Creek, which purchases water (>0.1 AAD-MGD) from City of Calhoun (Gordon County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	11.18	17.89
Self Supplied	0.18	0.29
Total Projected Demand from Municipal Facilities [1]	**11.00**	17.61

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Gordon County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Calhoun, City of (Calhoun WPCP)	16
Georgia Cumberland Academy WPCP	0.02
Fairmount, City of (Fairmount WPCP)	0.14
Gordon County Board Of Education (W.L. Swain Elementary School WPCP)	Report
Gordon County Board of Education (Max Tolbert Elementary School WPCP)	0.013
Total Permitted Monthly Average Flow (MGD)	**> 16.173**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	8.02
Septic Flows (AADF, MGD)	2.88

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Lumpkin County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Lumpkin County Water and Sewerage Authority	0.40	0.35		
Yahoola Creek Reservoir	Dahlonega, City of	6.80	5.67		
Total Withdrawal		**7.20**	**6.01**	**4.74**	**7.58**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	6.42	10.27
Self Supplied	1.68	2.69
Total Projected Demand from Municipal Facilities [1]	**4.74**	**7.58**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Lumpkin County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Dahlonega, City of (Dahlonega WPCP)	1.44
Haggai Realty LLC (Oak Grove Mobile Home Park WPCP)	0.01
Ranch Owner's Association, Inc. (R-Ranch in the Mountains WPCP)	0.1
North Georgia Water Reuse Facility	1.25
Total Permitted Monthly Average Flow (MGD)	**2.8**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.54
Septic Flows (AADF, MGD)	2.75

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Habersham County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Cornelia, City of (Cornelia WPCP)	3
Demorest, City of (Demorest WPCP)	0.4
Clarkesville, City of (Clarkesville WPCP)	0.75
Baldwin, City of (Baldwin WPCP)	0.8
Tallulah Falls School WPCP	0.01
Orange Lake Resorts (Apple Mountain Resort (2) WPCP)	0.096
Orange Lake Resorts (Apple Mountain Resort (1) WPCP)	0.03
Total Permitted Monthly Average Flow (MGD)	**5.086**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	7.25
Septic Flows (AADF, MGD)	2.62

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Habersham County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Alto, Town of	0.90	0.70		
Crystalline Rock	Demorest, City of [3]	1.20	1.20		
Crystalline Rock	Mount Airy, Town of	0.15	0.15		
Hazel Creek,Camp Cr Res, Emergency Camp Cr	Cornelia, City Of	4.00	3.33		
Soque River	Clarkesville, City Of	1.00	0.83		
Chattahoochee River	Baldwin, City of	3.00	2.50		
Total Withdrawal		**10.25**	**8.72**	**8.46**	**13.53**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] City of Demorest (Habersham County) purchases water (>0.1 AAD-MGD) from City of Toccoa (Stephens County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	9.15	14.64
Self Supplied	0.51	0.82
Total Projected Demand from Municipal Facilities [2]	**8.64**	**13.82**

NOTES:

[1] Includes municipally -supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Murray County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Conasauga FM	Chatsworth Water Works Commission	1.76	1.76		
Holly Creek	Chatsworth Water Works Commission [3]	1.00	0.83		
Eton Springs	Chatsworth Water Works Commission	1.80	1.50		
Carters Lake	Chatsworth Water Works Commission	2.30	1.92		
Coosawattee River	Chatsworth Water Works Commission	2.00	1.67		
Total Withdrawal		**8.86**	**7.68**	**2.71**	**4.34**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Chatsworth (Murray County) purchases water (>0.1 AAD-MGD) from Dalton Utilities (Whitfield County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.16	6.66
Self Supplied	0.67	1.07
Total Projected Demand from Municipal Facilities [1]	**3.50**	**5.60**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Murray County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Chatsworth, City of (Judson Vick WPCP)	3
Cohutta Springs Conference Center	Report
Total Permitted Monthly Average Flow (MGD)	**> 3**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.40
Septic Flows (AADF, MGD)	2.29

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Pickens County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Big Canoe Utilities Company, Inc.	0.30	0.30		
Crystalline Rock	Jasper, City of	1.33	1.33		
Long Swamp Creek	Jasper, City of	1.00	0.83		
Chestnut Cove Creek	Bent Tree Community	0.23	0.19		
Lake Tamarack	Bent Tree Community	0.23	0.19		
Blackwell Creek	Utilities, Inc. of Georgia	2.65	2.21		
Grandview Lake on Champion Creek	Pickens County [3]	0.33	0.28		
Total Withdrawal		**6.07**	**5.33**	**4.83**	**7.73**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Pickens County purchases water (>0.1 AAD-MGD) from Cherokee County Water and Sewerage Authority.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	5.41	8.66
Self Supplied	0.36	0.58
Total Projected Demand from Municipal Facilities [1]	**5.05**	**8.08**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Pickens County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Big Canoe WPCP	0.25
Jasper, City of (Jasper WPCP)	0.8
Jasper, City Of (Tate Housing Project Sewer Plant)	Report
Bent Tree Community, Inc. (Bent Tree Community WPCP)	0.0175
Young Life Properties (Sharp Top Cove WPCP)	0.05
Total Permitted Monthly Average Flow (MGD)	**> 1.1175**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.29
Septic Flows (AADF, MGD)	2.34

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Polk County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Newala LS	Rockmart, City of	2.59	2.59		
Big Spring	Cedartown, City of	2.60	2.17		
Aragon, Ammons, and Mulco Springs	Polk County Water, Sewage and Solid Waste Authority	1.10	0.92		
Deaton Springs	Polk County Water, Sewage and Solid Waste Authority	4.00	3.33		
Total Withdrawal		**10.29**	**9.01**	**5.32**	**8.51**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	5.39	8.62
Self Supplied	0.07	0.12
Total Projected Demand from Municipal Facilities [2]	**5.32**	**8.51**

NOTES:

[1] Includes municipally -supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Polk County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Cedartown, City of (Cedartown WPCP)	3.5
Rockmart, City of (Rockmart WPCP)	3
Polk County Water, Sewage, and Solid Waste Authority (Aragon WPCP)	0.17
Total Permitted Monthly Average Flow (MGD)	**6.67**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	3.98
Septic Flows (AADF, MGD)	1.72

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow
0.98 MGD from a manufacturing industry and 0.27 MGD from a poultry processing industry forecasted separately; industrial flows expected

Towns County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Young Harris, City of	0.50	0.50		
Lake Chatuge	Hiawassee, City Of	2.04	1.70		
Total Withdrawal		**2.54**	**2.20**	**2.54**	**4.06**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.78	4.44
Self Supplied	0.24	0.38
Total Projected Demand from Municipal Facilities [1]	**2.54**	**4.06**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Towns County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Young Harris, City of (Young Harris WPCP)	0.24
Hiawassee, City of (Hiawassee WPCP)	0.3
Total Permitted Monthly Average Flow (MGD)	**0.54**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.88
Septic Flows (AADF, MGD)	1.21

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Union County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Notla Water Authority	0.80	0.70		
Crystalline Rock	Blairsville, City of	0.40	0.40		
Crystalline Rock	Coosa Water Authority	0.39	0.39		
Nottley River	Blairsville, City of	1.23	1.03		
Lake Nottley	Notla Water Authority	2.00	1.67		
	Total Withdrawal	**4.82**	**4.18**	**2.71**	**4.34**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.75	4.40
Self Supplied	0.04	0.06
Total Projected Demand from Municipal Facilities [1]	**2.71**	4.34

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Union County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Georgia Department of Natural Resources (Vogel State Park)	0.07
Blairsville, City of (Blairsville WPCP)	0.4
Crossing Creeks RV Resort WPCP	0.0426
Total Permitted Monthly Average Flow (MGD)	**0.5126**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.69
Septic Flows (AADF, MGD)	2.08

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Walker County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Knox Group	Walker County Water & Sewerage Authority - Coke Oven	2.80	2.80		
Paleozoic Limestone	Walker County Water & Sewerage Authority - Kensington	1.00	1.00		
Newala LS	Walker County Rural Water & Sewer Authority	0.55	0.55		
Knox Group	Chickamauga, City of	1.80	1.80		
Knox Group	LaFayette, City of - Dixon Springs	0.85	0.75		
Knox Group	LaFayette, City of - (Wells 3 & 5)	1.10	1.00		
Knox Group	Walker County Water & Sewerage Authority - Water Treatment Plant	4.50	4.50		
Dry Creek	Lafayette, City of	0.90	0.75		
Big Spring	LaFayette, City of	1.31	1.09		
Crawfish Spring Lake	Walker County Water & Sewer Authority	4.00	3.33		
	Total Withdrawal	**18.81**	**17.58**	**6.82**	**10.91**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	7.27	11.64
Self Supplied	0.45	0.73
Total Projected Demand from Municipal Facilities [1]	**6.82**	**10.91**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Walker County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
LaFayette, City of (LaFayette WPCP)	3.5
Walker County WPCP	3.5
Dade County Water and Sewer Authority (Canyon Ridge WRF)	0.034
Total Permitted Monthly Average Flow (MGD)	**7.034**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	5.44
Septic Flows (AADF, MGD)	3.61

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

White County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Helen, City of	0.40	0.40		
Crystalline Rock	Cleveland, City of	0.84	0.84		
Turner Creek	White County Water & Sewerage Authority	1.80	1.50		
Total Withdrawal		**3.04**	**2.74**	**3.35**	**5.36**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	5.21	8.34
Self Supplied	1.87	2.99
Total Projected Demand from Municipal Facilities [1]	**3.35**	**5.36**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

White County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Cleveland, City of (Cleveland WPCP)	0.75
Mountain Lake Resort WPCP	0.01
URJ Camp Coleman WPCP	0.025
Georgia Department of Natural Resources (Unicoi State Park WPCP)	0.0582
Helen, City of (Helen WPCP)	0.5
Marcus Jewish Community Center (Camp Barney Medintz WPCP)	0.027
Total Permitted Monthly Average Flow (MGD)	**1.3702**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.21
Septic Flows (AADF, MGD)	2.88

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Whitfield County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Conasauga River	Dalton Utilities [3]	40.30	33.58		
Mill Creek	Dalton Utilities	7.50	6.25		
Coahulla Creek	Dalton Utilities	5.00	4.17		
Conasauga River [4]	Dalton Utilities	18.00	15.00		
Freeman Spring	Dalton Utilities	1.50	1.25		
Total Withdrawal		**54.30**	**45.25**	**28.28**	**45.25**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Includes demand for Chatsworth (Murray County), which purchases water (>0.1 AAD-MGD) from Dalton Utilities (Whitfield County).

[4] Flow augmentation permit to fill the River Road Reservoir (pump-storage).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	27.84	44.55
Self Supplied	0.35	0.56
Total Projected Demand from Municipal Facilities [2]	**27.50**	**43.99**

NOTES:

[1] Includes municipally -supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Whitfield County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Whitfield County Board of Education (Dawnville Elementary School WPCP)	0.01
Dalton Utilities (Mill Creek WPCP)	0.15
Dalton Utilities (Whitfield Mountain View Acres WPCP)	0.08
America's Best Value Inn & Suites WPCP	0.03
Whitfield County Board Of Education (Westside Elementary School)	0.02
Westside Middle School	Report
Dalton Utilities - Riverbend LAS	33
Northwest Whitfield County High School	0.032
Total Permitted Monthly Average Flow (MGD)	**33.322**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	14.65
Septic Flows (AADF, MGD)	4.02

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

2.59 MGD from a manufacturing industry forecasted separately; industrial flows projected to stay constant through 2060

APPENDIX 14 – LOWER FLINT-OCHLOCKONEE COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Baker County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Banks	Newton, City of	0.25	0.25		
Total Withdrawal		**0.25**	**0.25**	**0.09**	**0.14**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.20	0.32
Self Supplied	0.11	0.18
Total Projected Demand from Municipal Facilities [1]	**0.09**	0.14

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Baker County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Total Permitted Monthly Average Flow (MGD)	**0**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.00
Septic Flows (AADF, MGD)	0.12

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Calhoun County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Claiborne	Leary, City of	0.30	0.30		
Clayton	Edison, City of	0.30	0.20		
Floridan	Arlington, City of	0.30	0.30		
Clayton	Morgan, City of	0.35	0.30		
Total Withdrawal		**1.25**	**1.10**	**0.58**	**0.93**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.76	1.21
Self Supplied	0.18	0.28
Total Projected Demand from Municipal Facilities [1]	**0.58**	**0.93**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Calhoun County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Arlington, City of (Arlington WPCP)	0.4
Leary, City of (Leary WPCP)	0.1
Edison, City of (Edison WPCP)	0.25
Morgan, City of (Morgan WPCP)	0.32
Total Permitted Monthly Average Flow (MGD)	**1.07**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.80
Septic Flows (AADF, MGD)	0.20

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Colquitt County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Moultrie, City of	5.20	4.50		
Floridan	Norman Park, City of	0.40	0.35		
	Total Withdrawal	**5.60**	**4.85**	**3.25**	**5.21**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.64	7.43
Self Supplied	1.39	2.22
Total Projected Demand from Municipal Facilities [1]	**3.25**	**5.21**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Colquitt County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Doerun, City of (Doerun WPCP)	0.15
Moultrie, City of (Moultrie WPCP)	4
Moultrie, City of (Spence Field WPCP)	0
Norman Park (Norman Park WPCP)	0.2
Total Permitted Monthly Average Flow (MGD)	**4.35**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	3.11
Septic Flows (AADF, MGD)	1.97

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Decatur County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Bainbridge, City of	5.00	4.40		
Floridan	Decatur County Industrial Airpark	0.65	0.55		
Total Withdrawal		**5.65**	**4.95**	**2.19**	**3.50**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.83	4.53
Self Supplied	0.64	1.03
Total Projected Demand from Municipal Facilities [1]	**2.19**	**3.50**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Decatur County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Bainbridge, City of (Bainbridge WPCP)	2.5
Decatur County (Industrial Airpark WPCP)	1.5
Po Boys BBQ, Inc. (Wingate's Lodge and Marina WPCP)	0.01
Total Permitted Monthly Average Flow (MGD)	**4.01**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.18
Septic Flows (AADF, MGD)	0.83

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Dougherty County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Albany, City of Utility Board	36	24		
Floridan	Marine Corps Logistics Base	2	1.5		
Total Withdrawal		**38.00**	**25.50**	**8.13**	**13.01**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	8.32	13.32
Self Supplied	0.19	0.31
Total Projected Demand from Municipal Facilities [1]	**8.13**	**13.01**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Dougherty County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Water Service Company of Georgia (Holland's Folly Subdivision WPCP)	0.05
Albany, City of (Albany CSO)	Report
Albany, City of (Joshua Street WPCP)	32
Total Permitted Monthly Average Flow (MGD)	**> 32.05**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	14.56
Septic Flows (AADF, MGD)	1.16

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Early County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Claiborne	Blakely, City of	2.70	2.70		
Floridan	Damascus, City of	0.18	0.18		
Total Withdrawal		**2.88**	**2.88**	**0.96**	**1.54**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.27	2.03
Self Supplied	0.30	0.49
Total Projected Demand from Municipal Facilities [1]	**0.96**	**1.54**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Early County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Blakely, City of (Blakely WPCP)	2
Total Permitted Monthly Average Flow (MGD)	**2**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.41
Septic Flows (AADF, MGD)	0.32

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Grady County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Cairo, City of	3.50	3.00		
Total Withdrawal		**3.50**	**3.00**	**1.41**	**2.26**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.18	3.48
Self Supplied	0.77	1.23
Total Projected Demand from Municipal Facilities [1]	**1.41**	**2.26**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Grady County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Cairo, City of (Cairo WPCP)	3
Pinewood Nursing Center	Report
Total Permitted Monthly Average Flow (MGD)	**> 3**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.47
Septic Flows (AADF, MGD)	0.76

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Lee County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Tallahatta	Leesburg, City of	0.50	0.45		
Claiborne	Lee County Utilities Authority	3.00	2.50		
Floridan	Georgia Department of Corrections - Lee State Prison	0.18	0.18		
Claiborne	Smithville, City of	0.20	0.20		
Total Withdrawal		**3.88**	**3.33**	**2.17**	**3.48**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.98	4.77
Self Supplied	0.81	1.30
Total Projected Demand from Municipal Facilities [1]	**2.17**	**3.48**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Lee County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Lee County Utilities Authority (Kinchafoonee Creek WPCP)	0.7
Leesburg, City Of (Leesburg Pond WPCP)	1.2
Smithville, City of (Smithville WPCP)	0.12
Georgia Department of Corrections (Lee State Prison WPCP)	0.134
Total Permitted Monthly Average Flow (MGD)	**2.154**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.86
Septic Flows (AADF, MGD)	1.44

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Miller County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Colquitt, City of	1.00	0.80		
Floridan	Golden Triangle RCD	1.30	1.30		
Total Withdrawal		**2.30**	**2.10**	**0.21**	**0.33**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.40	0.64
Self Supplied	0.19	0.31
Total Projected Demand from Municipal Facilities [1]	**0.21**	**0.33**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Miller County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Colquitt, City of	0.4
Total Permitted Monthly Average Flow (MGD)	**0.4**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.24
Septic Flows (AADF, MGD)	0.18

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Mitchell County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Pelham, City of	1.00	0.90		
Floridan	Camilla, City of	5.50	5.00		
Floridan	Mitchell County Board of Commissioners	0.30	0.30		
Total Withdrawal		**6.80**	**6.20**	**4.91**	**7.86**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	5.53	8.84
Self Supplied	0.61	0.98
Total Projected Demand from Municipal Facilities [2]	**4.91**	**7.86**

NOTES:

[1] Includes municipally -supplied industrial demand

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Mitchell County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Baconton, City of (Baconton WPCP)	0.1
Camilla, City of (Camilla WPCP)	3.8
Mitchell County Board of Commissioners (Autry Correctional Institute WPCP)	0.3
Pelham, City of (Pelham WPCP)	1.5
Total Permitted Monthly Average Flow (MGD)	**5.7**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.00
Septic Flows (AADF, MGD)	0.57

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Seminole County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Donalsonville, City of	1.00	0.80		
Total Withdrawal		**1.00**	**0.80**	**0.35**	**0.56**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.53	0.85
Self Supplied	0.18	0.29
Total Projected Demand from Municipal Facilities [1]	**0.35**	**0.56**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Seminole County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Donalsonville, City of (Donalsonville WPCP)	1
Total Permitted Monthly Average Flow (MGD)	**1**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.48
Septic Flows (AADF, MGD)	0.25

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Terrell County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Clayton	Dawson, City of	1.93	1.42		
Total Withdrawal		**1.93**	**1.42**	**1.05**	**1.68**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.18	1.89
Self Supplied	0.13	0.21
Total Projected Demand from Municipal Facilities [1]	**1.05**	**1.68**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Terrell County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Dawson, City of (Dawson WPCP)	2.5
Total Permitted Monthly Average Flow (MGD)	**2.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.21
Septic Flows (AADF, MGD)	0.18

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Thomas County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Meigs, City of	0.20	0.20		
Floridan	Thomasville, City of - Thomasville Utilities	8.00	6.50		
Floridan	Thomasville, City of - Waverly / Four Corners Water System	0.17	0.17		
Floridan	Boston, City of	0.30	0.24		
Floridan	Coolidge, City of	0.14	0.10		
Total Withdrawal		**8.82**	**7.21**	**5.47**	**8.75**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	6.32	10.11
Self Supplied	0.85	1.36
Total Projected Demand from Municipal Facilities [1]	**5.47**	**8.75**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Thomas County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Thomasville, City of (Oquina Creek WPCP)	6.5
Boston, City of (Boston WPCP)	0.21
Ochlocknee, Town of (Ochlocknee WPCP)	0.05
Meigs, City of (Meigs WPCP)	0.15
Coolidge, City of (Coolidge WPCP)	0.083
Total Permitted Monthly Average Flow (MGD)	**6.993**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	4.87
Septic Flows (AADF, MGD)	1.95

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Worth County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Sylvester, City of	2.00	1.60		
Total Withdrawal		**2.00**	**1.60**	**1.04**	**1.66**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.66	2.65
Self Supplied	0.62	0.99
Total Projected Demand from Municipal Facilities [1]	**1.04**	**1.66**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Worth County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Worthy Manor Subdivision WPCP	0.08
Sylvester, City of (Sylvester WPCP)	0.64
Total Permitted Monthly Average Flow (MGD)	**0.72**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.33
Septic Flows (AADF, MGD)	0.72

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

APPENDIX 15 – MIDDLE CHATTAHOOCHEE COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Carrol County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Snake Creek Reservoir	Carroll County Water Authority	11.00	8.00		
Indian Creek	Bowdon, City of	0.36	0.30		
Lake Paradise & Cowens Lake	Villa Rica, City Of	1.50	1.25		
Little Tallapoosa River	Carrollton, City of	12.00	10.00		
Tysinger Reservoir	Bowdon, City Of	3.50	2.90		
Crystalline Rock	Carroll County Water Authority	0.75	0.75		
Total Withdrawal		**29.11**	**23.20**	**16.85**	**26.96**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	17.76	28.41
Self Supplied	0.91	1.45
Total Projected Demand from Municipal Facilities [2]	**16.85**	**26.96**

NOTES:

[1] Includes municipally -supplied industrial demand

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Carroll County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Villa Rica, City of (North Sweetwater WPCP)	0.52
Pentagon Properties, Inc (Cedar Village Manufactured Home Community WPCP)	0.03
Bowdon, City of (Bowdon WPCP)	0.4
Villa Rica, City of (Tallapoosa West WPCP)	2.15
Mount Zion United Methodist Church Ministries	Report
Indian Lake Subdivison	0.0624
Carroll County Schools (Villa Rica Middle School WPCP)	0.0114
City of Temple LAS	1
Carroll County Water Authority (Fairfield Plantation)	0.45
Carrollton, City Of (Carrollton WPCP)	7
Total Permitted Monthly Average Flow (MGD)	**> 11.6238**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	13.62
Septic Flows (AADF, MGD)	7.77

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

0.81 MGD from a poultry processing industry and 0.02 MGD from a manufacturing industry were forecasted separately; industrial flows are expected to remain constant

Chattahoochee County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Cretaceous Sand	Unified Government of Cusseta-Chattahoochee County Water System	0.64	0.59		
Total Withdrawal		**0.64**	**0.59**	**0.26**	**0.42**

NOTES:

[1] Maximum day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.78	1.24
Self Supplied	0.51	0.82
Total Projected Demand from Municipal Facilities [2]	**0.26**	**0.42**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Chattahoochee County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Cusseta-Chattahoochee County (Chattahoochee County Industrial Park WPCP)	0.0225
Total Permitted Monthly Average Flow (MGD)	**0.0225**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.01
Septic Flows (AADF, MGD)	0.21

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Clay County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Providence Sand	Fort Gaines, City of	0.40	0.40		
Total Withdrawal		**0.40**	**0.40**	**0.25**	**0.40**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Max Day Demand (MGD)
County Needs	0.29	0.46
Self Supplied	0.04	0.06
Total Projected Demand from Municipal Facilities [1]	**0.25**	**0.40**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Clay County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Fort Gaines, City of (Fort Gaines WPCP)	0.3
Total Permitted Monthly Average Flow (MGD)	**0.3**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.10
Septic Flows (AADF, MGD)	0.08

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Haralson County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Tallapoosa River	Haralson County Water Authority	3.75	3.13		
Beech Creek & Bremen Reservoir (Bush Creek)	Bremen, City of	0.58	0.48		
Crystalline Rock	Haralson County Water Authority	0.82	0.82		
Total Withdrawal		**5.15**	**4.43**	**3.52**	**5.63**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.02	6.43
Self Supplied	0.50	0.80
Total Projected Demand from Municipal Facilities [1]	**3.52**	**5.63**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Haralson County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Tallapoosa, City of (Tallapoosa WPCP)	1
Bremen, City of (Baxter Creek WPCP)	0.2
Bremen, City of (Buck Creek WPCP)	0.9
Buchanan, City of (Buchanan WPCP)	0.17
Waco, City of (Waco WPCP)	0.1
Bremen, City of (Turkey Creek WPCP)	0.2
Total Permitted Monthly Average Flow (MGD)	**2.57**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.65
Septic Flows (AADF, MGD)	2.15

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Harris County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Bartletts Ferry	Harris County Water Works [3]	3.00	2.50		
X Street Springs (3)	Pine Mountain Valley Water Association	0.50	0.42		
Crystalline Rock	Callaway Gardens Resort, Inc.	0.50	0.40		
Crystalline Rock	Hamilton, City of	0.30	0.30		
Total Withdrawal		**4.30**	**3.62**	**5.22**	**8.35**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day is 1.6 times annual average day.

[3] Harris County Water Works purchases water (>0.1 AAD-MGD) from City of Columbus (Muscogee County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	6.19	9.90
Self Supplied	0.70	1.12
Total Projected Demand from Municipal Facilities [2]	**5.49**	**8.78**

NOTES:

[1] Includes municipally -supplied industrial demand

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Harris County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
West Point, City of (West Point WPCP)	2
Callaway Gardens Resort, Inc. WPCP	0.5
Pine Mountain, Town of (Pine Mountain WPCP)	0.3
Oak View Home, Inc (Oak View Home WPCP)	0.01
Hamilton, City of (Hamilton WPCP)	0.2
Department of Natural Resources (Franklin D. Roosevelt State Park)	Report
Acres of Shade MHP	Report
Total Permitted Monthly Average Flow (MGD)	**> 3.01**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.72
Septic Flows (AADF, MGD)	2.33

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Heard County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Centralhatchee Creek	Heard County Water Authority	3.10	2.58		
Hillabahatchee Creek	Heard County Water Authority	3.10	2.58		
Crystalline Rock	Ephesus Water System	0.19	0.19		
Total Withdrawal		**6.39**	**5.36**	**1.95**	**3.12**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.14	3.43
Self Supplied	0.19	0.31
Total Projected Demand from Municipal Facilities [1]	**1.95**	**3.12**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Heard County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Heard County Water Authority (Heard County Water Authority WPCP)	0.16
Total Permitted Monthly Average Flow (MGD)	**0.16**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.20
Septic Flows (AADF, MGD)	0.91

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Muscogee County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Chattahoochee River	Fort Benning	10.00	8.33		
Lake Oliver	Columbus, City Of [2]	90.00	75.00		
Total Withdrawal		**100.00**	**83.33**	**24.29**	**38.87**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day is 1.6 times annual average day.

[3] Includes demand for Harris County, which purchases water (>0.1 AAD-MGD) from City of Columbus (Muscogee County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	24.02	38.43
Self Supplied	-	-
Total Projected Demand from Municipal Facilities [1]	**24.02**	**38.43**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Muscogee County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Columbus Water Works (South WRF)	Report
Columbus Water Works CSO	Report
Total Permitted Monthly Average Flow (MGD)	**> 0**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	34.79
Septic Flows (AADF, MGD)	0.37

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Columbus Water Works (CWW) has one sewer interconnection with Harris County and an intergovernmental agreement to provide up to 2 MGD of sewer conveyance and treatment within Muscogee County.

CWW has a 50-year wastewater contract with Fort Benning to provide wastewater conveyance and treatment up to 12.2 MGD. CWW also has an inactive wastewater connection with Phenix City, AL, with capacity of 6 MGD.

Quitman County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
NA	Quitman County [2]	NA	NA		
Total Withdrawal				**0.00**	**0.00**

NOTES:

[1] Maximum day is 1.6 times annual average day.

[2] Quitman County does not have surface or groundwater permits listed.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.15	0.24
Self Supplied	0.15	0.24
Total Projected Demand from Municipal Facilities [1]	**0.00**	**0.00**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Quitman County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Georgetown-Quitman County Water Pollution Control Plant	0.3
Total Permitted Monthly Average Flow (MGD)	**0.3**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.11
Septic Flows (AADF, MGD)	0.13

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Randolph County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Clayton	Cuthbert, City of	1.00	0.80		
Clayton	Shellman, City of	0.18	0.15		
Total Withdrawal		**1.18**	**0.95**	**0.74**	**1.19**

NOTES:

[1] Maximum day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.86	1.37
Self Supplied	0.12	0.18
Total Projected Demand from Municipal Facilities [1]	**0.74**	**1.19**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Randolph County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Randolph County Board of Education (Randolph / Clay High School WPCP)	Report
Cuthbert, City of (Cuthbert WPCP)	0.6
Total Permitted Monthly Average Flow (MGD)	**> 0.6**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.34
Septic Flows (AADF, MGD)	0.26

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Stewart County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Cretaceous Sand	Richland, City of	0.50	0.50		
Cretaceous Sand	Lumpkin, City of	0.25	0.25		
Cretaceous Sand	Stewart County Water Authority	0.50	0.50		
Total Withdrawal		**1.25**	**1.25**	**0.61**	**0.97**

NOTES:

[1] Maximum day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.65	1.04
Self Supplied	0.04	0.07
Total Projected Demand from Municipal Facilities [1]	**0.61**	**0.97**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Stewart County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Lumpkin, City of (Lumpkin WPCP)	0.43
Department of Natural Resources (Florence Marina State Park)	Report
Richland, City of (Richland WPCP)	0.3
Total Permitted Monthly Average Flow (MGD)	**> 0.73**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.61
Septic Flows (AADF, MGD)	0.14

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Troup County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
West Point Lake Reservoir	Lagrange, City of [3]	20.00	16.67		
Chattahoochee River	West Point, City Of	1.80	1.50		
Total Withdrawal		**21.80**	**18.17**	**8.60**	**13.76**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day is 1.6 times annual average day.

[3] Includes demand for Greenville (Meriwether County), which purchases water (>0.1 AAD-MGD) from City of Lagrange (Troup County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	9.80	15.68
Self Supplied	1.42	2.28
Total Projected Demand from Municipal Facilities [2]	**8.38**	**13.41**

NOTES:

[1] Includes municipally -supplied industrial demand

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Troup County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
LaGrange, City of (Long Cane Creek WPCP)	12.5
Hogansville, City Of (Hogansville WPCP)	1.5
Hogansville, City of (Hogansville WPCP)	0.65
Total Permitted Monthly Average Flow (MGD)	**14.65**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	7.48
Septic Flows (AADF, MGD)	3.15

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

APPENDIX 16 – MIDDLE OCMULGEE COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Bibb County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Ocmulgee River [3]	Macon Water Authority	110.00	91.67		
Town Creek Reservoir [4]	Macon Water Authority [5]	63.00	52.50		
Total Withdrawal		**63.00**	**52.50**	**24.01**	**38.41**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Pump-storage into Town Creek Reservoir.

[4] Surface water withdrawal for Macon Water Authority is located in Jones County.

[5] Includes demand for South Monroe County Water System, which purchases water (>0.1 AAD-MGD) from Macon Water Authority (Bibb County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	23.81	38.09
Self Supplied	0.54	0.87
Total Projected Demand from Municipal Facilities [1]	**23.27**	**37.22**

NOTES:

[1] Includes municipally -supplied industrial demand

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Bibb County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Macon Water Authority (Lower Poplar WRF)	20
Macon Water Authority (Rocky Creek WPCP)	28
Total Permitted Monthly Average Flow (MGD)	**48**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows[1]
Total Projected Discharge Flows (Max Monthly Average, MGD) [1]	41.89
Septic Flows (AADF, MGD)	1.69

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

[1] 10.1 MGD of industrial flows forecasted separately; Macon Water Authority forecasts these flows to be 11.5 MGD in 2060

[2] 0.4 MGD (Max Monthly Average) from Peach County (City of Byron) to Rocky Creek WPCP

Butts County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Towaliga River	Jackson, City Of - Towaliga R	1.00	0.83		
Ocmulgee River	Butts County, et al. W&S Authority [3]	9.70	8.08		
Crystalline Rock	Georgia Department of Corrections - Georgia Diagnostic Prison	0.30	0.30		
Total Withdrawal		**11.00**	**9.22**	**3.24**	**5.19**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Includes demand for North Monroe County, which purchases water (>0.1 AAD-MGD) from Butts County, *et al* W&S Authority.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.01	4.82
Self Supplied	0.01	0.01
Total Projected Demand from Municipal Facilities [1]	**3.00**	**4.81**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Butts County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Jackson, City of (Yellow Water Creek WPCP)	0.75
Forest Glen Estates Mobile Home Park WPCP	0.03
Jackson, City of (Southside WPCP)	0.7
Jackson, City of (Northeast WPCP)	0.14
Flying J Travel Plaza	0.06
Butts County, et al. Water & Sewer Authority (Bucksnort Ranch WPCP)	0.5
Georgia Department Of Corrections (Diagnostic & Classification Prison WPCP)	0.4
Total Permitted Monthly Average Flow (MGD)	**2.58**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.06
Septic Flows (AADF, MGD)	1.53

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Crawford County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Cretaceous Sand	Roberta, City of	0.24	0.18		
Cretaceous Sand	Crawford County Board of Commissioners	0.375	0.3		
Total Withdrawal		**0.615**	**0.48**	**0.28**	**0.45**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.82	1.31
Self Supplied	0.54	0.86
Total Projected Demand from Municipal Facilities [1]	**0.28**	**0.45**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Crawford County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Roberta, City of (Roberta WPCP)	0.44
Total Permitted Monthly Average Flow (MGD)	**0.44**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.16
Septic Flows (AADF, MGD)	0.59

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Houston County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Cretaceous Sand	Warner Robins, City of	14.5	10.8		
Cretaceous Sand	Perry, City of	6.15	4.5		
Cretaceous Sand	Centerville, City of	2.5	1.8		
Cretaceous Sand	Houston County Water - Hayneville Section	0.252	0.168		
Cretaceous Sand	Houston County Water - Feagin Mill / Elberta / Dunbar System	27.2	18.4		
Cretaceous Sand	Houston County Water - Henderson Section	0.25	0.165		
Cretaceous Sand	Robins Air Force Base	5.01	3.87		
Cretaceous Sand	Robins Air Force Base - Luna Lake	0.18	0.18		
Total Withdrawal		**56.042**	**39.883**	**32.17**	**51.48**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	32.90	52.64
Self Supplied	0.73	1.16
Total Projected Demand from Municipal Facilities [1]	**32.17**	**51.48**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Houston County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Robins Air Force Base	Report
Perry, City of (Frank Satterfield Road WWTF)	3
Davis Oil Company (Shell Food Mart WPCP)	0.01
Warner Robins, City of (Sandy Run Creek WPCP)	12
Warner Robins, City of (Ocmulgee River WPCP)	3
Winding River Development WPCP	2
Christ Sanctified Holy Church	0.018
Total Permitted Monthly Average Flow (MGD)	**> 20.028**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	19.27
Septic Flows (AADF, MGD)	4.16

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Jasper County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
City Reservoir, Lowry Branch	Monticello, City of	0.5	0.417		
Crystalline Rock	Monticello, City of	0.375	0.375		
Crystalline Rock	Turtle Cove Property Owners Association	0.25	0.25		
Total Withdrawal		**1.125**	**1.042**	**1.16**	**1.86**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.69	2.70
Self Supplied	0.53	0.85
Total Projected Demand from Municipal Facilities [1]	**1.16**	**1.86**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Jasper County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Monticello, City of (Pearson Creek WPCP)	0.17
Monticello, City of (White Oak Creek WPCP)	0.12
Total Permitted Monthly Average Flow (MGD)	**0.29**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.24
Septic Flows (AADF, MGD)	0.82

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Jones County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Cretaceous Sand, Crystalline Rock	Jones County Water System	2.5	2.5		
Crystalline Rock	Gray, City of	0.75	0.7		
Total Withdrawal		**3.25**	**3.2**	**1.99**	**3.19**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.55	4.08
Self Supplied	0.56	0.89
Total Projected Demand from Municipal Facilities [1]	**1.99**	**3.19**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Jones County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Gray, City of (Wolf Creek WPCP)	0.4
Total Permitted Monthly Average Flow (MGD)	**0.4**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.48
Septic Flows (AADF, MGD)	1.34

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Lamar County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [3]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Eady Creek Reservoir	Barnesville, City of	4.00	3.33		
Big Towaliga Creek	Barnesville, City of	0.50	0.42		
Little Towaliga River	Barnesville, City of	1.00	0.83		
Total Withdrawal		**5.50**	**4.58**	**2.36**	**3.78**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Lamar County purchases water (>0.1 AAD-MGD) from City of Griffin (Spalding County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.16	6.65
Self Supplied	1.04	1.67
Total Projected Demand from Municipal Facilities [1]	3.11	**4.98**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Lamar County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Griffin, City of (Potato Creek WPCP)[1]	-
Barnesville, City of (James A. King WWTF)	2.4
Total Permitted Monthly Average Flow (MGD)	**2.4**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	6.88
Septic Flows (AADF, MGD)	1.45

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

[1] Potato Creek WPCP services the City of Griffin in Spalding County, but discharges to Lamar County. Projected flows have been assigned to Spalding County

Monroe County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [3]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Rocky Creek	Forsyth, City of	1.50	1.25		
Tobesofkee Creek Reservoir	Forsyth, City of	4.00	4.00		
Total Withdrawal		**5.50**	**5.25**	**1.61**	**2.57**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Monroe County purchases water (>0.1 AAD-MGD) from Macon Water Authority (Bibb County) and Butts County.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.57	5.71
Self Supplied	0.98	1.57
Total Projected Demand from Municipal Facilities [1]	2.59	**4.14**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Monroe County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Forsyth, City of (South WPCP)	0.6
Forsyth, City of (Northeast WPCP)	1.4
Rumble Road BP Service Station WPCP	0
Department of Natural Resources (High Falls State Park)	Report
Rumble Road WPCP	Report
Pruitt Health of Monroe	Report
Bolingreen Nursing Center WPCP	Report
Georgia Department of Public Safety (Georgia Public Safety Training Center WPCP)	0.12
Total Permitted Monthly Average Flow (MGD)	**> 2.12**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.13
Septic Flows (AADF, MGD)	1.33

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Newton County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Alcovy River	Covington, City of - Newton County Water System	4.00	3.33		
Cornish Cr. Reservoir	Newton County Board Of Commissioners [3]	28.00	23.00		
Alcovy River (Pumps to Cornis	Newton County Board Of Commissioners	35.00	29.17		
Alcovy River (Pumps to Bear Creek Res.)	Newton County	35.00	29.17		
Bear Creek Reservoir	Newton County	34.00	28.00		
Total Withdrawal		**62.00**	**51.00**	**26.55**	**42.48**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Includes demand for Walton County Water System, which purchases water (>0.1 AAD-MGD) from Newton County Board of Commissioners.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	25.65	41.04
Self Supplied	2.23	3.57
Total Projected Demand from Municipal Facilities [1]	**23.42**	**37.47**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Newton County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Mansfield, City of (Mansfield WPCP)	0.06
Newton County (Yellow River WPCP)	3.2
Covington, City of (Covington WRF)	5.6
Newton County Board of Education (Alcovy High School WPCP)	0.0264
Brick Store Utility Company	0.035
Total Permitted Monthly Average Flow (MGD)	**8.9214**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	11.06
Septic Flows (AADF, MGD)	8.33

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Peach County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Cretaceous Sand	Fort Valley, City of - Utility Commission	4	2.5		
Cretaceous Sand	Byron, City of	1.3	1.2		
Total Withdrawal		**5.3**	**3.7**	**2.05**	**3.27**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.44	3.91
Self Supplied	0.40	0.64
Total Projected Demand from Municipal Facilities [1]	**2.05**	**3.27**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Peach County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Fort Valley, City of (Fort Valley WPCP)	2.2
Total Permitted Monthly Average Flow (MGD)	**2.2**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.23
Flows to Bibb County (AADF, MGD)	0.40
Septic Flows (AADF, MGD)	1.10

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Pulaski County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Cretaceous Sand	Hawkinsville, City of	1.85	1.6		
Total Withdrawal		**1.85**	**1.6**	**0.85**	**1.36**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.06	1.70
Self Supplied	0.21	0.34
Total Projected Demand from Municipal Facilities [1]	**0.85**	**1.36**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Pulaski County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Hawkinsville, City of (South WPCP)	1.3
Hawkinsville, City of (North WPCP)	1
Total Permitted Monthly Average Flow (MGD)	**2.3**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.32
Septic Flows (AADF, MGD)	0.32

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Twiggs County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
Cretaceous Sand	Jeffersonville, City of	0.35	0.3		
Cretaceous Sand	Twiggs County Board of Commissioners	0.5	0.5		
Total Withdrawal		**0.85**	**0.8**	**0.41**	**0.65**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.71	1.14
Self Supplied	0.31	0.49
Total Projected Demand from Municipal Facilities [1]	**0.41**	**0.65**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Twiggs County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Jeffersonville, City of (Jeffersonville WPCP)	0.7
Total Permitted Monthly Average Flow (MGD)	**0.7**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.12
Septic Flows (AADF, MGD)	0.34

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

APPENDIX 17 – SAVANNAH-UPPER OGEECHEE COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Banks County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Mtn. Creek Reservoir	Banks County Board Of Commissioners	1.00	0.83		
Total Withdrawal		**1.00**	**0.83**	**2.50**	**4.00**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.25	5.20
Self Supplied	0.75	1.20
Total Projected Demand from Municipal Facilities [1]	**2.50**	**4.00**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Banks County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Maysville, City of (Maysville WPCP)	0.06
Commerce, City of (Holiday Inn WPCP)	0.04
Commerce, City of (Davis House WPCP)	0.07
Banks County Board of Commissioners (Hudson River WPCP)	0.13
Homer Housing WPCP	Report
Old Banks County Elementary School WPCP	Report
North Georgia Church Of God (Legacy Retreat Center WPCP)	0.01
Banks County Board Of Commissioners (Atlanta International Dragway WPCP)	0.27
Banks County Golf, LLC (Chimney Oaks WPCP)	0.072
Banks County Board of Commissioners (Industrial Park WPCP)	0.045
Total Permitted Monthly Average Flow (MGD)	**> 0.697**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.41
Septic Flows (AADF, MGD)	2.10

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Burke County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Waynesboro, City of	4.00	3.50		
Cretaceous Sand	Sardis, City of	0.40	0.40		
Total Withdrawal		**4.40**	**3.90**	**0.94**	**1.50**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.84	2.94
Self Supplied	0.90	1.44
Total Projected Demand from Municipal Facilities [1]	**0.94**	**1.50**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Burke County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Midville, City of (Midville WPCP)	0.17
Sardis, City of (Sardis WPCP)	0.2
Waynesboro, City of (Brier Creek WPCP)	2
Keysville, City of (Keysville WPCP)	0.0596
Total Permitted Monthly Average Flow (MGD)	**2.4296**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.16
Septic Flows (AADF, MGD)	0.84

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Columbia County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Clarks Hill Reservoir	Columbia County Water System	8.00	6.67		
Stevens Creek Reservoir (Savannah River)	Columbia County Water System [3]	45.90	38.25		
Crystalline Rock	Harlem, City of	0.28	0.25		
Crystalline Rock	Grovetown, City of	0.90	0.90		
Total Withdrawal		**55.08**	**46.07**	**23.57**	**37.72**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

[3] Includes demand for South Carolina, which purchases water (>0.1 AAD-MGD) from Columbia County Water System.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	23.51	37.61
Self Supplied	0.63	1.02
Total Projected Demand from Municipal Facilities [1]	**22.87**	**36.60**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Columbia County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Harlem, City of (Harlem WPCP)	0.25
Columbia County (Crawford Creek WPCP)	1.5
Columbia County (Reed Creek WPCP)	4.6
Columbia County (Kiokee Creek WPCP)	0.3
Columbia County (Little River WPCP)	6
Grovetown, City of (Grovetown WPCP)	3
Georgia Department of Natural Resources (Mistletoe State Park)	Report
Grovetown, City of	0.58
Total Permitted Monthly Average Flow (MGD)	**> 16.23**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	14.10
Septic Flows (AADF, MGD)	2.26

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Elbert County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Beaverdam Creek	Elberton, City of	1.70	1.42		
Lake Russell	Elberton, City of [3]	3.70	3.08		
Total Withdrawal		**3.70**	**4.50**	**2.63**	**4.21**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Madison County purchases water (>0.1 AAD-MGD) from City of Elberton (Elbert County). In July 2019, City of Elberton completed an interconnection with Madison County Water System. Currently the average water sales to Madison County are 0.26 MGD. The City of Elberton is contracted to provide a maximum 30 day average of 0.4 MGD.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.20	3.52
Self Supplied	0.49	0.78
Total Projected Demand from Municipal Facilities [1]	**1.71**	**2.74**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Elbert County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Bowman, City of (Bowman WPCP)	0.09
Elberton, City of (Fortson Creek WPCP)	0.6
Elberton, City of (Falling Creek WPCP)	0.9
Nancy Hart Nursing Center	Report
Heardmont Healthcare (Heardmont Nursing Home WPCP)	Report
Total Permitted Monthly Average Flow (MGD)	**> 1.59**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.21
Septic Flows (AADF, MGD)	0.61

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

0.9 MGD from poultry processing industry forecasted separately; industry flows expected to remain constant through 2060

Franklin County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [2]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [3]
Crawford Creek Reservoir	Lavonia, City of	1.50	1.25		
Lake Hartwell	Lavonia, City Of [4]	3.00	2.50		
North Fork Broad River	Royston, City of	1.00	0.83		
Crystalline Rock	Franklin County	1.55	1.55		
Total Withdrawal		**5.55**	**4.88**	**3.22**	**5.15**

NOTES:

[1] City of Carnesville (Franklin County) purchases water (>0.1 AAD-MGD) from City of Toccoa (Stephens County).

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[3] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

[4] Includes demand for Hart County Water System, which purchases water (>0.1 AAD-MGD) from City of Lavonia (Franklin County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.18	5.10
Self Supplied	0.60	0.95
Total Projected Demand from Municipal Facilities [1]	**2.59**	**4.14**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Franklin County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Royston, City of (Royston WPCP)	0.5
Lavonia, City of (Lavonia WPCP)	0.75
Franklin Springs, City of (Franklin Springs WPCP)	0.1
Franklin County Board of Commissioners (Franklin County WPCP - NPDES)	0.3
Georgia Department of Natural Resources (Tugaloo State Park WPCP)	Report
Franklin County Board of Commissioners (Franklin County WPCP - LAS)	0.075
Total Permitted Monthly Average Flow (MGD)	**> 1.725**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.53
Septic Flows (AADF, MGD)	1.54

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Glascock County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[1]
NA	Glascock County [2]	NA	NA		
Total Withdrawal				**0.00**	**0.00**

NOTES:

[1] Max day is 1.6 times annual average day.

[2] Glascock County does not have surface or groundwater permits listed.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.15	0.24
Self Supplied	0.15	0.24
Total Projected Demand from Municipal Facilities [1]	**0.00**	**0.00**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Glascock County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Gibson, City of (Gibson WPCP)	0.21
Total Permitted Monthly Average Flow (MGD)	**0.21**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.05
Septic Flows (AADF, MGD)	0.10

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Hart County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [2]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [3]
Lake Hartwell	Hartwell, City Of	3.50	2.92		
Crystalline Rock	Royston, City of	0.34	0.34		
Total Withdrawal		**3.84**	**3.26**	**2.33**	**3.72**

NOTES:

[1] Hart County purchases water (>0.1 AAD-MGD) from City of Lavonia (Franklin County).

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[3] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.43	5.48
Self Supplied	0.47	0.75
Total Projected Demand from Municipal Facilities [1]	**2.96**	**4.73**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Hart County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
The New Harbor Light Marina, Inc.	Report
Hartwell, City of (Hartwell WRF)	1.75
Total Permitted Monthly Average Flow (MGD)	**> 1.75**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.10
Septic Flows (AADF, MGD)	1.35

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Jefferson County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand, Eocene Sand	Wadley, City of	0.45	0.45		
Cretaceous Sand	Louisville, City of	2.00	2.00		
Cretaceous Sand	Wrens, City of	0.80	0.65		
Cretaceous Sand	Louisville, City of - Grange Road Water System	0.90	0.90		
Total Withdrawal		**4.15**	**4.00**	**1.23**	**1.97**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.07	3.31
Self Supplied	0.84	1.34
Total Projected Demand from Municipal Facilities [1]	**1.23**	**1.97**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Jefferson County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Wadley, City of (Wadley WPCP)	0.22
Louisville, City of (Forstmann WPCP)	1
Wrens, City of (Wrens WPCP)	1
Bartow, Town Of (Bartow WPCP)	0.05
Total Permitted Monthly Average Flow (MGD)	**2.27**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	3.48
Septic Flows (AADF, MGD)	0.41

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Jenkins County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Upper Floridan	Millen, City of	1.00	1.00		
Total Withdrawal		**1.00**	**1.00**	**0.47**	**0.76**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.58	0.92
Self Supplied	0.10	0.16
Total Projected Demand from Municipal Facilities [1]	**0.47**	**0.76**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Jenkins County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Millen, City of (Millen WPCP)	0.95
Total Permitted Monthly Average Flow (MGD)	**0.95**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.53
Septic Flows (AADF, MGD)	0.31

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Lincoln County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Clarks Hill Reservoir	Lincolnton, City Of	0.63	0.53		
Crystalline Rock	Lincoln County Water System	0.35	0.30		
Total Withdrawal		**0.98**	**0.83**	**0.48**	**0.77**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.63	1.02
Self Supplied	0.15	0.25
Total Projected Demand from Municipal Facilities [1]	**0.48**	**0.77**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Lincoln County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Lincolnton, City of (Lincolnton WPCP)	0.52
DNR Elijah Clark State Park	Report
Total Permitted Monthly Average Flow (MGD)	**> 0.52**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.24
Septic Flows (AADF, MGD)	0.34

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Madison County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Crystalline Rock	Danielsville, City of	0.30	0.30		
Crystalline Rock	Comer, City of	0.25	0.25		
Total Withdrawal		**0.55**	**0.55**	**2.77**	**4.43**

NOTES:

[1] Madison County purchases water (>0.1 AAD-MGD) from City of Commerce (Banks County) and City of Elberton (Elbert County).

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.03	6.45
Self Supplied	0.76	1.21
Total Projected Demand from Municipal Facilities [1]	**3.28**	**5.24**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Madison County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Comer, City of (Comer WPCP)	0.09
Danielsville, City of (Danielsville WPCP)	0.08
Madison County Industrial Development and Building Authority (Madison County Industrial Development and Building Authority WPCP)	0.05
Total Permitted Monthly Average Flow (MGD)	**0.22**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.11
Septic Flows (AADF, MGD)	2.67

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

McDuffie County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Clarks Hill Reservoir	Thomson/ McDuffie Water & Sewer Commission	3.10	2.58		
Usry's Lake on Sweetwater Creek	Thomson/ McDuffie Water & Sewer Commission	1.50	1.25		
Total Withdrawal		**4.60**	**3.83**	**2.12**	**3.39**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.27	3.63
Self Supplied	0.15	0.23
Total Projected Demand from Municipal Facilities [1]	**2.12**	**3.39**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

McDuffie County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Thomson, City of (Thomson WPCP)	2.5
Thomson, City of (Dearing WPCP)	0.09
Thomson, City of (Mattox Creek WPCP)	0.171
Total Permitted Monthly Average Flow (MGD)	**2.761**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	4.24
Septic Flows (AADF, MGD)	1.08

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Oglethorpe County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Tributary To Long Creek	Crawford, City of	0.25	0.21		
Total Withdrawal		**0.25**	**0.21**	**1.19**	**1.90**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.34	2.15
Self Supplied	0.16	0.25
Total Projected Demand from Municipal Facilities [1]	**1.19**	**1.90**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Oglethorpe County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Crawford, City of (Crawford WPCP)	0.18
Total Permitted Monthly Average Flow (MGD)	**0.18**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.11
Septic Flows (AADF, MGD)	1.14

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Rabun County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Lake Rabun (Savannah River Basin) and Little TN River (TN River Basin)	Rabun County Water & Sewer Authority f/k/a Clayton-Rabun County Water & Sewer Authority	3.50	2.92		
Black Creek	Clayton, City of	0.70	0.58		
Crystalline Rock	Sky Valley, City of	0.30	0.30		
Total Withdrawal		**4.50**	**3.80**	**2.53**	**4.05**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	2.97	4.76
Self Supplied	0.44	0.71
Total Projected Demand from Municipal Facilities [2]	**2.53**	**4.05**

NOTES:

[1] Includes municipally-supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Rabun County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Clayton, City of (Clayton WPCP)	1
Athens Y Camp for Boys	Report
Center for Spiritual Awareness	Report
Athens Y Camp Chattooga	Report
Rabun County Water & Sewer Authority (Rabun County WRF)	0.5
Dillard, City Of (Dillard WPCP)	0.2
Waterfall Property Owners Association (Waterfall at Lake Burton WRF)	0.075
Camp Ramah Darom	0.025
Total Permitted Monthly Average Flow (MGD)	**> 1.8**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.81
Septic Flows (AADF, MGD)	1.09

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Richmond County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Augusta Canal	Augusta-Richmond County	45	37.5		
Savannah River	Augusta Utilities Department	15	12.5		
Cretaceous Sand	Hephzibah, City of	1.2	1.2		
Cretaceous Sand	Augusta Utilities Department	18.4	18.4		
Cretaceous Sand	Blythe, City of	0.25	0.25		
Total Withdrawal		**79.85**	**69.85**	**37.18**	**59.49**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	37.43	59.89
Self Supplied	0.25	0.40
Total Projected Demand from Municipal Facilities [2]	**37.18**	**59.49**

NOTES:

[1] Includes municipally-supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Richmond County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Augusta, City of (J.B. Messerly WPCP)	46.1
Augusta, City of (Spirit Creek WPCP)	2.24
Hephzibah, City of (Hephzibah WPCP)	0.09
Total Permitted Monthly Average Flow (MGD)	**48.43**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	43.55
Septic Flows (AADF, MGD)	2.46

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

0.11 MGD from manufacturing industry forecasted separately; industrial flows expected to remain constant through 2060

Screven County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Sylvania, City of	1.50	1.30		
Total Withdrawal		**1.50**	**1.30**	**0.69**	**1.11**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.21	1.94
Self Supplied	0.52	0.83
Total Projected Demand from Municipal Facilities [1]	**0.69**	**1.11**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Screven County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Newington, Town Of (Newington WPCP)	0.05
Sylvania, City of (Sylvania WPCP)	1.51
Georgia Visitor Center (Sylvania)	0.02
Hiltonia, Town of (Hiltonia WPCP)	0.0468
Total Permitted Monthly Average Flow (MGD)	**1.6268**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.26
Septic Flows (AADF, MGD)	0.51

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Stephens County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Lake Toccoa	Toccoa, City Of - Lake Toccoa [3]	9.00	7.50		
Lake Yonah	Toccoa, City Of	6.00	5.00		
Floridan	Sylvania, City of	0.20	0.20		
Total Withdrawal		**15.20**	**12.70**	**5.54**	**8.86**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

[3] Includes demand for Demorest (Habersham County) and Carnesville (Franklin County), which purchase water (>0.1 AAD-MGD) from City of Toccoa (Stephens County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.89	7.82
Self Supplied	0.09	0.14
Total Projected Demand from Municipal Facilities [1]	**4.80**	**7.68**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Stephens County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Toccoa, City Of (Toccoa Creek WPCP)	0.41
Toccoa, City of (EastaNollee Creek WPCP)	2
Toccoa Falls College WPCP	0.09
Georgia Baptist Conference Center WPCP	Report
Stephens County Schools (Old Big A Elementary School WPCP)	Report
Stephens County Schools (Old Middle School Site WPCP)	Report
Total Permitted Monthly Average Flow (MGD)	**> 2.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.26
Septic Flows (AADF, MGD)	1.24

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Taliaferro County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
NA	Taliaferro County [2]	NA	NA		
Total Withdrawal				**0.00**	**0.00**

NOTES:

[1] Max day is 1.6 times annual average day.

[2] Taliaferro County does not have surface or groundwater permits listed.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.07	0.12
Self Supplied	0.07	0.12
Total Projected Demand from Municipal Facilities [1]	**0.00**	**0.00**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Taliaferro County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Crawfordville, City of (Crawfordville WPCP)	0.1
Department of Natural Resources (A. H. Stephens State Park)	Report
Total Permitted Monthly Average Flow (MGD)	**> 0.1**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.03
Septic Flows (AADF, MGD)	0.05

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Warren County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Rocky Comfort Creek Reservoir	Warrenton, City Of	0.75	0.63		
Total Withdrawal		**0.75**	**0.63**	**0.40**	**0.64**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.50	0.79
Self Supplied	0.10	0.16
Total Projected Demand from Municipal Facilities [1]	**0.40**	**0.64**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Warren County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Warrenton, City of (Warrenton WPCP)	0.5
Norwood, City Of (Norwood WPCP)	0.05
Total Permitted Monthly Average Flow (MGD)	**0.55**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.31
Septic Flows (AADF, MGD)	0.17

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Wilkes County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD) [1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [2]
Clarks Hill Reservoir	Washington, City of	2.00	1.67		
Little Beaverdam Creek and Beaverdam Creek	Washington, City of	1.80	1.50		
Total Withdrawal		**3.80**	**3.17**	**0.65**	**1.04**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Maximum day withdrawal is projected at 1.6 times annual average day withdrawal.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.83	1.32
Self Supplied	0.17	0.28
Total Projected Demand from Municipal Facilities [1]	**0.65**	**1.04**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Wilkes County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Washington, City of (Rocky Creek WPCP)	4
Tignall, Town of (Tignall WPCP)	0.08
Total Permitted Monthly Average Flow (MGD)	**4.08**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.50
Septic Flows (AADF, MGD)	0.25

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

APPENDIX 18 – SUWANNEE-SATILLA COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Atkinson County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Pearson, City of	0.40	0.40		
Floridan	Willacoochee, City of	0.50	0.50		
	Total Withdrawal	**0.90**	**0.90**	**0.44**	**0.70**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.80	1.28
Self Supplied	0.36	0.58
Total Projected Demand from Municipal Facilities [1]	**0.44**	**0.70**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Atkinson County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Pearson, City of (Pearson WPCP)	0.9
Willacoochee, City of (Willacoochee WPCP)	0.355
Total Permitted Monthly Average Flow (MGD)	**1.255**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.38
Septic Flows (AADF, MGD)	0.30

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Bacon County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Alma, City of	1.50	1.50		
Total Withdrawal		**1.50**	**1.50**	**0.60**	**0.96**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.14	1.83
Self Supplied	0.54	0.86
Total Projected Demand from Municipal Facilities [1]	**0.60**	**0.96**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Bacon County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Alma, City of (Alma WPCP)	0.75
Alma, City of	0.75
Total Permitted Monthly Average Flow (MGD)	**1.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.76
Septic Flows (AADF, MGD)	0.54

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Ben Hill County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Fitzgerald Water, Light, & Bond Commission	6.00	5.50		
Total Withdrawal		**6.00**	**5.50**	**1.62**	**2.59**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.95	3.11
Self Supplied	0.33	0.52
Total Projected Demand from Municipal Facilities [1]	**1.62**	**2.59**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Ben Hill County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Fitzgerald, City of (C.A. Newcomer)	6
Fitzgerald	0.3
Total Permitted Monthly Average Flow (MGD)	**6.3**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.59
Septic Flows (AADF, MGD)	0.70

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Berrien County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Nashville, City of	1.50	1.50		
Floridan	Enigma, Town of	0.25	0.23		
Floridan	Ray City, City of	0.20	0.20		
Total Withdrawal		**1.95**	**1.93**	**0.95**	**1.52**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.06	3.30
Self Supplied	1.11	1.78
Total Projected Demand from Municipal Facilities [1]	**0.95**	**1.52**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Berrien County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Ray City (Ray City WPCP)	0.1
Alapaha, Town of (Alapaha WPCP)	0.1
Nashville, City of (Nashville WPCP)	1
Total Permitted Monthly Average Flow (MGD)	**1.2**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.12
Septic Flows (AADF, MGD)	0.96

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Brantley County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Nahunta, City of	0.23	0.20		
Total Withdrawal		**0.23**	**0.20**	**0.23**	**0.36**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.55	2.47
Self Supplied	1.32	2.11
Total Projected Demand from Municipal Facilities [1]	**0.23**	**0.36**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Brantley County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Nahunta, City of (Nahunta WPCP)	0.12
Total Permitted Monthly Average Flow (MGD)	**0.12**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.02
Septic Flows (AADF, MGD)	0.90

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Brooks County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Quitman, City of	1.50	1.40		
Floridan	Water Service Company of Georgia, Inc.	0.19	0.15		
Total Withdrawal		**1.69**	**1.55**	**0.94**	**1.51**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.52	2.44
Self Supplied	0.58	0.93
Total Projected Demand from Municipal Facilities [1]	**0.94**	**1.51**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Brooks County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Quitman, City of (Quitman WPCP)	1.3
Brookside Choice Properties (Fellowship Home At Brookside WPCP)	0.015
Total Permitted Monthly Average Flow (MGD)	**1.315**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.72
Septic Flows (AADF, MGD)	0.50

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Charlton County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Folkston, City of	1.50	1.25		
Floridan	Homeland, City of	0.15	0.15		
	Total Withdrawal	**1.65**	**1.40**	**0.62**	**1.00**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.09	1.74
Self Supplied	0.46	0.74
Total Projected Demand from Municipal Facilities [1]	**0.62**	**1.00**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Charlton County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Folkston, City of (Folkston WPCP (Pond))	0.28
Folkston, City of (Folkston WPCP Wetlands)	0.5
Total Permitted Monthly Average Flow (MGD)	**0.78**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.45
Septic Flows (AADF, MGD)	0.52

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Clinch County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Homerville, City of	0.75	0.75		
Total Withdrawal		**0.75**	**0.75**	**0.56**	**0.89**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.85	1.37
Self Supplied	0.30	0.47
Total Projected Demand from Municipal Facilities [1]	**0.56**	**0.89**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Clinch County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Homerville, City of (Homerville WPCP)	0.5
Homerville, City of (Industrial Park WPCP)	0.25
Stephen Foster State Park WPCP	Report
Total Permitted Monthly Average Flow (MGD)	**> .75**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.80
Septic Flows (AADF, MGD)	0.35

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Coffee County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Douglas, City of	6.00	5.75		
Floridan	Broxton, City of	0.28	0.25		
Floridan	Nicholls, City of	0.50	0.50		
Floridan	Holiday Beach, Inc.	0.50	0.50		
Floridan	Coffee County Board of Commissioners	0.35	0.30		
Floridan	Ambrose, City of	0.15	0.10		
Total Withdrawal		**7.78**	**7.40**	**5.68**	**9.08**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	7.60	12.16
Self Supplied	1.92	3.08
Total Projected Demand from Municipal Facilities [2]	**5.68**	**9.08**

NOTES:

[1] Includes municipally -supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Coffee County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Douglas, City of (Southeast WPCP)	6
Broxton	0.162
Nicholls, City of	0.5
Total Permitted Monthly Average Flow (MGD)	**6.662**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	5.35
Septic Flows (AADF, MGD)	1.53

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow
1.29 MGD from poultry processing industry forecasted separately; industrial flows projected to remain constant through 2060

Cook County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Adel, City of	4.31	3.30		
Floridan	Sparks, City of	0.60	0.55		
Claiborne	Lenox, City of	0.18	0.15		
	Total Withdrawal	**5.09**	**4.00**	**1.34**	**2.14**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.98	3.17
Self Supplied	0.64	1.03
Total Projected Demand from Municipal Facilities [1]	**1.34**	**2.14**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Cook County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Sparks, City of (Sparks WPCP)	0.5
Adel, City of (Adel WPCP)	2.5
Lenox, City of (Lenox WPCP)	0.17
Mishel Hospitality Group, Inc (Economy Inn WPCP)	0.02
Total Permitted Monthly Average Flow (MGD)	**3.19**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.25
Septic Flows (AADF, MGD)	0.41

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Echols County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [2]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
NA	Echols County [2]	NA	NA		
Total Withdrawal		**NA**	**NA**	**0.00**	**0.00**

NOTES:

[1] Max day is 1.6 times annual average day.

[2] Echols County does not have surface or groundwater permits listed.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.28	0.45
Self Supplied	0.28	0.45
Total Projected Demand from Municipal Facilities [1]	**0.00**	**0.00**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Echols County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Total Permitted Monthly Average Flow (MGD)	**0**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.00
Septic Flows (AADF, MGD)	0.18

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Irwin County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Ocilla, City of	1.00	0.70		
Total Withdrawal		**1.00**	**0.70**	**0.56**	**0.90**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.19	1.90
Self Supplied	0.62	1.00
Total Projected Demand from Municipal Facilities [1]	**0.56**	**0.90**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Irwin County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Ocilla, City of (Ocilla WPCP)	0.85
Total Permitted Monthly Average Flow (MGD)	**0.85**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.87
Septic Flows (AADF, MGD)	0.56

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Lanier County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Lakeland, City of	0.70	0.70		
Total Withdrawal		**0.70**	**0.70**	**0.38**	**0.61**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.96	1.53
Self Supplied	0.58	0.92
Total Projected Demand from Municipal Facilities [1]	**0.38**	**0.61**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Lanier County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Lakeland, City of (Lakeland WPCP)	0.5
Total Permitted Monthly Average Flow (MGD)	**0.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.19
Septic Flows (AADF, MGD)	0.58

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Lowndes County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Hahira, City of	0.60	0.40		
Floridan	Valdosta, City of	15.30	11.40		
Floridan	Moody Air Force Base	0.90	0.80		
Floridan	Lowndes County Board of Commissioners - South Lowndes System	8.29	4.42		
Floridan	Lowndes County Board of Commissioners - North Lowndes System	2.50	2.02		
	Total Withdrawal	**27.59**	**19.04**	**17.79**	**28.47**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	20.45	32.72
Self Supplied	2.66	4.25
Total Projected Demand from Municipal Facilities [1]	**17.79**	**28.47**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Lowndes County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
US Department of the Air Force (Moody Air Force Base)	0.75
Valdosta, City of (Mud Creek WPCP)	3.22
Stoker Utilities, LLC (Oak Street Subdivision WPCP)	0.1
Valdosta, City Of (Withlacoochee WPCP)	12
Hahira, City of (Hahira WPCP)	0.28
Georgia Sheriffs' Boys Ranch WPCP	0.03
Stoker Utilities, LLC (Hamilton Point/Heather Woods Subdivision LAS)	0.05
Lowndes County (South Regional WPCP)	2
Total Permitted Monthly Average Flow (MGD)	**18.43**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	27.13
Septic Flows (AADF, MGD)	3.57

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Pierce County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Blackshear, City of	0.75	0.68		
Floridan	Chatham Water Utility, LLC - Okefenokee Country Club	0.15	0.15		
Total Withdrawal		**0.90**	**0.83**	**0.57**	**0.91**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.72	2.75
Self Supplied	1.14	1.83
Total Projected Demand from Municipal Facilities [1]	**0.57**	**0.91**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Pierce County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Patterson, City of (Patterson WPCP)	0.21
Blackshear, City of	0.5
Total Permitted Monthly Average Flow (MGD)	**0.71**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.39
Septic Flows (AADF, MGD)	0.87

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Tift County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Tifton/Tift County Water System	11.00	8.36		
Floridan	Abraham Baldwin Agricultural College	0.50	0.50		
Floridan	Omega, City of	0.37	0.32		
Total Withdrawal		**11.87**	**9.18**	**4.94**	**7.90**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	6.21	9.94
Self Supplied	1.27	2.04
Total Projected Demand from Municipal Facilities [1]	**4.94**	**7.90**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Tift County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
OM, Inc. (EcoNomy Inn WPCP)	0.02
Ty Ty, City of (Ty Ty WPCP)	0.08
Magnolia Plantation WPCP	0.01
Tifton, City of (New River WPCP)	8
Omega, City of	0.131
Total Permitted Monthly Average Flow (MGD)	**8.241**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	5.93
Septic Flows (AADF, MGD)	1.01

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Turner County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Ashburn, City of	1.73	1.73		
Floridan	Sycamore, City of	0.20	0.18		
	Total Withdrawal	**1.93**	**1.90**	**0.90**	**1.43**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.10	1.77
Self Supplied	0.21	0.33
Total Projected Demand from Municipal Facilities [1]	**0.90**	**1.43**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Turner County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Ashburn, City of (Airport WPCP)	1.16
JIM-N-I Water & Sewer System	Report
Maria's Rentals, LLC (Ashburn Inn and RV Park WPCP)	Report
Sycamore	0.082
Total Permitted Monthly Average Flow (MGD)	**> 1.242**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.72
Septic Flows (AADF, MGD)	0.29

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Ware County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan	Waycross, City of	3.16	2.60		
Floridan	Waycross, City of - Ware County Industrial Park	3.40	3.00		
Floridan	Satilla Regional Water and Sewer Authority	2.20	1.80		
Total Withdrawal		**8.76**	**7.40**	**4.14**	**6.63**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.42	7.08
Self Supplied	0.28	0.45
Total Projected Demand from Municipal Facilities [1]	**4.14**	**6.63**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Ware County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Waycross, City of (Waycross WPCP)	6.7
Total Permitted Monthly Average Flow (MGD)	**6.7**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.79
Septic Flows (AADF, MGD)	1.79

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

APPENDIX 19 – UPPER FLINT COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Crisp County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Floridan, Claiborne (Tallahatta), Wilcox	Cordele, City of	4.10	3.00		
Claiborne	Crisp County Board of Commisioners	1.00	0.80		
Floridan	Arabi, City of	0.20	0.15		
Total Withdrawal		**5.30**	**3.95**	**1.76**	**2.82**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.32	3.71
Self Supplied	0.55	0.89
Total Projected Demand from Municipal Facilities [1]	**1.76**	**2.82**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Crisp County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Cordele, City of (Gum Creek WPCP)	5
Georgia Department of Natural Resources (The Retreat at Lake Blackshear WPCP)	0.015
Total Permitted Monthly Average Flow (MGD)	**5.015**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	3.13
Septic Flows (AADF, MGD)	0.49

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Dooly County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Vienna, City of	2.61	2.15		
Claiborne (Tallahatta)	Unadilla, City of	1.15	1.13		
Claiborne	Pinehurst, City of	0.20	0.20		
Total Withdrawal		**3.96**	**3.48**	**2.76**	**4.41**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [2]	2.98	4.77
Self Supplied	0.22	0.35
Total Projected Demand from Municipal Facilities [1]	**2.76**	**4.41**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

[2] Includes municipally -supplied industrial demand.

Dooly County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Byromville, Town of (Byromville WPCP)	0.1
Pinehurst, City of (Pinehurst WPCP)	0.12
Vienna, City of (North WPCP)	1.6
Vienna, City of (South WPCP)	0.75
Unadilla, City of (Unadilla WPCP)	0.62
Total Permitted Monthly Average Flow (MGD)	**3.19**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.77
Septic Flows (AADF, MGD)	0.28

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Macon County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Montezuma, City of	1.25	0.81		
Cretaceous Sand	Marshallville,City of	0.16	0.12		
Cretaceous Sand	Oglethorpe, City of	0.75	0.70		
Total Withdrawal		**2.16**	**1.63**	**0.76**	**1.22**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.99	1.58
Self Supplied	0.23	0.37
Total Projected Demand from Municipal Facilities [1]	**0.76**	**1.22**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Macon County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Marshallville, City Of (Marshallville WPCP)	0.12
Ideal, City of (Ideal WPCP)	0.08
The Oaks Nursing Home	Report
Total Permitted Monthly Average Flow (MGD)	**> 0.2**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.16
Septic Flows (AADF, MGD)	0.31

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Marion County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Buena Vista, City of	2.00	1.75		
Cretaceous Sand	Marion County Water System	1.30	1.00		
Total Withdrawal		**3.30**	**2.75**	**0.78**	**1.24**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.94	1.50
Self Supplied	0.16	0.26
Total Projected Demand from Municipal Facilities [1]	**0.78**	**1.24**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Marion County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Buena Vista, City of (Buena Vista WPCP)	0.4
Former Tri-County High School WPCP	Report
Total Permitted Monthly Average Flow (MGD)	**> 0.4**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.23
Septic Flows (AADF, MGD)	0.33

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Meriwether County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[2]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [3]
Cane Creek Watershed Reservoir (Lake Meriwether)	Woodbury, City of	0.50	0.42		
Cascade Creek	Roosevelt Warm Springs Institute	0.14	0.12		
Cold Springs	Warm Springs, City of	0.24	0.20		
Crystalline Rock	Luthersville, City of	0.43	0.43		
Total Withdrawal		**1.32**	**1.17**	**1.12**	**1.80**

NOTES:

[1] Greenville (Meriwether County) purchases water (>0.1 AAD-MGD) from City of Lagrange (Troup County).

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[3] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.97	3.15
Self Supplied	0.63	1.01
Total Projected Demand from Municipal Facilities [1]	**1.34**	**2.15**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Meriweather County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Warm Springs, City of (Warm Springs WPCP)	0.4
Greenville, City of (Kennel Creek WPCP)	0.25
Woodbury, City of (Woodbury WPCP)	0.325
Manchester, City of (Pigeon Creek WPCP)	0.812
Total Permitted Monthly Average Flow (MGD)	**1.787**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.35
Septic Flows (AADF, MGD)	0.75

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Pike County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Crystalline Rock	Pike County Water & Sewer Authority	0.21	0.21		
Total Withdrawal		**0.21**	**0.21**	**0.44**	**0.70**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.82	2.91
Self Supplied	1.39	2.22
Total Projected Demand from Municipal Facilities [1]	**0.44**	**0.70**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Pike County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Georgia Baptist Children's Home and Family Ministries, Inc. (Meansville Campus WPCP)	0.01
Molena Health & Rehab, LLC (Molena Extended Care WPCP)	0.01
Concord, City of (North WPCP)	0.04
Concord, City of (South WPCP)	0.1
Zebulon, City of (Zebulon WPCP)	0.2
Total Permitted Monthly Average Flow (MGD)	**0.36**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.10
Septic Flows (AADF, MGD)	1.17

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Schley County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Ellaville, City of	0.35	0.28		
Cretaceous Sand	Schley County Utilities	0.60	0.45		
Total Withdrawal		**0.95**	**0.73**	**0.48**	**0.77**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.56	0.90
Self Supplied	0.08	0.13
Total Projected Demand from Municipal Facilities [1]	**0.48**	**0.77**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Schley County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Ellaville, City of (Ellaville WPCP)	0.4
Total Permitted Monthly Average Flow (MGD)	**0.4**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.60
Septic Flows (AADF, MGD)	0.29

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Spalding County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Flint River	Griffin, City of	12.00	10.00		
Still Branch Reservoir [3,4]	Griffin, City of	42.00	35.00		
Flint River (Still Branch) [3,5]	Griffin, City of	50.00	41.67		
Total Withdrawal		**54.00**	**45.00**	**9.63**	**15.40**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Surface water withdrawal for City of Griffin (Spalding County) is located in Pike County.

[4] Includes demand for Coweta and Lamar Counties, which purchase water (>0.1 AAD-MGD) from City of Griffin (Spalding County). Assumed Coweta County's demand will taper by 2040.

[5] Intake to pump-storage facility.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	9.17	14.67
Self Supplied	0.29	0.47
Total Projected Demand from Municipal Facilities [1]	**8.88**	**14.20**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Spalding County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Griffin Moose Family Center #1503	Report
Griffin-Spalding County School System (Beaver Brook School WPCP)	Report
Timbercreek Mobile Home Park WPCP	Report
Spalding County Wsfa (Springs WPCP)	Report
Griffin, City of (Cabin Creek WPCP)	1.5
South Hampton Mobile Home Community WPCP	0.1
Community Services, LLLP - Troublesome Creek WRF	0.69
Griffin, City of (Shoal Creek WPCP)	2.25
Troublesome Creek WRF	0.275
Griffin, City of (Potato Creek WPCP)[1]	2
Total Permitted Monthly Average Flow (MGD)	**> 6.815**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	6.98
Septic Flows (AADF, MGD)	4.09

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

[1] Potato Creek serves the City of Griffin, but discharges in Lamar County

Sumter County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Americus, City of	4.20	3.75		
Cretaceous Sand	Plains, City of	0.20	0.15		
Total Withdrawal		**4.40**	**3.90**	**1.81**	**2.90**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.35	3.75
Self Supplied	0.53	0.86
Total Projected Demand from Municipal Facilities [1]	**1.81**	**2.90**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Sumter County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Plains, City of (Plains WPCP)	0.12
Andersonville, City of (Andersonville WPCP)	0.03
Americus, City Of (Mill Creek WPCP)	4.4
Total Permitted Monthly Average Flow (MGD)	**4.55**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.14
Septic Flows (AADF, MGD)	0.54

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Talbot County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Rush Creek Reservoir	Manchester, City of	1.44	1.20		
Lazer Creek [3]	Manchester, City of	3.70	3.08		
Crystalline Rock	Talbotton, City of	0.20	0.20		
Total Withdrawal		**1.64**	**1.40**	**0.76**	**1.22**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Intake to pump-storage facility.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.81	1.29
Self Supplied	0.05	0.07
Total Projected Demand from Municipal Facilities [1]	**0.76**	**1.22**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Talbot County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Tri-City Housing Authority	Report
Total Permitted Monthly Average Flow (MGD)	**> 0**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.00
Septic Flows (AADF, MGD)	0.18

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Taylor County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Reynolds, City of	0.45	0.26		
Cretaceous Sand	Butler, City of	2.20	1.80		
Total Withdrawal		**2.65**	**2.06**	**0.52**	**0.84**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.72	1.16
Self Supplied	0.20	0.32
Total Projected Demand from Municipal Facilities [1]	**0.52**	**0.84**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Taylor County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Taylor County Board of Commissioners (Plant Laurel WPCP)	0.12
Reynolds, City of (Reynolds WPCP)	0.16
Butler, City of (Butler WPCP)	0.5
Total Permitted Monthly Average Flow (MGD)	**0.78**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.59
Septic Flows (AADF, MGD)	0.23

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Upson County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Potato Creek [3]	Thomaston, City Of	3.40	2.83		
Potato Creek [3]	Thomaston, City Of	0.40	0.33		
Raw Water Cr Res	Thomaston, City Of	4.30	3.58		
Crystalline Rock	Upson County Water Departr	0.47	0.47		
Total Withdrawal		**4.77**	**4.05**	**2.85**	**4.56**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Intake to pump-storage facility.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.58	5.73
Self Supplied	0.73	1.17
Total Projected Demand from Municipal Facilities [1]	**2.85**	**4.56**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Upson County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Thomaston, City of (Bell Creek WPCP)	2
Thomaston, City of (Town Branch WPCP)	2
Total Permitted Monthly Average Flow (MGD)	**4**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	2.32
Septic Flows (AADF, MGD)	0.89

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Webster County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD) [1]
Cretaceous Sand	Unified Government of Webster County	0.25	0.15		
Total Withdrawal		**0.25**	**0.15**	**0.07**	**0.11**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	0.13	0.21
Self Supplied	0.07	0.11
Total Projected Demand from Municipal Facilities [1]	**0.07**	**0.11**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Webster County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Total Permitted Monthly Average Flow (MGD)	**0**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.00
Septic Flows (AADF, MGD)	0.10

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

APPENDIX 20 – UPPER OCONEE COUNTY-LEVEL WATER DEMAND AND WASTEWATER FLOW SUMMARIES

Baldwin County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [1]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[2]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[3]
Oconee River	Milledgeville, City of	12.44	10.37		
Oconee River	Milledgeville, City of	3.00	2.50		
Total Withdrawal		**3.00**	**12.87**	**3.20**	**5.12**

NOTES:

[1] Baldwin County purchases water (>0.1 AAD-MGD) from Sinclair Water Authority (Putnam County).

[2] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[3] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.81	7.69
Self Supplied	0.20	0.31
Total Projected Demand from Municipal Facilities [1]	**4.61**	**7.38**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Baldwin County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Milledgeville, City of (Milledgeville WPCP)	10.5
Lake Laurel Complex (GCSU East Campus) WPCP	Report
Lake Laurel Complex (GCSU East Campus) WPCP	Report
Total Permitted Monthly Average Flow (MGD)	**> 10.5**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	3.24
Septic Flows (AADF, MGD)	1.37

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Barrow County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Mulberry River	Winder, City of	5.10	4.25		
Mulberry River	Winder, City of	12.60	4.10		
Little Mulberry River	Winder, City of	4.50	1.40		
Rock Creek at Parks Mill Road (1), and Rock Creek at Reservoir (2)	Auburn, City of	7.20	3.90		
NRCS Reservoir #6 @ Barber Creek	Statham, City Of	0.80	0.67		
Oak Street Spring	Statham, City Of	0.14	0.11		
Bear Creek Reservoir [3]	Upper Oconee Basin Water Authority	11.02	9.18		
Total Withdrawal		**17.06**	**14.21**	**19.72**	**31.55**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Bear Creek Regional Reservoir is located in Jackson County and managed by the Upper Oconee Basin Water Authority (UOBWA). Yields are allocated between UOBWA members according to the following schedule: Athens-Clarke County 44%, Barrow County 19%, Jackson County 25%, and Oconee County 12%.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	22.34	35.75
Self Supplied	2.62	4.20
Total Projected Demand from Municipal Facilities [2]	**19.72**	**31.55**

NOTES:

[1] Includes municipally-supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Barrow County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Winder, City of (Marburg Creek WPCP)	0.6
Barrow County Board of Commissioners (Barber Creek WRF)	1.5
Winder, City of (Cedar Creek WPCP)	4
Barrow County Board of Commissioners (Tanners Bridge WRF)	5
Bethlehem Elementary School LAS	0.014
Barrow County Board of Commissioners (Tanners Bridge WRF)	0.5
Winder, City of (Marburg Creek WRF)	0.9
Total Permitted Monthly Average Flow (MGD)	**12.514**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	8.82
Septic Flows (AADF, MGD)	10.49

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Clarke County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
North Oconee River	Athens-Clarke County	25.50	21.25		
Middle Oconee River	Athens-Clarke County	16.00	13.33		
Bear Creek Reservoir [3]	Upper Oconee Basin Water Authority	25.52	21.27		
Total Withdrawal		**25.50**	**21.25**	**14.93**	**23.88**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Bear Creek Regional Reservoir is located in Jackson County and managed by the Upper Oconee Basin Water Authority (UOBWA). Yields are allocated between UOBWA members according to the following schedule: Athens-Clarke County 44%, Barrow County 19%, Jackson County 25%, and Oconee County 12%. Athens-Clarke County must not exceed the combined withdrawal of 34.75 MGD (Max Day) or equivalent to 25.5 MGD (Monthly Average) from the North Oconee River Permit, the Middle Oconee River Permit, and the permit holder's allocation from Bear Creek Reservoir.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	15.05	24.08
Self Supplied	0.12	0.20
Total Projected Demand from Municipal Facilities [2]	**14.93**	**23.88**

NOTES:

[1] Includes municipally-supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Clarke County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Athens-Clarke County (North Oconee WPCP)	14
Athens-Clarke County (Middle Oconee WPCP)	10
Pinewood Estates North Mobile Home Park WPCP	0.04
Athens-Clarke County (Cedar Creek WPCP)	4
Country Corners Community	Report
Hallmark Mobile Home Park	Report
University of Georgia (Composting Facility)	0.01
Total Permitted Monthly Average Flow (MGD)	**> 28.05**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	26.70
Septic Flows (AADF, MGD)	2.50

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Greene County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Sherrill Creek Reservoir	Union Point, City of	0.33	0.28		
Lake Oconee	Greensboro, City of	3	2.50		
Lake Oconee	Piedmont Water Resources	2	1.67		
Crystalline Rock	Piedmont Water Company - Reynolds Plantation	1.652	0.94		
Crystalline Rock	Piedmont Water Company - Harbor Club	0.138	0.12		
Total Withdrawal		**7.12**	**5.50**	**3.76**	**6.02**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	4.20	6.72
Self Supplied	0.43	0.69
Total Projected Demand from Municipal Facilities [1]	**3.76**	**6.02**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Greene County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Greensboro, City of (South WPCP)	1
Union Point, City of (Union Point WPCP)	0.45
Reynolds Plantation Urban WRF	0.15
Carey Station Urban WRF	0.5
Total Permitted Monthly Average Flow (MGD)	**2.1**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.44
Septic Flows (AADF, MGD)	1.25

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Hancock County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Lake Sinclair	Sparta, City Of	1.3	1.08		
Total Withdrawal		**1.3**	**1.08**	**1.10**	**1.76**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	1.14	1.82
Self Supplied	0.04	0.06
Total Projected Demand from Municipal Facilities [1]	**1.10**	**1.76**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Hancock County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Mayfield WPCP	0.06
Sparta, City of (Sparta WPCP)	0.8
Total Permitted Monthly Average Flow (MGD)	**0.86**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.46
Septic Flows (AADF, MGD)	0.32

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Jackson County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider [4]	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Grove Creek Reservoir	Commerce, City of	4.20	3.50		
Big Curry Creek Reservoir	Jefferson, City of	1.75	1.46		
North Oconee River	Jefferson, City of	4.00	3.33		
Parks Creek Reservoir	Jefferson, City of	4.60	3.83		
Middle Oconee River	Upper Oconee Basin Water Authority	60.00	50.00		
Bear Creek Reservoir [3]	Upper Oconee Basin Water Authority	14.50	12.08		
Crystalline Rock	Braselton, Town of [3]	1.12	0.90		
Crystalline Rock	Hoschton, City of	0.15	0.15		
Crystalline Rock	Nicholson Water Authority	0.23	0.23		
Total Withdrawal		**26.55**	**22.15**	**16.63**	**26.60**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Bear Creek Regional Reservoir is located in Jackson County and managed by the Upper Oconee Basin Water Authority (UOBWA). Yields are allocated between UOBWA members according to the following schedule: Athens-Clarke County 44%, Barrow County 19%, Jackson County 25%, and Oconee County 12%.

[4] City of Braselton (Jackson County) purchases water (>0.1 AAD-MGD) from Gwinnett County and City of Commerce (Jackson County) sells water to Madison County.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	18.42	29.48
Self Supplied	2.02	3.22
Total Projected Demand from Municipal Facilities [1]	**16.41**	**26.25**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Jackson County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Jackson County Water & Sewer Authority (Middle OconeeWPCP)	0.5
Jefferson, City of (Central City WPCP)	1
Hoschton, City of (Hoschton WPCP)	0.1
Braselton, Town of (Braselton WRF)	1.27
Arcade, City of (Arcade WRF)	0.25
Commerce, City of (Northside WPCP)	1.05
Jefferson, City of (Central City WPCP)	0.38
Jefferson, City of (I85 North WPCP)	0.287
Arcade Meadows (formerly, 4W ARCADE)	0.25
Total Permitted Monthly Average Flow (MGD)	**5.087**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	15.67
Septic Flows (AADF, MGD)	7.52

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Laurens County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Oconee River	Dublin, City of	5.00	4.17		
Cretaceous Sand	East Dublin, City of	1.12	0.90		
Dublin - Midville	Dublin, City of	0.15	0.15		
Claiborne	Dexter, Town of	0.23	0.23		
Total Withdrawal		**6.50**	**5.45**	**3.70**	**5.92**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	5.11	8.18
Self Supplied	1.41	2.26
Total Projected Demand from Municipal Facilities [1]	**3.70**	**5.92**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Laurens County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Cadwell, Town of (Cadwell WPCP)	0.05
Dudley, City of (Dudley WPCP)	0.12
Dublin, City of (Dublin WPCP)	6
Rentz, Town of (Rentz WPCP)	0.12
Dexter, City of (Dexter WPCP)	0.08
West Laurens Middle/High School	Report
East Dublin, City Of (East Dublin WPCP)	0.75
Total Permitted Monthly Average Flow (MGD)	**> 7.12**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	4.60
Septic Flows (AADF, MGD)	1.44

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Morgan County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Hard Labor Creek	Madison, City Of - Hard Labor	1.50	1.25		
Lake Oconee	Madison, City Of	2.00	1.67		
Total Withdrawal		**3.50**	**2.92**	**2.48**	**3.97**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	3.47	5.55
Self Supplied	0.99	1.58
Total Projected Demand from Municipal Facilities [1]	**2.48**	**3.97**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Morgan County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Madison, City of (Southside WPCP)	0.66
Rutledge, City of (Rutledge WPCP)	0.05
Madison, City of (Indian Creek WRF)	1
Department of Natural Resources (Hard Labor Creek State Park)	Report
Department of Transportation Rest Area 53	Report
Total Permitted Monthly Average Flow (MGD)	**> 1.71**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.06
Septic Flows (AADF, MGD)	1.09

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Oconee County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Crystalline Rock	Oconee County Utility Department	2.80	2.80		
Bear Creek Reservoir [2]	Upper Oconee Basin Water Authority	6.96	5.80		
Hard Labor Creek Reservoir [3]	Walton County Water & Sewerage Authority	12.43	12.43		
Total Withdrawal		**22.19**	**21.03**	**7.15**	**11.44**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[1] Max day is 1.6 times annual average day.

[2] Bear Creek Regional Reservoir is located in Jackson County and managed by the Upper Oconee Basin Water Authority (UOBWA). Yields are allocated between UOBWA members according to the following schedule: Athens-Clarke County 44%, Barrow County 19%, Jackson County 25%, and Oconee County 12%.

[3] Hard Labor Creek Regional Reservoir is located in Jackson County and managed by the Walton County Water & Sewerage Authority (WCWSA). Yields are allocated between WCWSA members according to the following schedule: Walton County 71.2% and Oconee County 28.8%.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	9.06	14.50
Self Supplied	1.91	3.06
Total Projected Demand from Municipal Facilities [1]	**7.15**	**11.44**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Oconee County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Oconee County Board of Commissioners (Rocky Branch WRF)	1
Oconee County (Calls Creek WPCP)	1.5
Oconee County Board of Commissioners (Rocky Branch WPCP)	0.4
High Shoals Health & Rehabilitation	0.012
Oconee County Schools (Dove Creek Elementary School WPCP)	0.0102
Total Permitted Monthly Average Flow (MGD)	**2.9222**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	5.18
Septic Flows (AADF, MGD)	4.78

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Putnam County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Lake Sinclair	Sinclair Water Authority [3]	6.65	5.54		
Crystalline Rock	Piedmont Water Company - Oconee Crossing	0.50	0.50		
Crystalline Rock	Piedmont Water Company - Long Shoals Plantation & River Bend / Horseshoe Bend Water Systems	0.40	0.40		
Crystalline Rock	Piedmont Water Company - Great Waters at Reynolds Plantation	0.26	0.16		
Crystalline Rock	Wildwood Water LLC	0.35	0.35		
Total Withdrawal		**8.16**	**6.96**	**3.26**	**5.22**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Includes demand for Baldwin County, which purchases water (>0.1 AAD-MGD) from Sinclair Water Authority (Putnam County).

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.03	3.24
Self Supplied	0.17	0.28
Total Projected Demand from Municipal Facilities [1]	**1.85**	**2.97**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Putnam County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Eatonton - Putnam Water & Sewer Authority (Westside WPCP)	0.55
Eatonton - Putnam Water & Sewer Authority (Eastside WPCP)	0.55
University of Georgia (Rock Eagle 4-H Center)	Report
Great Waters at Reynolds Plantation WRF	0.07
Oconee Crossing	0.5
Total Permitted Monthly Average Flow (MGD)	**> 1.67**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.67
Septic Flows (AADF, MGD)	1.01

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Walton County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Apalachee River	Walton County Water & Sewerage Authority	60.00	50.00		
Hard Labor Creek Reservoir [3]	Walton County Water & Sewerage Authority [4]	36.88	30.73		
Alcovy River	Social Circle, City of	1.00	0.83		
Alcovy River	Monroe, City of	10.00	8.33		
John T. Briscoe. Jr Reservoir	Monroe, City of	12.00	10.00		
Total Withdrawal		**59.88**	**49.90**	**12.12**	**19.40**

NOTES:

[1] Where a permitted annual average withdrawal was not available, it was calculated by dividing the permitted monthly average limit by 1.2.

[2] Max day is 1.6 times annual average day.

[3] Hard Labor Creek Regional Reservoir is located in Jackson County and managed by the Walton County Water & Sewerage Authority (WCWSA). Yields are allocated between WCWSA members according to the following schedule: Walton County 71.2% and Oconee County 28.8%.

[4] Walton County purchases water (>0.1 AAD-MGD) from Newton County Board of Commissioners.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	15.28	24.45
Self Supplied	3.16	5.05
Total Projected Demand from Municipal Facilities [1]	**12.12**	**19.40**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Walton County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Loganville, City of (Big Flat Creek WPCP)	1.75
Social Circle, City of (Little River WPCP)	0.65
Monroe, City of (Jack's Creek WPCP)	3.4
Walton County Board of Education (Loganville Middle School WPCP)	0.03
Walton County Board of Education (Youth Middle School WPCP)	0.0225
Loganville	0.25
Walnut Grove, City of (Walnut Grove WPCP)	0.05
Total Permitted Monthly Average Flow (MGD)	**6.1525**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	6.78
Septic Flows (AADF, MGD)	7.25

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Washington County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Cretaceous Sand	Tennille, City of	0.44	0.44		
Cretaceous Sand	Sandersville, City of	4.50	3.50		
Cretaceous Sand	Davisboro, Town of	0.50	0.50		
Total Withdrawal		**5.44**	**4.44**	**2.26**	**3.61**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs	2.72	4.36
Self Supplied	0.47	0.75
Total Projected Demand from Municipal Facilities [1]	**2.26**	**3.61**

NOTES:

[1] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Washington County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Harrison, City of (Harrison WPCP)	0.07
Sandersville, City Of (Sandersville WPCP)	1.7
Oconee Health Care Center	0.01
Tennille, City of (Buffalo Creek WPCP)	0.45
Davisboro, City of (Davisboro WPCP)	0.3
Total Permitted Monthly Average Flow (MGD)	**2.53**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	1.74
Septic Flows (AADF, MGD)	0.64

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow

Wilkinson County - Water Demands and Withdrawals

Summary of Permitted Sources

Source	Water Provider	Permitted Monthly Average Day (MGD)	Permitted Annual Average Day (MGD)[1]	Projected Water Withdrawal	
				2060 Average Day (MGD)	2060 Maximum Day (MGD)[2]
Cretaceous Sand	Gordon, City of	0.40	0.40		
Cretaceous Sand	McIntyre, City of	0.22	0.22		
Cretaceous Sand	Irwinton, City of	0.32	0.25		
Total Withdrawal		**0.94**	**0.87**	**0.67**	**1.07**

NOTES:

[1] Max day is 1.6 times annual average day.

Summary of Water Needs

Type of Demand	2060 Average Day Demand (MGD)	2060 Maximum Day Demand (MGD)
County Needs [1]	0.79	1.27
Self Supplied	0.12	0.19
Total Projected Demand from Municipal Facilities [2]	**0.67**	**1.07**

NOTES:

[1] Includes municipally-supplied industrial demand.

[2] The projected demand is intended to be a guideline to identify general expansion needs. Expansion capacity may be required sooner or later than indicated depending on local population and employment growth, water service extensions and other planning variables. Specific conditions for withdrawal and operation permits will be determined by GAEPD.

Wilkinson County-Projected Flows and Facility Needs

Permitted Facilities Summary

Facilities	Current Permitted Monthly Average Flow (MGD)
Gordon, City of (Gordon WPCP)	0.75
Wilkinson County Board of Education (Wilkinson County Senior High School WPCP)	0.02
Wilkinson County Board of Education (Wilkinson County Elementary School WPCP)	0.02
Total Permitted Monthly Average Flow (MGD)	**0.79**

Summary of Wastewater Needs

Wastewater Flows	2060 Projected Flows
Total Projected Discharge Flows (Max Monthly Average, MGD)	0.12
Septic Flows (AADF, MGD)	0.30

Note: Maximum Monthly Average is 1.25 times Annual Average Daily Flow