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SPATIAL DISTRIBUTION OF ESTIMATED WATER USE

FINAL REPORT

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Final Report

St. Johns River Water Management District | February 2014

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FINAL REPORT

Prepared for

St. Johns River Water Management District

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1 BACKGROUND

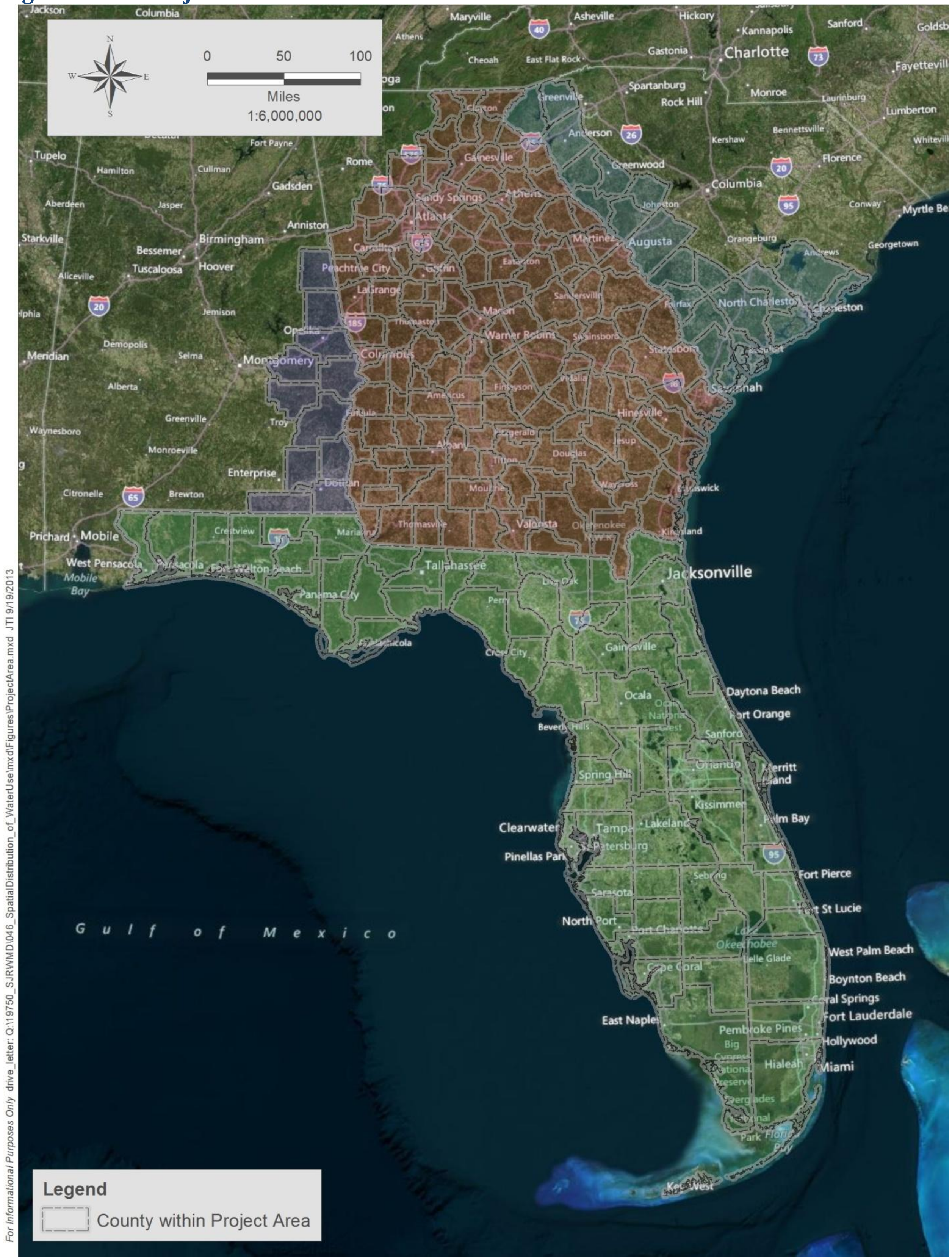
The St. Johns River Water Management District (SJRWMD) created the Water Conservation and Demand Management Program in Fiscal Year 2008-2009. The goal of the program is to develop and implement innovative water-conservation and demand-management initiatives and to develop and analyze metrics to demonstrate the effectiveness of water conservation planned or implemented by SJRWMD.

In 2013, The Balmoral Group, LLC, generated parcel-level consumption estimates for the US Geological Survey (USGS) Peninsular Florida Model (MEGA Model) domain. The results of Balmoral's work are documented in the 2013 report, *Development of Parcel-Level Urban Water Use Estimates for the U.S. Geological Survey Peninsular Florida Model for Groundwater Recharge and Water Conservation Potential*. SJRWMD used water-consumption billing data from 26 utilities to develop profiles of water use for residential consumers as a percentage of customers within average levels of consumption by thousand-gallon. Balmoral used these profiles to assign single-family (SF) and multi-family (MF) parcels a monthly water use typically observed for the sample utilities and distributed randomly. Benchmarks of monthly water use per square foot of heated area were used for commercial, industrial, and institutional (CII) categories. These monthly water-use estimates serve as a proxy for account-level data. Balmoral also estimated monthly water use for seven counties in Georgia. In Georgia, where statewide standardized county appraiser data do not exist, the National Land Cover Database (NLCD) and census data were used to estimate water use.

To expand on the effort completed by Balmoral, SJRWMD contracted with Jones Edmunds & Associates, Inc. to generate monthly water-use estimates from January 2000 to December 2012 for 242 counties across Florida, Georgia, Alabama, and South Carolina (Figure 1). For this effort, Jones Edmunds disaggregated county-level USGS and SJRWMD water-use estimates by spatially distributing these estimates to parcels (in Florida) or census blocks (outside of Florida). As directed by SJRWMD, Jones Edmunds used the SJRWMD water-use estimate methodology, which estimates water use by land use and was previously implemented on a smaller scale as part of the Balmoral project. The results of the SJRWMD water-use estimates were then scaled to county-level USGS and SJRWMD yearly water-use estimates. This report summarizes the methodology employed by Jones Edmunds and provides the results of the spatial distribution.

The goal of this work was an "80/20 analysis" approach to spatially distribute existing county-level water-use estimates for use by SJRWMD, specifically in the North Florida-Southeast Georgia (NFSEG) groundwater modeling effort. The calculation unit for the NFSEG modeling effort is expected to be 2,500-feet-X-2,500-feet. Individual parcel- or census block-level estimates should be considered in this context.

Figure 1 Project Domain



2 DEVELOPMENT OF SPATIAL DATA FOR WATER USE ESTIMATES

SJRWMD's water-use-estimate methodology is based on customer class information available in parcel data. Jones Edmunds obtained 2012 parcel data from the Florida Department of Revenue (FDOR), 2010 census block data, and 2006 NLCD data from SJRWMD. We also obtained additional spatial data from SJRWMD and others as needed. We developed spatial data before applying SJRWMD water-use-estimate methodology, which is discussed in Section 4.

2.1 Parcels Within Florida

The 2012 parcel data included attributes developed by FDOR, including City, County, Customer Class, Year Built, etc. We assigned each parcel to a water management district as appropriate. We used water supply and wastewater treatment service areas provided by SJRWMD to assign water and wastewater utilities to each parcel. Service areas were generally available for the SJRWMD and adjacent areas. Where utility service area boundaries were not available, we used the 2010 city boundaries as a surrogate for utility service areas. We used the 2012 Florida Department of Health (FDOH) septic facility locations to determine if parcels within a wastewater service area used septic for wastewater disposal. Parcels not within a public supply service area or surrogate were assigned as self-supply for consumption source. Parcels not within a wastewater treatment service area or surrogate or parcels identified in the FDOH septic data were assigned as septic for disposal.

There are over nine million parcels in Florida. Approximately five million were assigned water-use estimates based on SJRWMD's customer class methodology (Section 4).

2.2 Census Blocks and NLCD Outside of Florida

GIS Associates developed spatial databases outside of Florida for the relevant counties in Georgia, Alabama, and South Carolina. There were 175 counties and 361,121 Census blocks in the portion of the NFSEG domain covering Georgia, Alabama, and South Carolina. SJRWMD provided most of these data, including:

- Block-level data from the 2010 Census (spatial boundaries and housing unit totals).
- City boundaries (from the 2010 Census).
- Golf course locations.
- Power plant locations.
- 2006 National Land Cover Database (NLCD) from USGS.

USGS county water-use estimates for 2000 and 2005 were obtained from SJRWMD and USGS.

2.3 Individual Large Users

Jones Edmunds obtained power-generation and recreational-facility point data from SJRWMD and water-use permittee (WUP) data from SJRWMD and the Northwest Florida Water Management District (NWFWMD). The data for power-generation facilities, recreational facilities, and SJRWMD WUPs were provided as point data. The NWFWMD WUP data were provided as table data with spatial coordinates for some users, which Jones Edmunds transformed into point data. NWFWMD WUP data without spatial coordinates were not included in our workflow. The point data were assigned to the containing city, county, and water management district as appropriate. The point data were also assigned to the containing parcel.

There are 275 power-generation facility points within the project area. These facility locations were used to distribute power-generation consumptive-use estimates (Section 4).

There are approximately 5,000 recreational points within the project area. Of these, approximately 1,800 are identified as golf courses. The golf course locations were used to distribute golf course irrigation-use estimates (Section 4).

NWFWMD provided approximately 8,000 WUP well locations and SJRWMD provided approximately 18,000 WUP well locations within the project area, though less than 3,000 well locations were related to water-use data and relevant to our workflow. The largest WUP data well locations (daily average flows greater than 1 mgd) were also used to create an individual large user dataset and to assign water-use estimates to corresponding power-generation facilities or golf courses as applicable (Section 4).

3 DEVELOPMENT OF CLIMATE CONDITIONS

SJRWMD outdoor water-use methodology for the SF residential customer class is based on irrigation type and climate condition. To determine "wet," "dry," and "normal" climate conditions across the project area, Jones Edmunds obtained North American Land Data Assimilation Systems (NLDAS) rainfall data from SJRWMD in the form of station points and hourly rainfall. The NLDAS rainfall data included over 2,000 stations covering our project area – though no data were provided for portions of Berkeley and Charleston Counties, South Carolina. We summarized this data to monthly rainfall totals for each station from 1980 to 2012. We then developed 80th and 20th percentile thresholds of monthly rainfall distributions by climate zone. We used US Department of Agriculture (USDA) plant-hardiness zones – which we obtained from the USDA website and are developed based on average winter temperatures – as a surrogate for climate zones covering our project area.

We used the 80th percentile as the breakpoint between wet and normal climate conditions and the 20th percentile as the breakpoint between dry and normal conditions, which is consistent with work previously completed to estimate agricultural irrigation demand within the NFSEG model domain. The 80th and 20th percentiles of monthly rainfall for each plant-hardiness zone were determined based on the monthly NLDAS rainfall data available within that zone from 1980 to 2012. We then assigned each NLDAS station to a plant-hardiness zone, compared NLDAS points within a plant hardiness zone to that zone's average statistics, and determined the climate condition for each station by month from January 2000 to December 2012 based on the 80th and 20th percentiles. This was similar to the way SJRWMD compared the NEXRAD data to weather stations in their initial analysis (Section 4).

Subsequently, we assigned each parcel (within Florida) or Census block (outside of Florida) to the nearest NLDAS station. The climate condition associated with each parcel or census block was used along with an assigned irrigation type and outdoor use distribution to determine the appropriate outdoor water use by month (Section 4).

4 ASSIGNMENT OF WATER-USE ESTIMATES

Jones Edmunds assigned monthly indoor and outdoor water-use estimates by parcel (within Florida) or census block (outside of Florida). GIS Associates, Inc. generated water-use estimates for areas outside of Florida. Jones Edmunds generated estimates from January 2000 to December 2012 for 242 counties across Florida, Georgia, Alabama, and South Carolina (Figure 1). We used the SJRWMD customer class methodology for water-use estimates that was previously developed on separate projects. More information on SJRWMD's methodology for customer-class estimates is provided in *Development of Parcel-Level Urban Water Use Estimates for the U.S. Geological Survey Peninsular Florida Model for Groundwater Recharge and Water Conservation Potential* (Balmoral Group, 2013). In general, the methodology can be divided into two approaches: Within Florida and Outside of Florida.

We also assigned water use based on WUP well data to power-generation facilities and golf courses as available and spatially distributed annual water-use estimates for these locations when WUP data were not available. Lastly, we created a subset of the WUP well data representing CII individual large users.

4.1 FLORIDA

Jones Edmunds assigned indoor and outdoor water use by parcel within Florida by customer class, following the SJRWMD methodology. We also generated individual large-user estimates for power-generation facilities, golf courses, and CII large users. Example figures of the resulting spatially distributed water use are provided in Appendix C.

4.1.1 CUSTOMER-CLASS WATER-USE ESTIMATES BY PARCEL

We grouped parcels into 12 customer classes based on the 2013 FDOR Land-Use Code (Table 1). Descriptions of each Land-Use Code (000-099) are provided in *User's Guide for 2013 Property Tax Data Files* (FDOR, 2013).

Table 1 Customer Class Aggregation

Customer Class	Department of Revenue Land-Use Code
Single Family	001, 002
Multi-Family	003, 004, 005, 008
Hospitals	073, 085
Hotels	39
Indoor Recreation	032, 034, 071, 077, 079
Live-In Care	006, 007, 074, 075, 078
Office Buildings	017, 018, 019, 023, 024, 076, 081, 086, 087, 088, 089, 090
Restaurants	021, 022, 033
Retail	011, 012, 013, 014, 015, 016, 025, 026, 027, 029, 030
Schools	072, 083, 084
Industrial (Manufacturing)	020, 041, 042, 043, 044, 045, 046, 047, 091
Warehousing/Storage	048, 049

The methodology to assign indoor water use differed for residential, which included SF and MF customer classes, and CII, which included the remaining 10 customer classes. We assigned residential indoor water use based on SJRWMD-provided load distributions, which were based on a sampling of 21 utilities (Table 2). We distributed the indoor water-use estimates stochastically by creating a random number for each parcel with a SF equivalent equal to one. We then assigned indoor loads proportionally based on Table 2. Parcels with a SF equivalent greater than 1 were assigned 3,413 gallons per month—which is based on an MF-specific distribution not shown below—multiplied by the SF equivalent. For example, a parcel with SF equivalent equal to 10 was assigned 34,130 gallons for each month. The FDOR Year Built was used to zero out estimates prior to development of the parcel. For example, a parcel with Year Built equal to 2004 was not assigned indoor water use for January 2000 through December 2003. This is the same methodology previously applied by Balmoral (2013).

Table 2 Load Distribution for Indoor Water Use

Gallons per Month	Percent of Single Family Equivalents
0	2.76%
1,000	20.58%
2,000	20.25%
3,000	17.16%
4,000	12.95%
5,000	8.27%
6,000	5.37%
7,000	3.55%
8,000	2.18%
9,000	1.52%
10,000	5.40%

We assigned SF parcels a SF equivalent of 1. MF parcels were assigned an SF equivalent based on the FDOR Number of Residential Units (NORESUNTS) attribute when available. Since assignment of FDOR NORESUNTS is not uniformly developed across counties or properties, we confirmed these values were representative of the individual units within the community using the FDOR Total Living Area. We considered NORESUNTS to be representative if the square footage per unit was between 600 and 2,000. This filter allowed us to use FDOR NORESUNTS as the SF equivalent value for over 85% of the MF parcels. We assigned the remaining MF parcels a SF equivalent based on FDOR Total Living Area divided by the average square foot per MF unit, which we determined to be 1,071 square feet per unit based on previous work (Balmoral, 2013). SF equivalents were assigned as whole numbers, and no MF parcels were assigned a SF equivalent less than 1.

We assigned indoor water use for CII customer classes based on use-per-square-foot estimates (Table 3). The parcel total living area was determined from the FDOR Total Living Area when available. When not available, we assigned average Total Living Areas by customer class. This is the same methodology previously applied by Balmoral (2013). We also used the FDOR Structure attribute to zero out estimates when parcels did not have a building present (Structure = No) and therefore would not have an associated indoor water use. Similar to residential estimates, the FDOR Year Built was used to zero out estimates prior to development of the parcel.

Table 3 Water Use Per Area for CII Customer Classes

Customer Class	Gallons per Square Foot per Month	Average Total Living Area (Square Foot)
Hospitals	1.22	123,799
Hotels	6.95	34,198
Indoor Recreation	1.52	12,275
Industrial (Manufacturing)	1.51	38,779
Live-In Care	6.08	57,459
Warehousing/Storage	2.13	21,556

Customer Class	Gallons per Square Foot per Month	Average Total Living Area (Square Foot)
Office Buildings	3.04	7,195
Restaurants	14.60	4,610
Retail	2.43	24,510
Schools	4.87	65,218

We assigned outdoor water use (irrigation) for the SF customer class. We assigned irrigation type by creating a random number for each SF parcel and stochastically assigning SF parcels as either hose irrigation or in-ground system irrigation based on proportions provided by SJRWMD; 49.91% were assigned hose irrigation and 50.09% were assigned in-ground system irrigation. We generated the random number for SF outdoor use independently of the random number generated for indoor use. We varied outdoor-use estimates within each irrigation type based on distributions provided by SJRWMD and the climate condition for a given month, which was determined based on associated NLDAS station data (Section 3). We estimated dry and wet climate-condition outdoor use using the same distributions as normal climate conditions but adjusted outdoor use for dry and wet conditions using the multiplication factors in Table 4.

Table 4 Climate-Condition Multipliers for Hose and In-ground Systems

Month	Dry Conditions		Wet Conditions	
	Hose	In-Ground	Hose	In-Ground
January	1.00	1.10	1.00	0.85
February	1.00	1.10	1.00	0.85
March	1.00	1.10	1.00	0.85
April	1.00	1.10	0.90	0.80
May	1.00	1.20	0.90	0.80
June	1.00	1.20	0.90	0.80
July	1.00	1.20	0.90	0.80
August	1.00	1.20	0.90	0.80
September	1.00	1.10	0.90	0.80
October	1.00	1.10	1.00	0.85
November	1.00	1.10	1.00	0.85
December	1.00	1.10	1.00	0.85

These multiplication factors were based on account-level data summarized by SJRWMD for wet, dry, and normal climate conditions. SJRWMD had previously generated wet and dry climate-condition load distributions for the two irrigation types (described below), but we observed significant variability in these distributions, likely due to data limitations. The observed variability conflicted with the expected seasonality of outdoor water-use data and the expected relationship between climate conditions, such as higher water use being expected in dry climate conditions. Therefore, we discarded the wet and dry climate-condition distributions in favor of wet and dry climate-condition adjustment factors applied to the normal climate-condition distributions. By using the normal climate-condition distributions and adjusting the magnitude of water use for dry or wet climate conditions, we maintained the expected seasonality in the outdoor water-use data and the expected relationship between different climate conditions. This approach produced the most robust dataset possible given the limited data available for dry and wet climate conditions. Tables 5 and 6 provide the outdoor water-use distributions for normal climate conditions.

SJRWMD staff previously analyzed account-level monthly consumption data from 26 public supply utilities within the District. Approximately 290,000 single family accounts were analyzed, with monthly consumption available up to nine years for some utilities. Where separate irrigation meter data was not available, SJRWMD separated indoor and outdoor use using the minimum month method. SJRWMD used climate station data (from 24 stations with long periods of record and spatially distributed throughout SJRWMD) to develop a 30-year running average and standard deviation for monthly rainfall from January 2003 through December 2012. They also performed a spatial analysis to associate the closest weather station to each of the utility service areas that provided account level data. NEXRAD rainfall monthly totals for each utility were then compared to the associated weather station's 30-year running statistics for each month. SJRWMD classified each month as wet, normal, or dry based on the NEXRAD data (greater than or less than 1 standard deviation from the long-term data determining wet and dry conditions, respectively). SJRWMD determined the standard deviations to be the 15.87th and 84.13th percentile on average. After each month over the period of record was categorized as wet, normal, or dry, outdoor load profiles, which are the percentage of accounts at each 1,000 gallons of outdoor consumption, were developed for each month and each climatic condition for hose irrigators and in-ground irrigators. The results of this analysis were 72 separate load profiles for outdoor use (12 months X 3 climate conditions X 2 irrigator types).

4.1.2 Water Use Estimates for Individual Users

Jones Edmunds assigned water use to three types of individual large users: power-generation facilities, golf courses, and other CII large users. For these assignments, we considered WUP data as the best-available data. WUP data were provided by SJRWMD and NWFWMD (Section 2). When WUP data were not available, we distributed annual water-use estimates (Section 5) equally to each location. Jones Edmunds did not estimate water use for agricultural or public supply large users. Agricultural water use was not considered as part of this project, and public supply water use is distributed at the parcel level.

WUP data provided by SJRWMD contained average annual water use for 2001 and 2006 through 2010. WUP data provided by NWFWMD contained monthly water use from 2000 to 2010. To distribute these estimates, we summarized monthly water-use data into annual data. When annual data were not available for the entire period (2000-2012), we assigned the average of available annual data to the missing years for each well. For example, if data at a given well location were only available for 2010, the 2010 annual use was assigned to 2000-2009, 2011, and 2012. If no data were available for a given user, we discarded that WUP well location. After filling in data gaps, we generated monthly water-use estimates from the average annual estimates for each user.

For CII individual large users, we selected a subset of the CII well locations (Section 2). We did not reconcile CII individual large users with our customer-class estimates since we were unable to establish a consistent spatial link between the WUP well locations and the appropriate corresponding parcels. In other words, WUP well locations associated with a given CII location were not consistently spatially coincident with the parcel boundary for the same CII location. Therefore, we expect some overlap between the CII individual large-user estimates and CII estimates generated by customer class. Since the individual large-user estimates should be inherently larger than the CII estimates generated by customer class, we do not expect this overlap to affect summarized CII water use by county.

SJRWMD-provided power-generation facilities and golf courses did not contain an associated water use. We used the WUP data to assign an annual water use as available and when spatially coincident. Where WUP data were not available for power-generation facilities, we distributed the consumptive water use estimated by county from USGS or SJRWMD equally to the remaining power-generation facilities minus any water use assigned from WUP data for power-generation facilities within a given county. SJRWMD annual water-use estimates were used in favor of USGS annual water-use estimates when available for an entire county. We considered power-generation consumptive use to consist of 100% fresh groundwater withdrawals when reported or 5% of fresh surface-water withdrawals when no groundwater withdrawals were reported.

Table 5 In-ground System Irrigation Distribution for Normal Climate Conditions

Gallons	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	5.8%	7.7%	7.1%	4.1%	7.7%	3.5%	5.4%	8.7%	9.5%	9.1%	8.3%	5.9%
1000	9.6%	12.7%	10.8%	6.6%	6.8%	5.9%	8.7%	10.5%	9.7%	10.6%	10.1%	10.1%
2000	13.4%	15.6%	13.3%	10.2%	9.5%	8.6%	11.9%	12.4%	11.3%	12.2%	12.9%	13.7%
3000	13.7%	14.2%	13.1%	11.6%	10.5%	9.8%	12.2%	11.6%	11.3%	11.2%	12.2%	13.3%
4000	11.5%	11.3%	11.1%	11.0%	9.4%	9.6%	10.9%	9.9%	9.9%	9.3%	10.1%	10.9%
5000	8.9%	8.2%	8.6%	9.2%	8.1%	8.4%	8.7%	7.5%	8.0%	7.4%	7.7%	8.5%
6000	6.9%	6.0%	6.5%	7.3%	6.6%	7.5%	7.1%	5.9%	6.3%	5.9%	5.9%	6.5%
7000	5.2%	4.4%	4.9%	6.2%	5.2%	6.3%	5.5%	4.7%	5.2%	4.9%	4.7%	4.9%
8000	3.9%	3.2%	3.7%	4.8%	4.2%	5.2%	4.4%	3.8%	3.9%	3.9%	3.7%	3.7%
9000	3.1%	2.6%	3.0%	3.8%	3.5%	4.4%	3.7%	3.2%	3.2%	3.2%	3.1%	3.0%
10000	2.4%	2.0%	2.4%	3.3%	2.9%	3.7%	3.0%	2.8%	2.8%	2.7%	2.5%	2.5%
11000	2.1%	1.7%	2.0%	2.8%	2.5%	3.3%	2.5%	2.3%	2.3%	2.2%	2.1%	2.1%
12000	1.8%	1.5%	1.7%	2.4%	2.2%	2.9%	2.2%	2.0%	1.8%	1.9%	2.0%	1.9%
13000	1.6%	1.2%	1.5%	2.2%	1.9%	2.5%	1.8%	1.8%	1.6%	1.7%	1.8%	1.6%
14000	1.2%	1.0%	1.2%	1.8%	1.6%	2.1%	1.5%	1.4%	1.3%	1.3%	1.5%	1.3%
15000	1.2%	0.9%	1.1%	1.6%	1.5%	1.9%	1.4%	1.3%	1.2%	1.2%	1.3%	1.2%
16000	0.9%	0.8%	1.0%	1.4%	1.4%	1.6%	1.2%	1.2%	1.1%	1.1%	1.2%	1.0%
17000	0.8%	0.6%	0.8%	1.1%	1.3%	1.4%	1.0%	1.0%	1.0%	1.0%	1.0%	0.9%
18000	0.7%	0.6%	0.7%	1.0%	1.1%	1.2%	1.0%	1.0%	0.8%	0.9%	0.9%	0.8%
19000	0.6%	0.5%	0.6%	0.9%	1.0%	1.1%	0.8%	0.9%	0.8%	0.8%	0.8%	0.8%
20000	0.6%	0.4%	0.6%	0.8%	0.9%	1.0%	0.6%	0.7%	0.6%	0.7%	0.7%	0.6%
21000	0.5%	0.4%	0.6%	0.7%	0.9%	0.9%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%
22000	0.5%	0.4%	0.5%	0.7%	0.8%	0.8%	0.5%	0.5%	0.6%	0.5%	0.6%	0.5%
23000	0.4%	0.3%	0.5%	0.6%	0.7%	0.7%	0.4%	0.4%	0.5%	0.5%	0.6%	0.5%
24000	0.4%	0.3%	0.4%	0.5%	0.6%	0.7%	0.4%	0.4%	0.4%	0.4%	0.5%	0.4%
25000	0.3%	0.2%	0.3%	0.5%	0.6%	0.6%	0.3%	0.3%	0.4%	0.4%	0.4%	0.3%

Gallons	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
26000	0.2%	0.1%	0.2%	0.3%	0.5%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
27000	0.2%	0.1%	0.2%	0.2%	0.5%	0.4%	0.2%	0.3%	0.3%	0.3%	0.3%	0.2%
28000	0.2%	0.1%	0.2%	0.3%	0.4%	0.3%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%
29000	0.1%	0.1%	0.1%	0.2%	0.4%	0.3%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%
30000	1.2%	0.8%	1.4%	1.9%	4.7%	2.8%	1.8%	2.4%	2.8%	2.9%	2.0%	1.7%

Table 6 Hose Irrigation Distribution for Normal Climate Conditions

Gallons	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
0	22.5%	23.6%	22.3%	18.9%	22.7%	19.8%	24.1%	28.2%	25.8%	28.4%	26.9%	22.9%
1000	27.2%	29.5%	29.5%	25.1%	23.6%	24.7%	27.0%	26.7%	27.7%	27.3%	29.4%	27.8%
2000	22.2%	22.5%	22.9%	23.4%	20.7%	22.3%	21.7%	20.2%	20.4%	19.3%	21.2%	22.7%
3000	13.8%	12.1%	12.7%	15.0%	13.5%	14.5%	12.9%	11.3%	12.1%	11.0%	11.0%	12.9%
4000	6.7%	5.6%	5.9%	8.1%	7.4%	8.1%	6.5%	5.8%	6.0%	5.7%	5.0%	6.3%
5000	3.1%	2.6%	2.7%	3.9%	3.9%	4.2%	3.0%	2.9%	3.0%	2.9%	2.3%	2.8%
6000	1.4%	1.3%	1.2%	1.9%	2.1%	2.1%	1.5%	1.5%	1.5%	1.6%	1.2%	1.3%
7000	0.7%	0.7%	0.6%	1.0%	1.3%	1.1%	0.8%	0.9%	0.9%	0.9%	0.6%	0.8%
8000	0.4%	0.5%	0.4%	0.6%	0.9%	0.6%	0.5%	0.6%	0.5%	0.5%	0.4%	0.4%
9000	0.3%	0.4%	0.3%	0.4%	0.6%	0.4%	0.3%	0.3%	0.4%	0.4%	0.3%	0.4%
10000	1.5%	1.3%	1.6%	1.8%	3.4%	2.4%	1.5%	1.6%	1.8%	1.9%	1.6%	1.6%

We applied the same approach for golf course locations. We used golf-course irrigation estimates available from USGS (surface water and groundwater) and recreational/aesthetic irrigation estimates available from SJRWMD (surface water and groundwater). SJRWMD annual water-use estimates were used in favor of USGS annual water-use estimates when available for an entire county.

Similar to WUP data associated with CII parcels, we did not reconcile power-generation-facility or golf-course-location water-use estimates with our customer-class estimates. Also similar to CII individual large-user estimates, we expect some overlap between the power-generation-facility estimates and CII estimates generated by customer class, though again the power-generation-facility estimates should be inherently larger than the CII estimates generated by customer class. We do not expect overlap between the golf course location estimates and the customer-class estimates since outdoor water use was only estimated for the SF customer class.

4.2 Outside of Florida

GIS Associates assigned indoor and outdoor water use by Census block and large individual users outside of Florida. The approaches are similar to those applied within Florida with variation given the data types available. Example figures of the resulting spatially distributed water use are provided in Appendix C.

4.2.1 Water-Use Estimates by Census Block

For Public Supply (PS), we distributed the USGS county water-use totals for groundwater and surface water to PS Census blocks within each county in proportion to each block's percentage of the county's housing units from the 2010 Census. Because water-service-area boundaries were not available outside of Florida, Census blocks were assumed to be publicly supplied if they fell within municipal boundaries. (The source of these municipal boundaries was the 2010 Census provided by SJRWMD.) We used the USGS-reported county PS groundwater and surface water use in 2000 and 2005. We interpolated the annual values for groundwater and surface water for 2001-2004, and we used the 2005 values as a proxy for 2006-2012.

We derived the monthly values by applying historic monthly average indoor and outdoor use from SJRWMD data, adjusting the outdoor use for "wet," "dry," and "normal" climate conditions using NLDAS rainfall data, and applying the weighted average of hose (49.91%) and in-ground (50.09%) irrigation methods to the outdoor use for each block. Census blocks were assigned "wet," "dry," and "normal" climate conditions based on the NLDAS data point closest to each block. Monthly indoor use was assigned 3,479 gallons per housing unit based on SJRWMD data.

Monthly outdoor use was assigned values based on Table 7, also based on SJRWMD data. Because a Census block typically contains many housing units, we determined that it was preferable to assume that each block contained the average mix of hose and in-ground irrigation rather than one or the other. Therefore, the values in Table 7 reflect the weighted average of hose irrigation (49.91%) and in-ground irrigation (50.09%) applied to each block for "wet," "dry," and "normal" climate conditions. Whether a particular month over the 13-year period was considered "wet," "dry," or "normal" was based upon the NLDAS data point closest to each block.

Table 7 Housing Unit Monthly Outdoor Water Use (Gallons)

Month	Dry	Normal	Wet
JAN	4,247	3,948	3,498
FEB	3,726	3,469	3,082
MAR	4,161	3,866	3,423
APR	5,076	4,711	3,875
MAY	5,952	5,146	4,228
JUN	6,029	5,206	4,273
JUL	4,907	4,245	3,490
AUG	4,761	4,114	3,380
SEP	4,556	4,225	3,472
OCT	4,553	4,220	3,722
NOV	4,379	4,058	3,577
DEC	4,360	4,048	3,582

For Domestic Self-Supply (DSS), we distributed the USGS county water-use totals for groundwater and surface water to DSS Census blocks within each county in proportion to each block's percentage of the county's housing units from the 2010 Census. Because water-service-area boundaries were not available outside of Florida, Census blocks were assumed to be self-supplied if they were not within municipal boundaries. (The source of these municipal boundaries was the 2010 Census provided by SJRWMD.) We used the USGS-reported county DSS groundwater and surface water use in 2000 and 2005. We interpolated the annual values for groundwater and surface water for 2001-2004, and we used the 2005 values as a proxy for 2006-2012. The monthly values were derived by applying historic monthly average indoor and outdoor use from SJRWMD data, adjusting the outdoor use for "wet," "dry," and "normal" climate conditions using NLDAS rainfall data, similar to the Public Supply approach.

For Industrial Self-Supply (IND), we distributed the USGS county water-use totals for groundwater and surface water to individual Census blocks within each county in proportion to each block's percentage of the county's high-intensity development extracted from the National Land Cover Database (NLCD) data. We used the USGS-reported county IND groundwater and surface water use in 2000 and 2005. We interpolated the annual values for groundwater and surface water for 2001-2004, and we used the 2005 values as a proxy for 2006-2012. The monthly values were derived by dividing the annual values by 12 and were converted to gallons per month. All use was considered to be indoor use.

To spatially distribute these data, we joined the USGS county water-use totals (groundwater and surface water) to the county boundaries. We then associated the county boundaries and associated water use to the block feature class from the 2010 Census. To identify land-use types likely to include IND uses, we extracted the high-intensity development category (24) from the NLCD dataset (from the NLCD Legend Land Cover Class Descriptions), summarized the acreage by census block and county, and joined it to the census block feature class. The county groundwater and surface water totals were then distributed to census blocks in proportion to each block's percentage of the county's high-intensity development acreage.

Additional work was performed for counties with IND water use estimates greater than 10 MGD. For these counties, industries with the largest use were identified by Standard Industrial

Classification (SIC) code in USGS water use reports for Georgia (2000 and 2005) and Alabama (2005). These were then located using facility location data from the U.S. Environmental Protection Agency. The portal for the facility data is http://www.epa.gov/enviro/html/fii/fii_query_java.html. Using this portal, we queried the database by state, county, and SIC code. This produced a map of the locations of all facilities in the specified county with that particular SIC code. This map was used as a reference to manually identify the census blocks in ArcGIS containing the locations. The water use associated with that SIC code was then distributed to these blocks in proportion to each block's number of facilities. For each of these counties, any remaining IND use was distributed using the NLCD method previously described.

Because the USGS reports were not available for South Carolina, the South Carolina Water Assessment was used instead. Figure 4-12 of this document depicts the ten largest surface and groundwater industrial use facilities and estimated water use in 2006. This 2006 estimated use was used as a proxy for the 2000–2012 values. Any remaining IND use was distributed using the NLCD method previously described.

Because of the size of the monthly water-use tables, separate tables were created as necessary for water-use type (PS, DSS, and IND), water-use source (groundwater and surface water), and year (2000-2012). A relationship class was created to relate each of these tables to the 2010 Census block feature class within the file geodatabase deliverable.

4.2.2 Water-Use Estimates for Individual Users

We assigned water use to two types of individual large users: Power Generation Facilities and Golf Courses. We did not estimate water use for agricultural, industrial (except for the largest users mentioned previously), or public supply large users. Agricultural water use was not considered as part of this project, and public supply and industrial water use are distributed at the parcel 2010 Census-block level.

For Golf Course (Recreational) Self-Supply, we distributed the USGS county water-use totals for groundwater and surface water proportionally to the number of golf courses in each county. The USGS reported county golf course water use separately in 2005, but it is not separated in the 2000 data. For that reason, 2005 was used as a proxy for all years. The monthly values were derived by dividing the annual values by 12. All use was considered to be outdoor use.

To spatially distribute these data, we joined the USGS county water-use totals to the county boundaries. We then joined the county boundaries and associated water use to the point feature class of golf course locations in which they were located. We summarized the number of courses falling within each county, and divided the county water use by that number. The result was applied equally to each course falling within the county. Note that 3 of the 138 counties with USGS-reported use had no golf course locations, and each of the 3 counties without courses had exactly 0.07 MGD of golf-course use reported by USGS. Because courses in these counties could not be identified using imagery (because the NLCD data were too generalized to locate golf courses), and because 0.07 MGD distributed evenly across each of these counties would be insignificant for modeling purposes, the small amount of golf course reported use in these 3 counties was not considered.

For Power Generation, we distributed the USGS county water-use totals for groundwater and surface water proportionally to the number of power plants in each county. We used the USGS-reported county power generation groundwater use in 2000 and 2005, and for any counties with power plants and no groundwater use, we used 5% of the surface water as an estimation of consumptive use. We interpolated the annual values for groundwater and surface water for 2001-2004, and we used the 2005 values as a proxy for 2006-2012. The monthly values were derived by dividing the annual values by 12 and were converted to gallons per month. All use was considered to be outdoor use.

To spatially distribute these data, we joined the USGS county water-use totals to the county boundaries. We then joined the county boundaries and associated water use to the point feature class of power plant locations in which they were located. We summarized the number of plants falling within each county, and divided the county groundwater and surface water use by that number. The result was applied equally to each plant falling within the county. All of the counties with USGS power generation use had one or more power plant locations, so all of the USGS water use was distributed using this method. However, there were 52 counties in the study area with no UGSG power generation reported use that contain power plants.

Similar to census block estimates, separate tables were created as necessary for water-use type (golf course and power generation), water-use source (groundwater and surface water), and year (2000-2012). A relationship class was created to relate each of these tables to the golf course and power plant feature classes within the file geodatabase deliverable.

5 ADJUSTMENT OF WATER-USE ESTIMATES

Jones Edmunds scaled water-use estimates by customer class to annual county-level water-use estimates developed by SJRWMD and USGS. Water-use estimates from SJRWMD for individual users based on WUP data were considered the best-available data (Section 4) and were not adjusted based on county-level annual estimates. For example, since power generation and golf course water-use estimates were based previously on either WUP data or annual water-use estimates, these data were not further adjusted. SJRWMD annual water-use estimates (Section 5.1) were used in favor of USGS annual water-use estimates (Section 5.2) when available for an entire county. Power generation, golf course, and CII individual large-user annual estimates were generated as described in Sections 5.1 and 5.2.

Annual water-use estimates were summarized by Public Supply and Self-Supply for a combination of SF, MF, and CII users. While SJRWMD was available more discretely for Self-Supply (available as SF+MF and CII explicitly), the larger grouping was used to be consistent with use categories available from USGS, which is necessary because the available USGS data do not provide self-supply use for commercial users explicitly. Table 8 describes the data used to scale customer-class estimates.

Table 8 Annual Water-Use Estimate Categories Used to Develop Adjustment Factors

Category	SJRWMD		USGS		
Public Supply	Public Supply Total Fresh Water Use		Public Supply Total Self-Supplied Withdrawals, Fresh		
SF, MF, CII Self-Supply	Domestic self-supply total fresh water use	Commercial/ industrial/institutional and mining/dewatering self-supply total fresh-water use	Domestic total self-supplied withdrawals, fresh	Industrial total self-supplied withdrawals, fresh	Mining total self-supplied withdrawals, fresh
Golf Course Self-Supply	Landscape/recreational/aesthetic self-supply total fresh-water use		Irrigation, golf courses total self-supplied withdrawals for golf courses, fresh		
Power	Thermoelectric power generation		Total thermoelectric power self-supplied		

Category	SJRWMD	USGS
Generation Self-Supply	self-supply total water use (fresh, listed saline removed)	groundwater withdrawals, fresh OR 5% of total thermoelectric power self-supplied surface water withdrawals, fresh

Similarly, the customer-class estimates developed as described in Section 4 were summarized by Public Supply and Self-Supply for a combination of SF, MF, and CII users. These totals were then compared for the 242 counties within our project area for each year for the project period (2000-2012). We used this comparison to develop yearly adjustment factors for each category (Public Supply and Self-Supply). These adjustment factors were then applied as multiplication factors to monthly customer-class data. This process yielded an adjusted dataset that distributed annual water-use estimates monthly from 2000 to 2012 to parcel- or census block-level data.

GIS Associates scaled water-use estimates by census block to annual county-level water-use estimates developed by USGS. Total PS and DSS water use (indoor and outdoor) was summarized for each county and compared with the USGS county totals. Multipliers were calculated to adjust the census block estimated water use for all blocks within a county to equal the USGS water use. The percentage of total use per block supplied by groundwater and surface water was based on the USGS percentages for the county in which the block is located. The final block monthly values were calibrated to USGS totals for groundwater and surface water and were provided in gallons per month.

Appendix A includes the adjustment factors developed for this project.

5.1 Development of SJRWMD Data

We used SJRWMD annual water-use estimates for the ten counties within Florida listed below. SJRWMD annual water-use estimates were available for the entire project period.

- Brevard
- Clay
- Duval
- Flagler
- Indian River
- Nassau
- Putnam
- St. Johns
- Seminole
- Volusia

We observed that SJRWMD annual estimates were generally in line with USGS annual estimates for 2000 and 2005. We also observed temporal trends during the project period for Public Supply (Table 9) and Domestic Self-Supply (Table 10) annual water-use estimates provided by SJRWMD. After observing these trends, we developed regression coefficients for annual water use from 2000 and 2005, since these years are available from USGS. These regression coefficients were used to fill in the gaps in the USGS annual water-use estimates as appropriate (Section 5.2). We did not observe significant temporal trends for CII Self-Supply, Landscape/Recreational/Aesthetic Self-Supply, or Power Generation Self-Supply.

Appendix B includes the annual water-use estimates used for this project.

5.2 Development of USGS Data

USGS annual water-use estimates were available for all counties within Florida, Georgia, Alabama, and South Carolina. However, USGS annual water-use estimates were only available for 2000 and 2005. To create a dataset covering the entire project period, we used regression techniques, with the 2000 and 2005 water-use estimates as independent variables.

For public supply, we used the regression coefficients that were developed based on the SJRWMD dataset and applied these coefficients to the USGS 2000 and 2005 water-use estimates

for the given years. For SF, MF, and CII self-supply, power generation self-supply, and golf course self-supply, we used linear interpolation between 2000 and 2005 USGS water-use estimates to generate water-use estimates for 2001-2004, and we applied the USGS 2005 water-use estimates for 2006-2012. This approach yielded a complete dataset of annual water-use estimates for the five categories noted in Table 8. We chose this simpler approach because we did not observe any significant trends in the SJRWMD water-use estimates for CII Self-Supply, Landscape/Recreational/Aesthetic Self-Supply, or Power Generation Self-Supply.
Appendix B includes the annual water-use estimates used for this project.

Table 9 Public Supply Regression Coefficients

SJRWMD PS	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
2000 Coefficient	1.000	0.510	0.475	0.476	0.139	0.000	0.431	0.354	0.387	0.360	0.218	0.283	0.432
2005 Coefficient	0.000	0.389	0.434	0.455	0.845	1.000	0.644	0.691	0.576	0.559	0.701	0.671	0.481
R-Squared	1.000	0.998	0.998	0.992	0.995	1.000	0.998	0.998	0.998	0.998	0.999	0.998	0.997

Table 10 Domestic Self-Supply Regression Coefficients

SJRWMD DSS	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
2000 Coefficient	1.000	0.400	0.420	0.455	0.492	0.000	0.019	0.421	0.370	0.366	0.504	0.608	0.473
2005 Coefficient	0.000	0.640	0.663	0.666	0.671	1.000	1.018	0.685	0.673	0.609	0.581	0.489	0.552
R-Squared	1.000	0.920	0.926	0.927	0.927	1.000	1.000	0.951	0.946	0.950	0.931	0.930	0.924

6 ASSUMPTIONS AND LIMITATIONS

The goal of this work was an "80/20 analysis" approach to develop spatially distributed water-use estimates (indoor and outdoor) for non-agricultural, developed land use. Water use estimates were developed by use type (Section 4) based on limited available data and simplified assumptions. Estimates were subsequently adjusted based on existing county-level estimates (Section 5). While these estimates have a variety of potential uses, we expect outdoor water use (irrigation) estimates will be used specifically in the NFSEG groundwater modeling effort to help develop potential recharge estimates. The grid size for the NFSEG modeling effort will be 2,500-feet-X-2,500-feet, and individual point-, parcel-, or census block-level estimates should be considered in this context. By contrast, water-use estimates developed for this project are not well-suited to develop a groundwater well package (such as that required for the NFSEG groundwater model) without further refinement. Jones Edmunds, in coordination with SJRWMD, noted limitations of this work based on data availability and assumptions made throughout the process, as listed below.

- Water-use estimates developed for this project are based on limited available data and simplified assumptions. Inconsistencies between sources of input data exist that may affect water-use estimates, which were not reconciled as part of this project. For example, there are point locations of power-generation facilities and golf courses that are within counties where water-use estimates are zero for the corresponding use category. Also, methodologies for Number of Residential Units, Total Living Area, and Year Built development may vary for different counties within Florida.
- Water-use estimates were not developed for agricultural land use as part of this project.
- Individual large-user water-use estimates (power generation, golf course, and CII large users) do not consider year built. In many cases, the best-available water-use data were only available for isolated years.
- Customer-class water-use estimates do not consider urban re-development. In Florida, water-use estimates were based on the 2012 FDOR land-use code and year built only. Outside of Florida, water-use estimates were based on the 2010 census block housing units.
- Indoor and outdoor water-use distributions are based on random numbers assigned state-wide (in Florida) and project-wide (outside of Florida). By contrast, indoor and outdoor load profiles were generated from utility-wide data.
- Outdoor water use was not considered for MF or CII customer classes.
- Service-area boundaries for public supply and wastewater disposal are static throughout the analysis period, as are municipal boundaries, which were used as a proxy for utility boundaries as needed.
- Yearly water-use estimates were only available for the entire analysis period from SJRWMD. Regression and gap-filling techniques were used outside of SJRWMD's data to produce water-use estimates for the entire analysis period.
- Only the groundwater portion of power-generation water use was considered consumptive. This assumption was applied to all counties except for counties with only reported surface-water use. For these counties, 5% of the surface-water use was considered to be consumptive as a simplifying assumption. In some cases, 5% may not be representative of consumptive use.
- Golf-course irrigation data were only available for 2005 outside of Florida. Accordingly, 2005 USGS estimates were used for the entire project period for Georgia, Alabama, and South Carolina.

7 FUTURE WORK

The results of this effort offer a reasonable approximation of consumptive use (indoor and outdoor) spatially distributed across 242 counties in Florida, Georgia, Alabama, and South Carolina. As more and/or better data become available, estimates can be refined or replaced. Ideally, withdrawals will be represented by point data (supply well) and outdoor use will be represented by polygon data (application area) or point data (injection well) as appropriate. In general, inconsistencies between sources of input data should be prioritized for manual corrections, and these priorities should consider the level of detail required for subsequent uses of this data. Jones Edmunds recommends the following efforts be considered in the future. We have separated these recommendations based on the potential impact to the spatial distribution of consumptive use versus application and disposal to help prioritize future work based on data needs.

7.1 REFINEMENT OF CONSUMPTIVE USE ESTIMATES

- Identification of additional data sources for water use associated with individual large users (power generation, golf course, and CII large users). For example, actual consumptive use for power-generation facilities should be collected because these locations are a potential source of significant use.
- Reconcile individual large-user estimates with customer-class estimates to avoid potential counting of water use twice.
- Supplement customer-class water-use estimates with account-level data when available. This may include utility data or WUP data.
- Refine service-area boundaries for public supply as better data is obtained.

7.2 REFINEMENT OF APPLICATION AND DISPOSAL ESTIMATES

- Relate golf course outdoor water use to the irrigated area for better spatial representation.
- Identification of additional large recharge features (e.g., land-application sites, including rapid infiltration basins, leaky wetland systems and sprayfields) as supplemental data.
- Link customer-class estimates to wastewater outfall locations for better spatial representation.
- Quantify outdoor use for MF and CII customer classes.
- Develop outdoor use load profiles for self-supply users and centralized water-supply users separately.
- Refine service-area boundaries for wastewater disposal as better data is obtained.

Appendix A
Annual Adjustment Factors

Public Supply Adjustment Factors for Counties in Florida

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alachua	1.81	1.56	1.54	1.55	1.59	1.56	1.67	1.58	1.43	1.34	1.34	1.40	1.35
Baker	1.13	0.99	0.97	0.97	1.01	0.99	1.03	0.98	0.88	0.82	0.80	0.85	0.81
Bay	3.64	3.14	3.10	3.16	3.13	3.06	3.38	3.14	2.88	2.70	2.68	2.77	2.71
Bradford	1.30	1.26	1.28	1.30	1.44	1.46	1.44	1.39	1.26	1.20	1.23	1.28	1.19
Brevard	0.99	0.99	0.97	1.05	1.10	0.95	0.96	0.85	0.81	0.81	0.80	0.82	0.80
Broward	1.88	1.66	1.64	1.65	1.73	1.74	1.84	1.76	1.61	1.54	1.54	1.58	1.52
Calhoun	1.65	1.40	1.42	1.44	1.43	1.40	1.61	1.52	1.42	1.32	1.31	1.35	1.35
Charlotte	0.45	0.37	0.37	0.37	0.36	0.34	0.37	0.34	0.32	0.30	0.29	0.30	0.30
Citrus	0.89	0.82	0.82	0.81	0.87	0.86	0.85	0.82	0.73	0.69	0.72	0.74	0.69
Clay	1.19	1.09	1.04	1.12	1.22	0.88	0.97	0.95	0.89	0.64	0.62	0.81	0.74
Collier	1.84	1.76	1.71	1.72	1.91	1.97	1.87	1.79	1.61	1.51	1.57	1.61	1.46
Columbia	1.28	1.12	1.11	1.13	1.16	1.16	1.23	1.18	1.05	0.99	1.00	1.05	1.01
Dade	2.36	2.11	2.10	2.13	2.22	2.25	2.36	2.27	2.06	1.96	1.95	2.02	1.93
DeSoto	7.37	10.02	10.42	10.55	14.01	15.22	12.62	12.39	11.00	10.43	11.56	11.43	9.51
Dixie	1.32	1.32	1.33	1.35	1.55	1.61	1.55	1.52	1.37	1.31	1.37	1.39	1.27
Duval	1.30	1.20	1.19	1.16	1.29	1.34	1.31	1.26	1.12	1.05	1.06	1.10	1.02
Escambia	4.57	3.94	3.93	4.02	4.03	4.03	4.46	4.28	3.98	3.76	3.71	3.82	3.78
Flagler	1.06	0.97	1.00	0.95	0.87	0.90	0.88	0.85	0.80	0.73	0.73	0.83	0.78
Franklin	4.03	3.78	3.78	3.94	4.19	4.25	4.34	4.14	3.81	3.66	3.79	3.77	3.59
Gadsden	2.26	1.96	1.98	2.01	2.07	2.00	2.10	1.94	1.82	1.68	1.66	1.71	1.67
Gilchrist	0.76	0.61	0.60	0.61	0.59	0.56	0.65	0.61	0.56	0.53	0.52	0.54	0.54
Glades	0.69	0.83	0.85	0.87	1.10	1.18	0.99	0.99	0.88	0.82	0.90	0.90	0.80
Gulf	2.15	2.12	2.12	2.21	2.38	2.39	2.29	2.11	1.89	1.81	1.88	1.88	1.75
Hamilton	1.68	1.48	1.49	1.51	1.52	1.52	1.64	1.57	1.45	1.37	1.35	1.43	1.36
Hardee	1.64	1.35	1.35	1.34	1.33	1.26	1.43	1.31	1.20	1.15	1.11	1.16	1.16
Hendry	2.23	2.23	2.27	2.30	2.63	2.76	2.54	2.47	2.22	2.10	2.21	2.24	2.06
Hernando	1.43	1.32	1.32	1.31	1.38	1.33	1.32	1.28	1.14	1.08	1.10	1.15	1.07
Highlands	0.93	0.82	0.82	0.83	0.84	0.83	0.87	0.83	0.76	0.72	0.72	0.74	0.72
Hillsborough	1.35	1.35	1.35	1.35	1.57	1.56	1.49	1.43	1.28	1.23	1.26	1.30	1.17
Holmes	2.48	2.11	2.12	2.14	2.13	2.10	2.38	2.30	2.11	2.03	1.95	2.05	2.01

Indian River	1.17	1.20	1.05	1.67	1.59	1.14	0.98	0.93	0.88	0.86	0.87	0.91	0.93
Jackson	1.10	0.97	0.98	0.99	0.99	1.00	1.08	1.04	0.96	0.91	0.90	0.93	0.91
Jefferson	1.77	1.64	1.65	1.66	1.81	1.86	1.94	1.82	1.68	1.60	1.62	1.68	1.56
Lafayette	1.76	1.56	1.56	1.59	1.67	1.70	1.81	1.74	1.59	1.51	1.50	1.56	1.51
Lake	2.24	1.92	1.86	1.79	1.80	1.71	1.70	1.62	1.45	1.37	1.37	1.42	1.35
Lee	1.08	1.02	1.01	1.01	1.10	1.10	1.04	0.98	0.89	0.84	0.86	0.89	0.82
Leon	1.55	1.32	1.32	1.30	1.33	1.32	1.43	1.35	1.25	1.18	1.17	1.20	1.17
Levy	1.30	1.07	1.06	1.06	1.04	1.01	1.14	1.08	1.00	0.95	0.92	0.97	0.95
Liberty	2.97	2.77	2.79	2.86	3.03	3.06	3.18	3.01	2.77	2.57	2.61	2.68	2.55
Madison	1.72	1.45	1.44	1.46	1.45	1.42	1.60	1.51	1.37	1.31	1.28	1.35	1.33
Manatee	1.82	1.56	1.54	1.54	1.59	1.54	1.60	1.51	1.38	1.32	1.29	1.36	1.28
Marion	1.36	1.17	1.13	1.09	1.09	1.05	1.07	1.02	0.91	0.87	0.87	0.90	0.87
Martin	1.42	1.28	1.25	1.22	1.27	1.29	1.31	1.28	1.15	1.08	1.08	1.12	1.09
Monroe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau	1.23	1.13	1.02	0.98	1.04	0.96	1.10	1.14	1.01	0.98	0.96	1.02	1.14
Okaloosa	2.10	1.86	1.83	1.84	1.87	1.84	1.91	1.83	1.68	1.57	1.55	1.60	1.56
Okeechobee	0.97	0.83	0.80	0.82	0.80	0.79	0.84	0.80	0.73	0.68	0.66	0.70	0.68
Orange	1.95	1.67	1.64	1.61	1.63	1.58	1.66	1.57	1.42	1.32	1.31	1.36	1.30
Osceola	1.42	1.22	1.18	1.14	1.14	1.08	1.09	1.01	0.91	0.86	0.86	0.89	0.83
Palm Beach	2.14	1.91	1.89	1.88	1.99	2.01	2.05	1.97	1.79	1.69	1.71	1.76	1.66
Pasco	2.94	2.21	2.15	2.11	1.90	1.69	2.04	1.89	1.73	1.66	1.55	1.66	1.65
Pinellas	0.37	0.27	0.26	0.27	0.23	0.20	0.28	0.26	0.25	0.24	0.22	0.24	0.24
Polk	1.58	1.37	1.36	1.34	1.37	1.31	1.35	1.27	1.14	1.09	1.08	1.12	1.08
Putnam	1.14	1.07	1.03	1.16	1.14	0.98	0.91	0.96	0.88	0.74	0.81	0.87	0.81
St Johns	1.05	0.83	0.82	0.87	0.94	0.71	0.78	0.75	0.77	0.70	0.57	0.75	0.70
St Lucie	0.92	0.93	0.91	0.87	0.94	0.95	0.82	0.80	0.70	0.66	0.68	0.70	0.65
Santa Rosa	7.07	6.91	6.76	6.83	7.37	7.53	7.43	7.21	6.58	6.22	6.40	6.45	6.12
Sarasota	0.81	0.66	0.66	0.65	0.64	0.62	0.67	0.62	0.58	0.55	0.54	0.56	0.54
Seminole	1.92	1.61	1.55	1.43	1.48	1.43	1.60	1.51	1.39	1.36	1.31	1.28	1.23
Sumter	0.94	1.21	1.24	1.19	1.34	1.30	0.91	0.88	0.71	0.65	0.70	0.69	0.59
Suwannee	1.50	1.38	1.38	1.41	1.51	1.52	1.59	1.52	1.40	1.33	1.33	1.40	1.31
Taylor	1.50	1.42	1.46	1.46	1.61	1.67	1.61	1.55	1.41	1.37	1.38	1.41	1.34

Union	2.21	1.79	1.79	1.80	1.72	1.70	1.92	1.86	1.73	1.59	1.54	1.65	1.63
Volusia	1.20	1.15	1.14	1.11	1.14	1.12	1.14	1.09	0.99	0.94	0.91	0.96	0.93
Wakulla	15.37	12.55	12.53	12.87	12.18	11.74	13.51	12.61	11.81	11.25	10.91	11.26	11.29
Walton	6.33	6.06	6.20	6.31	6.98	7.15	7.01	6.78	5.93	5.68	5.68	5.86	5.47
Washington	1.32	1.14	1.15	1.16	1.18	1.17	1.28	1.22	1.12	1.08	1.04	1.10	1.07

Self-Supply Adjustment Factors for Counties in Florida

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alachua	1.86	1.91	1.96	2.00	2.04	2.06	2.00	1.98	1.95	1.93	1.94	1.95	1.94
Baker	0.59	0.69	0.79	0.89	1.00	1.09	1.07	1.07	1.06	1.06	1.04	1.06	1.06
Bay	0.27	0.25	0.24	0.23	0.21	0.20	0.19	0.19	0.18	0.18	0.18	0.18	0.18
Bradford	1.57	1.79	2.02	2.21	2.42	2.58	2.51	2.44	2.42	2.41	2.37	2.41	2.43
Brevard	2.03	1.80	1.60	7.29	7.83	3.38	4.40	4.41	3.79	3.81	4.28	3.94	4.23
Broward	5.01	4.11	3.26	2.48	1.71	0.95	0.93	0.92	0.92	0.93	0.92	0.91	0.90
Calhoun	1.28	1.27	1.28	1.26	1.25	1.22	1.18	1.14	1.15	1.11	1.14	1.12	1.13
Charlotte	7.21	6.60	6.18	5.73	5.20	4.66	4.47	4.21	4.27	4.19	4.15	4.10	4.16
Citrus	20.95	20.33	20.11	19.47	18.87	18.09	17.54	17.56	17.14	16.93	17.24	17.25	17.29
Clay	3.89	2.90	2.91	2.56	3.05	1.94	1.46	1.90	1.82	1.28	1.28	1.65	1.47
Collier	5.18	4.87	4.48	3.98	3.69	3.50	3.29	1.88	1.85	1.83	1.83	1.84	1.83
Columbia	1.15	1.11	1.07	1.05	1.02	0.99	0.94	0.93	0.90	0.88	0.89	0.90	0.90
Dade	44.43	43.65	42.52	41.71	40.21	39.08	37.42	36.80	36.00	35.81	35.81	35.63	36.21
DeSoto	3.13	2.86	2.61	2.36	2.06	1.60	1.55	1.48	1.51	1.47	1.46	1.44	1.42
Dixie	0.84	0.82	0.81	0.79	0.80	0.78	0.75	0.75	0.74	0.75	0.75	0.74	0.75
Duval	11.99	13.83	13.37	18.67	18.01	16.39	19.15	16.17	16.66	13.16	13.50	13.83	12.88
Escambia	2.27	2.24	2.14	2.07	1.97	1.90	1.87	1.83	1.82	1.80	1.81	1.76	1.79
Flagler	1.72	7.98	7.69	13.29	7.74	12.10	11.88	10.54	5.81	4.66	3.07	2.12	1.96
Franklin	0.18	0.15	0.12	0.10	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Gadsden	0.91	0.86	0.82	0.77	0.75	0.69	0.67	0.65	0.66	0.64	0.65	0.64	0.64
Gilchrist	1.43	1.45	1.48	1.50	1.55	1.57	1.51	1.50	1.47	1.46	1.47	1.47	1.47
Glades	17.45	20.38	23.51	26.46	27.96	31.13	29.84	28.70	29.11	27.82	28.37	28.12	28.20
Gulf	2.10	1.73	1.35	1.00	0.64	0.31	0.30	0.29	0.29	0.29	0.29	0.29	0.29
Hamilton	59.66	58.33	56.36	54.92	53.66	51.85	50.80	48.99	48.53	47.91	47.10	47.94	47.61

Hardee	11.36	10.28	9.17	8.04	7.03	5.73	5.40	5.26	5.15	5.20	5.15	5.10	5.16
Hendry	2.21	2.05	1.93	1.80	1.66	1.59	1.50	1.46	1.45	1.41	1.42	1.41	1.41
Hernando	8.10	7.77	7.56	7.18	6.74	6.23	5.86	5.58	5.43	5.37	5.39	5.43	5.42
Highlands	0.86	0.80	0.73	0.66	0.59	0.52	0.50	0.49	0.48	0.48	0.48	0.48	0.49
Hillsborough	3.72	3.32	3.02	2.70	2.43	2.04	2.03	1.95	1.91	1.93	1.90	1.92	1.91
Holmes	1.72	1.68	1.63	1.58	1.55	1.49	1.49	1.48	1.46	1.47	1.41	1.41	1.42
Indian River	10.20	8.39	7.81	14.25	14.78	5.91	5.48	4.70	4.54	3.74	2.48	2.92	2.84
Jackson	1.04	1.04	1.02	0.99	0.97	0.94	0.92	0.89	0.89	0.87	0.87	0.87	0.88
Jefferson	1.07	1.05	1.04	1.02	0.99	0.98	0.96	0.92	0.91	0.91	0.91	0.90	0.90
Lafayette	1.77	1.75	1.75	1.70	1.71	1.70	1.63	1.60	1.58	1.57	1.56	1.55	1.58
Lake	2.39	2.37	2.37	2.32	2.30	2.26	2.19	2.17	2.11	2.10	2.10	2.10	2.09
Lee	4.58	4.55	4.43	4.18	3.70	3.14	2.41	2.06	2.07	2.04	2.03	2.02	2.03
Leon	0.36	0.35	0.35	0.34	0.33	0.32	0.32	0.31	0.31	0.31	0.31	0.31	0.31
Levy	2.59	2.45	2.31	2.17	2.11	1.98	1.91	1.87	1.83	1.83	1.83	1.83	1.80
Liberty	2.07	1.85	1.64	1.42	1.19	0.94	0.92	0.89	0.90	0.88	0.89	0.87	0.87
Madison	1.94	1.86	1.72	1.60	1.54	1.53	1.49	1.44	1.41	1.40	1.40	1.41	1.41
Manatee	2.90	4.06	4.99	5.82	6.45	7.09	6.71	6.22	6.22	6.32	6.18	6.16	6.27
Marion	1.74	1.66	1.59	1.51	1.45	1.37	1.31	1.28	1.24	1.24	1.25	1.25	1.24
Martin	19.85	18.05	16.05	14.33	13.04	12.05	11.35	11.26	10.93	10.83	10.50	10.53	10.72
Monroe	13.23	10.57	7.93	5.31	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau	18.94	19.97	18.87	17.95	17.71	19.88	19.03	17.14	17.00	16.23	15.41	15.91	16.86
Okaloosa	0.13	0.12	0.10	0.09	0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Okeechobee	1.19	1.16	1.10	1.06	0.99	0.97	0.91	0.91	0.89	0.87	0.87	0.87	0.88
Orange	303.01	316.38	319.88	323.62	327.54	336.27	331.58	327.03	322.63	316.96	294.16	293.47	290.98
Osceola	7,669.33	7,809.15	7,912.02	7,825.49	7,830.00	7,902.75	7,920.92	7,939.17	7,913.64	7,979.62	7,972.24	7,870.26	7,873.86
Palm Beach	10.35	8.96	7.66	6.59	5.72	5.05	4.95	4.88	4.79	4.79	4.85	4.74	4.79
Pasco	1.70	1.55	1.47	1.35	1.25	1.12	1.12	1.07	1.04	1.04	1.03	1.04	1.03
Pinellas	1.93	2.01	2.11	2.19	2.27	2.26	2.30	2.19	2.14	2.17	2.16	2.19	2.16
Polk	36.58	33.92	31.27	28.66	26.33	23.70	22.93	22.41	22.08	21.97	21.97	21.76	21.89
Putnam	8.75	6.09	5.77	5.42	4.96	5.59	6.26	4.57	4.56	4.03	4.25	4.54	3.47
St Johns	1.85	1.84	1.69	2.91	2.53	2.31	2.26	3.44	3.49	2.88	2.65	2.51	2.11
St Lucie	15.72	14.80	13.45	12.31	11.35	10.41	10.03	10.09	9.94	9.93	9.72	9.90	10.01

Santa Rosa	0.57	0.51	0.43	0.37	0.31	0.25	0.24	0.23	0.23	0.23	0.22	0.22	0.22
Sarasota	0.36	0.41	0.47	0.52	0.57	0.62	0.63	0.61	0.61	0.61	0.61	0.61	0.60
Seminole	3.86	5.17	5.04	5.50	5.44	3.62	3.23	2.36	1.94	1.99	1.90	1.87	1.80
Sumter	25.42	21.05	17.64	13.65	9.98	6.43	6.16	5.92	5.72	5.61	5.62	5.61	5.66
Suwannee	1.95	1.90	1.86	1.82	1.78	1.74	1.67	1.62	1.61	1.59	1.57	1.60	1.59
Taylor	43.77	43.03	43.49	41.88	41.72	41.63	39.83	38.64	38.05	39.10	38.56	37.98	39.03
Union	2.57	2.54	2.54	2.56	2.58	2.62	2.50	2.50	2.47	2.36	2.38	2.44	2.40
Volusia	0.75	0.82	0.77	0.83	0.97	0.64	0.68	0.86	0.93	0.77	0.89	0.95	0.80
Wakulla	0.95	0.93	0.91	0.91	0.88	0.84	0.79	0.73	0.73	0.73	0.73	0.71	0.72
Walton	0.20	0.16	0.12	0.09	0.06	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Washington	1.13	1.11	1.11	1.08	1.05	1.01	0.97	0.94	0.94	0.92	0.91	0.92	0.91

Representative Adjustment Factors for Counties Outside of Florida

ST_CO_FP10	STATE	COUNTY	PS Multipliers		DSS Multipliers	
			2000	2012	2000	2012
01005	Alabama	Barbour				
01011	Alabama	Bullock				
01017	Alabama	Chambers				
01045	Alabama	Dale				
01061	Alabama	Geneva				
01067	Alabama	Henry				
01069	Alabama	Houston				
01081	Alabama	Lee				
01087	Alabama	Macon				
01111	Alabama	Randolph				
01113	Alabama	Russell			-	
13001	Georgia	Appling				
13003	Georgia	Atkinson				
13005	Georgia	Bacon				
13007	Georgia	Baker				
13009	Georgia	Baldwin				
13011	Georgia	Banks				
13013	Georgia	Barrow				
13017	Georgia	Ben Hill				
13019	Georgia	Berrien				
13021	Georgia	Bibb				
13023	Georgia	Bleckley				
13025	Georgia	Brantley				
13027	Georgia	Brooks				
13029	Georgia	Bryan				
13031	Georgia	Bulloch				
13033	Georgia	Burke				
13035	Georgia	Butts				
13037	Georgia	Calhoun				
13039	Georgia	Camden				
13043	Georgia	Candler				
13045	Georgia	Carroll				
13049	Georgia	Charlton				
13051	Georgia	Chatham				
13053	Georgia	Chattahooche			-	-
13057	Georgia	Cherokee				
13059	Georgia	Clarke			-	-
13061	Georgia	Clay				
13063	Georgia	Clayton			-	
13065	Georgia	Clinch				
13067	Georgia	Cobb				
13069	Georgia	Coffee				
13071	Georgia	Colquitt				

13073	Georgia	Columbia				
13075	Georgia	Cook				
13077	Georgia	Coweta				
13079	Georgia	Crawford				
13081	Georgia	Crisp				
13085	Georgia	Dawson				
13087	Georgia	Decatur				
13089	Georgia	DeKalb				
13091	Georgia	Dodge				
13093	Georgia	Dooly				
13095	Georgia	Dougherty			-	
13097	Georgia	Douglas				
13099	Georgia	Early				
13101	Georgia	Echols	-	-		
13103	Georgia	Effingham				
13105	Georgia	Elbert				
13107	Georgia	Emanuel				
13109	Georgia	Evans				
13113	Georgia	Fayette				
13117	Georgia	Forsyth				
13119	Georgia	Franklin				
13121	Georgia	Fulton				
13125	Georgia	Glascock				
13127	Georgia	Glynn				
13131	Georgia	Grady				
13133	Georgia	Greene				
13135	Georgia	Gwinnett			-	-
13137	Georgia	Habersham				
13139	Georgia	Hall				
13141	Georgia	Hancock				
13145	Georgia	Harris				
13147	Georgia	Hart				
13149	Georgia	Heard				
13151	Georgia	Henry				
13153	Georgia	Houston				
13155	Georgia	Irwin				
13157	Georgia	Jackson				
13159	Georgia	Jasper				
13161	Georgia	Jeff Davis				
13163	Georgia	Jefferson				
13165	Georgia	Jenkins				
13167	Georgia	Johnson				
13169	Georgia	Jones				
13171	Georgia	Lamar				
13173	Georgia	Lanier				
13175	Georgia	Laurens				

13177	Georgia	Lee				
13179	Georgia	Liberty				
13181	Georgia	Lincoln				
13183	Georgia	Long				
13185	Georgia	Lowndes				
13187	Georgia	Lumpkin				
13189	Georgia	McDuffie				
13191	Georgia	McIntosh				
13193	Georgia	Macon				
13195	Georgia	Madison				
13197	Georgia	Marion				
13199	Georgia	Meriwether				
13201	Georgia	Miller				
13205	Georgia	Mitchell				
13207	Georgia	Monroe				
13209	Georgia	Montgomery				
13211	Georgia	Morgan				
13215	Georgia	Muscogee			-	-
13217	Georgia	Newton				
13219	Georgia	Oconee				
13221	Georgia	Oglethorpe				
13223	Georgia	Paulding				
13225	Georgia	Peach				
13229	Georgia	Pierce				
13231	Georgia	Pike				
13235	Georgia	Pulaski				
13237	Georgia	Putnam				
13239	Georgia	Quitman			-	-
13241	Georgia	Rabun				
13243	Georgia	Randolph				
13245	Georgia	Richmond			-	-
13247	Georgia	Rockdale				
13249	Georgia	Schley				
13251	Georgia	Screven				
13253	Georgia	Seminole				
13255	Georgia	Spalding				
13257	Georgia	Stephens				
13259	Georgia	Stewart				
13261	Georgia	Sumter				
13263	Georgia	Talbot				
13265	Georgia	Taliaferro				
13267	Georgia	Tattnall				
13269	Georgia	Taylor				
13271	Georgia	Telfair				
13273	Georgia	Terrell				
13275	Georgia	Thomas				

13277	Georgia	Tift				
13279	Georgia	Toombs				
13281	Georgia	Towns				
13283	Georgia	Treutlen				
13285	Georgia	Troup				
13287	Georgia	Turner				
13289	Georgia	Twiggs				
13291	Georgia	Union				
13293	Georgia	Upson				
13297	Georgia	Walton				
13299	Georgia	Ware				
13301	Georgia	Warren				
13303	Georgia	Washington				
13305	Georgia	Wayne				
13307	Georgia	Webster			-	-
13309	Georgia	Wheeler				
13311	Georgia	White				
13315	Georgia	Wilcox				
13317	Georgia	Wilkes				
13319	Georgia	Wilkinson				
13321	Georgia	Worth				
45001	South	Abbeville				
45003	South	Aiken				
45005	South	Allendale				
45007	South	Anderson				
45009	South	Bamberg				
45011	South	Barnwell				
45013	South	Beaufort				
45015	South	Berkeley				
45019	South	Charleston				
45029	South	Colleton				
45035	South	Dorchester				
45037	South	Edgefield				
45047	South	Greenwood				
45049	South	Hampton				
45053	South	Jasper				
45065	South	McCormick				
45073	South	Oconee				
45077	South	Pickens				
45081	South	Saluda				

Appendix B
Annual Water-Use Estimates

Public Supply Annual Water Use (MGD) for Counties in Florida

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alachua	28.26	25.07	25.32	25.95	27.10	27.43	29.85	28.97	26.73	25.49	25.38	26.43	25.42
Baker	0.88	0.78	0.79	0.81	0.85	0.86	0.93	0.91	0.84	0.80	0.79	0.83	0.79
Bay	51.17	44.40	44.74	45.82	46.92	47.12	52.40	50.70	46.94	44.73	44.17	46.14	44.80
Bradford	1.38	1.36	1.39	1.43	1.62	1.69	1.68	1.66	1.51	1.44	1.49	1.53	1.41
Brevard	53.35	54.14	55.58	61.78	65.59	58.61	61.27	54.62	53.23	53.93	53.53	54.37	53.33
Broward	258.06	234.00	236.91	242.90	258.54	263.57	280.99	273.60	251.65	240.08	240.94	250.10	238.41
Calhoun	0.75	0.63	0.63	0.64	0.64	0.63	0.73	0.70	0.65	0.62	0.60	0.64	0.63
Charlotte	7.28	6.19	6.22	6.37	6.39	6.37	7.24	6.98	6.49	6.18	6.05	6.34	6.21
Citrus	13.97	13.20	13.42	13.77	15.15	15.64	16.09	15.76	14.41	13.76	14.00	14.46	13.57
Clay	14.77	14.29	14.26	15.93	18.17	13.96	16.14	16.22	15.38	11.17	11.13	14.27	12.97
Collier	52.40	52.82	54.03	55.53	64.02	67.16	65.84	64.99	58.95	56.37	58.48	59.94	54.98
Columbia	3.67	3.26	3.30	3.38	3.53	3.58	3.89	3.77	3.48	3.32	3.31	3.44	3.31
DeSoto	10.59	14.68	15.39	15.92	21.65	23.88	19.94	20.26	17.85	17.15	19.04	19.04	16.07
Dixie	0.67	0.68	0.70	0.72	0.84	0.88	0.86	0.85	0.77	0.73	0.76	0.78	0.71
Duval	119.12	111.86	113.42	112.52	128.16	137.92	138.54	138.13	124.46	118.40	122.14	124.57	114.70
Escambia	44.63	38.47	38.74	39.67	40.38	40.45	45.29	43.77	40.57	38.65	38.07	39.81	38.76
Flagler	6.22	6.17	7.01	7.41	7.69	8.92	9.71	9.34	9.09	8.46	8.70	9.70	8.99
Franklin	1.92	1.81	1.84	1.88	2.07	2.13	2.20	2.15	1.97	1.88	1.91	1.97	1.86
Gadsden	4.34	3.78	3.81	3.91	4.02	4.04	4.47	4.33	4.01	3.82	3.78	3.94	3.82
Gilchrist	0.27	0.22	0.22	0.23	0.22	0.22	0.26	0.25	0.23	0.22	0.21	0.22	0.22
Glades	0.55	0.67	0.70	0.72	0.93	1.01	0.89	0.89	0.79	0.76	0.83	0.83	0.72
Gulf	1.47	1.46	1.49	1.53	1.74	1.82	1.81	1.78	1.62	1.55	1.60	1.64	1.51
Hamilton	0.95	0.85	0.86	0.88	0.93	0.94	1.01	0.99	0.91	0.87	0.87	0.90	0.86
Hardee	1.78	1.49	1.49	1.53	1.51	1.49	1.73	1.66	1.55	1.47	1.43	1.50	1.49
Hendry	4.72	4.82	4.94	5.08	5.91	6.22	6.04	5.97	5.41	5.17	5.39	5.51	5.03
Hernando	20.27	19.09	19.40	19.91	21.85	22.53	23.25	22.75	20.82	19.88	20.21	20.87	19.61
Highlands	9.14	8.10	8.18	8.39	8.76	8.86	9.65	9.36	8.64	8.24	8.20	8.54	8.22
Hillsborough	166.39	173.05	177.50	182.58	214.87	226.96	217.90	215.83	195.09	186.64	195.31	199.54	181.17
Holmes	1.38	1.17	1.18	1.20	1.21	1.20	1.37	1.32	1.23	1.17	1.14	1.20	1.17

Indian River	13.93	14.60	13.31	22.49	22.09	16.76	15.50	14.97	14.43	14.23	14.78	15.05	15.25
Jackson	2.46	2.16	2.18	2.24	2.32	2.34	2.57	2.49	2.30	2.19	2.18	2.27	2.19
Jefferson	0.72	0.67	0.68	0.70	0.76	0.78	0.81	0.79	0.73	0.69	0.70	0.73	0.69
Lafayette	0.20	0.18	0.18	0.19	0.20	0.20	0.22	0.21	0.19	0.18	0.18	0.19	0.18
Lake	39.92	36.11	36.55	37.47	39.80	40.54	43.32	42.16	38.79	37.01	37.11	38.53	36.77
Lee	52.37	51.78	52.87	54.32	61.80	64.53	64.13	63.16	57.43	54.89	56.63	58.17	53.70
Leon	35.70	31.28	31.56	32.33	33.40	33.66	37.07	35.91	33.20	31.65	31.37	32.72	31.63
Levy	2.16	1.80	1.80	1.84	1.81	1.79	2.08	2.00	1.87	1.78	1.72	1.81	1.80
Liberty	0.39	0.36	0.36	0.37	0.40	0.41	0.43	0.42	0.39	0.37	0.37	0.39	0.37
Madison	1.65	1.40	1.41	1.44	1.45	1.44	1.64	1.58	1.47	1.40	1.37	1.43	1.41
Manatee	49.92	45.26	45.83	46.99	50.01	50.98	54.35	52.92	48.68	46.44	46.60	48.38	46.12
Marion	27.99	24.83	25.08	25.70	26.84	27.17	29.56	28.70	26.48	25.25	25.14	26.18	25.18
Martin	18.45	16.91	17.14	17.57	18.87	19.30	20.38	19.88	18.25	17.42	17.55	18.19	17.27
Miami-Dade	394.29	356.48	360.80	369.90	392.74	400.01	427.59	416.18	382.94	365.31	366.23	380.32	362.98
Monroe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau	6.81	6.47	6.09	6.11	6.65	6.50	7.74	8.32	7.55	7.38	7.41	7.79	8.62
Okaloosa	22.97	20.29	20.48	20.99	21.84	22.07	24.12	23.39	21.60	20.59	20.47	21.33	20.55
Okeechobee	2.23	1.93	1.94	1.99	2.03	2.04	2.28	2.20	2.04	1.94	1.92	2.00	1.95
Orange	211.76	187.33	189.17	193.83	201.96	204.22	222.81	216.18	199.55	190.27	189.25	197.13	189.83
Osceola	30.00	27.51	27.88	28.59	30.71	31.42	33.17	32.35	29.70	28.35	28.56	29.60	28.09
Palm Beach	229.84	213.05	216.18	221.77	240.34	246.67	257.94	251.93	231.00	220.49	222.95	230.76	218.08
Pasco	102.67	81.35	81.15	82.88	77.34	74.65	92.34	87.97	82.72	78.64	74.68	79.22	80.31
Pinellas	39.88	29.29	28.94	29.49	25.03	23.06	32.04	30.07	28.71	27.23	24.85	26.79	28.34
Polk	75.49	67.47	68.21	69.91	73.51	74.59	80.58	78.30	72.17	68.83	68.72	71.48	68.53
Putnam	3.20	3.04	3.01	3.41	3.42	2.98	2.83	2.97	2.73	2.31	2.56	2.72	2.53
St Johns	16.49	13.63	14.02	15.64	17.88	14.34	16.59	16.39	17.38	16.15	13.49	17.58	16.17
St Lucie	17.95	18.81	19.31	19.86	23.49	24.85	23.74	23.54	21.26	20.34	21.33	21.77	19.72
Santa Rosa	13.47	13.05	13.30	13.65	15.30	15.90	16.05	15.76	14.37	13.73	14.08	14.49	13.48
Sarasota	28.71	24.88	25.07	25.67	26.25	26.35	29.35	28.38	26.28	25.05	24.72	25.83	25.09
Seminole	66.90	57.28	56.11	53.32	56.12	56.14	64.18	61.80	57.48	56.59	54.97	53.94	51.60
Sumter	4.44	6.28	6.59	6.82	9.34	10.33	8.57	8.71	7.67	7.37	8.21	8.19	6.89

Suwannee	1.40	1.29	1.31	1.35	1.45	1.49	1.56	1.53	1.40	1.34	1.35	1.40	1.32
Taylor	1.73	1.67	1.70	1.74	1.95	2.02	2.05	2.01	1.83	1.75	1.79	1.85	1.72
Union	0.36	0.30	0.30	0.30	0.30	0.29	0.34	0.33	0.31	0.29	0.28	0.30	0.30
Volusia	55.04	53.44	55.44	55.26	58.50	58.55	62.09	59.52	55.35	53.19	52.47	55.29	53.18
Wakulla	2.19	1.82	1.83	1.87	1.83	1.81	2.11	2.03	1.89	1.80	1.75	1.84	1.82
Walton	7.35	7.21	7.36	7.56	8.56	8.92	8.91	8.77	7.98	7.63	7.85	8.07	7.47
Washington	1.16	1.00	1.00	1.03	1.04	1.04	1.17	1.13	1.05	1.00	0.98	1.03	1.00

Self-Supply Annual Water Use (MGD) for Counties in Florida

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alachua	4.57	4.83	5.08	5.34	5.59	5.85	5.85	5.85	5.85	5.85	5.85	5.85	5.85
Baker	1.95	2.32	2.68	3.05	3.41	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
Bay	2.23	2.16	2.08	2.01	1.93	1.86	1.86	1.86	1.86	1.86	1.86	1.86	1.86
Bradford	1.94	2.26	2.58	2.90	3.22	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54
Brevard	2.95	2.65	2.44	11.51	12.53	5.59	7.57	7.68	6.78	6.88	7.90	7.11	7.61
Broward	2.11	1.77	1.44	1.10	0.77	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Calhoun	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Charlotte	5.93	5.66	5.40	5.13	4.87	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
Citrus	8.25	8.18	8.11	8.05	7.98	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91
Clay	11.11	8.57	8.79	7.93	9.62	6.30	4.86	6.44	6.23	4.42	4.46	5.72	5.02
Collier	8.35	8.47	8.58	8.70	8.81	8.93	8.93	8.93	8.93	8.93	8.93	8.93	8.93
Columbia	3.74	3.73	3.72	3.71	3.70	3.69	3.69	3.69	3.69	3.69	3.69	3.69	3.69
DeSoto	3.55	3.30	3.04	2.79	2.53	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28
Dixie	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Duval	16.97	20.01	19.86	28.54	27.86	25.80	30.49	26.23	27.40	21.90	22.98	23.19	21.35
Escambia	58.54	57.77	57.00	56.23	55.46	54.69	54.69	54.69	54.69	54.69	54.69	54.69	54.69
Flagler	0.89	4.22	4.29	7.57	4.60	7.42	7.63	6.73	3.81	3.13	2.09	1.42	1.30
Franklin	0.19	0.16	0.14	0.11	0.09	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Gadsden	2.05	1.99	1.93	1.86	1.80	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74
Gilchrist	1.33	1.40	1.47	1.54	1.61	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68
Glades	4.64	5.64	6.65	7.65	8.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66

Gulf	2.55	2.13	1.70	1.28	0.85	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Hamilton	35.11	35.00	34.89	34.78	34.67	34.56	34.56	34.56	34.56	34.56	34.56	34.56	34.56
Hardee	6.57	6.00	5.42	4.85	4.27	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70
Hendry	2.18	2.10	2.02	1.95	1.87	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79
Hernando	21.18	20.88	20.58	20.29	19.99	19.69	19.69	19.69	19.69	19.69	19.69	19.69	19.69
Highlands	1.99	1.86	1.72	1.59	1.45	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
Hillsborough	23.67	21.95	20.23	18.52	16.80	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08
Holmes	1.35	1.33	1.31	1.29	1.27	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Indian River	1.99	1.80	1.79	3.43	4.03	1.68	1.75	1.52	1.49	1.25	0.84	0.97	0.94
Jackson	3.22	3.20	3.18	3.15	3.13	3.11	3.11	3.11	3.11	3.11	3.11	3.11	3.11
Jefferson	0.84	0.85	0.85	0.86	0.86	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Lafayette	0.61	0.62	0.62	0.63	0.63	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64
Lake	14.21	14.48	14.75	15.01	15.28	15.55	15.55	15.55	15.55	15.55	15.55	15.55	15.55
Lee	24.35	25.26	26.17	27.09	28.00	28.91	28.91	28.91	28.91	28.91	28.91	28.91	28.91
Leon	4.29	4.25	4.21	4.16	4.12	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
Levy	5.92	5.79	5.66	5.52	5.39	5.26	5.26	5.26	5.26	5.26	5.26	5.26	5.26
Liberty	1.02	0.91	0.80	0.70	0.59	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Madison	1.28	1.26	1.25	1.23	1.22	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Manatee	1.13	1.78	2.44	3.09	3.75	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40
Marion	17.52	17.17	16.82	16.46	16.11	15.76	15.76	15.76	15.76	15.76	15.76	15.76	15.76
Martin	6.98	6.59	6.19	5.80	5.40	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01
Miami-Dade	45.19	44.70	44.22	43.73	43.25	42.76	42.76	42.76	42.76	42.76	42.76	42.76	42.76
Monroe	0.08	0.06	0.05	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nassau	37.12	40.70	40.27	39.70	39.76	45.69	44.76	41.21	41.14	39.73	38.65	39.46	41.23
Okaloosa	1.27	1.16	1.05	0.95	0.84	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Okeechobee	1.52	1.50	1.49	1.47	1.46	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
Orange	10.44	10.96	11.47	11.99	12.50	13.02	13.02	13.02	13.02	13.02	13.02	13.02	13.02
Osceola	4.61	4.63	4.65	4.68	4.70	4.72	4.72	4.72	4.72	4.72	4.72	4.72	4.72
Palm Beach	28.50	26.34	24.18	22.02	19.86	17.70	17.70	17.70	17.70	17.70	17.70	17.70	17.70
Pasco	9.14	8.68	8.22	7.76	7.30	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84
Pinellas	0.98	1.03	1.08	1.14	1.19	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24

Polk	88.39	83.25	78.10	72.96	67.81	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67
Putnam	55.25	39.10	38.23	36.48	33.91	38.92	44.95	32.66	33.16	29.75	31.80	33.37	25.55
St Johns	1.92	2.00	1.93	3.42	3.07	2.98	3.04	4.70	4.85	4.06	3.84	3.57	2.97
St Lucie	16.25	15.33	14.41	13.48	12.56	11.64	11.64	11.64	11.64	11.64	11.64	11.64	11.64
Santa Rosa	5.90	5.36	4.83	4.29	3.76	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22
Sarasota	0.98	1.16	1.34	1.53	1.71	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Seminole	2.81	3.77	3.77	4.33	4.48	3.09	2.76	2.07	1.72	1.76	1.71	1.68	1.59
Sumter	21.81	18.68	15.54	12.41	9.27	6.14	6.14	6.14	6.14	6.14	6.14	6.14	6.14
Suwannee	4.13	4.15	4.17	4.19	4.21	4.23	4.23	4.23	4.23	4.23	4.23	4.23	4.23
Taylor	46.06	46.04	46.03	46.01	46.00	45.98	45.98	45.98	45.98	45.98	45.98	45.98	45.98
Union	1.11	1.14	1.17	1.21	1.24	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
Volusia	3.51	3.93	3.82	4.20	5.12	3.47	3.86	4.89	5.44	4.53	5.31	5.65	4.72
Wakulla	2.06	2.09	2.12	2.15	2.18	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21
Walton	0.99	0.83	0.68	0.52	0.37	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Washington	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42

Public Supply Annual Water Use (MGD) for Counties Outside of Florida

STATE	COUNTY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alabama	Barbour	4.85	4.71	4.57	4.43	4.29	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
Alabama	Bullock	2.50	2.41	2.32	2.22	2.13	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
Alabama	Chambers	6.21	6.02	5.82	5.63	5.43	5.24	5.24	5.24	5.24	5.24	5.24	5.24	5.24
Alabama	Dale	6.88	7.26	7.64	8.02	8.40	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.78
Alabama	Geneva	1.69	1.74	1.78	1.83	1.87	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92
Alabama	Henry	1.83	1.84	1.85	1.87	1.88	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Alabama	Houston	18.92	18.31	17.69	17.08	16.46	15.85	15.85	15.85	15.85	15.85	15.85	15.85	15.85
Alabama	Lee	12.70	13.43	14.16	14.89	15.62	16.35	16.35	16.35	16.35	16.35	16.35	16.35	16.35
Alabama	Macon	3.36	3.50	3.64	3.79	3.93	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07
Alabama	Randolph	1.36	1.42	1.49	1.55	1.62	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68
Alabama	Russell	8.14	8.13	8.13	8.12	8.12	8.11	8.11	8.11	8.11	8.11	8.11	8.11	8.11
Georgia	Appling	1.05	1.03	1.00	0.98	0.95	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93

Georgia	Atkinson	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Georgia	Bacon	0.49	0.54	0.60	0.65	0.71	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Georgia	Baker	0.25	0.22	0.19	0.17	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Georgia	Baldwin	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75
Georgia	Banks	0.53	0.83	1.12	1.42	1.71	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01
Georgia	Barrow	5.23	5.19	5.14	5.10	5.05	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01
Georgia	Ben Hill	4.21	3.98	3.75	3.52	3.29	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
Georgia	Berrien	0.80	0.84	0.88	0.91	0.95	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Georgia	Bibb	33.44	26.78	20.12	13.46	6.80	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Georgia	Bleckley	0.93	0.79	0.64	0.50	0.35	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Georgia	Brantley	0.39	0.35	0.31	0.28	0.24	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Georgia	Brooks	1.60	1.47	1.34	1.22	1.09	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Georgia	Bryan	1.56	1.59	1.63	1.66	1.70	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73
Georgia	Bulloch	3.41	3.53	3.65	3.77	3.89	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01
Georgia	Burke	4.12	3.52	2.92	2.31	1.71	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11
Georgia	Butts	3.23	3.17	3.11	3.05	2.99	2.93	2.93	2.93	2.93	2.93	2.93	2.93	2.93
Georgia	Calhoun	1.05	1.00	0.94	0.89	0.83	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Georgia	Camden	3.75	3.81	3.87	3.94	4.00	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06
Georgia	Candler	0.66	0.62	0.58	0.54	0.50	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Georgia	Carroll	8.69	9.29	9.89	10.48	11.08	11.68	11.68	11.68	11.68	11.68	11.68	11.68	11.68
Georgia	Charlton	0.71	0.71	0.72	0.72	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Georgia	Chatham	33.45	33.46	33.48	33.49	33.51	33.52	33.52	33.52	33.52	33.52	33.52	33.52	33.52
Georgia	Chattahoochee	9.50	7.81	6.11	4.42	2.72	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Georgia	Cherokee	15.25	15.99	16.73	17.46	18.20	18.94	18.94	18.94	18.94	18.94	18.94	18.94	18.94
Georgia	Clarke	18.51	16.11	13.72	11.32	8.93	6.53	6.53	6.53	6.53	6.53	6.53	6.53	6.53
Georgia	Clay	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Georgia	Clayton	25.61	23.22	20.84	18.45	16.07	13.68	13.68	13.68	13.68	13.68	13.68	13.68	13.68
Georgia	Clinch	0.52	0.51	0.51	0.50	0.50	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Georgia	Cobb	96.78	86.81	76.85	66.88	56.92	46.95	46.95	46.95	46.95	46.95	46.95	46.95	46.95

Georgia	Coffee	5.44	5.29	5.14	4.98	4.83	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68
Georgia	Colquitt	4.45	4.33	4.21	4.08	3.96	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84
Georgia	Columbia	12.57	12.57	12.56	12.56	12.55	12.55	12.55	12.55	12.55	12.55	12.55	12.55	12.55
Georgia	Cook	2.15	2.14	2.13	2.11	2.10	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09
Georgia	Coweta	10.01	9.65	9.28	8.92	8.55	8.19	8.19	8.19	8.19	8.19	8.19	8.19	8.19
Georgia	Crawford	0.23	0.24	0.25	0.26	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Georgia	Crisp	1.25	1.42	1.59	1.76	1.93	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Georgia	Dawson	1.12	1.22	1.31	1.41	1.50	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Georgia	Decatur	2.65	2.69	2.74	2.78	2.83	2.87	2.87	2.87	2.87	2.87	2.87	2.87	2.87
Georgia	DeKalb	86.72	85.99	85.25	84.52	83.78	83.05	83.05	83.05	83.05	83.05	83.05	83.05	83.05
Georgia	Dodge	1.36	1.23	1.10	0.98	0.85	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Georgia	Dooly	1.87	1.94	2.01	2.07	2.14	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21
Georgia	Dougherty	19.08	18.01	16.94	15.87	14.80	13.73	13.73	13.73	13.73	13.73	13.73	13.73	13.73
Georgia	Douglas	9.54	11.99	14.44	16.88	19.33	21.78	21.78	21.78	21.78	21.78	21.78	21.78	21.78
Georgia	Early	0.47	0.56	0.64	0.73	0.81	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Georgia	Echols	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Georgia	Effingham	33.00	33.66	34.32	34.97	35.63	36.29	36.29	36.29	36.29	36.29	36.29	36.29	36.29
Georgia	Elbert	1.73	1.75	1.77	1.80	1.82	1.84	1.84	1.84	1.84	1.84	1.84	1.84	1.84
Georgia	Emanuel	1.62	1.70	1.78	1.87	1.95	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
Georgia	Evans	0.59	0.58	0.58	0.57	0.57	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Georgia	Fayette	13.86	13.31	12.76	12.22	11.67	11.12	11.12	11.12	11.12	11.12	11.12	11.12	11.12
Georgia	Forsyth	16.26	16.43	16.61	16.78	16.96	17.13	17.13	17.13	17.13	17.13	17.13	17.13	17.13
Georgia	Franklin	2.27	2.20	2.13	2.07	2.00	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
Georgia	Fulton	164.60	160.66	156.72	152.78	148.84	144.90	144.90	144.90	144.90	144.90	144.90	144.90	144.90
Georgia	Glascock	0.12	0.11	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Georgia	Glynn	12.42	11.91	11.39	10.88	10.36	9.85	9.85	9.85	9.85	9.85	9.85	9.85	9.85
Georgia	Grady	1.98	1.95	1.93	1.90	1.88	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
Georgia	Greene	1.64	1.60	1.56	1.53	1.49	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Georgia	Gwinnett	90.36	72.86	55.37	37.87	20.38	2.88	2.88	2.88	2.88	2.88	2.88	2.88	2.88

Georgia	Habersham	5.76	5.79	5.82	5.84	5.87	5.90	5.90	5.90	5.90	5.90	5.90	5.90	5.90
Georgia	Hall	18.66	35.60	52.54	69.49	86.43	103.37	103.37	103.37	103.37	103.37	103.37	103.37	103.37
Georgia	Hancock	0.79	0.84	0.88	0.93	0.97	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Georgia	Harris	2.49	3.47	4.45	5.42	6.40	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38
Georgia	Hart	1.93	1.81	1.68	1.56	1.43	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
Georgia	Heard	1.66	1.54	1.42	1.30	1.18	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Georgia	Henry	12.61	16.73	20.84	24.96	29.07	33.19	33.19	33.19	33.19	33.19	33.19	33.19	33.19
Georgia	Houston	20.77	20.74	20.71	20.67	20.64	20.61	20.61	20.61	20.61	20.61	20.61	20.61	20.61
Georgia	Irwin	0.76	0.72	0.68	0.65	0.61	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Georgia	Jackson	3.24	6.34	9.43	12.53	15.62	18.72	18.72	18.72	18.72	18.72	18.72	18.72	18.72
Georgia	Jasper	0.93	0.85	0.78	0.70	0.63	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Georgia	Jeff Davis	0.83	0.75	0.67	0.60	0.52	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Georgia	Jefferson	1.84	1.77	1.71	1.64	1.58	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51
Georgia	Jenkins	0.54	0.52	0.49	0.47	0.44	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Georgia	Johnson	0.26	0.31	0.36	0.42	0.47	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Georgia	Jones	1.49	6.49	11.50	16.50	21.51	26.51	26.51	26.51	26.51	26.51	26.51	26.51	26.51
Georgia	Lamar	3.52	3.08	2.64	2.19	1.75	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
Georgia	Lanier	0.56	0.54	0.52	0.49	0.47	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Georgia	Laurens	4.39	4.30	4.21	4.12	4.03	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
Georgia	Lee	0.78	0.99	1.20	1.40	1.61	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82
Georgia	Liberty	6.28	5.99	5.70	5.42	5.13	4.84	4.84	4.84	4.84	4.84	4.84	4.84	4.84
Georgia	Lincoln	0.67	0.61	0.56	0.50	0.45	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Georgia	Long	0.27	0.51	0.76	1.00	1.25	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Georgia	Lowndes	9.30	9.56	9.82	10.07	10.33	10.59	10.59	10.59	10.59	10.59	10.59	10.59	10.59
Georgia	Lumpkin	1.11	1.13	1.15	1.17	1.19	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Georgia	McDuffie	2.63	2.63	2.62	2.62	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61
Georgia	McIntosh	0.87	0.84	0.81	0.79	0.76	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Georgia	Macon	0.76	0.93	1.09	1.26	1.42	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59
Georgia	Madison	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42

Georgia	Marion	1.75	1.78	1.81	1.85	1.88	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91
Georgia	Meriwether	1.97	1.64	1.31	0.99	0.66	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Georgia	Miller	0.30	0.38	0.46	0.53	0.61	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Georgia	Mitchell	2.61	2.86	3.11	3.37	3.62	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
Georgia	Monroe	1.68	1.63	1.58	1.53	1.48	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
Georgia	Montgomery	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Georgia	Morgan	1.54	1.52	1.50	1.49	1.47	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Georgia	Muscogee	41.08	39.31	37.54	35.76	33.99	32.22	32.22	32.22	32.22	32.22	32.22	32.22	32.22
Georgia	Newton	12.17	11.99	11.80	11.62	11.43	11.25	11.25	11.25	11.25	11.25	11.25	11.25	11.25
Georgia	Oconee	1.95	1.62	1.29	0.97	0.64	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Georgia	Oglethorpe	0.19	0.20	0.20	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Georgia	Paulding	2.83	2.89	2.94	3.00	3.05	3.11	3.11	3.11	3.11	3.11	3.11	3.11	3.11
Georgia	Peach	2.35	2.31	2.27	2.24	2.20	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
Georgia	Pierce	0.69	0.67	0.65	0.63	0.61	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Georgia	Pike	0.73	0.61	0.50	0.38	0.27	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Georgia	Pulaski	1.15	1.09	1.03	0.97	0.91	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Georgia	Putnam	1.29	1.27	1.26	1.24	1.23	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Georgia	Quitman	0.20	0.19	0.18	0.16	0.15	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Georgia	Rabun	1.37	1.49	1.61	1.73	1.85	1.97	1.97	1.97	1.97	1.97	1.97	1.97	1.97
Georgia	Randolph	1.06	1.04	1.02	1.00	0.98	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Georgia	Richmond	43.58	43.49	43.40	43.31	43.22	43.13	43.13	43.13	43.13	43.13	43.13	43.13	43.13
Georgia	Rockdale	2.00	4.11	6.22	8.32	10.43	12.54	12.54	12.54	12.54	12.54	12.54	12.54	12.54
Georgia	Schley	0.30	0.37	0.43	0.50	0.56	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Georgia	Screven	1.15	1.12	1.10	1.07	1.05	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Georgia	Seminole	0.65	0.65	0.64	0.64	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Georgia	Spalding	9.27	9.90	10.53	11.15	11.78	12.41	12.41	12.41	12.41	12.41	12.41	12.41	12.41
Georgia	Stephens	3.49	3.59	3.68	3.78	3.87	3.97	3.97	3.97	3.97	3.97	3.97	3.97	3.97
Georgia	Stewart	0.77	0.66	0.55	0.44	0.33	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.22
Georgia	Sumter	3.71	3.58	3.45	3.31	3.18	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05

Georgia	Talbot	0.20	0.41	0.63	0.84	1.06	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
Georgia	Taliaferro	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Georgia	Tattnall	1.18	1.17	1.16	1.14	1.13	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
Georgia	Taylor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Georgia	Telfair	1.88	1.76	1.64	1.51	1.39	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
Georgia	Terrell	1.31	1.34	1.38	1.41	1.45	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48
Georgia	Thomas	7.13	6.81	6.50	6.18	5.87	5.55	5.55	5.55	5.55	5.55	5.55	5.55	5.55
Georgia	Tift	6.58	6.26	5.94	5.63	5.31	4.99	4.99	4.99	4.99	4.99	4.99	4.99	4.99
Georgia	Toombs	2.66	2.66	2.66	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67
Georgia	Towns	0.95	1.18	1.41	1.65	1.88	2.11	2.11	2.11	2.11	2.11	2.11	2.11	2.11
Georgia	Treutlen	0.45	0.44	0.43	0.42	0.41	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Georgia	Troup	10.77	10.68	10.59	10.51	10.42	10.33	10.33	10.33	10.33	10.33	10.33	10.33	10.33
Georgia	Turner	0.71	0.74	0.78	0.81	0.85	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Georgia	Twiggs	0.33	0.32	0.32	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Georgia	Union	0.61	0.87	1.13	1.39	1.65	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91
Georgia	Upson	3.38	3.28	3.17	3.07	2.96	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
Georgia	Walton	4.76	4.85	4.94	5.02	5.11	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
Georgia	Ware	3.85	3.77	3.69	3.60	3.52	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44
Georgia	Warren	0.51	0.49	0.46	0.44	0.41	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Georgia	Washington	4.19	4.00	3.81	3.62	3.43	3.24	3.24	3.24	3.24	3.24	3.24	3.24	3.24
Georgia	Wayne	1.91	1.95	1.98	2.02	2.05	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09
Georgia	Webster	0.10	0.11	0.13	0.14	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Georgia	Wheeler	0.27	0.28	0.29	0.29	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Georgia	White	2.05	2.02	1.99	1.95	1.92	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
Georgia	Wilcox	0.62	0.63	0.65	0.66	0.68	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Georgia	Wilkes	2.04	1.87	1.70	1.54	1.37	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Georgia	Wilkinson	2.35	2.07	1.78	1.50	1.21	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Georgia	Worth	1.46	1.44	1.41	1.39	1.36	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
South Carolina	Abbeville	2.87	2.80	2.74	2.67	2.61	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54

South Carolina	Aiken	18.95	18.95	18.95	18.94	18.94	18.94	18.94	18.94	18.94	18.94	18.94	18.94	18.94
South Carolina	Allendale	1.20	1.13	1.06	0.99	0.92	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
South Carolina	Anderson	19.91	20.16	20.41	20.67	20.92	21.17	21.17	21.17	21.17	21.17	21.17	21.17	21.17
South Carolina	Bamberg	1.27	1.28	1.29	1.30	1.31	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
South Carolina	Barnwell	2.73	2.65	2.57	2.49	2.41	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33
South Carolina	Beaufort	13.73	15.12	16.52	17.91	19.31	20.70	20.70	20.70	20.70	20.70	20.70	20.70	20.70
South Carolina	Berkeley	65.46	55.29	45.11	34.94	24.76	14.59	14.59	14.59	14.59	14.59	14.59	14.59	14.59
South Carolina	Charleston	6.35	21.77	37.19	52.60	68.02	83.44	83.44	83.44	83.44	83.44	83.44	83.44	83.44
South Carolina	Colleton	2.35	2.30	2.25	2.19	2.14	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09
South Carolina	Dorchester	13.16	10.85	8.54	6.22	3.91	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
South Carolina	Edgefield	3.96	3.97	3.97	3.98	3.98	3.99	3.99	3.99	3.99	3.99	3.99	3.99	3.99
South Carolina	Greenwood	13.18	13.04	12.90	12.75	12.61	12.47	12.47	12.47	12.47	12.47	12.47	12.47	12.47
South Carolina	Hampton	11.57	9.56	7.55	5.54	3.53	1.52	1.52	1.52	1.52	1.52	1.52	1.52	1.52
South Carolina	Jasper	1.26	5.09	8.93	12.76	16.60	20.43	20.43	20.43	20.43	20.43	20.43	20.43	20.43
South Carolina	McCormick	1.90	1.73	1.56	1.40	1.23	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06

South Carolina	Oconee	10.12	10.12	10.11	10.11	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
South Carolina	Pickens	28.65	24.84	21.03	17.23	13.42	9.61	9.61	9.61	9.61	9.61	9.61	9.61	9.61
South Carolina	Saluda	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Self-Supply Annual Water Use (MGD) for Counties outside Florida

STATE	COUNTY	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Alabama	Barbour	0.51	0.43	0.35	0.27	0.19	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Alabama	Bullock	0.09	0.08	0.08	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Alabama	Chambers	0.27	0.33	0.39	0.46	0.52	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Alabama	Dale	0.94	0.87	0.79	0.72	0.64	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Alabama	Geneva	0.91	0.84	0.78	0.71	0.65	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Alabama	Henry	0.12	0.15	0.17	0.20	0.22	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Alabama	Houston	1.91	1.83	1.74	1.66	1.57	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Alabama	Lee	0.86	0.83	0.80	0.76	0.73	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Alabama	Macon	0.42	0.38	0.33	0.29	0.24	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Alabama	Randolph	0.88	0.81	0.74	0.67	0.60	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Alabama	Russell	-	0.05	0.10	0.16	0.21	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Georgia	Appling	0.82	0.83	0.83	0.84	0.84	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Georgia	Atkinson	0.26	0.27	0.28	0.30	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Georgia	Bacon	0.47	0.48	0.49	0.50	0.51	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Georgia	Baker	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Georgia	Baldwin	0.36	0.30	0.23	0.17	0.10	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Georgia	Banks	0.83	0.80	0.77	0.75	0.72	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Georgia	Barrow	1.61	1.71	1.81	1.90	2.00	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10

Georgia	Ben Hill	0.55	0.49	0.44	0.38	0.33	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Georgia	Berrien	0.60	0.62	0.64	0.65	0.67	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Georgia	Bibb	0.41	0.70	0.99	1.27	1.56	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85
Georgia	Bleckley	0.52	0.52	0.52	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Georgia	Brantley	0.95	0.96	0.97	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Georgia	Brooks	0.65	0.66	0.67	0.68	0.69	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Georgia	Bryan	0.63	0.66	0.69	0.71	0.74	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Georgia	Bulloch	1.24	1.19	1.13	1.08	1.02	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Georgia	Burke	0.90	0.94	0.99	1.03	1.08	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
Georgia	Butts	0.30	0.30	0.31	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Georgia	Calhoun	0.09	0.08	0.08	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Georgia	Camden	0.99	1.01	1.03	1.05	1.07	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Georgia	Candler	0.40	0.41	0.42	0.43	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Georgia	Carroll	2.64	2.45	2.26	2.07	1.88	1.69	1.69	1.69	1.69	1.69	1.69	1.69	1.69
Georgia	Charlton	0.55	0.54	0.52	0.51	0.49	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Georgia	Chatham	2.23	2.23	2.23	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24
Georgia	Chattahoochee	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Georgia	Cherokee	2.10	2.71	3.33	3.94	4.56	5.17	5.17	5.17	5.17	5.17	5.17	5.17	5.17
Georgia	Clarke	0.22	0.18	0.14	0.10	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Georgia	Clay	0.16	0.15	0.14	0.13	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Georgia	Clayton	-	0.13	0.27	0.40	0.54	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Georgia	Clinch	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Georgia	Cobb	0.96	0.97	0.98	0.98	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Georgia	Coffee	1.36	1.41	1.47	1.52	1.58	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
Georgia	Colquitt	1.58	1.56	1.54	1.51	1.49	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
Georgia	Columbia	0.68	0.74	0.80	0.86	0.92	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Georgia	Cook	0.51	0.52	0.52	0.53	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Georgia	Coweta	3.38	2.79	2.20	1.60	1.01	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Georgia	Crawford	0.82	0.81	0.80	0.78	0.77	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76

Georgia	Crisp	0.42	0.41	0.40	0.38	0.37	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Georgia	Dawson	0.62	0.59	0.56	0.54	0.51	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Georgia	Decatur	1.11	1.10	1.09	1.09	1.08	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Georgia	DeKalb	3.13	3.11	3.10	3.08	3.07	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
Georgia	Dodge	0.77	0.80	0.83	0.86	0.89	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Georgia	Dooly	0.35	0.34	0.33	0.32	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Georgia	Dougherty	-	0.06	0.11	0.17	0.22	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Georgia	Douglas	0.70	1.14	1.59	2.03	2.48	2.92	2.92	2.92	2.92	2.92	2.92	2.92	2.92
Georgia	Early	0.46	0.46	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Georgia	Echols	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Georgia	Effingham	0.96	1.08	1.21	1.33	1.46	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58
Georgia	Elbert	0.70	0.72	0.74	0.76	0.78	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Georgia	Emanuel	0.71	0.72	0.73	0.74	0.75	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Georgia	Evans	0.10	0.16	0.23	0.29	0.36	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Georgia	Fayette	1.10	1.23	1.36	1.48	1.61	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74
Georgia	Forsyth	2.17	2.37	2.56	2.76	2.95	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Georgia	Franklin	0.67	0.70	0.73	0.77	0.80	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Georgia	Fulton	1.10	1.13	1.16	1.18	1.21	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
Georgia	Glascock	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Georgia	Glynn	0.65	0.66	0.67	0.68	0.69	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Georgia	Grady	0.83	0.84	0.84	0.85	0.85	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Georgia	Greene	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Georgia	Gwinnett	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia	Habersham	1.09	1.13	1.18	1.22	1.27	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
Georgia	Hall	4.64	4.15	3.66	3.16	2.67	2.18	2.18	2.18	2.18	2.18	2.18	2.18	2.18
Georgia	Hancock	0.31	0.30	0.29	0.28	0.27	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Georgia	Harris	0.86	0.85	0.84	0.82	0.81	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Georgia	Hart	1.12	1.13	1.14	1.16	1.17	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
Georgia	Heard	0.31	0.29	0.28	0.26	0.25	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Georgia	Henry	0.54	0.58	0.63	0.67	0.72	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76

Georgia	Houston	0.90	0.77	0.64	0.51	0.38	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Georgia	Irwin	0.45	0.45	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Georgia	Jackson	1.38	1.14	0.91	0.67	0.44	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Georgia	Jasper	0.43	0.52	0.62	0.71	0.81	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Georgia	Jeff Davis	0.48	0.49	0.49	0.50	0.50	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Georgia	Jefferson	0.64	0.63	0.62	0.62	0.61	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Georgia	Jenkins	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Georgia	Johnson	0.42	0.44	0.45	0.47	0.48	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Georgia	Jones	0.85	0.90	0.94	0.99	1.03	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Georgia	Lamar	0.72	0.71	0.70	0.70	0.69	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Georgia	Lanier	0.33	0.33	0.34	0.34	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Georgia	Laurens	1.52	1.54	1.57	1.59	1.62	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64
Georgia	Lee	1.27	1.25	1.24	1.22	1.21	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
Georgia	Liberty	0.86	0.83	0.79	0.76	0.72	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Georgia	Lincoln	0.31	0.28	0.26	0.23	0.21	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Georgia	Long	0.48	0.50	0.52	0.54	0.56	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Georgia	Lowndes	2.00	1.85	1.71	1.56	1.42	1.27	1.27	1.27	1.27	1.27	1.27	1.27	1.27
Georgia	Lumpkin	1.18	1.24	1.30	1.37	1.43	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Georgia	McDuffie	0.65	0.65	0.66	0.66	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Georgia	McIntosh	0.15	0.16	0.17	0.19	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Georgia	Macon	0.48	0.47	0.46	0.46	0.45	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Georgia	Madison	1.52	1.54	1.57	1.59	1.62	1.64	1.64	1.64	1.64	1.64	1.64	1.64	1.64
Georgia	Marion	0.36	0.36	0.35	0.35	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Georgia	Meriwether	0.82	0.85	0.88	0.92	0.95	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Georgia	Miller	0.30	0.30	0.29	0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Georgia	Mitchell	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Georgia	Monroe	1.14	1.15	1.15	1.16	1.16	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Georgia	Montgomery	0.21	0.22	0.23	0.24	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Georgia	Morgan	0.62	0.64	0.66	0.67	0.69	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Georgia	Muscogee	-	-	-	-	-	-	-	-	-	-	-	-	-

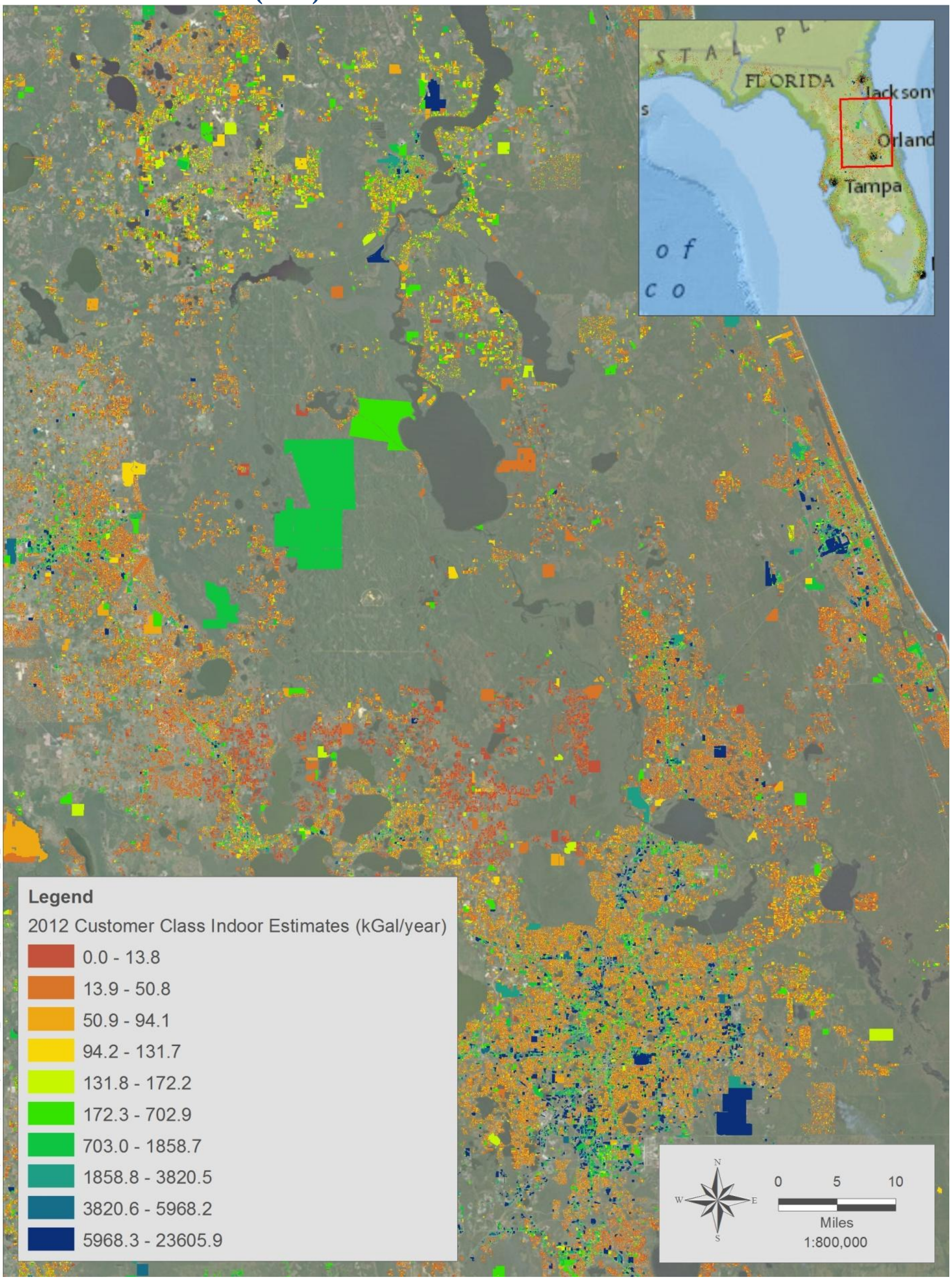
Georgia	Newton	0.08	0.47	0.86	1.25	1.64	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03
Georgia	Oconee	0.79	0.81	0.83	0.85	0.87	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Georgia	Oglethorpe	0.75	0.77	0.79	0.80	0.82	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Georgia	Paulding	1.32	1.29	1.27	1.24	1.22	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
Georgia	Peach	0.65	0.64	0.62	0.61	0.59	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Georgia	Pierce	0.80	0.82	0.85	0.87	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Georgia	Pike	0.81	0.84	0.86	0.89	0.91	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Georgia	Pulaski	0.35	0.34	0.33	0.31	0.30	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Georgia	Putnam	0.56	0.57	0.57	0.58	0.58	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Georgia	Quitman	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Georgia	Rabun	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Georgia	Randolph	0.22	0.21	0.19	0.18	0.16	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Georgia	Richmond	0.02	0.07	0.13	0.18	0.24	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Georgia	Rockdale	0.05	0.33	0.62	0.90	1.19	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
Georgia	Schley	0.12	0.11	0.09	0.08	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Georgia	Screven	0.74	0.73	0.72	0.70	0.69	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Georgia	Seminole	0.40	0.40	0.40	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Georgia	Spalding	0.83	0.84	0.85	0.85	0.86	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Georgia	Stephens	0.12	0.13	0.15	0.16	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Georgia	Stewart	0.12	0.10	0.09	0.07	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Georgia	Sumter	0.98	0.96	0.94	0.91	0.89	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Georgia	Talbot	0.12	0.12	0.13	0.13	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Georgia	Taliaferro	0.12	0.11	0.10	0.10	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Georgia	Tattnall	0.97	0.99	1.00	1.02	1.03	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
Georgia	Taylor	0.32	0.32	0.32	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Georgia	Telfair	0.19	0.21	0.24	0.26	0.29	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Georgia	Terrell	0.25	0.25	0.25	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Georgia	Thomas	0.80	0.82	0.85	0.87	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Georgia	Tift	0.78	0.80	0.82	0.83	0.85	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Georgia	Toombs	0.42	0.47	0.52	0.58	0.63	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68

Georgia	Towns	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Georgia	Treutlen	0.29	0.29	0.28	0.28	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Georgia	Troup	0.62	0.67	0.73	0.78	0.84	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Georgia	Turner	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Georgia	Twiggs	0.61	0.61	0.60	0.60	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Georgia	Union	0.45	0.46	0.48	0.49	0.51	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Georgia	Upson	0.21	0.40	0.59	0.78	0.97	1.16	1.16	1.16	1.16	1.16	1.16	1.16	1.16
Georgia	Walton	1.98	2.11	2.23	2.36	2.48	2.61	2.61	2.61	2.61	2.61	2.61	2.61	2.61
Georgia	Ware	0.41	0.41	0.40	0.40	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39
Georgia	Warren	0.22	0.22	0.21	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Georgia	Washington	0.75	0.74	0.73	0.72	0.71	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Georgia	Wayne	1.09	1.11	1.14	1.16	1.19	1.21	1.21	1.21	1.21	1.21	1.21	1.21	1.21
Georgia	Webster	0.10	0.10	0.09	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Georgia	Wheeler	0.30	0.31	0.32	0.32	0.33	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Georgia	White	1.00	1.02	1.04	1.06	1.08	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Georgia	Wilcox	0.32	0.31	0.30	0.30	0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Georgia	Wilkes	0.27	0.30	0.32	0.35	0.37	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Georgia	Wilkinson	0.15	0.17	0.18	0.20	0.21	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Georgia	Worth	0.92	0.91	0.91	0.90	0.90	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
South Carolina	Abbeville	0.73	0.97	1.22	1.46	1.71	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
South Carolina	Aiken	0.80	1.34	1.89	2.43	2.98	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52
South Carolina	Allendale	0.27	0.28	0.29	0.31	0.32	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
South Carolina	Anderson	0.36	1.31	2.26	3.22	4.17	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12
South Carolina	Bamberg	0.41	0.46	0.51	0.56	0.61	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
South Carolina	Barnwell	0.63	0.70	0.76	0.83	0.89	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96

South Carolina	Beaufort	0.52	0.68	0.84	1.01	1.17	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
South Carolina	Berkeley	3.60	3.31	3.02	2.74	2.45	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16
South Carolina	Charleston	2.56	2.95	3.34	3.74	4.13	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52
South Carolina	Colleton	1.30	1.46	1.63	1.79	1.96	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
South Carolina	Dorchester	1.92	2.54	3.17	3.79	4.42	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04
South Carolina	Edgefield	0.11	0.18	0.24	0.31	0.37	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
South Carolina	Greenwood	1.33	1.37	1.41	1.46	1.50	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54
South Carolina	Hampton	0.47	0.58	0.70	0.81	0.93	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
South Carolina	Jasper	0.18	0.35	0.52	0.68	0.85	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
South Carolina	McCormick	0.08	0.21	0.34	0.48	0.61	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
South Carolina	Oconee	0.53	0.76	0.99	1.21	1.44	1.67	1.67	1.67	1.67	1.67	1.67	1.67	1.67
South Carolina	Pickens	1.86	2.89	3.93	4.96	6.00	7.03	7.03	7.03	7.03	7.03	7.03	7.03	7.03
South Carolina	Saluda	0.95	1.13	1.31	1.49	1.67	1.85	1.85	1.85	1.85	1.85	1.85	1.85	1.85

Appendix C
Example Figures

Figure C1 Example Spatial Distribution of Customer Class Indoor Water Use Estimates for Florida (2012)



For Informational Purposes Only S:\Projects\19750_SJRWMD\046_SpatialDistribution_of_WaterUse\MXD\CustClass.mxd JTI 12/28/2013

Figure C2 Example Spatial Distribution of Customer Class Outdoor Water Use Estimates for Florida (2012)

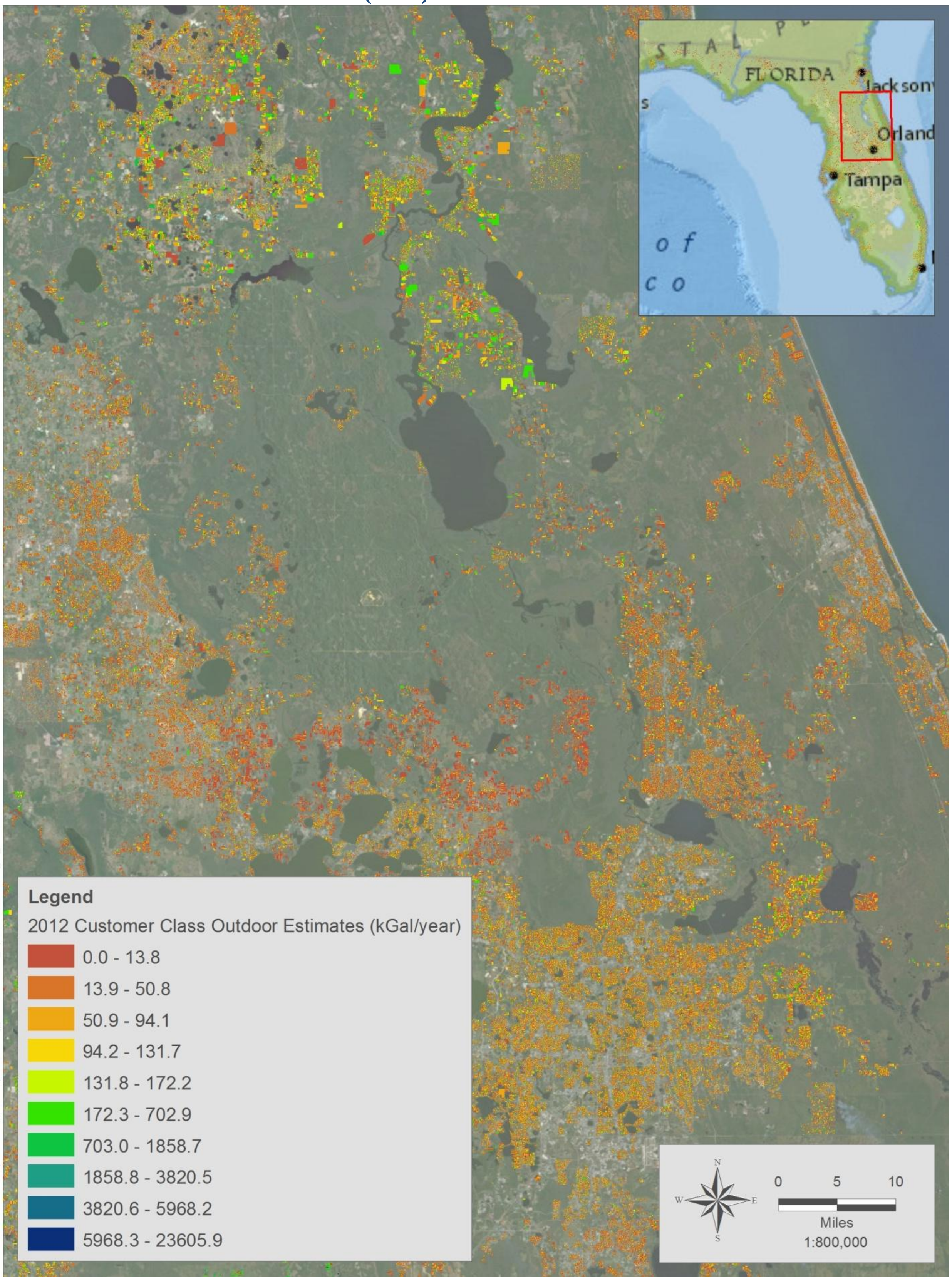


Figure C3 Example Spatial Distribution of Power Generation Water Use Estimates for Florida (2012)

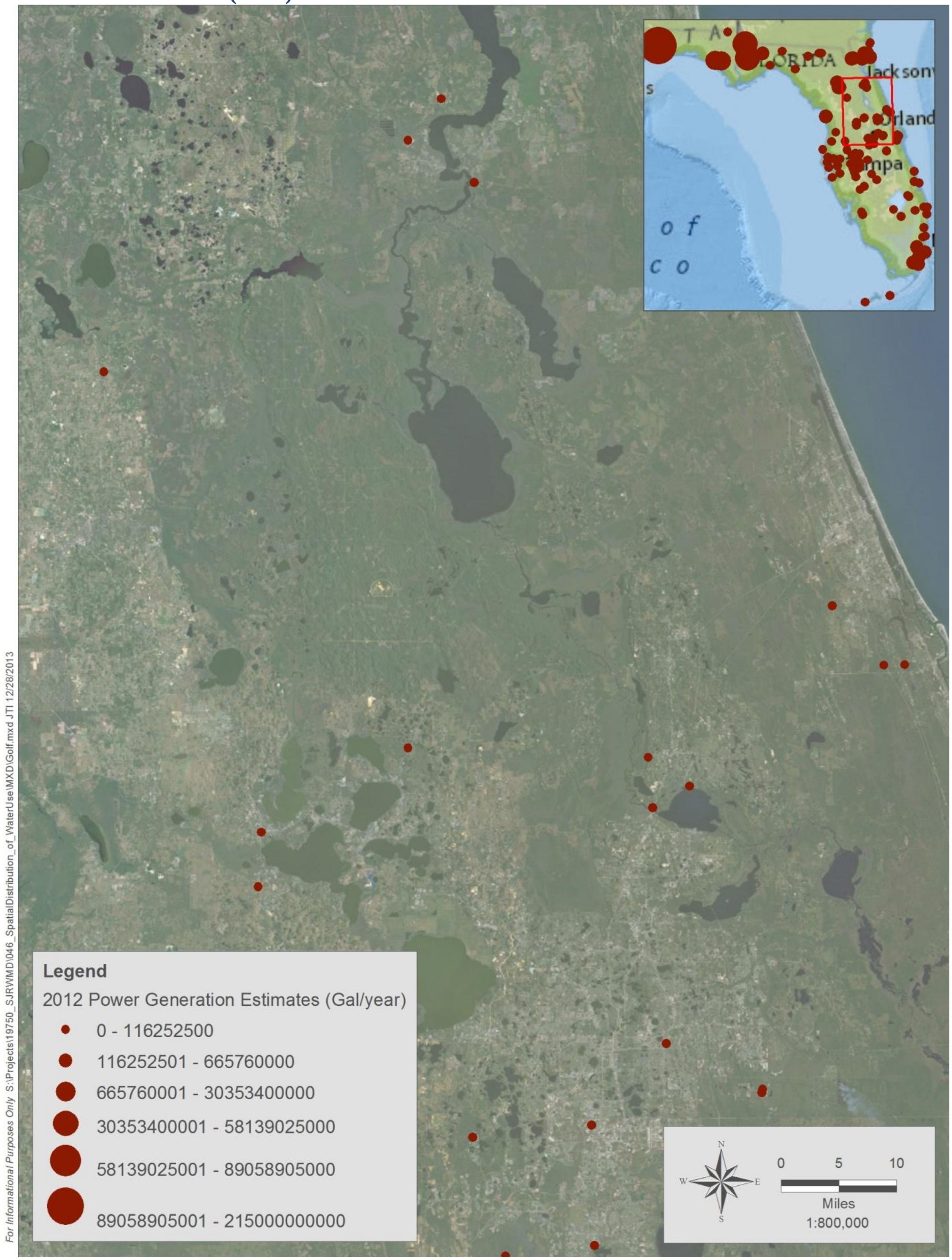


Figure C4 Example Spatial Distribution of Golf Course Water Use Estimates for Florida (2012)

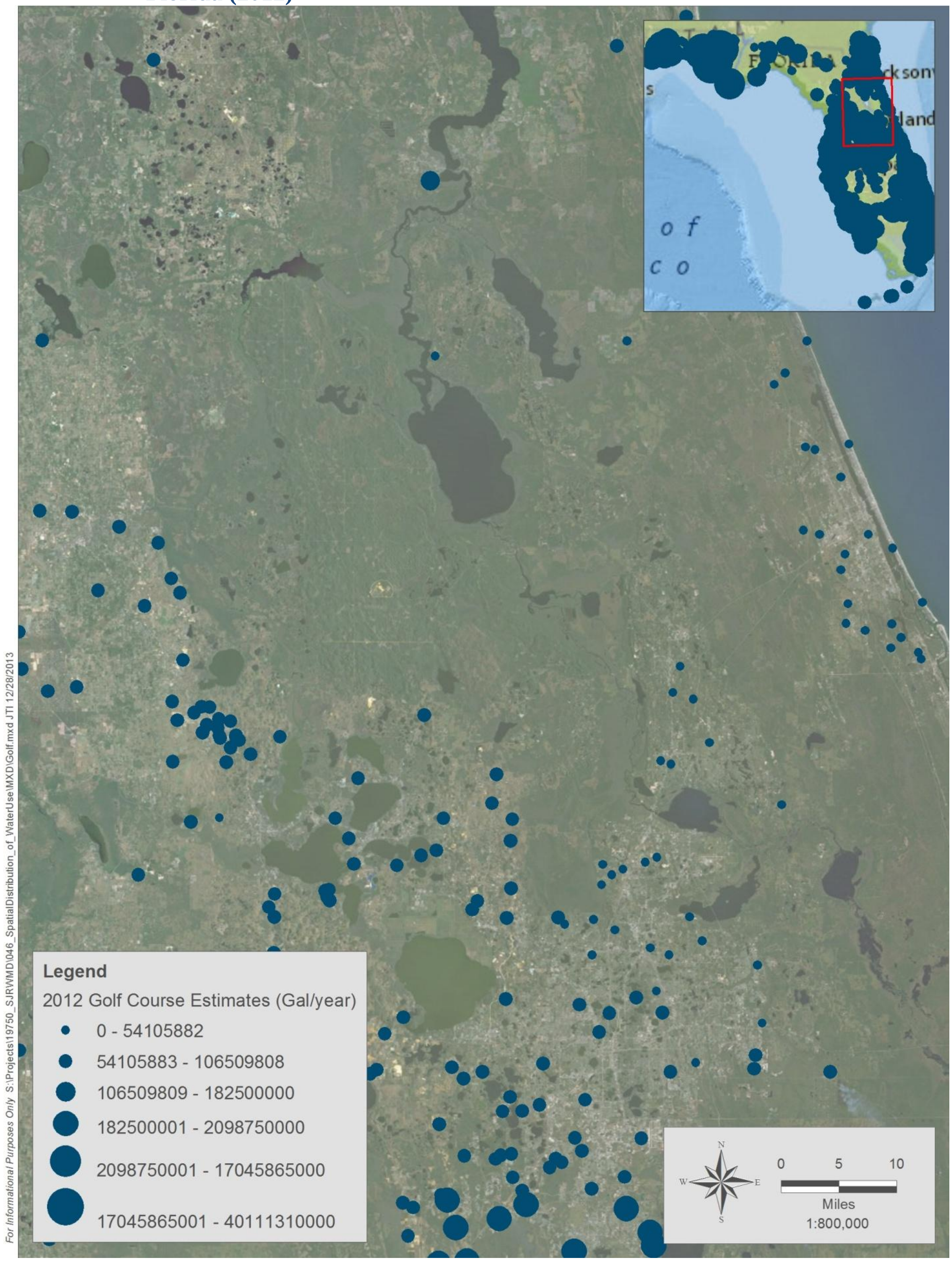


Figure C5 Example Spatial Distribution of Individual CII User Water Use Estimates for Florida (2012)

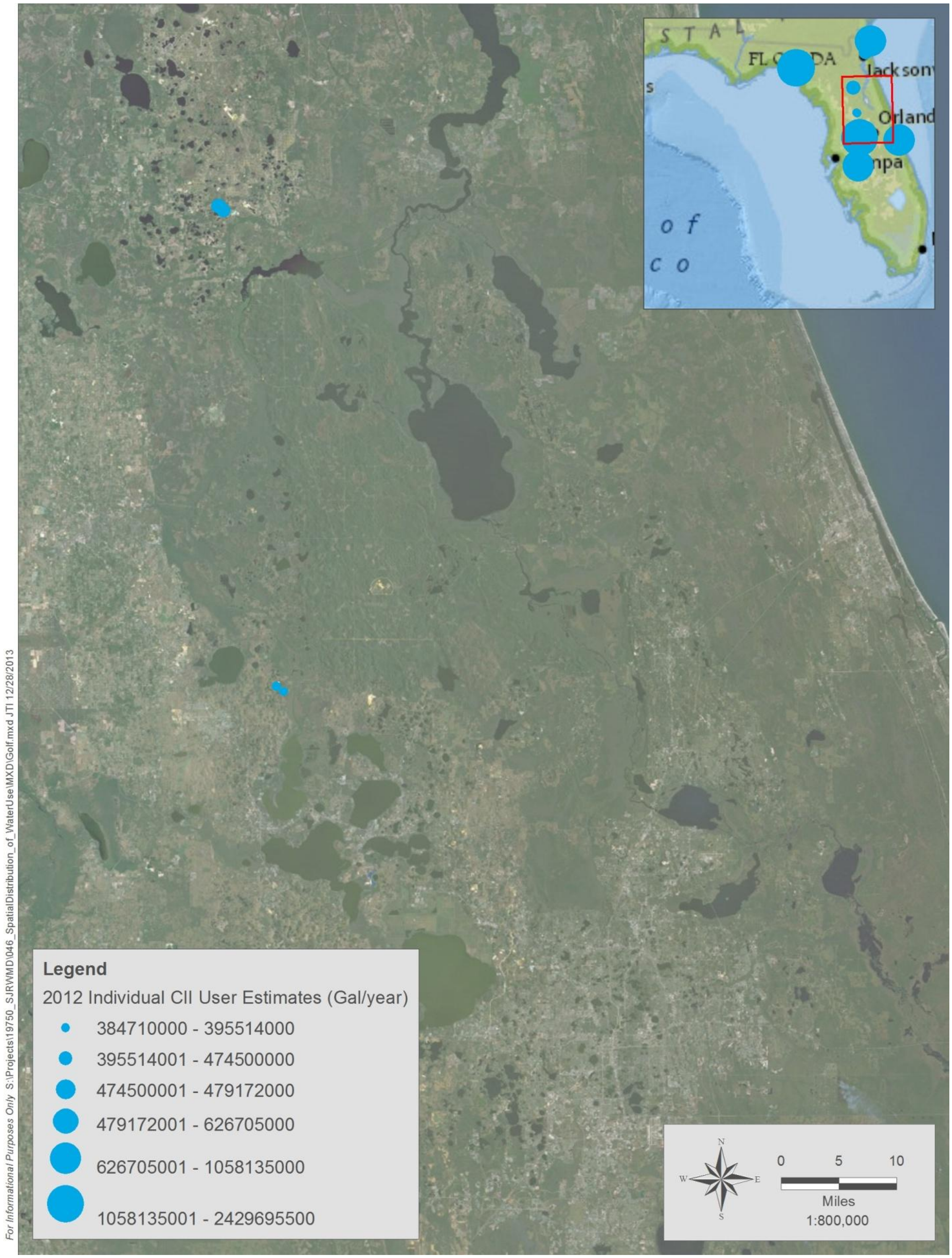


Figure C6 Example Spatial Distribution of Public Supply Indoor Water Use Estimates Outside Florida (2012)

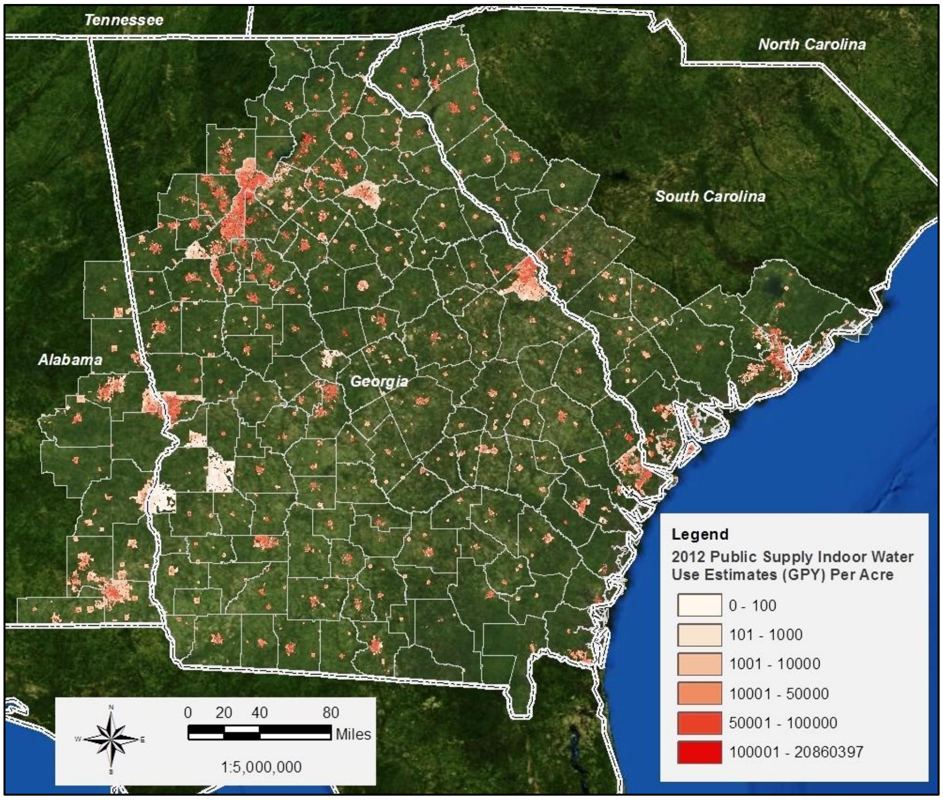


Figure C7 Example Spatial Distribution of Public Supply Outdoor Water Use Estimates Outside Florida (2012)

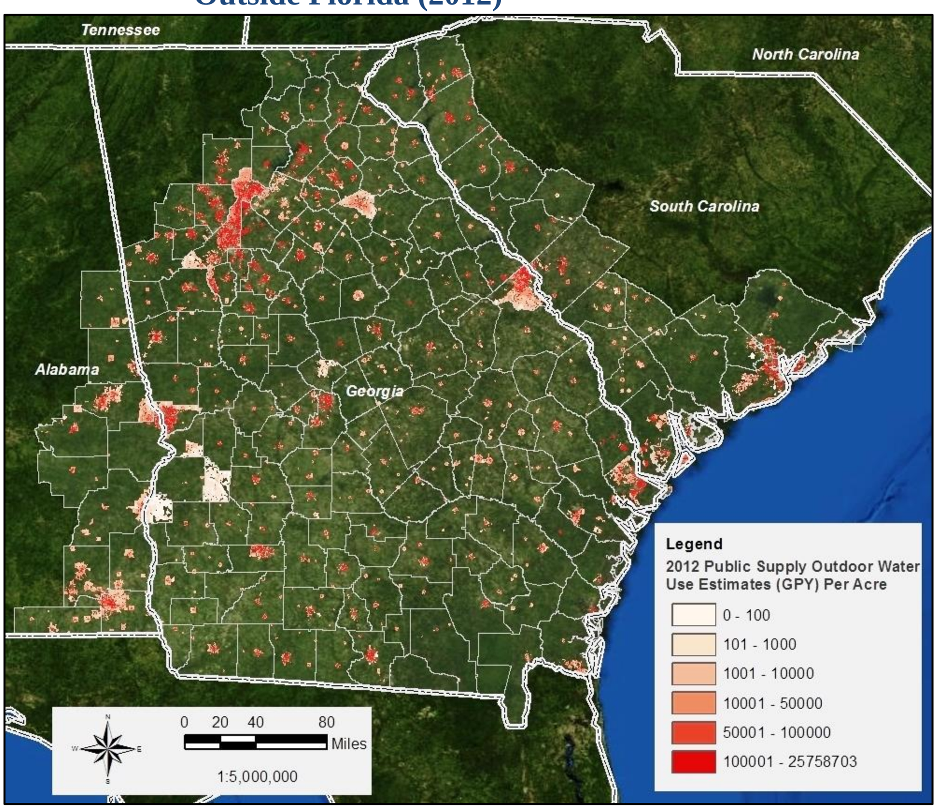


Figure C8 Example Spatial Distribution of Domestic Self-Supply Indoor Water Use Estimates Outside Florida (2012)

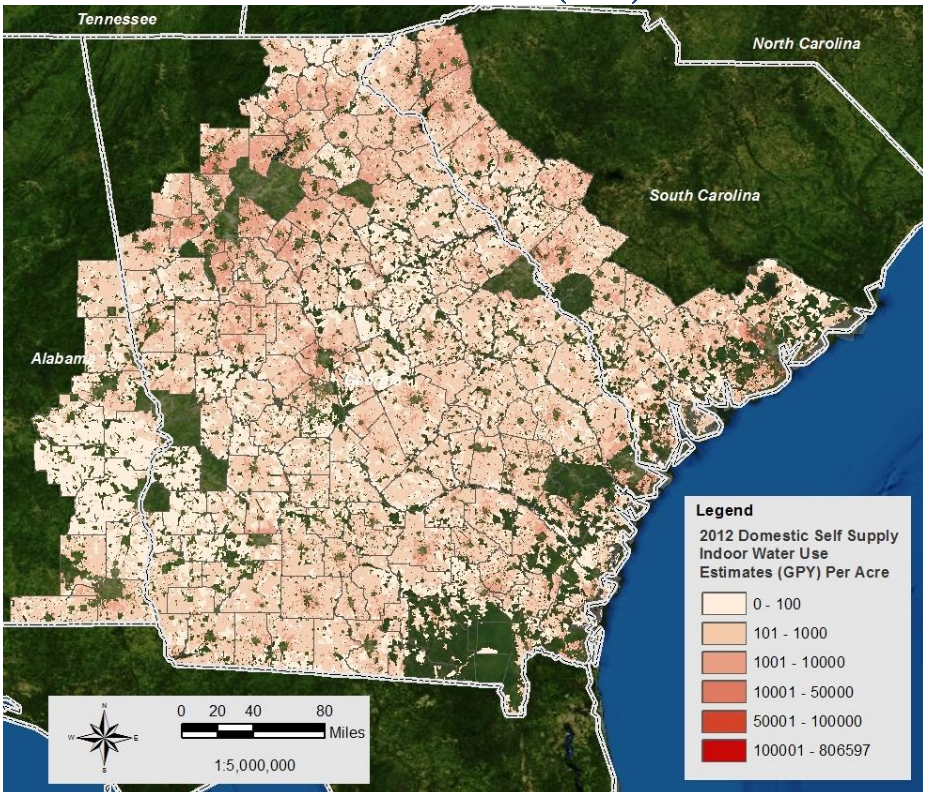


Figure C9 Example Spatial Distribution of Domestic Self-Supply Outdoor Water Use Estimates Outside Florida (2012)

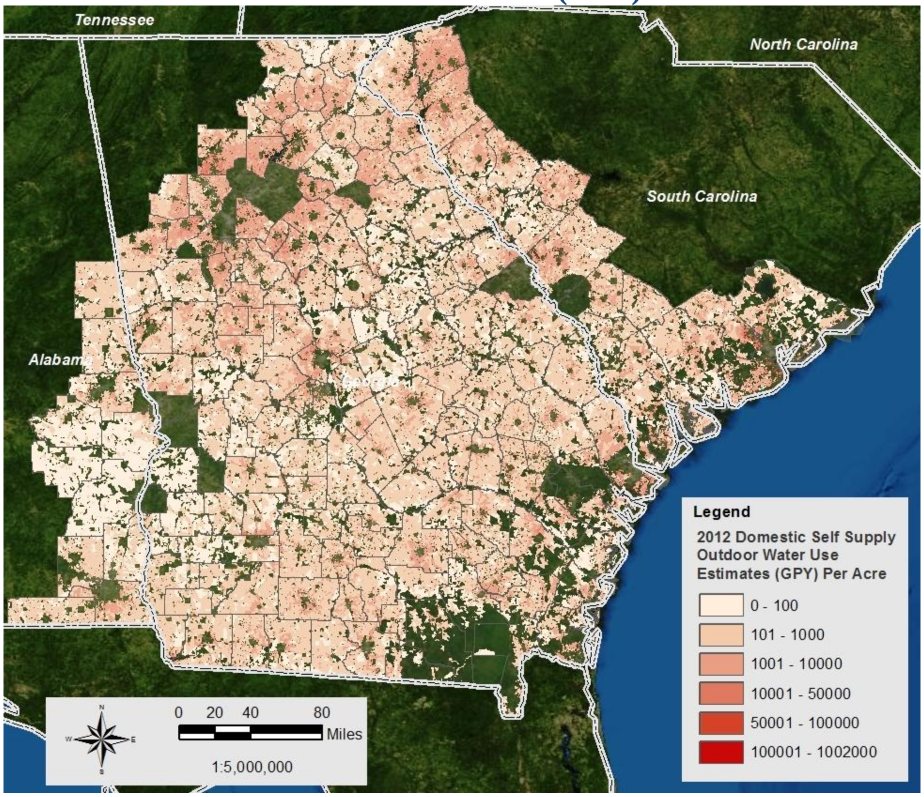


Figure C10 Example Spatial Distribution of CII User Water Use Estimates Outside Florida (2012)

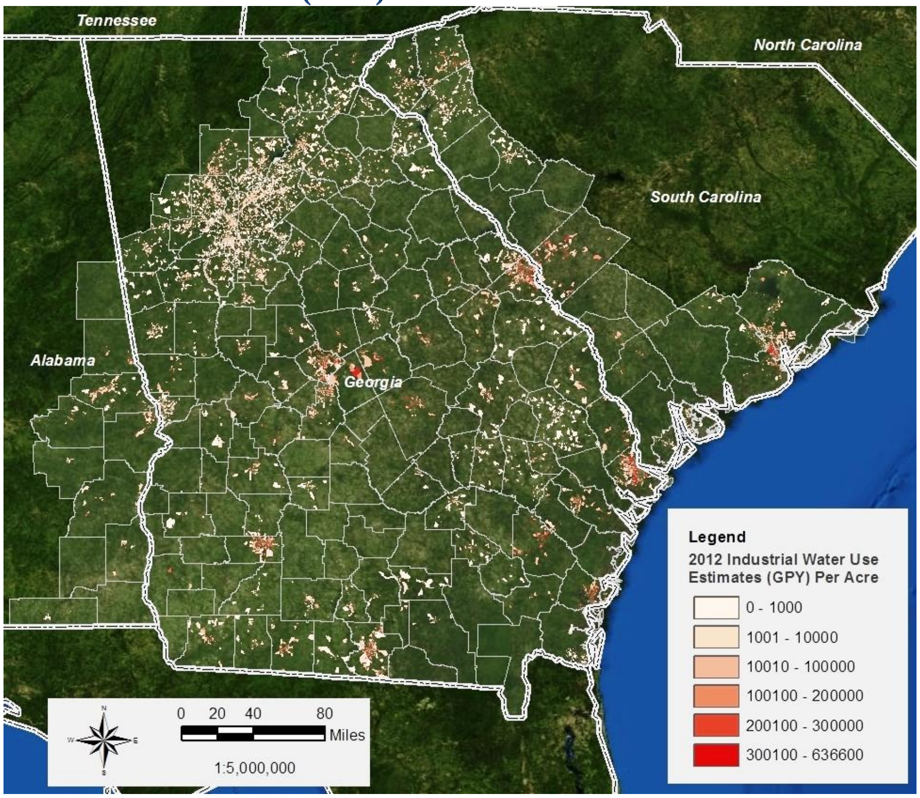


Figure C11 Example Spatial Distribution of Power Generation Water Use Estimates Outside Florida (2012)

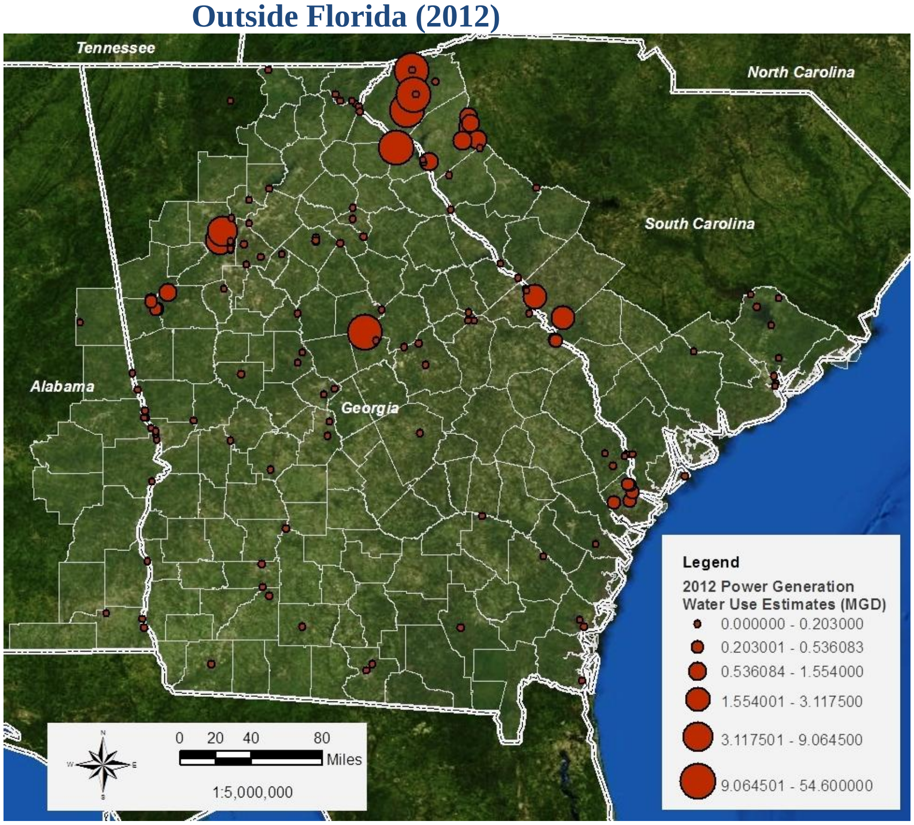


Figure C12 Example Spatial Distribution of Golf Course Water Use Estimates Outside Florida (2012)