Section 6: WATER SUPPLY SOURCES

This Section identifies surface water supply sources for the Metro Water District to meet future water demands. The first part of this Section discusses the water supply sources intended to meet water needs through the 2035 planning horizon. The rest of this Section discusses alternate potential water supply sources or those for post-2035 consideration.

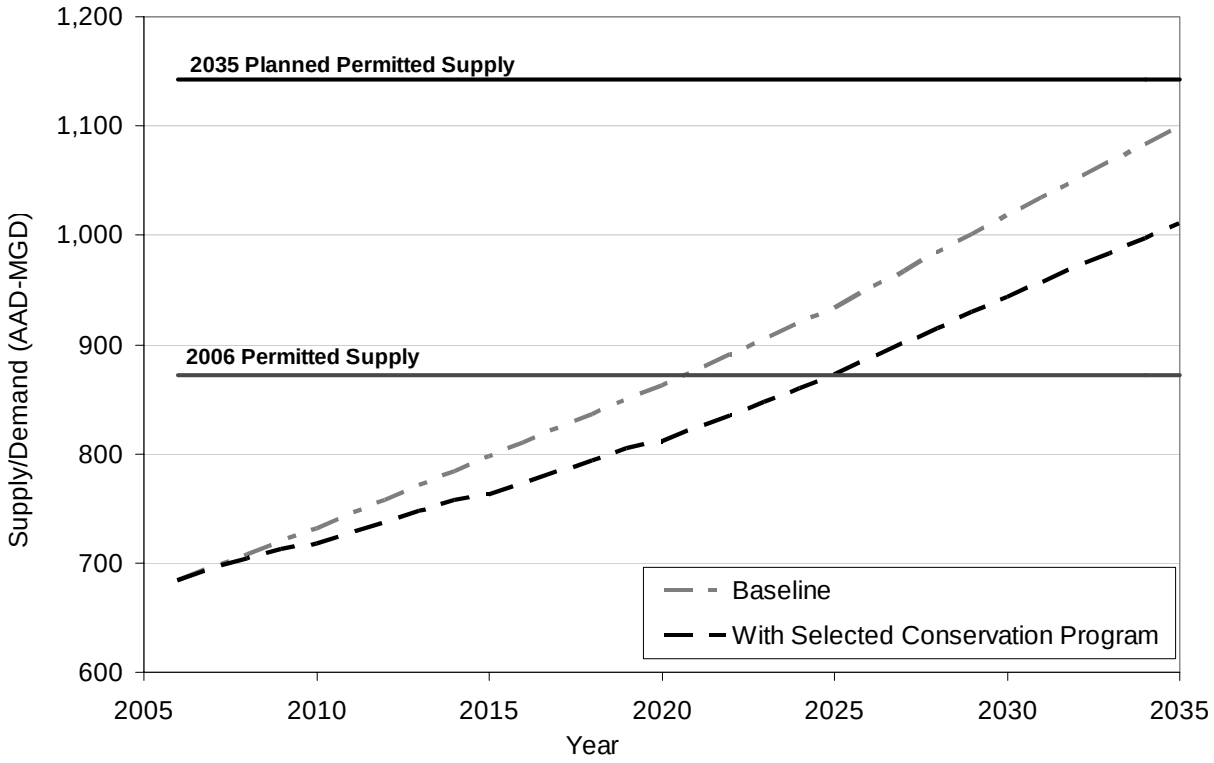
MEETING 2035 DEMAND

By 2035, the Metro Water District's water demands will be approaching 1,011 AAD-MGD as shown in Table 3-5 with the aggressive water conservation program discussed in Section 5. The current permitted surface water supply is 882 AAD-MGD, therefore to meet the projected future water supply needs in the Metro Water District through 2035, additional water supply sources will be needed. It is important to note that the savings from the Metro Water District water conservation program were considered first, prior to looking at additional water supply sources. The water supply evaluation performed for the 2003 plan served as a starting point for identifying new sources, supplemented by additional water supply sources identified through discussions with local water providers and previous water supply evaluations performed by local and regional agencies. These future water supply alternatives to meet 2035 demands included:

- Existing water supply sources and reservoirs
- Expansions of existing sources
- Potential new water supply sources

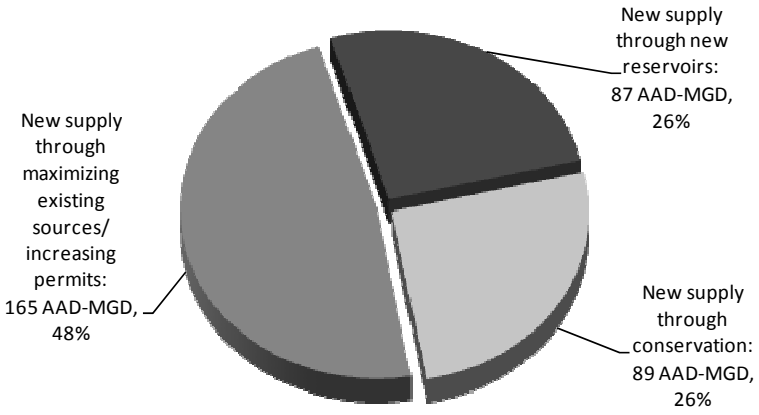
Each of these sources was evaluated and considered in conjunction with local plans, priorities and preferences. On an average annual basis, the anticipated year 2035 permitted surface water supply is 1,140 AAD-MGD. Figure 6-1 shows graphically that the water supplies identified will meet 2035 forecasted demands.

FIGURE 6-1
Metro Water District Water Demand and Supply Forecasts



To meet the 2035 water demands, this Water Supply and Water Conservation Management Plan relies on (1) an aggressive water conservation program, (2) maximizing existing supply sources, and (3) new supply sources through new reservoirs. Figure 6-2 shows that the majority of planned future supplies over currently permitted supplies are the result of maximizing existing water supply sources while conservation provides slightly more water than new reservoir sources.

FIGURE 6-2
Comparison of Future Water Supplies to Meet Demands



WATER SUPPLY EVALUATION CRITERIA

The evaluation criteria used to develop the recommended water supply sources was based on the alternatives evaluation in the 2003 Water Supply and Water Conservation Management Plan with some adjustments as outlined below.

Maximize the use of existing sources and facilities. Water supply sources and treatment facilities are a major investment for local water providers; therefore maximizing existing water supply sources is cost-effective and generally involves the lowest environmental impact.

Minimize interbasin transfers and maximize basin self-sufficiency. Maximizing basin self-sufficiency includes both minimizing interbasin transfers and careful use of the allocations from Lake Lanier and Allatoona Lake. The Metro Water District has always supported the minimization of interbasin transfers.

Maximize reuse opportunities. With limited drinking water supplies in the Metro Water District, indirect potable reuse is viewed as an amenity to replenish drinking water supplies. Indirect potable reuse is critical to meeting future water supply needs in Lake Lanier and Allatoona Lake. Non-potable reuse replaces demands for potable water supply, thereby extending limited available water supply sources.

Continue to protect water quality. Protecting existing and future drinking water supplies is a strong priority of the Wastewater Management Plan and the Watershed Management Plan. The location of new drinking water supply sources must consider water quality as well as instream water needs.

Advanced treatment technologies. As the use of indirect potable reuse to augment water supplies increases, it will likely be accompanied by upgrades to treatment technologies in drinking water treatment plants. Technologies such as UV disinfection may provide added barriers and ensure continued delivery of high quality potable water.

2035 WATER SUPPLY SOURCES

The following discussion presents the preferred water supply sources to meet 2035 water demands consistent with the County Level Summaries in Appendix B. The sources identified to meet 2035 water demands are shown on Figure 6-3 and in Table 6-1.

As discussed in Section 2, groundwater use makes up less than 1% of the public water supplies for the Metro Water District due to bedrock geology. Over the 2035 planning horizon, it is expected that the percentage of groundwater use will remain about constant. For planning purposes, groundwater supply sources have been factored into the water supply as a source for small towns and as a supplemental source.

While water reuse is an important component of this Water Supply and Water Conservation Management Plan, it is considered a mechanism for increasing reliability and extending supplies. Reuse is covered in detail in Section 7.

FIGURE 6-3
Surface Water Supply Sources Identified to Meet 2035 Demands

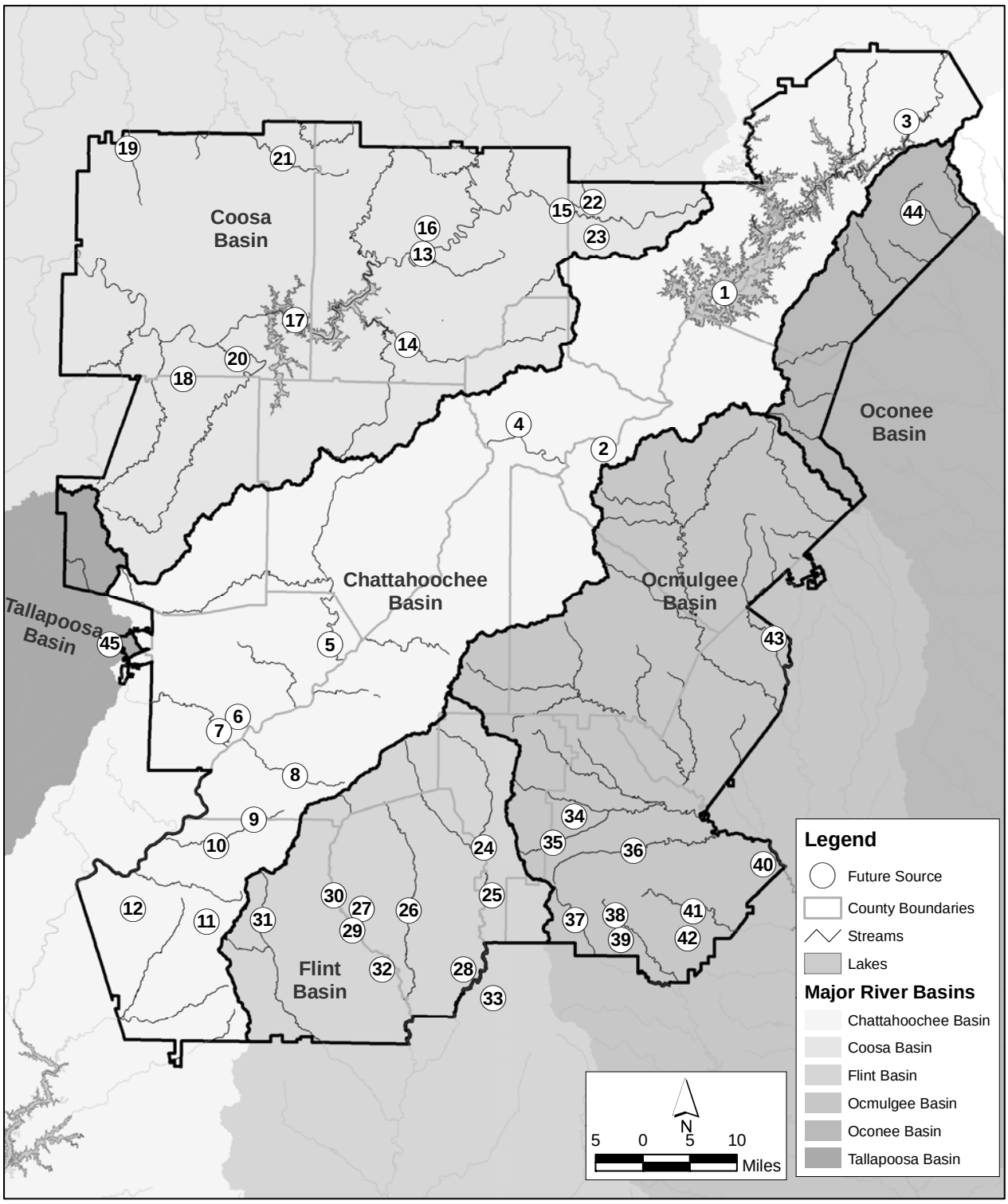


TABLE 6-1
Surface Water Supply Sources Through 2035

Water Supply Source	Owner/Operator Utilizing Source	2035 Planned Permitted Monthly Average Withdrawal (MGD) (Note 10)
Chattahoochee River Basin		
1 Lake Lanier	City of Cumming	27
	Forsyth County Water Resources	51
	Gwinnett County DWR	169
	City of Buford	3.22
	City of Gainesville Public Utilities	53
2 Chattahoochee River	Cobb County-Marietta Water Authority	87
	DeKalb County Watershed Management	140
	City of Atlanta Watershed Management	180
	Atlanta - Fulton County Water Resources	116
	Forsyth County / City of Cumming	(Note 1)
3 Glades Reservoir (Flat Creek)	Hall County	TBD
4 Big Creek	City of Roswell	3.75
5 Sweetwater Creek	City of East Point	11.5
6 Bear Creek (Douglas County)	Douglasville-Douglas County Water and Sewer Authority	(Note 2)
7 Dog River	Douglasville-Douglas County Water and Sewer Authority	23
8 Bear Creek (Fulton County)	TBD	11
9 Cedar Creek (Fulton County)	City of Palmetto	0.45
10 Cedar Creek (BT Brown) Reservoir (Coweta County)	Coweta County Water and Sewerage Authority	7.5
11 Sandy Brown Creek and J.T. Haynes Reservoir	Newnan Utilities	15.8
12 Chattahoochee Basin Options	Coweta County	8
Chattahoochee River Basin Total		**907.22**
Coosa River Basin		
13 Etowah River	City of Canton	13.5
	City of Cartersville	(Note 3)

Water Supply Source	Owner/Operator Utilizing Source	2035 Planned Permitted Monthly Average Withdrawal (MGD) (Note 10)
14 Etowah Watershed Reservoir (Note 4)	Fulton County	15
15 Etowah River / Yellow Creek (Lathem Reservoir)	Cherokee County Water and Sewerage Authority	39.8
16 Etowah River / Hickory Log Creek	Cobb County-Marietta Water Authority	(Note 5)
	City of Canton	
17 Allatoona Lake	Cobb County-Marietta Water Authority	106.5
	City of Cartersville	52.5
18 Etowah River / Richland Creek	Paulding County	30
19 Lewis Spring	City of Adairsville	4.5
20 Moss Springs	City of Emerson	0.5
21 Bolivar Springs	Bartow County	0.8
22 Bannister Creek	Forsyth County	TBD (Note 1)
23 Etowah Watershed Reservoir	Forsyth County	
Coosa River Basin Total		**263.1**
Flint River Basin		
24 Flint River	Clayton County Water Authority	(Note 6)
	Fayette County Water System	(Note 7)
25 J.W. Smith and Shoal Creek Reservoirs	Clayton County Water Authority	19.8 (Note 8)
26 Whitewater Creek	City of Fayetteville	3
	Fayette County Water System (Note 6)	31
27 Lake Kedron / Lake Peachtree (Flat Creek)	Fayette County Water System	
28 Lake Horton (Horton Creek)	Fayette County Water System	
29 Lake McIntosh (Line Creek)	Fayette County Water System	
30 Line Creek	Newnan Utilities	(Note 9)
31 White Oak Creek	Newnan Utilities	
32 Hutchins' Lake (Keg Creek)	City of Senoia	0.45
33 Still Branch Creek	City of Griffin (to Coweta County)	7.5
Flint River Basin Total		**61.75**

Water Supply Source	Owner/Operator Utilizing Source	2035 Planned Permitted Monthly Average Withdrawal (MGD) (Note 10)
Ocmulgee River Basin		
34 W.J. Hooper Reservoir (Little Cotton Indian Creek)	Clayton County Water Authority	39.5 (Note 8)
35 Blalock Reservoir (Pates Creek)	Clayton County Water Authority	
36 Fargason (Walnut Creek) Reservoir	City of McDonough	2.4
37 Towaliga River Reservoirs (Strickland and Cole)	Henry County Water and Sewerage Authority	21.75
38 Gardner (Indian Creek) Reservoir	Henry County Water and Sewerage Authority	
39 Rowland (Long Branch) Reservoir	Henry County Water and Sewerage Authority	
40 Ocmulgee Reservoir	Henry County Water and Sewerage Authority	39
41 Tussahaw Creek Reservoir	Henry County Water and Sewerage Authority	
42 Brown Branch	City of Locust Grove	0.34
43 Big Haynes Creek	Rockdale County	22.1
Ocmulgee River Basin Total		**125.09**
Oconee River Basin		
44 North Oconee River / Cedar Creek	City of Gainesville Public Utilities	9
Tallapoosa River Basin		
45 Little Tallapoosa River (Lake Fashion / Cowan Lake)	City of Villa Rica	2.25
Totals		
Metro Water District Total	Monthly Average	1,368.41
	Annual Average	1,140.34

Notes:
1. Alternate intake if additional supplies are unavailable from Lake Lanier
2. The Bear Creek Reservoir serves as a supplemental supply to the Dog River Reservoir.
3. Cartersville's permit for Etowah River is included within it's Allatoona Lake permit.
4. The specific location of the reservoir has not been identified, but is likely to be near the Fulton County service area.
5. Water released to Etowah River—included in Canton / Cobb County Marietta Water Authority withdrawals
6. Water pumped to fill Shoal Creek reservoir
7. Water pumped to fill Lake Horton reservoir
8. Clayton County Water Authority will increase capacity at one of its three facilities to 79 PD-MGD (59.3 MGD on a monthly average basis) by 2035. This table shows capacities evenly split.
9. White Oak Creek and Line Creek withdrawals fill JT Haynes Reservoir.
10. Annual average day equals monthly average divided by 1.2.

CHATTAHOOCHEE RIVER BASIN

The Chattahoochee River, along with Lake Lanier and several tributaries will continue to be the largest water supply source in the Metro Water District through 2035 and beyond. The major supply sources through the planning horizon are described below.

Lake Lanier: Lake Sidney Lanier is the largest reservoir on the Chattahoochee River and extends 44 miles up the Chattahoochee from Buford Dam. Gwinnett County, City of Buford, City of Cumming/Forsyth County and City of Gainesville have water supply intakes on Lake Lanier. All five local water providers are expected to increase their withdrawals through 2035 to meet demands.

Chattahoochee River: The main stem of the Chattahoochee River in the Metro Water District for water supply includes the reach from Buford Dam to Peachtree Creek. The City of Atlanta, Atlanta-Fulton County Water Resources Commission, Cobb County-Marietta Water Authority, and DeKalb County all have major water supply intakes on this reach. Through 2035, it is anticipated that Atlanta-Fulton County Water Resources Commission will increase its permitted withdrawal from the Chattahoochee River. Forsyth County/City of Cumming may develop an intake on the Chattahoochee River during the planning horizon if additional supplies from Lake Lanier are not obtained.

Flat Creek (Glades Reservoir): A land owner in Hall County is currently in the permitting process for a new 733-acre reservoir on Flat Creek that will release water into Lake Lanier in Hall County. Expected year 2035 monthly withdrawal from this source is yet to be determined.

Big Creek: Big Creek in north Fulton County is a water supply source for the City of Roswell with a permitted monthly average withdrawal of 1.2 MGD. A safe yield analysis of Big Creek and additional supplemental sources are currently under investigation. Roswell plans to continue using this supply with a total monthly average withdrawal of 3.75 MGD by 2035 from a combination of groundwater and surface water sources.

Sweetwater Creek: The City of East Point has a water withdrawal intake on Sweetwater Creek in Douglas County. The Ben Hill reservoir provides storage and serves as a management tool to ensure the minimum required flow from Sweetwater Creek to the Chattahoochee River and to ensure adequate flows in Sweetwater Creek during droughts. Through 2035, no expansion or changes in the permitted monthly average withdrawal of 11.5 MGD are being considered.

Bear Creek (Douglas County): The Douglasville-Douglas County Water and Sewer Authority operates a reservoir on Bear Creek in Douglas County. The Bear Creek Reservoir serves as a supplemental supply to the Dog River Reservoir.

Dog River: The Dog River Reservoir in Douglas County is operated by the Douglasville-Douglas County Water and Sewer Authority. A project currently underway to increase the dam height will allow for an increase of permitted monthly withdrawal to 23 AAD-MGD.

Bear Creek (Fulton County): A new impoundment is proposed on Bear Creek in south Fulton County. This project would have an expected permitted monthly withdrawal of 11 MGD in year 2035.

Cedar Creek (Fulton County): The City of Palmetto has a water withdrawal intake and chain of reservoirs on Cedar Creek in south Fulton County. This facility has a maximum yield of 1.0 AAD-MGD. Palmetto plans to continue utilizing this source through 2035.

Cedar Creek (Coweta County): The B.T. Brown Reservoir on Cedar Creek in Coweta County is operated by the Coweta County Water and Sewerage Authority. The Authority proposes increasing the yield of this reservoir to allow for 10 PD-MGD capacity at the treatment plant by reducing the 12-foot freeboard between the top of the dam and normal pool without any additional structural changes.

Sandy Brown Creek and JT Haynes Reservoir: The City of Newnan uses Sandy Brown Creek as a water supply source for the off-stream J.T. Haynes Reservoir. The J.T. Haynes Reservoir is also supplemented with flows from White Oak Creek and Line Creek. Withdrawals from the J.T. Haynes Reservoir are expected to increase to a permitted monthly average withdrawal of 16 MGD by 2035.

Chattahoochee Basin Options: Coweta County will explore either purchasing water from the City of Atlanta or developing an intake on the Chattahoochee River for meeting future demands in Coweta County.

Chattahoochee Basin Limitations

Georgia EPD has determined a withdrawal limit from Lake Lanier and the Chattahoochee River above Peachtree Creek for the Metro Water District of 664 AAD-MGD. However, additional withdrawals are allowed if returns are equal to 100% of the withdrawal increment over the 664 AAD-MGD limit. Georgia EPD has also provided guidance on the rate of return for withdrawals in the Chattahoochee River Basin above Whitesburg for the Metro Water District. This Chattahoochee River Basin average annual return rate is 58% of withdrawals.

This plan complies with both requirements. The return rate in the Chattahoochee River Basin for this plan is 78% of the annual average withdrawals in 2035. This plan also complies with the withdrawal limit based on returns. The plan includes a total withdrawal of 688 AAD-MGD from the Chattahoochee River and Lake Lanier by meeting the 100% return rate of the 24 AAD-MGD beyond the 664 AAD-MGD.

COOSA RIVER BASIN

The Coosa River in the Metro Water District, which includes the Etowah River and Allatoona Lake, will continue to be the second largest water supply source for the Metro Water District through 2035. The water supply sources through the planning horizon are described below.

Etowah River: The main stem of the Etowah River provides water supplies for the City of Canton, the City of Cartersville and the Cherokee County Water and Sewerage Authority. The Cherokee County Water and Sewer Authority utilizes the Hollis Q. Lathem Reservoir as an in-stream drought contingency facility on Yellow Creek. Water is released from this reservoir during periods of critical flow in the Etowah River. Both Canton and the Cherokee County Water and Sewer Authority plan to increase withdrawals from the Etowah to meet demands through 2035. The Etowah River is also the primary source of water for the Hickory Log Creek Reservoir. The City of Cartersville in conjunction with Bartow County is considering an intake

on the Etowah River downstream of Allatoona Lake. Forsyth County is also considering adding a withdrawal from an Etowah River source. A new reservoir is under consideration by Fulton County to meet demands in North Fulton. The specific location of the reservoir within the Etowah basin has not been identified, but is likely to be near the Fulton County service area.

Allatoona Lake: Allatoona Lake is an impoundment of the Etowah River which is operated by the U.S. Army Corps of Engineers (Corps). Both the Cobb-County Marietta Water Authority and the City of Cartersville have water supply intakes on the Lake. Both local water providers plan to increase their withdrawals through 2035.

Richland Creek: Paulding County is currently in the permitting stages of a new reservoir on Richland Creek; expected permitted monthly withdrawal is 30 MGD.

Lewis Spring: The City of Adairsville utilizes Lewis Spring which is a groundwater spring, considered a surface water source. Adairsville plans to increase its use of this source slightly through 2035.

Moss Springs: The City of Emerson utilizes Moss Springs, which is a groundwater spring, considered a surface water source.

Bolivar Springs: Bartow County utilizes Bolivar Springs, which is a groundwater spring, considered a surface water source.

Bannister Creek: Forsyth County is exploring a supplemental water source to an off-stream reservoir by pumping water from Bannister Creek to the Etowah River, just upstream of its confluence with the Etowah River.

Hickory Log Creek Reservoir: Hickory Log Creek Reservoir is off-stream storage filled with water pumped from the Etowah River. Water is not withdrawn from the reservoir but instead from intake facilities downstream.

Coosa Basin Limitations

Georgia EPD has set a withdrawal limit from Allatoona Lake of 200 AAD-MGD. For other new or expanded withdrawals in the Coosa Basin, an instream protection flow of monthly 7Q10 is required. A third restriction is that interbasin transfers from the Coosa River Basin are limited to a maximum of 100 AAD-MGD.

This plan complies with those requirements. The total withdrawal from Allatoona Lake in the plan is 133 AAD-MGD. The net withdrawal for the entire Coosa Basin within the Metro Water District is 219 AAD-MGD. The interbasin transfer amount is 34 AAD-MGD.

FLINT RIVER BASIN

The Flint River basin will continue to be an important water supply source for southern Metro Water District communities through 2035. The water supply sources through the planning horizon are described below.

Flint River: The Flint River is utilized as a water supply source by both the Clayton County Water Authority and the Fayette County Water System. Clayton County Water Authority pumps

from the Flint River to fill two reservoirs located on Shoal Creek. Fayette County pumps from the Flint River to Lake Horton. Fayette County plans to increase withdrawals from the Flint River by 2035. Clayton County may also increase withdrawals from the Flint River by 2035.

J.W. Smith and Shoal Creek Reservoirs: Clayton County Water Authority has two reservoirs on Shoal Creek: the J.W. Smith Reservoir and Shoal Creek Reservoir. Both facilities are filled primarily with off-stream pumping from the Flint River.

Whitewater Creek: The City of Fayetteville and Fayette County both have intakes on Whitewater Creek. Fayette County pumps water from Whitewater Creek to either the Crosstown Water Treatment Plant or to the Lake Horton reservoir. The City of Fayetteville is considering an off-stream reservoir by 2015 for additional drought protection.

Flat Creek Reservoirs (Lake Kedron/Lake Peachtree): Lake Kedron and Lake Peachtree are two impoundments of Flat Creek which are used as a water supply source by Fayette County. No increased withdrawals from the Flat Creek reservoirs are anticipated through 2035.

Horton Creek (Lake Horton): Lake Horton is a water supply reservoir on Horton Creek in Fayette County. Water is pumped from the Flint River and Whitewater Creek to the Lake. The Fayette County Water System plans to expand withdrawals from Lake Horton through 2035.

Line Creek: Fayette County has an impoundment on Line Creek, Lake McIntosh, which provides a yield of 12.5 AAD-MGD. Newnan Utilities has an intake on Line Creek which is used as a supplemental water supply source for the off-stream J.T. Haynes Reservoir. Both Fayette County and Newnan Utilities plan to utilize additional withdrawals from Line Creek by 2035.

White Oak Creek: White Oak Creek is used by Newnan Utilities as a water supply source for the off-stream J.T. Haynes Reservoir. No additional withdrawals are expected from this source through 2035.

Hutchins' Lake: The City of Senoia located on Keg Creek just upstream of the confluence with Line Creek. This is a small drinking water supply reservoir that serves the needs of the City of Senoia. Senoia plans to expand their permitted withdrawal by year 2015.

Still Branch Creek: Coweta County has an existing contractual agreement with the City of Griffin to purchase water from Still Branch Creek. The impoundment is located east of the Flint River in Pike County. The maximum 24 hour withdrawal is 48 MGD and the not to exceed monthly average is 42 MGD. Still Branch Creek serves the City of Griffin as well as seven wholesale customers.

OCMULGEE RIVER BASIN

The Ocmulgee River Basin includes a number of important water supply sources for the southwest communities in the Metro Water District, including Clayton, Henry and Rockdale Counties. The water supply sources through the planning horizon are described below.

W.J. Hooper Reservoir (Little Cotton Indian Creek): The Clayton County Water Authority has the William J. Hooper Reservoir on Little Cotton Indian Creek in Henry County near Stockbridge. The reservoir is supplemented with flows from the upstream Blalock Reservoir. Clayton County Water Authority has a permit to pump supplemental water from Big Cotton Indian Creek, but is not currently using this source. It is expected that some increases in withdrawals from the reservoirs on Little Cotton Indian Creek will occur by 2035.

Blalock Reservoir (Pates Creek): The Edgar Blalock Reservoir is another Clayton County Water Authority reservoir on Pates Creek fives miles upstream on its confluence with Little Cotton Indian Creek. The Blalock Reservoir can release up to 20 AAD-MGD downstream to the Hooper Reservoir. No expansions of this facility are planned through 2035.

John Fargason (Walnut Creek) Reservoir: The City of McDonough uses Walnut Creek as a water supply source and owns and operates the in-stream John Fargason reservoir. The City of McDonough plans to expand this supply source before 2010.

Towaliga River (Strickland and Cole) Reservoirs: The Henry County Water and Sewerage Authority has two reservoirs on the Towaliga River; The Edward Cole (Upper Towaliga) Reservoir and the Strickland (Lower Towaliga) Reservoir. The Towaliga Reservoirs feed the S. Howell Gardner (Indian Creek) and Rowland (Long Branch) Reservoirs. The Authority plans to expand withdrawals from the Towaliga watershed to allow for an additional 5 PD-MGD by 2025 at the Towaliga Water Treatment Plant. The additional needed capacity will be obtained through a permit increase at the Towaliga, Gardner, and/or the Rowland Reservoirs.

S. Howell Gardner (Indian Creek) Reservoir: The S. Howell Gardner Reservoir is an impoundment of Indian Creek used as a water source by the Henry County Water and Sewerage Authority at the Towaliga Water Treatment Plant. The Authority is planning for an additional 5 PD-MGD by 2025 at the Towaliga Water Treatment Plant. The additional needed capacity will be obtained through a permit increase at the Towaliga, Gardner, and/or the Rowland Reservoirs.

Rowland (Long Branch) Reservoir: The Rowland Reservoir is an impoundment of Long Branch used as a water source by the Henry County Water and Sewerage Authority at the Towaliga Water Treatment Plant. The Authority is planning for an additional 5 PD-MGD by 2025 at the Towaliga Water Treatment Plant. The additional needed capacity will be obtained through a permit increase at the Gardner Reservoir and/or the Rowland Reservoir.

Tussahaw Creek: The Tussahaw Creek Reservoir, a 1,500-acre impoundment on Tussahaw Creek, provides water supply for the Henry County Water and Sewerage Authority. The Henry County Water and Sewerage Authority plans to expand withdrawals to a maximum of 52 MGD by 2035.

Ocmulgee Reservoir: The Henry County Water and Sewerage Authority is considering a new reservoir on the Ocmulgee River. The specific location of the reservoir has not been identified.

Withdrawals from the proposed Reservoir would likely be routed to the Tussahaw Water Treatment Facility.

Brown Branch: The City of Locust Grove treats spring water from Brown Branch, which forms the headwaters to Wolf Creek. The spring water is blended with well water.

Big Haynes Creek: Big Haynes Creek is the major water supply source for Rockdale County, which withdraws from Randy Pointer Lake, an instream water supply reservoir. Rockdale County plans to increase withdrawals from this source by 2025.

OCONEE RIVER BASIN

The Oconee River Basin in the Metro Water District is composed mostly of smaller headwater streams; therefore there is only one water supply source below that is being considered for meeting 2035 demands.

North Oconee River / Cedar Creek: The City of Gainesville plans to use the North Oconee Reservoir on Cedar Creek for water supply purposes and pump from the North Oconee River as a supplemental source. This reservoir will have an expected permitted monthly withdrawal of 9 MGD.

TALLAPOOSA RIVER BASIN

The Tallapoosa River Basin accounts for less than 2% of the land area in the Metro Water District with primarily small headwater streams. There is only one water supply source that is planned for meeting 2035 demands.

Lake Fashion/ Cowan Lake: The City of Villa Rica withdraws water from the main reservoir Lake Fashion and the backup reservoir Cowan Lake. Both reservoirs are located in the Upper Little Tallapoosa River; Cowan Lake is fed by Astin Creek and Lake Fashion is fed by the Little Tallapoosa River. The City of Villa Rica plans to expand this supply source before 2015.

FUTURE INTERBASIN TRANSFERS

Table 6-2 provides the future interbasin transfers, based on 2035 demand forecasts and the facilities planned to meet the forecasted demand. Future planned water supplies aimed to minimize interbasin transfers are discussed in the evaluation criteria discussion.

In Table 6-2, the water supply interbasin transfer shows the difference between withdrawal and consumption and the wastewater shows the difference between consumption and discharge. The net interbasin transfer shows the total interbasin transfer based on expected permitted withdrawals and discharges.

TABLE 6-2
Summary of 2035 Interbasin Transfers

Water Supply		
Water Supply Basin	**Receiving Basin**	**Transfer (AAD-MGD)**
Chattahoochee	Flint	19
Chattahoochee	Ocmulgee	179
Chattahoochee	Oconee	15
Coosa	Chattahoochee	36
Coosa	Tallapoosa	2
Ocmulgee	Flint	15
Wastewater Returns		
Basin Generated	**Basin Discharge**	**Transfer (AAD-MGD)**
Chattahoochee	Coosa	4
Flint	Chattahoochee	12
Flint	Ocmulgee	17
Ocmulgee	Chattahoochee	82
Oconee	Chattahoochee	9
Net Interbasin Transfer		
Source Basin	**Receiving Basin**	**Net Transfer (AAD-MGD)**
Chattahoochee	Flint	7
Chattahoochee	Ocmulgee	97
Chattahoochee	Oconee	6
Coosa	Chattahoochee	32
Coosa	Tallapoosa	2
Flint	Ocmulgee	2

POST-2035 WATER SUPPLY OPTIONS

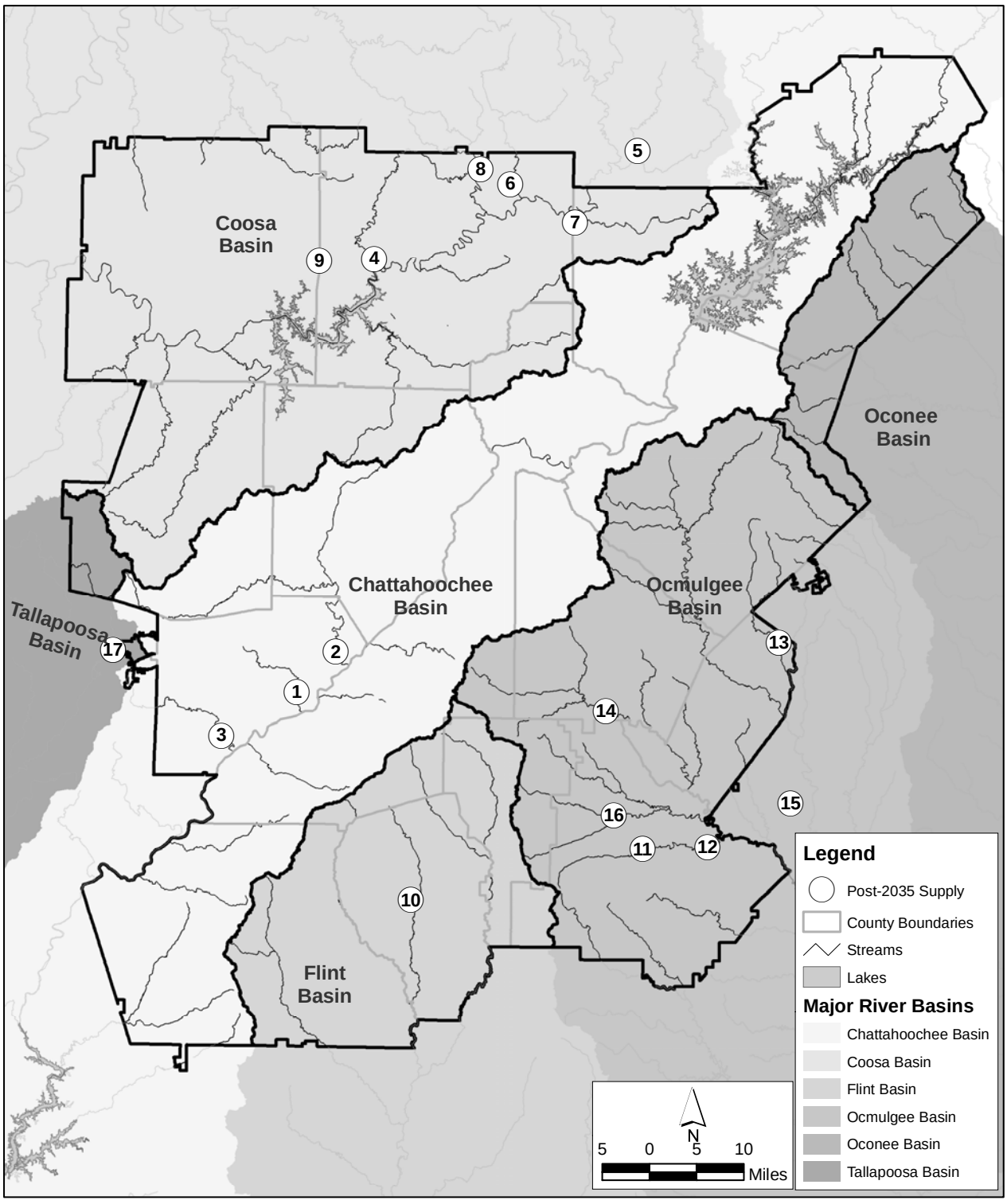
The following potential new water supply sources are not required to meet the expected future demands of the Metro Water District through 2035. However, they may be considered as water supply alternatives if any of the planned water supply sources are not realized and for future water supply demands beyond 2035. While not all of these water supply sources may be needed to meet demands beyond 2035, a wider range of potential alternatives will provide for better future planning.

The information on yield for the water supply sources are for future planning purposes and based on data collected for the 2003 Water Supply and Water Conservation Management Plan with supplemental information provided by the local water providers. Safe yield analysis would be required to confirm the ability of these potential sources to meet future demands.

A number of the post-2035 water supply options include regional reservoirs. The development and use of water supply sources outside the Metro Water District will be determined in accordance with the regional planning process under the Comprehensive State-wide Water Management Plan adopted by the 2008 General Assembly. Georgia EPD certification of this Plan does not constitute an endorsement of the development of the post-2035 potential water supply sources listed in the remainder of this Section.

Realizing future water supply sources can require decades of planning and significant capital expenditure. Knowing these time and financial investments, planning ahead for needs beyond the 2035 planning horizon within the bounds of the 2035 planning horizon is critical. Further evaluation and vetting of these post-2035 potential water supply sources beyond this Plan by the TCC is recommended in Section 11. Figure 6-4 shows the location of these potential water supply options that are further summarized by basin.

FIGURE 6-4
Additional Potential New Surface Water Supply Sources for the Metro Water District (Post-2035)



CHATTAHOOCHEE RIVER BASIN

Anneewakee Creek: A new reservoir on Anneewakee Creek near the confluence with Chattahoochee River.

Sweetwater Creek: A new dam and reservoir on Sweetwater Creek near the confluence with Chattahoochee River.

Dog River Reservoir: The Dog River Reservoir could be expanded as a water supply source by raising the dam and expanding storage volume from its current 1.9 BG to 5.44 BG.

TABLE 6-3
Chattahoochee River Basin – Other Potential Surface Water Supply Sources (Post-2035)

Water Supply Source	Description
1 Anneewakee Creek	Reservoir on Anneewakee Creek near confluence with Chattahoochee River
2 Sweetwater Creek	New dam and reservoir on Sweetwater Creek near confluence with Chattahoochee River
3 Dog River Reservoir	Increase dam height on Dog River Reservoir

COOSA RIVER BASIN

Shoal Creek (Options 1 and 2): Pump water from Shoal Creek about 5 miles upstream of its confluence from the Etowah River to an off-stream storage reservoir to supplement flows in the Etowah River. A second option would be a reservoir site in southwest Dawson County filled by Shoal Creek only or with water pumped from the Etowah River.

Long Swamp Creek (Options 1 and 2): Construct a low dam and river intake on Long Swamp Creek and store water during wet weather conditions in quarries near Tate, Georgia to augment flows to Allatoona Lake. Another option would involve constructing off-stream storage reservoir on Long Creek, two miles upstream of its confluence with the Etowah River.

Settingdown Creek: Off-stream reservoir on Settingdown Creek at its confluence with the Etowah River, with regulated releases to the Etowah River.

Sharp Mountain Creek: New dam and reservoir located on Sharp Mountain Creek, 1,000 feet upstream of Spence Road. The Cobb County-Marietta Water Authority has purchased most of the land required for the reservoir.

Boston Creek: A new 249-acre reservoir on Boston Creek with estimated usable volume of 1,950 MG at normal pool.

TABLE 6-4
Coosa River Basin – Other Potential Surface Water Supply Sources (Post-2035)

Water Supply Source		Description
4 Shoal Creek (Option 1)		Pump water from Shoal Creek to an off-stream storage reservoir to supplement flows in Etowah River.
5 Shoal Creek (Option 2)		Reservior site in Dawson County filled by Shoal Creek only or water pumped from the Etowah River.
6 Long Swamp Creek	Option 1	Construct a low dam and river intake on Long Swamp Creek and store water in quarries to augment flows to Allatoona Lake.
	Option 2	A potential off-stream storage reservoir on Long Swamp Creek, two miles upstream of its confluence with the Etowah River.
7 Settingdown Creek		Off-stream reservoir on Settingdown Creek at its confluence with the Etowah River, with regulated releases to the Etowah River.
8 Sharp Mountain Creek		New dam and reservoir located on Sharp Mountain Creek.
9 Boston Creek		A new 249-acre reservoir on Boston Creek for withdrawal credits from Allatoona Lake.

FLINT RIVER BASIN

Whitewater Creek: New reservoir on Pelham Creek near Davis Road supplied by Whitewater Creek. The land for this facility has been purchased by Fayetteville, but permitting has not been started.

TABLE 6-5
Flint River Basin – Other Potential Surface Water Supply Sources (Post-2035)

Water Supply Source	Description
10 Whitewater Creek	New reservoir on Pelham Creek near Davis Road.

OCMULGEE RIVER BASIN

Walnut Creek (Options 1 and 2): One option for additional water supplies from Walnut Creek would involve raising the dam elevation of the McDonough John Fargason Reservoir from 735 feet to 755 feet mean sea level. A second option would be a new 60-foot dam and reservoir on Walnut Creek at Turner Drive which would create 3,070 MG of usable storage.

Big Haynes Creek: The Randy Poynter Reservoir on Big Haynes Creek could be expanded as a water supply source by raising the dam by one foot.

South River: DeKalb County is investigating the possibility of a surface water intake or off-stream reservoir on the South River within the County. If feasible, this source will include indirect potable reuse to augment existing supplies.

Ocmulgee Reservoir: Additional development of water sources in the Ocmulgee Basin are being considered to meet future demands.

Big Cotton Indian Creek: Flows into the Clayton County Water Authority Hooper Reservoir have occasionally been supplemented in the past by pumping water from the Big Cotton Indian Creek at an old low-head dam site located approximately 6 miles downstream.

TABLE 6-6
Ocmulgee River Basin – Other Potential Surface Water Supply Sources (Post-2035)

Water Supply Source	Description
11 Walnut Creek (Option 1)	Raise the dam elevation from 735 feet mean sea level (MSL) to 755 feet MSL to increase yield.
12 Walnut Creek (Option 2)	New 60-foot dam and reservoir on Walnut Creek at Turner Drive.
13 Big Haynes Creek	Raise the dam by one foot to increase the safe yield.
14 South River	New intake or off-stream reservoir on South River with flows augmented by indirect potable reuse.
15 Ocmulgee Basin Source	Source in the Ocmulgee basin.
16 Big Cotton Indian Creek	Clayton County Water Authority has an inactive intake on this source. If they reactivated the withdrawal, it would be used to supplement the W.J. Hooper Reservoir.

*indicated increase in yield

OCONEE RIVER BASIN

No post-2035 sources are being considered in the Oconee River basin.

TALLAPOOSA RIVER BASIN

West Georgia Reservoir: There has been regional interest in creating a West Georgia Reservoir as a water supply source for communities both inside and outside of the Metro Water District.

TABLE 6-7
Tallapoosa River Basin – Other Potential Surface Water Supply Sources (Post-2035)

Water Supply Source	Description
17 West Georgia Reservoir	A dam and reservoir on the Tallapoosa River mainstem or a major tributary have been discussed by several west Georgia communities in Carroll or Haralson counties.