

County-Level Summaries



Appendix B outlines the anticipated schedule for expanding existing water and wastewater treatment plant capacities as well as building new water and wastewater treatment facilities in the Metropolitan North Georgia Water Planning District (District) to meet 2040 forecasted demands. Actual timing of new or expanded facilities or supplies will occur when local growth and planning indicate the need for additional capacity. Water supply and sewerage wastewater needs for 2040 are provided for each county and are further discussed in [Section 4](#). The information in this appendix was developed in consultation with the utilities and local governments based on their local water and wastewater planning efforts.

For the counties surrounding Lake Lanier, this appendix also includes requirements for high-quality effluent to be returned to Lake Lanier for the year 2050. This return flow is a critical piece of the District Plan and the drinking water supply plan for the State of Georgia in the Apalachicola, Chattahoochee and Flint (ACF) Basin. Planning considerations influenced the county-level summaries. For example, the return of high-quality effluent to Lake Lanier, Allatoona Lake and the Upper Flint River basin promotes long-term sustainability of water use and replenishes drinking water supplies, and the decommissioning of less efficient wastewater treatment facilities benefits water quality.

This appendix covers hydraulic capacity only; it does not cover upgrades to the level of treatment at existing water and wastewater facilities. The level of treatment at wastewater treatment plants may in some cases be impacted by the effectiveness of nonpoint source pollution controls, including those outlined in this Plan, and changes in the assimilative capacity of receiving water bodies.

Facility capacities listed in this appendix for each planning period are considered as maximums and not design flows or monthly averages as seen in EPD permits, and wastewater providers may plan within and up to that capacity. All new facilities and facility expansions identified in Appendix B are subject to applicable water quality permitting requirements and must provide a justification of need or socio-economic analysis to Georgia Environmental Protection Division (Georgia EPD) for review and must meet all state standards associated with the necessary permits. Inclusion within this Plan does not guarantee assimilative capacity or a permit.

The tables in this appendix do not include private, public-agency, or industrial facilities, which are permitted by Georgia EPD and are not part of the District's planning process. Local water and wastewater providers who elect to decommission these facilities and consolidate flows at another facility in the District will not require a plan amendment.

Summary of Planned Sources

A summary of water supply sources is provided for each county including the current permitted withdrawal and the planned 2040 withdrawal. The monthly average day peaking factor of 1.2 (maximum month average day/average annual day) was calculated for the 2003 Water Supply and Water Conservation Management Plan. It was reviewed and confirmed as appropriate for the 2022 Plan during the plan update process.

Plant Capacities

Plant capacities listed in this appendix were determined to meet or exceed the projected 2040 peak day water demand or maximum monthly flow wastewater facility treatment demand. It is recognized that plant capacity is added in increments based on design factors and economies of scale and not to match a specific projected flow on the date the additional capacity comes online. For example, if a water treatment plant or wastewater treatment plant with a 5 million gallon per day (MGD) capacity needs to handle a projected demand of 8 MGD, the most cost-efficient plan may be to double the current capacity to 10 MGD. The size of incremental expansions should be determined through local water and wastewater master plans based on the design of the facility, economies of scale and the community's needs.

The forecasts of water treatment plant capacity needs in this appendix were based on a District-wide average peaking factor of 1.6 (peak day/average annual day). This peaking factor was calculated for the 2003 Water Supply and Water Conservation Management Plan. It was reviewed and confirmed as appropriate for the 2022 Plan during the plan update process. The forecasts of wastewater treatment plant capacity in this appendix were based on a District-wide average peaking factor of 1.25 (maximum monthly average daily flow/average annual daily flow) for wastewater demands along with county infiltration/inflow factors. At a local level, these factors will vary for each utility due to variations in water distribution and collections system efficiency. Each utility must determine an appropriate peaking value and the impacts of water conservation measures on future flows in their local water and wastewater master plans (see Action Items [INTEGRATED-2](#) and [INTEGRATED-4](#)).

Significant proposed changes in plant capacity will be evaluated against the essential elements of this Plan through the Plan amendment process, as discussed in [Section 6.5.1](#) and outlined in the most recent [Adopted Plan Amendment Guidelines](#). Minor changes in phasing of capacity are considered consistent with this Plan and do not require an amendment.

Phasing

The timeframe for capital improvements described in this appendix is flexible unless otherwise noted. For example, delaying the date that a plant is decommissioned is generally acceptable. Expanding a plant in several phases is also generally acceptable. Local water and wastewater master plans are expected to define the timeframes for capital improvements in greater detail than this Plan (see Action Items [INTEGRATED-2](#) and [INTEGRATED-4](#)).

The permitting, design, construction and start-up of additional treatment capacity is a lengthy process, generally taking several years at minimum. Although this plan uses the best population and economic numbers available, significant changes in population and/or economic growth can occur more rapidly than updates to this Plan. Utilities are encouraged to identify additional water capacities, especially those that are, by their nature, time sensitive for consideration in future amendments to this Plan.

Permitting

In several instances, planning for future water supplies, shared water supply allocations and local wastewater discharge locations are recommended for local water and wastewater providers within the same county. As such, the split shown in this appendix between utilities within the same county is based on information available at the time this Plan was prepared and may change based on development and growth patterns in the county. In the case of such changes, an amendment to this Plan would be necessary.

BARTOW COUNTY - WATER

Summary of Planned Sources

Source	Local Water Provider	Current Permitted Withdrawal Monthly Average (MGD)	2040 Planned Withdrawal (MGD) (Note 1)	
			Monthly (Note 2)	Peak Day
Lewis Spring	Adairsville	4.1	4.5	6.0
Moss Spring	Emerson	0.5	1.5	1.5
Bolivar Springs	Bartow	0.8	1.2	1.2
Etowah River (Note 3)	Cartersville	23.0	37.5	50.0
Allatoona Lake				
Paleozoic Rock Aquifer	Bartow	0.0	3.0	4.5
Paleozoic Rock Aquifer	Emerson	0.0	1.0	1.0
Paleozoic Rock Aquifer	Kingston	0.15	0.15	0.15
Paleozoic Rock Aquifer	White	0.2	0.2	0.2
Total Withdrawal (MGD)		28.8	49.1	64.6

Notes:

- 1) 2040 Planned Withdrawal reflects proposed plant capacities needed to accommodate projected water demands and incremental plant expansions.
- 2) Monthly is calculated by dividing Peak Day by 1.33, unless otherwise listed in current permits.
- 3) The intake in the Etowah River is only permitted to Cartersville. A future intake may have a joint permit with Bartow County.
- 4) Bartow County's water supply is currently served through a contract with the City of Cartersville. In the future, Bartow County may seek a permit from Georgia EPD to have a direct withdrawal from Allatoona Lake. If that water withdrawal is permitted and constructed, Bartow County would reduce or eliminate their purchased water from the City of Cartersville. In either scenario, total withdrawals from Allatoona Lake will not be affected. In the event that a withdrawal permit is obtained, the connection with the City of Cartersville will be maintained for emergency service.

Summary of Needs

Water Demands & Capacities	2040 Peak Day Demand (PD-MGD) (Note 5)
Bartow County Needs	45.7
Self Supplied	-0.7
Total Projected Demand from Facilities (PD-MGD)	44.9
Treatment Capacity	64.6
Total Projected Demand from Facilities (AADF-MGD)	2040 (AADF-MGD)
	28.5

Notes:

- 5) District-wide planning peak day factor is 1.6 times annual average day.
 For local system planning, the highest peak day factor was 1.72 from 2011 to 2019 in this County.

Phasing Plan

Facilities (Note 6)	Existing (2021) Permitted Plant Capacity (PD-MGD)	By 2040 Plant Capacity at End of Period (PD-MGD)
Coosa Basin		
Adairsville WTP	4.0	6.0
Emerson WTP	0.5	1.5
Bartow County WTP	0.8	1.2
Cartersville Clarence B. Walker WTP	27.0	50.0
Groundwater		
Bartow County	0.0	4.5
Emerson	0.0	1.0
Kingston	0.15	0.15
White	0.2	0.2
Total Capacity (PD-MGD)	32.7	64.6

Notes:

- 6) The schedule shown above is intended to be a general 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 Georgia EPD.

Interconnections

Maintain existing interconnections and water supply agreements with Cherokee and Polk Counties.

BARTOW COUNTY - WASTEWATER

Summary of Needs

Wastewater Flows & Capacities	2040 Maximum Month Average Daily Flow (MMF-MGD)
Bartow County Sewered Needs	16.8
To Cobb County	-0.09
Total Projected Sewered Flow to Plants	16.7

Septic Flows (AAD-MGD)	4.5
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Phasing Plan

Facilities (Notes 1, 2, 3)	Existing (2021)	By 2040
	Permitted Plant Capacity (MMF-MGD)	Planned Plant Capacity (MMF-MGD)
Coosa Basin		
Adairsville North WPCP	2	5
Cartersville WPCP	15	15
Emerson Henry Jordan WWTP	0.45	1.5
Bartow Southeast WPCP	0.1	<i>12.1</i>
West Bartow WPCP (Note 4)		
Bartow Two Run WPCP	0.1	Decommission
Total Capacity (MMF-MGD)	17.7	33.6
Sewered Needs		16.7

Notes:

- 1) Max Month Flow (MMF) is 1.25 times the Average Annual Daily Flow (AAD).
- 2) The schedule shown is intended to be a general guideline to identify general capacity needs. While the expansion capacities are intended to be in operation before the end of the period shown, exact timing of expansions should be determined by local wastewater master plans.
- 3) Planned plant capacity values shown in italics are values provided by local wastewater providers and are subject to applicable water quality permitting requirements and must provide justification of need to Georgia EPD. Inclusion in this appendix does not guarantee assimilative capacity or a permit. When applying to Georgia EPD for wasteload allocations or wastewater disposal permits, wastewater providers are responsible for providing the necessary documentation to justify the socio-economic need that may be documented through local master planning or other planning documents and that the plant capacities specified above are not exceeded.
- 4) West Bartow WPCP is estimated to be completed in the 2016-2025 timeframe with a capacity of 4.0 MGD.

CHEROKEE COUNTY - WATER

Summary of Planned Sources

Source	Local Water Provider	Current Permitted Withdrawal Monthly Average (MGD)	2040 Planned Withdrawal (MGD) (Note 1)	
			Monthly (Note 2)	Peak Day
Etowah River / Hollis Q. Latham Reservoir (Note 3)	CCWSA	36.0	30.4	40.5
Etowah River at Riverbend		4.5		
Etowah River	Canton	18.7	7.5	10.0
Etowah River (Note 4)		Fills Hickory Log Creek Reservoir		
Crystalline Rock Aquifer	Ball Ground	0.25	0.25	0.25
Crystalline Rock Aquifer	Woodstock	0.71	0.71	0.71
Crystalline Rock Aquifer	Lake Arrowhead Utility	0.5	0.5	0.5
Total Withdrawal (MGD)		60.7	39.3	52.0

Notes:

- 1) 2040 Planned Withdrawal reflects proposed plant capacities needed to accommodate projected water demands and incremental plant expansions.
- 2) Monthly is calculated by dividing Peak Day by 1.33, unless otherwise listed in current permits.
- 3) Hollis Q. Latham Reservoir provides stream flow augmentation during low-flow conditions on the Etowah River.
- 4) Hickory Log Creek Reservoir is a pump-storage reservoir for Canton and Cobb County-Marietta Water Authority (CCMWA). The intake on the Etowah River is permitted to pump at a peak day rate of 39 MGD. The Hickory Log Creek Reservoir provides stream flow augmentation for Canton during low-flow conditions on the Etowah River.

Summary of Needs

Water Demands & Capacities	2040 Peak Day Demand (PD-MGD) (Note 5)
Cherokee County Needs	44.9
From CCMWA (to City of Woodstock)	-2.38
To Pickens/Dawson Counties (Note 6)	1.60
Self Supplied	-1.46
Total Projected Demand from Facilities (PD-MGD)	42.7
Treatment Capacity	52.0
Total Projected Demand from Facilities (AADF-MGD)	2040 (AADF-MGD)
	28.1

Notes:

- 5) District-wide planning peak day factor is 1.6 times annual average day.
 For local system planning, the highest peak day factor was 1.57 from 2011 to 2019 in this County.
- 6) Cherokee County Water and Sewerage Authority (CCWSA) sells water to outside-the-District counties of Pickens and Dawson Counties. Such sales are not precluded by the Metro Water District plan.

Phasing Plan

Facilities (Note 7)	Existing (2021) Permitted Plant Capacity (PD-MGD)	By 2040 Plant Capacity at End of Period (PD-MGD)
Coosa Basin		
Canton WTP	5.45	10.0
CCWSA Etowah River WTP	38.0	40.5
Groundwater		
Ball Ground	0.25	0.25
Woodstock	0.71	0.71
Lake Arrowhead Utility	0.5	0.5
Total Capacity (PD-MGD)	44.9	52.0

Notes:

- 7) The schedule shown above is intended to be a general 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 Georgia EPD.

Interconnections

Maintain existing interconnections and water supply agreements with Forsyth, Cobb and Bartow Counties.

ROCKDALE COUNTY - WATER

Summary of Planned Sources

Source	Local Water Provider	Current Permitted Withdrawal Monthly Average (MGD)	2040 Planned Withdrawal (MGD) (Note 1)	
			Monthly (Note 2)	Peak Day
Big Haynes Creek (Randy Poynter Lake)	Rockdale	32.8	20.3	27.0
Total Withdrawal (MGD)		32.8	20.3	27.0

Notes:

- 1) 2040 Planned Withdrawal reflects proposed plant capacities needed to accommodate projected water demands and incremental plant expansions.
- 2) Monthly is calculated by dividing Peak Day by 1.33, unless otherwise listed in current permits.

Summary of Needs

Water Demands & Capacities	2040 Peak Day Demand (PD-MGD) (Note 3)
Rockdale County Needs	26.9
Self Supplied	-0.9
Total Projected Demand from Facilities (PD-MGD)	26.0
Treatment Capacity	27.0
Total Projected Demand from Facilities (AADF-MGD)	2040 (AADF-MGD)
	16.8

Notes:

- 3) District-wide planning peak day factor is 1.6 times annual average day.
 For local system planning, the highest peak day factor was 1.44 from 2011 to 2019 in this County.

Phasing Plan

Facilities (Note 4)	Existing (2021)	By 2040
	Permitted Plant Capacity (PD-MGD)	Plant Capacity at End of Period (PD-MGD)
Ocmulgee Basin		
Rockdale WTP	22.1	27.0
Total Capacity (PD-MGD)	22.1	27.0

Notes:

- 4) The schedule shown above is intended to be a general 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 Georgia EPD.

Interconnections

Maintain interconnections and water supply agreements with DeKalb, Gwinnett and Newton Counties. Infrastructure should be maintained to allow transfers from DeKalb and Gwinnett Counties to fill peak demands on an emergency basis.

ROCKDALE COUNTY - WASTEWATER

Summary of Needs

Wastewater Flows & Capacities	2040 Maximum Month Average Daily Flow (MMF-MGD)
Rockdale County Sewered Needs	10.2
To DeKalb County	-0.2
Total Projected Sewered Flow to Plants	10.0
Septic Flows (AAD-MGD)	3.1

Phasing Plan

Facilities (Note 1, 2, 3)	Existing (2021)	By 2040
	Permitted Plant Capacity (MMF-MGD)	Planned Plant Capacity (MMF-MGD)
Ocmulgee Basin		
Rockdale Quigg Branch WPCP	7.0	<i>16.0</i>
Rockdale Almand Branch WPCP	1.25	
Rockdale Honey Creek WPCP	0.3	
Rockdale Scott Creek WPCP	0.45	
Rockdale Reuse Facility (Note 4)		
Rockdale Snapping Shoals WPCP	3.0	
Total Capacity (MMF-MGD)	12.0	16.0
Sewered Needs		10.0

Notes:

- 1) Maximum Month Flow is 1.25 times the Average Annual Daily Flow (AAD).
- 2) The schedule shown is intended to be a general guideline to identify general capacity needs. While the expansion capacities are intended to be in operation before the end of the period shown, exact timing of expansions should be determined by local wastewater master plans.
- 3) Planned plant capacity values shown in italics are values provided by local wastewater providers and are subject to applicable water quality permitting requirements and must provide justification of need to Georgia EPD. Inclusion in this appendix does not guarantee assimilative capacity or a permit. When applying to Georgia EPD for wasteload allocations or wastewater disposal permits, wastewater providers are responsible for providing the necessary documentation to justify the socio-economic need that may be documented through local master planning or other planning documents and that the plant capacities specified above are not exceeded.
- 4) The Rockdale Reuse Facility will be constructed by 2040 and have a capacity of 4.0 MGD.