

Section 2: EXISTING WASTEWATER MANAGEMENT

Currently, the publicly-owned wastewater facilities in the Metro Water District have the permitted capacity to treat 660 million gallons per day (MGD) of wastewater. Once treated, the majority of the reclaimed water is returned to surface water bodies. The Metro Water District has met increased demand for wastewater treatment by seeking permit increases and then building or expanding treatment facilities or has relied on septic systems in lower density areas. This Section provides an overview of permitted treatment facilities, septic tank usage, and reuse systems employed to manage wastewater within the Metro Water District.

EXISTING PERMITTED WASTEWATER TREATMENT FACILITIES

The Metro Water District has 303 wastewater treatment facilities of which 92 are publicly-owned (municipal) based on facilities in operation at the end of 2006. The total available permitted capacity for these facilities is 660 MGD, of which almost 653 MGD is permitted to publicly-owned facilities and almost 8 MGD is permitted to private facilities. Many private facilities are land application systems (LAS) or decentralized systems and do not have permitted flow limits. Wastewater treatment facilities are permitted on a maximum month flow (MMF) on an average daily basis, which is a statistical term that means the average daily flow for the maximum month occurring during a calendar year.

The 2003 Long-term Wastewater Management Plan indicates a total treatment capacity of 723 MMF-MGD compared to 660 MMF-MGD for 2006 facilities used in this Plan. In the 2003 Plan, the total treatment capacity includes planned facility capacity in addition to the existing facility permitted capacity. Since many of these facilities were not expanded or constructed by 2006, the 2008 Wastewater Management Plan is presenting only those capacities that were permitted as of the end of 2006.

Of the 211 private wastewater facilities located in the Metro Water District, 30 are owned by public school systems, 98 are owned by industries, and the remaining 83 are owned by campgrounds, mobile home parks and residential developments. Tables 2-1 and 2-2 summarize the total existing permitted wastewater treatment capacity by basin and for each county in the Metro Water District, respectively. Table 2-3 presents a detailed summary of permitted treatment capacity by facility for each county.

Sixty-seven percent (67%) of the existing publicly-owned permitted capacity in the Metro Water District is located in the Chattahoochee Basin, including the five largest water reclamation facilities (WRFs). Three counties, Cobb, Fulton, and Gwinnett, have 67% of the treatment capacity of the Metro Water District.

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TABLE 2-1
2006 Permitted Wastewater Treatment Capacity by Basin

Basin	Total Permitted Treatment Capacity (MMF-MGD)	Number of Municipal WWTPs	Number of Private WWTPs	Total Number of WWTPs
Chattahoochee	441.5	42	82	124
Coosa	67.9	19	65	84
Flint	17.1	9	21	30
Ocmulgee	132.9	21	26	47
Oconee	0.3	0	17	17
Tallapoosa	0.8	1	0	1
Total	660.5	92	211	303

TABLE 2-2
2006 Permitted Wastewater Treatment Capacity by County

County	2006 Total Available Treatment Capacity (MMF-MGD)
Bartow	18
Cherokee	13
Clayton	38
Cobb	112
Coweta	6
DeKalb	56
Douglas	15
Fayette	10
Forsyth	17
Fulton	229
Gwinnett	101
Hall	20
Henry	12
Paulding	5
Rockdale	8
Total	660

Note: Represents the permitted treatment and disposal capacity for facility operations during 2006. Permitted expansion options are not included.

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TABLE 2-3
2006 Permitted Treatment Facilities by County

County	Wastewater Treatment Plants	Basin	Receiving Water Body	2006 Permitted Treatment Capacity (MMF-MGD)
Bartow	Adairsville North WPCP	Coosa	Oothkalooga Creek	1.0
	Adairsville South WPCP	Coosa	Oothkalooga Creek tributary	0.5
	Cartersville WPCP	Coosa	Etowah River	15.0
	Bartow Southeast WPCP	Coosa	Etowah River	0.10
	Bartow Two Run Creek WPCP	Coosa	Two Run Creek	0.10
	Emerson Pond WPCP	Coosa	Pumpkinvine Creek	0.45
	Private WWTPs	Various	Various	0.38
	County Total			17.5
Cherokee	Canton WPCP	Coosa	Etowah River	1.9
	CCWSA Fitzgerald Creek WPCP (Note 1)	Coosa	Little River to Lake Allatoona	2.0
	CCWSA WPCP-Rose Creek (Notes 1, 9)	Coosa	Etowah River Arm of Lake Allatoona	2.0
			Reuse	4.0
	Woodstock WPCP	Coosa	Rube's Creek, tributary to Little River	2.5
	Private WWTPs	Various	Various	0.49
County Total			12.9	
Clayton	Clayton WB Casey/Huie WRF	Ocmulgee	Land Application	14.7
			Wetlands discharge to Shamrock Lake	9.3
	Clayton Northeast WRF	Ocmulgee	Panther Creek	10.0
	Clayton Shoal Creek WRF (Panhandle Wetlands)	Flint	Shoal Creek Reservoir / Trib to Flint River	4.4
	Private WWTPs	Flint	Various	0.1
County Total			38.5	
Cobb	Cobb Noonday Creek WRF (Note 1)	Coosa	Noonday Creek Tributary	20.0
	Cobb Northwest WRF (Note 1)	Coosa	Lake Allatoona	12.0
	Cobb RL Sutton WRF	Chattahoochee	Chattahoochee River	40.0
	Cobb South WRF	Chattahoochee	Chattahoochee River	40.0
	Private WWTPs	Various	Various	< 0.1
County Total			112.1	
Coweta	Newnan Wahoo Creek WPCP	Chattahoochee	Wahoo Creek Tributary	3.0
	Newnan Mineral Springs WPCP	Chattahoochee	Mineral Springs Branch/Mountain Creek	0.75
			Land Application	(Note 6)
	Coweta Arnall / Sargent WPCP	Chattahoochee	Wahoo Creek	0.06
	Coweta Arnco WPCP	Chattahoochee	Wahoo Creek	0.10
Coweta Shenandoah WPCP	Flint	White Oak Creek Tributary to Flint River	0.89	

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County	Wastewater Treatment Plants	Basin	Receiving Water Body	2006 Permitted Treatment Capacity (MMF-MGD)
	Grantville - Colley Street LAS	Chattahoochee	Land Application	0.15
	Grantville Ponds	Chattahoochee	Various	0.13
	Senoia LAS (Note 2)	Flint	Land Application	0.49
	Private WWTPs	Various	Various	0.25
	County Total			5.8
DeKalb	DeKalb Polebridge WPCP	Ocmulgee	South River Tributary	20.0
	DeKalb Snapfinger Creek WPCP	Ocmulgee	South River	36.0
	Private WWTPs	Various	Various	0.10
	County Total			56.1
Douglas	DDCWSA South Central UWRF (Note 9)	Chattahoochee	Reuse	0.50
	DDCWSA South Central WPCP	Chattahoochee	Chattahoochee River	6.00
	DDCWSA Beaver Estates WPCP	Chattahoochee	Crooked Creek	0.08
	DDCWSA Rebel Trails WPCP	Chattahoochee	Anneewakee Creek Trib	0.04
	DDCWSA Northside WPCP (Note 1)	Chattahoochee	Gothards Creek to Sweetwater Creek	0.60
	DDCWSA Southside WPCP	Chattahoochee	Anneewakee Creek	3.25
	DDCWSA Sweetwater Creek WPCP	Chattahoochee	Chattahoochee River	3.0
	Villa Rica North WPCP	Chattahoochee	Town Branch to Sweetwater Creek	0.52
	Villa Rica West WPCP (Note 4)	Tallapoosa		0.78
	Private WWTPs	Various	Various	0.69
County Total			15.5	
Fayette	Fayetteville Whitewater Creek WPCP (Note 8)	Flint	Whitewater Creek	3.75
	Peachtree City Rockaway WPCP (Note 1)	Flint	Line Creek Tributary	4.0
	Peachtree City Line Creek WPCP	Flint	Line Creek	2.0
	Private WWTPs	Various	Various	0.48
	County Total			10.2
Forsyth	Cumming Bethelview Road WPCP	Chattahoochee	Big Creek	8.00
	Cumming Lanier Beach South	Chattahoochee	Lake Lanier	0.04
	Cumming Habersham WPCP	Chattahoochee		0.11
	Forsyth Windermere Urban Reuse LAS (Note 9)	Chattahoochee	Land Application	0.55
	Forsyth Fowler Water Reclamation Facility (Note 9)	Chattahoochee	Reuse	4.0
	Forsyth Manor Water Reuse Facility (Note 9)	Coosa	Reuse	0.50
	Forsyth Dick Creek WRF	Chattahoochee	Dick Creek	0.76
	Forsyth Parkstone at the Bridges LAS	Coosa	Land Application	0.10
	Private WWTPs	Various	Various	2.5
County Total			16.6	

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County	Wastewater Treatment Plants	Basin	Receiving Water Body	2006 Permitted Treatment Capacity (MMF-MGD)
Fulton	Fulton Johns Creek WRF	Chattahoochee	Chattahoochee River	7.0
	Fulton Big Creek WRF	Chattahoochee	Chattahoochee River	24.0
	Fairburn LAS	Flint	Land Application	(Note 5)
	Fulton Little Bear Creek WRF	Chattahoochee	Little Bear Creek Tributary to Bear Creek	0.10
	Fulton Cauley Creek Water Reclamation Facility	Chattahoochee	Cauley Creek to Chattahoochee River	5.0
	Fulton Little River WRF (Note 3)	Coosa	Little River	1.0
	Fulton Settingdown Creek Golf Course Reuse (Notes 3, 9)	Coosa	Reuse	0.20
	Fulton Camp Creek WPCP (Note 1)	Chattahoochee	Chattahoochee River	13.0
	Atlanta RM Clayton WRC (Note 7)	Chattahoochee	Chattahoochee River	100.0
	Atlanta Utoy Creek WRC	Chattahoochee	Chattahoochee River	37.0
	Atlanta South River WRC	Chattahoochee	Chattahoochee River	41.0
	Private WWTPs	Various	Various	0.23
	County Total			
Gwinnett	Gwinnett F. Wayne Hill WRC (Note 9)	Chattahoochee	Lake Lanier	40.0
			Chattahoochee River	20.0
	Gwinnett Crooked Creek WRF	Chattahoochee	Chattahoochee River	16.0
	Gwinnett Jackson Creek WRF	Ocmulgee	Jackson Creek	3.0
	Gwinnett Yellow River WRF	Ocmulgee	Yellow River	14.5
	Buford Southside WPCP	Chattahoochee	Little Suwanee Creek	2.0
	Buford Westside WPCP	Chattahoochee	Richland Creek	0.25
	Gwinnett Beaver Run / Sweetwater Creek WRF	Ocmulgee	Sweetwater Creek	4.5
			Yellow River tributary to Upper Ocmulgee	0.62
	Private WWTPs	Various	Various	0.23
County Total				101.1
Hall	Gainesville Flat Creek WRF (Notes 1, 9)	Chattahoochee	Flat Creek	12
	Gainesville Linwood WRF (Note 9)	Chattahoochee	Lake Lanier	5
	Flowery Branch WPCP (Note 9)	Chattahoochee	Lake Lanier	0.40
			Land Application	0.51
	Spout Springs LAS	Chattahoochee	Land Application	0.75
	Lula Pond WPCP	Chattahoochee	Lula Branch tributary	0.08
	Private WWTPs	Various	Various	1.4
County Total				20.1
Henry	Henry Bear Creek LAS (Note 1)	Flint	Land Application	0.25
	Henry Indian Creek LAS (Note 1)	Ocmulgee	Land Application	1.50
	Henry Walnut Creek WRF (Note 1)	Ocmulgee	Land Application	4.0
	Henry Springdale Road WPCP	Ocmulgee	Little Cotton Indian Creek	0.50
	Henry Springdale LAS	Ocmulgee	Land Application	1.10

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County	Wastewater Treatment Plants	Basin	Receiving Water Body	2006 Permitted Treatment Capacity (MMF-MGD)
	Henry Springdale Road - Walnut Creek WPCP	Ocmulgee	Walnut Creek	0.40
	Locust Grove Indian Creek WPCP	Ocmulgee	Indian Creek to Towaliga River	1.50
	McDonough Walnut Creek WPCP (Note 1)	Ocmulgee	Walnut Creek	1.0
	Hampton WPCP	Flint	Bear Creek Tributary	0.5
	Stockbridge WPCP	Ocmulgee	Bush Creek Tributary	1.50
	Private WWTPs	Various	Various	0.23
	County Total			
Paulding	Paulding County Pumpkinvine Creek Reuse (Notes 1, 9)	Coosa	Reuse	0.70
	Dallas North WPCP	Coosa	Lawrence Creek to Pumpkinvine Creek	0.50
	Dallas West WPCP (Note 1)	Coosa	Weaver Creek to Pumpkinvine Creek	1.00
	Paulding County Coppermine LAS (Note 1)	Chattahoochee	Land Application	1.5
	Paulding Upper Sweetwater WRF (Notes 1, 9)	Chattahoochee	Reuse	0.3
	Private WWTPs	Various	Various	0.52
	County Total			
Rockdale	Rockdale Quigg Branch WRF (Note 1)	Ocmulgee	Yellow River	6.0
	Rockdale Almand Branch WPCP	Ocmulgee	Almand Creek to South River	1.25
	Rockdale Honey Creek WPCP	Ocmulgee	McClains Branch	0.30
	Rockdale Scott Creek WPCP	Ocmulgee	Scott Creek to South River	0.22
	Rockdale Snapping Shoals WPCP	Ocmulgee	Snapping Shoals Creek	0.45
	Private WWTPs	Various	Various	0.18
	County Total			
District Total				660.3

Notes:

Represents the permitted treatment and disposal capacity for facility operations during 2006. Permitted expansion options are not included. Closed and inactive facilities are not shown. ¹Indicates facilities with permit expansion options. ²Indicates that plans have been submitted for increased capacity. ³Facilities are located in Cherokee County. ⁴Villa Rica West WPCP located within Carroll County. ⁵Reserved capacity but facility is not currently planned. ⁶Reserved capacity but facility is not currently in operation. ⁷Fifty-four percent of capacity is owned by Fulton County and the City of Atlanta; the remaining 46% is owned by DeKalb County. ⁸Under construction for a permitted capacity of 5.0 mgd. ⁹Facility is considered a reuse facility, which includes non-potable reuse, planned indirect potable reuse, or incidental indirect potable reuse.

The vast majority of publicly owned treatment facilities have advanced levels of treatment that reduce biochemical oxygen demand to below 20 milligrams per liter (mg/L). Approximately 91% of the permitted capacity in the Metro Water District is advanced treatment. Figure 2-1 summarizes the treatment types at existing publicly owned treatment facilities. The Gwinnett F. Wayne Hill Water Reclamation Center (WRC) has the highest level of treatment within the Metro Water District, achieving a current total phosphorus limit of 0.08 mg/L. Figure 2-2 shows the

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distribution of existing treatment capacity by type of discharge, with the majority of the facilities in the Metro Water District returning treated flows to surface water bodies.

Figure 2-1
Level of Treatment at Existing Publicly-owned Treatment Facilities (2006)

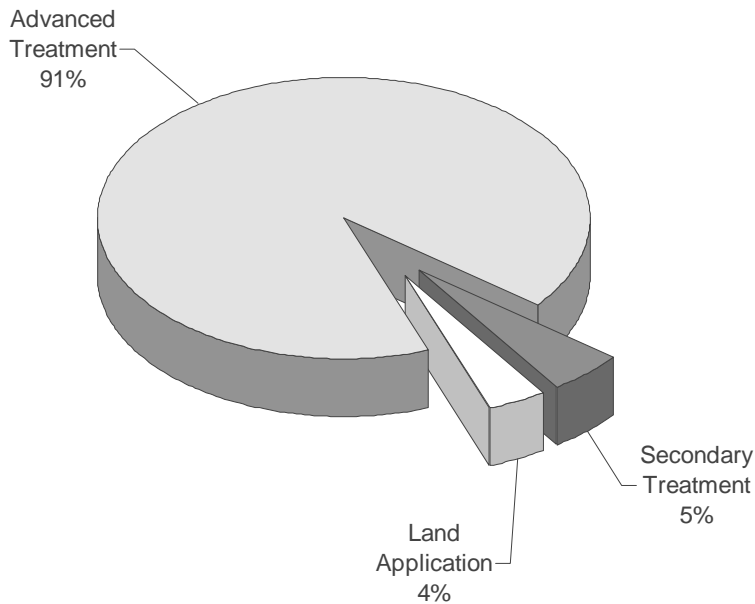
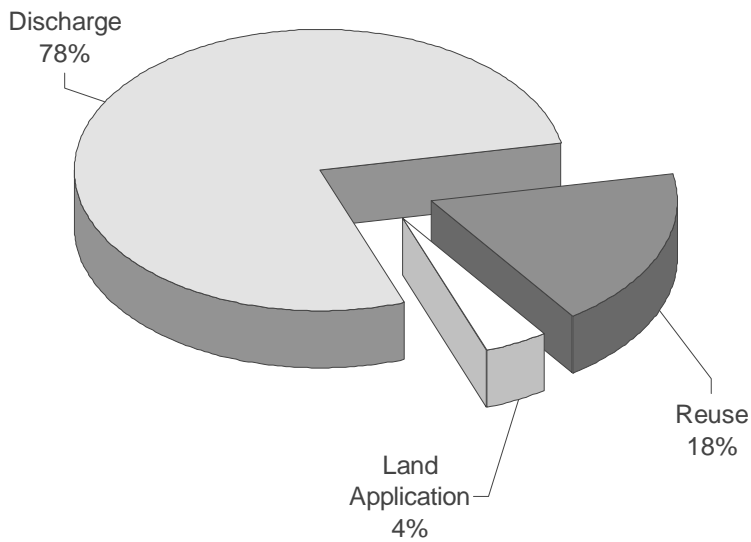


FIGURE 2-2
Discharge Locations at Existing Publicly-owned Treatment Facilities (2006)



EXISTING REUSE

Two types of reuse of reclaimed water are currently employed in the Metro Water District: non-potable reuse and indirect potable reuse. Non-potable reuse is currently practiced in the Metro Water District in the forms of golf course irrigation, industrial process water use, and other urban irrigation uses. Indirect potable reuse has historically been practiced in the Metro Water District in an incidental way, because some wastewater treatment facilities discharge upstream of water supply intakes. Planned indirect potable reuse, the returning reclaimed water to lakes or water bodies used for water supply, has been instituted by a number of local wastewater providers since 2003.

NON-POTABLE REUSE

Existing non-potable reuse applications in the Metro Water District comprise 2% of the treatment capacity and generally belong to one of the following categories:

- Irrigation with secondary-treated effluent in restricted areas or land treatment of wastewater, and
- Irrigation with high quality treated effluent in unrestricted areas such as golf courses and parks.

Although most of these non-potable reuse projects were developed to eliminate or reduce wastewater discharges, the reclaimed water from at least one treatment system recharges the potable water supply via soil percolation. Non-potable reuse and land application of wastewater contribute to the consumptive use of water as they have varying rates of returning water to the surface water source. Non-potable reuse that replaces surface water withdrawals is one way that this practice can be considered beneficial.

A summary of a few selected existing water reuse applications in the Metro Water District are presented below:

- The Cherokee Rose Creek Water Pollution Control Plant (WPCP), owned by the Cherokee County Water and Sewerage Authority (CCWSA), is permitted to discharge 2.5 MGD to either the Towne Lake Golf Course or Lake Allatoona.
- The Cauley Creek Water Reclamation Facility (WRF), located in North Fulton County, is privately owned by Cauley Creek Water Reclamation, LLC in a trust indenture relationship with Fulton County. The current capacity of the WRF is 5 MGD. The water is distributed under pressure via two separate transmission pipelines that serve the Shakerag area of North Fulton County. The primary pipeline serves the 18-hole St. Ives and the 36-hole Atlanta Athletic Club golf courses. It could also be used to serve the Quail Hollow, Montclair, and St. Ives communities, due to the proximity of the pipeline to these developments. The pipeline has been extended along Old Alabama Road to serve the 18-hole Country Club of the South and the 27-hole River Pines golf courses. The second transmission pipeline extends northward along Bell Road and serves the 18-hole Standard Club and will provide reclaimed water to the Homestead and Shakerag communities and Technology Park for irrigation.
- The Johns Creek Environmental Campus, owned by Fulton County Department of Public Works is situated on 43 acres off Holcomb Bridge Road in the City of Roswell adjacent to the Chattahoochee River. Construction began in late 2006 and is anticipated to last approximately 40 months. The facility will replace the existing Johns Creek Water Reclamation Facility and

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will have a total capacity of 15 MGD with an outfall to the adjacent Chattahoochee River as well as the capability to provide adjacent areas with non-potable reuse water.

- The Fowler Water Reclamation Facility (WRF) was commissioned as a design-build-operate facility by the Forsyth County Water and Sewer Department. Its current capacity is 2.5 MGD, with expansion capability to 7.5 MGD. It serves new communities in the Big Creek area north of Atlanta Road in Cumming. It will eventually receive flow from areas of South Forsyth County between Shiloh Road and McGinnis Ferry Road which is currently being treated by Fulton County. The treatment plant provides full urban water reuse quality water for irrigation, and has a 180-acre drip irrigation system at McGinnis Ferry Road for disposal of excess water. Through a 12-mile reuse pipeline (20-inch diameter), the WRF currently provides reuse water to a high school on Majors Road, Sharon Springs Park and St. Marlo's Country Club.

INDIRECT POTABLE REUSE

Indirect potable reuse is already practiced in the Metro Water District, both in planned and incidental forms and comprises 16% of current treatment capacity. Several major water supply intakes on the Chattahoochee River are currently located downstream of discharges from treatment facilities in Fulton and Gwinnett Counties. Examples of planned indirect potable reuse are found in Gwinnett, Cobb and Clayton Counties.

- Gwinnett County has constructed the 60-MGD Gwinnett F. Wayne Hill WRC, an indirect potable reuse facility. The facility treats wastewater to extremely stringent levels and returns it to the Chattahoochee River (20 MGD), where many downstream drinking water intakes exist. The treated effluent is transported 20 miles south, to a common outfall at the existing discharge location of the Gwinnett Crooked Creek WRF. This pipeline provides an opportunity for major water users (such as the Mall of Georgia) along the pipeline route to use the highly treated effluent for irrigation. Ultimately, Gwinnett will also return water to Lake Lanier (40 MGD), a primary source of drinking water for the Metro Water District.
- The Cobb Northwest Cobb WRF near Kennesaw is permitted to discharge 8 MGD to Lake Allatoona and 2 MGD to Cobblestone Golf Course for irrigation purposes. The treatment plant provides advanced nitrogen and phosphorus removal, filtration and ultraviolet disinfection ahead of its discharge to Lake Allatoona, the major water supply for West Cobb, Bartow, Paulding and Cherokee Counties.
- Noonday Creek WRF, also in northwest Cobb County, has a capacity of 12 MGD and has biological phosphorus removal, filtration and ultraviolet disinfection. The plant discharges to Noonday Creek, which is a tributary of Lake Allatoona.
- Clayton County Water Authority (CCWA) currently practices indirect potable reuse at two water reclamation facilities, W.B. Casey and Shoal Creek, which discharge high quality effluent into constructed treatment wetlands for natural treatment prior to discharge into CCWA drinking water supply watersheds. The CCWA indirect potable reuse system utilizes the multiple barrier approach seen in most other systems, but also provides two extra barriers through the constructed treatment wetlands and UV disinfection of potable water. During the 2007 drought, these two systems contributed to CCWA water reserves, which were maintained at or above 77% of full capacity. The W.B. Casey WRF facility provides advanced secondary level treatment for 24 MGD, of which 9.3 MGD of this treated effluent is currently pumped to the E.L. Huie Jr. constructed treatment wetlands. The Huie wetland discharges to the Pates Creek watershed containing both the Shamrock and the Blalock reservoirs. Construction of an

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additional 8.2 MGD of wetland cells will bring the total treatment capacity to 17.5 MGD in 2009. The Shoal Creek WRF provides advanced secondary treatment with UV disinfection to 4.4 MGD with an average of 1.4 MGD of treated effluent being pumped to the Panhandle constructed treatment wetlands. The Panhandle wetland discharges to the Shoal Creek watershed containing both the Shoal Creek and the J.W. Smith reservoirs.

Other facilities that contribute towards planned and/or incidental reuse include:

- Flowery Branch WRC
- Gainesville Flat Creek and Linwood WRFs
- Woodstock WPCP
- Cherokee (CCWSA) Fitzgerald and Rose Creek WPCPs
- Canton WPCP

EXISTING SEPTIC SYSTEM USAGE

In the summer of 2005 Metro Water District staff interviewed County Board of Health staff responsible for on-site sewage management in each of the 15 counties in the Metro Water District. From this work the Metro Water District created a Septic Systems Status and Issues Working Paper¹. Based on this Working Paper, the estimated number of septic systems in 2005 located in the 15-county Metro Water District was 505,970. Table 2-4 presents the estimated number of septic systems as of 2005 by class for each county in the Metro Water District. The “other” category includes facilities like schools and churches.

According to the Septic Systems Status and Issues Working Paper an estimated 26 percent of the total housing units in the Metro Water District are served by septic systems. The estimated percentage of total housing units served by septic systems in each county is illustrated in Figure 2-3.

Average day flows from septic systems in the Metro Water District are estimated to be 55 AAD-MGD. Figure 2-4 provides estimated septic tank flows by county. Methodology for estimating septic flows is based on population density and discussed in greater detail in Section 3.

¹ Septic Systems Status and Issues Working Paper, Metropolitan North Georgia Water Planning District, March 2006

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TABLE 2-4
Estimated Number of Septic Systems by County (2005)

County Name	Estimated Number of Systems	Percent Residential	Percent Commercial & Other
Bartow	26,000	99%	1%
Cherokee	26,000	99%	1%
Clayton	9,000	80%	20%
Cobb	25,000	90%	10%
Coweta	35,000	85%	15%
DeKalb	23,370	86%	14%
Douglas	25,500	90%	10%
Fayette	22,000	90%	10%
Forsyth	30,000	95%	5%
Fulton	50,000	92%	8%
Gwinnett	88,600	80%	20%
Hall	50,000	75%	25%
Henry	30,000	95%	5%
Paulding	45,500	95%	5%
Rockdale	20,000	94%	6%
Total	505,970	90%	10%

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FIGURE 2-3

Estimated Percent of Total Residential Septic Systems by County² (2005)

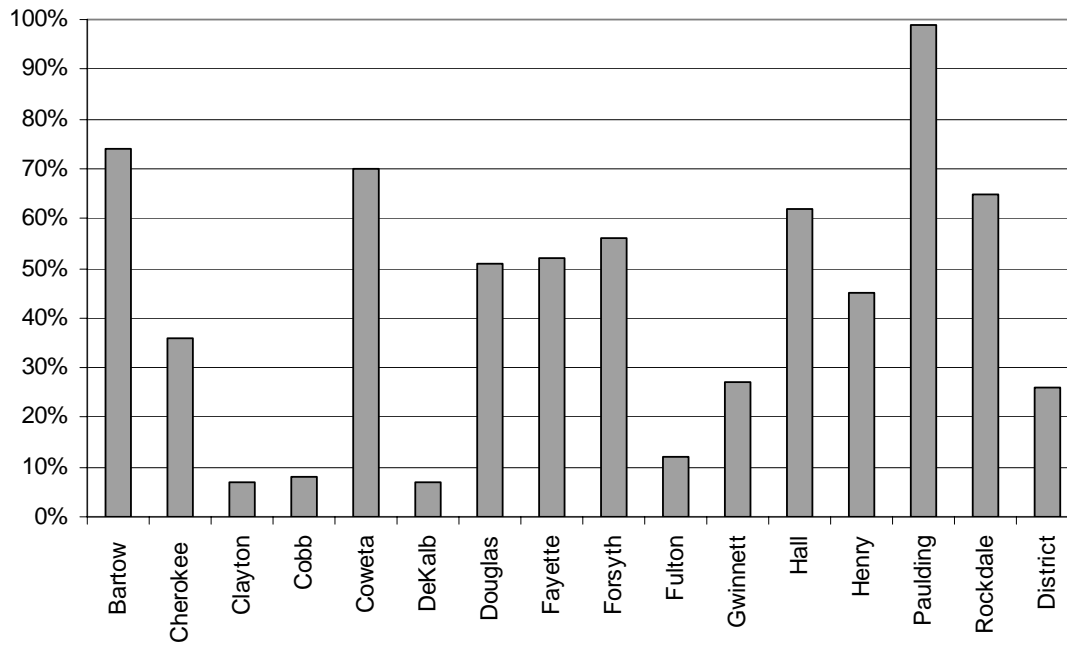
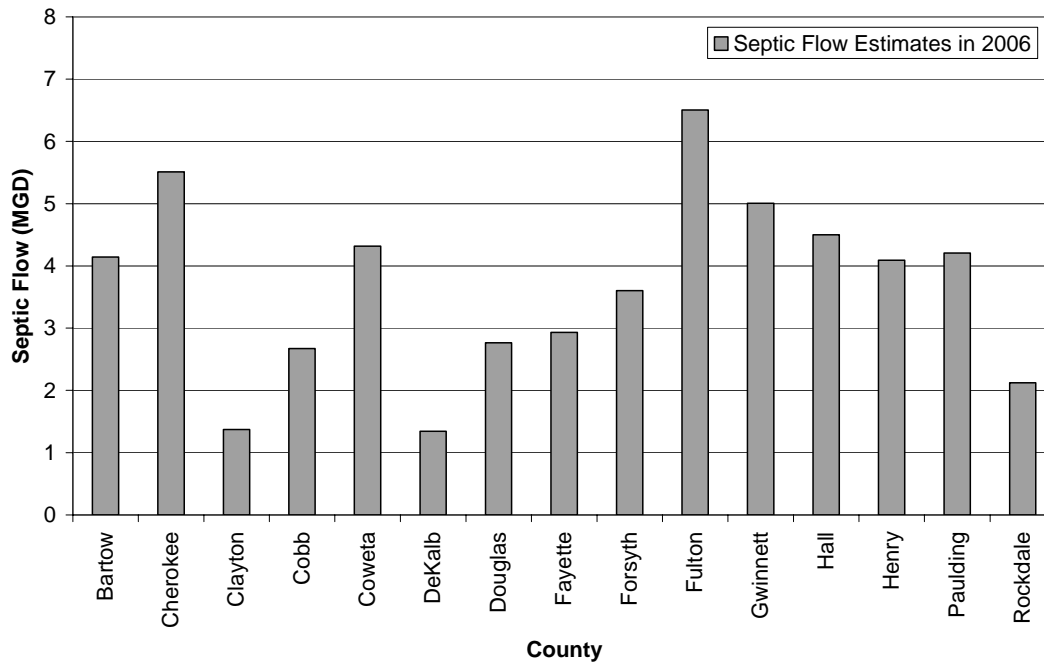


FIGURE 2-4

Estimated Annual Average Day Septic Flows by County (2006)



² Septic Systems Status and Issues Working Paper, Metropolitan North Georgia Water Planning District, March 2006

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In general, sewer is available within cities, or just outside city limit boundaries; septic systems are typically used for less dense development located outside these areas. Septic systems are located throughout the counties even within the sewered areas due to development outpacing sewer extensions as areas within the Metro Water District grew.

The septic systems within the Metro Water District are aging. The Septic Systems Status and Issues Working Paper indicates that almost 40 percent of septic systems are estimated to be more than 20 years old. Most of the older systems were designed and installed without the benefit of much more rigorous design, siting and construction methods that are required today. As a result, these older systems may not be capable of properly treating wastes and may have a negative impact on watershed water quality. The Metro Water District's Septic report lists the main causes for septic system failure as unsuitable soil conditions and location of the septic system followed by failures caused due to the age of the system.

Because of the varied soil properties found in the Metro Water District and the trend of increasing new home size, most of the Metro Water District counties have increased minimum lot sizes to obtain enough suitable soils. Given local experience with suitable soils, slopes, water tables and typical house sizes in their counties, all but two survey respondents think that their minimum lot sizes should be increased over their current minimums. An increase in minimum lot size would help to provide enough area of suitable soils for the primary and secondary drainfields.

EXISTING SURFACE WATER QUALITY

The Georgia EPD establishes water quality standards and is responsible for listing waters that do not meet these standards in the State of Georgia. If a water body does not support its designated use (drinking, recreation, fishing, wild/scenic rivers, or coastal fishing) by violating water quality standards, it is considered an "impaired" stream. Despite progress since 2003, over 1,500 miles of stream and almost 34,000 acres of lake within the Metro Water District do not meet state water quality standards according to the 2008 Georgia EPD list of impaired waters.

The dominant parameter of concern in the Metro Water District is fecal coliform bacteria. The primary source of fecal coliform is listed as non-point source runoff, such as wildlife, pet waste, failing septic systems, sanitary sewer overflows, or runoff from agricultural properties. Discharges from WRFs are considered to impair only a few streams, according to the inventory compiled by the Georgia EPD; programs outlined in the Watershed Management Plan and in Sections 7 through 9 of this Plan are intended to address these impairments and provide future protection to water quality.

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