Prepared in cooperation with the Georgia Department of Natural Resources,
Environmental Protection Division

Water Use in Georgia by County for 2010 and Water-Use Trends, 1985–2010

Open-File Report 2015–1230
Version 1.1 January 2016

U.S. Department of the Interior
U.S. Geological Survey

Front cover. Photo collage of water use and supply. *A*, Lake Sidney Lanier (Lake Lanier Convention and Visitors Bureau). *B*, Morgan Falls Dam (Alan M. Cressler, U.S. Geological Survey). *C*, Water tower (Nancy L. Barber, U.S. Geological Survey). *D*, Canada geese, Chattahoochee River (Alan M. Cressler, U.S. Geological Survey). *E*, Center-pivot irrigation, Albany (Alan M. Cressler, U.S. Geological Survey). *F*, Cooling towers (U.S. Nuclear Regulatory Commission).

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Contents

Abstract	1
Introduction.....	2
Purpose and Scope	2
Water Resources in Georgia.....	2
Climate in Georgia, 2010.....	7
Changes From Previous Reports.....	7
Data Sources and Methodology	9
Self-Supplied Water Use	11
Domestic Use.....	11
Commercial and Industrial Use	11
Mining Use	11
Irrigation	11
Crop Irrigation	11
Golf Course Irrigation	12
Livestock and Aquaculture	13
Thermoelectric	13
Public-Supplied Water	14
Population Served	15
Domestic Deliveries.....	16
Commercial Deliveries.....	16
Industrial Deliveries.....	16
Public Use, System Losses, and Transfers.....	17
Surface-Water Returns.....	17
Water Withdrawals, Estimated Water Use, and Surface-Water Returns.....	18
Water Use and Surface-Water Returns by Major River Basin	22
Self-Supplied Water Use	22
Public-Supplied Water Use.....	23
Surface-Water Returns.....	24
Water Use by Principal Aquifer	25
Self-Supplied Water Use	25
Public Supply	25
Water Use and Surface-Water Returns by Water-Planning Region	25
Self-Supplied Water Use	28
Public Supply	28
Surface-Water Returns	28
Water Use and Surface-Water Returns by County	29
Self-Supplied Water Use	38
Public Supply	39
Surface-Water Returns.....	39
Water-Use Trends, 1985–2010.....	40

Summary.....40

 Self-Supplied Water Use40

 Public-Supplied Water Use.....42

 Surface-Water Return Flows42

 Water-Use Trends.....42

References Cited.....43

Glossary.....45

Appendix 1. North American Industrial Classification Codes.....46

Appendix 2. Population, Water Withdrawals, and Water Use by Source of Water
for Each County in Georgia, 2010.....47

Figures

1. Map showing the State of Georgia showing all 159 counties and select cities3

2. Map showing physiographic provinces and area of principal aquifers in Georgia4

3. Map showing major river basins and streams in Georgia.....5

4. Map showing water-planning regions in Georgia6

5. Graphs showing the 2010 average monthly precipitation departures
from normal precipitation by climate division in Georgia8

6. Schematic diagram of public and self-supplied water withdrawals and
components of total water use for a typical county in Georgia.....9

7. Maps showing surface-water and groundwater withdrawals by county
in Georgia, 2010.....19

8. Pie diagrams showing water withdrawals by source and water-use category
in Georgia, 2010.....20

9. Maps showing percentage of total water withdrawals by county and source
in Georgia, 2010.....21

10. Graph showing water-withdrawal trends by water source in Georgia, 1985–201041

11. Graph showing water-withdrawal trends by water-use category in Georgia,
1985–201041

12. Graph showing surface-water return trends in Georgia, 1985–201041

Tables

1. Water-withdrawal, surface-water returns, and water-use data sources for Georgia, 2010	10
2. 2010 population, and water withdrawals by source and water-use category in Georgia, 2010	18
3. Permitted commercial and industrial water withdrawals by major North American Industrial Classification code in Georgia, 2010	21
4. Water withdrawals and public-supply deliveries by water-use category, for major river basins in Georgia, 2010	22
5. Surface-water returns by water-use category for major river basins in Georgia, 2010	24
6. Groundwater withdrawals and public-supply deliveries by use category for the principal aquifers in Georgia, 2010	26
7. Water withdrawals and public-supply deliveries by water-use category for water-planning regions in Georgia, 2010	27
8. Surface-water returns by water-use category for water planning regions in Georgia, 2010	29
9. Water withdrawals, water use, and surface water returns by county in Georgia, 2010	30
10. Population served and public-supply deliveries by county in Georgia, 2010	34

Conversion Factors

Inch/Pound to International System of Units

Multiply	By	To obtain
Length		
inch (in.)	2.54	centimeters (cm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
Area		
acre	4,047	square meter (m ²)
acre	0.4047	hectare (ha)
acre	0.004047	square kilometer (km ²)
square mile (mi ²)	259.0	hectare (ha)
square mile (mi ²)	2.590	square kilometer (km ²)
Volume		
gallon (gal)	3.785	liter (L)
gallon (gal)	0.003785	cubic meter (m ³)
million gallons (Mgal)	3,785	cubic meter (m ³)
cubic foot (ft ³)	0.02832	cubic meter (m ³)
acre-foot (acre-ft)	0.325851	million gallons per day (Mgal/d)
acre-foot (acre-ft)	0.001233	cubic hectometer (hm ³)
Flow rate		
gallon per day (gal/d)	0.003785	cubic meter per day (m ³ /d)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m ³ /s)

Datum

Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83).

Abbreviations

AWUDS	Aggregate Water Use Database System
BMPs	best management practices
CAFR	Comprehensive Annual Financial Audit Report
DMR	discharge monitoring report
GaEPD	Georgia Department of Natural Resources, Environmental Protection Division
GaSWCC	Georgia Soil and Water Conservation Commission
GGCSA	Georgia Golf Course Superintendents Association
GIS	geographic information system
GWUDS	Georgia Water-Use Database System
MNGWPD	Metropolitan North Georgia Water Planning District
NASS	National Agricultural Statistics Service
NPDES	National Pollutant Discharge Elimination System
NWIS	National Water Information System
NWUIP	National Water Use Information Program
SPI	standardized precipitation index
SWUDS	Site Specific Water Use Database System
USGS	U.S. Geological Survey

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Water Use in Georgia by County for 2010 and Water-Use Trends, 1985–2010

By Stephen J. Lawrence

Abstract

Water use and water withdrawals and returns in 2010 are estimated for each major river basin, principal aquifer, water-planning region, and county in Georgia using data obtained from various Federal and State agencies and local sources. Offstream water use in 2010 is estimated for the categories of public supply, domestic, commercial, industrial, mining, irrigation, livestock, aquaculture, and thermoelectric power. Water-use trends for 1985 to 2010 are also shown.

The period between 2007 and 2010 was a challenging time economically and climatologically in Georgia. During that period, the United States was in the midst of a major recession, resulting in decreases in the manufacturing and construction industries and large increases in unemployment. During 2007, 2008, and the latter half of 2010, precipitation in Georgia was substantially below the 30-year norm.

According to the 2010 Census of Population and Housing, nearly 9.7 million people lived in Georgia. The water for about 85 percent of that population was provided by public water suppliers. Estimated total water withdrawals from ground-water and surface-water sources were about 4,670 million gallons per day (Mgal/d) in 2010, about a 15-percent reduction from 2005 (5,471 Mgal/d). In 2010, thermoelectric-power facilities (2,046 Mgal/d) and public-supply uses (1,121 Mgal/d) accounted for 68 percent of all water withdrawn in Georgia. Surface-water withdrawals were greatest for thermoelectric-power generation (2,043 Mgal/d), whereas irrigation used the largest amount of groundwater (599 Mgal/d). Surface water provided 78 percent of the 1,121 Mgal/day withdrawn for public supply in 2010. Typically, counties in northern Georgia withdraw a larger percentage of water from surface water than groundwater sources; whereas, counties in the southern part of the State withdraw more water from groundwater sources.

Historically, water withdrawals in Georgia were highest in 1980 (6,725 Mgal/d). By 1990, water use had decreased by 20 percent to 5,353 Mgal/d, but increased to 6,487 Mgal/d in 2000. By 2005, water use had decreased to an estimated 5,471 Mgal/d, and declined further to 4,670 Mgal/d

in 2010—a 30-percent decrease since 1980. This decline was evident across all water-use categories, but was greatest for surface-water withdrawals by thermoelectric-power facilities. The estimated total water use per capita in 1985 (total withdrawals for all categories divided by total population) was about 850 gallons per day (gal/d), steadily decreasing to about 798 gal/d in 2000, and decreasing further to 460 gal/d in 2010. Although water use declined among all use categories during that 10-year period, most of the decline in per capita water use was caused by the large decrease in water used for thermoelectric-power generation.

Throughout 1985–2010 water withdrawn for thermoelectric-power generation has constituted the largest volume of offstream water use in Georgia. Total withdrawals for thermoelectric-power generation declined about 37 percent between 2000 and 2010, mostly due to the decommissioning of power plants in the State. Also during this period, several power plants were shut down and re-tooled to use natural gas-powered generators; thus, water withdrawals for cooling were substantially reduced.

The decline in water withdrawals and use between 2005 and 2010 can probably be attributed to several factors working together during this period: (1) water conservation laws and policies along with advances in water-conservation technology; (2) the onset of a major recession in 2007; and (3) below average rainfall in 2007, 2008, and the latter half of 2010. Because of these factors, water withdrawn by public suppliers decreased by 4.8 percent (despite a nearly 11-percent increase in population served) and per capita use decreased by 19 percent between 2005 and 2010.

About 2,225 Mgal/d of water was returned to Georgia streams and lakes in 2010 under the National Pollutant Discharge Elimination System program administered by the Georgia Environmental Protection Division. This amount is about 48 percent of the total water withdrawn from all sources in 2010. Water returns declined 39 percent between 1995 and 2010, mirroring the decline in water withdrawals during that period. In addition, land applications of treated wastewater increased steadily between 1995 and 2010.

Introduction

Among the natural resources in Georgia, water has the greatest potential to affect the future prosperity of Georgia's citizens. Credible knowledge of the quantity of water withdrawn from available water resources and how that water is used is necessary for managing the water resources of Georgia. The term "water use" is broadly applied to describe the movement of water from its natural source, through its interaction with human activities, and its subsequent return to the natural environment. This water-use model consists of various components such as (1) water withdrawal; (2) offstream treatment, distribution and delivery (including conveyance or system losses), and consumptive use; (3) land application of treated wastewater; (4) surface-water returns; and (5) instream use (such as hydroelectric- power generation). These components can be further subdivided into categories such as public-supplied water, domestic use, commercial use, industrial use, mining use, irrigation use (crop and golf course), livestock use (including aquaculture), and thermoelectric-power generation.

Estimates of how much water is consumed and no longer available for use helps quantify the amount of water available to downstream users. In addition to water withdrawals, surface-water returns, and consumptive use, water-use trends can provide a basis for estimating future water needs. By examining historical water-use patterns and current water-use practices, water managers can improve projections of water needs and identify management and infrastructure needs.

To provide estimates of water withdrawal, water use, and return flows to surface water needed for water management, the U.S. Geological Survey (USGS), in cooperation with Georgia Department of Natural Resources, Environmental Protection Division (GaEPD), developed the Georgia Water-Use Program in 1979 (Fanning, 1985). This ongoing program focuses on collecting, compiling, and disseminating water-use information for the State. In the past, these data were stored in a central database known as the Georgia Water-Use Database System (GWUDS) and the Aggregate Water Use Database System (AWUDS) maintained by the USGS. For the 2010 water-use compilation, GWUDS was replaced by the Site Specific Water Use Database System (SWUDS), a subsystem of the USGS National Water Information System (NWIS). In Georgia, SWUDS is maintained at the USGS South Atlantic Water Science Center.

Although water use in Georgia has been estimated since 1970 (Carter and Johnson, 1974), this report for 2010 is the eighth in a bi-decadal series of reports describing water use by county in Georgia. Previous reports from the Georgia Water-Use Program were published as companions to the USGS series "Estimated use of water in the United States" and include summaries for 1980 (Pierce and others, 1982), 1985 (Turlington and others, 1987), 1987 (Trent and others, 1990), 1990 (Fanning and others, 1992), 1995 (Fanning, 1997), 2000 (Fanning, 2003), and 2005 (Fanning and Trent, 2009). This 2010 report is the first report in the series to include county summaries of surface-water returns.

Purpose and Scope

The purpose of this report is to present a compilation of water withdrawals, surface-water returns (treated and untreated water), and water-use estimates for nine water-use categories in Georgia during 2010. These categories include public supply, domestic, commercial, industrial, mining, irrigation (subdivided into crop and golf-course irrigation), livestock, aquaculture, and thermoelectric power. Water withdrawals for public supply are allocated among the use categories of domestic, commercial, and industrial based on information about the customer base and water sales of public-supply systems. Sales to other public-supply systems (for example, public use for services such as recreation and fire suppression, and losses in the delivery system) are also estimated and compiled. Water-use estimates and water withdrawals and surface-water return flows for each use category are reported by major river basin, principal aquifer, water-planning region, and county in Georgia. Water-use trends during 1985–2010 are presented as well. Data are presented in tabular form, on maps showing surface-water and groundwater withdrawals in each county, and graphs showing 25-year water-use trends and the 20-year statewide trend in return flows.

Water Resources in Georgia

The water resources in Georgia consist of 14 major river basins and multiple aquifer systems; several of these basins and aquifers extend into adjacent States. Climate, geology, and landforms control the amount, distribution, and availability of Georgia's water resources. Georgia is considered a 'headwaters' State, in which the rivers originate in Georgia and flow into other States. Eleven of the 14 rivers that originate in Georgia flow into Alabama, Florida, South Carolina, or Tennessee. As of 2015, Georgia, Florida, and Alabama are involved in litigation regarding the amount and distribution of surface water withdrawn from the Apalachicola–Chattahoochee–Flint River Basin.

Georgia encompasses parts of 5 physiographic provinces, 8 principal aquifers, 14 major river basins, 11 water-planning regions, and 159 counties (figs. 1–4). The physiographic provinces are the Southern Valley and Ridge, Appalachian Plateau, Blue Ridge, and Piedmont in north Georgia, and the Coastal Plain in south Georgia (fig. 2). The major aquifers in Georgia include the Claiborne aquifer, Clayton aquifer, Cretaceous aquifer system, crystalline-rock aquifers, Floridan aquifer system, Brunswick aquifer, and Paleozoic-rock aquifers (fig. 2). The major river basins in Georgia are the Savannah, Ogeechee, Oconee, Ocmulgee, Altamaha, Satilla and St. Mary's, Suwannee and Aucila, Ochlockonee, Apalachicola, Coosa and Tallapoosa, and Tennessee (fig. 3). To facilitate water planning in Georgia, the Georgia State-wide Water Plan, identified 11 water-planning regions, each consisting of 9 to 20 counties (Georgia Environmental Protection Division, 2008; fig. 4).

Figure 1. The State of Georgia showing all 159 counties and select cities.

4 Water Use in Georgia by County for 2010 and Water-Use Trends, 1985–2010

Figure 2. Physiographic provinces and area of principal aquifers in Georgia (modified from Peck and others, 2013).

Figure 3. Major river basins and streams in Georgia.

Figure 4. Water-planning regions in Georgia.

Georgia is a “headwaters” State, with most of the rivers beginning as springs or small streams in northern Georgia and flowing generally southward into southern Georgia and Florida. In north-central Georgia, however, streams in the Tennessee River Basin flow northward into southern Tennessee. In addition, streams in the Coosa and Tallapoosa Basins (in northwestern Georgia) flow southwest into northeastern Alabama.

In northern Georgia, surface water from reservoirs or reservoir-augmented streamflow is the primary source of water; groundwater availability is limited in northern Georgia because storage capacity is typically low in the underlying fractured crystalline- and Paleozoic-rock aquifers. Most of the groundwater withdrawn in Georgia happens in southern Georgia, where aquifers, such as the Upper Floridan aquifer, are highly productive.

Climate in Georgia, 2010

The climate of northern Georgia typically is slightly wetter than that of southern Georgia. The long-term average annual rainfall (1925–2010) is 51.7 inches (in.) for northern Georgia (north of the Fall Line and 48.7 in. for southern Georgia (National Oceanic and Atmospheric Administration, 2014). A monthly standardized precipitation index (SPI) was utilized to identify 2010 average monthly precipitation departures from the 30-year monthly normal precipitation across Georgia (National Oceanic and Atmospheric Administration, 2011). The SPI is an index based on the probability of recording a given amount of precipitation, and the probabilities are standardized so that an index of zero indicates the median (normal) precipitation amount (half of the historical precipitation amounts are below the median and half are above). The index is negative for dry conditions and positive for wet conditions. As the dry or wet conditions

become more severe, the index becomes more negative or more positive, respectively.

Following the record amounts of precipitation in the third and fourth quarters of 2009, above normal precipitation continued into the first half of 2010 (fig. 5). Beginning in July 2010, precipitation was below normal with most areas of Georgia considered dry according to the monthly SPI. By December, north Georgia was moderately dry (nearly 2 in. below the 30-year monthly normal precipitation), whereas south Georgia was very dry to extremely dry (3 to nearly 4 in. below the 30-year monthly average precipitation; fig. 5). The lack of rainfall in south Georgia, especially during the growing season, resulted in increased crop irrigation and livestock water use. In the urban areas of Georgia, however, increases in water use were tempered by outdoor watering restrictions in place since 2007.

Changes From Previous Reports

Consumptive use and hydroelectric power generation were presented in previous reports from the Georgia Water-Use Program, but are not provided in this report; however, return flows to surface water are included. Estimates of consumptive use are not included in this report because water conservation laws and policies along with advances in water-conservation technology have changed the way water is used and reused in Georgia. As a result, the consumptive-use coefficients given in previous water-use reports for Georgia may not be appropriate for 2010. Research is currently needed to develop more accurate consumptive-use coefficients for the domestic, commercial, and industrial categories. In addition, the amount of water used to generate hydroelectric power could not be obtained from all hydroelectric facilities; therefore, this category is not included in this 2010 report.

8 Water Use in Georgia by County for 2010 and Water-Use Trends, 1985–2010

Figure 5. The 2010 average monthly precipitation departures from normal precipitation (1981–2010) by climate division in Georgia. Standardized precipitation index based on climate normals for 1895–2010.

Data Sources and Methodology

A generalized snapshot of water use for a typical county in Georgia and outlines for the types of data acquired and used to summarize water use in Georgia for 2010 are shown in figure 6. A variety of Federal, State, local, private, and online sources were used to gather surface-water and groundwater withdrawal, surface-water return flows, and water-use data for 2010 (table 1). Permitted withdrawal data for self-supplied commercial, industrial, mining, and thermoelectric power uses and public water suppliers were obtained from GaEPD's nonfarm withdrawal permit program. Georgia law (the Georgia Groundwater Use Act [OCGA 12-5-90] and the Georgia Water Supply Act [OCGA 12-5-170]) requires a withdrawal permit for any city, industry, or other water user that withdraws more than 100,000 gallons per day (gal/d;

monthly average) and to report monthly withdrawals to the GaEPD each year.

Surface-water return flow data were obtained from discharge monitoring reports (DMRs) supplied by GaEPD. The GaEPD administers the National Pollutant Discharge Elimination System (NPDES) program in Georgia which requires that all wastewater or other water discharges with the potential to carry pollutants to surface water must be permitted regardless of the volume discharged (U.S. Environmental Protection Agency, 2014). All NPDES permit holders are required to report monthly surface-water discharges to the GaEPD. All reported and estimated withdrawal, public-supplied wholesale water sales, and surface-water return data for 2010 were entered into the USGS SWUDS before the data were analyzed and summarized for this report.

Figure 6. Schematic diagram of public and self-supplied water withdrawals and components of total water use for a typical county in Georgia.

Table 1. Water-withdrawal, surface-water returns, and water-use data sources for Georgia, 2010.

[GaEPD, Georgia Environmental Protection Division, Watershed Protection Branch; USGS, U.S. Geological Survey]

Water-use category	Type of data	Data source
Public supply	Reported groundwater and surface-water withdrawals by permitted users	GaEPD Drinking Water and Water Withdrawal Program, groundwater and surface-water permitting units
	Population served, wholesale and retail water sales, and wholesale purchases	Mail survey to operators of municipal water systems
	Total number of accounts; in some cases number of residential, commercial, and industrial accounts and amount of water billed	City and County 2010/2011 Comprehensive Financial Audit reports
	Primarily water service area and zoning maps	City and County Comprehensive Planning documents, maps, and Web pages
	Population served by small public suppliers (subdivisions and mobile home parks)	GaEPD Drinking Water and Water Withdrawal Program, Drinking Water permit unit
Domestic	County, city, and census block populations, average household size, and housing unit occupancy percentage	U.S. Census Bureau (2011a, 2011b, 2011c)
Commercial	Reported groundwater and surface-water withdrawals by permitted users	GaEPD Drinking Water and Water Withdrawal Program, groundwater and surface-water permitting units
Industrial	Reported groundwater and surface-water withdrawals by permitted users	GaEPD Drinking Water and Water Withdrawal Program, groundwater and surface-water permitting units
Mining	Reported groundwater and surface-water withdrawals by permitted users	GaEPD Drinking Water and Water Withdrawal Program, groundwater and surface-water permitting units
	Withdrawal estimates by county	John Lovelace, USGS, written commun., 2011 (estimated from USGS Minerals Information Team data)
Livestock and aquaculture	Livestock water-use estimates by county, water-planning region, and 8-digit hydrologic unit	Georgia State Water Plan (Georgia Environmental Protection Division, 2008); Masters (2009)
Irrigation—Crops	Withdrawal estimates and irrigated acreage by county	Georgia State-Wide Water Plan (Georgia Environmental Protection Division, 2008); Hook (2010)
	Metered agricultural withdrawals and estimated withdrawals in non-metered counties in south Georgia	Georgia Soil and Water Conservation Commission; USGS; Torak and Painter (2011)
Irrigation—Golf courses	Reported groundwater and surface-water withdrawals by permitted users	GaEPD Drinking Water and Water Withdrawal Program, groundwater and surface-water permitting units
	Acreage, water application rates	Georgia State-Wide Water Plan (Georgia Environmental Protection Division, 2008); Lewis (2010)
Thermoelectric power	Reported groundwater and surface-water withdrawals by permitted users	GaEPD Drinking Water and Water Withdrawal Program, groundwater and surface-water permitting units, The Georgia Power Company; U.S. Energy Information Administration's (2011) annual electric generator report (form EIA-923; U.S. Energy Information Administration, 2011)
Surface-water return flows	Reported surface-water discharges by permitted users	GaEPD Drinking and Wastewater Regulatory Program, Municipal and Industrial permitting units

Because water withdrawals, surface-water returns, and water use in any given county or public-supply system commonly occur from and in more than one river basin, aquifer, or county, those amounts had to be apportioned among the appropriate river basins, aquifers, or counties. This apportionment was especially crucial for computing public-supply deliveries to domestic, commercial, and industrial customers; and for self-supplied domestic use, crop irrigation, and livestock use. A geographic information system (GIS) was used to spatially locate water intakes (surface-water withdrawal points) and outfalls (surface-water return points), groundwater wells, public-supply water service areas, irrigated acres, and livestock use within river basins. The percentage of water withdrawals from the various aquifers in Georgia was determined using location information on withdrawal and agricultural permits, lithology at the well using drillers logs and borehole geophysics, and aquifer tests (Lester Williams, Hydrologist, U.S. Geological Survey, written comm., 2013). A GIS coverage was created using these data and known locations and depths of the principal aquifers.

Self-Supplied Water Use

Self-supplied water is surface water or groundwater that is withdrawn, treated (drinking water use), and used onsite within a facility. Many self-supplied commercial, industrial, mining, and thermoelectric power facilities hold surface-water or groundwater (or both) withdrawal permits.

Domestic Use

Self-supplied groundwater withdrawals for domestic uses are commonly less than 100,000 gal/d and typically occur at individual dwellings in rural or semi-rural areas where access to public-supplied water is limited or non-existent. Surface water is generally not a source for self-supplied domestic uses in Georgia. The amount of water withdrawn and used for domestic purposes was calculated as the self-supplied population multiplied by a per capita coefficient of 75 gallons per day (gal/d) per person. The self-supplied domestic population was computed as the difference between the total population and the public-supplied population.

Commercial and Industrial Use

The 2010 annual and monthly withdrawal amounts for large self-supplied commercial and industrial establishments were reported to GaEPD (table 1) and provided to USGS for this report. Small, self-supplied commercial establishments such as campgrounds, marinas, State or county parks, restaurants, convenience stores, recreation areas, and recreational vehicle parks do not withdraw enough water to require a withdrawal permit, but do have drinking water permits and

withdraw and treat water for drinking and other indoor or outdoor uses. Water use by these small commercial establishments are not included in the 2010 estimates because the amount of water withdrawn and used could not be determined. Omitting those data in this report will likely have little effect on the water withdrawal and use estimates because these small establishments use relatively small amounts of water.

Mining Use

The majority of water withdrawn during mining operations is used for the extraction of minerals, quarrying, milling, and other typical preparations at a mine site. Granite, kaolin, fuller's earth, marble, and sand and gravel are mined extensively in the State, but these mining operations do not require large quantities of water. Although large amounts of water may be pumped to dewater mine pits and quarries, this water is not withdrawn for a beneficial use and is not included in the mining water-use estimates, but is included as a surface-water return if the water is discharged to surface water. Kaolin and fuller's earth operations use large amounts of water to transport and process the clay after extraction. Although some mining operations (especially kaolin and fuller's earth) had water withdrawal permits that indicated they withdrew more than 100,000 gal/d, these withdrawals were included in the industrial-use category rather than the mining category because the water is not used in the extraction of the clay, but in the processing of it.

The 2010 water-use estimates for mining operations that withdrew less than 100,000 gal/d, which is the threshold for a withdrawal permit, were provided for each Georgia county by the USGS National Water Use Program (Lovelace, 2009a). A detailed description of the methods used for estimating water use during mining operations are given in Lovelace (2009a). Mine production data were used with a water-use coefficient to compute water use for mining in Georgia. Water-use coefficients for specific minerals are not presented in this 2010 water-use compilation to avoid potential disclosure of confidential production data provided by mining operations to the USGS.

Irrigation

Surface-water and groundwater withdrawals for crop and golf course irrigation in 2010 were estimated using a variety of data sources (table 1). A few public suppliers provided metered irrigation usage data on the 2010 water-use questionnaire.

Crop Irrigation

Two different datasets were used to estimate crop irrigation: (1) modeled estimates for north Georgia and non-metered irrigation in some parts of south Georgia computed by the GaEPD for the Georgia Statewide Water Plan, and (2) metered data in south Georgia supplied by the Georgia

Soil and Water Conservation Commission (GaSWCC). The modeled estimates used for north Georgia and unmetered irrigated fields were those forecasted for 2011 because estimates for 2010 were not available.

Detailed methods used to estimate crop irrigation forecasts (irrigated acres, amount of water applied, and irrigation type such as center pivot, drip, and micro for the Georgia Statewide Water Plan (Georgia Environmental Protection Division, 2008) and links to datasets are available (Georgia Environmental Protection Division, 2010). Crop irrigation water use for the Georgia Statewide Water Plan was computed for average, above average, and below average precipitation during the growing season. Because most of the 2010 growing season in Georgia was dry to very dry, a mean of the estimated crop irrigation use for below-average and average precipitation conditions was computed for this 2010 water-use report.

For the Georgia Statewide Water Plan, withdrawal quantities for non-metered irrigation were computed for each county or drainage area as the product of three values:

- Projected irrigated area for a crop, in acres.
- Predicted monthly irrigation application depth, in inches.
- Proportion of irrigation water derived from a source.

The annualized withdrawal for each county, in million gallons per day, was the product of total acres irrigated and the total amount of water applied, in inches, converted to million gallons and divided by 365 days. Initial irrigated areas were measured on 2007–8 aerial imagery by the Georgia Department of Natural Resources (GaDNR; GaDNR Agricultural Lands, Danna Betts, Georgia Department of Natural Resources, written commun., May 2012) using fields that had been identified as irrigated and were assumed to represent irrigated areas in 2010; this identification was facilitated by interviewing farmers, estimates by the GaEPD Agriculture Water Permitting Unit, data and ground-truthing by the GaSWCC Agriculture Meter Program, and estimates by University of Georgia Agricultural Water Demand GIS.

Estimates of metered and unmetered crop irrigation in south Georgia were based on geostatistical modeling of metered groundwater pumping data supplied by the GaSWCC (Torak and Painter, 2011). Datasets were created containing a meter identification number, acres associated with each meter, annually reported withdrawals (acre-inches converted to million gallons per day) supplied by the GaSWCC, and water source (groundwater, surface water, well-to-pond). Irrigated acres were assigned to a meter using acreages determined for the Georgia Statewide Water Plan and 2010 aerial imagery (GaDNR Agricultural Lands, Danna Betts, Georgia Department of Natural Resources, written commun., May 2010). Metered data were not used if a meter was not assigned an acreage, or if irrigation depth was less than 2 in. (field not

irrigated) or greater than 62 in. (malfunctioning meter or rollback was occurring). Rollback occurs when pumping ends, water in the pipes reverses and returns to the well, then spins the meter impeller and continues to increment the amount recorded during pumping.

Three statistical regions were identified in south Georgia. The metered usage within each of these regions was used to develop a geostatistical model from which to compute irrigation depth over the region. When the geostatistical models were completed, irrigation depths for unmetered fields were computed using the model to spatially interpolate irrigation depth. The model outputs were brought into a GIS for linkage to agricultural fields. Within the GIS, the centroid for each field polygon was determined and used as a feature to represent each unmetered field. The estimated irrigation depths from the model were assigned to each field centroid. Irrigation demand in acre-inches was computed by multiplying irrigated acres by irrigation depth. Irrigation usage for fields that were not assigned to a meter represented the unmetered irrigation demand. Irrigation demand in acre-inches was converted to million gallons per day using a conversion factor and dividing by 365 to annualize the demand. Hot-spot, cluster, and outlier analyses were used to identify erroneous or incomplete data and data that represented different populations of metered usage.

Golf Course Irrigation

Surface-water and groundwater withdrawals for golf course irrigation in 2010 were estimated using data from two sources: (1) agricultural water withdrawal permits and (2) nonfarm withdrawal permits, both managed by the GaEPD. Under the Georgia Groundwater Use Act, the definition of farm use includes the statement “the irrigation of recreational turf, except in Bryan, Chatham, Effingham, and Glynn counties.” In addition, the 1988 amendments to the Georgia Water Quality Control Act state that the irrigation of recreational turf in the Chattahoochee River Basin above the Peachtree Creek confluence is not a farm use. Thus, in those areas where the irrigation of recreational turf is considered a nonfarm use, water withdrawals greater than 100,000 gal/d are permitted under Georgia’s nonfarm water withdrawal permit program.

The GaEPD partnered with the Georgia Golf Course Superintendents Association (GGCSA) and a University of Georgia researcher to estimate irrigation demand at golf courses for the Georgia Statewide Water Plan. Golf course irrigation demand was computed using the acres listed on agricultural water withdrawal permits and annual irrigation depths determined for well-managed golf courses that were supplied by Dr. Clint Waltz (University of Georgia, Griffin, Georgia, written commun., 2010). Using these data, golf course irrigation demand was computed for above-average, average, and below-average rainfall conditions (Lewis, 2010).

According to Lewis (2010), assumptions were made to estimate water use on agricultural permitted golf courses in

Georgia. Permitted acreages for golf courses in Georgia were obtained from the GaEPD agricultural permit database. These permitted acreages represent the most reliable source of irrigated acreage currently available to GaEPD. No comparison was made between area permitted and as-installed area of tees, greens, fairways, and other irrigated landscapes within those golf courses.

The recommended irrigation depth for turfgrass is 1 in. per week without rainfall (Clint Waltz, University of Georgia, Griffin, Georgia, written commun., 2008). Because Georgia has a 30-week growing season (April 1 to October 31), 30 in. of water is the recommended golf course irrigation rate in Georgia for a dry year (Clint Waltz, University of Georgia, Griffin, Georgia, written commun., 2008). The average irrigation depth reported in GGCSA best management practices (BMPs) program was 14.06 in. per year for 2004 to 2007 (Clint Waltz, University of Georgia, Griffin, Georgia, written commun., 2008). This average depth of 14.06 in. was considered the amount of water needed to irrigate golf courses in an average rainfall year. For each GaEPD agricultural permitted golf course, 14.06 in. was multiplied by the permitted acreage to determine the amount of water needed to irrigate golf courses in an average rainfall year. Likewise, the amount of water needed to irrigate golf courses in a year without rainfall was calculated by multiplying the total number of permitted acreage by 30 in. The irrigated water in acre-inches was converted to million gallons and divided by 365 to annualize the water use in terms of million gallons per day. Because the growing season in 2010 was dry, a mean of the estimated golf irrigation use for below-average and average precipitation conditions was computed for this 2010 water-use report.

Golf course irrigation in Bryan, Chatham, Effingham, and Glynn Counties and in the Chattahoochee River Basin above Peachtree Creek, is not considered a farm use and water withdrawals are permitted under the GaEPD nonfarm (municipal/industrial) permitting program. Under this permit program, 52 golf courses were permitted to withdraw water in 2010. The reported 2010 withdrawals for these golf courses were summed by county, river basin, water-planning region, and major aquifer and added to the estimates from the agricultural permitting program as described above. Estimates of golf course irrigation in each major river basin were computed by disaggregating the golf course irrigation in a county by the proportion of golf courses in a river basin within the county.

Livestock and Aquaculture

The water-use estimates for the livestock category were supplied by Mark Masters, Albany State University, Flint River Water Policy Center for the Georgia Statewide Water Plan (Georgia Environmental Protection Division, 2008; Masters, 2010). The most current data on the amount

of water used for each livestock category in gallons per day per head were compiled in 2008; whereas animal census data by county were obtained from the 2011 Farm Gate report for 2010 (University of Georgia, 2011). The total daily water use for each livestock category was computed by multiplying the estimated daily water use per animal by the number of animals. This daily water use was multiplied by 365 to annualize the water use and then converted to million gallons per day. The annual livestock use for each county, river basin, water-planning region, and major aquifer was the sum of the annual water use for each livestock category. Estimates of livestock water use for each major river basin were computed by disaggregating the livestock water use in a county by the proportion of livestock in a river basin within the county.

In 2010, catfish and trout production were the predominant aquaculture enterprises in Georgia (University of Georgia, 2011). The 2010 water-use estimates for aquaculture in each Georgia county were computed by the USGS National Water Use Information Program (NWUIP). A detailed description of the methods used for commercial and non-commercial aquaculture operations are given in Lovelace (2009b), in which county-level data on the number of farms using particular sources of water (groundwater, surface water, and so forth), pond acreage, the number of raceways and raceway flow rates, and the number of recirculating and non-recirculating tanks and their volumes were obtained from the National Agricultural Statistics Service (NASS; U.S. Department of Agriculture, 2009). Estimates of aquaculture water use for each major river basin were computed by first plotting known aquaculture operations in GIS, then disaggregating the aquaculture water use in a county by the proportion of aquaculture operations in a river basin within the county.

Thermoelectric

Most of the water withdrawn for thermoelectric-power generation is used for cooling. Twenty-one thermoelectric power facilities (19 in Georgia, 1 each in Alabama and South Carolina with intakes in Georgia) were permitted to withdraw water in 2010. Of the 21 facilities, 15 use fossil fuels (such as oil, coal, or natural gas), 4 use biomass (wood waste), and 2 use nuclear energy to generate electricity. The 2010 water withdrawal data for thermoelectric facilities in Georgia were obtained from three sources (table 1): (1) the Georgia Power Company provided monthly surface-water, water discharge, and consumptive use data for the thermoelectric facilities they own or operate; (2) permitted groundwater withdrawals were provided by the GaEPD under their groundwater withdrawal permit program; and (3) water withdrawal data for small, independent facilities were obtained from the U.S. Energy Information Administration's (2011) annual electric generator report (form EIA-923) database as reported by facility operators (U.S. Energy Information Administration, 2011).

Public-Supplied Water

Public-supplied water is withdrawn, treated, and delivered to domestic (residential), commercial, and industrial customers by public water suppliers. Any water supplier (municipal or private entity) that regularly serves at least 25 people or has at least 15 water connections is considered a public water system under Georgia law (OCGA 12–5–172–11). This definition includes large municipal, private, county, and small community water systems.

Small community water systems commonly withdraw less than 100,000 gal/d (monthly average) of water and typically are not required to obtain a withdrawal permit, but may be required to obtain a permit or certificate of use to deliver drinking water to customers. Small community water systems include incorporated and unincorporated towns and cities, subdivisions, mobile home parks, and apartment or condominium complexes.

Compiling the public-supplied water use for 2010 was a multitiered effort. Surface-water and groundwater withdrawals were summarized for permitted public water suppliers by county using data reported to the GaEPD under their nonfarm permit program (table 1). A list of entities with a drinking water permit under the GaEPD Drinking Water Program was used to identify small community water systems that withdraw less than 100,000 gal/d (monthly average threshold) from surface-water or groundwater sources.

Small-community water systems and small commercial establishments that typically withdraw less than 100,000 gal/d (monthly average) of water are not required to obtain a withdrawal permit, but may be required to obtain a drinking water permit from the GaEPD under the Georgia Safe Drinking Water Act of 1977 (OCGA 12–5–70). Small community water systems include incorporated and unincorporated towns and cities, subdivisions, mobile home parks, and apartment or condominium complexes. Small commercial establishments include campgrounds, marinas, parks, restaurants, convenience stores, recreation areas, and recreational vehicle parks.

In 2011, the GaEPD sent a water-use questionnaire to most of the public water suppliers in Georgia. All public water suppliers with withdrawal permits were surveyed. Many of the public water suppliers that withdraw a monthly average of less than 100,000 gal/d, but are permitted under the drinking water program were also surveyed. The questionnaire requested the following information for the 2010 calendar year:

- Amount of water withdrawn
- Amount of water purchased, if any, and the entity selling the water
- Total number of service connections
- Population served

- Amount of water or percentage of water delivered and number of connections for customers in the residential, commercial, industrial, and non-revenue categories.
- Amount of water sold and names of wholesale customers
- Three largest industrial customers and the amount of water delivered to each customer

Information on deliveries to customer groups and on wholesale sales was obtained from the 2010 water-use questionnaires and a variety of other public sources (table 1). About 21 percent of the water-use questionnaires were returned; many of the largest public water suppliers did not return a questionnaire. In order to acquire water-use information for those water suppliers that did not return a questionnaire, a number of different sources of information (table 1) were investigated using the following sequence:

- Statistical section of 2010–11 Comprehensive Annual Financial Audit Reports (CAFR) for total customers and amount of water billed to residential, commercial, industrial, and public customers (municipal buildings, parks and so forth).
- Comprehensive Planning Documents for service area maps, number of customers for 2010, if available, and proportion of residential, commercial, and industrial customers.
- Public-supplier internet Web sites for total customers and service area.
- 2005 water-use survey by the GaEPD (proportion of residential, commercial, and industrial customers).
- Internet business directories and Google Earth® for the number of commercial and industrial businesses within a service area, omitting those with a water withdrawal permit.
- 2010 census-block population and housing data for the population within a service area boundary (U.S. Census Bureau, 2011b, 2011c).

Surface-water and groundwater withdrawals were estimated for small community water systems that did not return a questionnaire. The population served by small community systems was provided by the GaEPD, but the populations served by the largest small community systems were checked against the 2010 census block data (U.S. Census Bureau, 2011b, 2011c) for Georgia using GIS. Water withdrawals were estimated using population served times a water-use coefficient of 75 gal/d per person plus 5 percent for distribution losses. The 5 percent distribution loss acknowledges that all distribution systems leak in proportion to the length of water-supply pipeage (U.S. Environmental Protection Agency, 2009)

and that the extent of water-supply pipeage for small community water systems is short, typically less than 5 miles long. The per capita water use was derived from USGS surveys in 1983 of self-supplied domestic users near Athens, Georgia (Julia Fanning, U.S. Geological Survey, written commun., 1983). Among 86 public water suppliers who returned the 2010 water use questionnaire, the median domestic per capita use was 76 gal/d. Moreover, the Metropolitan North Georgia Water Planning District (2011) listed the 2009 per capita water use as 61 gal/d.

Several public-supply systems convey water withdrawn from a river or stream to a storage reservoir from which water is withdrawn for treatment and distribution. The reservoir may be used only when streamflow is too low to support direct withdrawals, or may always be used as the direct source for the treatment plant. In some instances, water is withdrawn from a river or stream in one county and conveyed to a reservoir in a different county. When the withdrawal point and storage reservoir were within the same county, only water withdrawn from the reservoir was counted as a withdrawal for this compilation; however, when the withdrawal point and storage reservoir were located in different counties, the amount withdrawn from each county was computed in the following way.

- If the amount of water withdrawn from the reservoir was less than the amount conveyed from the river or stream for a given month, then the amount withdrawn from the reservoir was attributed to the county where the withdrawal point was located on the river or stream.
 - For example, if 5 Mgal/d of water was withdrawn from the Ocmulgee River in Bibb County and conveyed to Town Creek Reservoir in Jones County from which 2 Mgal/d was withdrawn for treatment and distribution, then the 5 Mgal/d was counted as a withdrawal from the Ocmulgee River in Bibb County.
- If the water withdrawn from the reservoir exceeded the amount conveyed from the river or stream, then the difference was attributed to the county where the reservoir was located and the remainder attributed to the county where the conveyance from the river or stream occurred.
 - For example, if 5 Mgal/d of water was withdrawn from the Ocmulgee River in Bibb County and conveyed to Town Creek Reservoir in Jones County from which 8 Mgal/d was withdrawn for treatment and distribution, then 3 Mgal/d was counted as a withdrawal from Jones County and 5 Mgal/d counted as a withdrawal from Bibb County.

Population Served

The population served by public suppliers within a defined water service area was computed from 2010 census block data (U.S. Census Bureau, 2011a, 2011b, 2011c). Water service-area maps and census block data were imported as layers into a GIS (hereafter referred to as “census map”). The population served for each public water supplier was estimated in the following manner.

- If the number of residential connections was available for a public supplier and the service area extent was the legal limits of a city or town, then the population served was the 2010 census population for the city or town.
- If the number of residential connections was available for a public supplier and the service area included and extended beyond the legal limits of a city or town, then the service area was outlined as a layer in the census map. The population served by public water suppliers was the summed census block population within the service area. When census blocks were split by service area boundaries, the proportion of the census block population in the service area was added to the population served. Prison populations were not included in population served estimates because prison water use is accounted for in the commercial use category.
- If the number of residential connections was available for a public supplier and the service area was identified by the extent of major water lines (commonly county water systems), then those water lines were added as a layer to the census map and census blocks closest to the water lines and with the greatest population density were selected. The occupied housing units in the selected census blocks were then summed until they equaled the known number of residential connections. The population served was the summed population in the census blocks.
- If the number of residential connections was available for a public supplier but the number was larger than the number of occupied housing units of the incorporated city or town, and the service area was unknown, then the service area was estimated. Beginning with the census blocks within the city or town boundaries, census blocks with the greatest number of housing units surrounding the city or town were added to those within the city boundary until the number of residential connections equaled the number of occupied housing units; these census blocks became the estimated service area. The population served was the 2010 census population within the estimated service area.

- Initial population served numbers for small community water systems were provided by the GaEPD Drinking Water Permit program. These data were used primarily for most of the subdivisions, apartment complexes, and mobile home parks in each county and river basin. These small community water systems were numerous and in many instances their locations and areal extent were not easily obtained. Nevertheless, the service areas for the largest of these small community systems were identified on the census map and the computed 2010 population was compared to the population served numbers obtained from the GaEPD. Typically, the GaEPD data were accurate for subdivisions with less than 100 households, but tended to be over or under estimated by 2–25 percent in subdivisions with more than 100 households. In some cases (primarily small towns), the population served on the drinking water permit was larger than the 2010 census population. In these instances, Google Earth® was then used to identify dwellings beyond the town limits that could be served by the town's water system. In most cases, the city or town was surrounded by farmland or a water body and the reported population served on the drinking water permit was overestimated. In these cases the reported population served was adjusted to equal the 2010 census population of the city or town.

Domestic Deliveries

Domestic water use is water used for typical household purposes such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, washing cars, and watering lawns and gardens. In Georgia, most of the water for domestic uses is provided by public suppliers; however, households in rural areas typically are supplied by individual water wells. These are termed self-supplied domestic water users.

Domestic deliveries from public supply are estimated using the percentage of water delivered to residential connections given in the 2010 water-use questionnaire. If a questionnaire was not returned, or deliveries were missing from the questionnaire, then the data were acquired using the sources and in the sequence listed previously. When the population served was determined, this population was multiplied by a domestic water-use coefficient of 75 gal/d per person. This coefficient reflects the annual average per capita domestic water use each day, as discussed in Self-supplied Water Use, Domestic Use section in this report.

Commercial Deliveries

Commercial establishments include motels, hotels, restaurants, medical centers, hospitals, military installations, public safety facilities (police stations, fire houses and so forth), correctional institutions, retail stores, educational facilities (public and private), campgrounds, and recreational vehicle parks. The amount of water delivered to commercial establishments by public water suppliers was summarized from the 2010 water-use questionnaire, 2010/2011 CAFR, the proportion stated in the 2005 water-use questionnaire, or was estimated using water-use coefficients. In some instances, the number of possible commercial customers in a known service area was determined by using internet business directories and Google Earth®.

Commercial water-use coefficients were computed using the amount of water delivered divided by the number of commercial connections from 2010 water-use questionnaires or 2010/2011 CAFRs. Among 73 public water suppliers who returned a correctly completed water-use questionnaire or listed commercial deliveries in a 2010/2011 CAFR, the median water delivery per commercial customer was 540 gal/d. The populations served for these 73 water suppliers ranged from 360 to 753,000. Water-use coefficients were used when the number of commercial customers was known, but the amount of water delivered was unknown. Commercial deliveries were computed as the number of commercial customers multiplied by the water-use coefficient. A coefficient of 200 gal/d per commercial customer was used for public suppliers serving fewer than 2,000 people and with commercial customers consisting primarily of small downtown businesses and gas station/convenience stores (as determined from Google Earth®), whereas a public supply delivery of 550 gal/d per commercial customer was used for all other public suppliers.

Industrial Deliveries

Industrial establishments include those involved with the production of chemical, food, textile, paper, wood, petroleum and allied products, metal fabrication, and machinery. The amount of water delivered to industries by public water suppliers in 2010 is summarized from the 2010 water-use questionnaire, 2010/2011 CAFR, the proportion of industrial deliveries given in the 2005 water-use questionnaire, or was estimated using water-use coefficients. In some instances, the number of possible industrial customers in a known service area was determined by using internet business directories,

Google Earth®, and the Dun and Bradstreet Hoovers database (Dun and Bradstreet, Inc., 2011).

A water-use coefficient was used when the number of industrial connections or customers was known but the amount of water delivered was unknown. Industrial deliveries were computed as the number of industrial customers multiplied by the water-use coefficient. Among 81 public water suppliers who returned a correctly completed water-use questionnaire or listed industrial deliveries in a 2010–11 CAFR, the median water delivery per industrial customer was 2,000 gal/d and ranged from 100 to 280,000 gal/d. This median value of 2,000 gal/d was used as the industrial water-use coefficient.

Public Use, System Losses, and Transfers

Non-revenue deliveries include unbilled authorized water use, unauthorized water use, meter inaccuracies and data errors, and storage and system losses (also known as distribution or conveyance losses) due to leakage (U.S. Environmental Protection Agency, 2009, p. 2–2). Unbilled authorized deliveries include water deliveries to churches, charitable organizations, schools, and fire suppression; public connections such as government office buildings, vehicle garages and maintenance buildings, and public recreation areas such as parks, recreation complexes, athletic fields, and public golf courses. Unauthorized water deliveries typically represent theft of water. Nonrevenue deliveries by privately owned water suppliers typically are restricted to system losses and unauthorized water use.

System losses reported on 2010 water-use questionnaires or in 2010–11 CAFRs ranged from about 4 to 32 percent of

the total water entering the distribution system. If the actual system loss was not available, then the average system loss was estimated at 15 percent for public water suppliers and 5 percent for subdivisions. The 15 percent loss was about the average for all water losses reported on the 2010 questionnaires or in the 2010–11 CAFRs and was similar to that reported by U.S. Environmental Protection Agency (2009, p. B–2, B–3) and by a consulting firm (CH2M HILL, 2007). Non-revenue deliveries were inconsistently reported on the 2010 water-use questionnaire and in some cases were reported as the difference between withdrawals plus purchases and residential, commercial, and industrial deliveries. Water transfers refer to water purchased and water sold on a wholesale basis between water suppliers. The amount of water purchased or sold in 2010 was taken from the 2010 water-use questionnaire, from 2010/2011 CAFRs (if reported), or from the 2005 questionnaire.

Surface-Water Returns

The amounts of treated and untreated water discharged to rivers, streams, and reservoirs in Georgia (surface-water returns) during 2010 were provided by the GaEPD and the Georgia Power Company. Each entity with a discharge permit under Georgia’s NPDES wastewater permit program is required to report average monthly discharges to the GaEPD. These discharge monitoring reports were the source of surface-water return data. These data were then summarized and compiled for each county, major river basin, and water-planning region in Georgia.

Water Withdrawals, Estimated Water Use, and Surface-Water Returns

The period between 2007 and 2010 was a challenging time economically and climatologically in Georgia. During that period, major recession affected the United States, including Georgia, resulting in large increases in unemployment and decreases in manufacturing, construction, and other industrial activity (Glassman, 2014).

According to the 2010 census, nearly 9.7 million people lived in Georgia (U.S. Census Bureau, 2011a; table 2). The water for 85 percent of that population was provided by public water suppliers. On a county basis, total water withdrawals ranged from less than 5 to 975 million gallons per day (Mgal/d) in 2010 (fig. 7). Estimated total withdrawals

from groundwater and surface-water sources were about 4,670 Mgal/d in 2010 (table 2; fig. 8), a nearly 15 percent reduction from 2005 (5,471 Mgal/d). In 2010, thermoelectric power facilities (2,046 Mgal/d) and public supply systems (1,121 Mgal/d) withdrew nearly 68 percent of all water withdrawn in Georgia.

In 2010, surface-water withdrawals (3,481 Mgal/d) were nearly three times greater than groundwater withdrawals (1,189 Mgal/d) in Georgia (table 2; fig. 8). Public suppliers, self-supplied industrial, golf course irrigation, livestock, aquaculture, and thermoelectric power facilities withdrew more surface water than groundwater. Surface-water withdrawals were greatest for thermoelectric-power generation (2,043 Mgal/d) and public supply (873 Mgal/d), accounting for nearly 84 percent of surface-water withdrawals in 2010. Agricultural and industrial withdrawals accounted for

Table 2. 2010 population, and water withdrawals by source and water-use category in Georgia, 2010.

[Mgal/d, million gallons per day; —, not applicable]

Population: 9,687,660

Population served by public supply: 8,255,250

Population using groundwater: 1,656,800

Population using surface water: 6,598,450

Self-supplied population (groundwater): 1,432,410

Total per capita use^a: 460 gallons per person per day

Acres irrigated: 1,303,050

Category	Water withdrawals (Mgal/d)			Deliveries from public supply ^b (Mgal/d)	Total use ^c (Mgal/d)	Surface-water returns (Mgal/d)
	Groundwater	Surface water	Total			
Public supply	247.8	872.9	1,121	—	—	—
Domestic	107.4	0.00	107.4	623.5	730.9	—
Commercial/public use ^d	2.08	0.58	2.66	209.2	211.9	1.21
Industrial	206.5	288.5 ^e	495.1	107.9	603.0	405.4
Public supply system losses ^f	—	—	—	181.8	181.8	—
Public wastewater treatment	—	—	—	—	—	711.4
Mining	16.67	0.29	16.96	—	16.96	24.10
Irrigation—Crop	577.5 ^g	169.8	747.4	—	747.4	—
Irrigation—Golf courses	21.50	33.12	54.62	3.14	57.76	—
Livestock and aquaculture	6.36	72.85	79.22	—	79.22	1.95
Thermoelectric power	2.92	2,043 ^d	2,046	—	2,046	1,081
Total	1,189	3,481	4,670	1,125	4,675	2,225

^aSum of withdrawals by all categories divided by the total 2010 population.

^bA net transfer of about 6.7 Mgal/d of public-supplied water occurred from Alabama and Tennessee to Georgia in 2010.

^cTotal use is total withdrawal plus public supply deliveries.

^dPublic use includes self-supplied withdrawals and unbilled public water delivered to municipal buildings, parks, golf courses, schools, churches, and so forth.

^eIncludes withdrawals from saline water.

^fPublic-supply system losses consist of water lost from the water distribution system and include pipe leaks and breaks, fire suppression, and unauthorized use.

^gIncludes permitted well-to-pond systems.

Figure 7. Surface-water and groundwater withdrawals by county in Georgia, 2010.

Figure 8. Water withdrawals by source and water-use category in Georgia, 2010. [Mgal/d, million gallons per day]

15 percent of surface-water withdrawals, whereas commercial, mining, and golf course irrigation accounted for the remaining 1 percent. Surface water provided 78 percent of the 1,121 Mgal/day withdrawn for public supply in 2010.

Self-supplied domestic, commercial, mining, and crop irrigation uses withdrew more groundwater than surface water in 2010 (table 2; fig. 8). Crop irrigation withdrew the largest amount of groundwater (578 Mgal/d). Thermoelectric-power and commercial uses withdrew the least amount of groundwater. Typically, counties in northern Georgia withdraw a larger percentage of water from surface water than groundwater sources, whereas counties in the southern Georgia withdraw more water from groundwater than surface-water sources (figs. 7 and 9).

Self-supplied industries withdrew about 495 Mgal/d in 2010, of which 58 percent was surface water (table 2). Paper and pulp facilities withdrew 78 percent of all water withdrawn by self-supplied industries (387 Mgal/d), of which 255 Mgal/d was surface water (table 3). In contrast, the kaolin and fuller's earth industries (primarily located in middle Georgia, south of the Fall Line) withdrew 8.7 percent of all water withdrawn by self-supplied industries (43.1 Mgal/d), of which 34.7 Mgal/d was groundwater. Chemical manufacturing facilities (appendix 1) used 7.8 percent of the total groundwater (16.3 Mgal/d) and 5.5 percent of the total surface water (15.8 Mgal/d) withdrawn by all industries in Georgia during 2010 (table 3).

In 2010, total water use in Georgia is estimated at 4,675 Mgal/d (table 2). This amount includes 1,125 Mgal/d of water delivered by public suppliers to domestic, commercial and public use, and industrial customers, and public-supply losses. About 6.7 Mgal/d of water was delivered from public suppliers in Alabama and Tennessee to customers in Georgia. Thermoelectric-power generation accounted for about 44 percent of all water used in Georgia during 2010. Crop irrigation and domestic categories each accounted for nearly 16 percent of the total water use in 2010, whereas the industrial and commercial/public use categories accounted for nearly 13 and 4.5 percent, respectively. Public-supply losses accounted for 3.9 percent and mining, golf course irrigation, and livestock collectively accounted for 3.3 percent of the total water use in Georgia.

About 2,225 Mgal/d of water was returned to surface-water bodies in Georgia and represents about 48 percent of the water withdrawn in 2010 (table 2). Nearly 49 percent of all surface-water returns were from thermoelectric-power facilities using once-through cooling processes. About 32 percent of all surface-water returns was treated wastewater from public treatment facilities (711 Mgal/d), while industrial facilities discharged 405 Mgal/d or 18 percent of the total returns. Mining, aquaculture, and commercial facilities discharged about 1 percent of the water returned to surface water in 2010.

Figure 9. Percentage of total water withdrawals by county and source in Georgia, 2010.

Table 3. Permitted commercial and industrial water withdrawals by major North American Industrial Classification code (NAICS, appendix 1) in Georgia, 2010.

NAICS (Appendix 1)	Withdrawals (million gallons per day)		
	Groundwater	Surface water	Total
322—Paper, pulp	132.3	254.8	387.1
212—Kaolin and ball clay	34.72	8.43	43.15
325—Chemical products	16.25	15.81	32.06
311—Food	9.22	3.16	12.38
313, 314—Textiles	3.16	6.14	9.30
221—Electrical utility	0.89	0.00	0.89
327—Stone, clay	2.68	0.10	2.78
312—Beverage manufacturing	2.85	0.00	2.85
321—Lumber and wood products	2.43	0.00	2.45
331—Primary metals	0.44	0.12	0.56
339—Miscellaneous manufacturing	0.53	0.00	0.53
326—Rubber, plastic	0.23	0.00	0.23
332—Metal fabrication	0.05	0.00	0.05
Total	205.8	288.6	494.4
All other industries	0.70	0.00	0.70

Water Use and Surface-Water Returns by Major River Basin

Of the 2,624 Mgal/d of water withdrawn for non-thermo-electric uses in 2010, about 57 percent was self-supplied water (1,503 Mgal/d; table 2). Non-thermoelectric water withdrawals were greatest in the Apalachicola River Basin (1,250 Mgal/d) and smallest in the Ochlockonee River Basin (26 Mgal/d; table 4). Per capita water use (public supply, domestic, commercial, and industrial water use per person) ranged from 81 gal/d in the Ocmulgee River Basin to 553 gal/d in the Altamaha River Basin (table 4).

Self-Supplied Water Use

Self-supplied water use is water withdrawn directly from a groundwater or a surface-water source by a user, in contrast to water that is delivered by a public supplier. Self-supplied domestic withdrawals amounted to 107 Mgal/d and 56 percent of that use was in the Apalachicola (26.2 Mgal/d), Ocmulgee (20.7 Mgal/d), and Savannah River Basins (12.4 Mgal/d;

table 4). In the Coosa and Tallapoosa River Basins, only 6.5 percent of the population relied on domestic wells for their water supply (table 4). In contrast, nearly 47 percent of the population in the Ochlockonee River Basin and 57 percent of the population in the Altamaha River Basin relied on domestic wells for their water (table 4).

About 515 Mgal/d was withdrawn by self-supplied commercial, industrial, and mining users in 2010 (table 4). Self-supplied commercial and industrial use was greatest in the Apalachicola (134 Mgal/d) and Savannah River (130 Mgal/d) Basins. In contrast, self-supplied commercial and industrial use was lowest (0.81 Mgal/d each) in the Ochlockonee and Tennessee River Basins. Mining withdrawals were greatest in the Apalachicola (6.1 Mgal/d), Ocmulgee (2.6 Mgal/d), and Savannah River Basins (2.5 Mgal/d), but lowest in the Satilla and St. Mary's River (0.15 Mgal/d), Tennessee River (0.20 Mgal/d), and the Suwannee and Aucilla River Basins (0.22 Mgal/d).

Crop irrigation, livestock management, and aquaculture are the primary agricultural users of water in Georgia. Crop irrigation accounts for about 90 percent of all water withdrawn for agriculture in Georgia (table 2). Agricultural activities

Table 4. Water withdrawals and public-supply deliveries by water-use category, for major river basins in Georgia, 2010.

[—, not applicable]

Major river basin (fig. 3)	Total population (thousands)	Self-supplied domestic population, as percent of total population	Withdrawals (million gallons per day)						
			Public supply	Domestic	Commercial	Industrial	Mining	Golf course irrigation	Crop irrigation
Savannah	668.33	25.6	116.6	12.83	0.29	129.4	2.50	4.55	7.99
Ogeechee	487.56	15.0	52.14	5.49	0.61	13.46	0.53	2.01	30.04
Oconee	624.82	21.1	51.04	9.91	0.01	43.67	1.72	6.16	15.39
Ocmulgee	2,124.36	13.0	128.5	20.71	0.06	23.46	2.65	10.41	62.80
Altamaha	134.47	57.0	9.45	5.76	0.26	58.84	0.31	0.44	16.21
Satilla and St. Marys	293.24	33.4	25.49	7.36	0.15	42.34	0.15	5.93	14.21
Suwannee and Aucilla	316.78	31.3	35.80	7.44	0.22	10.65	0.22	1.61	64.42
Ochlockonee	81.89	46.8	5.26	2.88	0.03	0.78	1.04	0.19	14.29
Apalachicola	3,519.12	9.9	532.0	26.17	0.59	133.1	6.08	12.65	515.8
Coosa and Tallapoosa	1,235.93	6.5	147.0	5.96	0.32	38.68	1.56	9.28	5.63
Tennessee	201.15	19.5	17.43	2.94	0.12	0.69	0.20	1.38	0.51
Total	9,687.65	—	1,121	107.4	2.66	495.1	16.96	54.61	747.3

^aPer capita use based on public-supply, domestic, commercial, and industrial withdrawals divided by the total population in the basin.

^bPublic-supply system losses include water lost from the water distribution system and includes pipe leaks and breaks, fire suppression, and unauthorized use.

^cAbout 6.7 Mgal/d of water was delivered into and used in Georgia by public water suppliers in Alabama and Tennessee in 2010.

^dIncludes 213 Mgal/d of saline surface water.

withdrew about 827 Mgal/d of water in 2010 and 65 percent of these withdrawals were in the Apalachicola River Basin (table 4). Agricultural withdrawals in the Apalachicola Basin were 8-times higher than those in the Suwannee and Aucilla River Basins (67.2 Mgal/d), the basins with the next largest withdrawals. In contrast, agricultural withdrawals were lowest in the Coosa and Tallapoosa River Basins (14.7 Mgal/d) and Ochlockonee River Basin (15.7 Mgal/d), and the Tennessee River Basin (15.8 Mgal/d).

Nearly 55 Mgal/d of water was withdrawn to irrigate golf courses in 2010 (table 2). Of that total, 61 percent was surface water. Golf course irrigation was highest in the Apalachicola River and Ocmulgee River Basins (respectively, 12.7 and 10.4 Mgal/d; table 4). Water withdrawals for golf course irrigation were lowest in the Ochlockonee River Basin (0.19 Mgal/d).

Surface-water withdrawals for thermoelectric-power generation accounted for 59 percent of all surface-water withdrawals in 2010 (table 2). The thermoelectric-power generation from Plants Arkwright, Branch, Hatch, and Scherer in the Ocmulgee and Oconee River Basins withdrew 1,008 Mgal/d in 2010, representing about 49 percent of the surface-water

withdrawals for thermoelectric power in Georgia. Within the Coosa and Tallapoosa River Basins, Plant Bowen and Plant Hammond withdrew 480 Mgal/d (23 percent) of surface water in 2010. In the Savannah River Basin, Plant McIntosh, Plant Vogtle and Plant Wentworth (Kraft) withdrew 342 Mgal/d (17 percent) of surface water in 2010, 213 Mgal/d of which was saline surface water.

Public-Supplied Water Use

Any entity (public or private) that regularly delivers water to at least 25 people or has at least 15 water connections is considered a public water system (public supplier) under Georgia law (OCGA 12–5–172–11). In 2010, public suppliers withdrew about 1,121 Mgal/d in Georgia. Included in this report is public-supplied water delivered from public suppliers in Alabama, South Carolina, and Tennessee and used in Georgia. Water delivered from public suppliers in Georgia to Alabama, South Carolina, or Tennessee is counted as a public-supply delivery to water users in those States, but is not included in water-use calculations for Georgia because that water is not used in Georgia.

Table 4. Water withdrawals and public-supply deliveries by water-use category, for major river basins in Georgia, 2010.—Continued

[—, not applicable]

Withdrawals—Continued (million gallons per day)			Per capita use ^a (gallons per day)	Public supply deliveries (million gallons per day)						System loss, as a percent of total deliveries
Livestock and aquaculture	Thermo- electric	Totals		Domestic	Commercial and public use	Industrial	Irrigation	System losses ^b	Total ^c	
6.08	341.9 ^d	622.1	388	39.37	22.49	8.47	0.00	11.63	81.97	14.2
2.71	0.00	107.0	147	33.54	9.62	27.80	0.00	12.54	83.50	15.0
9.50	952.4	1,090	167	28.57	14.66	5.12	0.00	7.97	56.32	14.2
3.21	55.23	307.0	81	133.5	45.99	7.95	0.00	24.33	211.8	11.5
2.12	56.89	150.3	553	4.32	1.73	0.73	0.00	1.18	7.96	14.8
3.27	8.09	107.0	257	14.99	5.04	1.36	0.00	3.23	24.62	13.1
2.79	0.00	123.2	171	21.36	7.79	2.46	0.00	6.73	38.34	17.6
1.47	0.00	25.94	109	2.16	0.43	0.05	0.00	0.40	3.04	13.2
23.68	151.4	1,402	197	271.1	79.62	35.03	3.14	92.95	481.8	19.3
9.05	480.1	697.6	155	61.72	19.54	18.63	0.00	17.75	117.6	15.1
15.30	0.29	38.86	105	12.95	2.35	0.34	0.00	3.10	18.74	16.5
79.18	2,046	4,670	—	623.5	209.2	107.9	3.14	181.8	1,125	16.2

Of the 1,125 Mgal/d of water delivered by public suppliers, 55 percent was used for domestic (residential; 623 Mgal/d) purposes in Georgia (table 2). The domestic use of water is directly related to the population served by public water suppliers and inversely related to the self-supplied populations; thus, public-supplied domestic water use was greatest in the Apalachicola River Basin, which has the highest public-supplied population and lowest in the Ochlockonee River Basin, which has the lowest public-supplied population.

Nearly 19 percent of public-supplied water was delivered to commercial customers (including public-use connections) in 2010 (table 2). Public-supply deliveries for commercial and public uses were greatest in the Apalachicola (80 Mgal/d) and Ocmulgee River Basins (46 Mgal/d). In contrast, commercial deliveries were lowest in the Ochlockonee (0.43 Mgal/d) and the Altamaha (1.7 Mgal/d) River Basins (table 4).

Nearly 9.6 percent of public-supplied water was delivered to industrial customers in 2010 (tables 2 and 4). Industrial uses of public-supplied water were greatest in the Apalachicola (35 Mgal/d) and Ogeechee (27 Mgal/d) River Basins (table 4). In contrast, industrial deliveries were lowest in the Tennessee (0.34 Mgal/d) and Ochlockonee (0.05 Mgal/d) River Basins.

Water lost in the public-supply distribution system (system or public losses) is typically the result of pipe leakage and breaks. System losses are related to the total length of the pipeage, age of the pipes, and water pressure (U.S. Environmental Protection Agency, 2009). Thus, the largest and oldest public-supply systems will lose the greatest amount of water. In 2010, an estimated 182 Mgal/d of water was lost in the public-supply distribution system (table 2). Average

public-supply losses were estimated at 16.1 percent of the water delivered in 2010 and ranged from 11.4 percent in the Ocmulgee River Basin to 19.3 percent in the Apalachicola River Basin (table 4).

Surface-Water Returns

In basins where there is a greater reliance on groundwater than surface water for water supplies, surface-water returns may exceed surface-water withdrawals because once used, that groundwater enters sanitary sewer systems for treatment and discharge to surface water. About 2,225 Mgal/d of water was discharged to surface water by public (municipal and privately owned) wastewater treatment facilities, commercial, industrial, mining, aquaculture, and thermoelectric power facilities in 2010 (table 2). Thermoelectric power facilities returned nearly 49 percent of all water discharged to surface water, followed by public wastewater facilities (32 percent), and combined commercial and industrial discharges (19 percent).

River basins with the greatest populations returned the greatest amount of publicly-treated wastewater to surface water; thus, the Apalachicola and Ocmulgee River Basins received the greatest amount of public wastewater (respectively, 341 and 111 Mgal/d, table 5). In contrast, public wastewater discharges were lowest in the Tennessee (2.44 Mgal/d) and the Altamaha (7.3 Mgal/d) River Basins in 2010.

About 19 percent of surface-water returns were contributed by the commercial, industrial, mining, and aquaculture sectors in Georgia (table 5). Surface-water returns from commercial facilities were greatest in the Altamaha

Table 5. Surface-water returns by water-use category for major river basins in Georgia, 2010.

Major river basin (fig. 3)	Surface-water returns ^a (million gallons per day)						Totals
	Public wastewater	Commercial	Industrial	Mining	Aquaculture	Thermo- electric	
Savannah	75.02	0.03	140.7	4.83	0.00	205.0	425.6
Ogeechee	18.47	0.00	9.15	0.00	0.00	0.00	27.59
Oconee	28.06	0.01	18.80	4.81	0.00	368.7	420.3
Ocmulgee	111.0	0.00	5.37	4.35	0.00	0.00	120.7
Altamaha	7.31	0.82	53.88	0.00	0.00	0.00	62.01
Satilla and St. Marys	23.06	0.00	40.05	0.00	0.00	8.10	71.21
Suwannee and Aucilla	22.14	0.01	0.02	0.00	0.00	0.00	22.16
Ochlockonee	8.37	0.27	0.60	0.03	0.00	0.00	9.24
Apalachicola	341.5	0.07	44.90	6.65	0.00	51.00	444.1
Coosa and Tallapoosa	74.04	0.00	90.96	3.41	0.00	448.0	616.4
Tennessee	2.44	0.00	0.93	0.00	1.95	0.00	5.29
Total	711.4	1.21	405.4	24.10	1.95	1,081	2,225

^aSurface-water returns may exceed surface-water withdrawals in basins where there is a greater reliance on groundwater than surface-water supplies.

(0.82 Mgal/d) and the Ochlockonee (0.27 Mgal/d) River Basins; however, seven basins—Ogeechee, Ocmulgee, Satilla and St. Mary's, Coosa and Tallapoosa, and Tennessee—did not receive any return flows from commercial facilities in 2010. Surface-water returns from industrial facilities were greatest in the Savannah (141 Mgal/d) and Coosa and Tallapoosa (91 Mgal/d) River Basins, whereas the Ochlockonee (0.60 Mgal/d) and the Suwannee and Aucilla (0.02 Mgal/d) River Basins received the lowest return flows from industrial facilities in 2010. Surface-water returns from mining activities were greatest in the Apalachicola River Basin (6.7 Mgal/d) followed by the Savannah and Oconee River Basins (4.8 Mgal/d each). Federal and State fish hatcheries discharged nearly 2 Mgal/d of water to surface water in the Tennessee Basin, the only basin with reported surface-water returns from aquaculture facilities.

Surface-water returns from thermoelectric-power facilities are primarily from facilities that utilize once-through cooling processes. Within the Coosa and Tallapoosa Basins, Plant Hammond returned 448 Mgal/d (41 percent of all returns in Georgia) to surface water in 2010, whereas Plant Arkwright and Plant Branch, and the Crisp County plant in the Oconee River Basin returned 369 Mgal/d (34 percent; table 5). In the Savannah River Basin, Plant McIntosh returned 205 Mgal/d to the lower Savannah River in 2010.

Water Use by Principal Aquifer

About 1,189 Mgal/d of groundwater were withdrawn from the principal aquifers in Georgia during 2010 (tables 2 and 6). About 68 percent of all groundwater withdrawals in 2010 came from the Floridan aquifer system, followed by the Cretaceous aquifer system (15 percent), the crystalline-rock aquifers (5.3 percent), and the Claiborne aquifer (5.0 percent). The surficial aquifer system supplied the least amount of groundwater in 2010, only 0.1 percent of total groundwater withdrawals.

In 2010, nearly 3.1 million people or 32 percent of the 2010 Georgia population used groundwater for domestic purposes (tables 2 and 6). Of that population, about 1.4 million people relied on small domestic wells for their water (table 2). The Floridan aquifer system supplied about 56 percent of the population using groundwater, followed by the Cretaceous aquifer system (22 percent), and the crystalline-rock and Paleozoic-rock aquifers (15.4 percent). The Claiborne and Clayton aquifers supplied about 5 percent of the population using groundwater in 2010. Only about 1.6 percent of the groundwater population used water from the Brunswick aquifer or surficial aquifer system.

Self-Supplied Water Use

Of groundwater used in 2010, 79 percent was withdrawn by self-supplied users (table 6). Of the 1,189 Mgal/d

of groundwater withdrawn in 2010, 50 percent was used for crop and golf course irrigation (599 Mgal/d), 17 percent was used by industry (206 Mgal/d), 9 percent for domestic use (107 Mgal/d), and 2.3 percent for mining, livestock and aquaculture, thermoelectric power generation, and commercial uses (table 6). Except for mining, the Floridan aquifer system supplied the majority of the water used in the other seven use categories. Of the groundwater used for mining, 75 percent was withdrawn from the crystalline-rock aquifers (7.3 Mgal/d) and the Cretaceous aquifer system (5.3 Mgal/d). About 2.7 percent of the self-supplied groundwater used for irrigation and industry came from the Brunswick aquifer.

Public Supply

Only 21 percent of groundwater withdrawn in 2010 was used for public supply (table 6). Nearly 1.7 million people used groundwater delivered by public water suppliers for domestic purposes in 2010. The two principal aquifers in southern Georgia (south of the Fall Line), the Floridan and the Cretaceous aquifer systems, provided 58 and 22 percent, respectively, of the groundwater used for public supply (table 6). The crystalline-rock and the Paleozoic-rock aquifers provided nearly all of the groundwater used in northern Georgia. Public-supply withdrawals from the crystalline-rock and the Paleozoic-rock aquifers accounted for, respectively, 6.9 and 4.9 percent of all public-supplied groundwater withdrawn in Georgia in 2010.

In 2010, nearly all groundwater withdrawals for public supply were delivered to users in Georgia. About 0.4 Mgal/d was delivered to users in Alabama, South Carolina, and Tennessee. Domestic uses accounted for nearly 57 percent of all public-supply deliveries of groundwater in Georgia (table 6). Commercial and public uses accounted for 17 percent and industrial uses accounted for about 10 percent of public-supplied groundwater delivered in Georgia.

Water Use and Surface-Water Returns by Water-Planning Region

Total water withdrawals and public-supply deliveries for each of the 11 water-planning regions recognized by the State of Georgia are listed in table 7. A total of 1,228 Mgal/d of water was withdrawn for public supply and by self-supplied domestic users in 2010 (table 7). Water-planning regions with the greatest populations withdrew the greatest amount of water. Excluding withdrawals for thermoelectric-power generation, water withdrawals were greatest in the Lower Flint–Ochlockonee region (612 Mgal/d) followed by the Metropolitan North Georgia Water Planning District (hereafter referred to as the Metro North Georgia District; 591 Mgal/d). Water withdrawals were lowest in the Suwannee–Satilla region (116 Mgal/d).

Table 6. Groundwater withdrawals and public-supply deliveries by use category for the principal aquifers in Georgia, 2010.

Aquifer name (fig. 2)	Population ^a (thousands)	Withdrawals (million gallons per day)								
		Public supply	Domestic	Commercial	Industrial	Mining	Irrigation	Livestock and aquaculture	Thermo-electric	Total
Floridan aquifer system (S400FLORDN)										
Floridan system	1,452.03	148.3	57.22	1.50	142.4	2.95	445.9	2.90	1.82	803.0
Surficial aquifer system (S100SURFCL)										
Brunswick	27.84	2.87	1.04	0.06	8.93	0.00	23.26	0.00	0.00	36.16
Surficial	2.68	0.28	0.12	0.00	0.10	0.00	0.76	0.00	0.03	1.29
Southeastern Coastal Plain aquifer system (S100SECSLP)										
Claiborne	120.51	7.63	0.07	0.04	1.77	0.37	48.68	0.51	0.00	59.07
Clayton	40.81	5.20	1.50	0.01	1.04	0.05	14.80	0.10	0.00	22.70
Cretaceous system	497.74	54.24	19.87	0.27	45.75	5.25	54.01	1.27	1.01	181.7
Piedmont and Blue Ridge crystalline rock aquifers (N400PDMBRX)										
Crystalline rock	808.31	17.22	22.40	0.20	3.91	7.39	11.17	1.25	0.06	63.60
Valley and ridge aquifer (N500VLYRDG)										
Paleozoic rock	139.29	12.06	5.21	0.00	2.65	0.66	0.42	0.33	0.00	21.33
Total	3,089.21	247.8	107.4	2.08	206.5	16.67	599.0	6.36	2.92	1,189

Aquifer name (fig. 2)	Population ^a (thousands)	Public-supply deliveries (million gallons per day)				
		Domestic	Commercial and public use	Industrial	Losses	Total ^b
Floridan aquifer system (S400FLORDN)						
Floridan system	1,452.03	79.05	25.79	21.15	23.77	149.8
Surficial aquifer system (S100SURFCL)						
Brunswick	27.84	1.79	0.49	0.13	0.51	2.92
Surficial	2.68	0.14	0.08	0.02	0.04	0.28
Southeastern Coastal Plain aquifer system (S100SECSLP)						
Claiborne	120.51	4.20	1.64	0.52	1.42	7.78
Clayton	40.81	2.82	1.25	0.25	0.97	5.29
Cretaceous system	497.74	30.66	9.90	3.03	9.00	52.59
Piedmont and Blue Ridge crystalline rock aquifers (N400PDMBRX)						
Crystalline rock	808.31	13.14	1.92	0.38	1.85	17.29
Valley and ridge aquifer (N500VLYRDG)						
Paleozoic rock	139.29	8.52	0.89	0.66	1.75	11.82
Total	3,089.21	140.3	41.97	25.81	39.34	247.4

^aPublic-supplied population and self-supplied domestic population using groundwater.^bThe difference between the amount of water withdrawn and the amount of water delivered represents deliveries from water suppliers in Alabama and Tennessee to water users in Georgia.

Table 7. Water withdrawals and public-supply deliveries by water-use category for water-planning regions in Georgia, 2010.

[Mgal/d, million gallons per day; —, not applicable]

Water-planning region (fig. 4)	Self-supplied population, (thousands)	Self-supplied population, (percent of total)	Withdrawals (million gallons per day)								
			Public supply	Domestic	Commercial	Industrial	Mining	Irrigation	Livestock and aquaculture	Thermo-electric	Total withdrawal
Coosa-North Georgia	131.41	18.2	90.85	9.85	0.44	34.52	0.98	7.86	28.00	432.2	604.7
Middle Chattahoochee	64.45	13.5	71.73	4.83	0.01	0.23	0.91	28.76	1.93	53.26	161.7
Metro North Georgia ^d	228.18	4.7	528.9	17.10	0.01	5.34	3.73	24.28	11.93	95.75	687.0
Upper Flint	93.57	36.4	25.87	7.03	0.25	12.89	2.82	104.3	4.62	0.00	157.8
Middle Ocmulgee	116.99	20.2	75.53	8.78	0.01	24.07	2.00	30.49	1.24	55.23	197.3
Upper Oconee	114.37	22.0	54.18	8.58	0.01	42.87	1.51	27.32	8.47	952.4	1,095
Savannah-Upper Ogeechee	163.64	26.7	81.12	12.26	0.30	79.48	2.65	30.75	7.30	65.75	279.6
Lower Flint-Ochlockonee	122.88	34.5	40.59	9.22	0.36	121.3	1.17	434.4	4.71	50.35	662.1
Suwannee-Satilla	153.55	37.5	38.20	11.52	0.20	10.54	0.36	51.78	3.59	0.00	116.2
Altamaha	143.67	56.4	15.35	10.76	0.38	60.58	0.16	53.31	5.95	56.89	203.4
Coastal Georgia	99.68	15.4	98.31	7.46	0.69	103.3	0.67	8.73	1.47	284.5	505.1
Total	1,432.39	—	1,121	107.4	2.66	495.1	16.96	802.0	79.21	2,046	4,670

Water-planning region (fig. 4)	Public-supplied population (thousands)	Public-supply deliveries (million gallons per day)					
		Domestic	Commercial and public use	Industrial	Irrigation ^a	System losses ^b	Total deliveries ^c
Coosa-North Georgia	614.85	48.99	18.63	16.24	0.00	15.76	99.62
Middle Chattahoochee	406.39	34.14	11.96	10.10	0.00	10.22	66.42
Metro North Georgia ^d	4,604.56	322.5	94.87	27.68	3.14	84.13	532.3
Upper Flint	155.75	12.88	3.64	1.10	0.00	5.99	23.61
Middle Ocmulgee	450.74	42.50	12.10	3.85	0.00	10.75	69.20
Upper Oconee	438.18	30.80	14.75	5.25	0.00	9.97	60.77
Savannah-Upper Ogeechee	446.57	36.79	21.68	7.98	0.00	13.34	79.79
Lower Flint-Ochlockonee	233.55	21.39	8.54	3.27	0.00	7.37	40.57
Suwannee-Satilla	253.03	22.33	7.46	2.92	0.00	5.49	38.20
Altamaha	111.09	8.88	3.00	1.00	0.00	2.49	15.37
Coastal Georgia	540.54	42.25	12.59	28.54	0.00	16.32	99.70
Total	8,255.25	623.5	209.2	107.9	3.14	181.8	1,125

^aRepresents public-supplied water measured by irrigation-only meters.

^bPublic-supply system losses is water lost from the water distribution system and includes pipe leaks and breaks, fire suppression, and unauthorized use. About 3 Mgal/d of public-supply deliveries are unaccountable and may be additional system losses.

^cPublic-supply withdrawals may not equal public-supply deliveries because of interregion and interstate transfers.

^dMetropolitan North Georgia Water Planning District.

Self-Supplied Water Use

About 1,500 Mgal/d of water was withdrawn by self-supplied users, excluding thermoelectric power facilities, in 2010 (table 7). The percentage of the population that was self-supplied in each planning region ranged from 4.7 in the Metro North Georgia District to 56 in the Altamaha planning region. Although the self-supplied population in the Metro North Georgia District represented only 4.7 percent of the population, the self-supplied domestic withdrawals were greatest (17.3 Mgal/d) among the water-planning regions. Self-supplied domestic withdrawals were lowest in the Middle Chattahoochee water-planning region (4.8 Mgal/d). Self-supplied commercial withdrawals accounted for less than 0.2 percent of all self-supplied water withdrawn in 2010; most of the commercial withdrawals were in the Coastal Georgia, Coosa–North Georgia, and Altamaha water-planning regions.

Of the 495 Mgal/d of water withdrawn by self-supplied industrial users in 2010, 25 percent was withdrawn in the Lower Flint–Ochlockonee water-planning region and 21 percent in the Coastal Georgia water-planning region. Of the 17 Mgal/d withdrawn for mining, the greatest withdrawals were in the Metro North Georgia District (22 percent), followed by the Upper Flint (17 percent) and Savannah–Upper Ogeechee (16 percent) water-planning regions. In 2010, about 802 Mgal/d was withdrawn for irrigation and the greatest withdrawals were in the Lower Flint–Ochlockonee (54 percent) and Upper Flint (13 percent) water-planning regions. Of 79.2 Mgal/d withdrawn for livestock and aquaculture uses, the greatest withdrawals were in the Coosa–North Georgia water-planning region (35 percent), followed by the Metro North Georgia District (15 percent); in these two regions, poultry and beef production, and public and private fish hatcheries used the majority of water withdrawn for livestock and aquaculture. About 2,046 Mgal/d of water was withdrawn for thermoelectric-power generation and the greatest withdrawals were in the Upper Oconee water-planning region (46 percent), followed by the Coosa–North Georgia (21 percent), and Coastal Georgia (14 percent) water-planning regions.

Public Supply

In 2010, public water suppliers withdrew 1,121 Mgal/d of water and delivered 1,125 Mgal/d of water to customers in Georgia (table 7). About 0.4 Mgal/d was delivered to wholesale customers in Alabama, Tennessee, and South Carolina; about 6.7 Mgal/d was delivered from public suppliers in Alabama and Tennessee to customers and wholesale suppliers in Georgia.

Domestic use accounted for 55 percent of the public-supply deliveries, followed by commercial and public uses at nearly 19 percent. About 9.6 percent of public-supplied water was delivered to industrial users. Estimated system losses during deliveries amounted to 182 Mgal/d or about 16 percent of public-supply deliveries (tables 2 and 7). Most public suppliers did not report their system losses on the water-use questionnaire; therefore, a coefficient of 15 percent was used to estimate unreported losses.

Of the water withdrawn by public suppliers, 47 percent was withdrawn in the Metro North Georgia District, followed by the Coastal Georgia and the Coosa–North Georgia water-planning regions at, respectively, 8.8 and 8.1 percent of the total public-supply withdrawals. These three water-planning regions had the highest public-supplied populations in 2010 (table 7).

Surface-Water Returns

Public wastewater discharges accounted for 32 percent of the 2,225 Mgal/d of water returned to surface water and 62 percent of all non-thermoelectric returns (table 8). Four water-planning regions discharged 73 percent of all public wastewater returned to surface water in 2010. The Metro North Georgia District discharged 364 Mgal/d of publicly-treated wastewater to surface water, the greatest amount in Georgia by a large margin. The Coastal Georgia, Savannah–Upper Ogeechee, and Middle Ocmulgee water-planning regions each discharged publicly-treated wastewater at a rate 7 times lower than the discharges in the Metro North Georgia District.

Water discharges from commercial and industrial facilities accounted for about 18 percent and mining facilities accounted for 1.1 percent of all surface-water returns (table 8). Of the nearly 407 Mgal/d of water discharged to surface water by commercial and industrial facilities, 34 percent was discharged in the Coastal Georgia and 22 percent in the Coosa–North Georgia water-planning regions (table 8). Commercial and industrial discharges were lowest in the Upper Flint (0.39 Mgal/d) and Suwannee–Satilla (0.09 Mgal/d) water-planning regions. Mining activities discharged 24 Mgal/d of water to surface water and nearly 30 percent of that occurred in the Metro North Georgia District, whereas 20 percent of the mining discharges were in the Savannah–Upper Ogeechee water-planning region and 17 percent in the Middle Ocmulgee water-planning region (table 8). Surface-water returns from mining activities were not recorded in the Suwannee–Satilla, Altamaha, and Coastal Georgia water-planning regions in 2010. The dewatering of mine pits during sand and gravel extraction is the primary source of these surface-water returns.

Table 8. Surface-water returns by water-use category for water planning regions in Georgia, 2010.

Water-planning region (fig. 4)	Surface-water returns (million gallons per day)						Totals
	Public wastewater	Commercial	Industrial	Mining	Aquaculture	Thermo- electric	
Coosa-North Georgia	38.44	0.06	89.71	1.63	1.95	432.0	563.8
Middle Chattahoochee	39.55	0.13	0.35	3.09	0.00	0.00	43.12
Metro North Georgia	363.9	0.14	2.23	7.20	0.00	17.00	390.5
Upper Flint	11.30	0.01	0.38	0.15	0.00	0.00	11.84
Middle Ocmulgee	50.36	0.01	4.47	4.05	0.00	0.00	58.89
Upper Oconee	27.53	0.00	18.75	3.10	0.00	368.7	418.1
Savannah-Upper Ogeechee	52.25	0.03	50.93	4.83	0.00	0.00	108.0
Lower Flint-Ochlockonee	35.38	0.00	45.11	0.03	0.00	50.00	130.5
Suwannee-Satilla	27.75	0.08	0.01	0.00	0.00	0.00	27.84
Altamaha	12.58	0.75	53.88	0.00	0.00	0.00	67.21
Coastal Georgia	52.42	0.00	139.6	0.00	0.00	213.1	405.1
Total	711.5	1.2	405.4	24.10	1.95	1,081	2,225

Water Use and Surface-Water Returns by County

Total water withdrawals, water use, and surface-water returns by use category are listed in table 9 and in appendix 2 for each of the 159 Georgia counties. In 2010, 6 of the 159 counties in Georgia (Fulton, Gwinnett, Dekalb, Cobb, Clayton, and Chatham) provided water to 43 percent of the nearly 8.3 million people receiving public-supplied water in Georgia. At least 70 percent of the total population in 10 Georgia counties were self-supplied with water from domestic wells; however, in Brantley County, 87 percent of the population was self-supplied (table 10). In contrast, less than 1 percent of the 2010 population in Baldwin, Clayton, Dekalb, Gwinnett, and Muscogee Counties used self-supplied water.

30 Water Use in Georgia by County for 2010 and Water-Use Trends, 1985–2010

Table 9. Water withdrawals, water use, and surface water returns by county in Georgia, 2010.

[Mgal/d, million gallons per day]

County (fig. 1)	Withdrawals, in Mgal/d								Total use ^b (Mgal/d)	Surface- water returns (Mgal/d)
	Public supply	Domestic	Commer- cial and public use ^a	Industrial	Mining	Irrigation	Livestock and aqua- culture	Thermo- electric	Totals	
Appling	0.91	0.94	0.00	0.00	0.00	1.76	0.27	56.90	60.78	0.93
Atkinson	0.44	0.34	0.00	0.40	0.00	0.44	0.99	0.00	2.61	0.27
Bacon	0.59	0.47	0.00	0.30	0.00	0.81	0.08	0.00	2.25	0.71
Baker	0.12	0.19	0.00	0.00	0.00	34.99	0.72	0.00	36.02	0.00
Baldwin	6.58	0.03	0.00	0.01	0.08	0.08	0.12	0.00	6.90	4.44
Banks	2.54	0.56	0.00	0.00	0.05	0.00	0.53	0.00	3.68	0.10
Barrow	4.60	0.51	0.00	0.39	0.05	0.79	0.19	0.00	6.53	0.51
Bartow	54.87	1.21	0.00	1.55	0.45	2.72	0.45	47.92	109.2	69.93
Ben Hill	3.23	0.29	0.00	0.00	0.00	2.07	0.07	0.00	5.66	2.65
Berrien	0.83	0.87	0.00	0.02	0.00	2.85	0.10	0.00	4.67	0.17
Bibb	23.60	2.17	0.00	14.61	0.01	0.65	0.04	0.00	41.08	43.53
Bleckley	0.74	0.59	0.12	0.00	0.00	6.32	0.08	0.00	7.85	0.33
Brantley	0.25	1.20	0.00	0.00	0.00	0.03	0.04	0.00	1.52	0.00
Brooks	0.94	0.72	0.01	0.06	0.00	5.61	0.42	0.00	7.76	0.00
Bryan	2.57	0.21	0.00	0.02	0.00	0.08	0.37	0.00	3.25	0.97
Bulloch	4.89	1.52	0.30	0.00	0.00	2.25	0.27	0.00	9.23	3.92
Burke	1.06	1.05	0.01	0.23	0.00	10.06	0.29	65.41	78.11	1.04
Butts	2.59	0.21	0.00	0.00	0.00	0.19	0.03	0.00	3.02	0.60
Calhoun	0.64	0.24	0.00	0.00	0.02	27.40	0.18	0.00	28.48	0.47
Camden	4.72	0.86	0.00	0.05	0.00	0.76	0.00	0.00	6.39	3.15
Candler	0.48	0.39	0.00	0.00	0.00	1.34	0.06	0.00	2.27	0.00
Carroll	11.82	1.56	0.00	0.02	0.11	0.69	0.82	0.00	15.02	1.10
Catoosa	5.66	0.05	0.00	0.00	0.05	1.07	0.16	0.00	6.99	0.00
Charlton	0.63	0.55	0.00	0.00	0.06	0.00	0.03	0.00	1.27	0.48
Chatham	32.06	0.80	0.25	37.79	0.12	1.22	0.01	206.2	278.5	311.9
Chattahoochee	0.34	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.88	4.72
Chattooga	3.32	0.42	0.00	5.31	0.02	0.00	1.65	0.00	10.72	10.24
Cherokee	17.93	0.52	0.00	3.18	0.11	2.40	0.18	0.00	24.32	26.48
Clarke	12.77	1.09	0.00	0.00	0.00	1.23	0.02	0.00	15.11	17.09
Clay	0.29	0.11	0.00	0.00	0.00	4.10	0.08	0.00	4.58	0.09
Clayton	9.35	0.04	0.00	0.00	0.25	0.16	0.01	0.00	9.81	27.64
Clinch	0.48	0.22	0.00	0.05	0.00	0.00	0.01	0.00	0.76	0.76
Cobb	43.84	3.22	0.00	0.39	0.00	1.97	0.02	5.25	54.69	82.72
Coffee	3.48	1.59	0.00	0.00	0.00	3.48	0.58	0.00	9.13	9.13
Colquitt	3.64	1.67	0.00	1.14	0.00	16.27	0.65	0.00	23.37	23.37
Columbia	16.19	1.36	0.00	0.03	0.40	1.06	0.04	0.00	19.08	19.08
Cook	1.80	0.53	0.00	0.00	0.21	5.18	0.16	0.00	7.88	7.88
Coweta	7.73	0.90	0.00	0.00	0.12	1.72	0.07	42.58	53.12	55.58
Crawford	0.35	0.67	0.00	0.00	0.39	1.23	0.22	0.00	2.86	2.86
Crisp	2.23	0.60	0.00	0.12	0.00	15.72	0.07	0.00	18.74	18.74
Dade	2.09	0.09	0.00	0.00	0.00	0.00	0.10	0.00	2.28	2.28
Dawson	1.70	0.45	0.00	0.00	0.00	0.30	0.30	0.00	2.75	2.86

Table 9. Water withdrawals, water use, and surface water returns by county in Georgia, 2010.—Continued

[Mgal/d, million gallons per day]

County (fig. 1)	Withdrawals, in Mgal/d								Total use ^b (Mgal/d)	Surface- water returns (Mgal/d)
	Public supply	Domestic	Commer- cial and public use ^a	Industrial	Mining	Irrigation	Livestock and aqua- culture	Thermo- electric	Totals	
Decatur	2.87	1.00	0.00	1.29	0.00	67.58	0.20	0.00	72.94	2.26
DeKalb	0.00	0.00	0.00	0.00	0.34	2.32	0.00	0.00	2.66	77.85 ^c
Dodge	1.15	0.97	0.00	0.00	0.00	9.47	0.90	0.00	12.49	0.65
Dooley	2.35	0.57	0.00	0.10	0.00	24.48	0.15	0.00	27.65	0.10
Dougherty	15.33	0.28	0.00	8.30	0.05	16.96	0.06	50.01	90.99	68.59
Douglas	19.97	0.29	0.00	0.00	0.32	0.60	1.82	0.00	23.00	15.04
Early	1.34	0.32	0.00	109.5	0.00	36.15	0.21	0.00	147.5	147.5
Echols	0.05	0.25	0.00	0.00	0.00	1.09	0.03	0.00	1.42	0.00
Effingham	35.58	1.43	0.00	15.23	0.15	0.23	0.09	70.21	122.9	90.92
Elbert	1.59	0.98	0.01	0.00	0.08	0.48	0.32	0.00	3.46	3.46
Emanuel	1.67	0.83	0.00	0.97	0.00	2.73	0.39	0.00	6.59	6.59
Evans	0.59	0.52	0.00	1.50	0.03	2.25	0.12	0.00	5.01	5.01
Fannin	1.90	0.89	0.00	0.00	0.00	0.02	6.42	0.00	9.23	9.12
Fayette	10.66	1.06	0.00	0.00	0.18	0.87	0.02	0.00	12.79	12.87
Floyd	13.08	0.42	0.32	25.85	0.11	2.00	0.71	432.2	474.7	474.8
Forsyth	19.22	0.17	0.00	0.00	0.71	0.58	6.68	0.00	27.36	27.31
Franklin	2.39	0.70	0.00	0.00	0.00	0.42	1.22	0.00	4.73	4.48
Fulton	200.7	3.73	0.00	0.01	0.26	3.73	0.09	0.00	208.5	139.7 ^d
Gilmer	3.11	1.21	0.00	1.42	0.07	0.33	0.70	0.00	6.84	6.84
Glascocock	0.07	0.16	0.00	0.07	0.00	0.04	0.06	0.00	0.40	0.40
Glynn	10.15	0.95	0.08	41.22	0.00	3.46	0.67	8.09	64.62	64.62
Gordon	10.52	0.65	0.00	0.06	0.00	1.46	0.84	0.00	13.53	12.85
Grady	1.68	1.04	0.00	0.00	0.00	5.90	0.92	0.00	9.54	9.54
Greene	1.91	0.29	0.00	0.00	0.08	1.91	0.30	0.00	4.49	4.49
Gwinnett	0.41	0.00	0.00	0.00	0.40	1.87	0.02	0.00	2.70	80.64
Habersham	5.28	1.15	0.00	0.00	0.06	0.58	5.08	0.00	12.15	12.27
Hall	94.79	2.09	0.00	0.21	0.20	1.37	1.57	0.00	100.2	23.82 ^c
Hancock	1.35	0.20	0.00	0.00	0.06	0.65	0.05	0.00	2.31	2.31
Haralson	2.62	0.45	0.00	0.00	0.00	0.22	0.62	0.00	3.91	4.11
Harris	6.27	0.45	0.00	0.00	0.13	0.20	0.05	0.00	7.10	4.27
Hart	1.15	1.13	0.00	0.00	0.00	1.12	0.80	0.00	4.20	4.66
Heard	1.46	0.26	0.00	0.00	0.00	0.00	0.16	48.61	50.49	50.47
Henry	37.48	2.01	0.00	0.00	0.19	2.41	0.86	0.00	42.95	24.73
Houston	23.76	0.17	0.00	2.96	0.02	5.95	0.05	0.00	32.91	30.98
Irwin	0.52	0.41	0.00	0.00	0.00	7.13	0.14	0.00	8.20	8.20
Jackson	10.83	1.14	0.00	0.48	0.09	0.43	3.63	0.00	16.60	12.05
Jasper	0.88	0.54	0.00	0.80	0.04	0.46	0.18	0.00	2.90	2.97
Jeff Davis	0.84	0.61	0.00	0.05	0.00	2.26	0.63	0.00	4.39	4.39
Jefferson	1.35	0.59	0.00	7.31	0.00	7.05	0.74	0.00	17.04	17.12
Jenkins	0.35	0.38	0.00	0.00	0.00	2.03	0.16	0.00	2.92	2.92
Johnson	0.56	0.52	0.00	0.00	0.00	0.78	0.08	0.00	1.94	1.94
Jones	4.45	1.06	0.00	0.00	0.95	0.27	0.10	0.00	6.83	4.07

Table 9. Water withdrawals, water use, and surface water returns by county in Georgia, 2010.—Continued

[Mgal/d, million gallons per day]

County (fig. 1)	Withdrawals, in Mgal/d								Total use ^b (Mgal/d)	Surface- water returns (Mgal/d)	
	Public supply	Domestic	Commer- cial and public use ^a	Industrial	Mining	Irrigation	Livestock and aqua- culture	Thermo- electric			Totals
Lamar	1.54	0.75	0.00	0.00	0.00	1.35	0.19	0.00	3.83	3.84	2.33
Lanier	0.52	0.43	0.00	0.00	0.09	0.87	0.04	0.00	1.95	1.95	0.09
Laurens	3.92	1.98	0.00	16.10	0.00	5.07	0.13	0.00	27.20	27.20	18.08
Lee	1.97	0.78	0.08	0.00	0.07	39.27	0.13	0.00	42.30	42.30	0.54
Liberty	6.75	0.69	0.05	8.96	0.09	0.02	0.01	0.00	16.57	16.57	11.81
Lincoln	0.51	0.20	0.00	1.01	0.00	0.00	0.11	0.00	1.83	1.83	0.25
Long	0.54	0.74	0.01	0.00	0.31	0.46	0.05	0.00	2.11	2.11	0.02
Lowndes	14.01	1.26	0.00	8.99	0.00	1.44	0.09	0.00	25.79	25.79	9.70
Lumpkin	1.32	1.47	0.00	0.00	0.04	0.28	0.15	0.00	3.26	3.26	0.62
McDuffie	2.20	0.53	0.00	0.00	0.00	0.58	0.14	0.00	3.45	3.45	1.21
McIntosh	1.05	0.26	0.00	0.00	0.00	0.25	0.00	0.00	1.56	1.56	0.26
Macon	0.88	0.61	0.01	10.05	0.00	14.74	0.66	0.00	26.95	26.95	1.33
Madison	0.50	1.52	0.00	0.10	0.02	0.30	0.80	0.00	3.24	3.37	0.05
Marion	0.72	0.18	0.00	0.27	0.24	1.31	0.14	0.00	2.86	2.86	0.48
Meriwether	0.23	0.97	0.21	0.11	0.00	0.21	0.26	0.00	1.99	2.97	0.35
Miller	0.27	0.31	0.00	0.00	0.00	45.28	0.22	0.00	46.08	46.08	0.27
Mitchell	3.86	0.88	0.24	0.84	0.00	58.91	0.69	0.14	65.56	65.56	0.08
Monroe	1.51	1.19	0.01	0.00	0.46	0.64	0.17	55.23	59.21	59.55	0.92
Montgomery	0.45	0.40	0.00	0.00	0.06	0.81	0.79	0.00	2.51	2.51	0.31
Morgan	1.50	0.52	0.01	0.05	0.00	1.99	1.28	0.00	5.35	5.35	0.71
Murray	2.65	0.35	0.00	0.00	0.02	0.23	0.61	0.00	3.86	4.84	1.27
Muscogee	37.30	0.00	0.00	0.01	0.56	0.87	0.00	4.59	43.33	36.81	32.97
Newton	12.83	0.21	0.00	0.00	0.10	0.82	0.14	0.00	14.10	9.72	0.03
Oconee	0.37	0.67	0.00	0.00	0.00	4.02	2.23	0.00	7.29	9.75	0.36
Oglethorpe	0.30	0.83	0.00	0.00	0.00	0.31	0.76	0.00	2.20	2.20	0.05
Paulding	0.13	0.79	0.00	0.00	0.20	0.85	0.11	0.00	2.08	12.61	0.71
Peach	2.63	0.77	0.00	0.00	0.00	5.22	0.04	0.00	8.66	8.66	1.67
Pickens	2.94	0.54	0.00	0.00	0.22	0.11	0.26	0.00	4.07	4.67	0.83
Pierce	0.74	0.90	0.00	0.08	0.00	2.31	0.10	0.00	4.13	4.13	0.00
Pike	4.44	0.93	0.00	0.00	0.00	1.39	0.16	0.00	6.92	3.07	0.15
Polk	5.50	0.07	0.00	1.29	0.08	0.26	0.56	0.00	7.76	7.29	3.70
Pulaski	1.00	0.52	0.00	0.54	0.00	13.31	0.02	0.00	15.39	15.39	1.28
Putnam	4.19	0.19	0.00	0.04	0.00	0.47	0.24	952.4	957.6	955.5	369.2
Quitman	0.14	0.05	0.00	0.00	0.00	0.25	0.02	0.00	0.46	0.47	0.00
Rabun	1.50	0.34	0.00	0.10	0.06	0.42	0.42	0.29	3.13	3.13	1.40
Randolph	0.57	0.20	0.00	0.18	0.00	21.34	0.06	0.00	22.35	22.35	0.39
Richmond	43.99	0.35	0.19	67.77	1.53	0.90	0.04	0.00	114.8	114.8	83.2
Rockdale	11.81	1.07	0.01	0.00	0.00	0.71	0.03	0.00	13.63	13.63	5.12
Schley	0.43	0.04	0.00	0.00	0.00	0.47	0.14	0.00	1.08	1.08	0.13
Screven	0.89	0.73	0.01	1.82	0.00	3.61	0.13	0.00	7.19	7.19	2.95

Table 9. Water withdrawals, water use, and surface water returns by county in Georgia, 2010.—Continued

[Mgal/d, million gallons per day]

County (fig. 1)	Withdrawals, in Mgal/d								Total use ^b (Mgal/d)	Surface- water returns (Mgal/d)	
	Public supply	Domestic	Commer- cial and public use ^a	Industrial	Mining	Irrigation	Livestock and aqua- culture	Thermo- electric			Totals
Seminole	0.58	0.37	0.00	0.00	0.00	44.22	0.07	0.00	45.24	45.24	0.43
Spalding	5.22	0.54	0.00	0.00	0.08	0.42	0.02	0.00	6.28	7.55	0.86
Stephens	3.13	0.16	0.08	0.00	0.12	2.29	0.18	0.00	5.96	5.84	1.06
Stewart	0.40	0.13	0.00	0.00	0.00	0.96	0.02	0.00	1.51	1.51	0.36
Sumter	2.78	0.93	0.02	0.26	1.60	35.40	0.54	0.00	41.53	41.53	2.63
Talbot	1.22	0.18	0.00	0.00	0.81	0.01	0.30	0.00	2.52	1.86	0.15
Taliaferro	0.05	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.05
Tattnall	1.11	1.32	0.22	0.03	0.01	5.03	1.66	0.00	9.38	9.38	1.88
Taylor	0.76	0.39	0.01	1.72	0.09	2.20	0.82	0.00	5.99	5.99	0.07
Telfair	1.43	0.65	0.00	0.00	0.00	3.15	0.06	0.00	5.29	5.29	0.74
Terrell	1.59	0.20	0.01	0.00	0.00	22.82	0.16	0.00	24.78	24.78	1.53
Thomas	5.49	1.03	0.03	0.19	1.03	3.01	0.29	0.00	11.07	11.07	4.06
Tift	5.62	0.86	0.17	0.00	0.00	9.04	0.12	0.00	15.81	15.81	4.80
Toombs	2.92	0.64	0.00	0.00	0.06	6.94	0.14	0.00	10.70	10.70	1.40
Towns	1.37	0.05	0.00	0.00	0.01	0.17	2.88	0.00	4.48	4.48	0.29
Treutlen	0.45	0.33	0.00	0.19	0.00	1.03	0.02	0.00	2.02	1.98	0.43
Troup	10.52	1.08	0.01	0.02	0.11	0.13	0.10	0.00	11.97	12.09	5.87
Turner	0.70	0.24	0.02	0.00	0.00	8.15	0.50	0.00	9.61	9.61	1.03
Twiggs	0.39	0.52	0.00	5.16	0.03	0.41	0.06	0.00	6.57	6.57	1.93
Union	1.90	0.28	0.00	0.00	0.08	0.39	5.36	0.00	8.01	8.01	0.29
Upson	4.48	0.94	0.00	0.26	0.00	0.40	0.25	0.00	6.33	6.33	2.71
Walker	6.33	0.36	0.12	0.59	0.00	0.02	1.19	0.00	8.61	10.93	3.13
Walton	2.82	0.81	0.00	0.00	0.03	2.99	0.16	0.00	6.81	10.49	2.87
Ware	3.37	0.39	0.00	0.64	0.00	1.28	0.09	0.00	5.77	5.77	4.09
Warren	0.34	0.24	0.00	1.04	0.39	0.00	0.13	0.00	2.14	2.14	2.36
Washington	2.67	0.85	0.00	12.02	1.11	7.64	0.10	0.00	24.39	24.39	4.49
Wayne	1.73	1.18	0.02	57.84	0.00	1.09	0.09	0.00	61.95	61.95	55.91
Webster	0.13	0.15	0.00	0.00	0.00	7.55	1.11	0.00	8.94	8.94	0.00
Wheeler	0.18	0.42	0.00	0.00	0.00	2.02	0.10	0.00	2.72	2.72	0.37
White	1.50	0.99	0.00	0.00	0.01	0.05	0.34	0.00	2.89	2.89	0.32
Whitfield	20.68	0.41	0.00	0.00	0.21	0.59	0.69	0.00	22.58	26.47	87.79
Wilcox	0.27	0.45	0.02	0.00	0.00	6.33	0.56	0.00	7.63	7.63	1.99
Wilkes	1.02	0.37	0.00	0.00	0.00	0.08	0.43	0.00	1.90	1.90	0.62
Wilkinson	0.67	0.30	0.00	13.78	0.01	0.05	0.02	0.00	14.83	14.83	2.87
Worth	1.21	0.91	0.00	0.00	0.00	15.64	0.21	0.20	18.17	18.17	3.96
Total	1,121	107.4	2.66	495.1	16.96	802.0	79.21	2,046	4,670	4,675	2,225

^aPublic use is water delivered by a public supplier to municipal buildings and golf courses, parks, and public safety buildings and areas.

^bTotal use includes public-supplied deliveries for domestic, commercial, industrial, and public uses; public supply losses (table 10); and self-supplied domestic, commercial, industrial, mining, irrigation, livestock and aquaculture, and thermoelectric uses. If total withdrawals exceed total use, then water was delivered out of the county. If total withdrawal is less than total use, then water was delivered into the county.

^cIncludes 0.12 Mgal/d metered irrigation deliveries.

^dIncludes 2.77 Mgal/d metered irrigation deliveries.

^eIncludes 0.25 Mgal/d metered irrigation deliveries.

Table 10. Population served and public-supply deliveries by county in Georgia, 2010.

[Mgal/d, million gallons per day; <, less than]

County (fig. 1)	Population (thousands)		Percentage of popu- lation self supplied	Public-supply deliveries ^b (million gallons per day)					Percentage of public-supply deliveries			
	Public supplied	Self- supplied domestic ^a		Domestic	Commercial and public use	Industrial	Irrigation	System losses ^c	Domestic	Commercial and public use	Industrial	System losses
Appling	5.70	12.54	68.7	0.64	0.04	0.05	0.00	0.18	70.3	4.4	5.5	19.8
Atkinson	3.90	4.48	53.4	0.25	0.01	0.12	0.00	0.06	56.8	2.3	27.3	13.6
Bacon	4.86	6.24	56.2	0.42	0.06	0.02	0.00	0.09	71.2	10.2	3.4	15.3
Baker	0.87	2.58	74.8	0.10	0.00	0.00	0.00	0.02	83.3	0.0	0.0	16.7
Baldwin	45.29	0.43	0.9	2.61	4.00	0.78	0.00	1.25	30.2	46.3	9.0	14.5
Banks	10.94	7.46	40.5	0.73	0.06	0.01	0.00	0.14	77.7	6.4	1.1	14.9
Barrow	62.63	6.74	9.7	4.76	0.87	0.78	0.00	1.25	62.1	11.4	10.2	16.3
Bartow	84.03	16.13	16.1	8.16	1.90	2.47	0.00	3.10	52.2	12.2	15.8	19.8
Ben Hill	13.73	3.90	22.1	1.62	0.45	0.58	0.00	0.58	50.2	13.9	18.0	18.0
Berrien	7.66	11.63	60.3	0.58	0.15	0.01	0.00	0.09	69.9	18.1	1.2	10.8
Bibb	126.67	28.88	18.6	13.73	6.59	1.89	0.00	3.84	52.7	25.3	7.3	14.7
Bleckley	5.22	7.84	60.0	0.32	0.15	0.00	0.00	0.27	42.6	21.4	0.0	36.0
Brantley	2.38	16.03	87.1	0.18	0.05	0.00	0.00	0.02	72.0	20.0	0.0	8.0
Brooks	6.67	9.57	58.9	0.61	0.21	0.01	0.00	0.11	64.9	22.3	1.1	11.7
Bryan	27.38	2.85	9.4	2.31	0.16	0.00	0.00	0.10	89.9	6.2	0.0	3.9
Bulloch	49.98	20.24	28.8	3.08	1.07	0.20	0.00	0.54	63.0	21.9	4.1	11.0
Burke	9.36	13.96	59.9	0.62	0.10	0.14	0.00	0.20	58.5	9.4	13.2	18.9
Butts	20.81	2.84	12.0	1.62	0.36	0.21	0.00	0.28	65.6	14.6	8.5	11.3
Calhoun	3.47	3.22	48.2	0.32	0.22	0.00	0.00	0.10	50.0	34.4	0.0	15.6
Camden	39.00	11.51	22.8	3.13	0.73	0.18	0.00	0.68	66.3	15.5	3.8	14.4
Candler	5.74	5.26	47.8	0.37	0.05	0.00	0.00	0.06	77.1	10.4	0.0	12.5
Carroll	89.76	20.77	18.8	6.70	1.73	1.37	0.00	2.02	56.7	14.6	11.6	17.1
Catoosa	63.21	0.73	1.1	5.92	0.55	0.07	0.00	1.47	73.9	6.9	0.9	18.4
Charlton	4.90	7.27	59.7	0.49	0.07	0.00	0.00	0.07	77.8	11.1	0.0	11.1
Chatham	254.45	10.68	4.0	20.84	6.95	25.80	0.00	11.85	31.8	10.6	39.4	18.1
Chattahoochee	4.12	7.15	63.4	0.28	0.01	3.84	0.00	0.05	6.7	0.2	91.9	1.2
Chattooga	20.45	5.57	21.4	1.68	0.25	0.27	0.00	0.64	59.2	8.8	9.5	22.5
Cherokee	207.38	6.97	3.2	14.95	1.33	0.59	0.00	3.22	74.4	6.6	2.9	16.0
Clarke	102.12	14.59	12.5	7.15	3.07	2.30	0.00	2.23	48.5	20.8	15.6	15.1
Clay	1.70	1.48	46.6	0.23	0.03	0.00	0.00	0.03	79.3	10.3	0.0	10.3
Clayton	258.90	0.52	0.2	19.34	2.06	1.65	0.00	4.13	71.2	7.6	6.1	15.2
Clinch	3.84	2.96	43.5	0.28	0.07	0.07	0.00	0.06	58.3	14.6	14.6	12.5
Cobb	645.08	43.00	6.2	34.81	23.54	3.02	0.00	10.50	48.4	32.8	4.2	14.6
Coffee	21.14	21.22	50.1	1.72	0.97	0.32	0.00	0.47	49.4	27.9	9.2	13.5
Colquitt	23.27	22.23	48.9	1.76	0.75	0.08	0.00	1.05	48.4	20.6	2.2	28.8
Columbia	105.91	18.14	14.6	10.61	4.02	0.16	0.00	1.40	65.5	24.8	1.0	8.6
Cook	10.20	7.01	40.7	1.13	0.36	0.03	0.00	0.28	62.8	20.0	1.7	15.6
Coweta	115.29	12.03	9.4	6.88	1.14	0.85	0.00	1.32	67.5	11.2	8.3	13.0
Crawford	3.76	8.87	70.2	0.26	0.04	0.00	0.00	0.05	74.3	11.4	0.0	14.3
Crisp	15.46	7.98	34.0	1.20	0.62	0.01	0.00	0.40	53.8	27.8	0.4	17.9
Dade	15.47	1.16	7.0	1.21	0.53	0.04	0.00	0.31	57.9	25.4	1.9	14.8
Dawson	16.37	5.96	26.7	1.14	0.29	0.02	0.00	0.36	63.0	16.0	1.1	19.9

Table 10. Population served and public-supply deliveries by county in Georgia, 2010.—Continued

[Mgal/d, million gallons per day; <, less than]

County (fig. 1)	Population (thousands)		Percentage of popu- lation self supplied	Public-supply deliveries ^b (million gallons per day)					Percentage of public-supply deliveries			
	Public supplied	Self- supplied domestic ^a		Domestic	Commercial and public use	Industrial	Irrigation	System losses ^c	Domestic	Commercial and public use	Industrial	System losses
Decatur	14.49	13.35	48.0	2.24	0.36	0.00	0.00	0.27	78.0	12.5	0.0	9.4
DeKalb	691.89	0.00	0.0	38.97	20.49	5.29	0.12	10.32	51.8	27.3	7.0	13.7
Dodge	8.80	13.00	59.6	0.62	0.29	0.09	0.00	0.15	53.9	25.2	7.8	13.0
Dooly	7.29	7.63	51.1	0.76	0.51	0.52	0.00	0.56	32.3	21.7	22.1	23.8
Dougherty	90.87	3.69	3.9	8.23	4.09	0.71	0.00	2.30	53.7	26.7	4.6	15.0
Douglas	128.54	3.86	2.9	8.20	1.36	0.41	0.00	2.04	68.3	11.3	3.4	17.0
Early	6.79	4.22	38.3	0.84	0.27	0.00	0.00	0.22	63.2	20.3	0.0	16.5
Echols	0.76	3.27	81.2	0.05	0.00	0.00	0.00	0.00	100.0	0.0	0.0	0.0
Effingham	33.15	19.10	36.6	2.51	0.27	0.33	0.00	0.47	70.1	7.5	9.2	13.1
Elbert	7.09	13.08	64.8	0.68	0.17	0.52	0.00	0.22	42.8	10.7	32.7	13.8
Emanuel	11.57	11.03	48.8	1.12	0.27	0.09	0.00	0.19	67.1	16.2	5.4	11.4
Evans	4.12	6.88	62.5	0.40	0.10	0.02	0.00	0.07	67.8	16.9	3.4	11.9
Fannin	11.82	11.86	50.1	1.09	0.39	0.04	0.00	0.27	60.9	21.8	2.2	15.1
Fayette	92.43	14.14	13.3	7.88	0.92	0.46	0.00	1.42	73.8	8.6	4.3	13.3
Floyd	90.71	5.61	5.8	6.72	3.08	1.15	0.00	2.27	50.8	23.3	8.7	17.2
Forsyth	173.29	2.22	1.3	11.50	3.11	2.14	0.00	2.42	60.0	16.2	11.2	12.6
Franklin	12.72	9.36	42.4	1.13	0.42	0.40	0.00	0.19	52.8	19.6	18.7	8.9
Fulton	870.81	49.77	5.4	84.18	9.61	3.53	2.77	31.80	63.8	7.3	2.7	24.1
Gilmer	12.15	16.14	57.1	0.65	0.46	1.51	0.00	0.49	20.9	14.8	48.6	15.8
Glascocock	0.90	2.18	70.8	0.07	0.00	0.00	0.00	0.00	100.0	0.0	0.0	0.0
Glynn	66.95	12.68	15.9	5.77	2.55	0.24	0.00	1.60	56.8	25.1	2.4	15.7
Gordon	46.51	8.68	15.7	4.05	2.42	1.79	0.00	1.58	41.2	24.6	18.2	16.1
Grady	11.13	13.88	55.5	1.17	0.26	0.00	0.00	0.24	70.1	15.6	0.0	14.4
Greene	12.15	3.84	24.0	1.50	0.21	0.00	0.00	0.20	78.5	11.0	0.0	10.5
Gwinnett	805.32	0.00	0.0	51.83	21.47	0.50	0.00	4.55	66.2	27.4	0.6	5.8
Habersham	27.67	15.37	35.7	2.67	0.54	1.41	0.00	0.78	49.4	10.0	26.1	14.4
Hall	151.82	27.86	15.5	8.43	2.16	4.85	0.25	2.69	45.9	11.8	26.4	14.6
Hancock	6.80	2.63	27.9	0.51	0.62	0.00	0.00	0.22	37.8	45.9	0.0	16.3
Haralson	22.75	6.03	21.0	1.65	0.47	0.05	0.00	0.65	58.5	16.7	1.8	23.0
Harris	25.98	6.04	18.9	2.17	0.12	0.94	0.00	0.21	63.1	3.5	27.3	6.1
Hart	10.10	15.11	59.9	0.98	0.35	0.04	0.00	0.24	60.9	21.7	2.5	14.9
Heard	8.37	3.46	29.3	0.60	0.55	0.00	0.00	0.31	41.1	37.7	0.0	21.2
Henry	177.08	26.84	13.2	13.87	2.10	0.49	0.00	2.80	72.0	10.9	2.5	14.5
Houston	137.57	2.33	1.7	14.47	2.56	1.15	0.00	3.65	66.3	11.7	5.3	16.7
Irwin	4.03	5.51	57.7	0.26	0.15	0.04	0.00	0.07	50.0	28.8	7.7	13.5
Jackson	45.34	15.15	25.0	3.61	1.21	0.45	0.00	1.01	57.5	19.3	7.2	16.1
Jasper	6.70	7.20	51.8	0.60	0.20	0.04	0.00	0.11	63.2	21.1	4.2	11.6
Jeff Davis	6.96	8.11	53.8	0.52	0.07	0.05	0.00	0.20	61.9	8.3	6.0	23.8
Jefferson	9.06	7.87	46.5	0.91	0.27	0.03	0.00	0.14	67.4	20.0	2.2	10.4
Jenkins	3.34	5.00	60.0	0.22	0.06	0.00	0.00	0.07	62.9	17.1	0.0	20.0
Johnson	3.06	6.92	69.3	0.20	0.28	0.00	0.00	0.08	35.7	50.0	0.0	14.3
Jones	14.55	14.12	49.2	1.29	0.14	0.00	0.00	0.26	76.3	8.3	0.0	15.4

Table 10. Population served and public-supply deliveries by county in Georgia, 2010.—Continued

[Mgal/d, million gallons per day; <, less than]

County (fig. 1)	Population (thousands)		Percentage of popu- lation self supplied	Public-supply deliveries ^b (million gallons per day)					Percentage of public-supply deliveries			
	Public supplied	Self- supplied domestic ^a		Domestic	Commercial and public use	Industrial	Irrigation	System losses ^c	Domestic	Commercial and public use	Industrial	System losses
Lamar	8.33	9.99	54.5	1.12	0.18	0.01	0.00	0.23	72.7	11.7	0.6	14.9
Lanier	4.36	5.72	56.7	0.33	0.12	0.00	0.00	0.07	63.5	23.1	0.0	13.5
Laurens	21.99	26.44	54.6	2.17	0.51	0.39	0.00	0.85	55.4	13.0	9.9	21.7
Lee	17.92	10.38	36.7	1.45	0.20	0.02	0.00	0.30	73.6	10.2	1.0	15.2
Liberty	54.20	9.25	14.6	3.34	0.68	1.79	0.00	0.94	49.5	10.1	26.5	13.9
Lincoln	5.28	2.72	34.0	0.38	0.06	0.01	0.00	0.06	74.5	11.8	2.0	11.8
Long	4.56	9.90	68.5	0.32	0.14	0.00	0.00	0.08	59.3	25.9	0.0	14.8
Lowndes	92.40	16.83	15.4	7.66	3.08	1.14	0.00	2.13	54.7	22.0	8.1	15.2
Lumpkin	10.32	19.65	65.6	0.72	0.28	0.14	0.00	0.18	54.5	21.2	10.6	13.6
McDuffie	14.78	7.10	32.4	0.97	0.52	0.35	0.00	0.36	44.1	23.6	15.9	16.4
McIntosh	10.87	3.46	24.2	0.95	0.04	0.00	0.00	0.06	90.5	3.8	0.0	5.7
Macon	6.57	8.17	55.4	0.48	0.08	0.15	0.00	0.17	54.5	9.1	17.0	19.3
Madison	7.84	20.28	72.1	0.42	0.05	0.01	0.00	0.15	66.7	7.9	1.6	23.8
Marion	6.29	2.45	28.0	0.47	0.06	0.05	0.00	0.14	65.3	8.3	6.9	19.4
Meriwether	9.08	12.91	58.7	0.72	0.24	0.01	0.00	0.24	59.5	19.8	0.8	19.8
Miller	1.97	4.16	67.8	0.15	0.07	0.00	0.00	0.05	55.6	25.9	0.0	18.5
Mitchell	11.79	11.71	49.8	1.01	0.68	1.77	0.00	0.40	26.2	17.6	45.9	10.4
Monroe	10.58	15.84	60.0	1.33	0.22	0.02	0.00	0.28	71.9	11.9	1.1	15.1
Montgomery	3.73	5.39	59.1	0.37	0.07	0.00	0.00	0.01	82.2	15.6	0.0	2.2
Morgan	10.94	6.93	38.8	0.63	0.46	0.23	0.00	0.18	42.0	30.7	15.3	12.0
Murray	34.92	4.71	11.9	2.39	0.35	0.48	0.00	0.41	65.8	9.6	13.2	11.3
Muscogee	189.88	0.01	0.0	17.33	6.46	1.75	0.00	5.24	56.3	21.0	5.7	17.0
Newton	97.15	2.81	2.8	5.74	1.00	0.43	0.00	1.28	67.9	11.8	5.1	15.1
Oconee	23.92	8.89	27.1	1.63	0.86	0.04	0.00	0.30	57.6	30.4	1.4	10.6
Oglethorpe	3.89	11.01	73.9	0.28	0.00	0.00	0.00	0.02	93.3	0.0	0.0	6.7
Paulding	131.78	10.54	7.4	8.09	0.67	0.16	0.00	1.74	75.9	6.3	1.5	16.3
Peach	17.42	10.28	37.1	1.53	0.52	0.09	0.00	0.49	58.2	19.8	3.4	18.6
Pickens	22.26	7.17	24.4	2.53	0.36	0.10	0.00	0.55	71.5	10.2	2.8	15.5
Pierce	6.76	12.00	64.0	0.54	0.07	0.05	0.00	0.08	73.0	9.5	6.8	10.8
Pike	5.49	12.38	69.3	0.44	0.09	0.00	0.00	0.06	74.6	15.3	0.0	10.2
Polk	40.52	0.95	2.3	3.20	0.51	0.45	0.00	0.87	63.6	10.1	8.9	17.3
Pulaski	5.08	6.93	57.7	0.59	0.17	0.01	0.00	0.23	59.0	17.0	1.0	23.0
Putnam	18.66	2.56	12.1	0.93	0.33	0.05	0.00	0.78	44.5	15.8	2.4	37.3
Quitman	1.86	0.65	26.0	0.14	0.00	0.00	0.00	<0.01	100.0	0.0	0.0	0.0
Rabun	11.68	4.60	28.2	0.90	0.04	0.00	0.00	0.56	60.0	2.7	0.0	37.3
Randolph	5.09	2.63	34.1	0.39	0.08	0.00	0.00	0.10	68.4	14.0	0.0	17.5
Richmond	195.88	4.67	2.3	14.85	14.73	5.64	0.00	8.77	33.8	33.5	12.8	19.9
Rockdale	70.92	14.30	16.8	5.45	3.01	1.27	0.00	2.08	46.1	25.5	10.8	17.6
Schley	4.53	0.48	9.6	0.32	0.03	0.01	0.00	0.07	74.4	7.0	2.3	16.3
Screven	4.87	9.72	66.6	0.39	0.25	0.05	0.00	0.20	43.8	28.1	5.6	22.5

Table 10. Population served and public-supply deliveries by county in Georgia, 2010.—Continued

[Mgal/d, million gallons per day; <, less than]

County (fig. 1)	Population (thousands)		Percentage of popu- lation self supplied	Public-supply deliveries ^b (million gallons per day)					Percentage of public-supply deliveries			
	Public supplied	Self- supplied domestic ^a		Domestic	Commercial and public use	Industrial	Irrigation	System losses ^c	Domestic	Commercial and public use	Industrial	System losses
Seminole	3.80	4.93	56.5	0.41	0.08	0.01	0.00	0.08	70.7	13.8	1.7	13.8
Spalding	56.87	7.20	11.2	3.09	0.73	0.22	0.00	2.45	47.6	11.2	3.4	37.8
Stephens	24.04	2.14	8.2	1.84	0.43	0.31	0.00	0.43	61.1	14.3	10.3	14.3
Stewart	4.26	1.80	29.7	0.32	0.04	0.00	0.00	0.04	80.0	10.0	0.0	10.0
Sumter	20.47	12.35	37.6	1.68	0.46	0.03	0.00	0.61	60.4	16.5	1.1	21.9
Talbot	4.51	2.36	34.3	0.38	0.09	0.00	0.00	0.09	67.9	16.1	0.0	16.1
Taliaferro	0.67	1.05	61.0	0.05	0.00	0.00	0.00	0.00	100.0	0.0	0.0	0.0
Tattnall	7.90	17.62	69.0	0.57	0.16	0.20	0.00	0.18	51.4	14.4	18.0	16.2
Taylor	3.76	5.15	57.8	0.56	0.08	0.00	0.00	0.12	73.7	10.5	0.0	15.8
Telfair	7.83	8.67	52.5	0.73	0.37	0.06	0.00	0.27	51.0	25.9	4.2	18.9
Terrell	6.70	2.62	28.1	0.54	0.17	0.28	0.00	0.60	34.0	10.7	17.6	37.7
Thomas	30.94	13.78	30.8	2.46	1.21	0.36	0.00	1.46	44.8	22.0	6.6	26.6
Tift	28.61	11.51	28.7	3.77	1.01	0.05	0.00	0.79	67.1	18.0	0.9	14.1
Toombs	18.72	8.50	31.2	1.45	0.52	0.44	0.00	0.51	49.7	17.8	15.1	17.5
Towns	9.75	0.72	6.9	1.00	0.14	0.01	0.00	0.22	73.0	10.2	0.7	16.1
Treutlen	2.48	4.41	64.0	0.26	0.07	0.00	0.00	0.07	65.0	17.5	0.0	17.5
Troup	52.62	14.42	21.5	4.33	2.47	2.15	0.00	1.57	41.2	23.5	20.4	14.9
Turner	5.67	3.26	36.5	0.44	0.12	0.02	0.00	0.12	62.9	17.1	2.9	17.1
Twiggs	2.12	6.90	76.5	0.22	0.12	0.00	0.00	0.05	56.4	30.8	0.0	12.8
Union	17.56	3.80	17.8	1.12	0.23	0.19	0.00	0.36	58.9	12.1	10.0	18.9
Upson	14.59	12.56	46.3	2.67	0.65	0.10	0.00	1.06	59.6	14.5	2.2	23.7
Walker	63.98	4.78	6.9	4.67	1.60	0.40	0.00	1.98	54.0	18.5	4.6	22.9
Walton	72.94	10.83	12.9	4.03	1.10	0.12	0.00	1.25	62.0	16.9	1.8	19.2
Ware	31.16	5.15	14.2	2.00	0.51	0.46	0.00	0.40	59.3	15.1	13.6	11.9
Warren	2.61	3.22	55.3	0.23	0.04	0.02	0.00	0.05	67.6	11.8	5.9	14.7
Washington	9.83	11.36	53.6	0.81	1.42	0.05	0.00	0.39	30.3	53.2	1.9	14.6
Wayne	14.30	15.80	52.5	1.03	0.49	0.00	0.00	0.21	59.5	28.3	0.0	12.1
Webster	0.84	1.96	70.0	0.11	0.00	0.00	0.00	0.02	84.6	0.0	0.0	15.4
Wheeler	1.77	5.65	76.1	0.12	0.03	0.00	0.00	0.03	66.7	16.7	0.0	16.7
White	14.00	13.14	48.4	0.83	0.48	0.03	0.00	0.16	55.3	32.0	2.0	10.7
Whitfield	97.18	5.42	5.3	7.40	6.17	8.14	0.00	2.86	30.1	25.1	33.1	11.6
Wilcox	3.19	6.07	65.5	0.22	0.03	0.00	0.00	0.03	78.6	10.7	0.0	10.7
Wilkes	5.61	4.98	47.0	0.48	0.11	0.29	0.00	0.14	47.1	10.8	28.4	13.7
Wilkinson	5.57	3.99	41.8	0.46	0.09	0.06	0.00	0.06	68.7	13.4	9.0	9.0
Worth	9.54	12.14	56.0	0.71	0.18	0.04	0.00	0.28	58.7	14.9	3.3	23.1
Total	8,255.25	1,432.40	36.7^a	623.5	209.2	107.9	3.14	181.8	60.9^d	14.9^d	2.9^d	14.9^d

^aSelf-supplied domestic population is the difference between the total county population and the population served by public water suppliers.

^bNot included is 0.4 Mgal/d of water delivered to Alabama, South Carolina, and Tennessee.

^cPublic-supply system losses include water lost from the water distribution system and includes pipe leaks and breaks, fire suppression, and unauthorized use. About 3 Mgal/d of public-supply deliveries are unaccountable and may be additional system losses.

^dMedian.

Self-Supplied Water Use

Self-supplied water is water withdrawn from a ground-water or surface-water source by a user other than a public supplier. Self-supplied users include rural households on individual wells, commercial and industrial businesses, mining operations, irrigated crop land and golf courses (irrigation), livestock and aquaculture production, and thermoelectric-power generation. Although the self-supplied populations in Fulton County and Cobb County were less than 6.5 percent of the 2010 Georgia population (table 10), they had the highest self-supplied domestic withdrawals, 3.7 Mgal/d in Fulton County and 3.2 Mgal/d in Cobb County, among Georgia counties in 2010 (table 9).

Estimated self-supplied commercial, industrial, and mining withdrawals amounted to 2.7, 495, and 17 Mgal/d, respectively, in 2010 (table 2). About 78 percent of commercial withdrawals was groundwater. The highest commercial withdrawals were in Floyd County (0.32 Mgal/d), Bulloch County (0.30 Mgal/d), and Chatham County (0.25 Mgal/d; table 9). About 58 percent of industrial withdrawals was surface water (table 2). The highest industrial withdrawals occurred in Early County (109 Mgal/d), followed by Richmond (68 Mgal/d) and Wayne Counties (58 Mgal/d). Mining withdrawals represent water used in the actual extraction of the raw mineral or rock complex. About 98 percent of mining withdrawals were groundwater in 2010. The counties with the highest withdrawals for mining were Sumter (1.6 Mgal/d), Richmond (1.5 Mgal/d), and Washington (1.1 Mgal/d; table 9).

Estimated self-supplied withdrawals for irrigation were 802 Mgal/d in 2010 (table 2). Crop irrigation accounted for 93 percent of the total water withdrawn for irrigation; golf course irrigation accounted for the remaining 7 percent. About 77 percent of water for crop irrigation was groundwater, whereas groundwater accounted for 39 percent of water used to irrigate golf courses. Withdrawals for crop irrigation (mostly groundwater) were highest in Decatur County (68 Mgal/d), followed by Mitchell County (59 Mgal/d) and Miller County (45 Mgal/d; table 9). Ninety-seven Georgia counties used a greater percentage of groundwater than surface water to irrigate crops, whereas 38 Georgia counties used a greater percentage of surface water than groundwater to irrigate crops in 2010. Surface-water withdrawals for irrigation were highest in Calhoun County at 17 Mgal/d. Two counties, Fannin and Clay, used an equal percentage of surface water and groundwater for crop irrigation. In addition, 21 counties withdrew less than 9,000 gal/d for crop irrigation.

Water withdrawals for golf course irrigation were nearly 55 Mgal/d in 2010; about 61 percent of these withdrawals were from surface water (table 2). Withdrawals were highest in Fulton County (3.7 Mgal/d, mostly surface water), followed by Glynn County (3.44 Mgal/d, mostly groundwater), Henry County and Stephens County (each 2.3 Mgal/d, mostly groundwater), and Dekalb County (2.3 Mgal/d, mostly surface water).

Water withdrawals for livestock and aquaculture production totaled 79 Mgal/d in 2010, of which 92 percent was surface water (table 2). Of that 79 Mgal/d, livestock used nearly 37 percent and aquaculture about 63 percent. Water withdrawals for livestock and aquaculture were highest in Forsyth (6.7 Mgal/d), Fannin (6.4 Mgal/d), Union (5.4 Mgal/d), and Habersham (5.1 Mgal/d) Counties (table 9), with 90 to 99 percent of the use attributed to high aquaculture water use associated with Federal and State gamefish hatcheries, private baitfish hatcheries, and private trout farms. Water use for livestock production was highest in Franklin County (1.2 Mgal/d, primarily poultry production), followed by Gordon, Carroll, Hart, Madison, and Oglethorpe Counties (0.8 Mgal/d each, primarily poultry and beef production).

At least one thermoelectric-power generation facility was present in 17 Georgia counties in 2010. About 99.8 percent of the 2,046 Mgal/d of water withdrawn for thermoelectric-power generation was surface water and about 52 percent of that water was returned to surface water in 2010 (table 2). The thermoelectric facilities in seven counties use once-through cooling, which means that water is withdrawn, conveyed through the facility for cooling, and discharged back to surface water. Facilities that use once-through cooling return about 99 percent of the amount withdrawn back to surface water. Once-through cooling facilities include Plant Branch in Putnam County (952 Mgal/d), Plant Hammond in Floyd County (432 Mgal/d), Plant Kraft in Chatham County (206 Mgal/d of saline surface water), Plant McIntosh in Effingham County (70 Mgal/d), Plant Mitchell in Dougherty County (50 Mgal/d), Plant McManus in Glynn County (8.1 Mgal/d of saline surface water), and Crisp County Power in Worth County (0.2 Mgal/d; table 9).

The thermoelectric-power facilities in 10 counties use a recirculating cooling system, which means that water is withdrawn from a source and discharged into a storage reservoir, where the water is conveyed through the facility to cooling towers, and the remaining water is returned to the storage reservoir. Typically, most of the water withdrawn is lost through evaporation in the cooling towers (consumptive use). About 343 Mgal/d was withdrawn by thermoelectric-power

facilities using recirculating cooling systems. Two of those facilities, one in Burke County (65 Mgal/d) and one in Heard County (49 Mgal/d), withdrew the most water, followed by facilities in Appling, Monroe, and Dougherty Counties (table 9).

Public Supply

About 1,121 Mgal/d of water was withdrawn for public supply in 2010 and 78 percent of that amount was surface water (table 2). Public suppliers in Fulton County withdrew 201 Mgal/d of water (mostly surface water), the highest among all counties in Georgia (table 9). This amount represents 18 percent of all public-supply withdrawals and 23 percent of all surface-water withdrawals for public supply in 2010. After Fulton County, public-supply withdrawals in Hall County (95 Mgal/d) were the next highest in Georgia. In contrast, public-supply withdrawals were only 0.05 Mgal/d in Taliaferro County and 0.13 Mgal/d in Webster County, the two least populated counties in Georgia.

In 2010, public water suppliers delivered about 1,125 Mgal/d to their customers. Approximately 0.4 Mgal/d of water was delivered to public suppliers in Alabama, South Carolina, and Tennessee. In Georgia, 60.9 percent (median) of public water was delivered to domestic customers, with a range of 6.1 percent in Chattahoochee County to 100 percent in Echols, Glascock, Quitman, and Taliaferro Counties (table 10). About 14.9 percent (median) of public water was delivered to commercial and public use customers, with a range of 0 percent in seven counties to 53 percent in Washington County. In addition, 2.9 percent (median) of public water was delivered to industrial customers, with a range of 0 percent in 40 counties to about 92 percent in Chattahoochee County (table 10). An estimated 14.9 percent (median) of public-supplied water was lost during delivery, with a range of less than 0.1 percent in Echols, Glascock, Quitman, and Taliaferro Counties to 38 percent in Terrell County. The amount of water lost from public distribution systems is typically a result of the age and extent (length in miles) of the pipeage (U.S. Environmental Protection Agency, 2009). Thus, small and revenue-poor public suppliers commonly have distribution systems that are at or exceed the life expectancy of the distribution pipeage, resulting in a greater percentage of water lost than where the public distribution system is newer.

Surface-Water Returns

About 2,225 Mgal/d of water was returned to Georgia streams and lakes in 2010 (tables 2 and 9). This amount is about 48 percent of the total water withdrawn from all sources in 2010. Surface-water returns declined 39 percent between 1995 and 2010, mirroring the decline in water withdrawals during that period. In addition, land applications of treated wastewater have increased steadily between 1995 and 2010. Surface-water returns ranged from zero in 14 counties to 443 Mgal/d in Floyd County (table 9). Counties with the greatest returns—Floyd, Putnam, Chatham—were those with the greatest returns from thermoelectric-power facilities using once-through cooling.

About 711 Mgal/d of treated wastewater was returned to Georgia's surface waters by public wastewater treatment facilities in 2010 (table 2). The median amount of public wastewater discharged to surface water by county was 0.73 Mgal/d and discharges were less than 5 Mgal/d in 84 percent of Georgia counties. Public wastewater discharges were greatest in Fulton County (136 Mgal/d) and Cobb County (77 Mgal/d; appendix 2). The minimum reporting level for surface-water returns in this report is 5,000 gal/d; returns of less than 5,000 gal/d are recorded as zero. Wastewater discharges in rural counties with small towns and other facilities that rely on sewage lagoons may not exceed the reporting level. Sewage lagoons commonly discharge wastewater intermittently. In addition, onsite septic systems are the primary means of wastewater disposal in many counties resulting in no surface-water returns.

Commercial, industrial, and mining facilities returned 431 Mgal/d of water to Georgia's surface waters in 2010 (table 2). Commercial and industrial facilities reported surface-water discharges in 41 Georgia counties (26 percent) in 2010. Commercial and industrial discharges were less than 2 Mgal/d in 25 counties and greater than 15 Mgal/d in 8 counties. Commercial and industrial discharges were greatest in Whitfield County (88 Mgal/d) and Chatham County (77 Mgal/d; appendix 2). Mining facilities reported surface-water returns in 32 counties totaling 24 Mgal/d. Surface-water returns from mining were greatest in Muscogee County (2.6 Mgal/d) and Warren County (2.2 Mgal/d; appendix 2). In Muscogee County, quarry dewatering was the source of surface-water returns, whereas kaolin mining was the major source of returns in Warren County.

Water-Use Trends, 1985–2010

Statewide water withdrawals reached an all-time high of 6,725 Mgal/d in 1980. By 1990, water use had decreased by 20 percent to 5,353 Mgal/d, but increased to 6,487 Mgal/d in 2000. By 2005, water use had decreased to an estimated 5,471 Mgal/d, and declined further to 4,670 Mgal/d in 2010. Between 2000 and 2010, water use declined by 28 percent and between 2005 and 2010 had declined by 15 percent (fig. 10). The decrease in water withdrawals between 2005 and 2010 was driven by declines in surface-water withdrawals. In contrast, groundwater withdrawals increased slightly during this period. This decline was evident across most water-use categories (fig. 10). The estimated total water use per capita in 1985 was about 850 gal/d, steadily decreasing to about 798 gal/d in 2000, and decreasing rapidly to 460 gal/d between 2000 and 2010 (fig. 11). The decline in water withdrawals and use between 2005 and 2010 can probably be attributed to several factors working together during this period: (1) water conservation laws and policies along with advances in water-conservation technology; (2) the onset of a major recession in 2007; and (3) below average rainfall in 2007 and 2008, and in the latter half of 2010. Because of these factors, water withdrawn by public suppliers decreased by 4.8 percent (despite a nearly 11-percent increase in population served) and per capita use decreased by 19 percent between 2005 and 2010.

Domestic and commercial water use increased slightly between 2005 and 2010 (fig. 11); however, because self-supplied domestic withdrawals are computed using an estimated self-served population, this increase is probably due to population increases in some rural areas of Georgia. Irrigation withdrawals also increased between 2005 and 2010 but are probably a response to the very dry conditions during most of the growing season in central and south Georgia.

Throughout 1985–2010, water withdrawn for thermoelectric-power generation has constituted the largest volume of offstream water use in Georgia (fig. 11). Total withdrawals for thermoelectric-power generation declined about 37 percent between 2000 and 2010, mostly due to the decommissioning or re-tooling of power plants in the State. During this period, several of the plants operated by the Georgia Power Company were re-tooled to use natural gas-powered generators. Surface-water returns declined 39 percent between 1995 and 2010, mirroring the decline in water withdrawals during that period (fig. 12). In addition, land applications of treated wastewater increased steadily between 1995 and 2010.

Summary

The period between 2007 and 2010 was a challenging time economically and climatologically in Georgia. During that period, the United States was in the midst of a major recession, resulting in decreases in the manufacturing and construction industries and large increases in unemployment.

During 2007, 2008, and the latter half of 2010, precipitation in Georgia was substantially below the 30-year norm.

According to the 2010 census, nearly 9.7 million people lived in Georgia. The water for about 85 percent of that population (8.3 million) was provided by public water suppliers. Estimated total water withdrawals from groundwater and surface-water sources were about 4,670 million gallons per day (Mgal/d) in 2010, a nearly 15-percent reduction from 2005 (5,471 Mgal/d). In 2010, surface-water withdrawals (3,481 Mgal/d) were nearly three times greater than groundwater withdrawals (1,189 Mgal/d) in Georgia.

In 2010, thermoelectric-power facilities (2,046 Mgal/d) and public-supply uses (1,121 Mgal/d) accounted for 68 percent of all water withdrawn in Georgia. Surface-water withdrawals were greatest for thermoelectric-power generation (2,043 Mgal/d), whereas irrigation used the largest amount of groundwater (599 Mgal/d). Surface water provided 78 percent of the 1,121 Mgal/day withdrawn for public supply in 2010. Typically, counties in northern Georgia withdraw a larger percentage of water from surface-water than groundwater sources, whereas counties in the southern part of the State withdraw more water from groundwater sources.

Self-Supplied Water Use

Self-supplied domestic withdrawals amounted to 107 Mgal/d and 56 percent of that use was in the Apalachicola (26.2 Mgal/d), Ocmulgee (20.7 Mgal/d), and Savannah River Basins (12.4 Mgal/d). In the Coosa and Tallapoosa River Basins, only 6.5 percent of the population relied on domestic wells for their water supply. In contrast, nearly 47 percent of the population in the Ochlockonee River Basin and 57 percent of the population in the Altamaha River Basin relied on domestic wells for their water.

About 515 Mgal/d was withdrawn by self-supplied commercial, industrial, and mining users in 2010. Self-supplied industries withdrew about 495 Mgal/d in 2010, of which 58 percent was surface water. Paper and pulp facilities withdrew 78 percent of all water withdrawn by self-supplied industries (387 Mgal/d), of which 255 Mgal/d was surface water. Self-supplied commercial and industrial use was greatest in the Apalachicola (134 Mgal/d) and Savannah River (130 Mgal/d) Basins. Mining withdrawals also were greatest in the Apalachicola (6.1 Mgal/d) and Savannah River Basins (2.5 Mgal/d).

Crop irrigation, livestock management, and aquaculture are the primary agricultural users of water in Georgia. Estimated self-supplied withdrawals for irrigation were 802 Mgal/d in 2010. Crop irrigation accounted for 93 percent of the total water withdrawn for irrigation and golf course irrigation accounted for the remaining 7 percent. About 77 percent of water for crop irrigation was groundwater, whereas groundwater accounted for 39 percent of water used to irrigate golf courses. About 65 percent of the irrigation withdrawals were in the Apalachicola River Basin. Golf course irrigation was highest in the Apalachicola River and Ocmulgee River Basins (respectively, 12.7 and 10.4 Mgal/d).

Figure 10. Water-withdrawal trends by water source in Georgia, 1985–2010.

Figure 11. Water-withdrawal trends by water-use category in Georgia, 1985–2010.

Figure 12. Surface-water return trends in Georgia, 1985–2010.

Withdrawals for crop irrigation (mostly groundwater) were highest in Decatur County (68 Mgal/d), followed by Mitchell County (59 Mgal/d) and Miller County (45 Mgal/d).

Water withdrawals for livestock and aquaculture production totaled 79 Mgal/d in 2010, of which 92 percent was surface water. Of that 79 Mgal/d, livestock used nearly 37 percent and aquaculture about 63 percent. Water withdrawals for livestock and aquaculture were highest in Forsyth (6.7 Mgal/d), Fannin (6.4 Mgal/d), Union (5.4 Mgal/d), and Habersham (5.1 Mgal/d) Counties; 90 to 99 percent of this use is for aquaculture at Federal and State gamefish hatcheries, private baitfish hatcheries, and private trout farms. Water use for livestock production was highest in Franklin County (1.2 Mgal/d, primarily poultry production).

Public-Supplied Water Use

About 1,121 Mgal/d of water was withdrawn for public supply in 2010 and 78 percent of that amount was surface water. About 1,125 Mgal/d of water was delivered to customers in Georgia. About 0.4 Mgal/d was delivered from Georgia to wholesale customers in Alabama, Tennessee, and South Carolina; about 6.7 Mgal/d was delivered from public suppliers in Alabama and Tennessee to customers and wholesale suppliers in Georgia. Of the 1,125 Mgal/d of water delivered by public suppliers, 55 percent was used for domestic (residential; 623 Mgal/d) purposes in Georgia. Nearly 19 percent of public-supplied water was delivered to commercial customers (including public-use connections) and nearly 9.6 percent was delivered to industrial customers in 2010. An estimated 182 Mgal/d of water was lost in the public-supply distribution system in 2010. Average public-supply losses were estimated at 16.1 percent of the water delivered.

In 2010, nearly 3.1 million people or 32 percent of the 2010 Georgia population used groundwater for domestic purposes. Of that population, about 1.4 million people relied on small domestic wells for their water. About 1,189 Mgal/d of groundwater was withdrawn from the principal aquifers in Georgia during 2010. About 68 percent of all groundwater withdrawals in 2010 came from the Floridan aquifer system. The two principal aquifers in southern Georgia (south of the Fall Line), the Floridan and the Cretaceous aquifer systems provided 56 and 22 percent, respectively, of the groundwater used for public supply. The crystalline-rock and the Paleozoic-rock aquifers provided nearly all of the groundwater used in northern Georgia.

In 2010, public suppliers in 6 of the 159 counties in Georgia (Fulton, Gwinnett, DeKalb, Cobb, Clayton, and Chatham) provided water to 43 percent of the nearly 8.3 million people receiving public-supplied water in Georgia. Public suppliers in Fulton County withdrew 201 Mgal/d of water (mostly surface water), the highest among all counties in Georgia. This amount represents 18 percent of all public-supply withdrawals and 23 percent of all surface-water withdrawals for public supply.

Surface-Water Return Flows

In basins where there is a greater reliance on groundwater than surface water for water supplies, surface-water returns may exceed surface-water withdrawals because once used, that groundwater enters sanitary sewer systems for treatment and discharge to surface water. About 2,225 Mgal/d of water was discharged to surface water by public (municipal and privately owned) wastewater treatment facilities, commercial, industrial, mining, aquaculture, and thermoelectric power facilities in 2010 (table 2). Thermoelectric power facilities returned nearly 49 percent of all water discharged to surface water, followed by public wastewater facilities (32 percent), and combined commercial and industrial discharges (19 percent).

Surface-water returns from thermoelectric-power facilities are primarily from facilities that utilize once-through cooling processes. Within the Coosa and Tallapoosa Basins, Plant Hammond returned 448 Mgal/d (41 percent of all returns in the basin) to surface water in 2010, whereas Plant Arkwright and Plant Branch, and the Crisp County plant in the Oconee River Basin returned 369 Mgal/d (34 percent). River basins with the greatest populations returned the greatest amount of publicly-treated wastewater to surface water; thus, the Apalachicola and Ocmulgee River Basins received the greatest amount of public wastewater (respectively, 341 and 111 Mgal/d).

Water-Use Trends

Historically, water withdrawals in Georgia were highest in 1980 (6,725 Mgal/d). By 1990, water use had decreased by 20 percent to 5,353 Mgal/d, but increased to 6,487 Mgal/d in 2000. By 2005, water use had decreased to an estimated 5,471 Mgal/d, and declined further to 4,670 Mgal/d in 2010—a 30-percent decrease since 1980. This decline was evident across all water-use categories, but was greatest for surface-water withdrawals by thermoelectric-power facilities. The estimated total water use per capita in 1985 (total withdrawals for all categories divided by total population) was about 850 gallons per day (gal/d), steadily decreasing to about 798 gal/d in 2000, and decreasing further to 460 gal/d in 2010. Although water use declined among all use categories during that 10-year period, most of the decline in per capita water use was caused by the large decrease in water used for thermoelectric-power generation.

Throughout 1985–2010 water withdrawn for thermoelectric-power generation constituted the largest volume of offstream water use in Georgia. Total withdrawals for thermoelectric-power generation declined about 37 percent between 2000 and 2010, mostly due to the decommissioning of power plants in the State. Also during this period, several power plants were shut down and re-tooled to use natural gas-powered generators; thus, water withdrawals for cooling were substantially reduced.

The decline in water withdrawals and use between 2005 and 2010 can probably be attributed to several factors working together during this period: (1) water conservation laws and policies along with advances in water-conservation technology; (2) the onset of a major recession in 2007; and (3) below average rainfall in 2007, 2008, and the latter half of 2010. Because of these factors, water withdrawn by public suppliers decreased by 4.8 percent (despite a nearly 11-percent increase in population served) and per capita use decreased by 19 percent between 2005 and 2010.

References Cited

- Carter, R.F., and Johnson, A.M.F., 1974, Use of water in Georgia, 1970, with projections to 1990: Georgia Geologic Survey Hydrologic Report 2, 74 p.
- CH2M HILL, 2007, Georgia water use and conservation profiles, TM-2 data analysis: Technical memorandum prepared for Georgia Environmental Protection Division, 40 p.
- Dun and Bradstreet, Inc., 2011, Hoover's Relationship Manager: Dun and Bradstreet data base: accessed November 10, 2011, at <http://www.hoovers.com>.
- Fanning, J.L., 1985, The Georgia water-use program: U.S. Geological Survey Open-File Report 85-481, pamphlet.
- Fanning, J.L., 1997, Water use in Georgia by county for 1995: Georgia Geologic Survey Information Circular 101, 95 p.
- Fanning, J.L., 2003, Water use in Georgia, 2000; and trends, 1950–2000 in Kathryn J. Hatcher (ed.), Proceedings of the 2003 Georgia Water Resources Conference, April 23–24, 2003, University of Georgia, Athens, Georgia, accessed October 29, 2014, at <http://ga.water.usgs.gov/publications/other/gwrc2003/pdf/Fanning-GWRC2003.pdf>.
- Fanning, J.L., Doonan, G.A., and Montgomery, L.T., 1992, Water use in Georgia by county for 1990: Georgia Geologic Survey Information Circular 90, 98 p.
- Fanning, J.L. and Trent, V.P., 2009, Water use in Georgia by county for 2005; and water-use trends, 1980–2005: U.S. Geological Survey Scientific Investigations Report 2009-5002, 186 p., accessed June 25, 2014, at <http://pubs.usgs.gov/sir/2009/5002/>.
- Georgia Environmental Protection Division, 2008, Georgia comprehensive state-wide water management plan: Atlanta, Georgia, Georgia Water Council, 39 p. [Also available online at <http://www.georgiawaterplanning.org/>]
- Georgia Environmental Protection Division, 2010, Agricultural irrigation water demand: Atlanta, Georgia, Georgia Department of Natural Resources, accessed June 25, 2014, at <http://www.nespal.org/sirp/waterinfo/State/awd/agwaterdemand.htm>.
- Glassman, J.E., 2014, Regional perspectives—Georgia economic outlook: JP Morgan Chase and Company, accessed October 30, 2014, at <https://www.chase.com/content/dam/chasecom/en/commercial-bank/documents/georgia-economy.pdf>.
- Lewis, Clifford, 2010, Water use for Georgia agricultural withdrawal permitted golf courses: Atlanta, Georgia, Georgia Department of Natural Resources, Environmental Protection Division, accessed October 30, 2014, at http://www.nespal.org/sirp/waterinfo/State/awd/AgWaterDemand_GolfCourses.htm.
- Lovelace, J.K., 2009a, Methods for estimating water withdrawals for mining in the United States, 2005: U.S. Geological Survey Scientific Investigations Report 2009-5053, 7 p., accessed June 26, 2014, at <http://pubs.usgs.gov/sir/2009/5053/>.
- Lovelace, J.K., 2009b, Methods for estimating water withdrawals for aquaculture in the United States, 2005: U.S. Geological Survey Scientific Investigations Report 2009-5042, 13 p., accessed June 26, 2014, at <http://pubs.usgs.gov/sir/2009/5042/>.
- Masters, Mark, 2010, Water for Georgia's livestock: Albany, Georgia, Flint River Policy Center, Albany State University, accessed June 26, 2014, at http://www.georgiawaterplanning.org/pages/forecasting/agricultural_water_use.php.
- Metropolitan North Georgia Water Planning District, 2011, Water metrics report: Atlanta, Georgia, Metropolitan North Georgia Water Planning District, accessed October 29, 2014, at http://documents.northgeorgiawater.org/2010_Water_Metrics_Report_FINAL%281%29.pdf.
- National Oceanic and Atmospheric Administration, 2011, U.S. monthly climate normals (1981–2010): National Climatic Data Center, NESDIS, NOAA, U.S. Department of Commerce, dataset C00822, accessed May 24, 2014, at <http://www.ncdc.noaa.gov/land-based-station-data/climate-normals/1981-2010-normals-data>.
- National Oceanic and Atmospheric Administration, 2014, Climate at a glance—Time series: National Climatic Data Center, NESDIS, NOAA, U.S. Department of Commerce, dataset C00822, accessed May 24, 2014, at <http://www.ncdc.noaa.gov/cag/time-series>.

- Peck, M.F., Gordon, D.W., and Painter, J.A., 2013, Ground-water conditions in Georgia, 2010–2011: U.S. Geological Survey Scientific Investigations Report 2013–5084, 63 p., accessed May 24, 2015, at <http://pubs.usgs.gov/sir/2013/5084/>.
- Pierce, R.R., Barber, N.L., and Stiles, H.R., 1982, Water use in Georgia by county for 1980: Georgia Geologic Survey Information Circular 59, 180 p.
- Torak, L.J. and Painter, J.A., 2011, Summary of the Georgia Agricultural Water Conservation and Metering Program and evaluation of methods used to collect and analyze irrigation data in the middle and lower Chattahoochee and Flint River Basins, 2004–2010: U.S. Geological Survey Scientific Investigations Report 2011–5126, 25 p., accessed June 24, 2014, at <http://pubs.usgs.gov/sir/2011/5126/>.
- Trent, V.P., Fanning, J.L., and Doonan, G.A., 1990, Water use in Georgia by county for 1987: Georgia Geologic Survey Information Circular 85, 112 p.
- Turlington, M.C., Fanning, J.L., and Doonan, G.A., 1987, Water use in Georgia by county for 1985: Georgia Geologic Survey Information Circular 81, 110 p.
- University of Georgia, 2011, 2010 Georgia farm gate value report: Athens, Georgia, The Center for Agribusiness and Economic Development, AR–11–01, 180 p., accessed June 26, 2014, at <http://www.caes.uga.edu/center/caed/pubs/2011/documents/AR-11-01.pdf>.
- U.S. Census Bureau, 2011a, Table GCT–PL2—Population and Housing Occupancy Status, 2010: Washington, D.C., U.S. Department of Commerce. accessed November 1, 2011, at <http://www.census.gov/2010census/popmap/ipmtext.php?fl=13>.
- U.S. Census Bureau, 2011b, 2010 Census Summary File 1, Total population in occupied housing units, Table H10: Using American FactFinder, Washington, D.C., U.S. Department of Commerce. accessed November 1, 2011, at <http://factfinder2.census.gov>.
- U.S. Census Bureau, 2011c, MAF/TIGER database extract—2010 Census Population and Housing Unit Counts—Blocks: Washington, D.C., U.S. Department of Commerce. Census block shape files accessed February 13, 2013, at <http://www.census.gov/geo/maps-data/data/tiger.html>.
- U.S. Census Bureau, 2012, North American Industry Classification System: Washington, D.C., U.S. Department of Commerce, U.S. Census Bureau, accessed June 26, 2014, at <http://www.census.gov/eos/www/naics/>.
- U.S. Department of Agriculture, 2009, 2007 Census of agriculture, United States, Summary and State data, Vol. 1, Chapter 2, County level data—Georgia: Washington, D.C., National Agricultural Statistics Service AC–07–A–51, accessed June 26, 2014, at http://www.agcensus.usda.gov/Publications/2007/Full_Report/.
- U.S. Energy Information Administration, 2011, Electricity: Washington, D.C., U.S. Department of Energy, U.S. Energy Information Administration, accessed October 30, 2014, at <http://www.eia.gov/electricity>.
- U.S. Environmental Protection Agency, 2009, Control and mitigation of drinking water losses in distribution systems: Office of Water, U.S. Environmental Protection Agency EPA 816–D–09–001, 128 p.
- U.S. Environmental Protection Agency, 2014, NPDES permit program basics, water permitting, accessed October 29, 2014, at <http://water.epa.gov/polwaste/npdes/basics/upload/101pape.pdf>.
- Western Regional Climate Center, 2014, 1-month standardized precipitation index: Reno, Nevada, Desert Research Institute, accessed May 28, 2014, at <http://www.wrcc.dri.edu/>.

Glossary

aquaculture water use Water used for the offstream farming of water organisms such as finfish and shellfish in ponds and fish hatcheries.

census block U.S. census blocks are statistical areas bounded by visible features such as roads, streets, water bodies, railroad tracks, city, town, county, township, or school district boundaries.

commercial water use Public or self-supplied water used for motels, hotels, restaurants, medical centers, hospitals, military installations, public safety, correctional institutions, educational facilities (public and private), campgrounds, and recreational vehicle parks.

domestic water use Water used for indoor household purposes such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and outdoor purposes such as watering lawns and gardens.

freshwater Water that contains less than 1,000 milligrams per liter of dissolved solids.

groundwater All subsurface water, distinct from surface water. Specifically, the part of the subsurface water in the saturated zone, which is a zone where all voids are filled with water.

industrial water use Water used by self-supplied industries for the fabrication, processing, washing, and cooling in industries associated with the fabrication of machinery and steel products, and the production of chemical, food, paper, wood, petroleum, and their allied products.

irrigation water use Water used for the production of fruit, vegetable, and nut crops and pasture, hay, turf, flower, and ornamental horticulture and nurseries.

livestock water use Water used for the production of animals for food or hobby and raised in feedlots, dairy operations, corrals, barns, or pens; in this report, includes aquaculture operations.

mining water use Water used in the extraction of minerals and includes quarrying, and milling, but does not include dewatering of quarries or mine pits.

offstream water use Water withdrawn from a surface-water source and used in areas not within the surface-water channel or basin.

per capita water use The average amount of water used per person during a standard time period, generally per day. Per capita use may be calculated based on total water use, public-supply water use, self-supplied domestic water use, or domestic deliveries from public supply.

public-supply withdrawals The withdrawal of water by a public supplier.

public water supplier Any water supplier (municipal or private entity) that regularly serves at least 25 people or has at least 15 water connections is considered a public water system under Georgia Law (OCGA 12-5-172-11).

public water use Water provided by a public supply for such uses as firefighting, street washing, water treatment, municipal buildings, parks, and swimming pools.

raw water Water that has not been filtered or treated before use.

saline water Water that contains more than 1,000 milligrams per liter of dissolved solids.

self-supplied domestic Surface water or groundwater withdrawn from a private intake or well at a single residence for domestic uses.

self-supplied water Water that is withdrawn directly from a groundwater or surface-water source by a user, as opposed to water that is delivered by a public supplier.

surface water An open body of water, such as a creek, canal, river, stream, lake, pond, or reservoir.

surface-water return flows Raw or treated water discharge to a river, stream, pond, lake, or reservoir.

thermoelectric-power use Water used to generate electricity with steam-driven turbine generators. Water is cooled using three different strategies: recirculating, once-through, and a mixture of the two. Recirculating systems consume the greatest amount of water.

water use Water used for a beneficial purpose, such as domestic activities (drinking, washing), industrial processes, agriculture, and thermoelectric- and hydroelectric-power generation.

water-use coefficient A factor or ratio used to estimate a quantity of water used based on a related quantity. Examples of water-use coefficients include daily per capita water use, consumptive crop irrigation requirements, livestock water requirements, per employee water use, and per unit of product water use.

water withdrawal The removal of water from a surface-water body or an aquifer that is conveyed to a storage tank or reservoir, or a place of use such as an agricultural field, water treatment or commercial, industrial, or thermoelectric facility.

Appendix 1. North American Industrial Classification Codes

Industrial water use is given by industry type, classified by a North American Industrial Classification System Code. The following is a brief description of the codes used in this publication (U.S. Census Bureau, 2012).

212—Mining and processing of kaolin and fuller’s earth.

This major group includes establishments engaged in the mining and processing of kaolin and fuller’s clay. Water washing is a processing method in which water and chemical dispersants are added to the mined clay to produce a slurry. The slurry is then transported through pipes to the processing facility.

311—Food and kindred products. This major group includes establishments that manufacture or process foods and beverages for human consumption, and certain related products, such as manufactured ice, chewing gum, vegetable oils and animal fats, and prepared feeds for animals and fowls.

312—Beverage manufacturing. The industrial group includes establishments such as breweries, distilleries, wineries, and those that produce soft drinks and bottled water.

313, 314—Textile mills and textile product mills. This major group includes establishments engaged in performing any of the following operations: (1) preparation of fiber and subsequent manufacturing of yarn, thread, braids, twine, and cordage; (2) manufacturing broad woven fabric, narrow woven fabric, knit fabric, and carpets and rugs from yarn; (3) dyeing and finishing fiber, yarn, fabric, and knit apparel; (4) coating, waterproofing, or otherwise treating fabric; (5) the integrated manufacture of knit apparel and other finished articles from yarn; and (6) the manufacture of felt goods, lace goods, non-woven fabrics, and miscellaneous textiles.

321—Wood product manufacturing, except furniture.

This major group includes sawmills, lathe mills, shingle mills, cooperage stock mills, planing mills, and pulpwood mills and veneer mills engaged in producing veneers, plywood, engineered wood products, millwork, and wood door and window manufacturing.

322—Paper, pulp, and allied products. This major group includes the manufacture of pulps from wood and other cellulose fibers and from rags; the manufacture of paper and paperboard; and the manufacture of paper and paperboard into converted products such as paper coated off the paper machine, paper bags, paper boxes, and envelopes.

325—Chemicals and allied products. This major group includes establishments producing basic chemicals and those manufacturing products by predominantly chemical processes. Establishments classified in this major group manufacture

three general classes of products: (1) basic chemicals such as acids, alkalies, salts, and organic chemicals; (2) chemical products to be used in further manufacture such as synthetic fibers, plastics materials, dry colors, and pigments; and (3) finished chemical products to be used for ultimate consumption such as drugs, cosmetics, and soaps, or to be used as materials or supplies in other industries such as paints, fertilizers, and explosives.

326—Rubber and miscellaneous plastics products. This major group includes establishments manufacturing from natural, synthetic, or reclaimed rubber; rubber products such as tires, rubber footwear, mechanical rubber goods, heels and soles, flooring, and rubber sundries; plastics such as pipes, pipe fittings, plastic bags, sheets, packaging material, polystyrene, and urethane foam products.

327—Stone, clay, glass, and concrete products. This major group includes establishments engaged in manufacturing flat glass and other glass products, cement, structural clay products, pottery, ceramics, concrete and gypsum products, cut stone, abrasive and asbestos products, and so forth, from materials taken principally from the earth in the form of stone, clay, and sand.

331—Primary metal industries. This major group includes establishments engaged in the smelting and refining of ferrous and nonferrous metals from ore, pig, or scrap; in the rolling, drawing, and alloying of ferrous and non-ferrous metals; in the manufacture of castings and other basic products of ferrous and nonferrous metals; and in the manufacture of aluminum sheet, foil, extruded products, pipes, tubes, nails, spikes, and insulated wire and cable.

332—Fabricated metal products, except machinery and transportation equipment. This major group includes establishments engaged in fabricating ferrous and nonferrous metal products such as metal cans, tinware, hand tools, cutlery, general hardware, non-electric heating apparatus, fabricated structural metal products, metal forging, metal stamping, ordnance (except vehicles and guided missiles), and a variety of metal and wire products not elsewhere classified.

339—Miscellaneous manufacturing. This major group includes establishments engaged in manufacturing medical equipment such as surgical, dental, and medical instruments and supplies; laboratory apparatus and furniture; manufacturing of jewelry and silverware; and a variety of other goods such as toys, sporting goods and athletic equipment, office supplies, musical instruments, signs, fasteners, needles, buttons, and caskets.

Appendix 2. Population, Water Withdrawals, and Water Use by Source of Water for Each County in Georgia, 2010

Abbreviations

- Ala. Alabama
- Ga. Georgia
- Mgal/d million gallons per day
- NAICS North American Industrial Classification System code
- < less than
- not applicable

Terms

Total use is total withdrawal plus public supply deliveries and losses.

Net transfers/losses for a county is the sum of all water purchased by public suppliers in a county from public-water suppliers in a different county minus the sum of all public-supplied water sold to public suppliers or delivered to customers in a different county and public-supply losses.

Category		Withdrawals		Total use	Surface-water returns
		Ground water	Surface water		
Self-supplied	Public supply	0.02	6.56	6.58	–
	Domestic	0.03	0.00	0.03 + 2.61 = 2.64	0.00
	Commercial/public use	0.00	0.00	0.00 + 4.00 = 4.00	0.00
	Industrial	0.01	0.00	0.01 + 0.78 = 0.79	0.00
	Public-supply losses	–	–	1.43	–
Self-supplied	Public wastewater treatment	–	–	–	4.44
	Mining	0.08	0.00	0.08	0.00
	Irrigation—Crop	0.00	0.00	0.00	0.00
	Irrigation—Golf course	0.00	0.08	0.08	0.00
	Livestock/aquaculture	0.00	0.12	0.12	0.00
	Thermoelectric power	0.00	0.00	0.00	0.00
TOTAL		0.14	6.76	8.96	4.44
About 2.36 Mgal/d were delivered from ABC County and 0.25 Mgal/d were delivered to XYZ County.					

Public-Supply Deliveries¹ by Use Category

APPLING COUNTY

Population	18,236
Population served by public supply—Groundwater	5,700
Population served by public supply—Surface water	0
Acres irrigated	7,260

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.91	0.00	0.91	—	—
Domestic	0.94	0.00	0.94	1.58	0.00
Commercial/public use	0.00	0.00	0.00	0.04	0.00
Industrial	0.00	0.00	0.00	0.05	0.00
Public-supply losses	—	—	—	0.18	—
Public wastewater treatment	—	—	—	—	0.93
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.31	0.45	1.76	1.76	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock and aquaculture	0.05	0.22	0.27	0.27	0.00
Thermoelectric power	0.21	56.69	56.90	56.90	0.00
TOTAL	3.42	57.36	60.78	60.78	0.93

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Baxley	0.83	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

ATKINSON COUNTY

Population	8,375
Population served by public supply—Groundwater	3,900
Population served by public supply—Surface water	0
Acres irrigated	6,690

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.44	0.00	0.44	—	—
Domestic	0.34	0.00	0.34	0.59	0.00
Commercial/public use	0.00	0.00	0.00	0.01	0.00
Industrial	0.40	0.00	0.40	0.52	0.01
Public-supply losses	—	—	—	0.06	—
Public wastewater treatment	—	—	—	—	0.26
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.40	0.04	0.44	0.44	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock and aquaculture	0.10	0.89	0.99	0.99	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.68	0.93	2.61	2.61	0.27

¹Total use is total withdrawals plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
321—Wood	0.40	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Pearson	0.22	0.00
City of Willacoochee	0.20	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BACON COUNTY

Population	11,096
Population served by public supply—Groundwater	4,860
Population served by public supply—Surface water	0
Acres irrigated	6,210

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.59	0.00	0.59	–	–
Domestic	0.47	0.00	0.47	0.89	0.00
Commercial/public use	0.00	0.00	0.00	0.06	0.00
Industrial	0.30	0.00	0.30	0.32	0.00
Public-supply losses	–	–	–	0.09	–
Public wastewater treatment	–	–	–	–	0.71
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.60	0.21	0.81	0.81	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.01	0.07	0.08	0.08	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.97	0.28	2.25	2.25	0.71

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
313—Textiles	0.30	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Alma	0.58	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BAKER COUNTY

Population	3,451
Population served by public supply—Groundwater	870
Population served by public supply—Surface water	0
Acres irrigated	43,010

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; <, less than]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.12	0.00	0.12	–	–
Domestic	0.19	0.00	0.19	0.29	0.00
Commercial/public use	0.00	0.00	0.00	<0.01	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.02	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	31.00	3.99	34.99	34.99	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.72	0.72	0.72	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	31.32	4.71	36.02	36.02	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Newton	0.12	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BALDWIN COUNTY

Population	45,720
Population served by public supply—Groundwater	360
Population served by public supply—Surface water	44,930
Acres irrigated	50

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.02	6.56	6.58	–	–
Domestic	0.03	0.00	0.03	2.64	0.00
Commercial/public use	0.00	0.00	0.00	4.00	0.00
Industrial	0.01	0.00	0.01	0.79	0.00
Public-supply losses	–	–	–	1.43	–
Public wastewater treatment	–	–	–	–	4.44
Mining	0.08	0.00	0.08	0.08	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.08	0.08	0.08	0.00
Livestock/aquaculture	0.00	0.12	0.12	0.12	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.14	6.76	6.90	8.96	4.44

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.11 Mgal/d was delivered from Putnam County, Georgia to Baldwin County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
321—Wood	0.01	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Milledgeville	0.00	6.56

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BANKS COUNTY

Population	18,395
Population served by public supply—Groundwater	2,320
Population served by public supply—Surface water	8,620
Acres irrigated	130

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.14	2.40	2.54	—	—
Domestic	0.56	0.00	0.56	1.29	0.00
Commercial/public use	0.00	0.00	0.00	0.06	0.00
Industrial	0.00	0.00	0.00	0.01	0.00
Public-supply losses	—	—	—	0.14	—
Public wastewater treatment	—	—	—	—	0.10
Mining	0.05	0.00	0.05	0.05	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.53	0.53	0.53	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.75	2.93	3.68	2.08	0.10

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 1.69 Mgal/d was delivered to Jackson County, Georgia and 0.04 Mgal/d to Franklin County, Georgia from Banks County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Commerce	0.00	¹ 1.74
Banks County Board of Commissioners	0.00	0.66

¹Water withdrawn was used in Jackson County, Georgia.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BARROW COUNTY

Population	69,367
Population served by public supply—Groundwater	710
Population served by public supply—Surface water	61,920
Acres irrigated	480

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.06	4.54	4.60	—	—
Domestic	0.51	0.00	0.51	5.27	0.00
Commercial/public use	0.00	0.00	0.00	0.87	0.00
Industrial	0.39	0.00	0.39	1.17	0.00
Public-supply losses	—	—	—	1.25	—
Public wastewater treatment	—	—	—	—	0.51
Mining	0.05	0.00	0.05	0.05	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.25	0.54	0.79	0.79	0.00
Livestock/aquaculture	0.00	0.19	0.19	0.19	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.26	5.27	6.53	9.59	0.51

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.17 Mgal/d was delivered from Jackson County, Georgia to Barrow County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food	0.39	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Winder	0.00	4.19
City of Statham	0.00	0.35

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BARTOW COUNTY

Population	100,157
Population served by public supply—Groundwater	1,900
Population served by public supply—Surface water	82,130
Acres irrigated	2,140

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.17	54.70	54.87	—	—
Domestic	1.21	0.00	1.21	9.37	0.00
Commercial/public use	0.00	0.00	0.00	1.90	0.00
Industrial	1.14	0.41	1.55	4.02	0.96
Public-supply losses	—	—	—	3.10	—
Public wastewater treatment	—	—	—	—	9.65
Mining	0.44	0.01	0.45	0.45	0.60
Irrigation—Crop	0.15	2.21	2.36	2.36	0.00
Irrigation—Golf course	0.00	0.36	0.36	0.36	0.00
Livestock/aquaculture	0.02	0.43	0.45	0.45	0.00
Thermoelectric power	0.00	47.92	47.92	47.92	16.00
TOTAL	3.13	106.04	109.17	69.93	27.21

¹Total use is total withdrawals plus public supply deliveries and losses. An average of 40 Mgal/d was withdrawn in Bartow County and delivered to Cobb County, Georgia; whereas, 0.61 Mgal/d was delivered to Floyd County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
325—Chemical products	0.98	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Cobb Co.—Marietta Water Authority	0.00	¹ 40.07
City of Cartersville	0.00	11.18
City of Adairsville	0.00	2.65
Bartow County	0.00	0.52
City of Emerson	0.00	0.28

¹Delivered and used in Cobb County, Georgia.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BEN HILL COUNTY

Population	17,634
Population served by public supply—Groundwater	13,730
Population served by public supply—Surface water	0
Acres irrigated	7,280

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	3.23	0.00	3.23	—	—
Domestic	0.29	0.00	0.29	1.91	0.00
Commercial/public use	0.00	0.00	0.00	0.45	0.00
Industrial	0.00	0.00	0.00	0.58	0.00
Public-supply losses	—	—	—	0.58	—
Public wastewater treatment	—	—	—	—	2.65
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.50	0.50	2.00	2.00	0.00
Irrigation—Golf course	0.07	0.00	0.07	0.07	0.00
Livestock/aquaculture	0.01	0.06	0.07	0.07	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	5.10	0.56	5.66	5.66	2.65

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Fitzgerald Water, Land, and Bond Commission	3.23	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BERRIEN COUNTY

Population	19,286
Population served by public supply—Groundwater	7,660
Population served by public supply—Surface water	0
Acres irrigated	14,320

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.83	0.00	0.83	–	–
Domestic	0.87	0.00	0.87	1.45	0.00
Commercial/public use	0.00	0.00	0.00	0.15	0.00
Industrial	0.02	0.00	0.02	0.03	0.00
Public-supply losses	–	–	–	0.09	–
Public wastewater treatment	–	–	–	–	0.17
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	2.00	0.85	2.85	2.85	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.02	0.08	0.10	0.10	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	3.74	0.93	4.67	4.67	0.17

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
313—Textiles	0.02	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Nashville	0.62	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BIBB COUNTY

Population	155,547
Population served by public supply—Groundwater	1,770
Population served by public supply—Surface water	124,900
Acres irrigated	347

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.14	23.46	23.60	–	–
Domestic	2.17	0.00	2.17	15.90	0.00
Commercial/public use	0.00	0.00	0.00	6.59	0.00
Industrial	1.72	12.89	14.61	16.50	2.86
Public-supply losses	–	–	–	3.84	–
Public wastewater treatment	–	–	–	–	33.28
Mining	0.00	0.01	0.01	0.01	0.65
Irrigation—Crop	0.33	0.03	0.36	0.36	0.00
Irrigation—Golf course	0.21	0.08	0.29	0.29	0.00
Livestock/aquaculture	0.01	0.03	0.04	0.04	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	4.58	36.50	41.08	43.53	36.79

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.23 Mgal/d was delivered from Bibb County to Monroe County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.41	12.89
321—Wood	1.08	0.00
326—Rubber, plastics	0.23	0.00

Withdrawals by Major Public Suppliers

[Mgal/d, million gallons per day]

Name	Groundwater	Surface water
Macon Water Authority	0.00	¹ 23.46

¹An average of 3.1 Mgal/d was withdrawn in Jones County, Georgia and delivered to Bibb County, Georgia in 2010.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BLECKLEY COUNTY

Population	13,063
Population served by public supply—Groundwater	5,220
Population served by public supply—Surface water	0
Acres irrigated	12,020

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.22	0.00	0.22	–	–
Domestic	0.59	0.00	0.59	0.70	0.00
Commercial/public use	0.12	0.00	0.12	0.18	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.05	–
Public wastewater treatment	–	–	–	–	0.33
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	4.58	1.23	5.81	5.81	0.00
Irrigation—Golf course	0.25	0.26	0.51	0.51	0.00
Livestock/aquaculture	0.02	0.06	0.08	0.08	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	5.78	1.55	7.33	7.33	0.33

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Cochran	0.22	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

0 2 4 6 MILES
0 2 4 6 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BRANTLEY COUNTY

Population	18,411
Population served by public supply—Groundwater	2,380
Population served by public supply—Surface water	0
Acres irrigated	720

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.25	0.00	0.25	–	–
Domestic	1.20	0.00	1.20	1.38	0.00
Commercial/public use	0.00	0.00	0.00	0.05	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.02	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.03	0.03	0.03	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.01	0.03	0.04	0.04	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.46	0.06	1.52	1.52	0.00

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Nahunta	0.14	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BROOKS COUNTY

Population	16,243
Population served by public supply—Groundwater	6,670
Population served by public supply—Surface water	0
Acres irrigated	15,480

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.94	0.00	0.94	–	–
Domestic	0.72	0.00	0.72	1.33	0.00
Commercial/public use	0.01	0.00	0.01	0.22	0.00
Industrial	0.06	0.00	0.06	0.07	0.00
Public-supply losses	–	–	–	0.11	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	5.53	0.08	5.61	5.61	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.08	0.34	0.42	0.42	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	7.34	0.42	7.76	7.76	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
321—Wood	0.06	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Quitman	0.73	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BRYAN COUNTY

Population	30,233
Population served by public supply—Groundwater	27,380
Population served by public supply—Surface water	0
Acres irrigated	130

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.57	0.00	2.57	—	—
Domestic	0.21	0.00	0.21	2.52	0.00
Commercial/public use	0.00	0.00	0.00	0.16	0.00
Industrial	0.02	0.00	0.02	0.02	0.00
Public-supply losses	—	—	—	0.10	—
Public wastewater treatment	—	—	—	—	0.97
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.04	0.03	0.07	0.07	0.00
Irrigation—Golf course	0.01	0.00	0.01	0.01	0.00
Livestock/aquaculture	0.03	0.34	0.37	0.37	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.88	0.37	3.25	3.25	0.97

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
339—Misc manufacturing	0.02	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Richmond Hill	1.41	0.00
Water Utility Management	0.40	0.00
Middle Georgia Water Co.	0.25	0.00
City of Pembroke	0.22	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BULLOCH COUNTY

Population	70,217
Population served by public supply—Groundwater	49,980
Population served by public supply—Surface water	0
Acres irrigated	15,970

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	4.89	0.00	4.89	–	–
Domestic	1.52	0.00	1.52	4.60	0.00
Commercial/public use	0.30	0.00	0.30	1.37	0.00
Industrial	0.00	0.00	0.00	0.20	0.00
Public-supply losses	–	–	–	0.54	–
Public wastewater treatment	–	–	–	–	3.92
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.62	1.45	2.07	2.07	0.00
Irrigation—Golf course	0.18	0.00	0.18	0.18	0.00
Livestock/aquaculture	0.03	0.24	0.27	0.27	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	7.54	1.69	9.23	9.23	3.92

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Statesboro	3.27	0.00
City of Brooklet	0.18	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BURKE COUNTY

Population	23,316
Population served by public supply—Groundwater	8,990
Population served by public supply—Surface water	370
Acres irrigated	23,230

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.01	0.05	1.06	–	–
Domestic	1.05	0.00	1.05	1.67	0.00
Commercial/public use	0.01	0.00	0.01	0.11	0.00
Industrial	0.23	0.00	0.23	0.37	0.00
Public-supply losses	–	–	–	0.20	–
Public wastewater treatment	–	–	–	–	1.04
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	6.84	3.22	10.06	10.06	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.06	0.23	0.29	0.29	0.00
Thermoelectric power	1.06	64.35	65.41	65.41	0.00
TOTAL	10.26	67.85	78.11	78.11	1.04

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.23	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Waynesboro	0.82	0.05

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

BUTTS COUNTY

Population	23,655
Population served by public supply—Groundwater	1,780
Population served by public supply—Surface water	19,030
Acres irrigated	110

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.14	2.45	2.59	–	–
Domestic	0.21	0.00	0.21	1.83	0.00
Commercial/public use	0.00	0.00	0.00	0.36	0.00
Industrial	0.00	0.00	0.00	0.21	0.00
Public-supply losses	–	–	–	0.28	–
Public wastewater treatment	–	–	–	–	0.60
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.09	0.00	0.09	0.09	0.00
Irrigation—Golf course	0.00	0.10	0.10	0.10	0.00
Livestock/aquaculture	0.00	0.03	0.03	0.03	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.44	2.58	3.02	2.90	0.60

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.01 Mgal/d was delivered to Butts County, Georgia from Spalding County, Georgia and about 0.13 Mgal/d delivered from Butts County to Monroe County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Butts County–Jackson–Jenkinsburg Water System	0.00	2.45

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

0 2 4 6 MILES
0 2 4 6 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CALHOUN COUNTY

Population	6,694
Population served by public supply—Groundwater	3,470
Population served by public supply—Surface water	0
Acres irrigated	30,170

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.64	0.00	0.64	—	—
Domestic	0.24	0.00	0.24	0.56	0.00
Commercial/public use	0.00	0.00	0.00	0.22	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	—	—	—	0.10	—
Public wastewater treatment	—	—	—	—	0.47
Mining	0.02	0.00	0.02	0.02	0.00
Irrigation—Crop	10.43	16.97	27.40	27.40	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.05	0.13	0.18	0.18	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	11.28	17.10	28.48	28.48	0.47

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Town of Morgan	0.27	0.00
City of Edison	0.16	0.00
City of Arlington	0.12	0.00
City of Leary	0.09	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CAMDEN COUNTY

Population	50,513
Population served by public supply—Groundwater	39,000
Population served by public supply—Surface water	0
Acres irrigated	440

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	4.72	0.00	4.72	–	–
Domestic	0.86	0.00	0.86	3.99	0.00
Commercial/public use	0.00	0.00	0.00	0.73	0.00
Industrial	0.05	0.00	0.05	0.23	0.00
Public-supply losses	–	–	–	0.68	–
Public wastewater treatment	–	–	–	–	3.15
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.03	0.03	0.03	0.00
Irrigation—Golf course	0.48	0.25	0.73	0.73	0.00
Livestock/aquaculture	0.00	0.00	0.00	0.00	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	6.11	0.28	6.39	6.39	3.15

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
325—Chemical products	0.05	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Kingsland	1.79	0.00
City of St. Mary's	1.54	0.00
U.S. Navy—Kings Bay	1.12	0.00
W & D Utilities	0.27	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

0 5 10 MILES
0 5 10 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CANDLER COUNTY

Population	10,998
Population served by public supply—Groundwater	5,740
Population served by public supply—Surface water	0
Acres irrigated	4,825

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY
[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.48	0.00	0.48	—	—
Domestic	0.39	0.00	0.39	0.76	0.00
Commercial/public use	0.00	0.00	0.00	0.05	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	—	—	—	0.06	—
Public wastewater treatment	—	—	—	—	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.51	0.65	1.16	1.16	0.00
Irrigation—Golf course	0.07	0.11	0.18	0.18	0.00
Livestock/aquaculture	0.01	0.05	0.06	0.06	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.46	0.81	2.27	2.27	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups [NAICS, North American Industrial Classification System code]		
NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers		
Name	Groundwater	Surface water
City of Metter	0.43	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CARROLL COUNTY

Population	110,527
Population served by public supply—Groundwater	4,530
Population served by public supply—Surface water	85,230
Acres irrigated	621

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.49	11.33	11.82	—	—
Domestic	1.56	0.00	1.56	8.26	0.00
Commercial/public use	0.00	0.00	0.00	1.73	0.00
Industrial	0.00	0.02	0.02	1.39	0.35
Public-supply losses	—	—	—	2.02	—
Public wastewater treatment	—	—	—	—	0.75
Mining	0.11	0.00	0.11	0.11	0.00
Irrigation—Crop	0.09	0.12	0.21	0.21	0.00
Irrigation—Golf course	0.00	0.48	0.48	0.48	0.00
Livestock/aquaculture	0.02	0.80	0.82	0.82	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.27	12.75	15.02	15.02	1.10

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
331—Primary metals	0.00	0.02

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Carrollton	0.00	5.04
Carroll County	0.00	4.32
City of Villa Rica	0.00	1.31
City of Bowdon	0.00	0.65

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CATOOSA COUNTY

Population	63,942
Population served by public supply—Groundwater	0
Population served by public supply—Surface water	63,210
Acres irrigated	420

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.00	5.66	5.66	–	–
Domestic	0.05	0.00	0.05	5.97	0.00
Commercial/public use	0.00	0.00	0.00	0.55	0.00
Industrial	0.00	0.00	0.00	0.07	0.00
Public-supply losses	–	–	–	1.47	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.05	0.00	0.05	0.05	0.00
Irrigation—Crop	0.09	0.24	0.33	0.33	0.00
Irrigation—Golf course	0.33	0.41	0.74	0.74	0.00
Livestock/aquaculture	0.01	0.15	0.16	0.16	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.53	6.46	6.99	9.34	0.00

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 1.71 Mgal/d was delivered from Hamilton County, Tennessee and 0.28 Mgal/d from Walker County, Georgia to Catoosa County, Georgia; whereas, 0.08 Mgal/d from Catoosa to Walker County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Catoosa Utility District	0.00	5.34
City of Ringgold	0.00	0.32

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CHARLTON COUNTY

Population	12,171
Population served by public supply—Groundwater	4,900
Population served by public supply—Surface water	0
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.63	0.00	0.63	—	—
Domestic	0.55	0.00	0.55	1.04	0.00
Commercial/public use	0.00	0.00	0.00	0.07	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	—	—	—	0.07	—
Public wastewater treatment	—	—	—	—	0.48
Mining	0.06	0.00	0.06	0.06	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.03	0.03	0.03	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.24	0.03	1.27	1.27	0.48

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Folkston	0.56	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CHATHAM COUNTY

Population	265,128
Population served by public supply—Groundwater	159,770
Population served by public supply—Surface water	94,680
Acres irrigated	680

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	32.06	0.00	32.06	–	–
Domestic	0.80	0.00	0.80	21.64	0.00
Commercial/public use	0.25	0.00	0.25	7.20	0.00
Industrial	18.72	19.07	37.79	63.59	77.08
Public-supply losses	–	–	–	11.85	–
Public wastewater treatment	–	–	–	–	29.73
Mining	0.12	0.00	0.12	0.12	0.00
Irrigation—Crop	0.21	0.00	0.21	0.21	0.00
Irrigation—Golf course	0.75	0.26	1.01	1.01	0.00
Livestock/aquaculture	0.00	0.01	0.01	0.01	0.00
Thermoelectric power	1.40	204.83	206.23	206.23	205.00
TOTAL	54.31	224.17	278.48	311.86	311.81

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.1 Mgal/d was delivered from Chatham to Effingham County, Georgia and 23.8 Mgal/d from Effingham County to Chatham County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	15.24	13.44
325—Chemicals	2.45	5.63
311—Food	0.73	0.00
321—Wood	0.25	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Savannah	23.35	0.00
Skidaway Island Utilities	1.71	0.00
City of Garden City	1.08	0.00
Hunter Army Airfield	1.04	0.00
City of Tybee Island	0.85	0.00
Chatham County	0.65	0.00
City of Pooler	0.57	0.00
Consolidated Utilities, Inc.	0.52	0.00
Water Utility Management	0.50	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CHATTAHOOCHEE COUNTY

Population	11,267
Population served by public supply—Groundwater	4,120
Population served by public supply—Surface water	0
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.34	0.00	0.34	–	–
Domestic	0.54	0.00	0.54	0.82	0.00
Commercial/public use	0.00	0.00	0.00	0.01	0.00
Industrial	0.00	0.00	0.00	3.84	0.00
Public-supply losses	–	–	–	0.05	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.00	0.00	0.00	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.88	0.00	0.88	4.72	0.00

¹Total use is total withdrawal plus public supply deliveries and losses. About 4 Mgal/d was delivered from Muscogee County, Georgia to Chattahoocchee County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Chattahoocchee–Cusseta Water System	0.34	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

0 2 4 6 MILES
0 2 4 6 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CHATTOOGA COUNTY

Population	26,015
Population served by public supply—Groundwater	8,540
Population served by public supply—Surface water	11,910
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.81	2.51	3.32	–	–
Domestic	0.42	0.00	0.42	2.10	0.00
Commercial/public use	0.00	0.00	0.00	0.25	0.00
Industrial	0.00	5.31	5.31	5.58	1.32
Public-supply losses	–	–	–	0.64	–
Public wastewater treatment	–	–	–	–	6.30
Mining	0.02	0.00	0.02	0.02	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.42	1.23	1.65	1.65	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.67	9.05	10.72	10.24	7.67

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.41 Mgal/d was delivered to an unidentified county in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
313—Textile Mills	0.00	5.31

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Summerville	0.00	2.51
Chattooga County	0.63	0.00
City of Lyerly	0.14	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CHEROKEE COUNTY

Population	214,346
Population served by public supply—Groundwater	4,560
Population served by public supply—Surface water	202,820
Acres irrigated	670

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.39	17.54	17.93	–	–
Domestic	0.52	0.00	0.52	15.47	0.00
Commercial/public use	0.00	0.00	0.00	1.33	0.00
Industrial	0.02	3.16	3.18	3.77	0.13
Public-supply losses	–	–	–	3.22	–
Public wastewater treatment	–	–	–	–	10.21
Mining	0.11	0.00	0.11	0.11	0.44
Irrigation—Crop	0.16	0.11	0.27	0.27	0.00
Irrigation—Golf course	0.63	1.50	2.13	2.13	0.00
Livestock/aquaculture	0.01	0.17	0.18	0.18	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.84	22.48	24.32	26.48	10.78

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 1.4 Mgal/d was delivered from Cobb and Pickens Counties, Georgia to Cherokee County, Georgia and about 0.62 Mgal/d from Cherokee County to Bartow, Pickens, and Dawson Counties, Georgia, collectively, in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food	0.02	3.16

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Cherokee County WSA	0.00	14.74
City of Canton	0.00	2.87
Lake Arrowhead Utility	0.17	0.00
City of Ball Ground	0.17	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CLARKE COUNTY

Population	116,714
Population served by public supply—Groundwater	1,880
Population served by public supply—Surface water	100,240
Acres irrigated	410

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.15	12.62	12.77	—	—
Domestic	1.09	0.00	1.09	8.24	0.00
Commercial/public use	0.00	0.00	0.00	3.07	0.00
Industrial	0.00	0.00	0.00	2.30	0.00
Public-supply losses	—	—	—	2.23	—
Public wastewater treatment	—	—	—	—	12.38
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.32	0.06	0.38	0.38	0.00
Irrigation—Golf course	0.05	0.80	0.85	0.85	0.00
Livestock/aquaculture	0.00	0.02	0.02	0.02	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.61	13.50	15.11	17.09	12.38

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.2 Mgal/d was withdrawn in Jackson County, Georgia and delivered to Clark County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Athens—Clarke County Water System	0.00	12.62

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CLAY COUNTY

Population	3,183
Population served by public supply—Groundwater	1,700
Population served by public supply—Surface water	0
Acres irrigated	6,950

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.29	0.00	0.29	–	–
Domestic	0.11	0.00	0.11	0.34	0.00
Commercial/public use	0.00	0.00	0.00	0.03	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.03	–
Public wastewater treatment	–	–	–	–	0.09
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.91	1.86	3.77	3.77	0.00
Irrigation—Golf course	0.33	0.00	0.33	0.33	0.00
Livestock/aquaculture	0.04	0.04	0.08	0.08	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.68	1.90	4.58	4.58	0.09

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Fort Gaines	0.25	0.00
Clay County Water System	0.04	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CLAYTON COUNTY

Population	259,424
Population served by public supply—Groundwater	80
Population served by public supply—Surface water	258,820
Acres irrigated	60

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY (Mgal/d)

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.05	9.30	9.35	—	—
Domestic	0.04	0.00	0.04	19.38	0.00
Commercial/public use	0.00	0.00	0.00	2.06	0.00
Industrial	0.00	0.00	0.00	1.65	0.00
Public-supply losses	—	—	—	4.13	—
Public wastewater treatment	—	—	—	—	1.73
Mining	0.23	0.02	0.25	0.25	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.16	0.16	0.16	0.00
Livestock/aquaculture	0.01	0.00	0.01	0.01	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.33	9.48	9.81	27.64	2.20

¹Total use is total withdrawal plus public supply deliveries and losses. A net average of 0.06 Mgal/d was delivered from Fulton County, Georgia to Clayton County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Clayton County Water Authority ¹	0.05	9.30

¹An average of 18.1 Mgal/d of additional surface water was withdrawn from Henry County, Georgia and delivered to Clayton County, Georgia in 2010.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CLINCH COUNTY

Population	6,798
Population served by public supply—Groundwater	3,840
Population served by public supply—Surface water	0
Acres irrigated	2,840

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[-, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.48	0.00	0.48	—	—
Domestic	0.22	0.00	0.22	0.50	0.00
Commercial/public use	0.00	0.00	0.00	0.07	0.00
Industrial	0.05	0.00	0.05	0.12	0.00
Public-supply losses	—	—	—	0.06	—
Public wastewater treatment	—	—	—	—	0.26
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.01	0.01	0.01	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.75	0.01	0.76	0.76	0.26

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
332—Fabrication	0.05	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Homerville	0.43	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data0 5 10 MILES
0 5 10 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

COBB COUNTY

Population	688,078
Population served by public supply—Groundwater	0
Population served by public supply—Surface water	645,080
Acres irrigated	680

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY (Mgal/d)

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.57	43.27	43.84	—	—
Domestic	3.22	0.00	3.22	38.03	0.00
Commercial/public use	0.00	0.00	0.00	23.54	0.00
Industrial	0.00	0.39	0.39	3.41	0.00
Public-supply losses	—	—	—	10.50	—
Public wastewater treatment	—	—	—	—	77.44
Mining	0.00	0.00	0.00	0.00	0.92
Irrigation—Crop	0.15	0.00	0.15	0.15	0.00
Irrigation—Golf course	0.34	1.48	1.82	1.82	0.00
Livestock/aquaculture	0.00	0.02	0.02	0.02	0.00
Thermoelectric power	0.00	5.25	5.25	5.25	1.00
TOTAL	4.28	50.41	54.69	82.72	79.42

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 10.5 Mgal/d was delivered to Paulding County, Georgia 1.29 Mgal/d to Cherokee County, Georgia; 0.09 Mgal/d to Fulton County, Georgia; and 0.01 Mgal/d to Douglas County, Georgia from Cobb County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.00	0.39

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Cobb County–Marietta Water Authority ¹	0.00	43.28
Cobb County Water System	0.57	0.00

¹An average of 40.1 Mgal/d was withdrawn from Bartow County, Georgia and delivered to Cobb County, Georgia in 2010.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

COFFEE COUNTY

Population	42,356
Population served by public supply—Groundwater	21,140
Population served by public supply—Surface water	0
Acres irrigated	23,000

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	3.48	0.00	3.48	–	–
Domestic	1.59	0.00	1.59	3.31	0.00
Commercial/public use	0.00	0.00	0.00	0.97	0.00
Industrial	0.00	0.00	0.00	0.32	0.00
Public-supply losses	–	–	–	0.47	–
Public wastewater treatment	–	–	–	–	2.33
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.91	0.87	2.78	2.78	0.00
Irrigation—Golf course	0.27	0.43	0.70	0.70	0.00
Livestock/aquaculture	0.06	0.52	0.58	0.58	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	7.31	1.82	9.13	9.13	2.33

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Douglas	2.48	0.00
City of Nicholls	0.37	0.00
City of Broxton	0.14	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

0 5 10 MILES
0 5 10 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

COLQUITT COUNTY

Population	45,498
Population served by public supply—Groundwater	23,270
Population served by public supply—Surface water	0
Acres irrigated	44,920

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	3.64	0.00	3.64	–	–
Domestic	1.67	0.00	1.67	3.43	0.00
Commercial/public use	0.00	0.00	0.00	0.75	0.00
Industrial	1.14	0.00	1.14	1.22	0.00
Public-supply losses	–	–	–	1.05	–
Public wastewater treatment	–	–	–	–	3.10
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	7.80	8.47	16.27	16.27	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.13	0.52	0.65	0.65	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	14.38	8.99	23.37	23.37	3.10

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food	1.14	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Moultrie	2.98	0.00
City of Norman Park	0.18	0.00
Water Service Company of Georgia, Inc.	0.16	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

COLUMBIA COUNTY

Population	124,053
Population served by public supply—Groundwater	1,380
Population served by public supply—Surface water	104,530
Acres irrigated	600

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.13	16.06	16.19	—	—
Domestic	1.36	0.00	1.36	11.97	0.00
Commercial/public use	0.00	0.00	0.00	4.02	0.00
Industrial	0.03	0.00	0.03	0.19	0.00
Public-supply losses	—	—	—	1.40	—
Public wastewater treatment	—	—	—	—	7.57
Mining	0.40	0.00	0.40	0.40	1.28
Irrigation—Crop	0.10	0.06	0.16	0.16	0.00
Irrigation—Golf course	0.13	0.77	0.90	0.90	0.00
Livestock/aquaculture	0.00	0.04	0.04	0.04	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.15	16.93	19.08	19.08	8.85

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
312—Beverages	0.03	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Columbia County	0.00	16.06
City of Groveland	0.09	0.00
City of Harlem	0.02	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

COOK COUNTY

Population	17,212
Population served by public supply—Groundwater	10,200
Population served by public supply—Surface water	0
Acres irrigated	10,460

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.80	0.00	1.80	–	–
Domestic	0.53	0.00	0.53	1.66	0.00
Commercial/public use	0.00	0.00	0.00	0.36	0.01
Industrial	0.00	0.00	0.00	0.03	0.00
Public-supply losses	–	–	–	0.28	–
Public wastewater treatment	–	–	–	–	1.25
Mining	0.21	0.00	0.21	0.21	0.00
Irrigation—Crop	4.10	0.88	4.98	4.98	0.00
Irrigation—Golf course	0.00	0.20	0.20	0.20	0.00
Livestock/aquaculture	0.03	0.13	0.16	0.16	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	6.67	1.21	7.88	7.88	1.26

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None		

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Adel	1.26	0.00
City of Sparks	0.42	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

0 2 4 6 MILES
0 2 4 6 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

COWETA COUNTY

Population	127,317
Population served by public supply—Groundwater	6,990
Population served by public supply—Surface water	108,300
Acres irrigated	810

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.38	7.35	7.73	—	—
Domestic	0.90	0.00	0.90	7.78	0.00
Commercial/public use	0.00	0.00	0.00	1.14	0.00
Industrial	0.00	0.00	0.00	0.85	0.00
Public-supply losses	—	—	—	1.32	—
Public wastewater treatment	—	—	—	—	3.03
Mining	0.12	0.00	0.12	0.12	0.00
Irrigation—Crop	0.02	0.11	0.13	0.13	0.00
Irrigation—Golf course	0.00	1.59	1.59	1.59	0.00
Livestock/aquaculture	0.00	0.07	0.07	0.07	0.00
Thermoelectric power	0.00	42.58	42.58	42.58	0.00
TOTAL	1.42	51.70	53.12	55.58	3.59

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.43 Mgal/d was delivered to Coweta County, Georgia from Spalding County, Georgia and 0.036 Mgal/d was delivered from Fulton County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Newnan	0.00	6.56
Coweta County Water & Sewer Authority	0.03	0.60
City of Senoia	0.06	0.18
Georgia Community Water, Inc.	0.13	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CRAWFORD COUNTY

Population	12,630
Population served by public supply—Groundwater	3,760
Population served by public supply—Surface water	0
Acres irrigated	2,980

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.35	0.00	0.35	–	–
Domestic	0.67	0.00	0.67	0.93	0.00
Commercial/public use	0.00	0.00	0.00	0.04	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.05	–
Public wastewater treatment	–	–	–	–	0.12
Mining	0.38	0.01	0.39	0.39	0.00
Irrigation—Crop	1.23	0.00	1.23	1.23	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.22	0.22	0.22	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.63	0.23	2.86	2.86	0.12

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Crawford County Water System	0.14	0.00
City of Roberta	0.18	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

CRISP COUNTY

Population	23,439
Population served by public supply—Groundwater	15,460
Population served by public supply—Surface water	0
Acres irrigated	28,790

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.23	0.00	2.23	—	—
Domestic	0.60	0.00	0.60	1.80	0.00
Commercial/public use	0.00	0.00	0.00	0.62	0.00
Industrial	0.12	0.00	0.12	0.13	0.00
Public-supply losses	—	—	—	0.40	—
Public wastewater treatment	—	—	—	—	2.88
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	10.49	4.90	15.39	15.39	0.00
Irrigation—Golf course	0.33	0.00	0.33	0.33	0.00
Livestock/aquaculture	0.02	0.05	0.07	0.07	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	13.79	4.95	18.74	18.74	2.88

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
321—Wood	0.11	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Cordele	1.84	0.00
Crisp County Waterworks	0.29	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

DADE COUNTY

Population	16,633
Population served by public supply—Groundwater	0
Population served by public supply—Surface water	15,470
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.00	2.09	2.09	–	–
Domestic	0.09	0.00	0.09	1.30	0.00
Commercial/public use	0.00	0.00	0.00	0.53	0.00
Industrial	0.00	0.00	0.00	0.04	0.00
Public-supply losses	–	–	–	0.31	–
Public wastewater treatment	–	–	–	–	0.28
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.01	0.09	0.10	0.10	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.10	2.18	2.28	2.28	0.28

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Dade County Water Authority	0.00	2.09

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

DAWSON COUNTY

Population	22,330
Population served by public supply—Groundwater	470
Population served by public supply—Surface water	15,900
Acres irrigated	300

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.45	1.25	1.70	–	–
Domestic	0.45	0.00	0.45	1.59	0.00
Commercial/public use	0.00	0.00	0.00	0.29	0.00
Industrial	0.00	0.00	0.00	0.02	0.00
Public-supply losses	–	–	–	0.36	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.09	0.09	0.09	0.00
Irrigation—Golf course	0.00	0.21	0.21	0.21	0.00
Livestock/aquaculture	0.00	0.30	0.30	0.30	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.90	1.85	2.75	2.86	0.00

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.06 Mgal/d was delivered to Dawson County, Georgia from Cherokee County, Georgia and 0.05 Mgal/d from Forsyth County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Etowah Water & Sewer Authority	0.00	1.25
City of Dawsonville	0.42	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

DECATUR COUNTY

Population	27,842
Population served by public supply—Groundwater	14,320
Population served by public supply—Surface water	170
Acres irrigated	69,010

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.87	0.00	2.87	–	–
Domestic	1.00	0.00	1.00	3.24	0.00
Commercial/public use	0.00	0.00	0.00	0.36	0.00
Industrial	0.71	0.58	1.29	1.29	0.57
Public-supply losses	–	–	–	0.27	–
Public wastewater treatment	–	–	–	–	1.69
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	66.51	1.00	67.51	67.51	0.00
Irrigation—Golf course	0.07	0.00	0.07	0.07	0.00
Livestock/aquaculture	0.15	0.05	0.20	0.20	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	71.31	1.63	72.94	72.94	2.26

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
327—Stone, clay	0.17	0.58
339—Misc manufacturing	0.30	0.00
313—Textiles	0.20	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Bainbridge	2.75	0.00
City of Attapulgus	0.04	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

DEKALB COUNTY

Population	691,890
Population served by public supply—Groundwater	0
Population served by public supply—Surface water	691,890
Acres irrigated	900

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.00	0.00	0.00	–	–
Domestic	0.00	0.00	0.00	38.97	0.00
Commercial/public use	0.00	0.00	0.00	20.49	0.00
Industrial	0.00	0.00	0.00	5.29	0.00
Public-supply losses	–	–	–	10.32	–
Public wastewater treatment	–	–	–	–	36.34
Mining	0.34	0.00	0.34	0.34	0.40
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.59	1.73	2.32	2.44	0.00
Livestock/aquaculture	0.00	0.00	0.00	0.00	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.93	1.73	2.66	77.85	36.74

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 74.95 Mgal/d was withdrawn in Fulton County, Georgia and delivered to DeKalb County and 0.1 Mgal/d from DeKalb County to Henry County, Georgia in 2010. About 4.2 Mgal/d were delivered to customers within the City of Atlanta water service area in DeKalb County.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
None—DeKalb County withdraws water in Fulton County		

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

DODGE COUNTY

Population	21,796
Population served by public supply—Groundwater	8,800
Population served by public supply—Surface water	0
Acres irrigated	14,320

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY
[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.15	0.00	1.15	–	–
Domestic	0.97	0.00	0.97	1.59	0.00
Commercial/public use	0.00	0.00	0.00	0.29	0.00
Industrial	0.00	0.00	0.00	0.09	0.00
Public-supply losses	–	–	–	0.15	–
Public wastewater treatment	–	–	–	–	0.65
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	6.29	3.02	9.31	9.31	0.00
Irrigation—Golf course	0.16	0.00	0.16	0.16	0.00
Livestock/aquaculture	0.76	0.14	0.90	0.90	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	9.33	3.16	12.49	12.49	0.65

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Eastman	1.01	0.00
Town of Chester	0.08	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

DOOLY COUNTY

Population	14,918
Population served by public supply—Groundwater	7,290
Population served by public supply—Surface water	0
Acres irrigated	41,630

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.35	0.00	2.35	–	–
Domestic	0.57	0.00	0.57	1.33	0.00
Commercial/public use	0.00	0.00	0.00	0.51	0.00
Industrial	0.10	0.00	0.10	0.62	0.00
Public-supply losses	–	–	–	0.56	–
Public wastewater treatment	–	–	–	–	0.10
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	19.95	4.53	24.48	24.48	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.02	0.13	0.15	0.15	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	22.99	4.66	27.65	27.65	0.10

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
321—Wood products	0.10	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Vienna	1.55	0.00
City of Unadilla	0.63	0.00
City of Pinehurst	0.10	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

DOUGHERTY COUNTY

Population	94,565
Population served by public supply—Groundwater	90,870
Population served by public supply—Surface water	0
Acres irrigated	19,350

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	15.33	0.00	15.33	—	—
Domestic	0.28	0.00	0.28	8.51	0.00
Commercial/public use	0.00	0.00	0.00	4.09	0.00
Industrial	8.30	0.00	8.30	9.01	1.99
Public-supply losses	—	—	—	2.30	—
Public wastewater treatment	—	—	—	—	16.60
Mining	0.05	0.00	0.05	0.05	0.00
Irrigation—Crop	15.53	0.21	15.74	15.74	0.00
Irrigation—Golf course	1.09	0.13	1.22	1.22	0.00
Livestock/aquaculture	0.04	0.02	0.06	0.06	0.00
Thermoelectric power	0.01	50.00	50.01	50.01	50.00
TOTAL	40.63	50.36	90.99	90.99	68.59

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	5.37	0.00
312—Beverages	2.83	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Albany Water, Gas and Light Commission	14.88	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

DOUGLAS COUNTY

Population	132,403
Population served by public supply—Groundwater	540
Population served by public supply—Surface water	128,000
Acres irrigated	365

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.04	19.93	19.97	—	—
Domestic	0.29	0.00	0.29	8.49	0.00
Commercial/public use	0.00	0.00	0.00	1.36	0.00
Industrial	0.00	0.00	0.00	0.41	0.00
Public-supply losses	—	—	—	2.04	—
Public wastewater treatment	—	—	—	—	6.29
Mining	0.32	0.00	0.32	0.32	0.42
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.60	0.60	0.60	0.00
Livestock/aquaculture	0.16	1.66	1.82	1.82	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.81	22.19	23.00	15.04	6.71

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 7.97 Mgal/d were withdrawn from Douglas County and delivered to Fulton County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Douglasville-Douglas Co. Water & Sewerage Auth.	0.00	11.95
City of East Point	0.00	17.97

¹This water was delivered to and used in Fulton County in 2010.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

EARLY COUNTY

Population	11,008
Population served by public supply—Groundwater	6,790
Population served by public supply—Surface water	0
Acres irrigated	52,670

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.34	0.00	1.34	–	
Domestic	0.32	0.00	0.32	1.18	0.00
Commercial/public use	0.00	0.00	0.00	0.27	0.00
Industrial	0.38	109.12	109.50	109.50	42.54
Public-supply losses	–	–	–	0.21	–
Public wastewater treatment	–	–	–	–	1.16
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	29.44	6.71	36.15	36.15	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.04	0.17	0.21	0.21	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	31.52	116.00	147.52	147.52	43.70

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.10	109.12
331—Primary metals	0.28	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Blakely	1.23	0.00
City of Damascus	0.09	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

ECHOLS COUNTY

Population	4,034
Population served by public supply—Groundwater	760
Population served by public supply—Surface water	0
Acres irrigated	2,360

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; <, less than]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.05	0.00	0.05	–	–
Domestic	0.25	0.00	0.25	0.30	0.00
Commercial/public use	0.00	0.00	0.00	0.00	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	<0.01	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.98	0.11	1.09	1.09	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.03	0.03	0.03	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.28	0.14	1.42	1.42	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Echols County Water Authority	0.05	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

EFFINGHAM COUNTY

Population	52,250
Population served by public supply—Groundwater	31,260
Population served by public supply—Surface water	1,890
Acres irrigated	980

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	3.08	32.50	35.58	–	–
Domestic	1.43	0.00	1.43	3.94	0.00
Commercial/public use	0.00	0.00	0.00	0.27	0.00
Industrial	0.81	14.42	15.23	15.56	15.38
Public-supply losses	–	–	–	0.47	–
Public wastewater treatment	–	–	–	–	0.71
Mining	0.15	0.00	0.15	0.15	0.00
Irrigation—Crop	0.18	0.05	0.23	0.23	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.02	0.07	0.09	0.09	0.00
Thermoelectric power	0.04	70.17	70.21	70.21	0.00
TOTAL	5.71	117.21	122.92	90.92	16.09

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 30.54 Mgal/d was withdrawn in Effingham County and delivered and used in Chatham County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.81	14.42

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Savannah Industrial & Domestic Water	0.00	32.50
City of Rincon	0.85	0.00
City of Springfield	0.71	0.00
Water Utility Management	0.39	0.00
Lakeside Water Company	0.22	0.00
City of Guyton	0.20	0.00
Middle Georgia Water Co.	0.16	0.00
Residential subdivision	0.14	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

ELBERT COUNTY

Population	20,166
Population served by public supply—Groundwater	1,100
Population served by public supply—Surface water	6,000
Acres irrigated	575

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.07	1.52	1.59	–	–
Domestic	0.98	0.00	0.98	1.66	0.00
Commercial/public use	0.01	0.00	0.01	0.18	0.00
Industrial	0.00	0.00	0.00	0.52	0.00
Public-supply losses	–	–	–	0.22	–
Public wastewater treatment	–	–	–	–	1.03
Mining	0.08	0.00	0.08	0.08	0.00
Irrigation—Crop	0.26	0.08	0.34	0.34	0.00
Irrigation—Golf course	0.06	0.08	0.14	0.14	0.00
Livestock/aquaculture	0.02	0.30	0.32	0.32	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.48	1.98	3.46	3.46	1.03

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Elberton	0.00	1.52
City of Bowman	0.06	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

EMANUEL COUNTY

Population	22,598
Population served by public supply—Groundwater	11,570
Population served by public supply—Surface water	0
Acres irrigated	3,490

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.67	0.00	1.67	–	–
Domestic	0.83	0.00	0.83	1.95	0.00
Commercial/public use	0.00	0.00	0.00	0.27	0.00
Industrial	0.97	0.00	0.97	1.06	0.00
Public-supply losses	–	–	–	0.19	–
Public wastewater treatment	–	–	–	–	0.84
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	2.71	0.02	2.73	2.73	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.16	0.23	0.39	0.39	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	6.34	0.25	6.59	6.59	0.84

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food	0.97	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Swainsboro	1.16	0.00
City of Twin City	0.17	0.00
City of Adrian	0.10	0.00
City of Stillmore	0.09	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

EVANS COUNTY

Population	11,000
Population served by public supply—Groundwater	4,120
Population served by public supply—Surface water	0
Acres irrigated	7,100

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.59	0.00	0.59	—	—
Domestic	0.52	0.00	0.52	0.92	0.00
Commercial/public use	0.00	0.00	0.00	0.10	0.00
Industrial	1.50	0.00	1.50	1.52	0.00
Public-supply losses	—	—	—	0.07	—
Public wastewater treatment	—	—	—	—	0.02
Mining	0.03	0.00	0.03	0.03	0.00
Irrigation—Crop	1.34	0.81	2.15	2.15	0.00
Irrigation—Golf course	0.10	0.00	0.10	0.10	0.00
Livestock/aquaculture	0.01	0.11	0.12	0.12	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	4.09	0.92	5.01	5.01	0.02

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food	1.50	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Claxton	0.47	0.00
City of Hagan	0.08	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

FANNIN COUNTY

Population	23,682
Population served by public supply—Groundwater	1,670
Population served by public supply—Surface water	10,150
Acres irrigated	200

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.12	1.78	1.90	–	–
Domestic	0.89	0.00	0.89	1.98	0.00
Commercial/public use	0.00	0.00	0.00	0.39	0.00
Industrial	0.00	0.00	0.00	0.04	0.00
Public-supply losses	–	–	–	0.27	–
Public wastewater treatment	–	–	–	–	0.34
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.01	0.01	0.02	0.02	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	6.42	6.42	6.42	1.95
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.02	8.21	9.23	9.12	2.29

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.12 Mgal/d was delivered from Fannin County, Georgia to Polk County, Tennessee in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Blue Ridge	0.00	0.93
City of Mccaysville	0.00	0.85
City of Morganton	0.11	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

FAYETTE COUNTY

Population	106,567
Population served by public supply—Groundwater	9,300
Population served by public supply—Surface water	83,130
Acres irrigated	645

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.93	9.73	10.66	–	–
Domestic	1.06	0.00	1.06	8.94	0.00
Commercial/public use	0.00	0.00	0.00	0.92	0.00
Industrial	0.00	0.00	0.00	0.46	0.00
Public-supply losses	–	–	–	1.42	–
Public wastewater treatment	–	–	–	–	5.26
Mining	0.18	0.00	0.18	0.18	0.17
Irrigation—Crop	0.00	0.08	0.08	0.08	0.00
Irrigation—Golf course	0.00	0.79	0.79	0.79	0.00
Livestock/aquaculture	0.00	0.02	0.02	0.02	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.17	10.62	12.79	12.81	5.44

¹Total use is total withdrawal plus public supply deliveries and losses. The City of Atlanta delivered 0.019 Mgal/d of water to Fayette County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Fayette County	0.12	9.02
City of Fayetteville	0.63	0.71

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

FLOYD COUNTY

Population	96,317
Population served by public supply—Groundwater	2,820
Population served by public supply—Surface water	87,890
Acres irrigated	2,140

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.57	12.51	13.08	–	–
Domestic	0.42	0.00	0.42	7.14	0.00
Commercial/public use	0.00	0.32	0.32	3.40	0.00
Industrial	0.14	25.71	25.85	27.00	0.00
Public-supply losses	–	–	–	2.27	–
Public wastewater treatment	–	–	–	–	11.07
Mining	0.10	0.01	0.11	0.11	0.00
Irrigation—Crop	0.05	1.14	1.19	1.19	0.00
Irrigation—Golf course	0.59	0.22	0.81	0.81	0.00
Livestock/aquaculture	0.03	0.68	0.71	0.71	0.00
Thermoelectric power	0.00	432.17	432.17	432.17	432.00
TOTAL	1.90	472.76	474.66	474.80	443.07

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.6 Mgal/d was delivered from Bartow County, Georgia to Floyd County, Georgia and 0.13 Mgal/d from Floyd County to DeKalb County, Alabama in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.00	25.71
812—Laundry services	0.14	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Rome	0.00	8.55
Floyd County	0.28	3.08
City of Cave Spring	0.29	0.88

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

FORSYTH COUNTY

Population	175,511
Population served by public supply—Groundwater	400
Population served by public supply—Surface water	172,890
Acres irrigated	350

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.04	19.18	19.22	–	–
Domestic	0.17	0.00	0.17	11.67	0.00
Commercial/public use	0.00	0.00	0.00	3.11	0.08
Industrial	0.00	0.00	0.00	2.14	0.30
Public-supply losses	–	–	–	2.42	–
Public wastewater treatment	–	–	–	–	2.25
Mining	0.70	0.01	0.71	0.71	0.06
Irrigation—Crop	0.23	0.07	0.30	0.30	0.00
Irrigation—Golf course	0.00	0.28	0.28	0.28	0.00
Livestock/aquaculture	0.00	6.68	6.68	6.68	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.14	26.22	27.36	27.31	2.69

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.05 Mgal/d was delivered from Forsyth County to Dawson County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Forsyth County Water & Sewer Authority	0.00	7.77
City of Cumming	0.00	11.41

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

FRANKLIN COUNTY

Population	22,084
Population served by public supply—Groundwater	4,450
Population served by public supply—Surface water	8,270
Acres irrigated	375

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.62	1.77	2.39	–	–
Domestic	0.70	0.00	0.70	1.83	0.00
Commercial/public use	0.00	0.00	0.00	0.42	0.00
Industrial	0.00	0.00	0.00	0.40	0.00
Public-supply losses	–	–	–	0.19	–
Public wastewater treatment	–	–	–	–	0.73
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.08	0.08	0.08	0.00
Irrigation—Golf course	0.19	0.15	0.34	0.34	0.00
Livestock/aquaculture	0.00	1.22	1.22	1.22	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.51	3.22	4.73	4.48	0.73

¹Total use is total withdrawal plus public supply deliveries and losses. In 2010, an average of 0.08 Mgal/d was delivered from Stephens County, Georgia and 0.04 Mgal/d from Banks County, Georgia to Franklin County; whereas, an average of 0.37 Mgal/d was delivered to Hart County, Georgia from Franklin County.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Lavonia	0.00	1.51
City of Royston	0.00	0.26
City of Franklin Springs	0.52	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

FULTON COUNTY

Population	920,581
Population served by public supply—Groundwater	0
Population served by public supply—Surface water	870,810
Acres irrigated	2,180

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.00	200.70	200.70	–	–
Domestic	3.73	0.00	3.73	87.91	0.00
Commercial/public use	0.00	0.00	0.00	9.61	0.00
Industrial	0.01	0.00	0.01	3.53	0.01
Public-supply losses	–	–	–	31.80	–
Public wastewater treatment	–	–	–	–	136.16
Mining	0.26	0.00	0.26	0.26	1.32
Irrigation—Crop	0.04	0.00	0.04	0.04	0.00
Irrigation—Golf course/turf	0.73	2.96	3.69	6.44	0.00
Livestock/aquaculture	0.00	0.09	0.09	0.09	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	4.77	203.75	208.52	139.68	137.49

¹Total use is total withdrawal plus public supply deliveries and losses. Does not include water used (4.2 Mgal/d) in the DeKalb County portion of Atlanta's service area. In 2010, an average of 0.05 Mgal/d was delivered from Cobb County, Georgia and 0.02 Mgal/d was delivered from Clayton County, Georgia to Fulton County; whereas, an average of 0.01 Mgal/d was delivered from Fulton County to Coweta County, Georgia.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
334—Electronics	0.01	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Atlanta	0.00	84.10
DeKalb County ¹	0.00	74.95
Atlanta-Fulton Co. Water Resources Commission	0.00	40.15
City of Roswell	0.00	1.08
City of Palmetto	0.00	0.42

¹All water withdrawn is used in DeKalb County, Georgia.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

0 5 10 MILES
0 5 10 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

GILMER COUNTY

Population	28,292
Population served by public supply—Groundwater	870
Population served by public supply—Surface water	11,280
Acres irrigated	320

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.06	3.05	3.11	—	—
Domestic	1.21	0.00	1.21	1.86	0.00
Commercial/public use	0.00	0.00	0.00	0.46	0.00
Industrial	1.42	0.00	1.42	2.93	0.00
Public-supply losses	—	—	—	0.49	—
Public wastewater treatment	—	—	—	—	2.09
Mining	0.07	0.00	0.07	0.07	1.42
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.33	0.33	0.33	0.00
Livestock/aquaculture	0.00	0.70	0.70	0.70	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.76	4.08	6.84	6.84	3.51

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
327—Stone, clay	1.42	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Ellijay–Gilmer County Water Authority	0.00	3.05

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

GLASCOCK COUNTY

Population	3,082
Population served by public supply—Groundwater	900
Population served by public supply—Surface water	0
Acres irrigated	90

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; <, less than]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.07	0.00	0.07	—	—
Domestic	0.16	0.00	0.16	0.23	0.00
Commercial/public use	0.00	0.00	0.00	<0.01	0.00
Industrial	0.07	0.00	0.07	0.07	0.00
Public-supply losses	—	—	—	<0.01	—
Public wastewater treatment	—	—	—	—	0.03
Mining	0.00	0.00	0.00	0.00	0.56
Irrigation—Crop	0.00	0.04	0.04	0.04	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.02	0.04	0.06	0.06	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.32	0.08	0.40	0.40	0.59

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
327—Stone, clay	0.07	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Town of Gibson	0.06	0.00
Town of Mitchell	0.01	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data0 2 4 6 MILES
0 2 4 6 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

GLYNN COUNTY

Population	79,626
Population served by public supply—Groundwater	66,950
Population served by public supply—Surface water	0
Acres irrigated	2,130

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	10.15	0.00	10.15	–	–
Domestic	0.95	0.00	0.95	6.72	0.00
Commercial/public use	0.08	0.00	0.08	2.63	0.00
Industrial	41.22	0.00	41.22	41.46	40.05
Public-supply losses	–	–	–	1.60	–
Public wastewater treatment	–	–	–	–	8.79
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.02	0.02	0.02	0.00
Irrigation—Golf course	3.19	0.25	3.44	3.44	0.00
Livestock/aquaculture	0.00	0.67	0.67	0.67	0.00
Thermoelectric power	0.01	8.08	8.09	8.09	8.10
TOTAL	55.60	9.01	64.62	64.62	56.94

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	32.71	0.00
325—Chemical products	8.25	0.00
311—Food	0.26	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Brunswick–Glynn Co. Joint W&S Authority	5.13	0.00
St. Simon's Island	2.59	0.00
Sea Island Company	1.01	0.00
Jekyll Island Authority	0.71	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

GORDON COUNTY

Population	55,186
Population served by public supply—Groundwater	14,120
Population served by public supply—Surface water	32,390
Acres irrigated	1,970

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	3.19	7.33	10.52	—	—
Domestic	0.65	0.00	0.65	4.70	0.00
Commercial/public use	0.00	0.00	0.00	2.42	0.01
Industrial	0.06	0.00	0.06	1.85	0.08
Public-supply losses	—	—	—	1.58	—
Public wastewater treatment	—	—	—	—	5.37
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.01	1.30	1.31	1.31	0.00
Irrigation—Golf course	0.00	0.15	0.15	0.15	0.00
Livestock/aquaculture	0.03	0.81	0.84	0.84	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	3.94	9.59	13.53	12.85	5.46

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.37 Mgal/d was delivered to Pickens County, Georgia and 0.31 Mgal/d to Murray County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
313—Textiles	0.06	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Calhoun	3.18	7.33

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

GRADY COUNTY

Population	25,011
Population served by public supply—Groundwater	11,130
Population served by public supply—Surface water	0
Acres irrigated	15,950

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.68	0.00	1.68	–	–
Domestic	1.04	0.00	1.04	2.21	0.00
Commercial/public use	0.00	0.00	0.00	0.26	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.25	–
Public wastewater treatment	–	–	–	–	1.52
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	4.28	1.47	5.74	5.74	0.00
Irrigation—Golf course	0.16	0.00	0.16	0.16	0.00
Livestock/aquaculture	0.10	0.82	0.92	0.92	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	7.26	2.29	9.54	9.54	1.52

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Cairo	1.59	0.00
City of Whigham	0.03	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

GREENE COUNTY

Population	15,994
Population served by public supply—Groundwater	7,380
Population served by public supply—Surface water	4,770
Acres irrigated	890

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.09	0.82	1.91	–	–
Domestic	0.29	0.00	0.29	1.79	0.00
Commercial/public use	0.00	0.00	0.00	0.21	0.00
Industrial	0.00	0.00	0.00	0.00	0.02
Public-supply losses	–	–	–	0.20	–
Public wastewater treatment	–	–	–	–	0.19
Mining	0.08	0.00	0.08	0.08	0.00
Irrigation—Crop	0.28	0.00	0.28	0.28	0.00
Irrigation—Golf course	0.00	1.63	1.63	1.63	0.00
Livestock/aquaculture	0.00	0.30	0.30	0.30	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.74	2.75	4.49	4.49	0.21

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Piedmont Water Company	0.95	0.00
City of Greensboro	0.00	0.62
City of Union Point	0.00	0.20

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

GWINNETT COUNTY

Population	805,321
Population served by public supply—Groundwater	4,190
Population served by public supply—Surface water	801,131
Acres irrigated	1,000

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.41	0.00	0.41	–	–
Domestic	0.00	0.00	0.00	51.83	0.00
Commercial/public use	0.00	0.00	0.00	21.47	0.00
Industrial	0.00	0.00	0.00	0.50	0.82
Public-supply losses	–	–	–	4.55	–
Public wastewater treatment	–	–	–	–	38.03
Mining	0.39	0.01	0.40	0.40	1.17
Irrigation—Crop	0.02	0.00	0.02	0.02	0.00
Irrigation—Golf course	0.07	1.78	1.85	1.85	0.00
Livestock/aquaculture	0.01	0.01	0.02	0.02	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.90	1.80	2.70	80.64	40.02

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 76.73 Mgal/d was withdrawn from Hall County, Georgia, but delivered to and used in Gwinnett County in 2010. About 29 percent of the Braselton service area is in Gwinnett County.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Lawrenceville	0.25	0.00
City of Suwanee	0.06	0.00

Gwinnett County Dept. of Water Resources withdraws water from Lake Sidney Lanier at an intake location in Hall County

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HABERSHAM COUNTY

Population	43,041
Population served by public supply—Groundwater	12,740
Population served by public supply—Surface water	14,930
Acres irrigated	470

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.07	4.21	5.28	—	—
Domestic	1.15	0.00	1.15	3.82	0.00
Commercial/public use	0.00	0.00	0.00	0.54	0.00
Industrial	0.00	0.00	0.00	1.41	0.19
Public-supply losses	—	—	—	0.78	—
Public wastewater treatment	—	—	—	—	2.90
Mining	0.06	0.00	0.06	0.06	0.00
Irrigation—Crop	0.02	0.26	0.28	0.28	0.00
Irrigation—Golf course	0.00	0.30	0.30	0.30	0.00
Livestock/aquaculture	0.01	5.07	5.08	5.08	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.31	9.84	12.15	12.27	3.19

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.12 Mgal/d was delivered from Stephens County, Georgia to Habersham County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Cornelia	0.00	1.89
City of Baldwin	0.00	1.63
City of Clarkesville	0.00	0.69
City of Alto	0.45	0.00
City of Demorest	0.45	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HALL COUNTY

Population	179,684
Population served by public supply—Groundwater	7,150
Population served by public supply—Surface water	144,670
Acres irrigated	830

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.55	94.24	94.79	–	–
Domestic	2.09	0.00	2.09	10.52	0.00
Commercial/public use	0.00	0.00	0.00	2.16	0.00
Industrial	0.21	0.00	0.21	5.06	0.00
Public-supply losses	–	–	–	2.69	–
Public wastewater treatment	–	–	–	–	9.03
Mining	0.20	0.00	0.20	0.20	0.00
Irrigation—Crop	0.07	0.04	0.11	0.11	0.00
Irrigation—Golf course	0.41	0.85	1.26	² 1.51	0.00
Livestock/aquaculture	0.09	1.48	1.57	1.57	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	3.62	96.61	100.23	23.82	9.03

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 76.72 Mgal/d was withdrawn in Hall County and delivered to and used in Gwinnett County, Georgia in 2010. ²Includes 0.25 Mgal/d of water delivered for irrigation.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food products	0.21	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Gwinnett Co. Dept. of Water Resources	0.00	¹ 75.46
City of Gainesville	0.00	17.52
City of Buford	0.00	¹ 1.26
City of Flowery Branch	0.23	0.00

¹Water withdrawn is used in Gwinnett County, Georgia.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HANCOCK COUNTY

Population	9,429
Population served by public supply—Groundwater	3,150
Population served by public supply—Surface water	3,650
Acres irrigated	310

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.23	1.12	1.35	–	–
Domestic	0.20	0.00	0.20	0.71	0.00
Commercial/public use	0.00	0.00	0.00	0.62	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.22	–
Public wastewater treatment	–	–	–	–	0.02
Mining	0.06	0.00	0.06	0.06	0.00
Irrigation—Crop	0.52	0.13	0.65	0.65	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.05	0.05	0.05	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.01	1.30	2.31	2.31	0.02

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Sparta	0.00	1.12
Piedmont Water Company	0.17	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HARALSON COUNTY

Population	28,780
Population served by public supply—Groundwater	320
Population served by public supply—Surface water	22,430
Acres irrigated	30

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.09	2.53	2.62	–	–
Domestic	0.45	0.00	0.45	2.10	0.00
Commercial/public use	0.00	0.00	0.00	0.47	0.00
Industrial	0.00	0.00	0.00	0.05	0.00
Public-supply losses	–	–	–	0.65	–
Public wastewater treatment	–	–	–	–	0.81
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.22	0.22	0.22	0.00
Livestock/aquaculture	0.05	0.57	0.62	0.62	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.59	3.32	3.91	4.11	0.81

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.2 Mgal/d was delivered from Cleburne County, Alabama to Haralson County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Haralson County Water Authority	0.09	2.34
City of Bremen	0.00	0.19

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HARRIS COUNTY

Population	32,024
Population served by public supply—Groundwater	5,250
Population served by public supply—Surface water	20,730
Acres irrigated	220

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.41	5.86	6.27	–	–
Domestic	0.45	0.00	0.45	2.62	0.00
Commercial/public use	0.00	0.00	0.00	0.12	0.13
Industrial	0.00	0.00	0.00	0.94	0.00
Public-supply losses	–	–	–	0.21	–
Public wastewater treatment	–	–	–	–	1.39
Mining	0.13	0.00	0.13	0.13	0.00
Irrigation—Crop	0.15	0.00	0.15	0.15	0.00
Irrigation—Golf course	0.00	0.05	0.05	0.05	0.00
Livestock/aquaculture	0.00	0.05	0.05	0.05	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.14	5.96	7.10	4.27	1.52

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.82 Mgal/d was delivered from Muscogee County, Georgia and 0.08 Mgal/d from Talbot County, Georgia to Harris County in 2010. An average of 3.73 Mgal/d was withdrawn in Harris County, Georgia but delivered to and used in Chambers County, Alabama in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Chattahoochee Valley Water Supply District	0.00	¹ 3.78
Harris County Water System	0.00	2.08
City of Hamilton	0.10	0.00

¹An average of 3.73 Mgal/d was delivered to and used in Chambers County, Alabama in 2010

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HART COUNTY

Population	25,213
Population served by public supply—Groundwater	2,200
Population served by public supply—Surface water	7,900
Acres irrigated	990

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.13	1.02	1.15	—	—
Domestic	1.13	0.00	1.13	2.11	0.00
Commercial/public use	0.00	0.00	0.00	0.35	0.00
Industrial	0.00	0.00	0.00	0.04	0.00
Public-supply losses	—	—	—	0.24	—
Public wastewater treatment	—	—	—	—	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.25	0.61	0.86	0.86	0.00
Irrigation—Golf course	0.00	0.26	0.26	0.26	0.00
Livestock/aquaculture	0.00	0.80	0.80	0.80	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.51	2.69	4.20	4.66	0.00

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.08 Mgal/d was delivered to Franklin County, Georgia in 2010. Parts of the cities of Royston and Canon lie in Hart County.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Hartwell	0.00	1.02

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HEARD COUNTY

Population	11,834
Population served by public supply—Groundwater	840
Population served by public supply—Surface water	7,530
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; <, less than]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.06	1.40	1.46	–	–
Domestic	0.26	0.00	0.26	0.86	0.00
Commercial/public use	0.00	0.00	0.00	0.55	0.00
Industrial	0.00	0.00	0.00	<0.01	0.00
Public-supply losses	–	–	–	0.31	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.16	0.16	0.16	0.00
Thermoelectric power	0.00	48.61	48.61	48.61	0.00
TOTAL	0.32	50.17	50.49	50.49	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Heard County Water Authority	0.00	1.40
City of Ephesus	0.06	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HENRY COUNTY

Population	203,922
Population served by public supply—Groundwater	5,080
Population served by public supply—Surface water	172,000
Acres irrigated	880

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.58	36.90	37.48	–	–
Domestic	2.01	0.00	2.01	15.88	0.00
Commercial/public use	0.00	0.00	0.00	2.10	0.00
Industrial	0.00	0.00	0.00	0.49	0.00
Public-supply losses	–	–	–	2.80	–
Public wastewater treatment	–	–	–	–	22.65
Mining	0.19	0.00	0.19	0.19	0.44
Irrigation—Crop	0.00	0.08	0.08	0.08	0.00
Irrigation—Golf course	1.52	0.81	2.33	2.33	0.00
Livestock/aquaculture	0.06	0.80	0.86	0.86	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	4.36	38.59	42.95	24.73	23.09

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.13 Mgal/d was delivered from DeKalb County, Georgia to Henry County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Henry County Water Authority	0.00	17.33
Clayton County Water Authority	0.00	¹ 15.23
City of McDonough	0.00	1.15
City of Locust Grove	0.00	0.29
City of Stockbridge	0.28	0.00

¹Withdrawn from Little Cotton Indian Creek in Henry County, Georgia and delivered to Harbin Reservoir (Edwin Blalock) in Henry County, Georgia. Withdrawals from Harbin Reservoir are delivered and used in Clayton County, Georgia.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

HOUSTON COUNTY

Population	139,900
Population served by public supply—Groundwater	137,570
Population served by public supply—Surface water	0
Acres irrigated	8,910

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	23.76	0.00	23.76	–	–
Domestic	0.17	0.00	0.17	14.64	0.00
Commercial/public use	0.00	0.00	0.00	2.56	0.00
Industrial	2.96	0.00	2.96	4.11	1.16
Public-supply losses	–	–	–	3.65	–
Public wastewater treatment	–	–	–	–	10.32
Mining	0.01	0.01	0.02	0.02	0.00
Irrigation—Crop	4.87	0.19	5.06	5.06	0.00
Irrigation—Golf course	0.55	0.34	0.89	0.89	0.00
Livestock/aquaculture	0.01	0.04	0.05	0.05	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	32.33	0.58	32.91	30.98	11.48

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.88 Mgal/d included in the industrial category was water withdrawn for groundwater remediation in 2010. Domestic and commercial customers in Peach County, Georgia were served by public water suppliers in Houston County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food	2.64	0.00
327—Stone, clay	0.24	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Houston County	10.62	0.00
City of Warner Robins	8.01	0.00
City of Perry	2.33	0.00
USAF Robins Airbase	1.55	0.00
City of Centerville	1.11	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

IRWIN COUNTY

Population	9,538
Population served by public supply—Groundwater	4,030
Population served by public supply—Surface water	0
Acres irrigated	31,050

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.52	0.00	0.52	–	–
Domestic	0.41	0.00	0.41	0.67	0.00
Commercial/public use	0.00	0.00	0.00	0.15	0.00
Industrial	0.00	0.00	0.00	0.04	0.00
Public-supply losses	–	–	–	0.06	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	3.65	3.27	6.92	6.92	0.00
Irrigation—Golf course	0.21	0.00	0.21	0.21	0.00
Livestock/aquaculture	0.03	0.11	0.14	0.15	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	4.82	3.38	8.20	8.20	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Ocilla	0.48	0.00
Town of Mystic	0.02	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

JACKSON COUNTY

Population	60,485
Population served by public supply—Groundwater	3,180
Population served by public supply—Surface water	42,160
Acres irrigated	310

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.31	10.52	10.83	–	–
Domestic	1.14	0.00	1.14	4.75	0.00
Commercial/public use	0.00	0.00	0.00	1.21	0.00
Industrial	0.48	0.00	0.48	0.93	0.00
Public-supply losses	–	–	–	1.01	–
Public wastewater treatment	–	–	–	–	1.93
Mining	0.09	0.00	0.09	0.09	0.00
Irrigation—Crop	0.09	0.03	0.12	0.12	0.00
Irrigation—Golf course	0.00	0.31	0.31	0.31	0.00
Livestock/aquaculture	0.25	3.38	3.63	3.63	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.36	14.24	16.60	12.05	1.93

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 1.0 Mgal/d was delivered to Clarke County, Georgia, 1.65 Mgal/d to Barrow County, Georgia, 2.1 Mgal/d to Oconee County, Georgia, and 0.06 Mgal/d was delivered to Banks County, Georgia in 2010. An average of 0.02 Mgal/d was delivered from Gwinnett County, Georgia to Jackson County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food products	0.48	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Upper Oconee Basin Water Authority	0.00	9.40
City of Jefferson	0.00	1.12
City of Braselton	0.13	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

JASPER COUNTY

Population	13,900
Population served by public supply—Groundwater	3,770
Population served by public supply—Surface water	2,930
Acres irrigated	170

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.42	0.46	0.88	–	–
Domestic	0.54	0.00	0.54	1.14	0.00
Commercial/public use	0.00	0.00	0.00	0.20	0.00
Industrial	0.00	0.80	0.80	0.84	0.00
Public-supply losses	–	–	–	0.11	–
Public wastewater treatment	–	–	–	–	0.23
Mining	0.04	0.00	0.04	0.04	0.00
Irrigation—Crop	0.40	0.06	0.46	0.46	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.18	0.18	0.18	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.40	1.50	2.90	2.97	0.23

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.07 Mgal/d was delivered from Newton County, Georgia to Jasper County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Monticello	0.19	0.46
Turtle Cove Property Owners Association	0.18	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

JEFF DAVIS COUNTY

Population	15,068
Population served by public supply—Groundwater	6,960
Population served by public supply—Surface water	0
Acres irrigated	9,838

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.84	0.00	0.84	—	—
Domestic	0.61	0.00	0.61	1.13	0.00
Commercial/public use	0.00	0.00	0.00	0.07	0.00
Industrial	0.05	0.00	0.05	0.10	0.00
Public-supply losses	—	—	—	0.20	—
Public wastewater treatment	—	—	—	—	0.71
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.59	0.62	2.21	2.21	0.00
Irrigation—Golf course	0.05	0.00	0.05	0.05	0.00
Livestock/aquaculture	0.27	0.36	0.63	0.63	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	3.41	0.98	4.39	4.39	0.71

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
313—Textiles	0.05	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Hazelhurst	0.80	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

JEFFERSON COUNTY

Population	16,930
Population served by public supply—Groundwater	9,060
Population served by public supply—Surface water	0
Acres irrigated	16,015

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.35	0.00	1.35	—	—
Domestic	0.59	0.00	0.59	1.50	0.00
Commercial/public use	0.00	0.00	0.00	0.27	0.00
Industrial	4.14	3.17	7.31	7.34	0.00
Public-supply losses	—	—	—	0.14	—
Public wastewater treatment	—	—	—	—	1.01
Mining	0.00	0.00	0.00	0.00	2.07
Irrigation—Crop	7.01	0.00	7.01	7.01	0.00
Irrigation—Golf course	0.04	0.00	0.04	0.04	0.00
Livestock/aquaculture	0.53	0.21	0.74	0.74	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	13.66	3.38	17.04	17.04	3.08

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
212—Kaolin and ball clay	4.14	3.17

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Louisville	0.71	0.00
City of Wadley	0.37	0.00
City of Wrens	0.17	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

JENKINS COUNTY

Population	8,340
Population served by public supply—Groundwater	3,340
Population served by public supply—Surface water	0
Acres irrigated	8,060

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.35	0.00	0.35	–	–
Domestic	0.38	0.00	0.38	0.60	0.00
Commercial/public use	0.00	0.00	0.00	0.06	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.07	–
Public wastewater treatment	–	–	–	–	0.72
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.30	0.73	2.03	2.03	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.12	0.04	0.16	0.16	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.15	0.77	2.92	2.92	0.72

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Millen	0.34	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

JOHNSON COUNTY

Population	9,980
Population served by public supply—Groundwater	3,060
Population served by public supply—Surface water	0
Acres irrigated	1,640

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.56	0.00	0.56	–	–
Domestic	0.52	0.00	0.52	0.72	0.00
Commercial/public use	0.00	0.00	0.00	0.28	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.08	–
Public wastewater treatment	–	–	–	–	0.70
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.71	0.07	0.78	0.78	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.02	0.06	0.08	0.08	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.81	0.13	1.94	1.94	0.70

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Wrightsville	0.51	0.00
Town of Kite	0.04	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

JONES COUNTY

Population	28,669
Population served by public supply—Groundwater	13,940
Population served by public supply—Surface water	610
Acres irrigated	230

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.67	2.78	4.45	–	–
Domestic	1.06	0.00	1.06	2.35	0.00
Commercial/public use	0.00	0.00	0.00	0.14	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.26	–
Public wastewater treatment	–	–	–	–	0.25
Mining	0.94	0.01	0.95	0.95	1.26
Irrigation—Crop	0.00	0.02	0.02	0.02	0.00
Irrigation—Golf course	0.00	0.25	0.25	0.25	0.00
Livestock/aquaculture	0.00	0.10	0.10	0.10	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	3.67	3.16	6.83	4.07	1.51

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.78 Mgal/d was delivered from Jones County to Bibb County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Macon Water Authority ¹	0.00	2.78
Jones County Water Comm.	1.12	0.00
City of Gray	0.46	0.00

¹About 23.5 Mgal/d of water is withdrawn from the Ocmulgee River in Bibb County, Georgia and delivered to Javors Lucas (Town Creek) Reservoir in Jones County. About 26.2 Mgal/d was withdrawn from the reservoir and delivered to Bibb County. Net withdrawal from Jones County was 2.78 Mgal/d in 2010.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LAMAR COUNTY

Population	18,317
Population served by public supply—Groundwater	120
Population served by public supply—Surface water	8,210
Acres irrigated	670

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.01	1.53	1.54	–	–
Domestic	0.75	0.00	0.75	1.87	0.00
Commercial/public use	0.00	0.00	0.00	0.18	0.00
Industrial	0.00	0.00	0.00	0.01	0.00
Public-supply losses	–	–	–	0.23	–
Public wastewater treatment	–	–	–	–	2.33
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.22	0.00	1.22	1.22	0.00
Irrigation—Golf course	0.00	0.13	0.13	0.13	0.00
Livestock/aquaculture	0.00	0.19	0.19	0.19	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.98	1.85	3.83	3.83	2.33

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Barnesville	0.00	1.53

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LANIER COUNTY

Population	10,078
Population served by public supply—Groundwater	4,360
Population served by public supply—Surface water	0
Acres irrigated	5,600

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.52	0.00	0.52	–	–
Domestic	0.43	0.00	0.43	0.76	0.00
Commercial/public use	0.00	0.00	0.00	0.12	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.07	–
Public wastewater treatment	–	–	–	–	0.09
Mining	0.09	0.00	0.09	0.09	0.00
Irrigation—Crop	0.79	0.08	0.87	0.87	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.02	0.02	0.04	0.04	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.85	0.10	1.95	1.95	0.09

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Lakeland	0.47	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LAURENS COUNTY

Population	48,434
Population served by public supply—Groundwater	13,300
Population served by public supply—Surface water	8,690
Acres irrigated	7,455

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.14	1.78	3.92	–	–
Domestic	1.98	0.00	1.98	4.15	0.00
Commercial/public use	0.00	0.00	0.00	0.51	0.00
Industrial	1.99	14.11	16.10	16.49	15.91
Public-supply losses	–	–	–	0.85	–
Public wastewater treatment	–	–	–	–	2.17
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	3.55	1.28	4.83	4.83	0.00
Irrigation—Golf course	0.16	0.08	0.24	0.24	0.00
Livestock/aquaculture	0.03	0.10	0.13	0.13	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	9.85	17.35	27.20	27.20	18.08

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	1.60	14.11
314—Textiles	0.39	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Dublin	1.30	1.78
City of East Dublin	0.42	0.00
Laurens Co. Water System	0.11	0.00
City of Dudley	0.09	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

0 5 10 MILES
0 5 10 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LEE COUNTY

Population	28,298
Population served by public supply—Groundwater	17,920
Population served by public supply—Surface water	0
Acres irrigated	45,170

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.97	0.00	1.97	–	–
Domestic	0.78	0.00	0.78	2.23	0.00
Commercial/public use	0.08	0.00	0.08	0.28	0.00
Industrial	0.00	0.00	0.00	0.02	0.00
Public-supply losses	–	–	–	0.30	–
Public wastewater treatment	–	–	–	–	0.54
Mining	0.07	0.00	0.07	0.07	0.00
Irrigation—Crop	30.44	8.83	39.27	39.27	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.13	0.13	0.13	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	33.34	8.96	42.30	42.30	0.54

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Lee County Utilities Auth.	1.40	0.00
City of Leesburg	0.37	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LIBERTY COUNTY

Population	63,453
Population served by public supply—Groundwater	54,200
Population served by public supply—Surface water	0
Acres irrigated	30

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	6.75	0.00	6.75	–	–
Domestic	0.69	0.00	0.69	4.03	0.00
Commercial/public use	0.05	0.00	0.05	0.73	0.00
Industrial	8.96	0.00	8.96	10.75	6.94
Public-supply losses	–	–	–	0.94	–
Public wastewater treatment	–	–	–	–	4.87
Mining	0.00	0.09	0.09	0.09	0.00
Irrigation—Crop	0.00	0.02	0.02	0.02	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.01	0.01	0.01	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	16.45	0.12	16.57	16.57	11.81

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	8.96	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Hinesville	2.97	0.00
U.S. Army—Fort Stewart	1.90	0.00
City of Riceboro	0.82	0.00
City of Walthourville	0.38	0.00
Water Utility Management	0.23	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LINCOLN COUNTY

Population	7,996
Population served by public supply—Groundwater	660
Population served by public supply—Surface water	4,620
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.05	0.46	0.51	–	–
Domestic	0.20	0.00	0.20	0.58	0.00
Commercial/public use	0.00	0.00	0.00	0.06	0.00
Industrial	1.01	0.00	1.01	1.02	0.00
Public-supply losses	–	–	–	0.06	–
Public wastewater treatment	–	–	–	–	0.25
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.11	0.11	0.11	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.26	0.57	1.83	1.83	0.25

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food products	1.01	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Lincolnton	0.00	0.46
Lincoln Co. Water System	0.04	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LONG COUNTY

Population	14,464
Population served by public supply—Groundwater	4,560
Population served by public supply—Surface water	0
Acres irrigated	960

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.54	0.00	0.54	—	—
Domestic	0.74	0.00	0.74	1.06	0.00
Commercial/public use	0.01	0.00	0.01	0.15	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	—	—	—	0.08	—
Public wastewater treatment	—	—	—	—	0.02
Mining	0.30	0.01	0.31	0.31	0.00
Irrigation—Crop	0.05	0.41	0.46	0.46	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.05	0.05	0.05	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.64	0.47	2.11	2.11	0.02

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Ludowici	0.39	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LOWNDES COUNTY

Population	109,233
Population served by public supply—Groundwater	92,400
Population served by public supply—Surface water	0
Acres irrigated	6,900

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	14.01	0.00	14.01	—	—
Domestic	1.26	0.00	1.26	8.92	0.00
Commercial/public use	0.00	0.00	0.00	3.08	0.00
Industrial	8.99	0.00	8.99	10.13	0.00
Public-supply losses	—	—	—	2.13	—
Public wastewater treatment	—	—	—	—	9.70
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.04	0.14	1.18	1.18	0.00
Irrigation—Golf course	0.26	0.00	0.26	0.26	0.00
Livestock/aquaculture	0.03	0.06	0.09	0.09	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	25.59	0.20	25.79	25.79	9.70

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	8.28	0.00
325—Chemical products	0.66	0.00
335—Misc. manufacturing	0.05	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Valdosta	10.79	0.00
Lowndes County Water System	1.58	0.00
USAF Moody Airbase	0.36	0.00
City of Hahira	0.14	0.00
City of Lake Park	0.10	0.00
City of Remerton	0.08	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

LUMPKIN COUNTY

Population	29,966
Population served by public supply—Groundwater	4,320
Population served by public supply—Surface water	6,000
Acres irrigated	230

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.34	0.98	1.32	–	–
Domestic	1.47	0.00	1.47	2.19	0.00
Commercial/public use	0.00	0.00	0.00	0.28	0.00
Industrial	0.00	0.00	0.00	0.14	0.00
Public-supply losses	–	–	–	0.18	–
Public wastewater treatment	–	–	–	–	0.62
Mining	0.00	0.04	0.04	0.04	0.00
Irrigation—Crop	0.10	0.02	0.12	0.12	0.00
Irrigation—Golf course	0.16	0.00	0.16	0.16	0.00
Livestock/aquaculture	0.00	0.15	0.15	0.15	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.07	1.19	3.26	3.26	0.62

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Dahlonega	0.10	0.98
Lumpkin County Water and Sewer Authority	0.14	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MACON COUNTY

Population	14,740
Population served by public supply—Groundwater	6,570
Population served by public supply—Surface water	0
Acres irrigated	22,990

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.88	0.00	0.88	–	–
Domestic	0.61	0.00	0.61	1.09	0.00
Commercial/public use	0.01	0.00	0.01	0.09	0.00
Industrial	0.81	9.24	10.05	10.20	0.02
Public-supply losses	–	–	–	0.17	–
Public wastewater treatment	–	–	–	–	1.31
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	10.54	4.20	14.74	14.74	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.13	0.53	0.66	0.66	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	12.98	13.97	26.95	26.95	1.33

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
325—Paper, pulp	0.57	9.24
311—Food products	0.19	0.00
212—Kaolin and ball clay	0.05	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Montezuma	0.30	0.00
City of Oglethorpe	0.44	0.00
City of Marshallville	0.14	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MADISON COUNTY

Population	28,120
Population served by public supply—Groundwater	7,840
Population served by public supply—Surface water	0
Acres irrigated	140

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.50	0.00	0.50	–	–
Domestic	1.52	0.00	1.52	1.94	0.00
Commercial/public use	0.00	0.00	0.00	0.05	0.00
Industrial	0.00	0.10	0.10	0.11	0.00
Public-supply losses	–	–	–	0.15	–
Public wastewater treatment	–	–	–	–	0.05
Mining	0.02	0.00	0.02	0.02	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.30	0.30	0.30	0.00
Livestock/aquaculture	0.00	0.80	0.80	0.80	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.04	1.20	3.24	3.37	0.05

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.13 Mgal/d was delivered from Franklin County, Georgia to Madison County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
327—Stone, clay	0.00	0.10

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Danielsville	0.12	0.00
City of Comer	0.12	0.00
Piedmont Water Co.	0.08	0.00
City of Colbert	0.05	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MARION COUNTY

Population	8,742
Population served by public supply—Groundwater	6,290
Population served by public supply—Surface water	0
Acres irrigated	5,770

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.72	0.00	0.72	—	—
Domestic	0.18	0.00	0.18	0.65	0.00
Commercial/public use	0.00	0.00	0.00	0.06	0.00
Industrial	0.00	0.27	0.27	0.32	0.28
Public-supply losses	—	—	—	0.14	—
Public wastewater treatment	—	—	—	—	0.20
Mining	0.24	0.00	0.24	0.24	0.00
Irrigation—Crop	0.08	1.23	1.31	1.31	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.02	0.12	0.14	0.14	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.24	1.62	2.86	2.86	0.48

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
212—Kaolin and ball clay	0.00	0.27

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Buena Vista—Marion County Water System	0.72	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MCDUFFIE COUNTY

Population	21,875
Population served by public supply—Groundwater	0
Population served by public supply—Surface water	14,780
Acres irrigated	900

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.00	2.20	2.20	–	–
Domestic	0.53	0.00	0.53	1.50	0.00
Commercial/public use	0.00	0.00	0.00	0.52	0.00
Industrial	0.00	0.00	0.00	0.35	0.00
Public-supply losses	–	–	–	0.36	–
Public wastewater treatment	–	–	–	–	1.21
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.14	0.05	0.19	0.19	0.00
Irrigation—Golf course	0.00	0.39	0.39	0.39	0.00
Livestock/aquaculture	0.00	0.14	0.14	0.14	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.67	2.78	3.45	3.45	1.21

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Thomson–McDuffie County Water and Sewer Commission	0.00	2.20

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MCINTOSH COUNTY

Population	14,333
Population served by public supply—Groundwater	10,870
Population served by public supply—Surface water	0
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; <, less than]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.05	0.00	1.05	—	—
Domestic	0.26	0.00	0.26	1.21	0.00
Commercial/public use	0.00	0.00	0.00	0.04	0.00
Industrial	0.00	0.00	0.00	<0.01	0.00
Public-supply losses	—	—	—	0.06	—
Public wastewater treatment	—	—	—	—	0.26
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.25	0.00	0.25	0.25	0.00
Livestock/aquaculture	0.00	0.00	0.00	0.00	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.56	0.00	1.56	1.56	0.26

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Darien	0.40	0.00
W and D Utilities	0.20	0.00
McIntosh County Water System	0.17	0.00
Water Utility Management	0.11	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MERIWETHER COUNTY

Population	21,992
Population served by public supply—Groundwater	640
Population served by public supply—Surface water	8,440
Acres irrigated	320

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.11	0.12	0.23	—	—
Domestic	0.97	0.00	0.97	1.69	0.00
Commercial/public use	0.07	0.14	0.21	0.45	0.00
Industrial	0.11	0.00	0.11	0.12	0.00
Public-supply losses	—	—	—	0.24	—
Public wastewater treatment	—	—	—	—	0.35
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.09	0.05	0.14	0.14	0.00
Irrigation—Golf course	0.00	0.07	0.07	0.07	0.00
Livestock/aquaculture	0.00	0.26	0.26	0.26	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.35	0.64	1.99	2.97	0.35

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.69 Mgal/d was delivered from Talbot County, Georgia and 0.24 Mgal/d from Troup County, Georgia to Meriwether County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
321—Wood	0.11	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Woodbury	0.00	0.12
City of Warm Springs	0.05	0.00
City of Luthersville	0.04	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MILLER COUNTY

Population	6,125
Population served by public supply—Groundwater	1,970
Population served by public supply—Surface water	0
Acres irrigated	59,290

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.27	0.00	0.27	–	–
Domestic	0.31	0.00	0.31	0.46	0.00
Commercial/public use	0.00	0.00	0.00	0.07	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.05	–
Public wastewater treatment	–	–	–	–	0.27
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	45.13	0.15	45.28	45.28	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.22	0.22	0.22	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	45.71	0.37	46.08	46.08	0.27

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Colquitt	0.27	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MITCHELL COUNTY

Population	23,498
Population served by public supply—Groundwater	11,790
Population served by public supply—Surface water	0
Acres irrigated	81,325

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	3.86	0.00	3.86	–	–
Domestic	0.88	0.00	0.88	1.89	0.00
Commercial/public use	0.24	0.00	0.24	0.92	0.00
Industrial	0.84	0.00	0.84	2.61	0.00
Public-supply losses	–	–	–	0.40	–
Public wastewater treatment	–	–	–	–	0.08
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	57.67	1.18	58.85	58.85	0.00
Irrigation—Golf course	0.06	0.00	0.06	0.06	0.00
Livestock/aquaculture	0.01	0.68	0.69	0.69	0.00
Thermoelectric power	0.14	0.00	0.14	0.14	0.00
TOTAL	63.70	1.86	65.56	65.56	0.08

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
325—Chemical products	0.84	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Camilla	3.06	0.00
City of Pelham	0.68	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MONROE COUNTY

Population	26,424
Population served by public supply—Groundwater	210
Population served by public supply—Surface water	10,370
Acres irrigated	420

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.01	1.50	1.51	–	–
Domestic	1.19	0.00	1.19	2.52	0.00
Commercial/public use	0.01	0.00	0.01	0.23	0.00
Industrial	0.00	0.00	0.00	0.02	0.00
Public-supply losses	–	–	–	0.28	–
Public wastewater treatment	–	–	–	–	0.70
Mining	0.45	0.01	0.46	0.46	0.22
Irrigation—Crop	0.12	0.01	0.13	0.13	0.00
Irrigation—Golf course	0.25	0.26	0.51	0.51	0.00
Livestock/aquaculture	0.00	0.17	0.17	0.17	0.00
Thermoelectric power	0.06	55.17	55.23	55.23	0.00
TOTAL	2.09	57.12	59.21	59.55	0.92

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Forsyth	0.00	1.50

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MONTGOMERY COUNTY

Population	9,123
Population served by public supply—Groundwater	3,730
Population served by public supply—Surface water	0
Acres irrigated	2,033

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; <, less than]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.45	0.00	0.45	–	–
Domestic	0.40	0.00	0.40	0.77	0.00
Commercial/public use	0.00	0.00	0.00	0.07	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.01	–
Public wastewater treatment	–	–	–	–	0.31
Mining	0.06	0.00	0.06	0.06	0.00
Irrigation—Crop	0.47	0.09	0.56	0.56	0.00
Irrigation—Golf course	0.00	0.25	0.25	0.25	0.00
Livestock/aquaculture	0.07	0.72	0.79	0.79	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.45	1.06	2.51	2.51	0.31

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Mount Vernon	0.33	0.00
Town of Uvalda	0.04	0.00
Town of Ailey	0.03	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MORGAN COUNTY

Population	17,868
Population served by public supply—Groundwater	1,570
Population served by public supply—Surface water	9,370
Acres irrigated	1,400

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.19	1.31	1.50	—	—
Domestic	0.52	0.00	0.52	1.34	0.00
Commercial/public use	0.01	0.00	0.01	0.47	0.00
Industrial	0.05	0.00	0.05	0.28	0.05
Public-supply losses	—	—	—	0.18	—
Public wastewater treatment	—	—	—	—	0.66
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.03	1.30	1.33	1.33	0.00
Irrigation—Golf course	0.00	0.66	0.66	0.66	0.00
Livestock/aquaculture	0.06	1.22	1.28	1.28	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.86	4.49	5.35	5.35	0.71

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.05	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Madison	0.00	1.31
City of Rutledge	0.07	0.00
City of Bostwick	0.06	0.00
Piedmont Water Company	0.05	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MURRAY COUNTY

Population	39,628
Population served by public supply—Groundwater	12,740
Population served by public supply—Surface water	22,180
Acres irrigated	260

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.76	1.89	2.65	–	–
Domestic	0.35	0.00	0.35	2.74	0.00
Commercial/public use	0.00	0.00	0.00	0.35	0.00
Industrial	0.00	0.00	0.00	0.48	0.00
Public-supply losses	–	–	–	0.41	–
Public wastewater treatment	–	–	–	–	1.27
Mining	0.02	0.00	0.02	0.02	0.00
Irrigation—Crop	0.00	0.23	0.23	0.23	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.06	0.55	0.61	0.61	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.19	2.67	3.86	4.84	1.27

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.34 Mgal/d was delivered from Gordon County, Georgia to Murray County, 0.14 Mgal/d from Polk County, Tennessee, and 0.5 Mgal/d from Whitfield County, Georgia to Murray County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Chatsworth Water Works Commission	0.75	1.89

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

MUSCOGEE COUNTY

Population	189,890
Population served by public supply—Groundwater	0
Population served by public supply—Surface water	189,880
Acres irrigated	420

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.00	37.30	37.30	–	–
Domestic	0.00	0.00	0.00	17.33	0.00
Commercial/public use	0.00	0.00	0.00	6.46	0.00
Industrial	0.01	0.00	0.01	1.76	0.00
Public-supply losses	–	–	–	5.24	–
Public wastewater treatment	–	–	–	–	30.39
Mining	0.55	0.01	0.56	0.56	2.58
Irrigation—Crop	0.05	0.00	0.05	0.05	0.00
Irrigation—Golf course	0.16	0.66	0.82	0.82	0.00
Livestock/aquaculture	0.00	0.00	0.00	0.00	0.00
Thermoelectric power	0.00	4.59	4.59	4.59	0.00
TOTAL	0.77	42.56	43.33	36.81	32.97

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.36 Mgal/d was withdrawn in Muscogee County and delivered to Lee County, Alabama in 2010. An average of 3.27 Mgal/d was delivered to Chattahoochee County, Georgia, 0.82 Mgal/d to Harris County, Georgia and 0.07 to Talbot County, Georgia from Muscogee County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
325—Chemical products	0.01	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Columbus	0.00	34.94
Smith Water Authority ¹	0.00	2.36

¹Water withdrawn is used in Lee County, Alabama.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

NEWTON COUNTY

Population	99,958
Population served by public supply—Groundwater	1,360
Population served by public supply—Surface water	95,790
Acres irrigated	500

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY (Mgal/d)

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.13	12.70	12.83	–	–
Domestic	0.21	0.00	0.21	5.95	0.00
Commercial/public use	0.00	0.00	0.00	1.00	0.00
Industrial	0.00	0.00	0.00	0.43	0.00
Public-supply losses	–	–	–	1.28	–
Public wastewater treatment	–	–	–	–	0.03
Mining	0.10	0.00	0.10	0.10	0.00
Irrigation—Crop	0.01	0.02	0.03	0.03	0.00
Irrigation—Golf course	0.33	0.46	0.79	0.79	0.00
Livestock/aquaculture	0.02	0.12	0.14	0.14	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.80	13.30	14.10	9.72	0.03

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 4.33 Mgal/d was delivered to Walton County, Georgia and 0.05 Mgal/d to Jasper County, Georgia from Newton County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Newton County Water–Sewerage Authority	0.00	12.84

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

OCONEE COUNTY

Population	32,808
Population served by public supply—Groundwater	4,720
Population served by public supply—Surface water	19,200
Acres irrigated	1,505

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.37	0.00	0.37	—	—
Domestic	0.67	0.00	0.67	2.30	0.00
Commercial/public use	0.00	0.00	0.00	0.86	0.00
Industrial	0.00	0.00	0.00	0.04	0.00
Public-supply losses	—	—	—	0.30	—
Public wastewater treatment	—	—	—	—	0.36
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	3.73	0.00	3.73	3.73	0.00
Irrigation—Golf course	0.00	0.29	0.29	0.29	0.00
Livestock/aquaculture	0.16	2.07	2.23	2.23	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	4.93	2.36	7.29	9.75	0.36

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.5 Mgal/d was delivered from Jackson County, Georgia and 0.10 Mgal/d from Barrow County, Georgia to Oconee County; whereas, 0.13 Mgal/d was delivered from Oconee County to Walton County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Oconee County	0.18	0.00
Piedmont Water Company	0.13	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

OGLETHORPE COUNTY

Population	14,899
Population served by public supply—Groundwater	2,910
Population served by public supply—Surface water	980
Acres irrigated	390

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.20	0.10	0.30	–	–
Domestic	0.83	0.00	0.83	1.11	0.00
Commercial/public use	0.00	0.00	0.00	0.00	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.02	–
Public wastewater treatment	–	–	–	–	0.05
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.25	0.06	0.31	0.31	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.76	0.76	0.76	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.28	0.92	2.20	2.20	0.05

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Crawford	0.00	0.10
City of Lexington	0.06	0.00
City of Arnoldsville	0.03	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

PAULDING COUNTY

Population	142,324
Population served by public supply—Groundwater	1,670
Population served by public supply—Surface water	130,110
Acres irrigated	447

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.13	0.00	0.13	–	–
Domestic	0.79	0.00	0.79	8.88	0.00
Commercial/public use	0.00	0.00	0.00	0.67	0.00
Industrial	0.00	0.00	0.00	0.16	0.00
Public-supply losses	–	–	–	1.74	–
Public wastewater treatment	–	–	–	–	0.71
Mining	0.20	0.00	0.20	0.20	0.00
Irrigation—Crop	0.13	0.00	0.13	0.13	0.00
Irrigation—Golf course	0.00	0.72	0.72	0.72	0.00
Livestock/aquaculture	0.00	0.11	0.11	0.11	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.25	0.83	2.08	12.61	0.71

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 10.53 Mgal/d was delivered from Cobb County, Georgia to Paulding County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Hiram	0.07	0.00
City of Dallas	0.06	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

PEACH COUNTY

Population	27,695
Population served by public supply—Groundwater	17,420
Population served by public supply—Surface water	0
Acres irrigated	9,430

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.63	0.00	2.63	–	–
Domestic	0.77	0.00	0.77	2.30	0.00
Commercial/public use	0.00	0.00	0.00	0.52	0.00
Industrial	0.00	0.00	0.00	0.09	0.00
Public-supply losses	–	–	–	0.49	–
Public wastewater treatment	–	–	–	–	1.67
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	5.14	0.08	5.22	5.22	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.01	0.03	0.04	0.04	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	8.55	0.11	8.66	8.66	1.67

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Fort Valley Utility Commission	2.15	0.00
City of Byron	0.46	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

PICKENS COUNTY

Population	29,431
Population served by public supply—Groundwater	9,090
Population served by public supply—Surface water	13,170
Acres irrigated	60

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.73	2.21	2.94	–	–
Domestic	0.54	0.00	0.54	3.07	0.00
Commercial/public use	0.00	0.00	0.00	0.36	0.00
Industrial	0.00	0.00	0.00	0.10	0.24
Public-supply losses	–	–	–	0.55	–
Public wastewater treatment	–	–	–	–	0.56
Mining	0.22	0.00	0.22	0.22	0.03
Irrigation—Crop	0.01	0.00	0.01	0.01	0.00
Irrigation—Golf course	0.00	0.10	0.10	0.10	0.00
Livestock/aquaculture	0.00	0.26	0.26	0.26	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.50	2.57	4.07	4.67	0.83

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.37 Mgal/d was delivered from Gordon County, Georgia, 0.18 Mgal/d from Cherokee County, Georgia, and 0.05 from Newton County, Georgia to Pickens County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Jasper	0.73	1.00
Big Canoe Utilities	0.00	0.98
Bent Tree Community	0.00	0.23

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

PIERCE COUNTY

Population	18,758
Population served by public supply—Groundwater	6,760
Population served by public supply—Surface water	0
Acres irrigated	10,630

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.74	0.00	0.74	–	–
Domestic	0.90	0.00	0.90	1.44	0.00
Commercial/public use	0.00	0.00	0.00	0.07	0.00
Industrial	0.08	0.00	0.08	0.13	0.00
Public-supply losses	–	–	–	0.08	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.87	0.33	2.20	2.20	0.00
Irrigation—Golf course	0.11	0.00	0.11	0.11	0.00
Livestock/aquaculture	0.02	0.08	0.10	0.10	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	3.72	0.41	4.13	4.13	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.08	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Blackshear	0.48	0.00
W and D Utilities	0.12	0.00
City of Patterson	0.06	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

PIKE COUNTY

Population	17,869
Population served by public supply—Groundwater	1,290
Population served by public supply—Surface water	4,200
Acres irrigated	1,250

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.29	4.15	4.44	–	–
Domestic	0.93	0.00	0.93	1.37	0.00
Commercial/public use	0.00	0.00	0.00	0.09	0.01
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.06	–
Public wastewater treatment	–	–	–	–	0.14
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	1.00	1.00	1.00	0.00
Irrigation—Golf course	0.00	0.39	0.39	0.39	0.00
Livestock/aquaculture	0.02	0.14	0.16	0.16	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.24	5.68	6.92	3.07	0.15

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 3.88 Mgal/d was delivered to Spalding County, Georgia from Pike County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Griffin	0.00	4.15
Pike County Rural Development	0.21	0.00
City of Concord	0.03	0.00
City of Molena	0.03	0.00

¹This water was delivered to Spalding County, Georgia.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

POLK COUNTY

Population	41,475
Population served by public supply—Groundwater	6,680
Population served by public supply—Surface water	33,840
Acres irrigated	150

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.35	4.15	5.50	–	–
Domestic	0.07	0.00	0.07	3.27	0.00
Commercial/public use	0.00	0.00	0.00	0.51	0.00
Industrial	1.29	0.00	1.29	1.74	0.24
Public-supply losses	–	–	–	0.87	–
Public wastewater treatment	–	–	–	–	3.46
Mining	0.08	0.00	0.08	0.08	0.00
Irrigation—Crop	0.01	0.00	0.01	0.01	0.00
Irrigation—Golf course	0.25	0.00	0.25	0.25	0.00
Livestock/aquaculture	0.04	0.52	0.56	0.56	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	3.09	4.67	7.76	7.29	3.70

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.47 Mgal/d was delivered to Bartow County, Georgia from Polk County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
325—Chemical products	1.29	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Polk County Water Authority	0.00	2.37
City of Cedartown	0.00	1.78
City of Rockmart	1.35	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

PULASKI COUNTY

Population	12,010
Population served by public supply—Groundwater	5,080
Population served by public supply—Surface water	0
Acres irrigated	17,310

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.00	0.00	1.00	–	–
Domestic	0.52	0.00	0.52	1.11	0.00
Commercial/public use	0.00	0.00	0.00	0.17	0.00
Industrial	0.54	0.00	0.54	0.55	0.45
Public-supply losses	–	–	–	0.23	–
Public wastewater treatment	–	–	–	–	0.83
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	10.13	3.18	13.31	13.31	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.02	0.02	0.02	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	12.19	3.20	15.39	15.39	1.28

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.54	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Hawkinsville	0.88	0.00
Hartford Water Authority	0.12	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

PUTNAM COUNTY

Population	21,218
Population served by public supply—Groundwater	6,390
Population served by public supply—Surface water	12,270
Acres irrigated	540

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.53	3.66	4.19	–	–
Domestic	0.19	0.00	0.19	1.12	0.00
Commercial/public use	0.00	0.00	0.00	0.33	0.00
Industrial	0.04	0.00	0.04	0.09	0.00
Public-supply losses	–	–	–	0.78	–
Public wastewater treatment	–	–	–	–	0.51
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.25	0.06	0.31	0.31	0.00
Irrigation—Golf course	0.00	0.16	0.16	0.16	0.00
Livestock/aquaculture	0.00	0.24	0.24	0.24	0.00
Thermoelectric power	0.00	952.42	952.42	952.42	368.73
TOTAL	1.01	956.54	957.55	955.45	369.24

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 2.1 Mgal/d was delivered to Baldwin County, Georgia from Putnam County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.04	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Sinclair Water Authority	0.00	3.66
Piedmont Water Company	0.35	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

QUITMAN COUNTY

Population	2,513
Population served by public supply—Groundwater	1,860
Population served by public supply—Surface water	0
Acres irrigated	500

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; <, less than]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.14	0.00	0.14	—	—
Domestic	0.05	0.00	0.05	0.19	0.00
Commercial/public use	0.00	0.00	0.00	0.00	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	—	—	—	<0.01	—
Public wastewater treatment	—	—	—	—	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.25	0.25	0.25	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.02	0.02	0.02	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.19	0.27	0.46	0.46	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	—	—

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Georgetown—Quitman County Commission	0.14	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

RABUN COUNTY

Population	16,276
Population served by public supply—Groundwater	920
Population served by public supply—Surface water	10,760
Acres irrigated	280

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.13	1.37	1.50	–	–
Domestic	0.34	0.00	0.34	1.24	0.00
Commercial/public use	0.00	0.00	0.00	0.04	0.00
Industrial	0.10	0.00	0.10	0.10	0.90
Public-supply losses	–	–	–	0.56	–
Public wastewater treatment	–	–	–	–	0.50
Mining	0.06	0.00	0.06	0.06	0.00
Irrigation—Crop	0.02	0.00	0.02	0.02	0.00
Irrigation—Golf course	0.00	0.40	0.40	0.40	0.00
Livestock/aquaculture	0.03	0.39	0.42	0.42	0.00
Thermoelectric power	0.00	0.29	0.29	0.29	0.00
TOTAL	0.68	2.45	3.13	3.13	1.40

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
313—Textiles	0.10	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Clayton–Rabun County Water and Sewerage Authority	0.00	1.37
City of Sky Valley	0.08	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

RANDOLPH COUNTY

Population	7,719
Population served by public supply—Groundwater	5,090
Population served by public supply—Surface water	0
Acres irrigated	26,004

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.57	0.00	0.57	–	–
Domestic	0.20	0.00	0.20	0.59	0.00
Commercial/public use	0.00	0.00	0.00	0.08	0.00
Industrial	0.18	0.00	0.18	0.18	0.00
Public-supply losses	–	–	–	0.09	–
Public wastewater treatment	–	–	–	–	0.39
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	9.69	11.59	21.28	21.28	0.00
Irrigation—Golf course	0.00	0.06	0.06	0.06	0.00
Livestock/aquaculture	0.01	0.05	0.06	0.07	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	10.65	11.70	22.35	22.35	0.39

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
311—Food	0.18	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Cuthbert	0.33	0.00
City of Shellman	0.21	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

RICHMOND COUNTY

Population	200,549
Population served by public supply—Groundwater	35,960
Population served by public supply—Surface water	159,920
Acres irrigated	500

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	7.33	36.66	43.99	–	–
Domestic	0.35	0.00	0.35	15.20	0.00
Commercial/public use	0.19	0.00	0.19	14.92	0.00
Industrial	2.13	65.64	67.77	73.41	47.85
Public-supply losses	–	–	–	8.77	–
Public wastewater treatment	–	–	–	–	35.32
Mining	1.53	0.00	1.53	1.53	0.00
Irrigation—Crop	0.14	0.00	0.14	0.14	0.00
Irrigation—Golf course	0.24	0.52	0.76	0.76	0.00
Livestock/aquaculture	0.02	0.02	0.04	0.04	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	11.93	102.84	114.77	114.77	83.17

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.00	55.46
325—Chemical products	1.39	10.18
327—Stone, clay	0.48	0.00
321—Wood	0.26	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Augusta–Richmond County Utilities	6.77	36.63
City of Hephzibah	0.37	0.00
City of Blythe	0.08	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

ROCKDALE COUNTY

Population	85,215
Population served by public supply—Groundwater	2,510
Population served by public supply—Surface water	68,410
Acres irrigated	434

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.24	11.57	11.81	–	–
Domestic	1.07	0.00	1.07	6.52	0.00
Commercial/public use	0.01	0.00	0.01	3.02	0.00
Industrial	0.00	0.00	0.00	1.27	0.00
Public-supply losses	–	–	–	2.08	–
Public wastewater treatment	–	–	–	–	5.12
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.10	0.61	0.71	0.71	0.00
Livestock/aquaculture	0.00	0.03	0.03	0.03	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.42	12.21	13.63	13.63	5.12

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Rockdale County Water Resources	0.00	11.57
Lakeview Utilities	0.14	0.00
Poyntsource Solutions, Inc.	0.10	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

SCHLEY COUNTY

Population	5,010
Population served by public supply—Groundwater	4,530
Population served by public supply—Surface water	0
Acres irrigated	1,790

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.43	0.00	0.43	–	–
Domestic	0.04	0.00	0.04	0.36	0.00
Commercial/public use	0.00	0.00	0.00	0.03	0.00
Industrial	0.00	0.00	0.00	0.01	0.00
Public-supply losses	–	–	–	0.07	–
Public wastewater treatment	–	–	–	–	0.13
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.08	0.32	0.40	0.40	0.00
Irrigation—Golf course	0.00	0.07	0.07	0.07	0.00
Livestock/aquaculture	0.02	0.12	0.14	0.14	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.57	0.51	1.08	1.08	0.13

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Schley County Water System	0.20	0.00
City of Ellaville	0.23	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

SCREVEN COUNTY

Population	14,593
Population served by public supply—Groundwater	4,870
Population served by public supply—Surface water	0
Acres irrigated	21,540

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.89	0.00	0.89	–	–
Domestic	0.73	0.00	0.73	1.12	0.00
Commercial/public use	0.01	0.00	0.01	0.26	0.00
Industrial	1.82	0.00	1.82	1.87	2.18
Public-supply losses	–	–	–	0.22	–
Public wastewater treatment	–	–	–	–	0.77
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	2.14	1.33	3.47	3.46	0.00
Irrigation—Golf course	0.07	0.07	0.14	0.14	0.00
Livestock/aquaculture	0.05	0.08	0.13	0.12	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	5.71	1.48	7.19	7.19	2.95

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
314—Textiles	1.82	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Sylvania	0.77	0.00
City of Hiltonia	0.03	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

SEMINOLE COUNTY

Population	8,729
Population served by public supply—Groundwater	3,800
Population served by public supply—Surface water	0
Acres irrigated	51,491

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.58	0.00	0.58	–	–
Domestic	0.37	0.00	0.37	0.78	0.00
Commercial/public use	0.00	0.00	0.00	0.08	0.00
Industrial	0.00	0.00	0.00	0.01	0.00
Public-supply losses	–	–	–	0.08	–
Public wastewater treatment	–	–	–	–	0.43
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	43.46	0.50	43.96	43.96	0.00
Irrigation—Golf course	0.26	0.00	0.26	0.26	0.00
Livestock/aquaculture	0.06	0.01	0.07	0.07	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	44.73	0.51	45.24	45.24	0.43

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Donalsonville	0.52	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

SPALDING COUNTY

Population	64,073
Population served by public supply—Groundwater	1,110
Population served by public supply—Surface water	55,760
Acres irrigated	250

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.09	5.13	5.22	–	–
Domestic	0.54	0.00	0.54	3.63	0.00
Commercial/public use	0.00	0.00	0.00	0.73	0.00
Industrial	0.00	0.00	0.00	0.22	0.08
Public-supply losses	–	–	–	2.45	–
Public wastewater treatment	–	–	–	–	0.73
Mining	0.08	0.00	0.08	0.08	0.05
Irrigation—Crop	0.03	0.01	0.04	0.04	0.00
Irrigation—Golf course	0.26	0.12	0.38	0.38	0.00
Livestock/aquaculture	0.00	0.02	0.02	0.02	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.00	5.28	6.28	7.55	0.86

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 3.7 Mgal/d was delivered from Pike County, Georgia to Spalding County and 2.43 Mgal/d was delivered from Spalding County to Coweta County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Griffin	0.00	5.13

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

STEPHENS COUNTY

Population	26,175
Population served by public supply—Groundwater	540
Population served by public supply—Surface water	23,500
Acres irrigated	500

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.05	3.08	3.13	–	–
Domestic	0.16	0.00	0.16	2.00	0.00
Commercial/public use	0.08	0.00	0.08	0.51	0.03
Industrial	0.00	0.00	0.00	0.31	0.00
Public-supply losses	–	–	–	0.43	–
Public wastewater treatment	–	–	–	–	1.03
Mining	0.12	0.00	0.12	0.12	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	2.29	0.00	2.29	2.29	0.00
Livestock/aquaculture	0.00	0.18	0.18	0.18	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.70	3.26	5.96	5.84	1.06

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.12 Mgal/d was delivered to Habersham County, Georgia from Stephens County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Toccoa	0.00	3.08

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

STEWART COUNTY

Population	6,058
Population served by public supply—Groundwater	4,260
Population served by public supply—Surface water	0
Acres irrigated	3,520

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.40	0.00	0.40	–	–
Domestic	0.13	0.00	0.13	0.45	0.00
Commercial/public use	0.00	0.00	0.00	0.04	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.04	–
Public wastewater treatment	–	–	–	–	0.36
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.04	0.92	0.96	0.96	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.02	0.02	0.02	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.57	0.94	1.51	1.51	0.36

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Stewart County Water System	0.16	0.00
City of Lumpkin	0.13	0.00
City of Richland	0.10	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

SUMTER COUNTY

Population	32,819
Population served by public supply—Groundwater	20,470
Population served by public supply—Surface water	0
Acres irrigated	48,124

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.78	0.00	2.78	–	–
Domestic	0.93	0.00	0.93	2.61	0.00
Commercial/public use	0.02	0.00	0.02	0.48	0.00
Industrial	0.26	0.00	0.26	0.29	0.00
Public-supply losses	–	–	–	0.61	–
Public wastewater treatment	–	–	–	–	2.63
Mining	1.60	0.00	1.60	1.60	0.00
Irrigation—Crop	22.88	12.42	35.30	35.30	0.00
Irrigation—Golf course	0.10	0.00	0.10	0.10	0.00
Livestock/aquaculture	0.07	0.47	0.54	0.54	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	28.64	12.89	41.53	41.53	2.63

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
212—Kaolin and ball clay	0.26	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Americus	2.55	0.00
Town of Leslie	0.04	0.00
Town of Desoto	0.03	0.00
Town of Andersonville	0.03	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TALBOT COUNTY

Population	6,865
Population served by public supply—Groundwater	1,570
Population served by public supply—Surface water	2,940
Acres irrigated	20

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.18	1.04	1.22	–	–
Domestic	0.18	0.00	0.18	0.56	0.00
Commercial/public use	0.00	0.00	0.00	0.09	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.09	–
Public wastewater treatment	–	–	–	–	0.05
Mining	0.80	0.01	0.81	0.81	0.00
Irrigation—Crop	0.01	0.00	0.01	0.01	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.30	0.30	0.30	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.17	1.35	2.52	1.86	0.15

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 1.04 Mgal/d was delivered to Meriwether County, Georgia and 0.07 Mgal/d was delivered from Muscogee County, Georgia to Talbot County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Manchester ¹	0.00	1.04
City of Talbotton	0.12	0.00
City of Woodland	0.03	0.00

¹Water use is in Meriwether County, Georgia

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TALIAFERRO COUNTY

Population	1,717
Population served by public supply—Groundwater	670
Population served by public supply—Surface water	0
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; <, less than]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.05	0.00	0.05	–	–
Domestic	0.08	0.00	0.08	0.13	0.00
Commercial/public use	0.00	0.00	0.00	0.00	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	<0.01	–
Public wastewater treatment	–	–	–	–	0.05
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.00	0.00	0.00	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.13	0.00	0.13	0.13	0.05

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Crawfordville	0.05	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TATTNALL COUNTY

Population	25,520
Population served by public supply—Groundwater	7,900
Population served by public supply—Surface water	0
Acres irrigated	16,540

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.11	0.00	1.11	–	–
Domestic	1.32	0.00	1.32	1.89	0.00
Commercial/public use	0.22	0.00	0.22	0.38	0.75
Industrial	0.03	0.00	0.03	0.23	0.00
Public-supply losses	–	–	–	0.18	–
Public wastewater treatment	–	–	–	–	1.13
Mining	0.01	0.00	0.01	0.01	0.00
Irrigation—Crop	1.85	3.02	4.87	4.87	0.00
Irrigation—Golf course	0.16	0.00	0.16	0.16	0.00
Livestock/aquaculture	0.15	1.51	1.66	1.66	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	4.85	4.53	9.38	9.38	1.88

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	0.03	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Glennville	0.73	0.00
City of Reidsville	0.28	0.00
City of Collins	0.04	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TAYLOR COUNTY

Population	8,906
Population served by public supply—Groundwater	3,760
Population served by public supply—Surface water	0
Acres irrigated	3,890

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.76	0.00	0.76	–	–
Domestic	0.39	0.00	0.39	0.95	0.00
Commercial/public use	0.01	0.00	0.01	0.09	0.00
Industrial	0.00	1.72	1.72	1.72	0.00
Public-supply losses	–	–	–	0.12	–
Public wastewater treatment	–	–	–	–	0.07
Mining	0.09	0.00	0.09	0.09	0.00
Irrigation—Crop	1.25	0.95	2.20	2.20	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.07	0.75	0.82	0.82	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.57	3.42	5.99	5.99	0.07

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
423—Stone, clay	0.00	1.72

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Butler	0.59	0.00
City of Reynolds	0.16	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TELFAIR COUNTY

Population	16,500
Population served by public supply—Groundwater	7,830
Population served by public supply—Surface water	0
Acres irrigated	6,180

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.43	0.00	1.43	–	–
Domestic	0.65	0.00	0.65	1.38	0.00
Commercial/public use	0.00	0.00	0.00	0.37	0.00
Industrial	0.00	0.00	0.00	0.06	0.00
Public-supply losses	–	–	–	0.27	–
Public wastewater treatment	–	–	–	–	0.74
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	2.13	1.02	3.15	3.15	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.01	0.05	0.06	0.06	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	4.22	1.07	5.29	5.29	0.74

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of McRae	0.65	0.00
City of Helena	0.43	0.00
City of Lumber City	0.19	0.00
City of Milan	0.14	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TERRELL COUNTY

Population	9,315
Population served by public supply—Groundwater	6,700
Population served by public supply—Surface water	0
Acres irrigated	27,270

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.59	0.00	1.59	–	–
Domestic	0.20	0.00	0.20	0.74	0.00
Commercial/public use	0.01	0.00	0.01	0.18	0.00
Industrial	0.00	0.00	0.00	0.28	0.00
Public-supply losses	–	–	–	0.60	–
Public wastewater treatment	–	–	–	–	1.53
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	11.88	10.90	22.78	22.78	0.00
Irrigation—Golf course	0.00	0.04	0.04	0.04	0.00
Livestock/aquaculture	0.11	0.05	0.16	0.16	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	13.79	10.99	24.78	24.78	1.53

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Dawson	1.54	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

THOMAS COUNTY

Population	44,720
Population served by public supply—Groundwater	30,940
Population served by public supply—Surface water	0
Acres irrigated	12,410

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	5.49	0.00	5.49	—	—
Domestic	1.03	0.00	1.03	3.49	0.00
Commercial/public use	0.03	0.00	0.03	1.24	0.00
Industrial	0.19	0.00	0.19	0.55	0.00
Public-supply losses	—	—	—	1.46	—
Public wastewater treatment	—	—	—	—	4.03
Mining	1.02	0.01	1.03	1.03	0.03
Irrigation—Crop	2.66	0.10	2.76	2.76	0.00
Irrigation—Golf course	0.25	0.00	0.25	0.25	0.00
Livestock/aquaculture	0.16	0.13	0.29	0.29	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	10.83	0.24	11.07	11.07	4.06

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
327—Stone, clay	0.14	0.00
311—Food	0.05	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Thomasville	4.75	0.00
City of Boston	0.24	0.00
City of Meigs	0.15	0.00
City of Coolidge	0.05	0.00
City of Ochlocknee	0.05	0.00
City of Pavo	0.05	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TIFT COUNTY

Population	40,118
Population served by public supply—Groundwater	28,610
Population served by public supply—Surface water	0
Acres irrigated	20,950

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	5.62	0.00	5.62	–	–
Domestic	0.86	0.00	0.86	4.63	0.00
Commercial/public use	0.17	0.00	0.17	1.18	0.00
Industrial	0.00	0.00	0.00	0.05	0.00
Public-supply losses	–	–	–	0.79	–
Public wastewater treatment	–	–	–	–	4.80
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	5.03	3.49	8.52	8.52	0.00
Irrigation—Golf course	0.52	0.00	0.52	0.52	0.00
Livestock/aquaculture	0.03	0.09	0.12	0.12	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	12.23	3.58	15.81	15.81	4.80

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Tifton-Tift County Water System	5.38	0.00
City of Omega	0.13	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TOOMBS COUNTY

Population	27,223
Population served by public supply—Groundwater	18,720
Population served by public supply—Surface water	0
Acres irrigated	11,440

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.92	0.00	2.92	–	–
Domestic	0.64	0.00	0.64	2.09	0.00
Commercial/public use	0.00	0.00	0.00	0.52	0.00
Industrial	0.00	0.00	0.00	0.44	0.00
Public-supply losses	–	–	–	0.51	–
Public wastewater treatment	–	–	–	–	1.40
Mining	0.06	0.00	0.06	0.06	0.00
Irrigation—Crop	3.04	3.76	6.80	6.80	0.00
Irrigation—Golf course	0.05	0.09	0.14	0.14	0.00
Livestock/aquaculture	0.02	0.12	0.14	0.14	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	6.73	3.97	10.70	10.70	1.40

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Vidalia	1.75	0.00
City of Lyons	1.08	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TOWNS COUNTY

Population	10,471
Population served by public supply—Groundwater	2,310
Population served by public supply—Surface water	7,440
Acres irrigated	100

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.18	1.19	1.37	–	–
Domestic	0.05	0.00	0.05	1.05	0.00
Commercial/public use	0.00	0.00	0.00	0.14	0.00
Industrial	0.00	0.00	0.00	0.01	0.00
Public-supply losses	–	–	–	0.22	–
Public wastewater treatment	–	–	–	–	0.29
Mining	0.01	0.00	0.01	0.01	0.00
Irrigation—Crop	0.02	0.00	0.02	0.02	0.00
Irrigation—Golf course	0.00	0.15	0.15	0.15	0.00
Livestock/aquaculture	0.00	2.88	2.88	2.88	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.26	4.22	4.48	4.48	0.29

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Hiawassee	0.00	1.19
City of Young Harris	0.16	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TREUTLEN COUNTY

Population	6,885
Population served by public supply—Groundwater	2,480
Population served by public supply—Surface water	0
Acres irrigated	1,140

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.45	0.00	0.45	—	—
Domestic	0.33	0.00	0.33	0.59	0.00
Commercial/public use	0.00	0.00	0.00	0.07	0.00
Industrial	0.19	0.00	0.19	0.19	0.00
Public-supply losses	—	—	—	0.07	—
Public wastewater treatment	—	—	—	—	0.43
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.50	0.53	1.03	1.03	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.01	0.01	0.02	0.03	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.48	0.54	2.02	1.98	0.43

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.04 Mgal/d was delivered to Montgomery County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
314—Textiles	0.19	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Soperton	0.45	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TROUP COUNTY

Population	67,044
Population served by public supply—Groundwater	60
Population served by public supply—Surface water	52,560
Acres irrigated	85

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.00	10.52	10.52	–	–
Domestic	1.08	0.00	1.08	5.41	0.00
Commercial/public use	0.01	0.00	0.01	2.48	0.00
Industrial	0.02	0.00	0.02	2.17	0.00
Public-supply losses	–	–	–	1.57	–
Public wastewater treatment	–	–	–	–	5.87
Mining	0.11	0.00	0.11	0.11	0.00
Irrigation—Crop	0.01	0.00	0.01	0.01	0.00
Irrigation—Golf course	0.00	0.12	0.12	0.12	0.00
Livestock/aquaculture	0.00	0.10	0.10	0.10	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.23	10.74	11.97	11.97	5.87

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.25 Mgal/d was delivered from Coweta County, Georgia to Troup County; 0.25 Mgal/d was delivered from Troup County to Meriwether County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
314—Textiles	0.02	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Lagrange	0.00	9.58
City of West Point	0.00	0.94

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TURNER COUNTY

Population	8,930
Population served by public supply—Groundwater	5,670
Population served by public supply—Surface water	0
Acres irrigated	31,770

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.70	0.00	0.70	–	–
Domestic	0.24	0.00	0.24	0.68	0.00
Commercial/public use	0.02	0.00	0.02	0.14	0.00
Industrial	0.00	0.00	0.00	0.02	0.00
Public-supply losses	–	–	–	0.12	–
Public wastewater treatment	–	–	–	–	1.03
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	4.72	3.38	8.10	8.10	0.00
Irrigation—Golf course	0.00	0.05	0.05	0.05	0.00
Livestock/aquaculture	0.06	0.44	0.50	0.50	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	5.74	3.87	9.61	9.61	1.03

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Ashburn	0.57	0.00
City of Sycamore	0.12	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

TWIGGS COUNTY

Population	9,023
Population served by public supply—Groundwater	2,500
Population served by public supply—Surface water	70
Acres irrigated	1,470

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.39	0.00	0.39	–	–
Domestic	0.52	0.00	0.52	0.74	0.00
Commercial/public use	0.00	0.00	0.00	0.12	0.00
Industrial	5.16	0.00	5.16	5.16	0.00
Public-supply losses	–	–	–	0.05	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.03	0.00	0.03	0.03	1.93
Irrigation—Crop	0.35	0.06	0.41	0.41	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.03	0.03	0.06	0.06	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	6.48	0.09	6.57	6.57	1.93

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
212—Kaolin and ball clay	5.16	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Jeffersonville	0.33	0.00
Twigg County Water System	0.06	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

UNION COUNTY

Population	21,356
Population served by public supply—Groundwater	6,980
Population served by public supply—Surface water	10,580
Acres irrigated	255

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.00	0.90	1.90	–	–
Domestic	0.28	0.00	0.28	1.40	0.00
Commercial/public use	0.00	0.00	0.00	0.23	0.00
Industrial	0.00	0.00	0.00	0.19	0.00
Public-supply losses	–	–	–	0.36	–
Public wastewater treatment	–	–	–	–	0.29
Mining	0.08	0.00	0.08	0.08	0.00
Irrigation—Crop	0.02	0.07	0.09	0.09	0.00
Irrigation—Golf course	0.00	0.30	0.30	0.30	0.00
Livestock/aquaculture	0.00	5.36	5.36	5.36	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.38	6.63	8.01	8.01	0.29

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Notla Water Authority	0.36	0.65
Coosa Water Authority	0.38	0.00
City of Blairsville	0.21	0.25

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

UPSON COUNTY

Population	27,153
Population served by public supply—Groundwater	3,050
Population served by public supply—Surface water	11,540
Acres irrigated	940

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.48	4.00	4.48	–	–
Domestic	0.94	0.00	0.94	3.61	0.00
Commercial/public use	0.00	0.00	0.00	0.65	0.00
Industrial	0.00	0.26	0.26	0.36	0.00
Public-supply losses	–	–	–	1.06	–
Public wastewater treatment	–	–	–	–	2.71
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.00	0.40	0.40	0.40	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.02	0.23	0.25	0.25	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.44	4.89	6.33	6.33	2.71

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
313—Textiles	0.00	0.26

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Thomaston	0.00	4.00
Upson County	0.32	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WALKER COUNTY

Population	68,756
Population served by public supply—Groundwater	41,850
Population served by public supply—Surface water	22,130
Acres irrigated	10

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[—, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	5.23	1.10	6.33	—	—
Domestic	0.36	0.00	0.36	5.03	0.00
Commercial/public use	0.00	0.12	0.12	1.72	0.00
Industrial	0.02	0.57	0.59	0.99	0.00
Public-supply losses	—	—	—	1.98	—
Public wastewater treatment	—	—	—	—	3.13
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.02	0.00	0.02	0.02	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.09	1.10	1.19	1.19	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	5.72	2.89	8.61	10.93	3.13

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 0.10 Mgal/d was delivered from Walker County to Catoosa County, Georgia; about 2.42 Mgal/d was delivered from Hamilton County, Tennessee to Walker County in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
313—Textiles	0.01	0.57
325—Chemical products	0.01	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Walker County Water Authority	3.22	0.00
City of Lafayette	0.85	1.10
City of Chickamauga	0.96	0.00
Walker County Rural Water Authority	0.20	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WALTON COUNTY

Population	83,768
Population served by public supply—Groundwater	640
Population served by public supply—Surface water	72,300
Acres irrigated	1,190

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.04	2.78	2.82	–	–
Domestic	0.81	0.00	0.81	4.84	0.00
Commercial/public use	0.00	0.00	0.00	1.10	0.00
Industrial	0.00	0.00	0.00	0.12	0.00
Public-supply losses	–	–	–	1.25	–
Public wastewater treatment	–	–	–	–	2.87
Mining	0.03	0.00	0.03	0.03	0.00
Irrigation—Crop	1.98	0.54	2.52	2.52	0.00
Irrigation—Golf course	0.00	0.47	0.47	0.47	0.00
Livestock/aquaculture	0.00	0.16	0.16	0.16	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.86	3.95	6.81	10.49	2.87

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Monroe	0.00	2.30
City of Social Circle	0.00	0.48

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 4.32 Mgal/d was delivered from Newton County, Georgia and 0.13 Mgal/d was delivered from Oconee County, Georgia to Walton County in 2010. About 2,400 residential customers of public suppliers in Walton County reside in Gwinnett County; therefore that use is not included for Walton County.

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WARE COUNTY

Population	36,312
Population served by public supply—Groundwater	31,160
Population served by public supply—Surface water	0
Acres irrigated	4,140

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[-, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	3.37	0.00	3.37	—	—
Domestic	0.39	0.00	0.39	2.39	0.00
Commercial/public use	0.00	0.00	0.00	0.51	0.07
Industrial	0.64	0.00	0.64	1.10	0.00
Public-supply losses	—	—	—	0.40	—
Public wastewater treatment	—	—	—	—	4.02
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.26	0.69	0.95	0.95	0.00
Irrigation—Golf course	0.33	0.00	0.33	0.33	0.00
Livestock/aquaculture	0.01	0.08	0.09	0.09	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	5.00	0.77	5.77	5.77	4.09

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
339—Misc. manufacturing	0.52	0.00
482—Railroad transport.	0.10	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Waycross	2.09	0.00
Satilla Regional Water and Sewer Authority	1.17	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WARREN COUNTY

Population	5,834
Population served by public supply—Groundwater	350
Population served by public supply—Surface water	2,260
Acres irrigated	0

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.02	0.32	0.34	–	–
Domestic	0.24	0.00	0.24	0.47	0.00
Commercial/public use	0.00	0.00	0.00	0.04	0.00
Industrial	0.64	0.40	1.04	1.06	0.00
Public-supply losses	–	–	–	0.05	–
Public wastewater treatment	–	–	–	–	0.17
Mining	0.39	0.00	0.39	0.39	2.19
Irrigation—Crop	0.00	0.00	0.00	0.00	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.13	0.13	0.13	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.29	0.85	2.14	2.14	2.36

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
221—Kaolin and ball clay	0.64	0.40

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Warrenton	0.00	0.32
City of Norwood	0.02	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WASHINGTON COUNTY

Population	21,187
Population served by public supply—Groundwater	9,830
Population served by public supply—Surface water	0
Acres irrigated	7,430

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	2.67	0.00	2.67	–	–
Domestic	0.85	0.00	0.85	1.66	0.00
Commercial/public use	0.00	0.00	0.00	1.42	0.00
Industrial	12.02	0.00	12.02	12.07	1.37
Public-supply losses	–	–	–	0.39	–
Public wastewater treatment	–	–	–	–	1.19
Mining	1.11	0.00	1.11	1.11	1.93
Irrigation—Crop	6.30	1.27	7.57	7.57	0.00
Irrigation—Golf course	0.00	0.07	0.07	0.07	0.00
Livestock/aquaculture	0.02	0.08	0.10	0.10	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	22.97	1.42	24.39	24.39	4.49

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
212—Kaolin and ball clay	12.02	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Sandersville	1.98	0.00
City of Davisboro	0.43	0.00
City of Tennille	0.14	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WAYNE COUNTY

Population	30,099
Population served by public supply—Groundwater	14,290
Population served by public supply—Surface water	0
Acres irrigated	3,960

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.73	0.00	1.73	–	–
Domestic	1.18	0.00	1.18	2.21	0.00
Commercial/public use	0.02	0.00	0.02	0.51	0.00
Industrial	57.84	0.00	57.84	57.84	53.88
Public-supply losses	–	–	–	0.21	–
Public wastewater treatment	–	–	–	–	2.03
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.01	0.01	1.02	1.02	0.00
Irrigation—Golf course	0.07	0.00	0.07	0.07	0.00
Livestock/aquaculture	0.01	0.08	0.09	0.09	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	61.86	0.09	61.95	61.95	55.91

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
322—Paper, pulp	57.84	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Jesup	1.44	0.00
City of Screven	0.07	0.00
Water Utility Management	0.06	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WEBSTER COUNTY

Population	2,799
Population served by public supply—Groundwater	840
Population served by public supply—Surface water	0
Acres irrigated	12,020

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.13	0.00	0.13	–	–
Domestic	0.15	0.00	0.15	0.26	0.00
Commercial/public use	0.00	0.00	0.00	0.00	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.02	–
Public wastewater treatment	–	–	–	–	0.00
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.37	6.18	7.55	7.55	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.09	1.02	1.11	1.11	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.74	7.20	8.94	8.94	0.00

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Unified Government of Webster County	0.13	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WHEELER COUNTY

Population	7,421
Population served by public supply—Groundwater	1,770
Population served by public supply—Surface water	0
Acres irrigated	4,250

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.18	0.00	0.18	–	–
Domestic	0.42	0.00	0.42	0.54	0.00
Commercial/public use	0.00	0.00	0.00	0.03	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.03	–
Public wastewater treatment	–	–	–	–	0.37
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	1.28	0.45	1.73	1.73	0.00
Irrigation—Golf course	0.29	0.00	0.29	0.29	0.00
Livestock/aquaculture	0.05	0.05	0.10	0.10	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	2.22	0.50	2.72	2.72	0.37

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Alamo	0.09	0.00
City of Glenwood	0.09	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Base modified from U.S. Geological Survey
1:100,000-scale digital data0 2 4 6 MILES
0 2 4 6 KILOMETERS

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WHITE COUNTY

Population	27,144
Population served by public supply—Groundwater	8,240
Population served by public supply—Surface water	5,760
Acres irrigated	40

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.92	0.58	1.50	–	–
Domestic	0.99	0.00	0.99	1.82	0.00
Commercial/public use	0.00	0.00	0.00	0.48	0.00
Industrial	0.00	0.00	0.00	0.03	0.00
Public-supply losses	–	–	–	0.16	–
Public wastewater treatment	–	–	–	–	0.32
Mining	0.00	0.01	0.01	0.01	0.00
Irrigation—Crop	0.03	0.02	0.05	0.05	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.34	0.34	0.34	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	1.94	0.95	2.89	2.89	0.32

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
White County Water and Sewerage Authority	0.00	0.58
Cleveland Waterworks	0.46	0.00
City of Helen	0.31	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WHITFIELD COUNTY

Population	102,599
Population served by public supply—Groundwater	0
Population served by public supply—Surface water	97,180
Acres irrigated	326

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable; Mgal/d, million gallons per day]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.00	20.68	20.68	–	–
Domestic	0.41	0.00	0.41	7.81	0.00
Commercial/public use	0.00	0.00	0.00	6.17	0.05
Industrial	0.00	0.00	0.00	8.14	87.59
Public-supply losses	–	–	–	2.86	–
Public wastewater treatment	–	–	–	–	0.15
Mining	0.21	0.00	0.21	0.21	0.00
Irrigation—Crop	0.07	0.00	0.07	0.07	0.00
Irrigation—Golf course	0.00	0.52	0.52	0.52	0.00
Livestock/aquaculture	0.05	0.64	0.69	0.69	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.74	21.84	22.58	26.47	87.79

¹Total use is total withdrawal plus public supply deliveries and losses. An average of 4 Mgal/d was delivered from Hamilton County, Tennessee to Whitfield County, Georgia in 2010.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
Dalton Utilities	0.00	20.68

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WILCOX COUNTY

Population	9,255
Population served by public supply—Groundwater	3,190
Population served by public supply—Surface water	0
Acres irrigated	14,290

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.27	0.00	0.27	–	–
Domestic	0.45	0.00	0.45	0.67	0.00
Commercial/public use	0.02	0.00	0.02	0.05	0.00
Industrial	0.00	0.00	0.00	0.00	0.00
Public-supply losses	–	–	–	0.03	–
Public wastewater treatment	–	–	–	–	1.99
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	5.08	1.25	6.33	6.32	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.06	0.50	0.56	0.56	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	5.88	1.75	7.63	7.63	1.99

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Abbeville	0.09	0.00
City of Rochelle	0.10	0.00
Town of Pineview	0.04	0.00

2010 Withdrawals by Source

Public-Supply Deliveries¹ by Use Category

¹Deliveries from public supply typically do not equal withdrawals because of inter-county deliveries and purchases, public use, and system losses.

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WILKES COUNTY

Population	10,593
Population served by public supply—Groundwater	750
Population served by public supply—Surface water	4,860
Acres irrigated	30

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY
[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.06	0.96	1.02	–	–
Domestic	0.37	0.00	0.37	0.85	0.00
Commercial/public use	0.00	0.00	0.00	0.11	0.00
Industrial	0.00	0.00	0.00	0.29	0.00
Public-supply losses	–	–	–	0.14	–
Public wastewater treatment	–	–	–	–	0.62
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	0.06	0.02	0.08	0.08	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.00	0.43	0.43	0.43	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	0.49	1.41	1.90	1.90	0.62

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]		
NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Washington	0.00	0.96
City of Tignall	0.04	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

WILKINSON COUNTY

Population	9,563
Population served by public supply—Groundwater	5,470
Population served by public supply—Surface water	100
Acres irrigated	80

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	0.67	0.00	0.67	–	–
Domestic	0.30	0.00	0.30	0.76	0.00
Commercial/public use	0.00	0.00	0.00	0.09	0.00
Industrial	12.60	1.18	13.78	13.84	1.40
Public-supply losses	–	–	–	0.06	–
Public wastewater treatment	–	–	–	–	0.30
Mining	0.01	0.00	0.01	0.01	1.17
Irrigation—Crop	0.04	0.01	0.05	0.05	0.00
Irrigation—Golf course	0.00	0.00	0.00	0.00	0.00
Livestock/aquaculture	0.01	0.01	0.02	0.02	0.00
Thermoelectric power	0.00	0.00	0.00	0.00	0.00
TOTAL	13.63	1.20	14.83	14.83	2.87

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
212—Kaolin and ball clay	12.24	1.18
327—Stone, clay	0.32	0.00
322—Paper, pulp	0.04	0.00

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Gordon	0.25	0.00
City of Irwinton	0.20	0.00
City of McIntyre	0.10	0.00
Town of Ivy	0.07	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

WORTH COUNTY

Population	21,679
Population served by public supply—Groundwater	9,540
Population served by public supply—Surface water	0
Acres irrigated	44,275

2010 WATER WITHDRAWALS AND ESTIMATED USE, IN MILLION GALLONS PER DAY

[–, not applicable]

Category	Withdrawals			Total use ¹	Surface-water returns
	Ground-water	Surface water	Total		
Public supply	1.21	0.00	1.21	–	–
Domestic	0.91	0.00	0.91	1.62	0.00
Commercial/public use	0.00	0.00	0.00	0.18	0.00
Industrial	0.00	0.00	0.00	0.04	0.00
Public-supply losses	–	–	–	0.28	–
Public wastewater treatment	–	–	–	–	3.96
Mining	0.00	0.00	0.00	0.00	0.00
Irrigation—Crop	11.80	3.78	15.58	15.58	0.00
Irrigation—Golf course	0.06	0.00	0.06	0.06	0.00
Livestock/aquaculture	0.06	0.15	0.21	0.21	0.00
Thermoelectric power	0.00	0.20	0.20	0.20	0.00
TOTAL	14.04	4.13	18.17	18.17	3.96

¹Total use is total withdrawal plus public supply deliveries and losses.

Withdrawals by Major Industrial Groups

[NAICS, North American Industrial Classification System code]

NAICS	Groundwater	Surface water
None	–	–

Withdrawals by Major Public Suppliers

Name	Groundwater	Surface water
City of Sylvester	1.03	0.00
City of Poulan	0.06	0.00
Town of Sumner	0.03	0.00
City of Warwick	0.03	0.00

2010 Withdrawals by Source

Public-Supply Deliveries by Use Category

Surface-Water Withdrawals by Year

Groundwater Withdrawals by Year

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