

8.0 STATEWIDE GENERATION

Georgia produces approximately 175,200 dry tons (approximately 876,000 wet tons) of biosolids per year from publicly owned treatment works (POTW) whose capacities vary, in part due to population densities in the areas served. For the purpose of this report, Georgia facilities have been divided into three main classifications based on the maximum daily design flow of wastewater through an operation and not necessarily by the actual daily flow of wastewater. Table 23 presents the number of facilities that are in each classification. Facilities that have flows less than one MGD are considered small, between one and ten MGD are medium and those facilities that treat more than ten MGD of wastewater per day are considered large.

The totals of biosolids removed from treatment facilities in 1997 are reported in dry weight tons and are the basis for this report. Table 23 presents a good overview of Georgia's biosolids-producing facilities. As was stated previously, not all counties have facilities that fit within the parameters of this study. Realizing this, apparent discrepancies corresponding to the actual number of counties in each of the Regional Development Centers and Table 23 are accounted.

Table 23. Regional generation by flow class.

Region	Number of Counties	Number of Facilities	Facilities <1 (MGD*)	Facilities 1<>10 (MGD)	Facilities >10 (MGD)	Total Flow (MGD)	Amount Removed (ton/yr.)
Atlanta Regional Commission	10	55	19	23	13	488.15	104,997.00
Central Savannah River Area	15	9	0	9	0	22.31	2,014.25
Chattahoochee Flint	5	11	8	3	0	14.98	776.17
Coastal Georgia	9	16	4	10	2	70.90	8,507.42
Coosa Valley	10	20	6	11	3	69.79	16,626.48
Georgia Mountains	13	15	10	5	0	21.53	2,610.85
Heart of Georgia Altamaha	12	8	2	6	0	14.76	1,491.57
Lower Chattahoochee Flint	5	4	3	0	1	42.81	5,297.98
McIntosh Trail	5	8	3	5	0	10.29	626.34
Middle Flint	7	9	6	3	0	13.86	891.33
Middle Georgia	11	14	5	7	2	69.96	16,526.29
North Georgia	5	4	1	2	1	46.30	3,296.32
Northeast Georgia	12	15	8	6	1	33.96	4,015.00
South Georgia	9	9	4	4	1	31.15	2,950.66
Southeast Georgia	8	6	4	2	0	14.66	699.89
Southwest Georgia	12	13	5	8	0	24.72	3,894.00
Totals	148	216	88	104	24	990.10	175,221.54

* MGD (Million Gallons Day)

Of the municipal treatment works in Georgia, 88 are considered small in size, treating less than one million gallons of wastewater/sewage per day while only 24 facilities treat ten million gallons or more daily. It is natural to assume that urban areas, such as Atlanta and Macon, with high population densities generate more waste than less densely populated areas. One anomaly when comparing urban with rural regions is the need for treatment facilities due to spatial diversification of population. Many rural communities rely upon individual septic tanks or local pond/lagoon systems to dispose of domestic waste. Therefore, it is difficult to quantify the amount of biosolids produced in septic and pond systems. This fact needs to be considered when evaluating the generation rates presented in Table 23. The statewide average of approximately 46 lb/person/yr is a simple representation of Georgia's biosolids production rate.

Landfilling is by far the most widely chosen method of disposal throughout the regions, disposing 43.23% or 75,750 dry tons of biosolids a year. Even with increasing tipping fees, the amount of biosolids sent to landfills has increased 6% between 1994 and 1999. In regions where land is more readily available, approximately 25.21% of Georgia's biosolids are land applied. The amount of biosolids that are land applied has increased from 3% while the composting of biosolids has increase only 1%. Incineration disposes 23.6% of Georgia's biosolids, which come from only six wastewater treatment facilities, four facilities in the Atlanta Regional Commission, and two in the Coastal Georgia region. Composting, pelletizing, and a combination of land application and landfilling constitutes 7.95% of the state's disposal options. Table 24 shows the tons each year that are disposed by each method and Table 25 presents the same data in percentages. Figure 9 presents the information in a graphical form.

Table 24. Quantification of statewide disposal methods (dry tons/yr).

	Composting	Incineration	Landfilling	Land Application	LA/LF Combined	Pelletizing	Regional Totals
Statewide Disposal (tons/yr)	5,660.42	41,359.25	75,749.73	44,166.28	3,039.90	5,245.96	175,221.54
Atlanta Regional Commission	2,380.71	37,615.44	56,810.24	2,944.64	0.00	5,245.96	104,997.00
Central Savannah River Area	0.00	0.00	1,794.16	220.10	0.00	0.00	2,014.25
Chattahoochee Flint	0.00	0.00	367.56	396.76	11.86	0.00	776.17
Coastal Georgia	2,046.19	3,743.81	2,705.38	12.05	0.00	0.00	8,507.42
Coosa Valley	0.00	0.00	1,065.44	12,670.06	2,890.98	0.00	16,626.48
Georgia Mountains	1,114.16	0.00	1,239.18	257.51	0.00	0.00	2,610.85
Heart of Georgia Altamaha	52.74	0.00	1,438.83	0.00	0.00	0.00	1,491.57
Lower Chattahoochee	0.00	0.00	41.06	5,256.91	0.00	0.00	5,297.98
McIntosh Trail	0.00	0.00	159.69	466.65	0.00	0.00	626.34
Middle Flint	3.10	0.00	168.27	719.96	0.00	0.00	891.33
Middle Georgia	0.00	0.00	717.96	15,808.33	0.00	0.00	16,526.29
North Georgia	0.00	0.00	517.21	2,779.11	0.00	0.00	3,296.32
Northeast Georgia	0.00	0.00	3,233.35	781.65	0.00	0.00	4,015.00
South Georgia	0.00	0.00	1,156.14	1,794.52	0.00	0.00	2,950.66
Southeast Georgia	63.51	0.00	578.34	58.04	0.00	0.00	699.89
Southwest Georgia	0.00	0.00	3,756.95	0.00	137.06	0.00	3,894.00

Table 25. Quantification of statewide disposal method.

	Composting	Incineration	Landfilling	Land Application	LA/LF Combined	Pelletizing
Statewide Disposal (100%)	3.23%	23.60%	43.23%	25.21%	1.73%	2.99%
Atlanta Regional Commission	42.06%	90.95%	75.00%	6.67%	0.00%	100.00%
Central Savannah River Area	0.00%	0.00%	2.37%	0.50%	0.00%	0.00%
Chattahoochee Flint	0.00%	0.00%	0.49%	0.90%	0.39%	0.00%
Coastal Georgia	36.15%	9.05%	3.57%	0.03%	0.00%	0.00%
Coosa Valley	0.00%	0.00%	1.41%	28.69%	95.10%	0.00%
Georgia Mountains	19.68%	0.00%	1.64%	0.58%	0.00%	0.00%
Heart of Georgia Altamaha	0.93%	0.00%	1.90%	0.00%	0.00%	0.00%
Lower Chattahoochee	0.00%	0.00%	0.05%	11.90%	0.00%	0.00%
McIntosh Trail	0.00%	0.00%	0.21%	1.06%	0.00%	0.00%
Middle Flint	0.05%	0.00%	0.22%	1.63%	0.00%	0.00%
Middle Georgia	0.00%	0.00%	0.95%	35.79%	0.00%	0.00%
North Georgia	0.00%	0.00%	0.68%	6.29%	0.00%	0.00%
Northeast Georgia	0.00%	0.00%	4.27%	1.77%	0.00%	0.00%
South Georgia	0.00%	0.00%	1.53%	4.06%	0.00%	0.00%
Southeast Georgia	1.12%	0.00%	0.76%	0.13%	0.00%	0.00%
Southwest Georgia	0.00%	0.00%	4.96%	0.00%	4.51%	0.00%
(%) Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%