

Bacteria Indicator Supplement
Chattahoochee River Basin – November 2008 Fecal Coliform TMDL
Action ID: GA_R4_22_12_12

As part of the 2019 Water Quality Standards Triennial Review, Georgia proposed *E. coli* and enterococci criteria for waters designated as fishing, coastal fishing, and drinking water to protect recreators who may inadvertently ingest water. Enterococci is the bacterial indicator for estuarine water, while *E. coli* is the bacterial indicator for all other waters. *E. coli* and enterococci have a better correlation with gastrointestinal illness than fecal coliform, and the *E. coli* and enterococci criteria are as protective of the fecal coliform criterion. Georgia EPD adopted the primary contact criteria for the recreational months, May through October, when immersion is expected to occur, and there is a higher likelihood of water ingestion. For non-recreational months, November through April, EPD adopted secondary contact criteria based on the estimated incidental water consumption rate from the 2019 update to Chapter 3 of the EPA Exposure Factors Handbook, Ingestion of Water and Other Select Liquids. Prior to these changes, fecal coliform was the bacterial indicator for the designated uses described above.

This supplement was developed to document the translation of the fecal coliform calculations to the new bacteria indicator, either *E. coli* or enterococci, for segments listed in the existing approved Total Maximum Daily Load (TMDL) document. To the extent that the existing approved TMDL document makes specific permitting recommendations based on fecal coliform, those recommendations will be translated to the approved bacteria indicator in all permits.

The loading curve approach was used to determine the allowable summer and winter seasonal loads. For waterbodies designated as recreational waters, a single curve represents the TMDL and is the 30-day recreational geometric mean criteria for the various bacterial indicators. For waterbodies designated as fishing, coastal fishing, and drinking water, two curves represent the TMDL. One curve represents the summer TMDL for the period May through October when the 30-day geometric mean water quality criteria are equal to the primary contact recreation bacteria criteria for the various indicators, and the second curve represents the winter TMDL for the period November through April when the 30-day geometric mean criteria are higher and are equal to the secondary contact recreation bacteria criteria.

The TMDL also has a single sample maximum criterion for fecal coliform or a Statistical Threshold Value (STV) for *E. coli* and enterococci. The single sample maximum applies for the months of November through April; whereas, the STV applies year round. The STV shall not be exceeded more than 10% of the time in a 30-day period. If a single sample exceeds the maximum criterion or the STV and a geometric mean criterion was also exceeded, then the TMDL is based on the criteria exceedance requiring the largest load reduction. The difference between the critical load and the TMDL curve represented the load reduction required for the stream segment to meet the appropriate instream standard.

The TMDL calculation is given using the following equation:

$$\text{TMDL} = C_{\text{standard}} \times Q$$

Where: TMDL = Total Maximum Bacteria Load either as a 30-day geometric mean or a single sample maximum
 C_{standard} = applicable state water quality standard
Q = stream flow

The applicable water quality standard for fecal coliform was:

May-October 200 counts/100 mL (as a 30-day geometric mean)
November-April 1,000 counts/100 mL (as a 30-day geometric mean)
November-April 4,000 counts/100 mL (as a single sample maximum)

The applicable water quality standard for *E. coli* is:

May-October 126 counts/100 mL (as a 30-day geometric mean)
May-October 410 counts/100 mL (as a STV)
November-April 265 counts/100 mL (as a 30-day geometric mean)
November-April 861 counts/100 mL (as a STV)

The applicable water quality standard for enterococci is:

May-October 35 counts/100 mL (as a 30-day geometric mean)
May-October 130 counts/100 mL (as a STV)
November-April 74 counts/100 mL (as a 30-day geometric mean)
November-April 273 counts/100 mL (as a STV)

TMDLs are the sum of all wasteload allocations (WLA) plus load allocation (LA) plus a margin of safety (MOS), or, stated as an equation, $TMDL = \sum WLA + \sum LA + MOS$. The MOS can be either implicit or explicit. For bacteria TMDLs, the practice has been to allocate an explicit ten percent MOS. TMDLs have given WLAs for all point sources equivalent to the recreational 30-day geometric mean criteria. The LA has also been given as the appropriate seasonal 30-day geometric mean criteria.

The wasteload allocation (WLA) is the portion of the receiving water's loading capacity that is allocated to existing or future point sources. WLAs were provided to the point sources with municipal wastewater treatment systems and to point sources with sanitary waste streams. Industrial wastewater treatment systems may also receive a WLA if they discharge bacteria because of the type of treatment processes employed or due to commingled sanitary waste streams.

For permitted point sources identified in the original TMDL, the WLAs were calculated based on permitted or design flow and primary recreation season bacteria criteria and are expressed as an accumulated load over a 30-day period and presented in units of counts per 30 days. If a facility expands its capacity and the permitted flow increases, the WLA for the facility would increase in proportion to the flow. If there is a new facility, the WLA would be the design flow times the summertime bacteria criteria. The established WLAs will meet the applicable water quality criteria. In addition, the permits may include routine monitoring and reporting requirements.

The reasonable assurance language included in the original TMDL in Section 6.3 shall be considered superseded and replaced by the following language.

The GA EPD is responsible for administering and enforcing laws to protect the waters of the State. Reasonable assurance ensures that a TMDL's wasteload and load allocations are properly distributed to meet the applicable water quality standards. Without such distribution, a TMDL's ability to serve as an effective guidepost for water quality improvement is significantly diminished. Federal regulations implementing the CWA require that effluent limits in permits be consistent with "the assumptions and requirements of any available [WLA]" in an approved TMDL [40 CFR 122.44(d)(1)(vii)(B)]. NPDES point source permits will be given effluent limits in the permit consistent with the individual WLAs specified in the TMDL.

The GA EPD is the lead agency for implementing the State's Nonpoint Source Management Program. Regulatory responsibilities that have a bearing on nonpoint source pollution include establishing water quality standards and use classifications, assessing and reporting water quality conditions, and regulating land use activities that may affect water quality. Georgia works with local governments, agricultural and forestry agencies, such as the Natural Resources Conservation Service, the Georgia Soil and Water Conservation Commission, and the Georgia Forestry Commission, to foster the implementation of best management practices to address nonpoint sources. In addition, public education efforts will be targeted to individual stakeholders to provide information regarding the use of best management practices to protect water quality.

Table 17a. *E. coli* WLAs Required

Facility Name	Permit No.	Receiving Stream	Listed Stream Segment	Bacteria Indicator	WLA (counts/30 days)
Atlanta R M Clayton	GA0021482	Chattahoochee River	Chattahoochee River - Peachtree Creek to Utoy Creek	<i>E. coli</i>	1.44E+13
Atlanta Utoy Creek	GA0021458	Chattahoochee River	Chattahoochee River - Utoy Creek to Pea Creek	<i>E. coli</i>	5.30E+12
Buford Southside	GA0023167	Suwanee Creek	Suwanee Creek - Mill Creek to Chattahoochee River	<i>E. coli</i>	2.87E+11
Buford Westside WPCP	GA0023175	Richland Creek	Richland Creek - Headwaters to Chattahoochee River	<i>E. coli</i>	3.58E+10
Clarkesville WPCP	GA0032514	Soquee River	Soquee River - Goshen Creek to SR 17	<i>E. coli</i>	1.08E+11
Cleveland WPCP	GA0036820	Tesnatee Creek	Tesnatee Creek - Cleveland	<i>E. coli</i>	1.08E+11
Cobb County R L Sutton	GA0026140	Chattahoochee River	Chattahoochee River - Peachtree Creek to Utoy Creek	<i>E. coli</i>	5.73E+12
Cobb County South	GA0026158	Chattahoochee River	Chattahoochee River - Peachtree Creek to Utoy Creek	<i>E. coli</i>	5.73E+12
Columbus South	GA0020516	Chattahoochee River	Chattahoochee River - N. Highland Dam to Upatoi Creek	<i>E. coli</i>	6.02E+12
Columbus Water Works	GA0020532	Tiger Creek	Chattahoochee River - N. Highland Dam to Upatoi Creek	<i>E. coli</i>	
Countryside MHP	GA0030201	Suwanee Creek	Suwanee Creek - Mill Creek to Chattahoochee River	<i>E. coli</i>	1.79E+10
Coweta Co Arnco WPCP	GA0000311	Wahoo Creek	Chattahoochee R – Wahoo Creek to Franklin	<i>E. coli</i>	1.44E+10
Cumming WPCP	GA0046019	Big Creek	Big Creek - Headwaters to Cheatham Creek	<i>E. coli</i>	2.87E+11
Douglasville Southside	GA0030341	Anneewakee Creek	Anneewakee Creek - House Creek to Lake Monroe	<i>E. coli</i>	4.66E+11
Douglasville Sweetwater	GA0047201	Chattahoochee River	Chattahoochee River - Utoy Creek to Pea Creek	<i>E. coli</i>	4.30E+11
Fort Gaines	GA0026191	Chattahoochee River	Chattahoochee River - Downstream of WF George Dam	<i>E. coli</i>	4.30E+10
Fulton County Big Creek	GA0024333	Chattahoochee River	Chattahoochee - Morgan Fall Dams to Peachtree Creek	<i>E. coli</i>	3.44E+12
Fulton County Camp Creek	GA0025381	Chattahoochee River	Chattahoochee River - Utoy Creek to Pea Creek	<i>E. coli</i>	1.86E+12
Gainesville Flat Cr WPCP	GA0021156	Flat Creek	Flat Creek - Headwaters, Gainesville to Lake Lanier	<i>E. coli</i>	1.03E+12
Gwinnett Co Crooked Cr/North	GA0026433	Chattahoochee River	Chattahoochee - Morgan Falls Dam to Peachtree Creek	<i>E. coli</i>	1.29E+12
Palmetto WPCP	GA0025542	Little Bear Creek	Chattahoochee - Pea Creek to Wahoo Creek	<i>E. coli</i>	8.63E+10

Facility Name	Permit No.	Receiving Stream	Listed Stream Segment	Bacteria Indicator	WLA (counts/30 days)
Tyson Foods Inc	GA0001074	Unnamed Trib/Orr's Ck	Orr Creek - U/S Castleberry Rd., Tyson Foods, to Big Creek	<i>E. coli</i>	2.15E+11
USA Ft Benning	GA0000973	Chattahoochee River	Chattahoochee River - Upatoi Creek to Railroad at Omaha	<i>E. coli</i>	6.62E+11
USAF Lockheed	GA0001198	Nickajack Creek	Nickajack Creek - Headwaters to Chattahoochee River	<i>E. coli</i>	1.00E+12
Atlanta Clear Creek CSO	GA0036871	Clear Creek	Clear Creek - Atlanta	<i>E. coli</i>	Q*126
Atlanta Proctor Ck Greens Ferry CSO	GA0037125	Proctor Creek	Proctor Creek - Headwaters to Chattahoochee River	<i>E. coli</i>	Q*126
Atlanta Proctor Creek North Ave CSO	GA0037117	Proctor Creek	Proctor Creek - Headwaters to Chattahoochee River	<i>E. coli</i>	Q*126
Atlanta Tanyard Creek CSO	GA0037109	Tanyard Branch	Tanyard Branch - Atlanta	<i>E. coli</i>	Q*126
Columbus Uptown Park CSO	GA0036838	Chattahoochee River	Chattahoochee River - N. Highland Dam to Upatoi Creek	<i>E. coli</i>	Q*126
Columbus South Commons	GA0036838	Chattahoochee River	Chattahoochee River - N. Highland Dam to Upatoi Creek	<i>E. coli</i>	Q*126

Table 18a. *E. coli* Loads Required

Stream Segment ^a	Location	Bacteria Indicator	Current Load (counts/30 days)	TMDL Components					Percent Reduction
				WLA ¹ (counts/30 days)	WLASw (counts/30 days)	LA (counts/30 days)	MOS (counts/30 days)	TMDL (counts/30 days)	
Anneewakee Creek GAR031300020333	House Creek to Lake Monroe, Douglas Co. (Douglas Co.)	<i>E. coli</i>	2	4.21E+11		1.50E+12	2.14E+11	2.14E+12	Undetermined ³
Arrow Creek GAR031300011201	Atlanta, DeKalb Co. (DeKalb Co.)	<i>E. coli</i>	2		2.82E+11	1.25E+11	4.53E+10	4.53E+11	Undetermined ³
Ball Mill Creek GAR031300010905	Fulton/DeKalb Counties	<i>E. coli</i>	2		1.31E+11	6.36E+10	7.75E+10	7.75E+11	Undetermined ³
Balus Creek GAR031300010802	Headwaters to Lake Lanier (Gainesville) (Hall Co.)	<i>E. coli</i>	2			1.07E+12	1.19E+11	1.19E+12	Undetermined ³
Big Creek GAR031300011006	Headwaters to Cheatham Creek (Forsyth Co.)	<i>E. coli</i>	2	1.34E+11		3.36E+12	8.76E+10	8.76E+11	Undetermined ³
Big Creek GAR031300011009	Hwy 400 to Chattahoochee River (Fulton Co.)	<i>E. coli</i>	2		1.53E+11	6.30E+11	3.89E+11	3.89E+12	Undetermined ³
Bishop Creek GAR031300011108	Headwaters to Sope Creek (Cobb Co.)	<i>E. coli</i>	2		4.18E+10	1.87E+10	6.74E+09	6.74E+10	Undetermined ³
Blue John Creek GAR031300020905	Headwaters to Troup Branch – LaGrange (Troupe Co.)	<i>E. coli</i>	2			7.18E+11	8.00E+10	8.00E+11	Undetermined ³
Bubbling Creek GAR031300011210	Headwaters to Nancy Creek (DeKalb Co.)	<i>E. coli</i>	2		7.75E+10	3.46E+10	1.24E+10	1.24E+11	Undetermined ³
Bull Creek GAR031300030112	Flat Rock Creek to Cooper Creek, Columbus (Muscogee Co.)	<i>E. coli</i>	2		1.04E+11	2.79E+11	4.25E+10	4.25E+11	Undetermined ³
Burnt Fork Creek GAR031300011211	Headwaters to South Fork Peachtree Creek (DeKalb Co.)	<i>E. coli</i>	2		5.84E+11	2.87E+11	9.70E+10	9.70E+11	Undetermined ³
Buttermilk Creek GAR031300020209	Headwaters to Sweetwater Creek (Cobb Co.)	<i>E. coli</i>	2		9.01E+10	6.74E+10	1.75E+10	1.75E+11	Undetermined ³
Camp Creek GAR031300020332	Unnamed tributary downstream of Cowart Lake to the Chattahoochee River (Fulton Co.)	<i>E. coli</i>	2		2.78E+13	6.55E+13	1.03E+13	1.03E+14	Undetermined ³
Chattahoochee River GAR031300010107	Ga Hwy 17, Helen to SR255 (White Co.)	<i>E. coli</i>	2			2.57E+13	2.86E+12	2.86E+13	Undetermined ³

Stream Segment ^a	Location	Bacteria Indicator	Current Load (counts/30 days)	TMDL Components					Percent Reduction
				WLA ¹ (counts/30 days)	WLASw (counts/30 days)	LA (counts/30 days)	MOS (counts/30 days)	TMDL (counts/30 days)	
Chattahoochee River GAR031300011113	Morgan Falls Dam to Peachtree Creek (Fulton, Cobb Co.)	<i>E. coli</i>	2	3.24E+12	3.58E+13	5.40E+13	1.03E+13	1.03E+14	Undetermined ³
Chattahoochee River GAR031300020107	Peachtree Creek to Utoy Creek (Fulton, Cobb Co.)	<i>E. coli</i>	2	1.72E+13	3.64E+13	4.45E+13	1.12E+13	1.12E+14	Undetermined ³
Chattahoochee River GAR031300020323	Utoy Creek to Pea Creek (Fulton, Douglas Co.)	<i>E. coli</i>	2	5.36E+12	6.74E+13	1.14E+14	2.07E+13	2.07E+14	Undetermined ³
Chattahoochee River GAR031300020337, GAR031300020432	Pea Creek to Wahoo Creek (Fulton, Douglas, Carroll, Coweta Co.)	<i>E. coli</i>	2	5.45E+10	5.88E+13	1.39E+14	2.21E+13	2.21E+14	Undetermined ³
Chattahoochee River GAR031300020609	Wahoo Creek to Franklin (West Point Lake) (Coweta, Carroll, Heard Co.)	<i>E. coli</i>	2	1.51E+18		2.26E+17	2.51E+16	2.51E+17	Undetermined ³
Chattahoochee River GAR031300030115, GAR031300030116	North Highland Dam to Upatoi Creek (Muscogee Co.)	<i>E. coli</i>	2	3.61E+12	1.01E+12	2.14E+14	2.43E+13	2.43E+14	Undetermined ³
Chattahoochee River GAR031300030604	Upatoi Creek to Railroad (Chattahoochee Co.)	<i>E. coli</i>	2	2.15E+11		2.77E+14	3.09E+13	3.09E+14	Undetermined ³
Chattahoochee River GAR031300040101	Downstream W.F. George Dam (Clay Co.)	<i>E. coli</i>	2	5.73E+09		1.70E+14	1.89E+13	1.89E+14	Undetermined ³
Clear Creek GAR031300011212	Headwaters to Peachtree Creek (Atlanta) (Fulton Co.)	<i>E. coli</i>	2		1.42E+11	6.62E+10	2.31E+10	2.31E+11	Undetermined ³
Cracker Creek GAR031300020210	Headwaters to Gothard's Creek (Douglas Co.)	<i>E. coli</i>	2			2.15E+11	2.39E+10	2.39E+11	Undetermined ³
Crawfish Creek GAR031300020324	Tributary to the Dog River (Douglas Co.)	<i>E. coli</i>	2			2.38E+12	2.65E+11	2.65E+12	Undetermined ³
Crooked Creek GAR031300010909	Tributary to Chattahoochee River (Gwinnett Co.)	<i>E. coli</i>	2		2.95E+11	1.80E+11	5.27E+10	5.27E+11	Undetermined ³
Flat Creek GAR031300010808	Headwaters, Gainesville to Lake Lanier (Hall Co.)	<i>E. coli</i>	2	9.89E+11		4.25E+11	1.57E+11	1.57E+12	Undetermined ³
Foe Killer Creek GAR031300011003	Headwaters to Big Creek (Fulton Co.)	<i>E. coli</i>	2		2.48E+11	1.69E+11	4.63E+10	4.63E+11	Undetermined ³
Foxwood Branch	Tributary to Rottenwood Creek, (Cobb Co.)	<i>E. coli</i>	2		2.57E+10	1.10E+10	4.08E+09	4.08E+10	Undetermined ³
Hilly Mill Creek GAR031300020404	Heard/Coweta Counties	<i>E. coli</i>	2			1.55E+12	1.73E+11	1.73E+12	Undetermined ³

Stream Segment ^a	Location	Bacteria Indicator	Current Load (counts/30 days)	TMDL Components					Percent Reduction
				WLA ¹ (counts/30 days)	WLASw (counts/30 days)	LA (counts/30 days)	MOS (counts/30 days)	TMDL (counts/30 days)	
Hog Waller Creek GAR031300011001	Tributary to Big Creek (Roswell) (Fulton Co.)	<i>E. coli</i>	2		8.69E+10	4.69E+10	1.49E+10	1.49E+11	Undetermined ³
Johns Creek GAR031300010903	Headwaters to Chattahoochee River (Fulton Co.)	<i>E. coli</i>	2		3.69E+11	3.44E+11	7.94E+10	7.94E+11	Undetermined ³
Kelly Mill Branch GAR031300011004	Headwaters to Orr Creek (Forsyth Co.)	<i>E. coli</i>	2			2.19E+11	2.60E+10	2.60E+11	Undetermined ³
Level Creek GAR031300010904	Headwaters to Chattahoochee River (Gwinnett Co.)	<i>E. coli</i>	2		8.57E+11	1.35E+12	2.46E+11	2.46E+12	Undetermined ³
Long Cane Creek GAR031300020911	Panther, Blue John & Long Cane Creeks, d/s LaGrange to Chattahoochee River (Troup Co.)	<i>E. coli</i>	2			1.99E+12	3.05E+11	3.05E+12	Undetermined ³
Long Island Creek GAR031300011101	Headwaters to Chattahoochee River (Fulton Co.)	<i>E. coli</i>	2		1.05E+11	5.05E+10	1.73E+10	1.73E+11	Undetermined ³
Lullwater Creek GAR031300011202	(DeKalb Co.)	<i>E. coli</i>	2		3.00E+11	1.63E+11	5.14E+10	5.14E+11	Undetermined ³
Marsh Creek GAR031300011102	Headwaters to Chattahoochee River (Fulton Co.)	<i>E. coli</i>	2		1.40E+11	7.81E+10	2.43E+10	2.43E+11	Undetermined ³
Mobley Creek GAR031300020309	Headwaters to the Dog River (Douglas Co.)	<i>E. coli</i>	2			1.17E+12	1.29E+11	1.29E+12	Undetermined ³
Mountain Oak Creek GAR031300021101	Hamilton (Harris Co.)	<i>E. coli</i>	2			9.58E+11	1.06E+11	1.06E+12	Undetermined ³
Mud Creek GAR031300010801	Headwaters to Lake Lanier (Hall Co.)	<i>E. coli</i>	2			4.05E+11	4.50E+10	4.50E+11	Undetermined ³
Mud Creek GAR031300020202	Ga. Hwy. 120 to Noses Creek (Cobb Co.)	<i>E. coli</i>	2		3.92E+11	5.58E+11	1.06E+11	1.06E+12	Undetermined ³
Mulberry Creek GAR031300021202	Ossahatchie Creek to Five Points Branch West near Mulberry Grove (Harris Co.)	<i>E. coli</i>	2			8.63E+11	9.64E+10	9.64E+11	Undetermined ³
Nancy Creek GAR031300011203	Headwaters to Peachtree Creek, Atlanta, (DeKalb, Fulton Co.)	<i>E. coli</i>	2		1.62E+12	7.94E+11	2.68E+11	2.68E+12	Undetermined ³
New River GAR031300020509	Headwaters to Mountain Creek, Coweta County (formerly Heard/Coweta Counties (Coweta Co.)	<i>E. coli</i>	2			2.68E+11	2.98E+10	2.98E+11	Undetermined ³

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				WLA ¹ (counts/30 days)	WLASw (counts/30 days)	LA (counts/30 days)	MOS (counts/30 days)	TMDL (counts/30 days)	
Nickajack Creek GAR031300020101	Headwaters to Chattahoochee River (Cobb Co.)	<i>E. coli</i>	2	2.58E+11	7.43E+10	6.26E+10	4.39E+10	4.39E+11	Undetermined ³
North Fork Balus Creek GAR031300010803	Headwaters to Balus Creek (Gainesville) (Hall Co.)	<i>E. coli</i>	2			2.66E+11	2.96E+10	2.96E+11	Undetermined ³
North Fork Peachtree Creek GAR031300011204	Headwaters to Peachtree Creek (Gwinnett, DeKalb, Fulton Co.)	<i>E. coli</i>	2		5.87E+12	2.86E+12	9.70E+11	9.70E+12	Undetermined ³
North Utoy Creek GAR031300020102	Headwaters to South Utoy Creek-Atlanta (Fulton Co.)	<i>E. coli</i>	2		7.75E+10	5.13E+10	1.44E+10	1.44E+11	Undetermined ³
Olley Creek GAR031300020204	Headwater to Sweetwater Creek (Cobb Co.)	<i>E. coli</i>	2		2.07E+11	1.43E+11	3.89E+10	3.89E+11	Undetermined ³
Orr Creek GAR031300011005	U/S Castleberry Rd., Tyson Foods, to Big Creek (Forsyth Co.)	<i>E. coli</i>	2	1.61E+11		8.88E+10	2.78E+10	2.78E+11	Undetermined ³
Pataula Creek GAR031300031501	Hodchodkee Creek to W. F. George Lake (Quitman, Clay Co.)	<i>E. coli</i>	2			8.51E+12	9.45E+11	9.45E+12	Undetermined ³
Pea Creek GAR031300020335	Cedar Grove Lake to Chattahoochee River (Fulton Co.)	<i>E. coli</i>	2		7.94E+10	8.32E+11	1.01E+11	1.01E+12	Undetermined ³
Peachtree Creek GAR031300011205	I-85 to Chattahoochee River, Atlanta (Fulton Co.)	<i>E. coli</i>	2		1.76E+12	9.01E+11	2.95E+11	2.95E+12	Undetermined ³
Peavine Creek GAR031300011206	Headwaters to South Fork Peachtree Creek (DeKalb Co.)	<i>E. coli</i>	2		6.87E+11	3.35E+11	1.13E+11	1.13E+12	Undetermined ³
Proctor Creek GAR031300020103	Headwaters to Chattahoochee River, Atlanta (Fulton Co.)	<i>E. coli</i>	2		2.87E+11	1.79E+11	5.18E+10	5.18E+11	Undetermined ³
Richland Creek GAR031300010906	Headwaters to Chattahoochee River (Gwinnett Co.)	<i>E. coli</i>	2	2.23E+10	8.95E+11	1.94E+12	3.18E+11	3.18E+12	Undetermined ³
Rocky Branch GAR031300030102	Tributary to the Chattahoochee River – Columbus (Muscogee Co.)	<i>E. coli</i>	2		6.36E+09	6.43E+09	1.42E+09	1.42E+10	Undetermined ³
Rottenwood Creek GAR031300011103	Headwaters to Chattahoochee River (Cobb Co.)	<i>E. coli</i>	2		1.88E+11	1.10E+11	6.17E+10	6.17E+11	Undetermined ³
Sandy Creek GAR031300020104	I-285 to Chattahoochee River (Fulton Co.)	<i>E. coli</i>	2		1.00E+10	6.87E+09	1.87E+09	1.87E+10	Undetermined ³

Stream Segment ^a	Location	Bacteria Indicator	Current Load (counts/30 days)	TMDL Components					Percent Reduction
				WLA ¹ (counts/30 days)	WLASw (counts/30 days)	LA (counts/30 days)	MOS (counts/30 days)	TMDL (counts/30 days)	
Sewell Mill Creek GAR031300011104	(Tributary to Sope Creek (Cobb Co.))	<i>E. coli</i>	2		2.84E+11	1.44E+11	4.76E+10	4.76E+11	Undetermined ³
Sope Creek GAR031300011105	Headwaters to Chattahoochee River (Cobb Co.)	<i>E. coli</i>	2		2.35E+13	1.32E+13	4.07E+12	4.07E+13	Undetermined ³
Soquee River GAR031300010202	Goshen Creek to SR 17, Clarkesville (Habersham Co.)	<i>E. coli</i>	2	2.90E+10		5.42E+12	6.05E+11	6.05E+12	Undetermined ³
South Fork Peachtree Creek GAR031300011207	Headwaters to Peachtree Ck, Atlanta (DeKalb, Fulton Co.)	<i>E. coli</i>	2		5.58E+11	2.97E+11	9.51E+10	9.51E+11	Undetermined ³
South Utoy Creek GAR031300020105	Headwaters to Fairburn Rd., Atlanta (Fulton Co.)	<i>E. coli</i>	2		9.26E+10	6.06E+10	1.70E+10	1.70E+11	Undetermined ³
Suwanee Creek GAR031300010918, GAR031300010919	Mill Creek to Chattahoochee River (Gwinnett Co.)	<i>E. coli</i>	2	1.11E+11	1.59E+12	3.18E+12	5.43E+11	5.43E+12	Undetermined ³
Sweetwater Creek GAR031300020213	U/S Pine Valley Rd. To Noses Creek (Paulding, Cobb Co.)	<i>E. coli</i>	2		2.31E+12	5.26E+12	4.11E+11	4.11E+12	Undetermined ³
Sweetwater Creek GAR031300020216, GAR031300020219, GAR031300020220	Noses to Chattahoochee River (Cobb, Douglas Co.)	<i>E. coli</i>	2		1.57E+11	3.55E+12	8.38E+11	8.38E+12	Undetermined ³
Tanyard Branch GAR031300011208	Headwaters to Peachtree Creek – Atlanta (Fulton Co.)	<i>E. coli</i>	2		9.39E+10	4.01E+10	1.49E+10	1.49E+11	Undetermined ³
Tanyard Creek GAR031300020903	Headwaters to Blue John Creek - LaGrange (Troup Co.)	<i>E. coli</i>	2			6.43E+10	7.18E+09	7.18E+10	Undetermined ³
Testnatee Creek GAR031300010502	Cleveland, (White Co.)	<i>E. coli</i>	2	4.30E+10		2.03E+12	2.31E+11	2.31E+12	Undetermined ³
Testnatee Creek GAR031300010503	Town Creek to Chestatee River (White/Lumpkin Co.)	<i>E. coli</i>	2			2.08E+12	2.31E+11	2.31E+12	Undetermined ³
Tributary to Mud Creek GAR031300020207	Cobb County	<i>E. coli</i>	2		4.78E+10	8.76E+10	1.51E+10	1.51E+11	Undetermined ³
Utoy Creek GAR031300020106	North and South Utoy Creeks to the Chattahoochee River – Atlanta (Fulton Co.)	<i>E. coli</i>	2		2.27E+11	2.01E+11	4.76E+10	4.76E+11	Undetermined ³
Ward Creek GAR031300020208	Headwaters to Noses Creek (Cobb Co.)	<i>E. coli</i>	2		1.33E+11	7.37E+10	2.30E+10	2.30E+11	Undetermined ³

Stream Segment ^a	Location	Bacteria Indicator	Current Load (counts/30 days)	TMDL Components					Percent Reduction
				WLA ¹ (counts/30 days)	WLASw (counts/30 days)	LA (counts/30 days)	MOS (counts/30 days)	TMDL (counts/30 days)	
Weracoba Creek GAR031300030104	Columbus s (0.2 miles upstream Cusseta Road to Bull Creek) (Muscogee Co.)	<i>E. coli</i>	²		2.51E+10	2.37E+10	5.42E+09	5.42E+10	Undetermined ³
White Oak Creek GAR031300020320	Tributary to the Chattahoochee River (Fulton Co.)	<i>E. coli</i>	²		5.31E+10	1.01E+12	1.19E+11	1.19E+12	Undetermined ³
Willeo Creek GAR031300011118, GAR031300011119	Unnamed tributary 250 ft downstream Willeo Road to the Chattahoochee River (Cobb, Fulton Co.)	<i>E. coli</i>	²		4.40E+11	2.32E+11	7.43E+10	7.43E+11	Undetermined ³
Woodall Creek GAR031300011209	Headwaters to Peachtree Creek - Atlanta (Fulton Co.)	<i>E. coli</i>	²		5.12E+10	2.92E+10	8.95E+09	8.95E+10	Undetermined ³

Notes:

- (1) The assigned bacteria load from the NPDES permitted facility for WLA was determined as the product of the *E. coli* permit limit and the facility average monthly discharge at the time of the critical load.
- (2) Samples were not analyzed for *E. coli*, therefore critical load calculation not possible
- (3) Percent reduction could not be determined due to absence of current load calculation
- (a) Stream segments identified in Table 18a with multiple ID numbers (GAR###) represent segments that have been split into smaller subsections in the biennial 305(b)/303(d) list of waters since the original issuance of the approved TMDL.