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South Carolina Water Use Report 2019 Summary

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Definitions

Aquifer – A geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs. An alternate definition includes saturated material capable of providing economically viable amounts of water to wells or springs.

Aquaculture water use (water use category) – Water used for raising, farming and/or harvesting of organisms that live in water, such as fish, shrimp and other shellfish and vegetal matter (seaweed).

Consumptive water use – The amount of water withdrawn that is evaporated, transpired, incorporated into products or crops, consumed by humans or livestock, or otherwise removed from the immediate water environment.

Effluent (wastewater) – Water conveyed out of a wastewater treatment facility or other works used for the purpose of treating, stabilizing, or holding wastewater. Effluent is often highly treated and is an excellent option for reuse of wastewater for irrigation.

Fall Line – The geologic and physiographic surface boundary separating the sedimentary deposits of the Coastal Plain from the metamorphic and igneous rocks of the Piedmont.

Farm – Any operation from which \$1000.00 or more of agricultural products were sold or normally would be sold during the year.

Golf course irrigation (water use category) – Water applied to maintain golf course turf, including tee boxes, fairways, putting greens, associated practice areas and periphery aesthetic landscaping.

Groundwater – Generally, all subsurface water as distinct from surface water; specifically, that part of the subsurface water in the saturated zone.

Hydroelectric water use (water use category) – Water used in generating electricity where turbine generators are driven by falling water.

Industrial water use (water use category) – Water used for commercial and industrial purposes, including fabrication, processing, washing, in-plant conveyance and cooling.

Irrigated acreage – Acreage capable of being irrigated, with regard to availability of water, suitable soils and topography of land.

Irrigation water use (water use category) – Water that is used for agricultural and landscaping purposes including turf farming and livestock management.

Mining water use (water use category) – Water that is used for in conjunction with surface or subsurface mining of minerals or natural materials

Other use (water use category) – Any use of surface water or groundwater not specifically identified in any of the other categories.

Reclaimed water – Wastewater treatment plant effluent that has been diverted, intercepted, or otherwise conveyed for use before it reaches a natural waterway or aquifer.

Surface water – Water flowing or stored on the earth's surface such as a stream, lake, or reservoir.

Thermoelectric water use (water use category) – Water used in generating electricity from fossil fuel (coal, oil, natural gas), geothermal, biomass, solid waste, or nuclear energy.

Water supply (water use category) – Water withdrawn by public and private water suppliers and conveyed to users or groups of users. Water suppliers provide water for a variety of uses including domestic, commercial, industrial and public water use.

Water usage rates – As utilized in this report, measurements to quantitatively represent volumetric withdrawals per unit of time; as in gallons per minute (gpm), gallons per day (gpd) and gallons per year (gpy). Unless otherwise stated, figures in this report are presented in millions of gallons per year.

Water use – Generally, water that is used for a specific purpose (i.e., domestic use, industrial, etc.). Broadly, human interaction with and influence on the hydrologic cycle, and includes water withdrawal, distribution, consumptive use, wastewater collection and return flow.

Withdrawal – The removal of surface water or groundwater from its current setting in the natural hydrologic system for use, including, but not limited to, water supply, industrial use, commercial use, domestic use, irrigation, livestock, power generation

Forward

The South Carolina Department of Health and Environmental Control (DHEC) is tasked with the management of South Carolina's water resources under the South Carolina Surface Water Withdrawal and Reporting Act, §49-4-10, et. seq., and the South Carolina Groundwater Use and Reporting Act, §49-5-10 et. seq. These regulations require water users that withdraw three (3) million gallons or greater in any month to register with and report their use annually to the Water Use Program at DHEC.

The water use data is compiled in a database and evaluated to determine how water is utilized state-wide. This data is shared between local, state, and federal regulatory and scientific agencies to share knowledge and understanding of the resource and the current state of demand. This database is utilized within the Department for critical water management decisions and even water use conflict resolutions. Statistics presented in this report represent self-reported data from registered and permitted users within the Water Use Program.

Water use from private domestic wells, small surface water irrigation pond intakes, facilities that do not meet the reporting threshold, or data from facilities failing to report their annual water use are not included in this annual summary. For the year 2019, compliance of reporting sources was greater than 99%.

If you have questions about this or previous Annual Water Use Reports, or would like to obtain further information about reported water withdrawals in South Carolina, please contact:

**Water Use Program
SCDHEC Bureau of Water
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**www.dhec.sc.gov/Environment/WaterQuality/GroundUseReporting/
www.dhec.sc.gov/Environment/WaterQuality/SurfaceWaterWithdrawals/**

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Introduction

South Carolina is fortunate to have an abundant and available fresh water supply, through surface water sources and groundwater aquifers. Growth and development in the state has led to increasing demand on water supplies. As of January 1, 2001, anyone withdrawing groundwater or surface water in excess of three (3) million gallons per month (in any month) must register and report that use annually to DHEC's Water Quantity Permitting Section (Department). Registration and reporting is a requirement of law and the Department has authority to take enforcement action against those not reporting, per the Groundwater Use and Reporting Act [49-5-10], R. 61-113, Groundwater Use and Reporting, the South Carolina Surface Water Withdrawal, Permitting, Use and Reporting Act [49-4-10], and R.61-119, Surface Water Withdrawal, Permitting, and Reporting.

Purpose and Methodology

The purpose of the annual South Carolina Water Use Report is to summarily present reported water use in South Carolina, broken down by county and use category, during calendar year 2019. The Department maintains and continually updates the water use and facility databases utilized in this report. Water use data are reported annually by registered and permitted users as required and mandated by state law. All water use volumes are reported in millions of gallons unless stated otherwise.

South Carolina Climate

The climate in South Carolina is affected by many factors, notably its location in the midlatitudes and its proximity to the Appalachian Mountains and the Atlantic Ocean. During the summer, ocean current-driven air masses such as the Bermuda High routinely push tropical air from the Gulf of Florida upland from the coast (South Carolina Department of Natural Resources, 2018). These warm, moist currents collide with cooler, drier air masses to generate rainfall, and at times, severe thunderstorms (South Carolina Department of Natural Resources, 2018). In contrast, the Appalachian region in the northwest portion of the state experiences cooler temperatures, owing in part to upward lifting of air masses and subsequent cooling effect provided by the increase in altitude (South Carolina Department of Natural Resources, 2018). Altitude change also causes the additional phenomenon of down-slope heating as air masses from the mountains settle and compress over the eastern Blue Ridge and Piedmont region (South Carolina Department of Natural Resources, 2018). During the winter months, the highlands of the Blue Ridge escarpment deflect northerly cold air to the southwest, often lessening the impact of major cold fronts and winter storms (South Carolina Department of Natural Resources, 2018). The vast majority of the state is classified as humid subtropical except in the Blue Ridge physiographic province, where it is humid continental (South Carolina Department of Natural Resources, 2018).

Average temperature varies from the mid-50s °F in the mountains to low-60s °F along the coast. The average annual precipitation is approximately 48 inches, with an annual total in the mountains of 70 to 80 inches, an annual total in the Midlands of 42 to 47 inches and an annual total along the coast of 50 to 52 inches. According to the South Carolina State Climatology Office, no month in South Carolina averages less than two inches of precipitation, regardless of location within the state (South Carolina Department of Natural Resources, 2018). Measurable snowfall is rare, occurring one to three times a year with accumulations seldom remaining more than a day or two. In 2019 the average statewide temperature was 65.1°F. The average monthly rainfall for 2019 was 3.83 inches, with cumulative rainfall of 45.97 inches (NOAA National Centers for Environmental Information, 2019) (Southeast Regional Climate Center, 2019)

Geography and Physiography

South Carolina has unique geography and widely-diverse ecology, covering nearly 31,189 square miles, with 1,078 square miles of inland and coastal waterways and 135 miles of coastline. The ecological diversity is due to climatic conditions and geology, dividing the state into three major physiographic regions: the Blue Ridge, the Piedmont, and the Coastal Plain (Figure 1). These regions exhibit variations in topography, geology, hydrology, and vegetation that directly affect the quantity, quality, and availability of water resources in South Carolina.

Blue Ridge

The Blue Ridge physiographic province is located in the very northwest portion of Oconee and Pickens counties (Figure 1). It is distinguished from other areas of South Carolina by elevations between 1,000 and 3,300 feet above sea level and greater surface relief. Dissected mountains, rugged hills, and thick forests characterize the land surface. The surface water in the Blue Ridge takes the form of high gradient creeks and streams with man-made lakes, while groundwater occurs in the fractures of the bedrock and a thin veneer of soil and saprolite overlying the bedrock. The water quality of streams and groundwater is generally excellent in the Blue Ridge owing to the constant replenishment from abundant local rainfall.

Piedmont

The Piedmont physiographic province includes all counties, or portions of counties, northwest of and up to the Fall Line, exclusive of those counties within the Blue Ridge province (Figure 1). Although similar to the Blue Ridge, the region demonstrates lower topographic relief, and therefore lower gradient streams, and elevations range from between 450 to 1000 feet above sea level. Counties in the Piedmont and Blue Ridge physiographic provinces depend primarily on the abundant regional rainfall that recharges lakes, reservoirs and major river systems. These surface water bodies constitute the primary source of water for public supply, industry, agriculture, and power production in the Piedmont region. Similar to the Blue Ridge, groundwater occurs in the fractures of the bedrock and overlying soil and saprolite, and is also of good quality, except in smaller areas of contamination.

Coastal Plain

The Coastal Plain physiographic province includes all counties, or portions of counties, extending from the Fall Line east to the Atlantic Ocean (Figure 1). Elevations of the exposed Coastal Plain range between 0 and 450 feet above sea level. Once below the Fall Line, rivers and streams assume a different character than those found in the Piedmont. Coastal Plain streams have a slower pace with quiet meandering river channels, typically with adjacent wetlands. Regional geology of the Coastal Plain is characterized by aquifers developed in layers of sands, silts, or high-permeability limestone confined by units of clay and silts or low-permeability limestone. The vast majority of South Carolina's water resources are contained as groundwater in the Coastal Plain, and in general, reliance on groundwater for irrigation, industrial uses, and public water supply increases east of the Fall Line. A generalized cross-section for the Coastal Plain aquifers is presented in Figure 2, and a brief outline of the major aquifers in South Carolina follows.

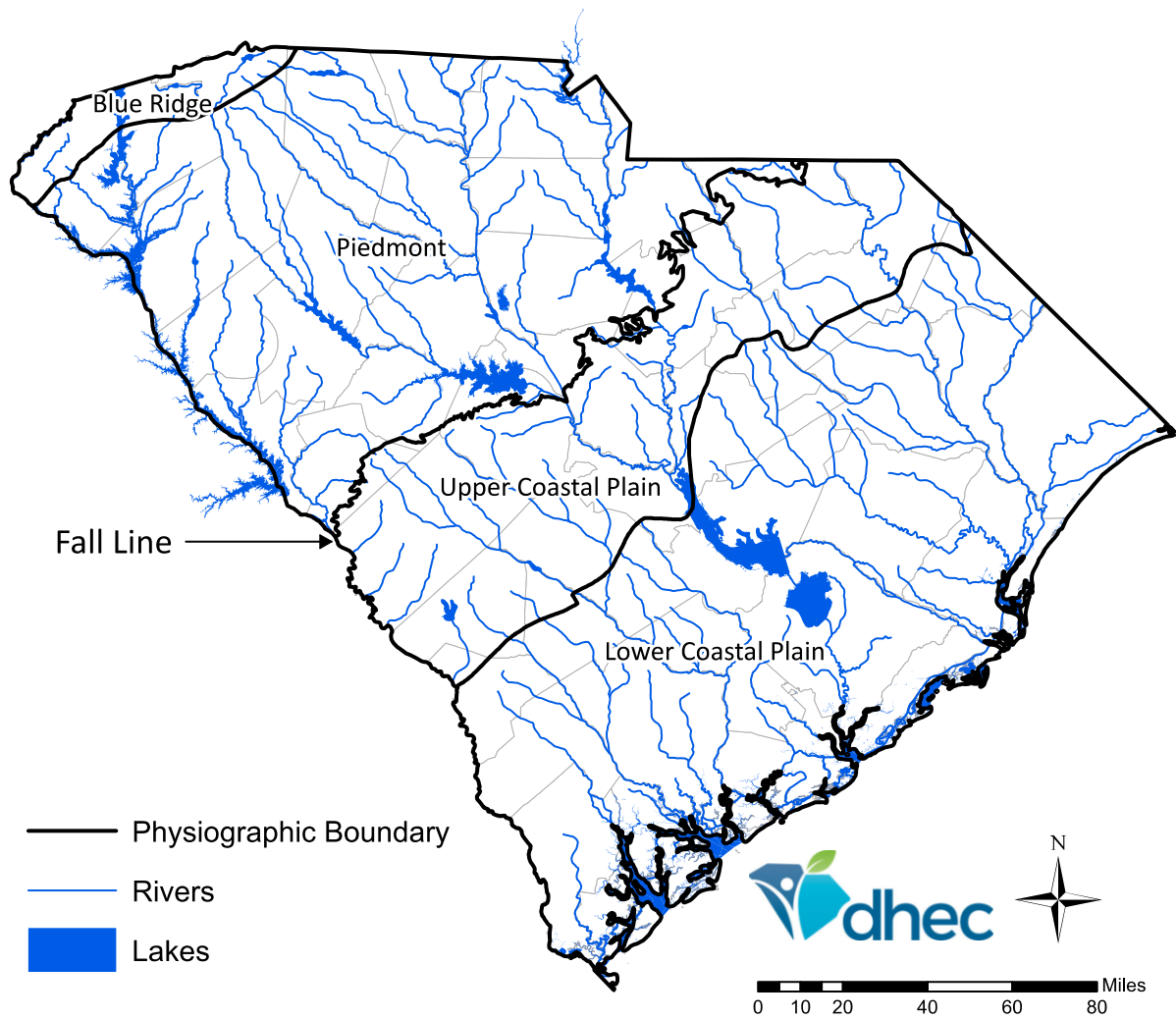


Figure 1: Hydrogeologic and Physiographic Setting for Water Use in South Carolina

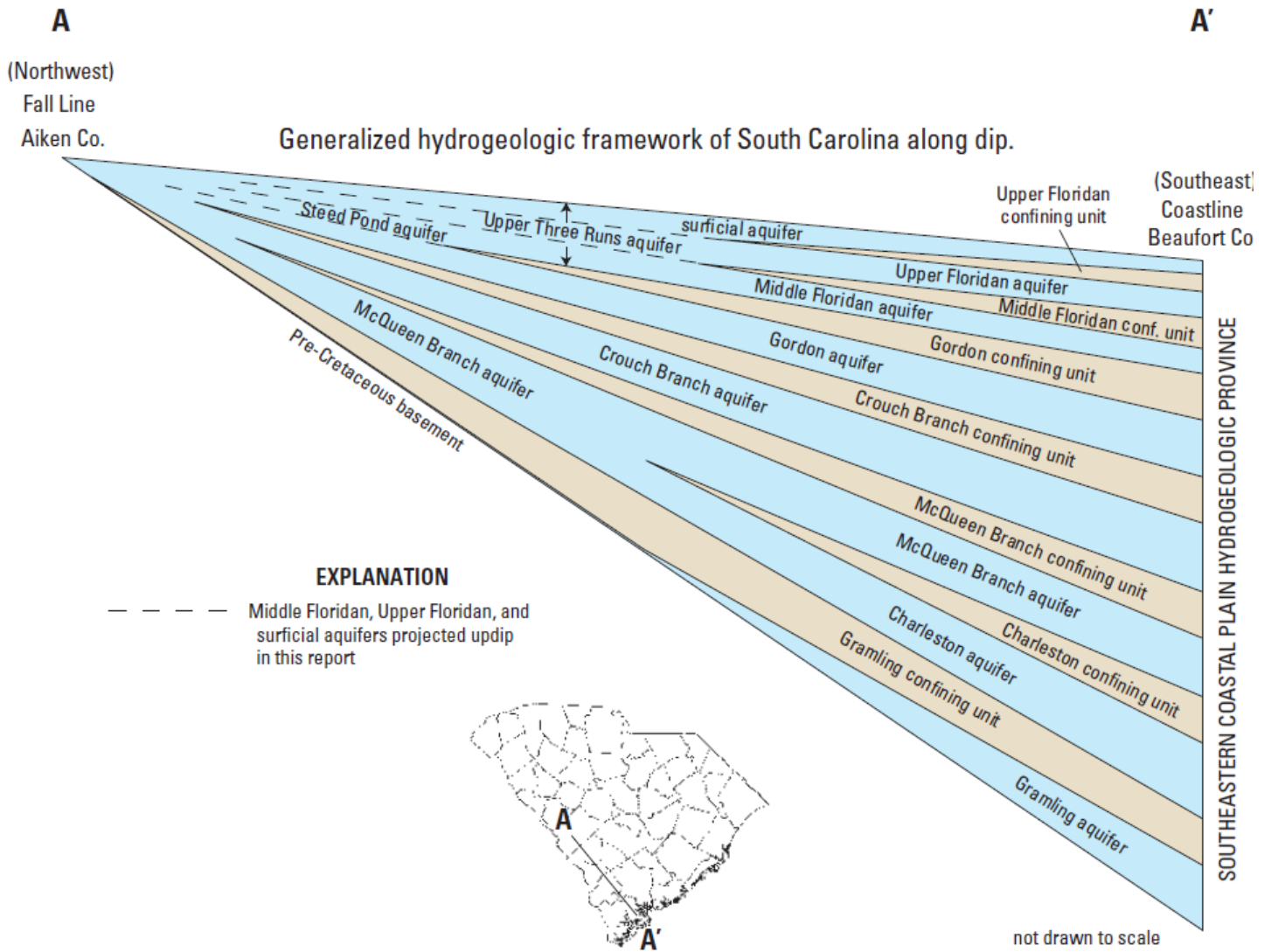


Figure 2: Generalized Hydrogeologic Cross-Section from the Fall Line through the Lower Coastal Plain in South Carolina (Gellici & Lautier, 2010)

Groundwater Resources

Groundwater resources are found throughout the subsurface of South Carolina in varying quantities, qualities, and depths that reflect the nature of the geologic materials that host the respective aquifers. The following is a brief description of the State's major groundwater resources.

Crystalline Rock Aquifer System of the Blue Ridge and Piedmont

Geology of the Blue Ridge is typically characterized by clayey saprolite, ranging in depth from several feet to tens of feet, overlying metamorphic crystalline rock. The saprolite grades downward through a highly permeable transition zone to unaltered parent bedrock. Groundwater conditions of the bedrock are dependent on the number of fractures and degree of interconnection of the fracture systems. Groundwater moves slowly through the saprolite and discharges to surface water bodies, wells, or is released from storage to the underlying bedrock through fractures (Gellici & Lautier, 2010). Geology of the Piedmont is similar to that of the Blue Ridge, but the diminished relief allows for greater thickness of saprolite development. In general, wells in the Blue Ridge and Piedmont regions yield little water when compared to wells drilled in the Coastal Plain owing to the inherently low porosity and permeability of the crystalline rock present in the upstate (Gellici & Lautier, 2010).

Surficial Aquifer System

Shallow sands that comprise the Surficial aquifer are among the youngest of the Coastal Plain sediments and are found exclusively in the Lower Coastal Plain (Gellici & Lautier, 2010). This system is capable of producing water in modest amounts for irrigation and private drinking water supply, but is susceptible to contamination due to its shallow, unconfined nature (Gellici & Lautier, 2010). The Surficial sands are highly influenced by local precipitation and river stage and are prone to dramatic water level declines during times of drought. Transmissivity in the aquifer can vary regionally, within one area ranging from 80 to 1,200 ft²/day and in another ranging from 190 to 270 ft²/day (Gellici & Lautier, 2010).

Floridan Aquifer System

The Floridan Aquifer varies between having two distinct aquifers separated by confining units in the more eastern sections of the extent (the Middle and Upper Floridan), to behaving more like one interconnected aquifer that pinches out towards the Fall Line. In the southern half of the Coastal Plain, Tertiary aquifers consisting of sand, grade southeastward into an ever thickening wedge of limestone (Gellici & Lautier, 2010). Development of this aquifer system is common in the Charleston, Dorchester, and Berkeley County area (Gellici & Lautier, 2010). Southwest of the Combahee and Salkehatchie Rivers, upper sections of the limestone become increasingly permeable owing to abundant voids created from dissolved marine fossils, and are capable of storing and supplying tremendous amounts of water (Gellici & Lautier, 2010). The upper, highly permeable zone is the most developed, supplying the majority of residential wells in Beaufort and Jasper Counties, and is a source of water for public supply, irrigation, and industry in the Low Country (Gellici & Lautier, 2010). This southern section of the Tertiary Limestone correlates regionally with the Upper Floridan Aquifer that extends from southern South Carolina to the southern keys of Florida.

Gordon Aquifer

The Gordon Aquifer extends only from the southwestern region of the Coastal Plain below the Fall Line to the northwestern counties below the Fall Line in Georgia due to the Cape Fear Arch (Gellici & Lautier, 2010). In the updip regions, the Gordon Aquifer is composed of unconsolidated sand and clayey sand with some gravel (Gellici & Lautier, 2010). As the unit goes downdip, the quartz sand grades into a more packstone and grainstone unit (Gellici & Lautier, 2010). The aquifer has a maximum thickness of just over 300 feet in Beaufort County. The average transmissivity is about 2,000 ft²/day in Beaufort County and in Barnwell County is around 4,900 ft²/day (Gellici & Lautier, 2010). The yield is much better in the thicker parts of the unit, but it is still not as productive as some of the underlying units.

Crouch Branch Aquifer

The Crouch Branch Aquifer covers most of SC in the Coastal Plain, but thins to almost absent in the northeastern Pee Dee region. In the more southern regions, it is fine grained, but in the more eastern parts it becomes more like sandy clay and calcareous clay (Gellici & Lautier, 2010). It is 500 feet at its maximum thickness in Berkeley and Williamsburg Counties, but is relatively impermeable in this area. It is utilized heavily in some areas due to its productivity in the west-central and updip parts of the Coastal Plain, where there are more medium to coarse-grained sediments. It has a calculated transmissivity of 11,000 ft²/day in western Orangeburg County and in parts of Barnwell County, but is as low at 2,400 ft²/day in the Pee Dee region (Gellici & Lautier, 2010).

McQueen Branch Aquifer

The McQueen Branch Aquifer is present over most of the Coastal Plain, but is fine-grained in Beaufort, Colleton, and Jasper Counties, and therefore is not as productive as in other regions. It reaches a maximum thickness of 350 feet in Barnwell County. The Aquifer is (generally?) described as poorly sorted, comprised of fine- to coarse-grained sand and clayey sand, with interstitial clay in the updip regions (Gellici & Lautier, 2010). The McQueen Branch is one of the most productive, and therefore one of the most utilized, in the region. In Orangeburg County, transmissivity was measured to be 27,000 ft²/day, and in Aiken County, close to the Savannah River Site (SRS), transmissivity ranges from 14,000 ft²/day to 50,000 ft²/day (Gellici & Lautier, 2010).

Charleston Aquifer

The Charleston Aquifer is not represented throughout the entire Coastal Plain. It overlies the Gramling Aquifer, but thins out towards the central part of the state and comes together with the McQueen Branch Aquifer, then disappears. The Charleston is at its maximum thickness of around 300 feet in Jasper County. It is composed mainly of unconsolidated sand, clayey sand, and clay (Gellici & Lautier, 2010). It has transmissivity values calculated to be between 3,100 ft²/day and 4,100 ft²/day in Berkeley County and 1,500 ft²/day and 2,400 ft²/day in Charleston County (Gellici & Lautier, 2010). It is not utilized much along the coast due to the fine-grained nature, but is developed more in Berkeley County.

Gramling Aquifer

The Gramling Aquifer is primarily in the southern part of the Atlantic Coastal Plain and overlies the crystalline basement rocks. The maximum thickness was measured in Beaufort County at 1,000 feet. The Gramling Aquifer is mostly comprised of unconsolidated to semi-consolidated, interbedded and laminated sand, clayey sand, silt, and clay (Gellici & Lautier, 2010). Silica-cemented beds present in the aquifer lead to lower permeability, and therefore, it is not very productive. It is only used on Hilton Head and Fripp Islands (Gellici & Lautier, 2010). The measured transmissivity is only 200 ft²/day at Fripp Island, but up to 1,200 ft²/day on Hilton Head Island (Gellici & Lautier, 2010).

Surface Water Resources

South Carolina's surface water resources are divided into eight (8) major river basins. The waters that make these basins are crucial to public water supply, agricultural irrigation, industry, and power generation. These watersheds are shown in Figure 3 and described below.



Figure 3: Eight Major River Basins in South Carolina

Broad River Basin

The Broad River Basin originates in the southern part North Carolina and is one of South Carolina's largest river basins at 3,989.6 square miles of the state. The majority of Cherokee, Union, Spartanburg, and Greenville Counties are drained by the Broad. Portions of Chester, Fairfield, Richland, and York Counties are also part of the basin. The Enoree, Pacolet, and Tyger Rivers are the major tributaries that drain into and define the Broad Basin. The Broad River joins the Saluda River at the end of the basin to form the Congaree River, which flows into the Saluda and Santee Basins.

Catawba River Basin

The Catawba River Basin, or Catawba-Wateree Basin, originates in North Carolina and enters South Carolina in York County. It is the smallest basin in the state, only encompassing 2,324 square miles. It drains York, Lancaster, Fairfield, Chester, Kershaw, and parts of Richland and Sumter Counties. The Catawba Basin hosts Lake Wylie, Fishing Creek Reservoir, Lake Wateree, the Catawba and Wateree Rivers, and other associated tributaries (such as Rocky Creek,

Fishing Creek, and Beaver Creek). The Catawba River basin terminates at the confluence of the Congaree River, and then flows southeasterly into the Santee River Basin.

Edisto River Basin

The Edisto River Basin is one of the three basins in South Carolina that fully originates in the state. It is 3,151 square miles, which encompasses nearly all of Orangeburg County and portions of Aiken, Berkeley, Calhoun, Dorchester, and Lexington Counties. The basin drains the central Coastal Plain and contains the North and South Forks of the Edisto River (main tributaries) that join to form the Edisto River. The basin ends in Charleston County and pours into the Atlantic Ocean in an estuarine environment. This basin has many important wetland regions and ecological diversity, with no dam structures to hinder flow through these areas.

Pee Dee River Basin

The Pee Dee River Basin originates in North Carolina and is the largest of South Carolina's watersheds at 7,847.7 square miles. It drains all or portions of Chesterfield, Darlington, Dillon, Georgetown, Horry, Kershaw, Lancaster, Lee, Marion, Marlboro, and Williamsburg Counties. The Pee Dee River Basin includes the Pee Dee, Lynches, Waccamaw, and Sampit Rivers and their watersheds. The basin ends in Georgetown County just below the Grand Strand region, becoming the Waccamaw River after joining with the Pee Dee River in the Waccamaw National Wildlife Refuge.

Salkehatchie River Basin

The Salkehatchie River Basin is the second of three basins located entirely in South Carolina, and is completely in the Coastal Plain. It is the second smallest basin in the state, at only 2,788 square miles. The basin drains portions of Bamberg, Barnwell, Beaufort, Colleton, Hampton, and Jasper Counties. The Coosawhatchie, Salkehatchie, and Little Salkehatchie Rivers drain the basin to form tide-dominated channels at the coast.

Saluda River Basin

The Saluda River Basin originates in the Blue Ridge province and drains the central portion of the Piedmont region of South Carolina. The Saluda River Basin covers 3,212 square miles and includes most of Greenville and Pickens Counties, and portions of Abbeville, Greenwood, Laurens, Lexington, Richland, and Saluda Counties. There are several major tributaries that make up the Saluda Basin, including the Saluda, Reedy, and Little Rivers. The Saluda River joins with the Broad River in Richland County to form the Congaree River, which then combines with the Catawba River further southeast to form the Santee River and Santee River Basin.

Santee River Basin

The Santee River Basin originates at the base of the Saluda and Catawba River Basins, and encompasses 3,006 square miles. It includes the two largest reservoirs in the state: Lake Marion and Lake Moultrie. These lakes were originally built to generate power for the state. The two reservoirs are connected via a 6.5 mile long Diversion Canal for power production and navigation. The Santee River Basin drains Berkeley, Calhoun, Charleston, Clarendon, Dorchester, and small parts of Georgetown and Sumter Counties via the Cooper, Santee, and Ashley Rivers.

Savannah River Basin

The Savannah River Basin is mostly shared with Georgia, and is one of the most regulated in the state due to the dams for reservoir storage and power production. These reservoirs include Lake Keowee, Lake Hartwell, Richard B. Russell Lake, and Strom Thurmond Lake. The basin on the South Carolina side is 4,958 square miles, and covers portions of Abbeville, Aiken, Allendale, Anderson, Edgefield, Greenwood, Hampton, McCormick, Oconee, and Pickens Counties. Some of the tributaries that drain into the Savannah Basin are the Chatooga, Seneca, Little River,

Stevens Creek, Rocky, and Tugaloo Rivers. The Savannah is a major basin for much of South Carolina, and drains into the Atlantic by the city of Savannah, Georgia and by Jasper County, South Carolina.

Surface and Groundwater Use Summary by Source, Category, and County in South Carolina, 2019

The following section outlines all reported water use for the State of South Carolina for the calendar year 2019. Water use is summarized by category (Appendix A). Where appropriate, the spatial distribution of water use is demonstrated on an accompanying map with a breakdown chart of groundwater and surface water use as a percentage of total use for the category.

Reporting Water Withdrawers

For reporting year 2019, South Carolina had 1,216 water withdrawers who submitted water use from 3,447 sources (2,942 groundwater and 505 surface water).

Table 1: Reporting Withdrawers and Type Use for Reporting Year 2019

Water Use Category	Facilities	Groundwater Sources	Surface Water Sources
<i>Aquaculture</i>	7	6	5
<i>Golf Course</i>	177	242	96
<i>Hydroelectric</i>	36	-	40
<i>Industrial</i>	87	189	36
<i>Irrigation</i>	621	1,608	201
<i>Mining</i>	12	10	11
<i>Other</i>	2	3	-
<i>Nuclear Power</i>	4	12	9
<i>Thermoelectric</i>	16	12	17
<i>Public Water Supply</i>	246	811	88

Table 2: Total Reported Water Use by Type and Source (in Millions of Gallons)

Water Use Category	Groundwater	Percentage	Surface Water	Percentage	Total	Percentage
<i>Aquaculture</i>	162.9	0.2%	538.8	0.0%	701.7	0.0%
<i>Golf Course</i>	2,717.0	2.4%	3,810.24	-	6,527.3	0.0%
<i>Hydroelectric</i>	-	-	22,735,683.2	91.6%	22,735,683.2	91.2%
<i>Industrial</i>	9,391.6	8.4%	91,596.2	0.4%	100,987.9	0.4%
<i>Irrigation</i>	54,052.1	48.4%	10,650.6	0.0%	64,703.1	0.3%
<i>Mining</i>	713.6	0.6%	1,095.3	0.0%	1,809.0	0.0%
<i>Nuclear Power</i>	381.8	0.3%	1,551,639.4	6.3%	1,552,021.1	6.2%
<i>Other</i>	20.1	0.0%	-	-	20.1	0.0%
<i>Thermoelectric</i>	1,515.1	1.4%	225,556.7	0.9%	227,071.8	0.9%
<i>Water Supply</i>	427,03.2	38.2%	212,174.1	0.9%	254,877.7	1.0%
Total	111,657.3	100.0%	24,828,934.3	100.0%	24,944,402.8	100.0%

Total Reported Water Use by County 2019

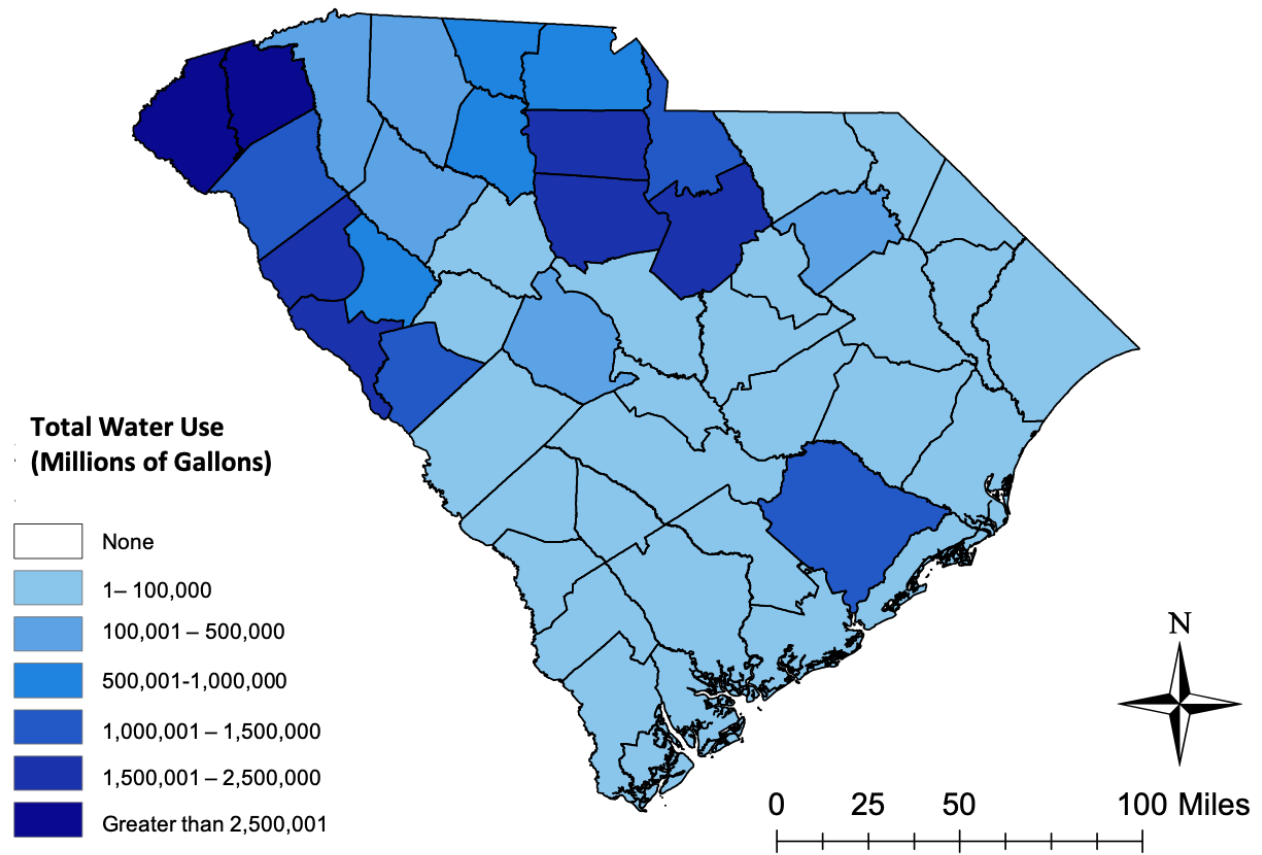


Figure 4: Total Reported Water Use by County¹

¹ note map legend range differs per map figure

Total Reported Use 2019 by Type Use

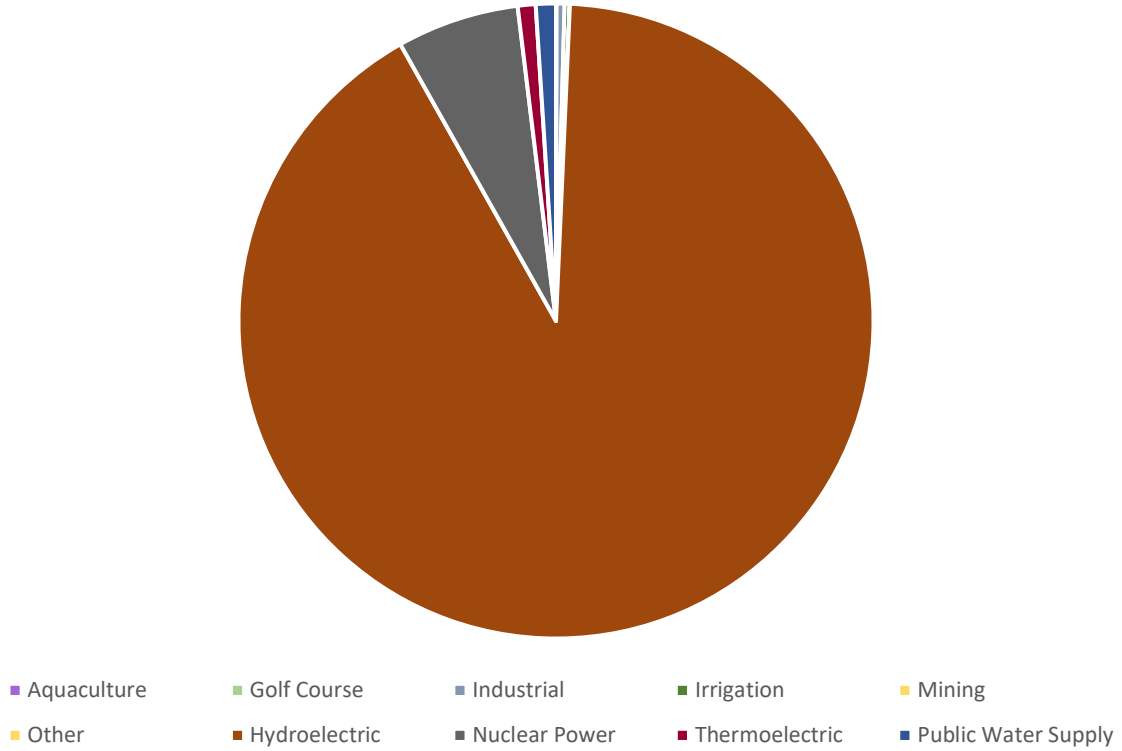


Figure 5: Total Reported Use 2019 by Type

Reported Total Water Use for 2019

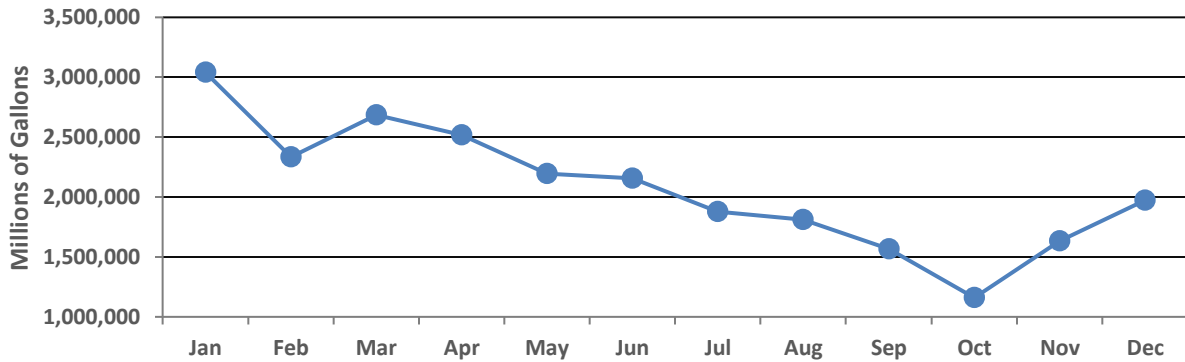


Figure 6: Total Reported Water Use in 2019 by Month

Table 3: Total Reported Water Use by Type and Source (No Power Production)

Water Use Category	Groundwater	Percentage	Surface Water	Percentage	Total	Percentage
Aquaculture	16286.7	0.1%	53880.0	0.2%	70166.8	0.2%
Golf Course	271701.2	2.5%	381024.4	1.2%	652728.1	1.5%
Industrial	939157.6	8.6%	9159622.3	28.6%	10098788.4	23.5%
Irrigation	5405206.9	49.2%	1065056.0	3.3%	6470312.1	15.1%
Mining	71361.7	0.7%	109534.4	0.3%	180896.7	0.4%
Other	2006.0	0.0%	-	-	2006.0	0.0%
Water Supply	4270317.2	38.9%	21217410.6	66.3%	25487766.7	59.3%
Total	10976037.2	100.0%	31986527.7	100.0%	42962664.9	100.0%

Total Water Use 2019 (No Power Production)

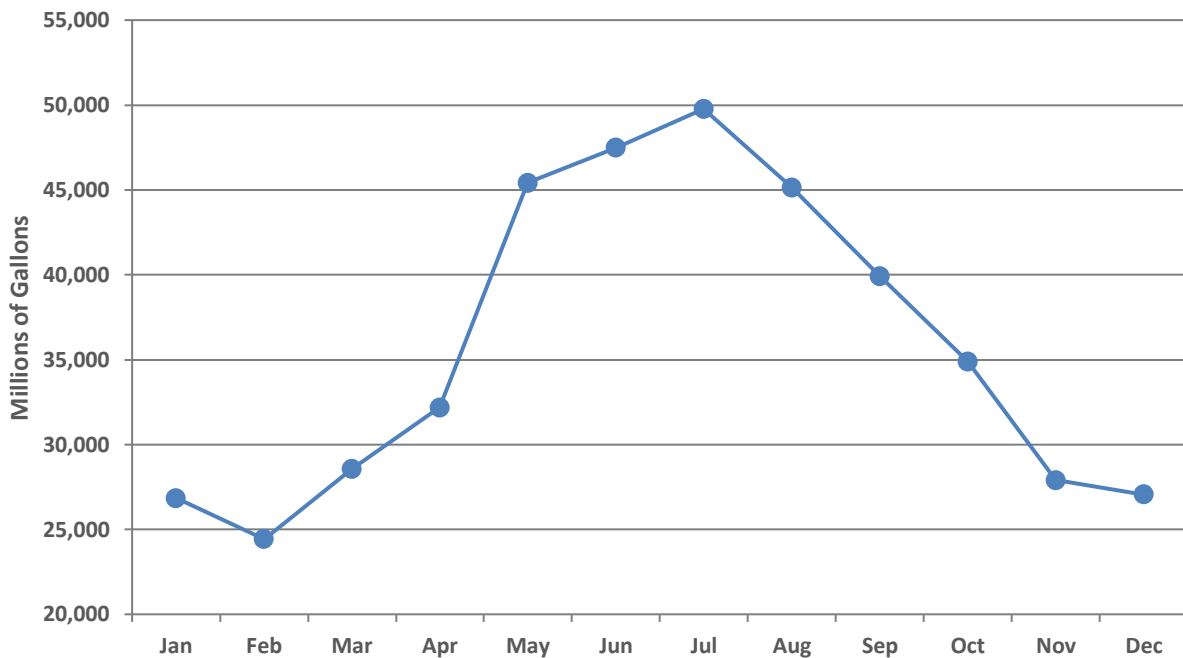


Figure 7: Total Reported Water Use by County 2019 (No Power Production)

Total Reported Water Use by County 2019 (No Power Production)

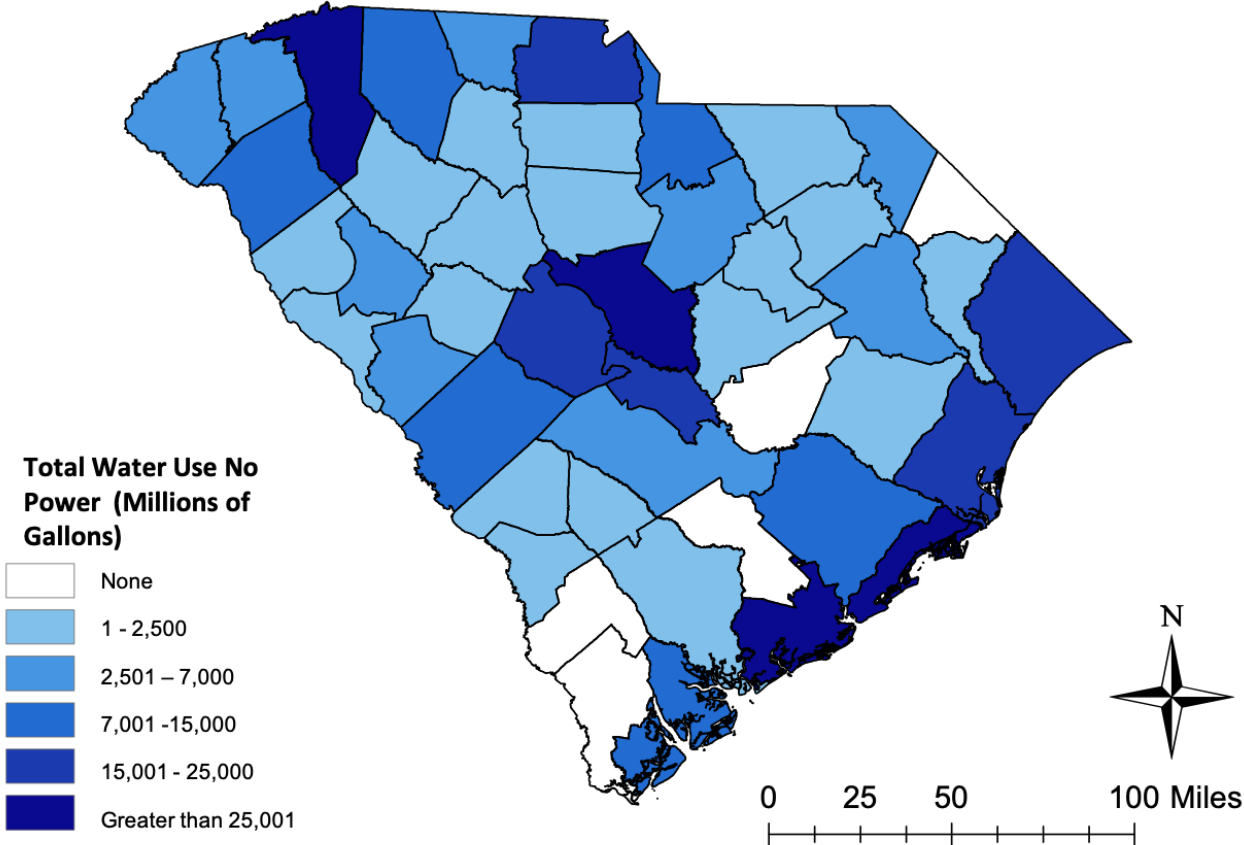


Figure 8: Total Reported Water Use by Month 2019 (No Power Production)

Reported Total Water Use 2009 to 2019 (No Power Production)

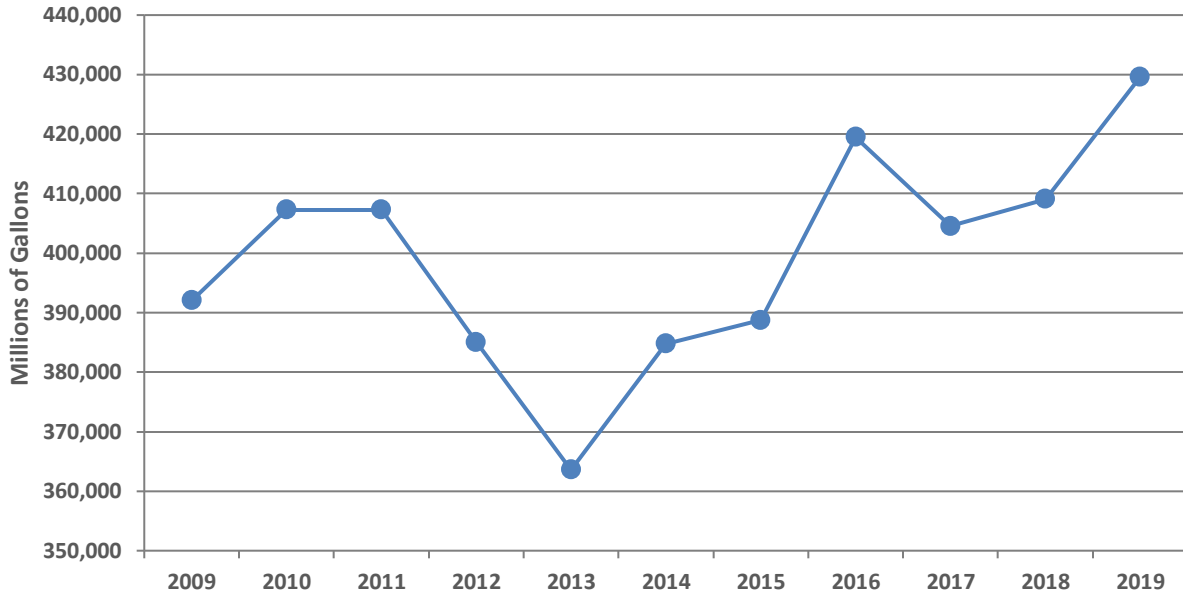


Figure 9: Total Reported Water Use from 2009-2019 (No Power Production)

Reported Water Use 2019 by Type Use No Power

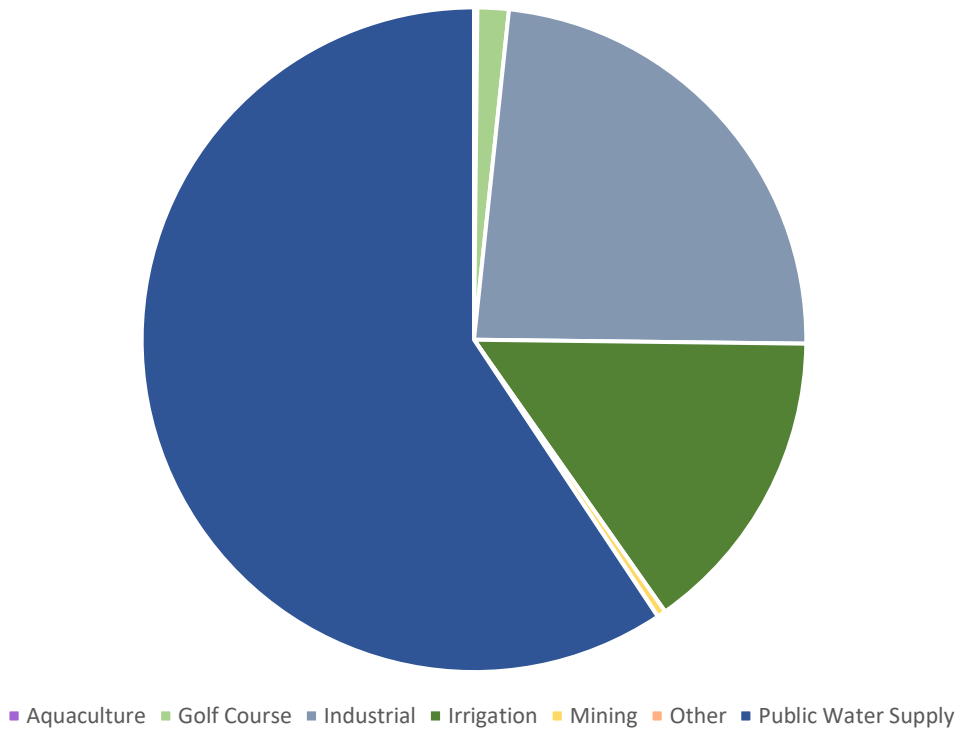


Figure 10: Total Reported Use in 2019 by Type (No Power Production)

Total Reported Surface Water Use by County 2019

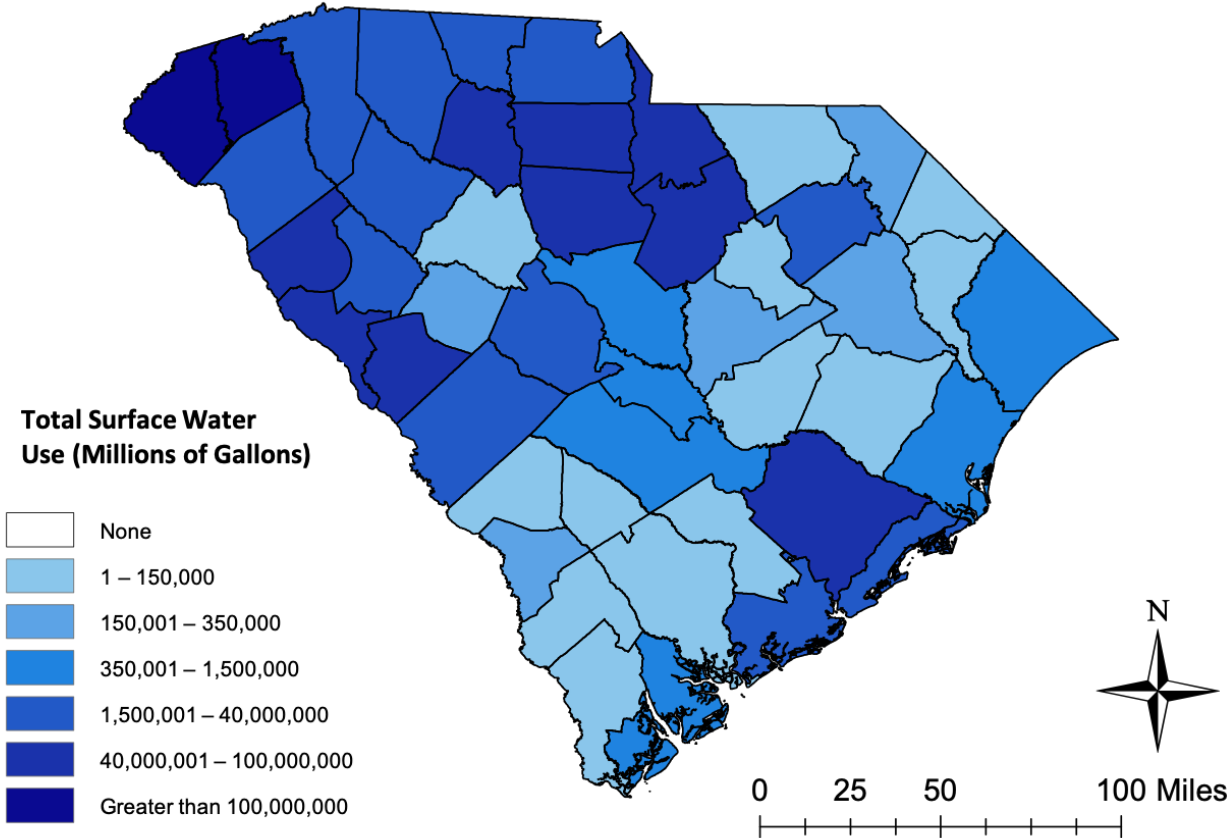


Figure 11: Total Reported Surface Water Use by County 2019

Reported Surface Water Use by County 2019 (No Power Production)

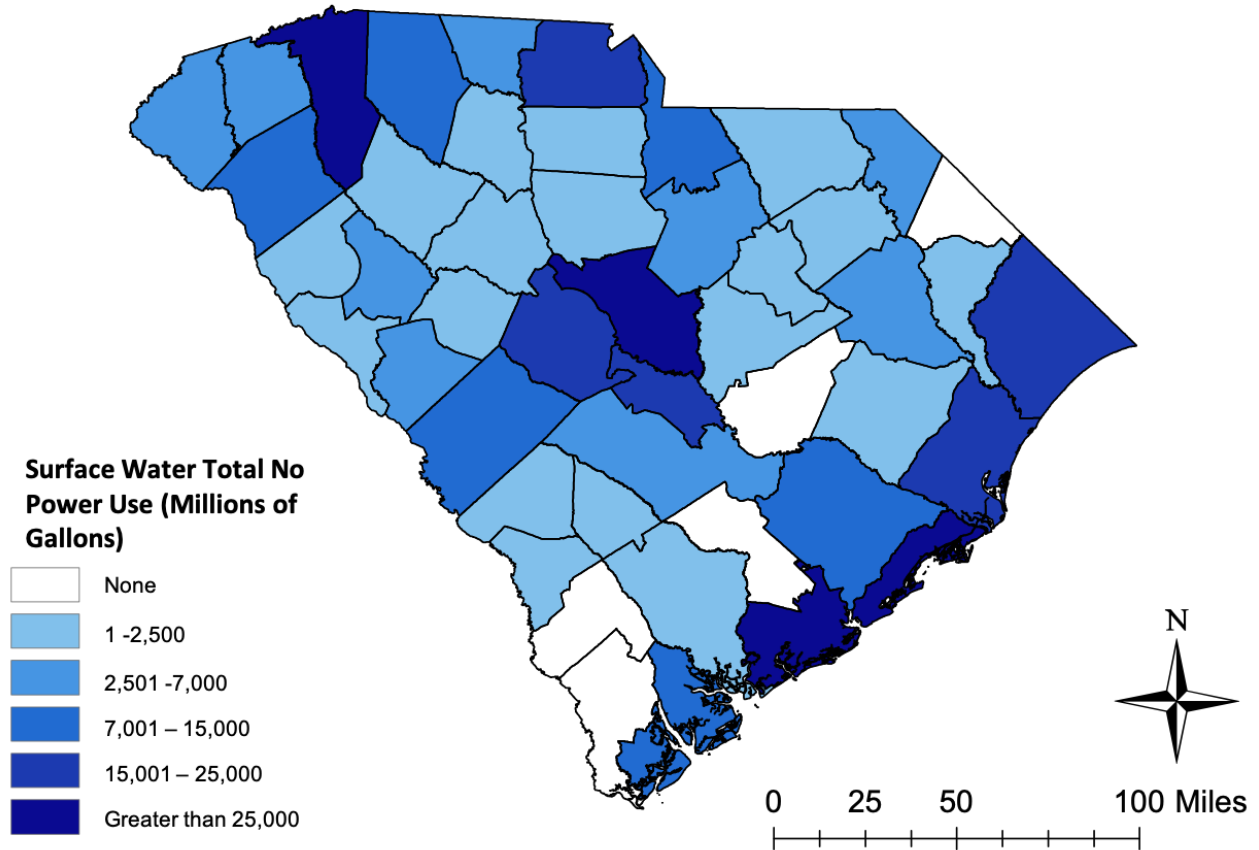


Figure 12: Total Reported Surface Water Use by County 2019 (No Power Production)

Surface Water Monthly Reported Use 2009 to 2019

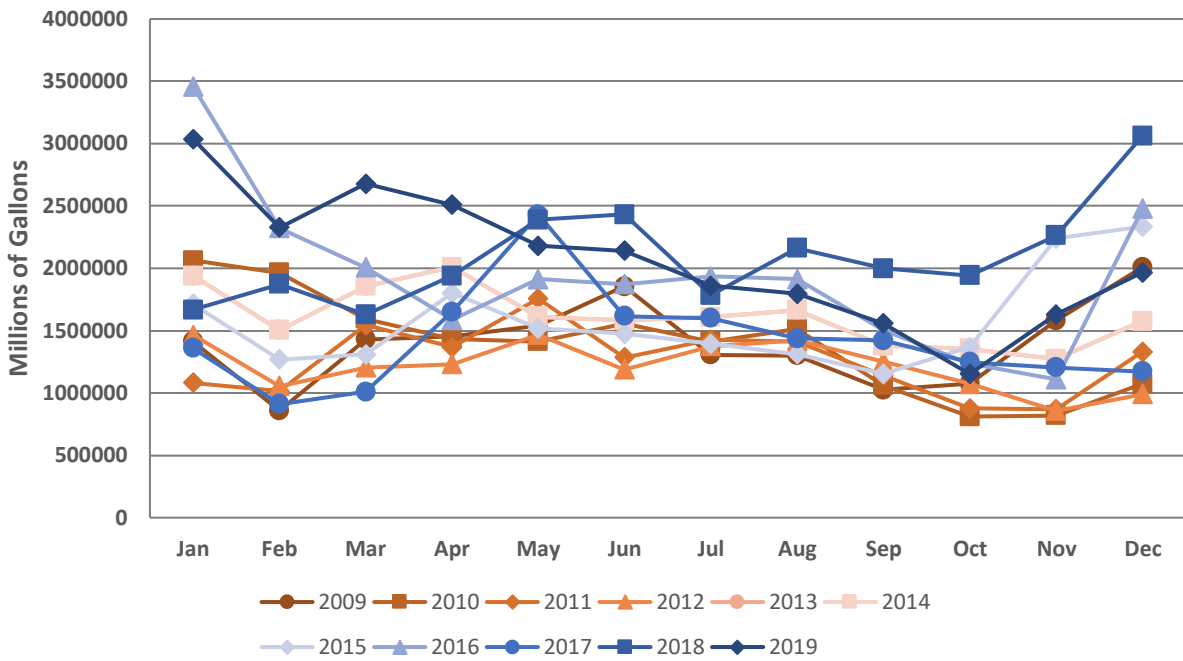


Figure 13: Total Surface Water Monthly Reported Use, 2009 to 2019

Surface Water Monthly Reported Use 2009 to 2019 (No Power Productions)

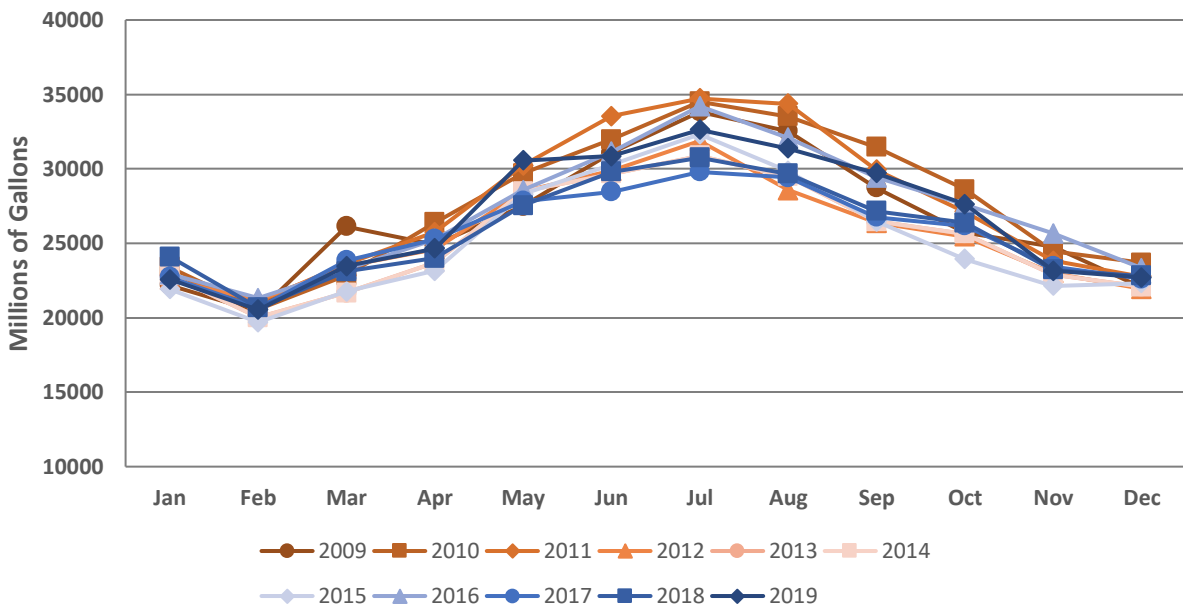


Figure 14: Total Surface Water Monthly Reported Use, 2009 to 2019 (No Power Production)

Reported Surface Water Use 2019 by Type Use (No Power Production)

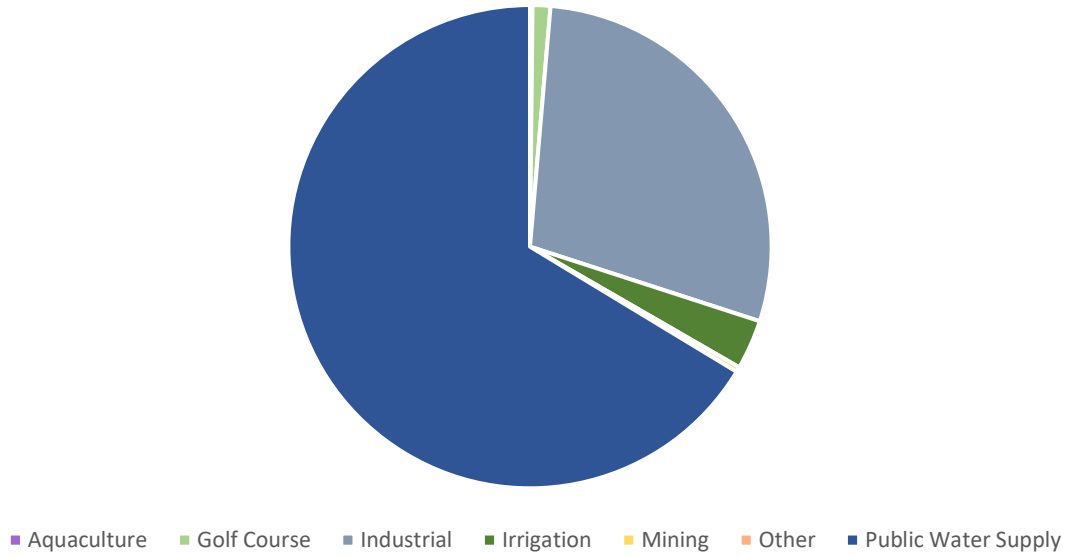


Figure 15: Total Reported Surface Water Use by Basin 2019

When creating figures and determining prudent maps and graphs, the decision was made to not separate power use from the rest of the groundwater use. This is because groundwater withdrawal is a full loss from the aquifer while hydro power from surface water is a pass-through system.

Total Reported Groundwater Use by County 2019

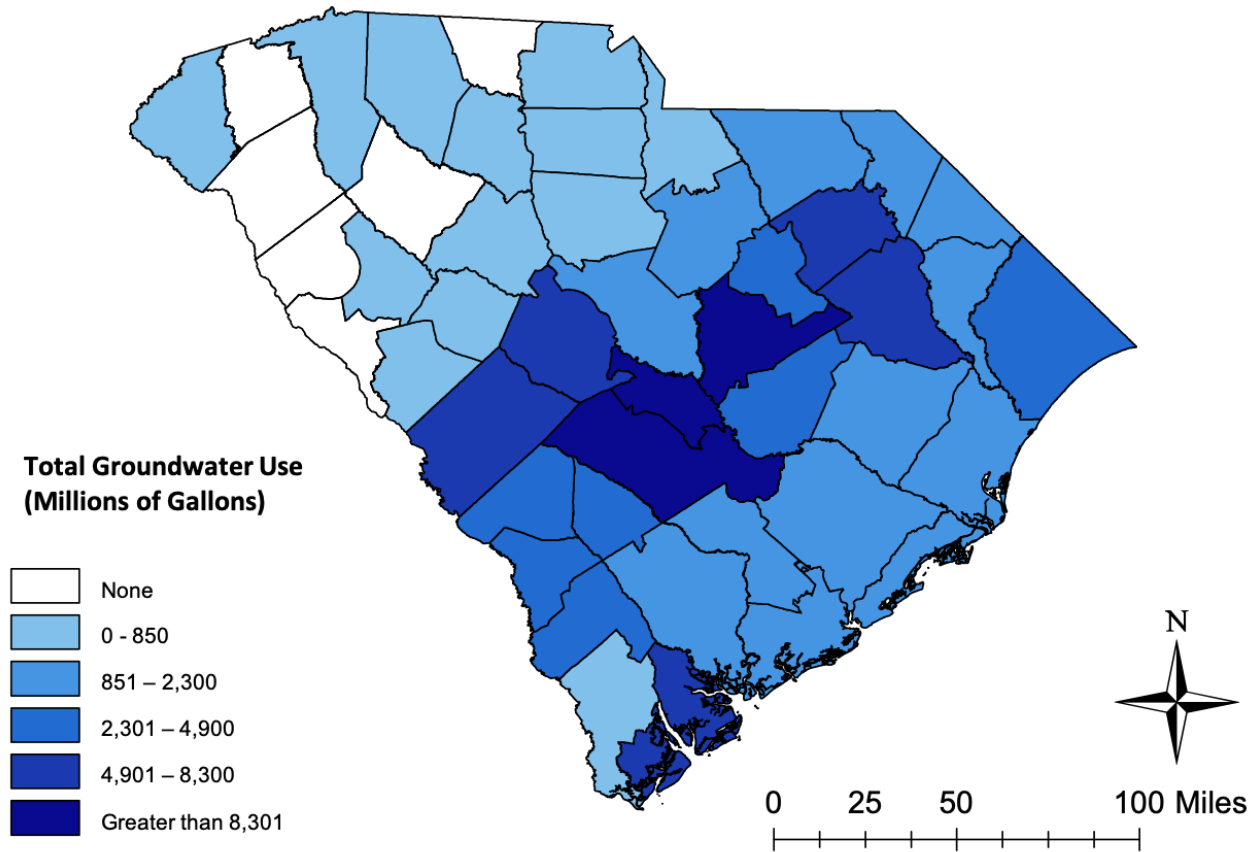


Figure 16: Total Reported Groundwater Use by County 2019

Groundwater Monthly Reported Use 2009 to 2019

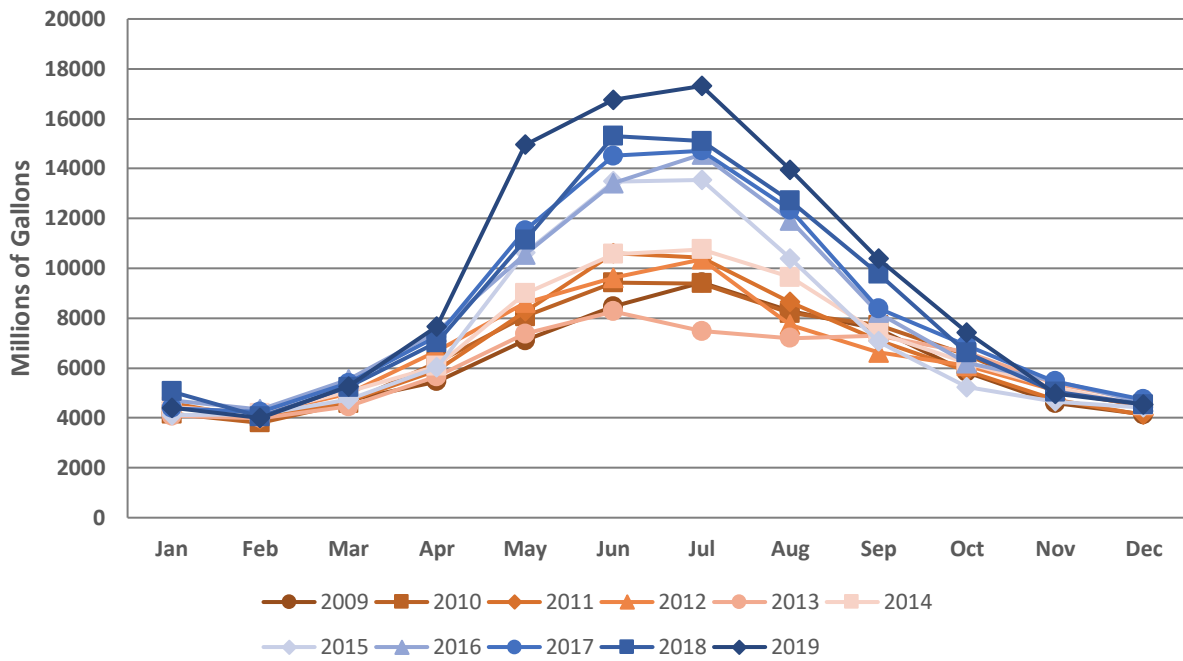


Figure 17: Total Groundwater Monthly Reported Use, 2009 to 2019

Reported Groundwater Use 2019 by Type Use

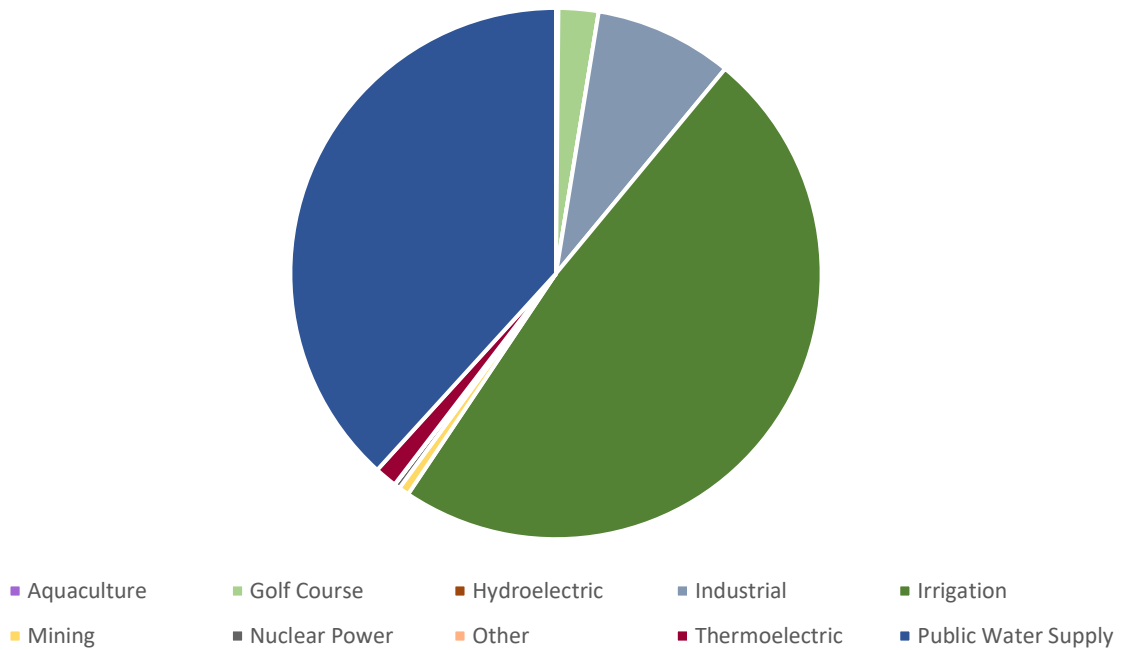


Figure 18: Reported Groundwater Use by Type in 2019

Historic Water Use by Basin²

Historical reported water use data was presented by basin to show how groundwater and surface water are used across basin boundaries. During this review, a decrease was shown in reported water use between 2012 and 2013 in several basins. Upon separating out the inactive users from the currently active users, the dip was determined to be due to the passing of the Surface Water Act. The Act went into effect January 1, 2011, and the following regulation came into effect June 22, 2012. The Department sent letters to all entities reporting surface water use informing them of the new requirements for reporting and exemptions in September 2012. This notification resulted in many users submitting letters of exemption from participating in the surface water program. The reported water use took a dip in the reported 2013 use based on these users going inactive.

Total Reported Surface Water Use by Basin 2019

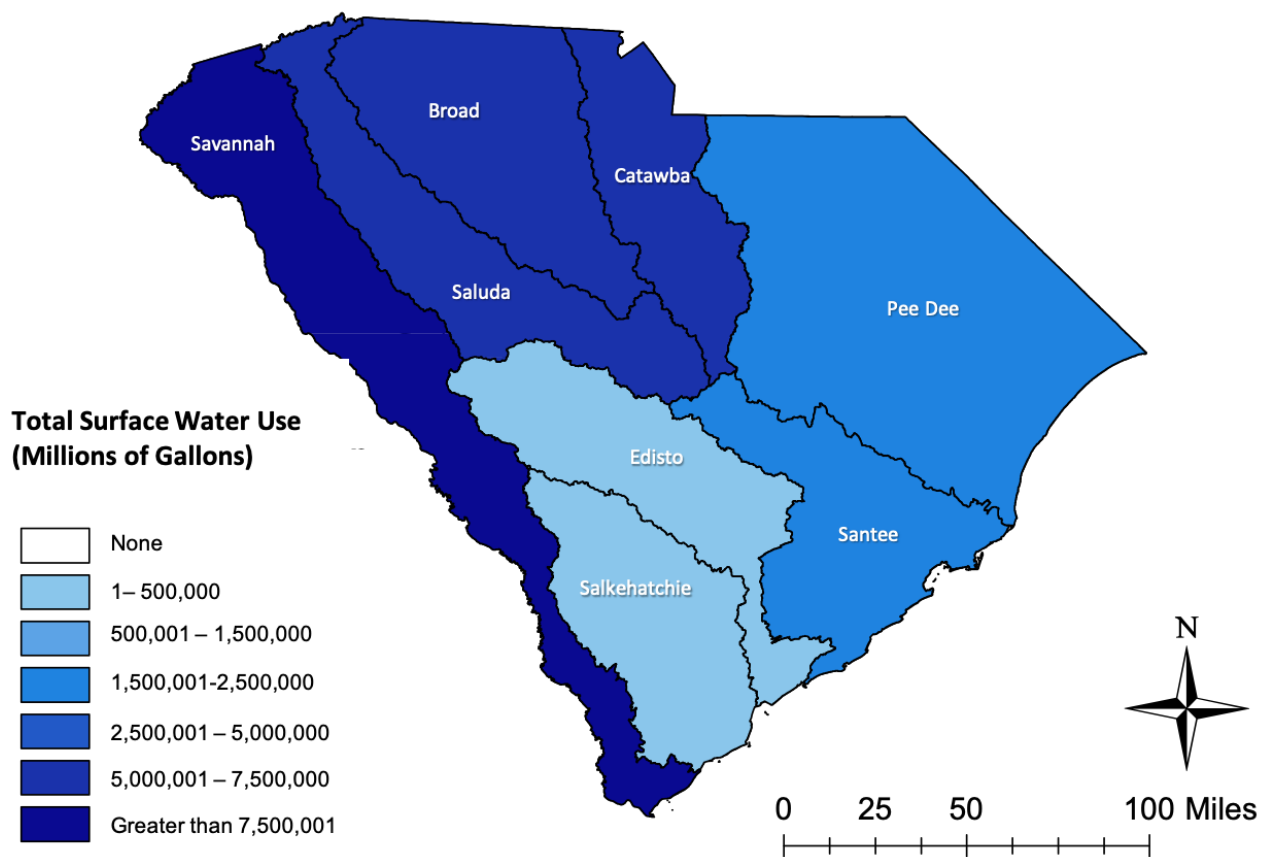


Figure 19: Total Reported Surface Water Use by Basin 2019 (No Power Production)

² Map legend range differs per map figure

Total Reported Surface Water Use (No Power) by Basin 2019

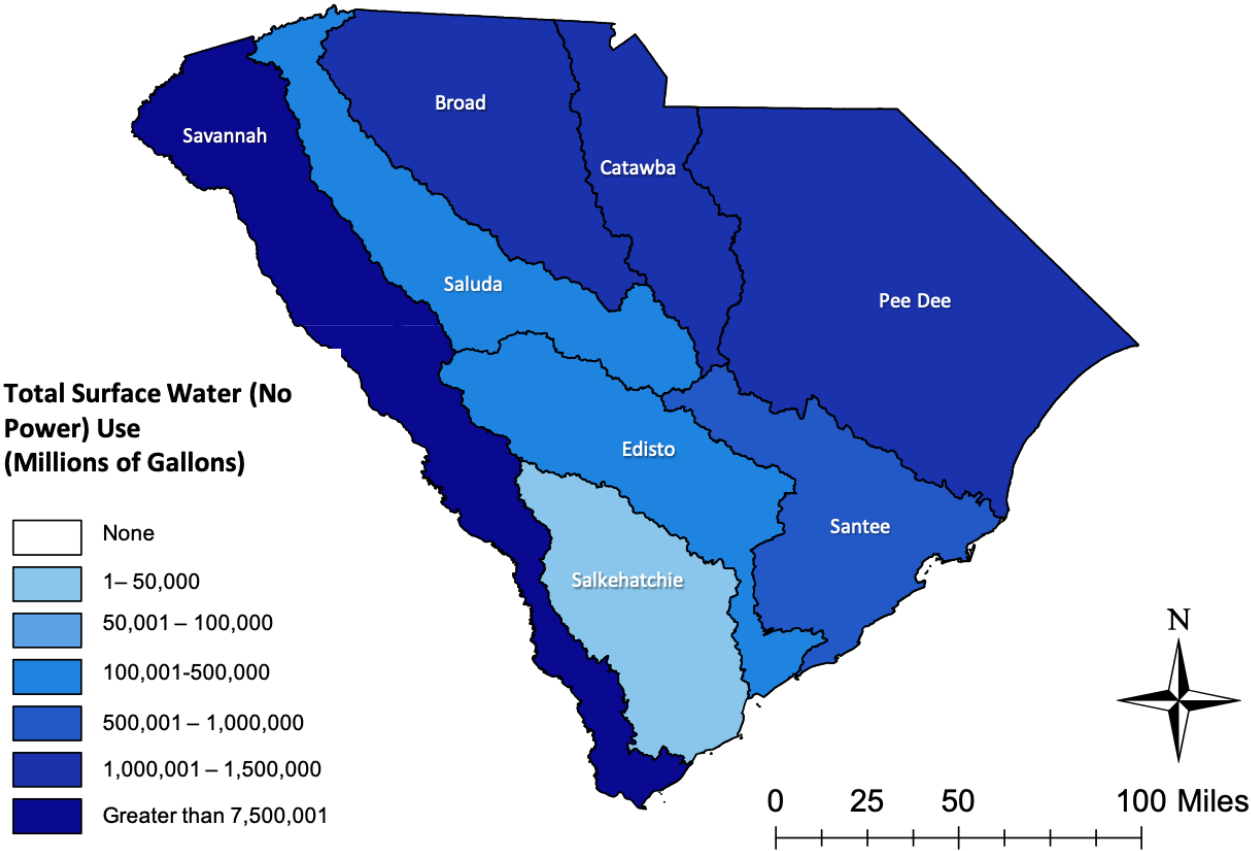


Figure 20: Total Reported Surface Water Use by Basin 2019 (No Power Production)

Historic Surface Water Usage in the Broad Basin

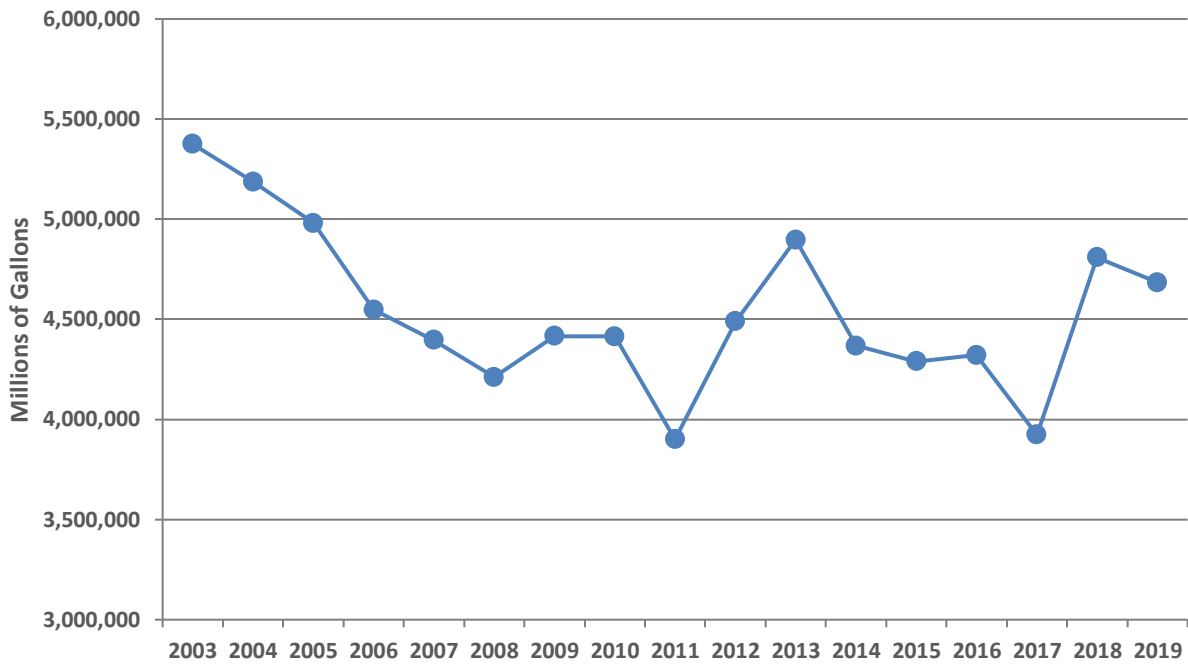


Figure 21: Total Historic Surface Water Reported Use in the Broad Basin, 2003-2019

Historic Surface Water Usage in the Broad Basin (No Power Production)

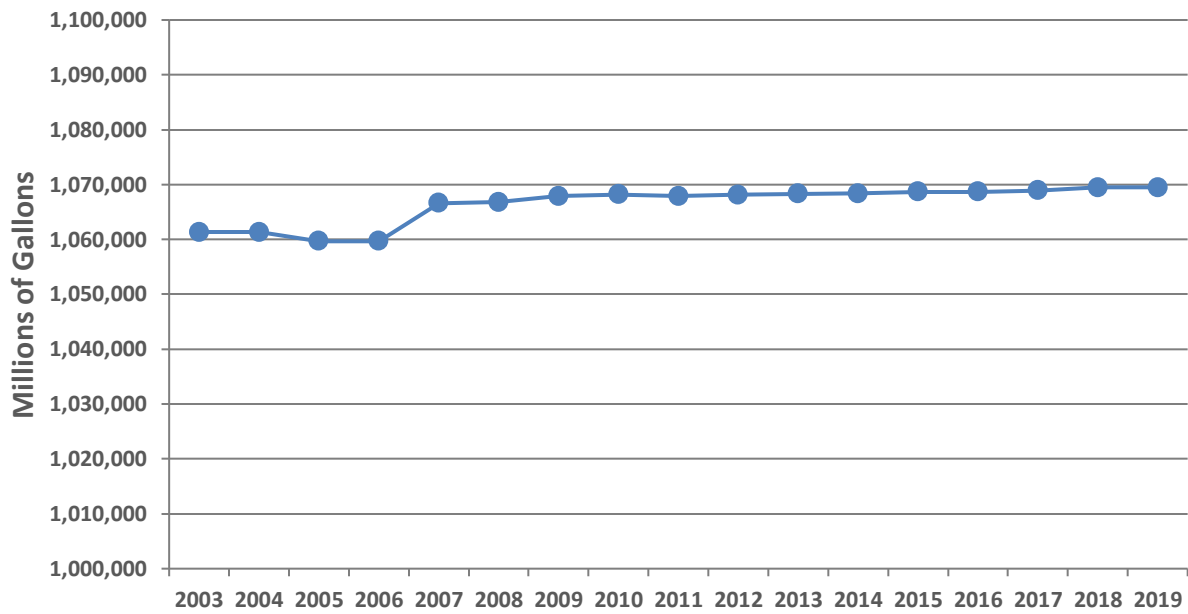


Figure 22: Total Historic Surface Water Reported Use in the Broad Basin excluding power production, 2003-2019

Historic Surface Water Usage in the Broad River Basin

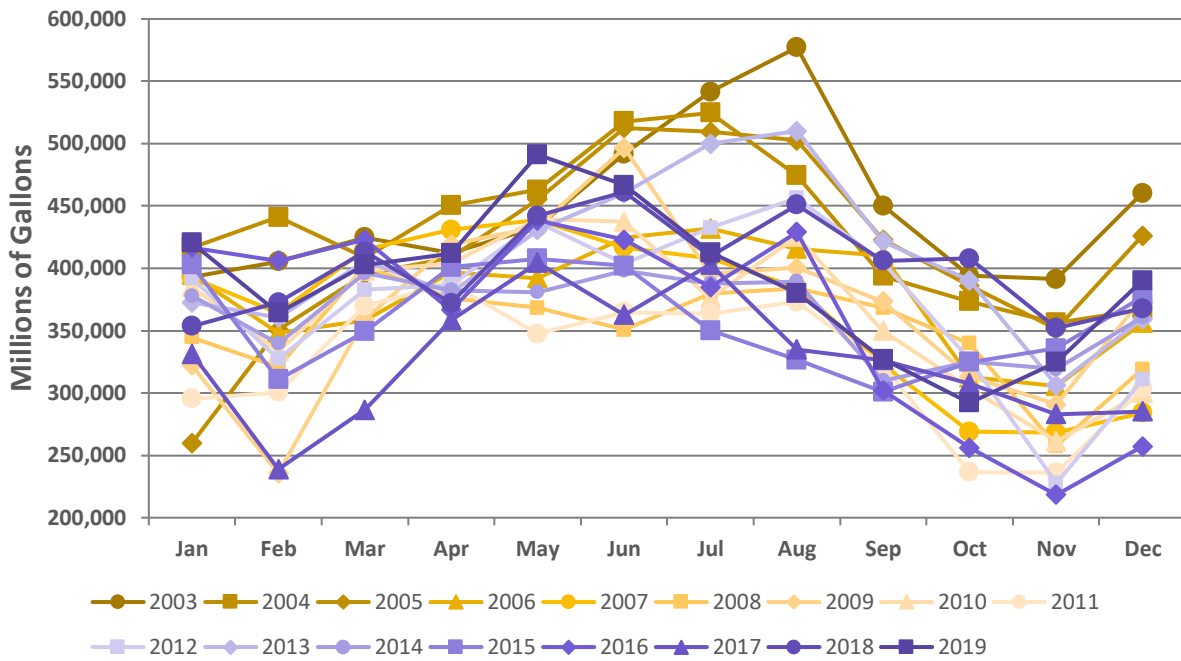


Figure 23: Total Historic Surface Water Reported Monthly Use in the Broad Basin, 2003-2019

Historic Surface Water Usage in the Broad Basin (No Power Production)

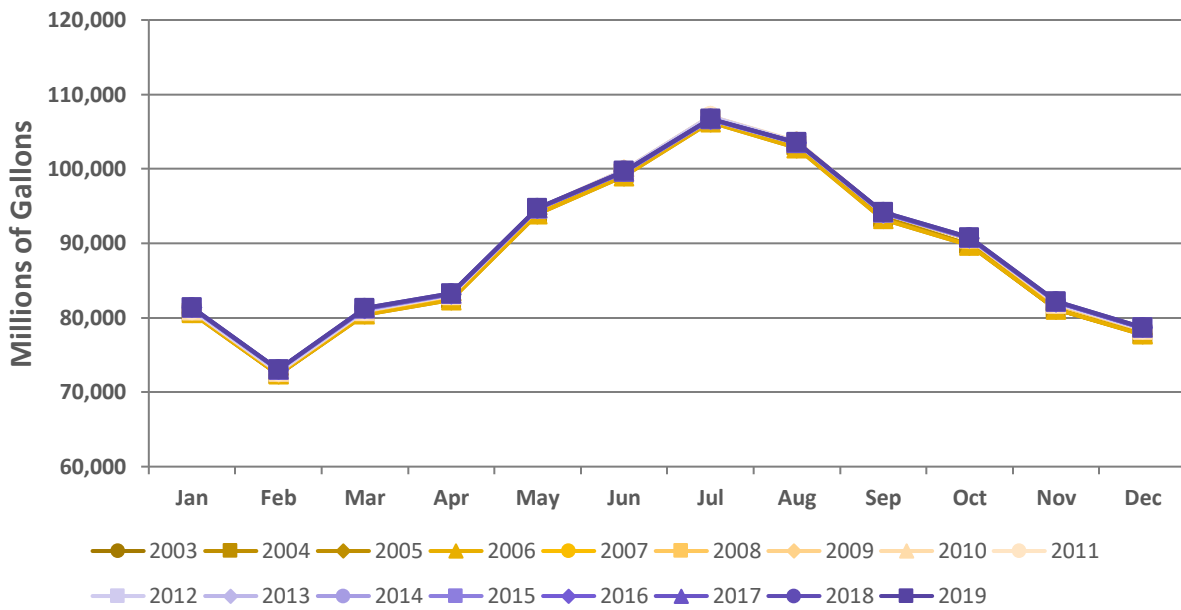


Figure 24: Total Historic Surface Water Reported Monthly Use in the Broad Basin with no power production users, 2003-2019

Historic Surface Water Usage in the Catawba Basin

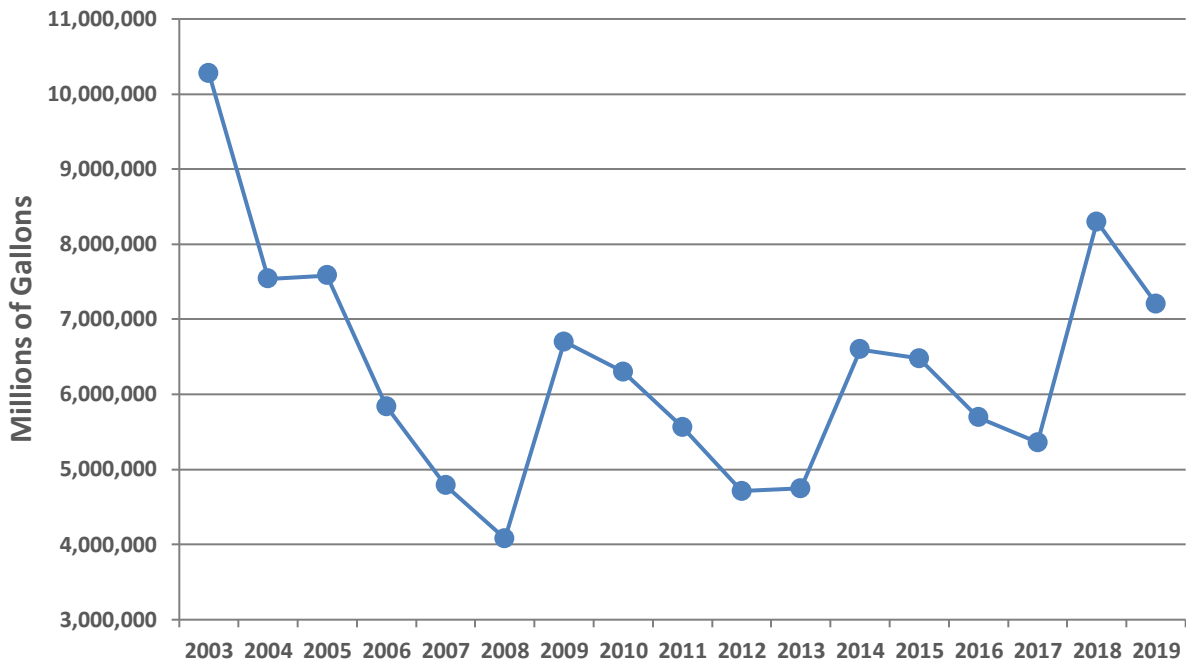


Figure 25: Total Historic Surface Water Reported Use in the Catawba Basin, 2003-2019

Historic Surface Water Usage in the Catawba River Basin (No Power Production)

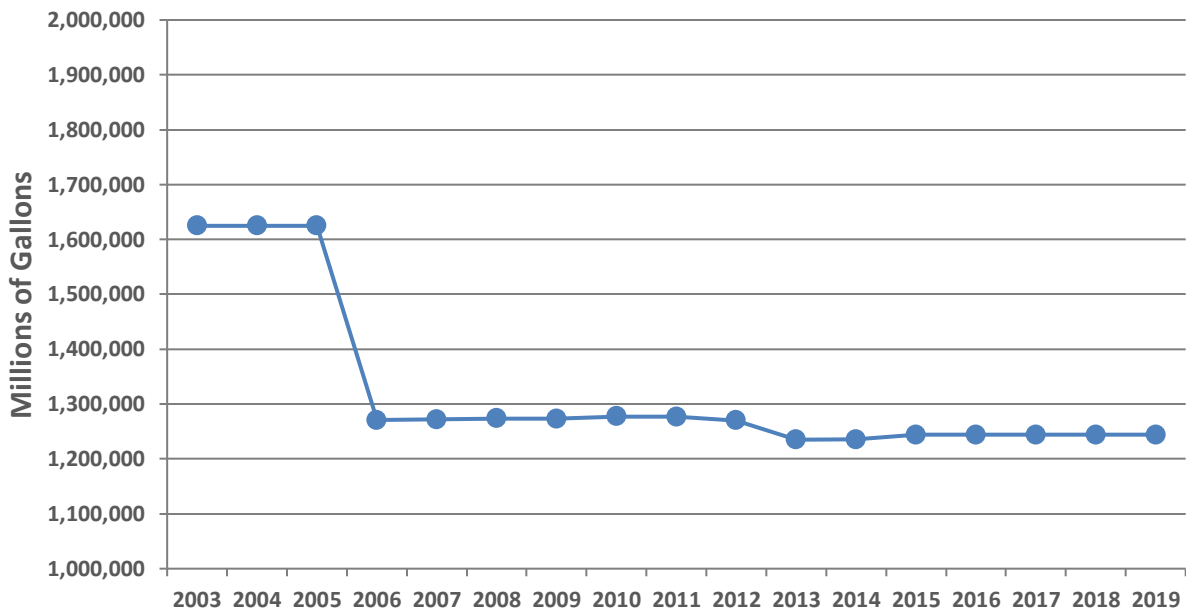


Figure 26: Total Historic Surface Water Reported Use in the Catawba Basin excluding power production, 2003-2019

Historic Surface Water Monthly Usage in the Catawba Basin

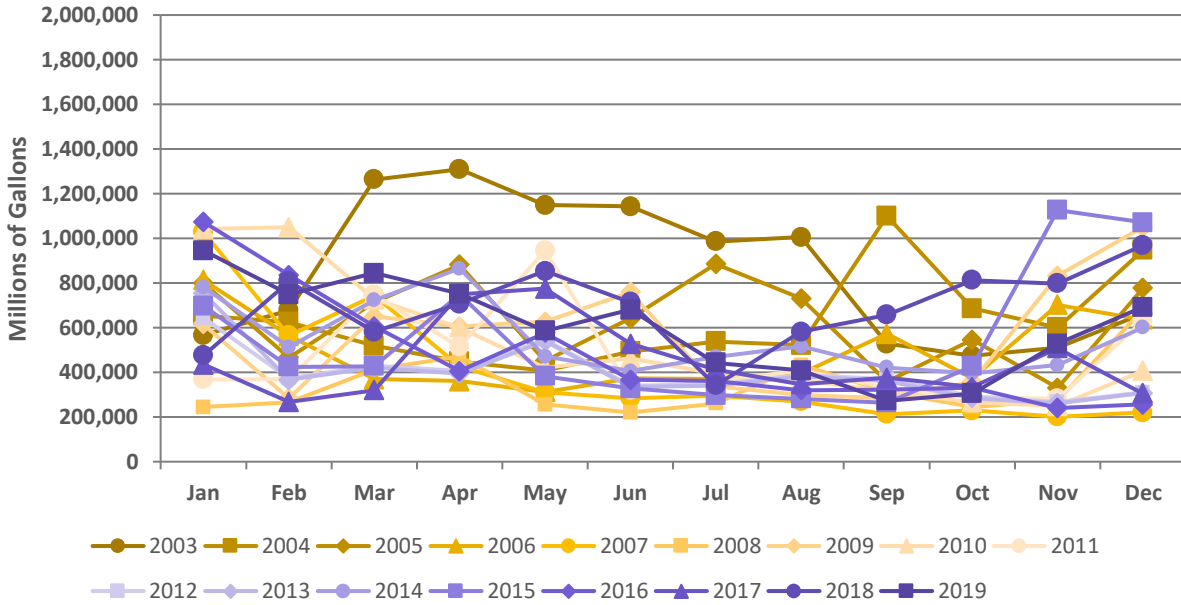


Figure 27: Total Historic Groundwater Reported Monthly Use in the Catawba Basin, 2003-2019

Historic Surface Water Usage in the Catawba Basin (No Power Production)

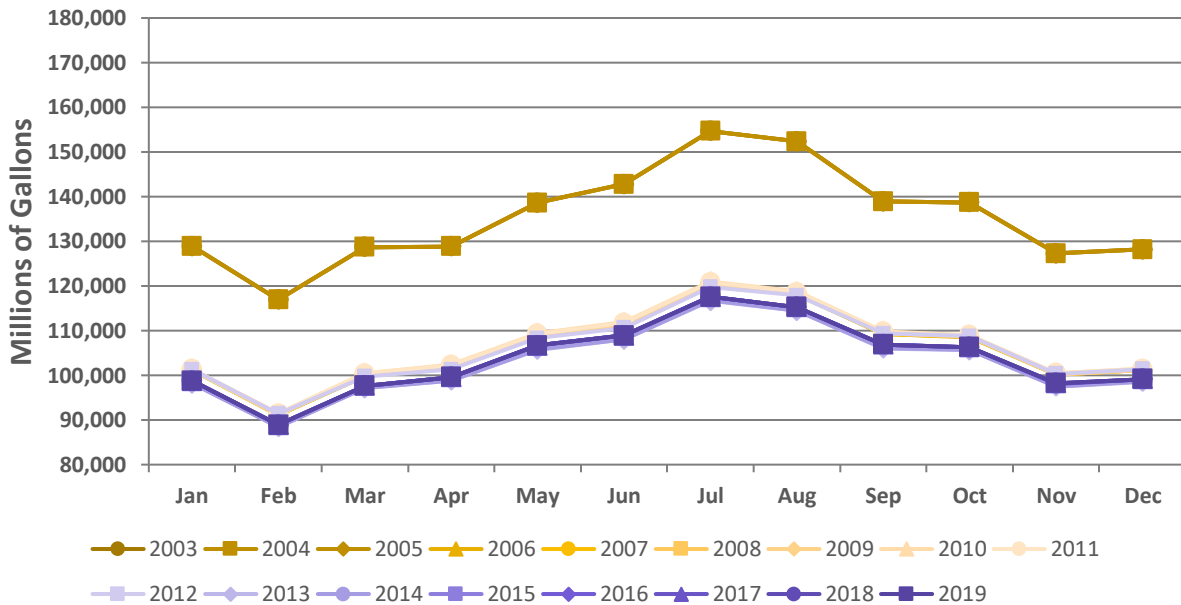


Figure 28: Total Historic Groundwater Reported Monthly Use in the Catawba Basin with no power production users, 2003-2019

The Edisto River Basin saw a significant loss of water in 2012 due to users requesting exemptions made available in the 2011 Surface Water Act.

Historic Surface Water Usage in the Edisto Basin

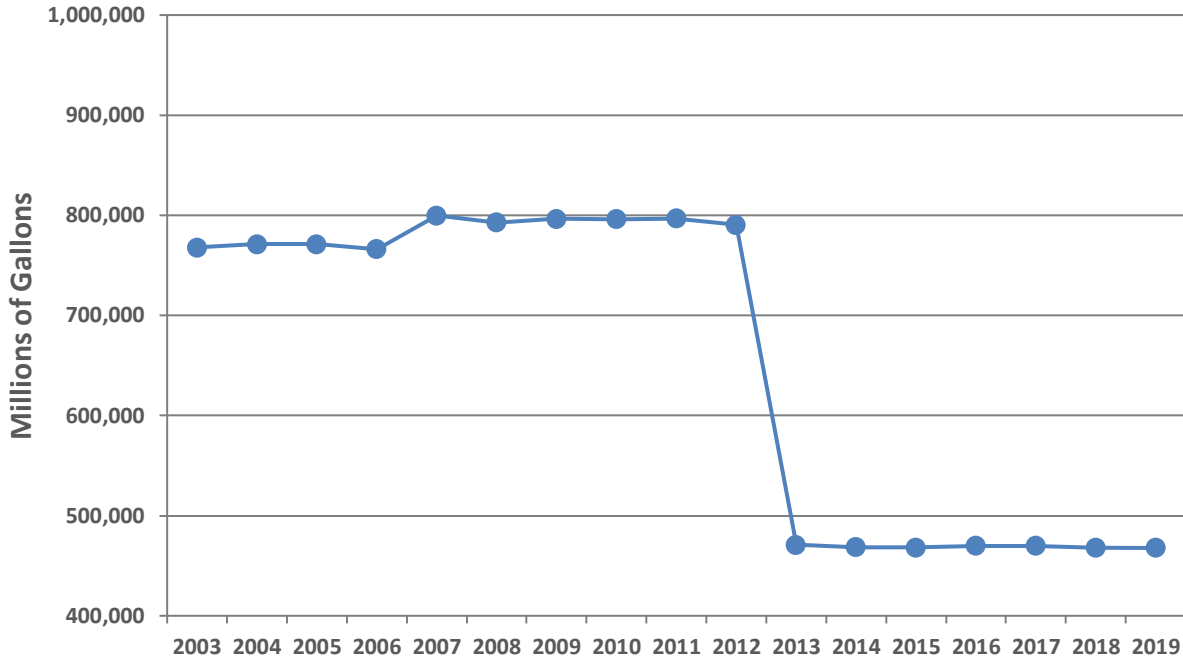


Figure 29: Total Historic Surface Water Reported Use in the Edisto Basin, 2003-2019

Total Historic Surface Water Usage for the Edisto Basin (Active Users)

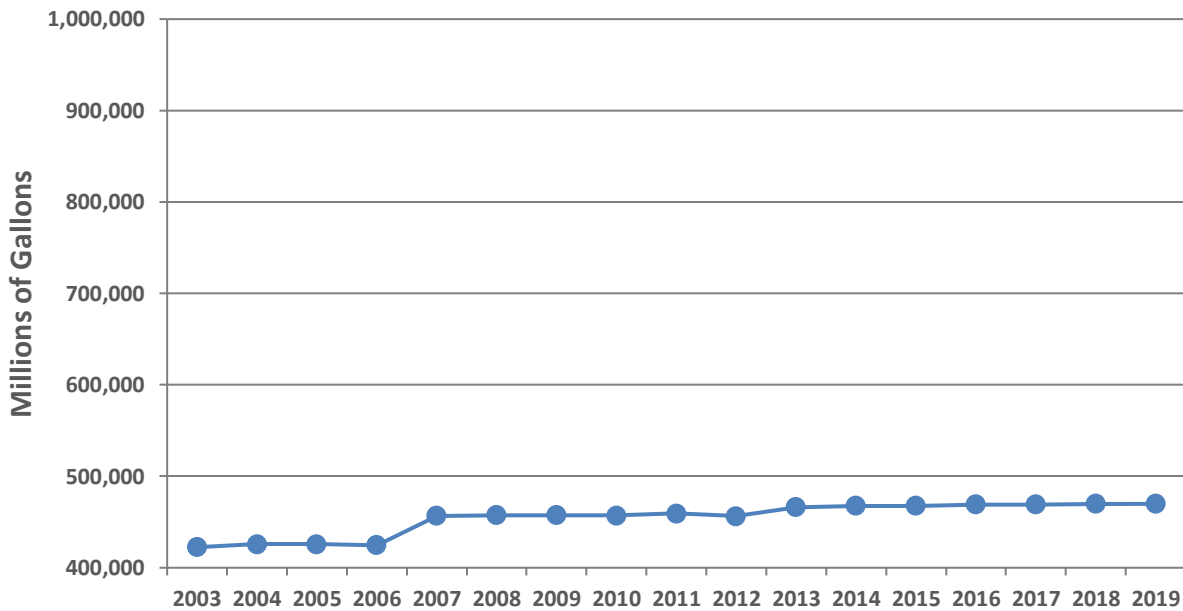


Figure 30: Total Historic Surface Water Reported Use in the Edisto Basin excluding non-active users, 2003-2019

Historic Surface Water Usage in the Edisto Basin (No Power Production)

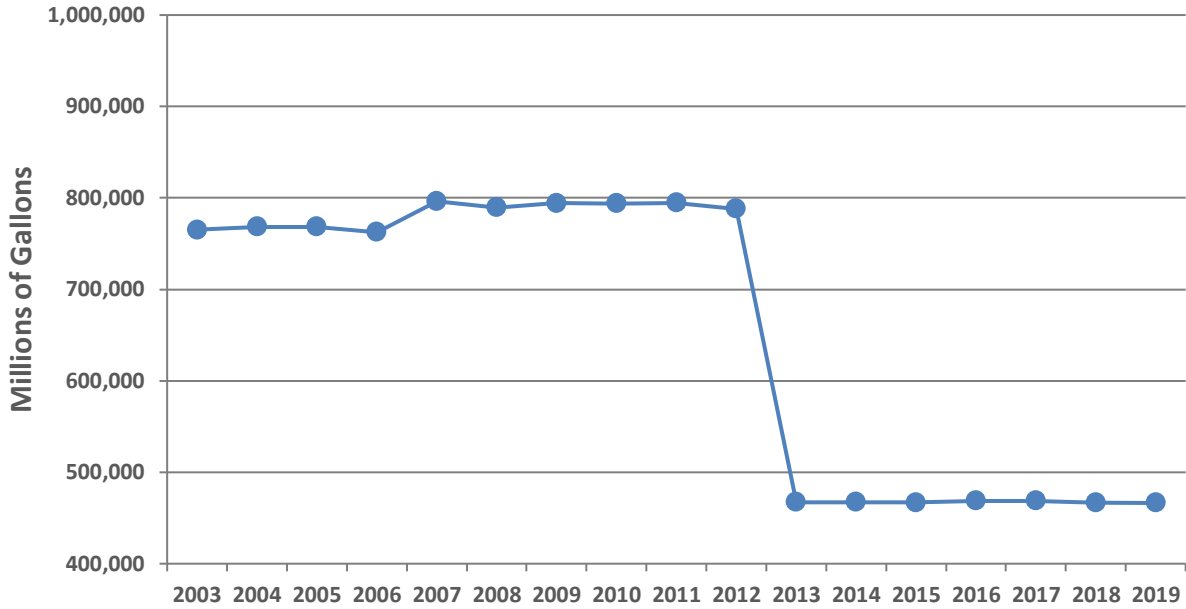


Figure 31: Total Historic Surface Water Reported Use in the Edisto Basin excluding power production, 2003-2019

Historic Surface Water Usage for the Edisto Basin (No Power Production) (Active Users)

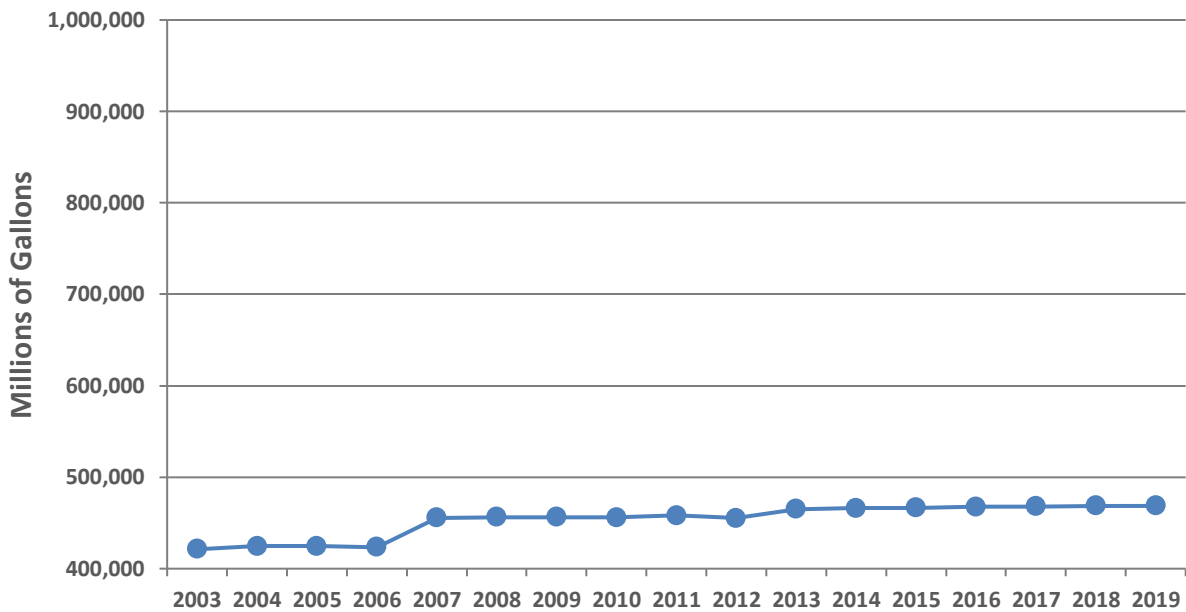


Figure 32: Total Historic Surface Water Reported Use in the Edisto Basin excluding power production and non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Edisto Basin

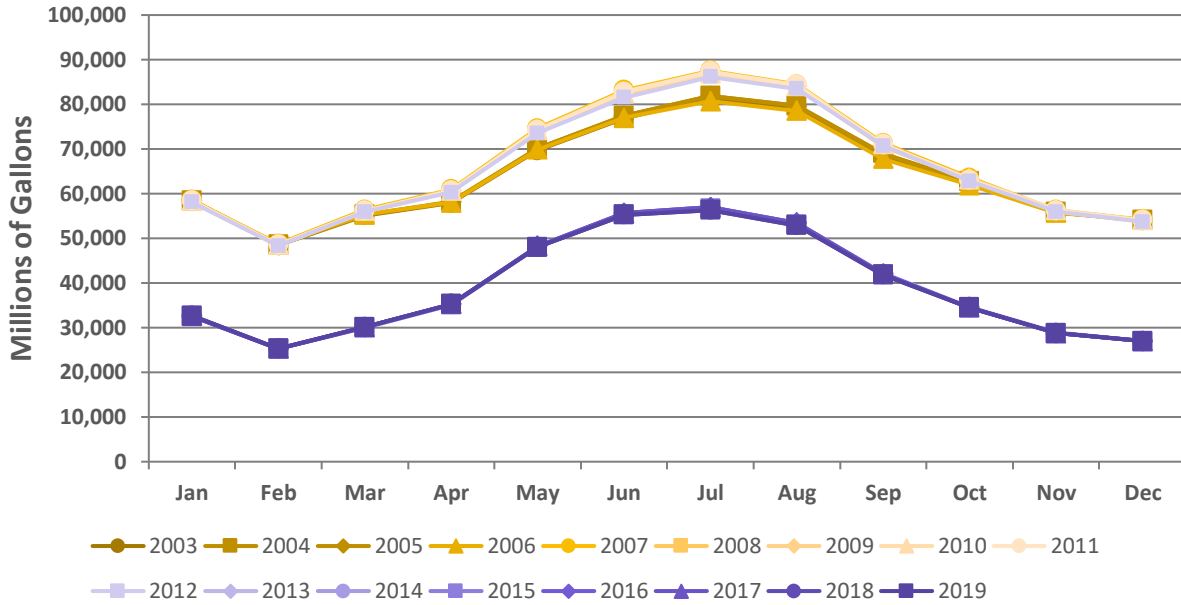


Figure 33: Total Historic Surface Water Reported Monthly Use in the Edisto Basin, 2003-2019

Monthly Historic Surface Water Usage for the Edisto River Basin (Active Users)

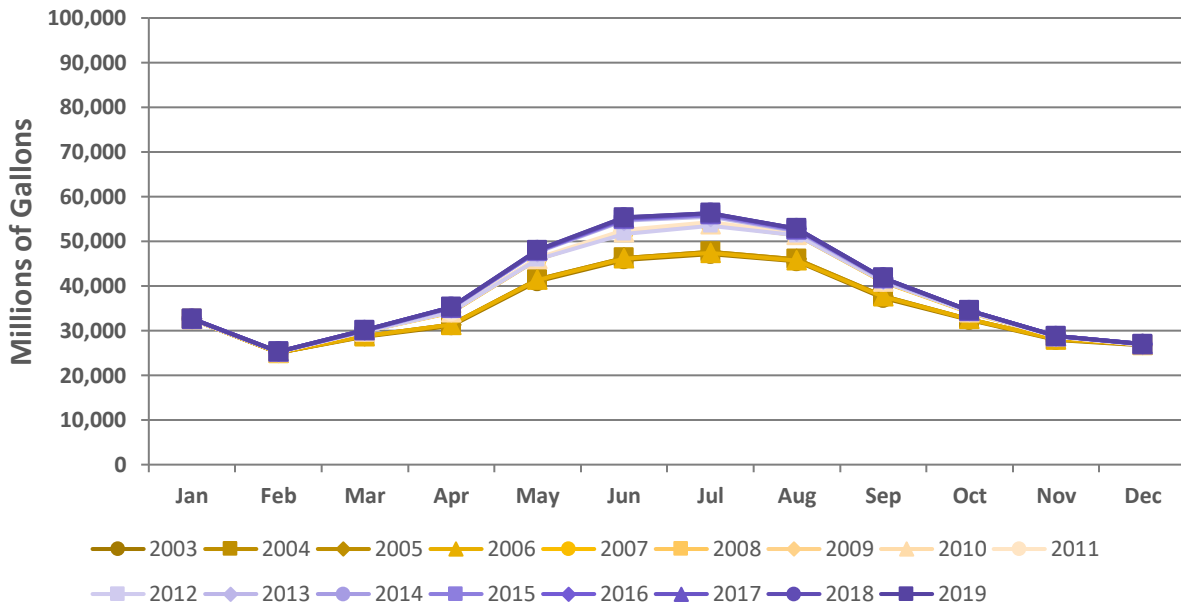


Figure 34: Total Historic Surface Water Reported Monthly Use in the Edisto Basin, excluding non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Edisto Basin (No Power Production)

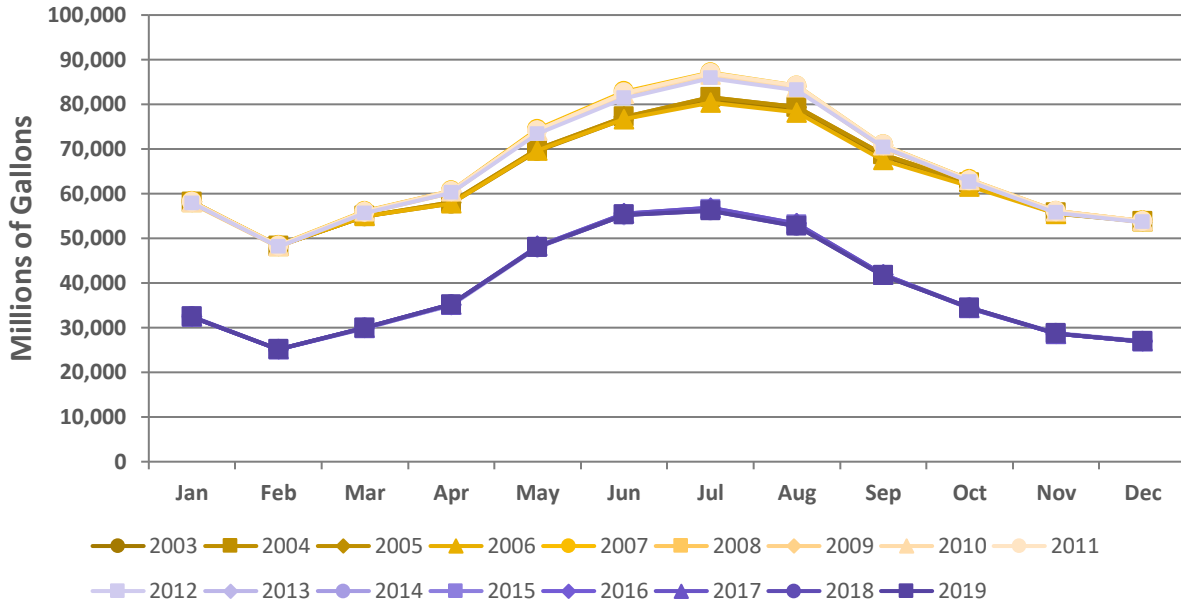


Figure 35: Total Historic Groundwater Reported Monthly Use in the Edisto Basin with no power production users, 2003-2019

Monthly Historic Surface Water Usage for the Edisto River Basin (No Power Production) (Active Users)

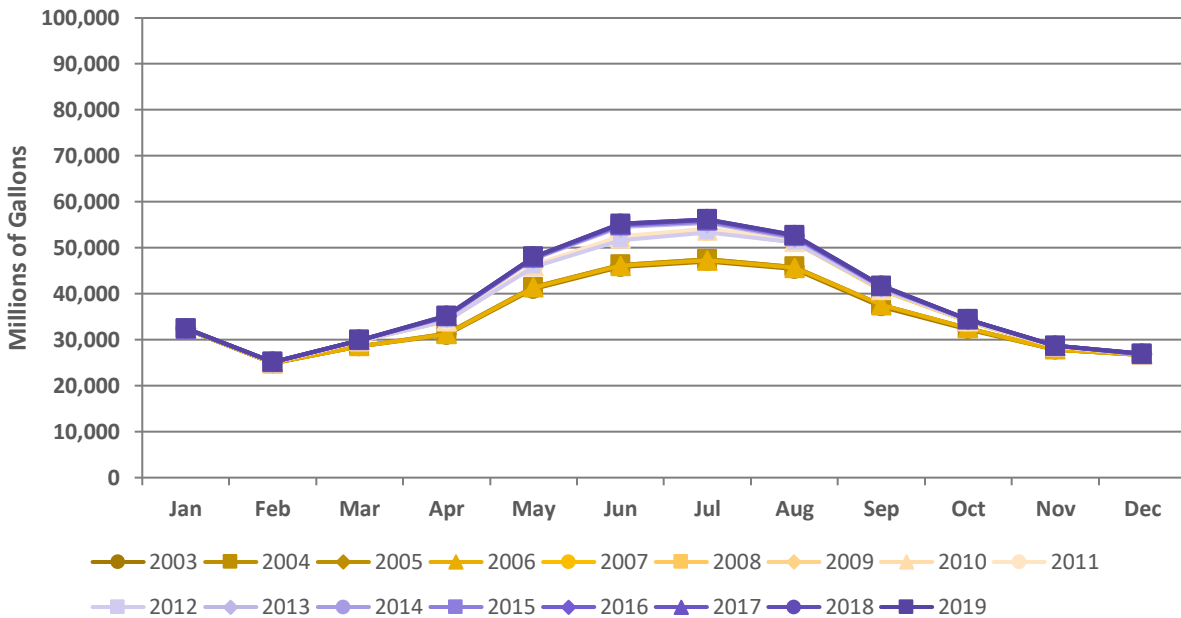


Figure 36: Total Historic Surface Water Reported Monthly Use in the Edisto Basin with no power production users, excluding non-active users, 2003-2019

Historic Surface Water Usage in the Pee Dee Basin

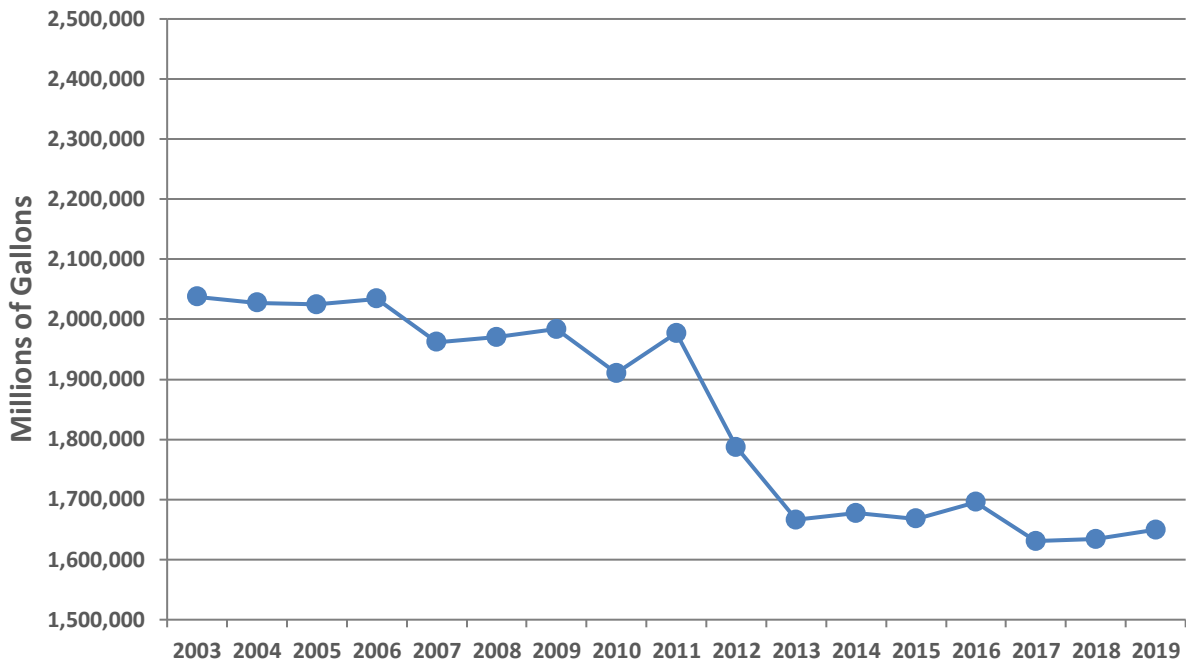


Figure 37: Total Historic Surface Water Reported Use in the Pee Dee Basin, 2003-2019

Historic Surface Water Usage for the Pee Dee River Basin (Active Users)

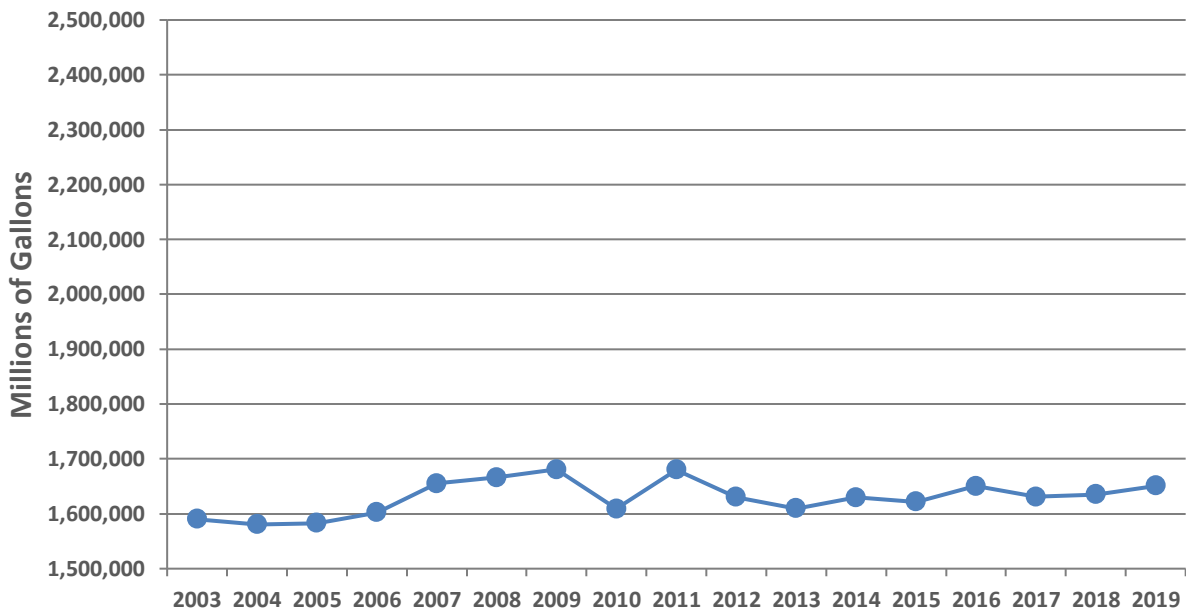


Figure 38: Total Historic Surface Water Reported Use in the Pee Dee Basin excluding non-active users, 2003-2019

Historic Surface Water Usage in the Pee Dee Basin (No Power Production)

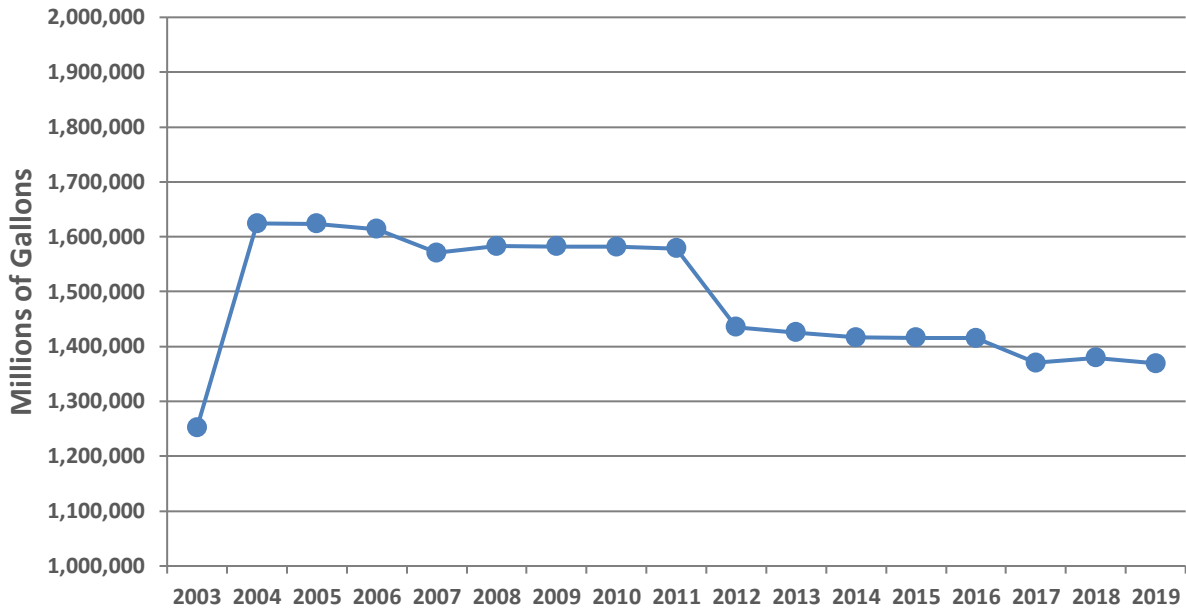


Figure 39: Total Historic Surface Water Reported Use in the Pee Dee Basin excluding power production, 2003-2019

Monthly Historic Surface Water Usage for the Pee Dee Basin (No Power Production) (Active Users)

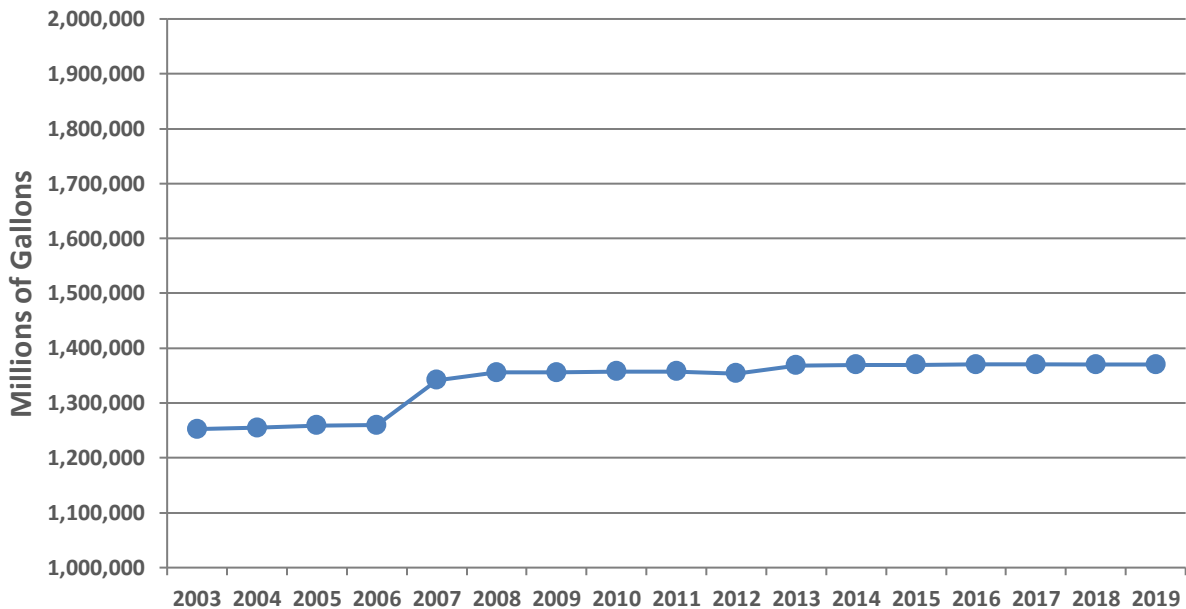


Figure 40: Total Historic Surface Water Reported Use in the Pee Dee Basin excluding power production and non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Pee Dee Basin

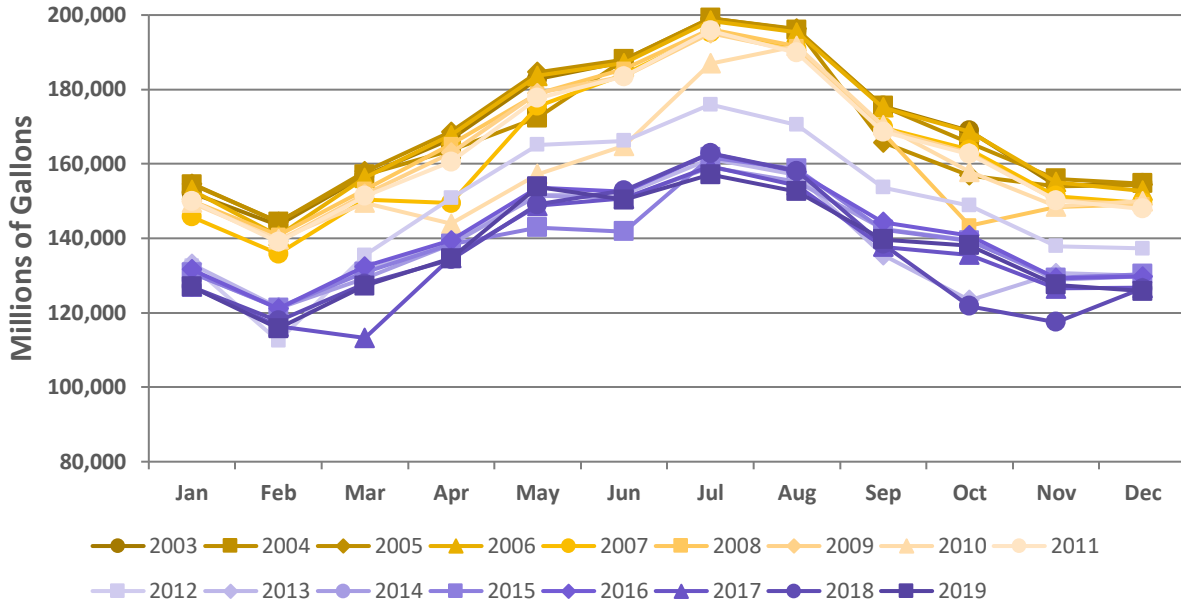


Figure 41: Total Historic Surface Water Reported Monthly Use in the Pee Dee Basin, 2003-2019.

Monthly Historic Surface Water Usage for the Pee Dee River Basin (Active Users)

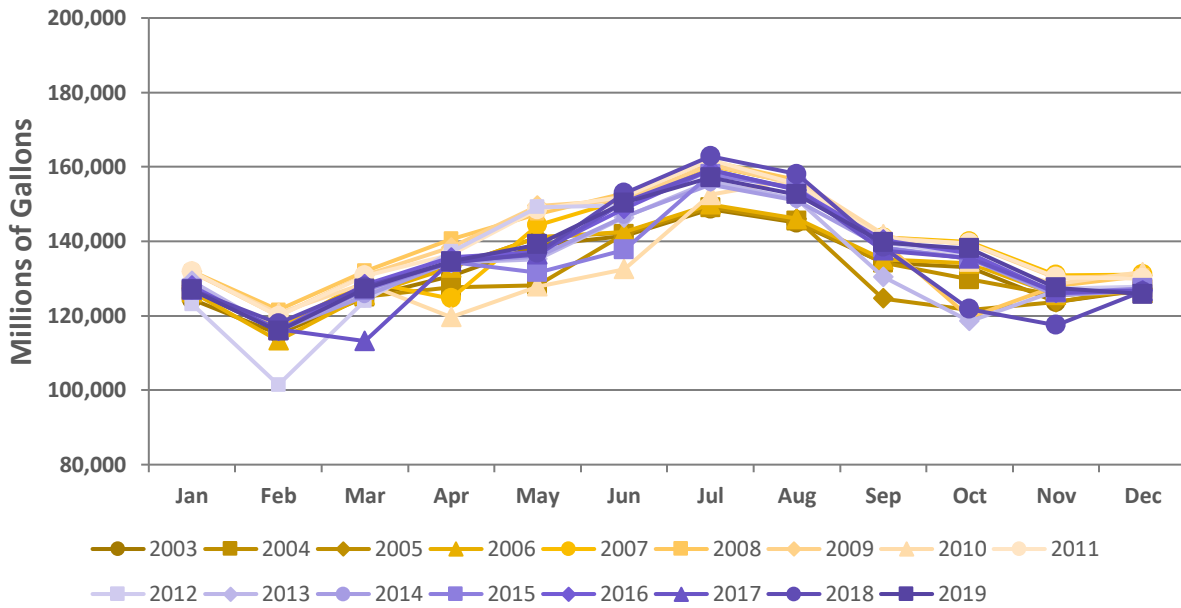


Figure 42: Total Historic Surface Water Reported Monthly Use in the Pee Dee Basin, excluding non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Pee Dee Basin (No Power)

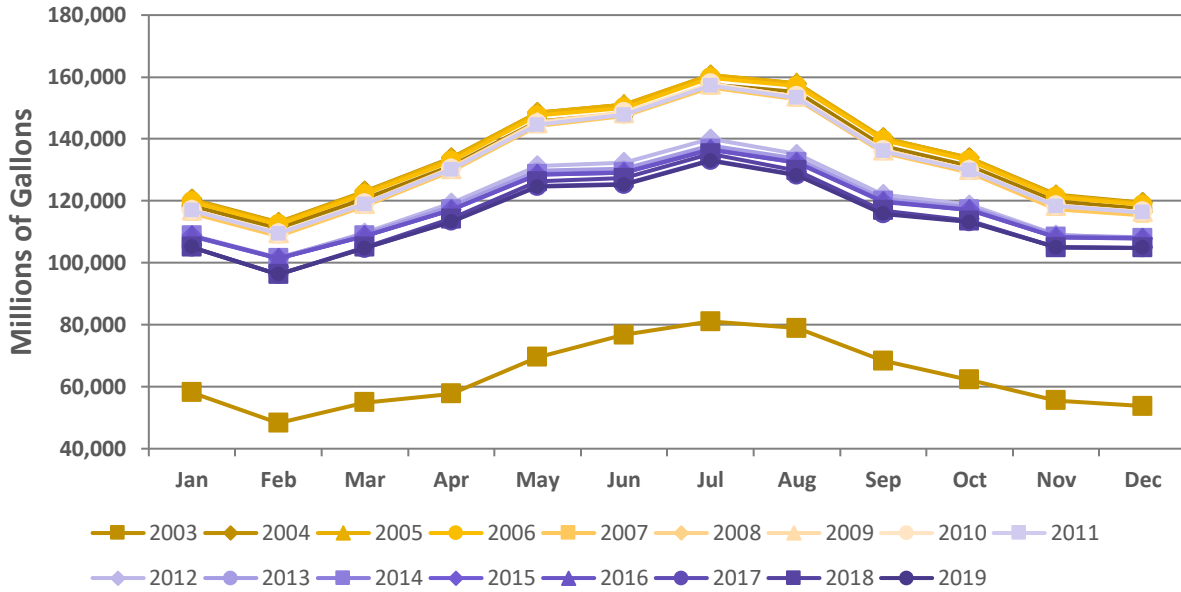


Figure 43: Total Historic Surface Water Reported Monthly Use in the Pee Dee Basin with no power production users, 2003-2019

Monthly Historic Surface Water Usage for the Pee Dee River Basin (No Power Production) (Active Users)

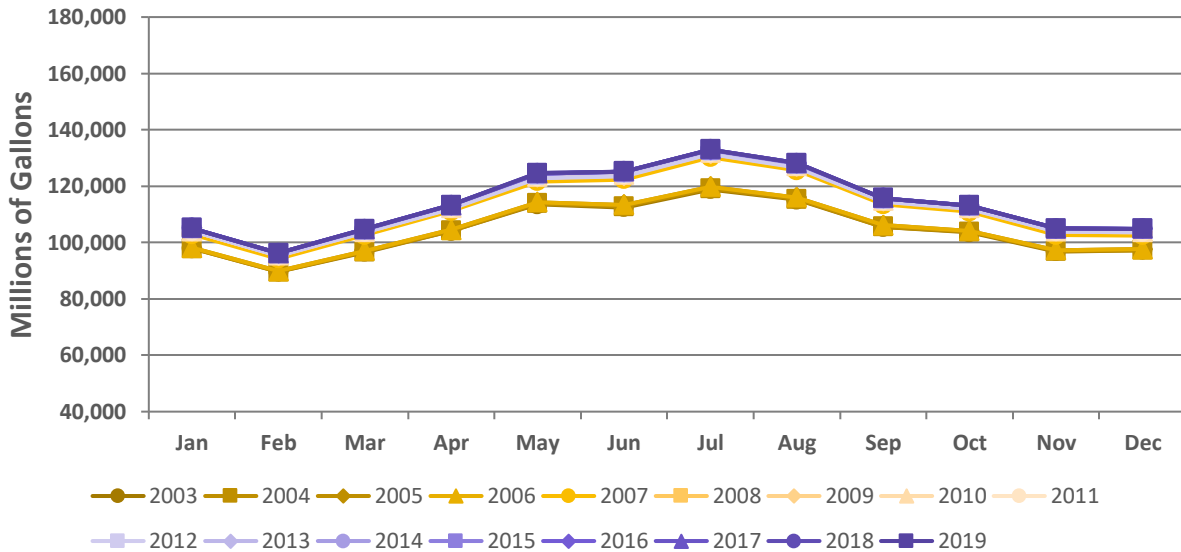


Figure 44: Total Historic Surface Water Reported Monthly Use in the Pee Dee Basin with no power production users, excluding non-active users, 2003-2019

Historic Surface Water Usage in the Salkehatchie Basin (No Power Production)*

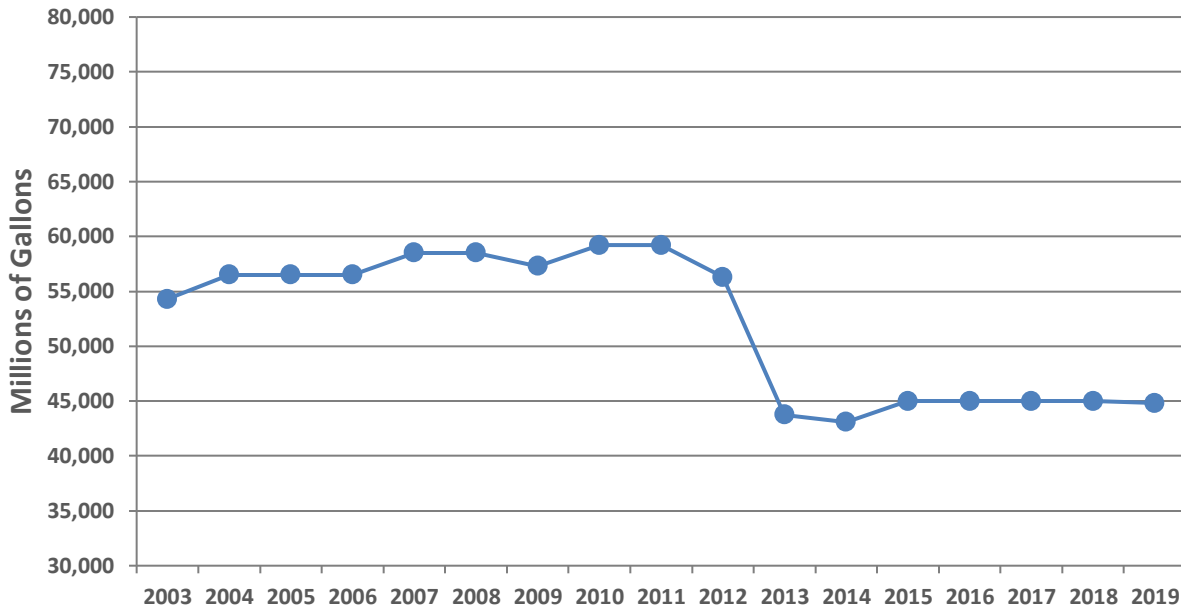


Figure 45: Total Historic Surface Water Reported Use in the Salkehatchie Basin, 2003-2019. *The Salkehatchie Basin does not have any power production users

Historic Surface Water Usage for the Salkehatchie Basin (No Power Production) (Active Users)

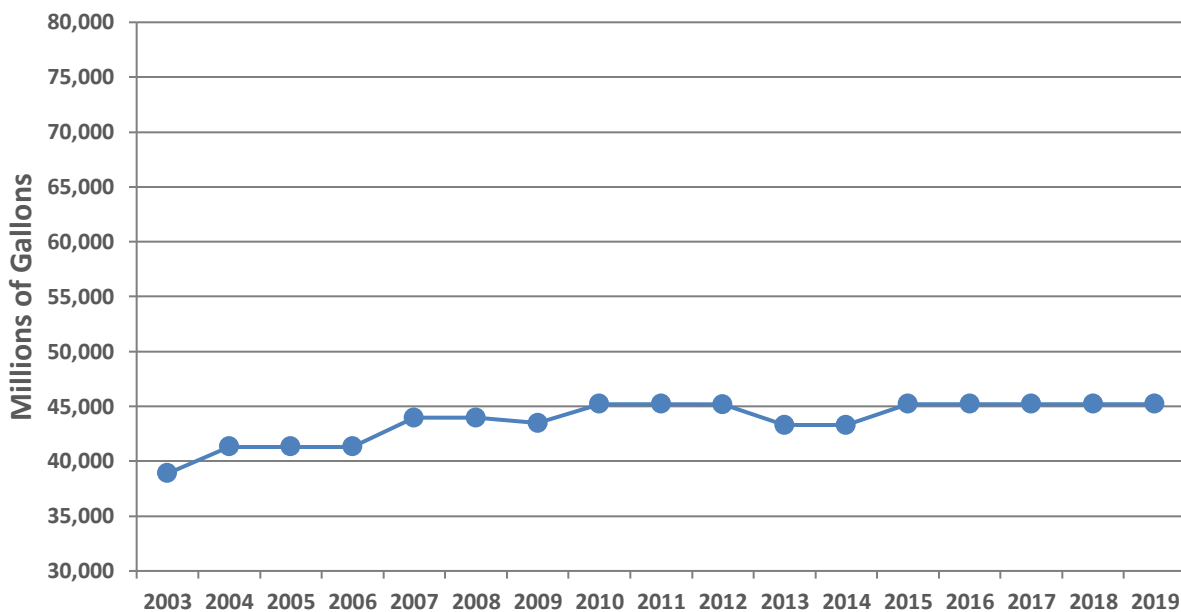


Figure 46: Total Historic Surface Water Reported Use in the Salkehatchie Basin excluding power production and non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Salkehatchie Basin (No Power Production)

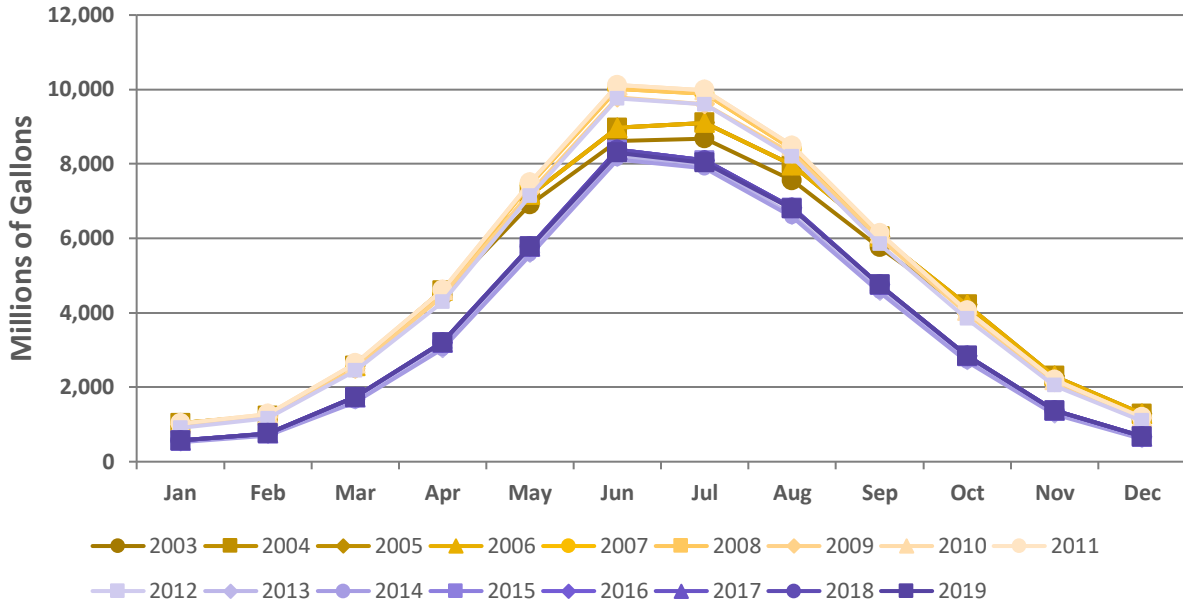


Figure 47: Total Historic Surface Water Monthly Reported Use in the Salkehatchie Basin with no power production users, 2003-2019

Monthly Historic Surface Water Usage for the Salkehatchie River Basin (No Power Production) (Active Users)

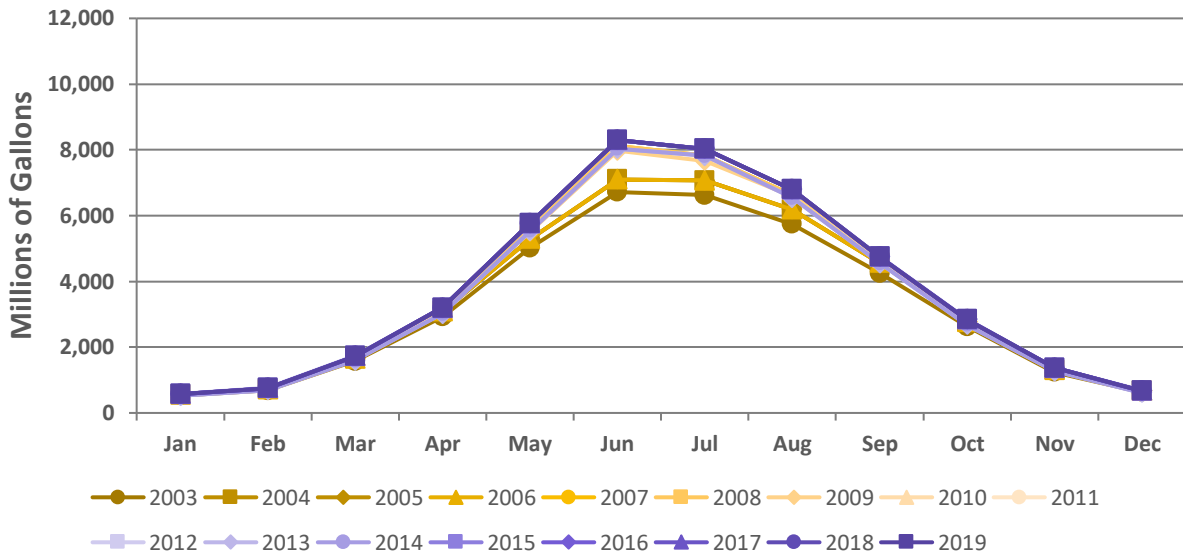


Figure 48: Total Historic Surface Water Monthly Reported Use in the Salkehatchie Basin with no power production users, excluding non-active users, 2003-2019

Historic Surface Water Usage in the Saluda Basin

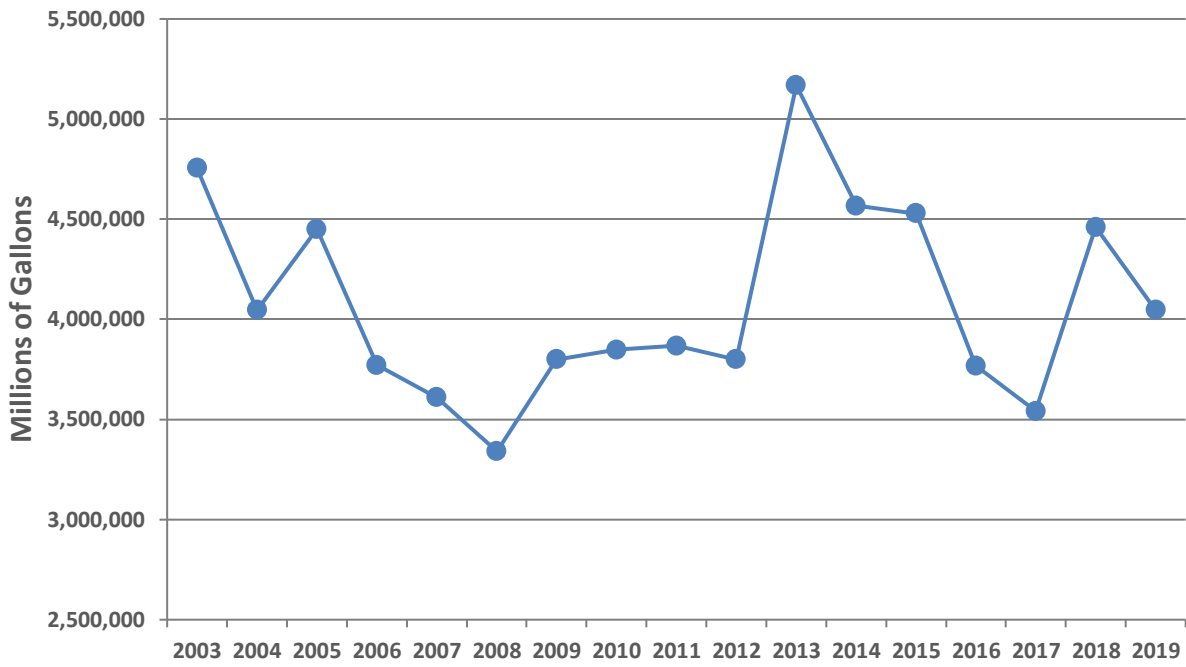


Figure 49: Total Historic Surface Water Reported Use in the Saluda Basin, 2003-2019

Historic Surface Water Usage for the Saluda River Basin (Active Users)

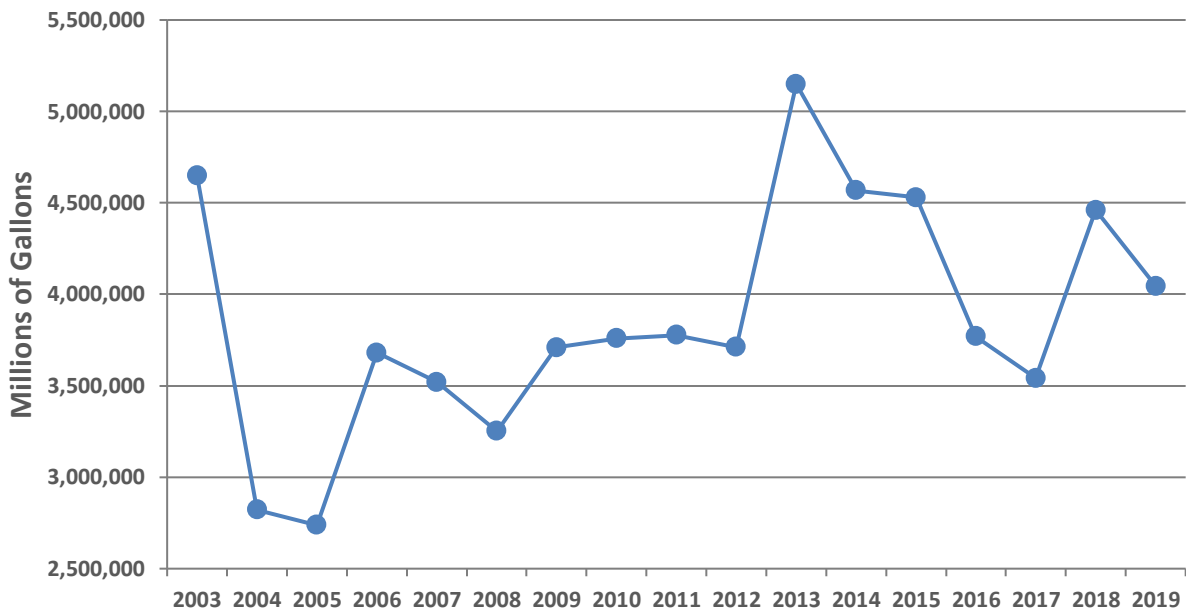


Figure 50: Total Historic Surface Water Reported Use in the Saluda Basin excluding non-active users, 2003-2019

Historic Surface Water Usage in the Saluda Basin (No Power Production)

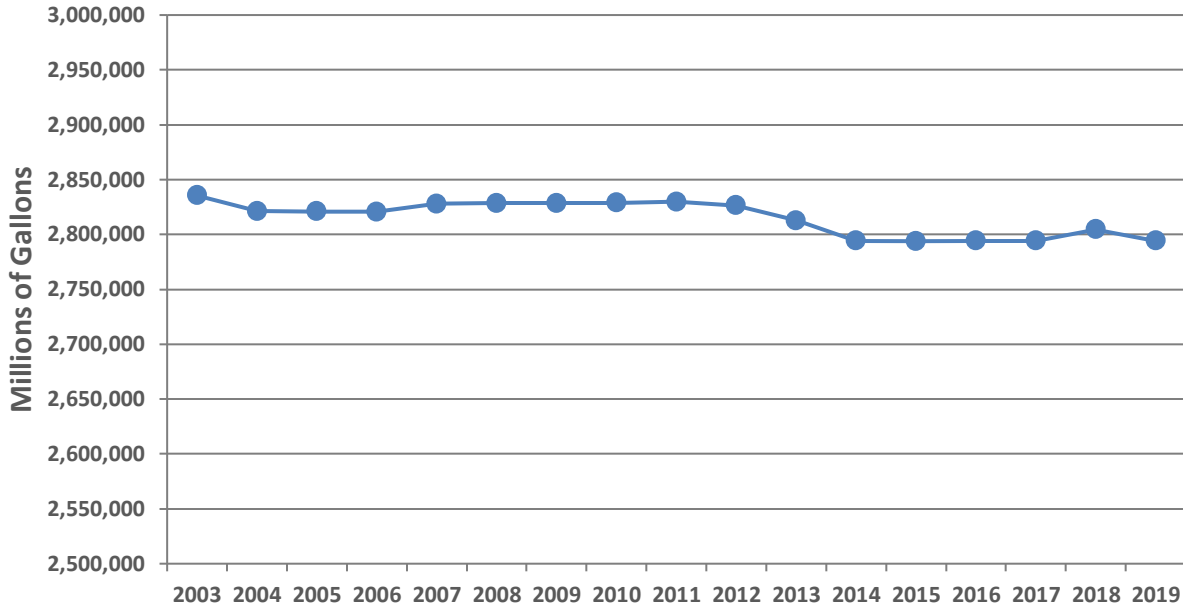


Figure 51: Total Historic Surface Water Reported Use in the Saluda Basin excluding power production, 2003-2019

Total Historic Surface Water Usage for the Saluda Basin (No Power Production) (Active User)

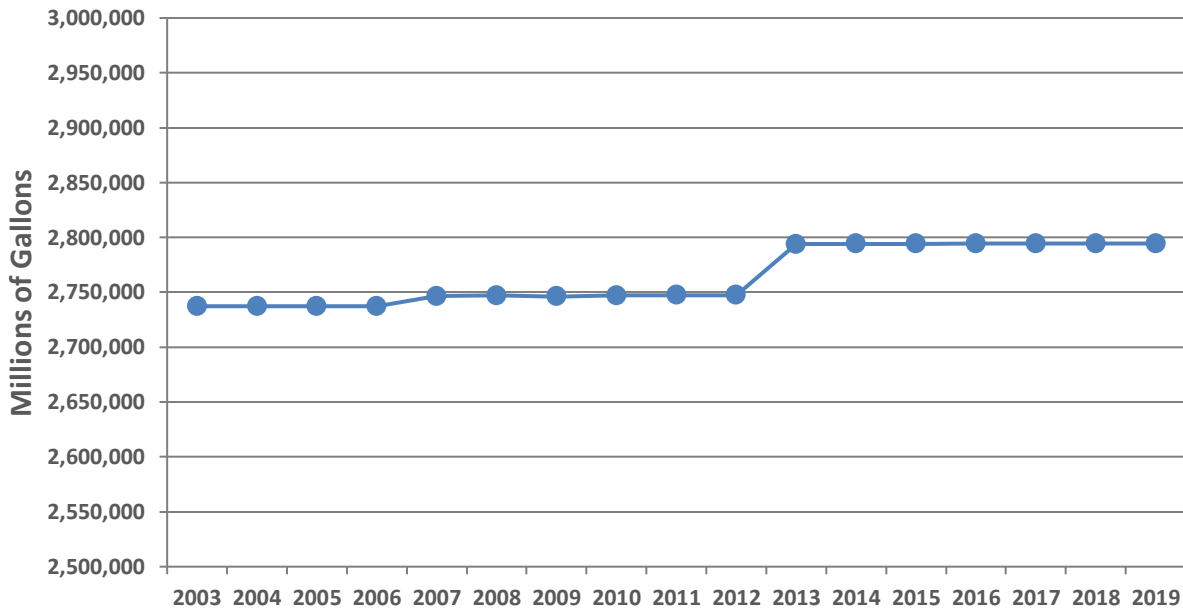


Figure 52: Total Historic Surface Water Reported Use in the Saluda Basin excluding power production and non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Saluda Basin

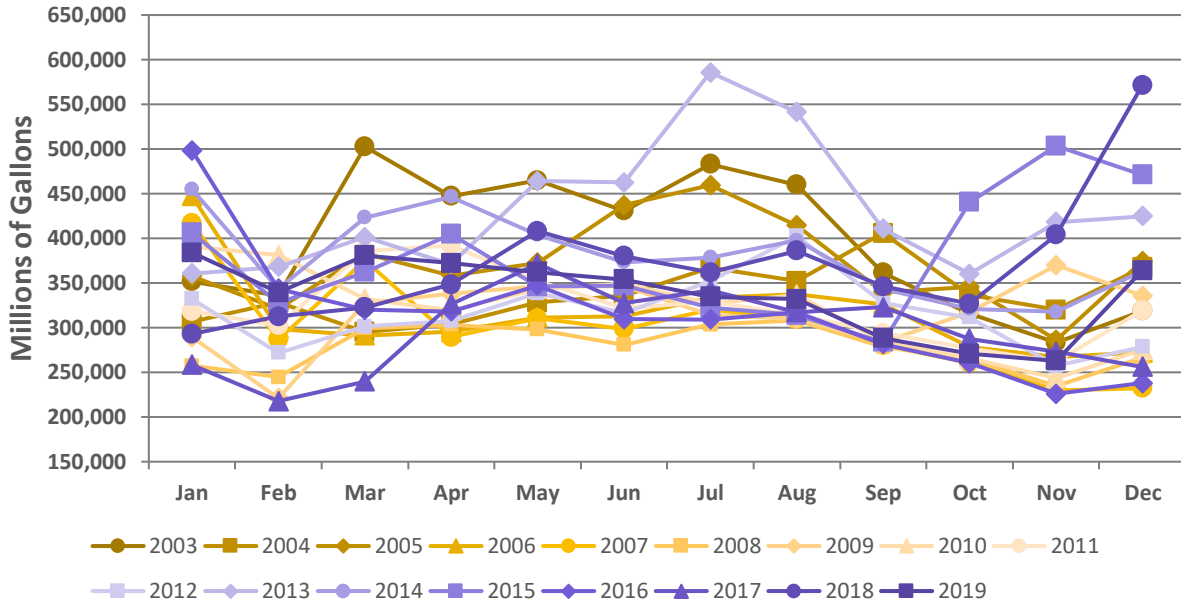


Figure 53: Total Historic Surface Water Monthly Reported Use in the Saluda Basin, 2003-2019

Total Monthly Historic Surface Water Usage for the Saluda River Basin (Active User)

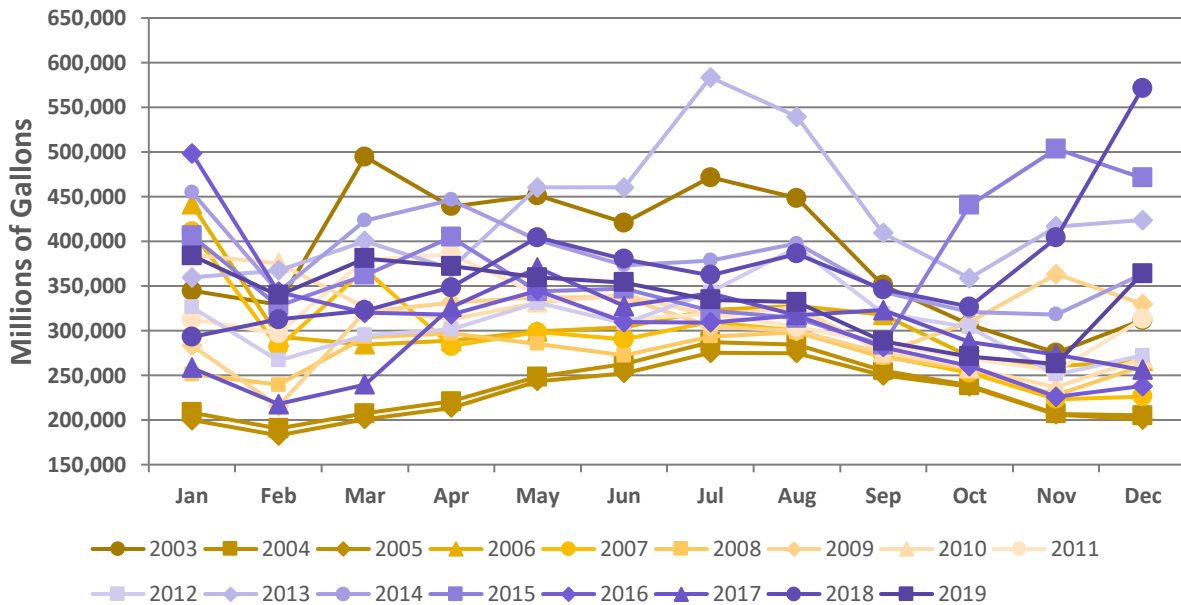


Figure 54: Total Historic Surface Water Monthly Reported Use in the Saluda Basin, excluding non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Saluda Basin (No Power Production)

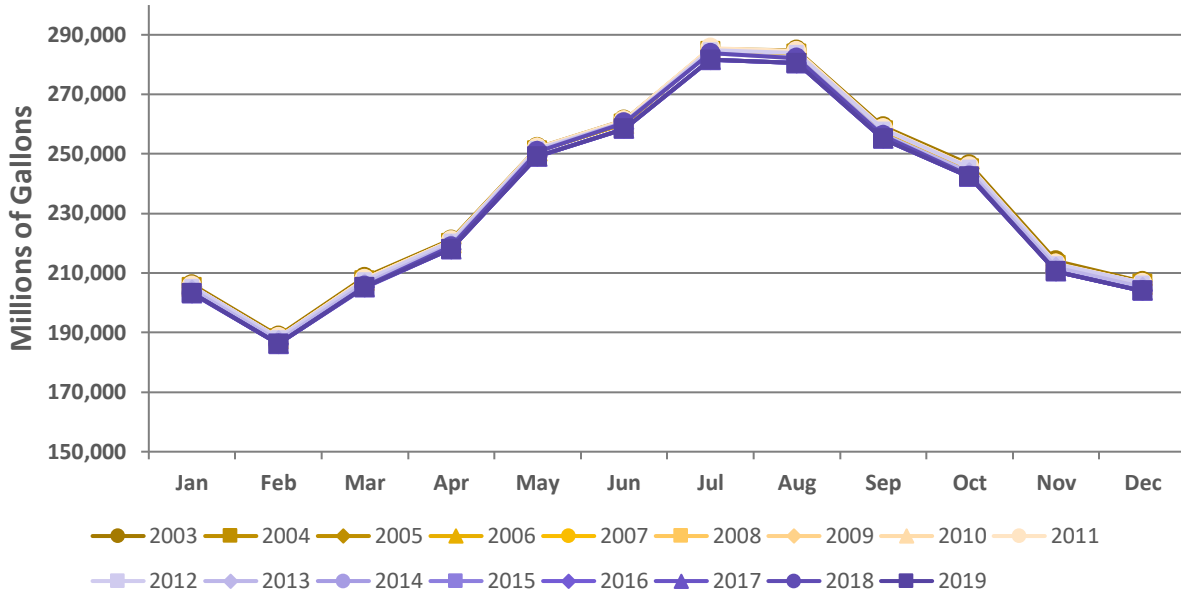


Figure 55: Total Historic Surface Water Monthly Reported Use in the Saluda Basin with no power production users, 2003-2019

Total Monthly Historic Surface Water Usage for the Saluda River Basin (No Power Production) (Active Users)

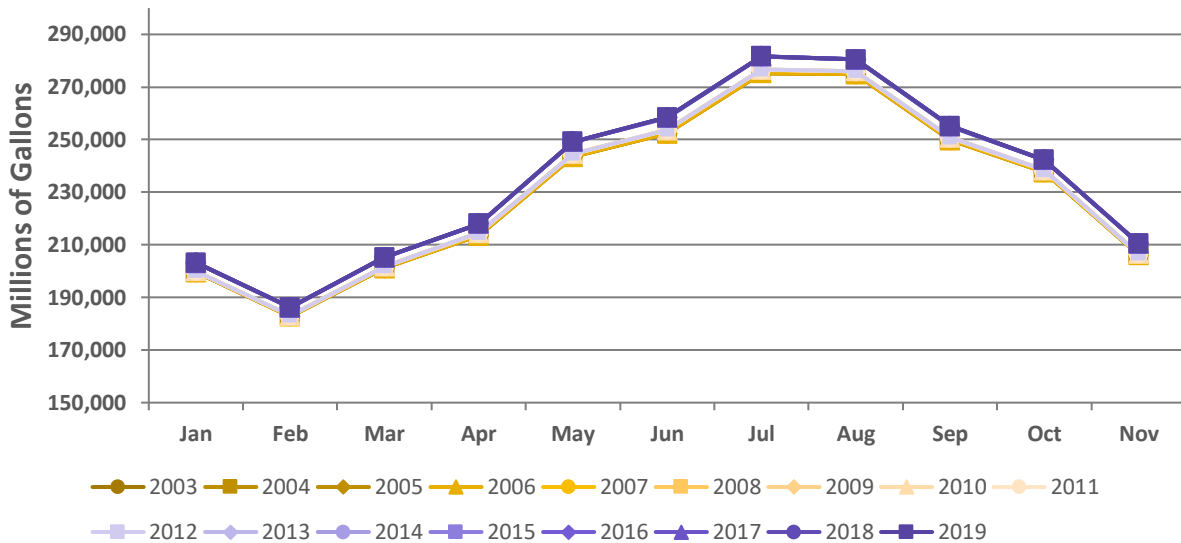


Figure 56: Total Historic Surface Water Monthly Reported Use in the Saluda Basin with no power production users, excluding non-active users, 2003-2019

Historic usage in the Santee Basin

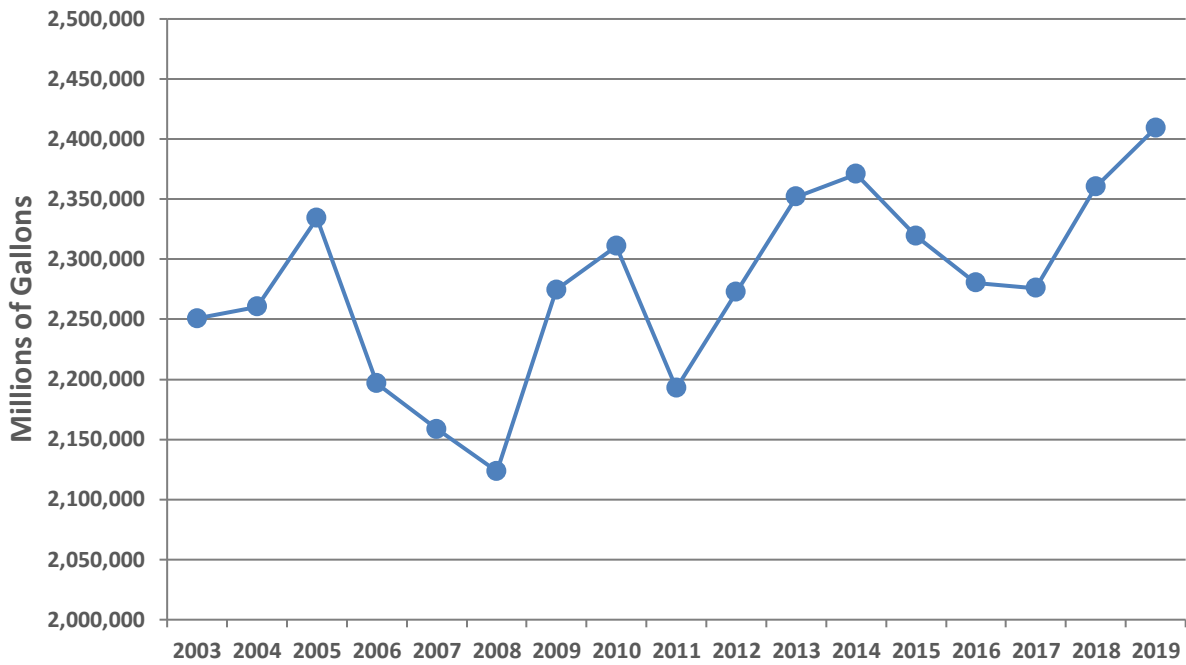


Figure 57: Total Historic Surface Water Reported Use in the Santee Basin, 2003-2019

Total Historic Surface Water Usage for the Santee River Basin (Active Users)

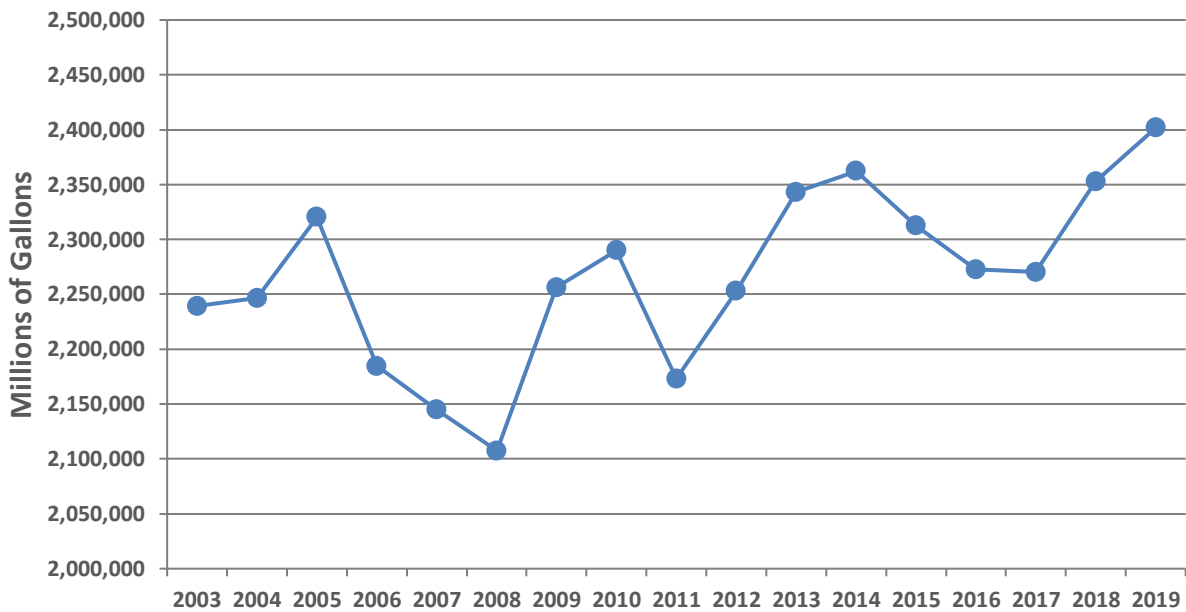


Figure 58: Total Historic Surface Water Reported Use in the Santee Basin excluding non-active users, 2003-2019

Historic Usage in the Santee Basin (No Power Production)

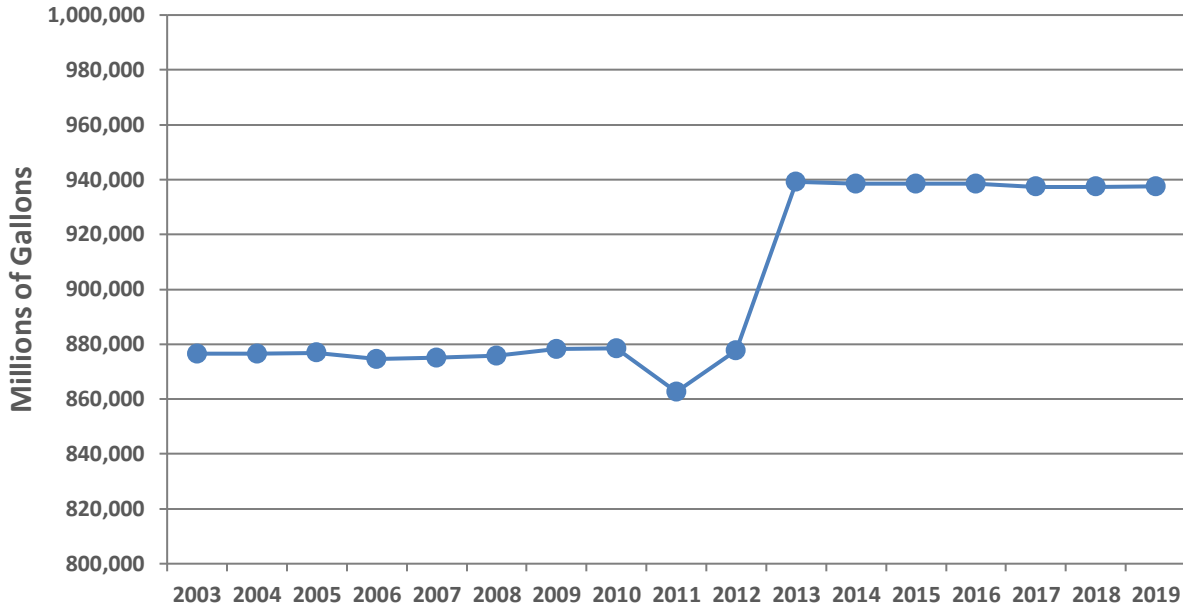


Figure 59: Total Historic Surface Water Reported Use in the Santee Basin excluding power production, 2003-2019 *2013 had the addition of Golf Course and Mining users in the basin

Total Historic Surface Water Usage for the Santee Basin* (No Power Production) (Active Users)

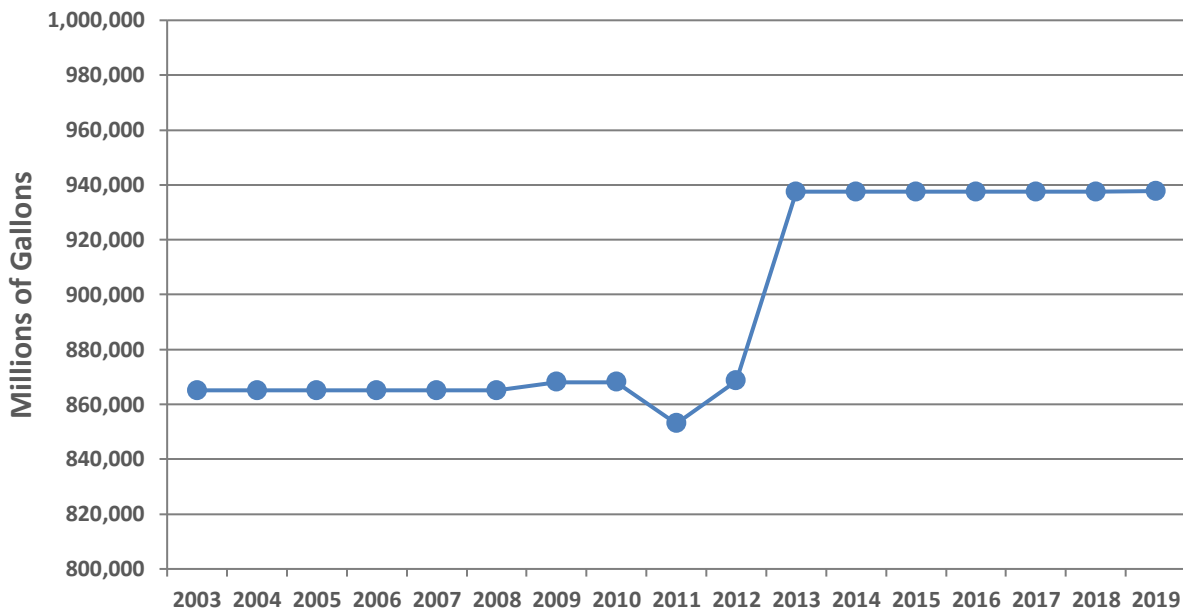


Figure 60: Total Historic Surface Water Reported Use in the Santee Basin excluding power production and non-active users, 2003-2019 *2013 had the addition of Golf Course and Mining users in the basin

Historic Surface Water Monthly Usage in the Santee Basin*

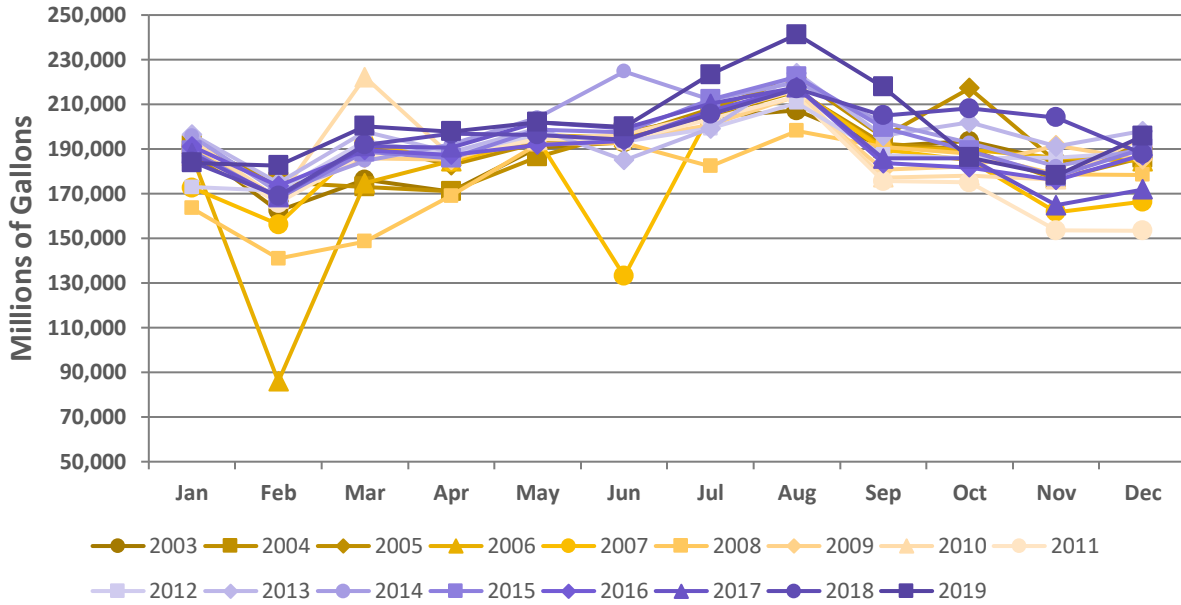


Figure 61: Total Historic Surface Water Reported Monthly Use in the Savannah Basin, 2003-2019. *Feb 2006 and Jun 2007 Hydroelectric power plants decrease use

Total Monthly Historic Surface Water Usage for the Santee Basin* (Active Users)

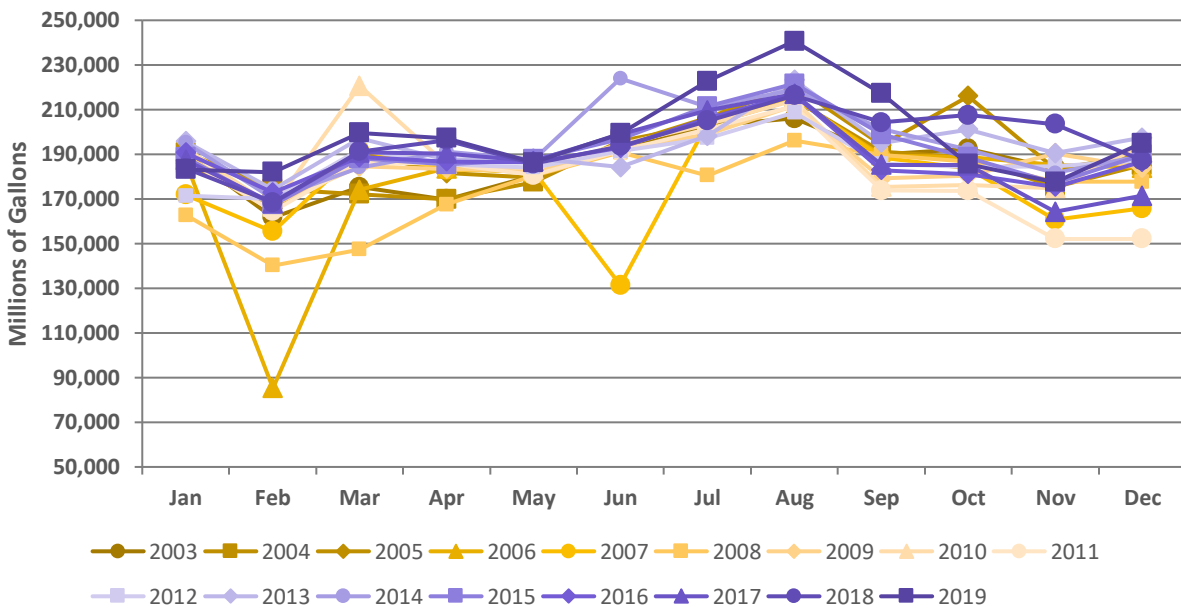


Figure 62: Total Historic Surface Water Reported Monthly Use in the Savannah Basin excluding non-active users, 2003-2019. *Feb 2006 and Jun 2007 Hydroelectric power plants decrease use

Historic Usage in the Santee Basin (No Power Production)

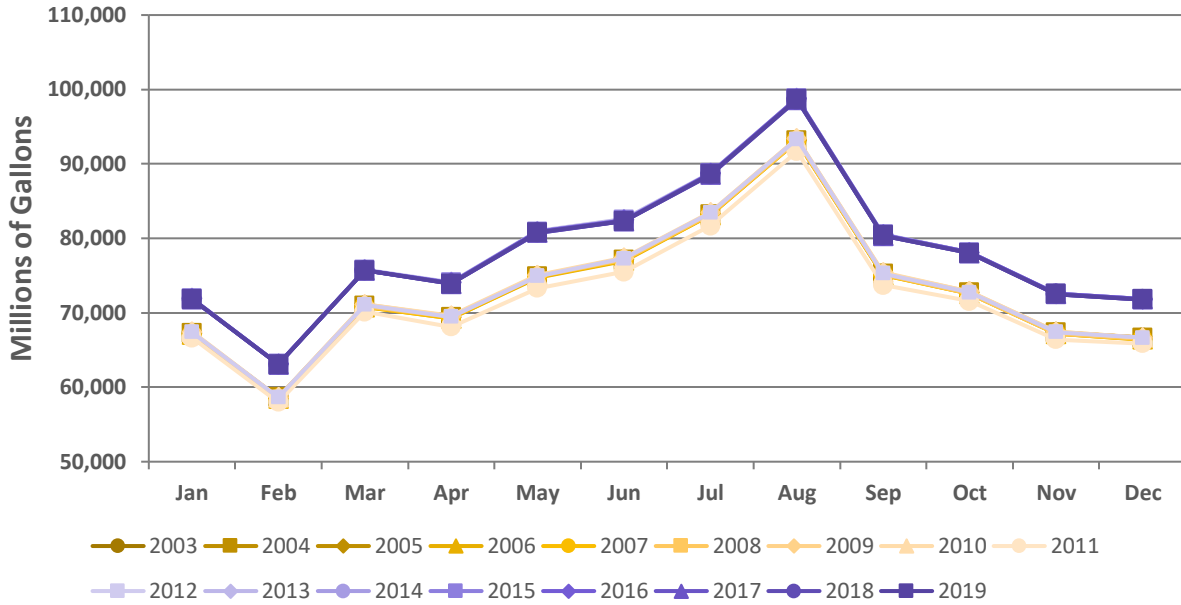


Figure 63: Total Historic Surface Water Monthly Reported Use in the Santee Basin with no power production users, 2003-2019

Total Monthly Historic Surface Water Usage for the Santee Basin (No Power Production) (Active Users)

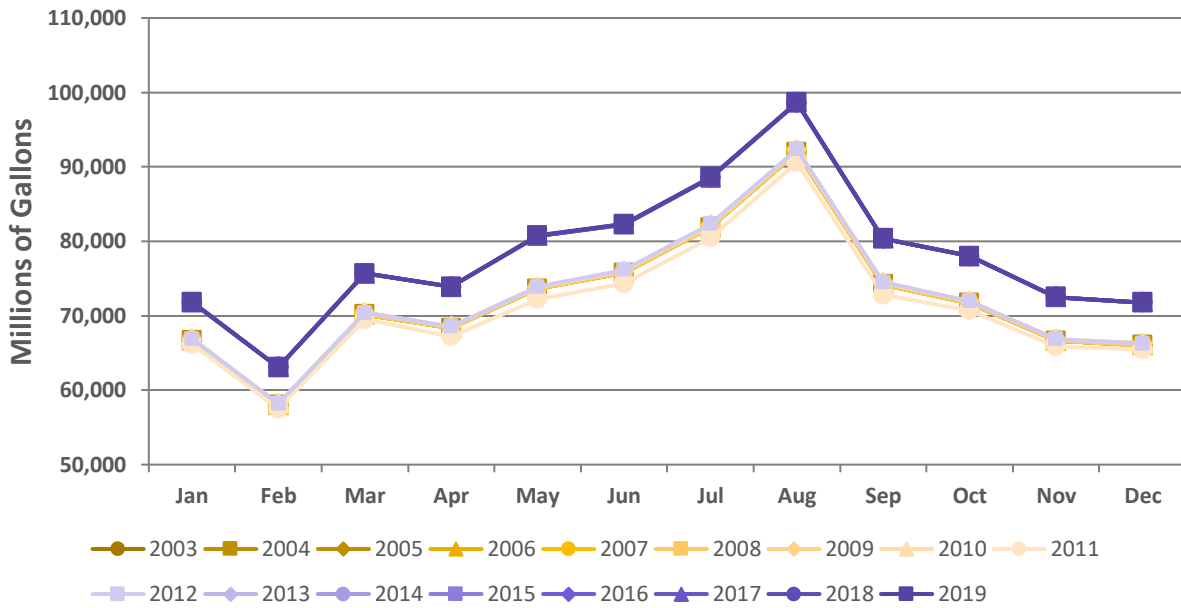


Figure 64: Total Historic Surface Water Monthly Reported Use in the Santee Basin with no power production users, excluding non-active users, 2003-2019

Total Historic Surface Water Usage for the Savannah Basin*

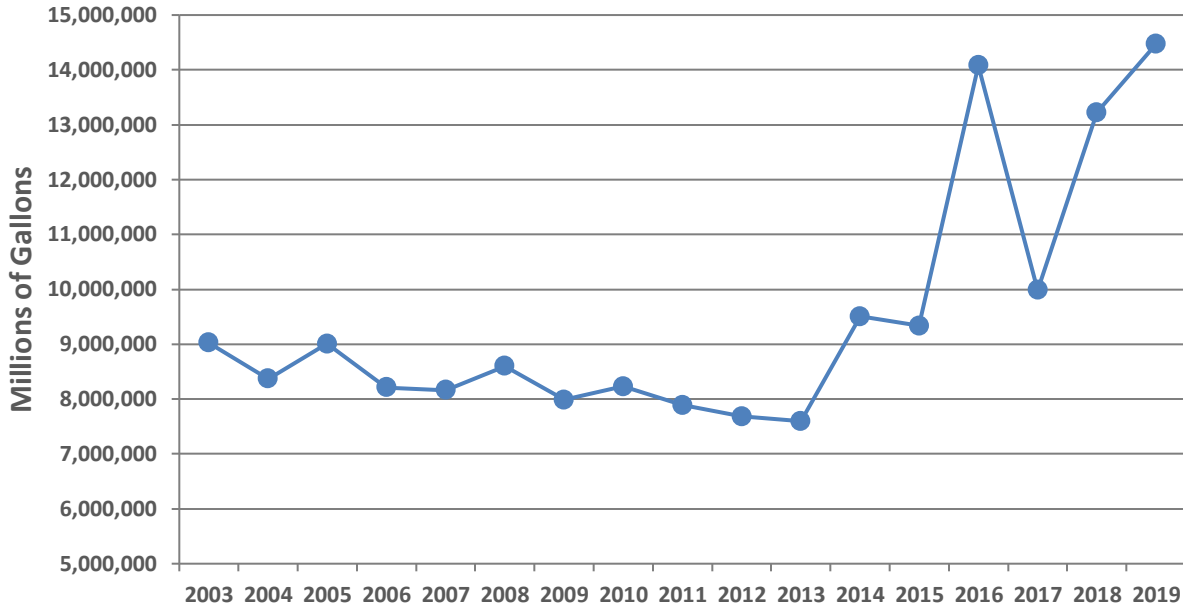


Figure 65: Total Historic Surface Water Reported Use Over Time in the Savannah Basin excluding non-active users, 2003-2019
 *2015 to present saw an increase use for hydroelectric power users, including the installation of 3 new power plants

Total Historic Surface Water Usage for the Savannah Basin* (Active Users)

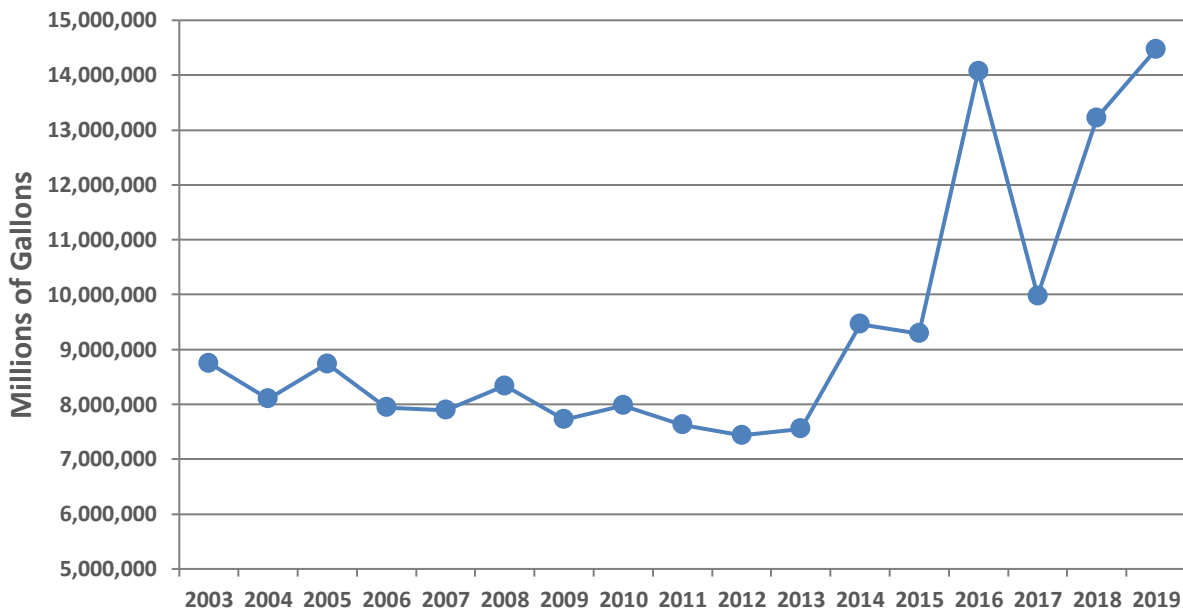


Figure 66: Total Historic Surface Water Reported Use Over Time in the Savannah Basin excluding non-active users, 2003-2019
 *2015 to present saw an increase use for hydroelectric power users, including the installation of 3 new power plants

Total Historic Surface Water Usage for the Savannah Basin (No Power Production)

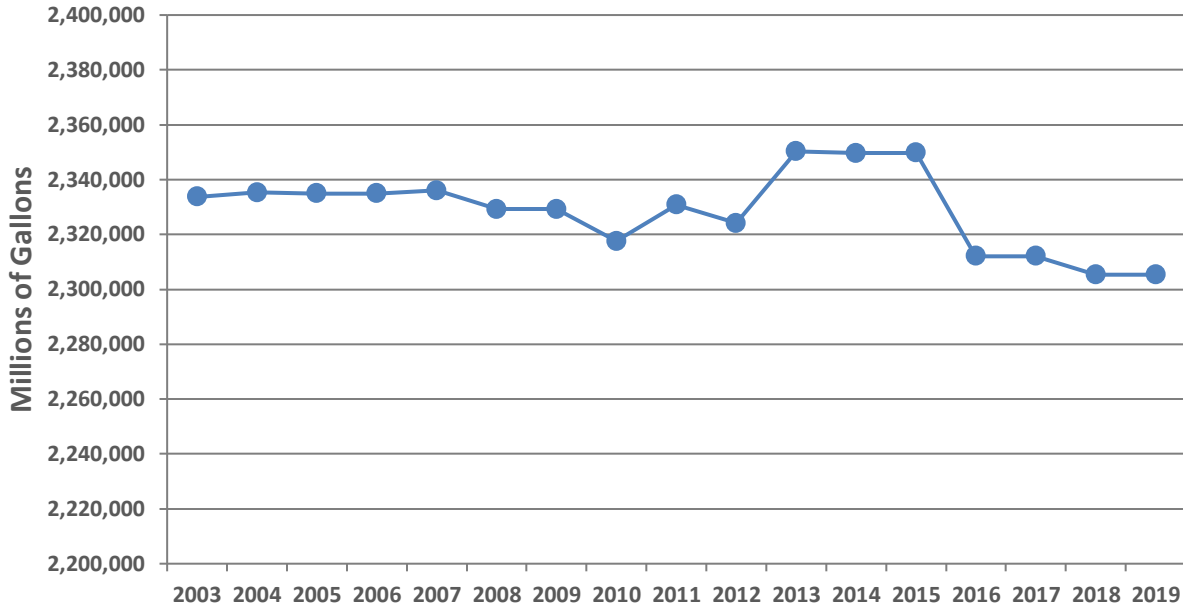


Figure 67: Total Historic Surface Water Reported Use Over Time in the Savannah Basin excluding power production and non-active users, 2003-2019

Total Historic Surface Water Usage for the Savannah Basin (No Power Production) (Active Users)

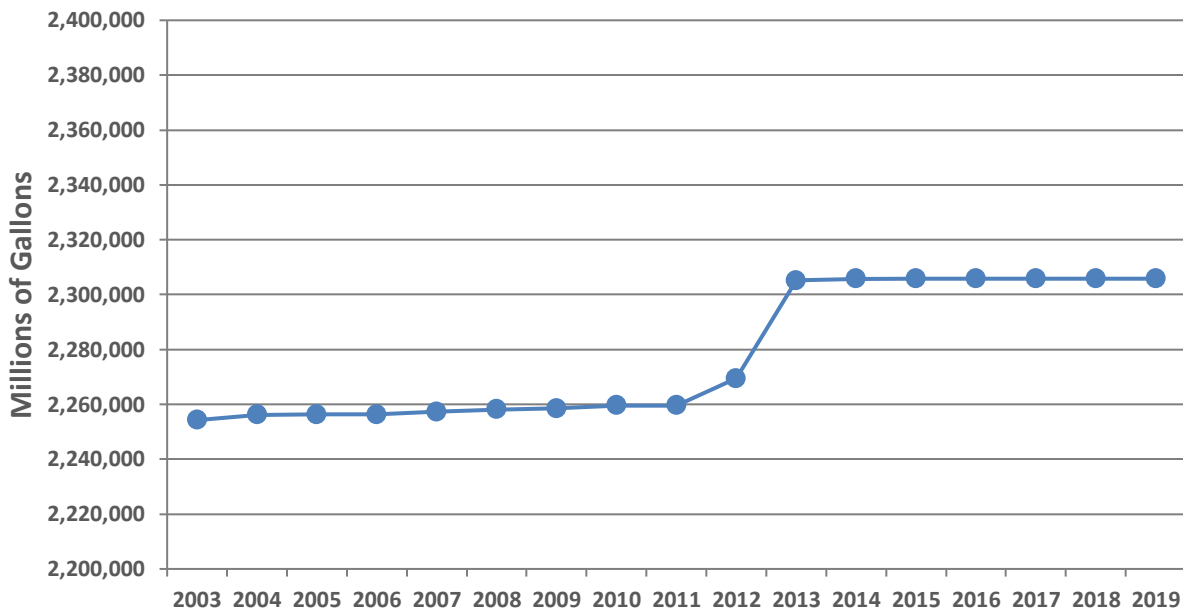


Figure 68: Total Historic Surface Water Reported Use Over Time in the Savannah Basin excluding power production and non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Savannah Basin

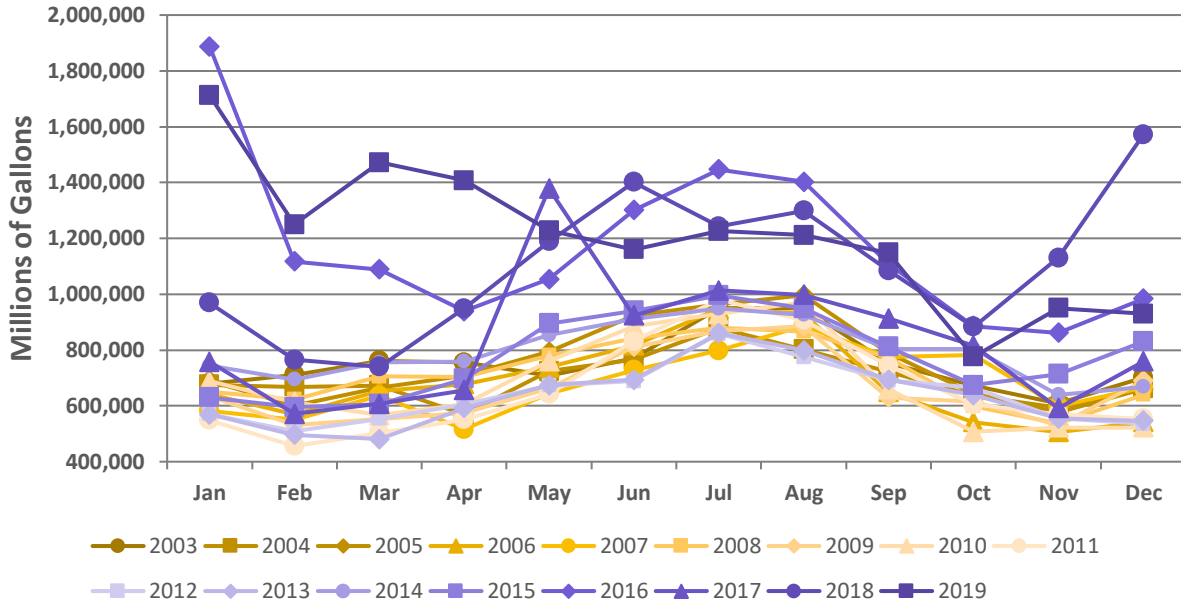


Figure 69: Total Historic Surface Water Monthly Reported Use in the Savannah Basin, 2003-2019

Total Monthly Historic Surface Water Usage for the Savannah Basin (Active Users)

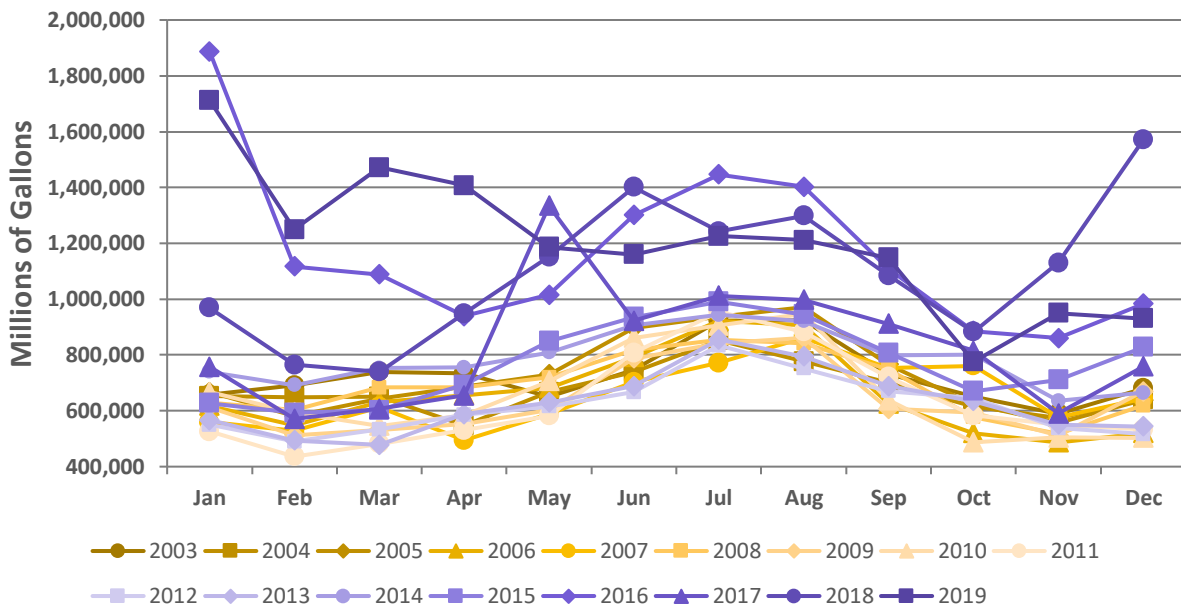


Figure 70: Total Historic Surface Water Monthly Reported Use in the Savannah Basin, excluding non-active users, 2003-2019

Historic Surface Water Monthly Usage in the Savannah Basin (No Power Production)

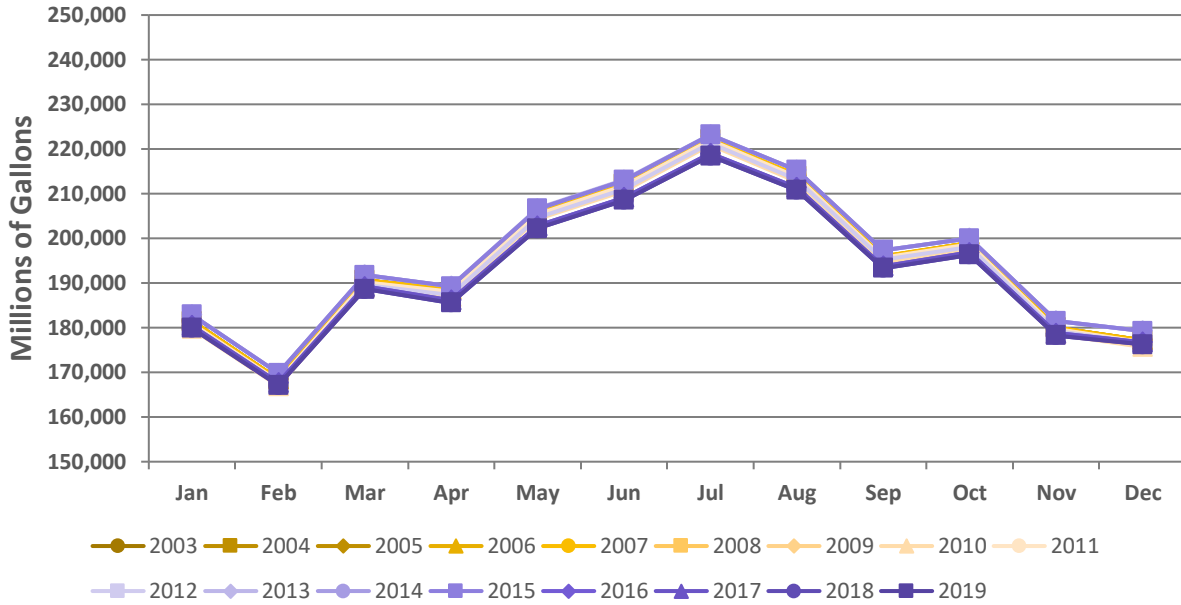


Figure 71: Total Historic Surface Water Monthly Reported Use in the Savannah Basin with no power production users, 2003-2019

Total Monthly Historic Surface Water Usage for the Savannah Basin (No Power Production) (Active Users)

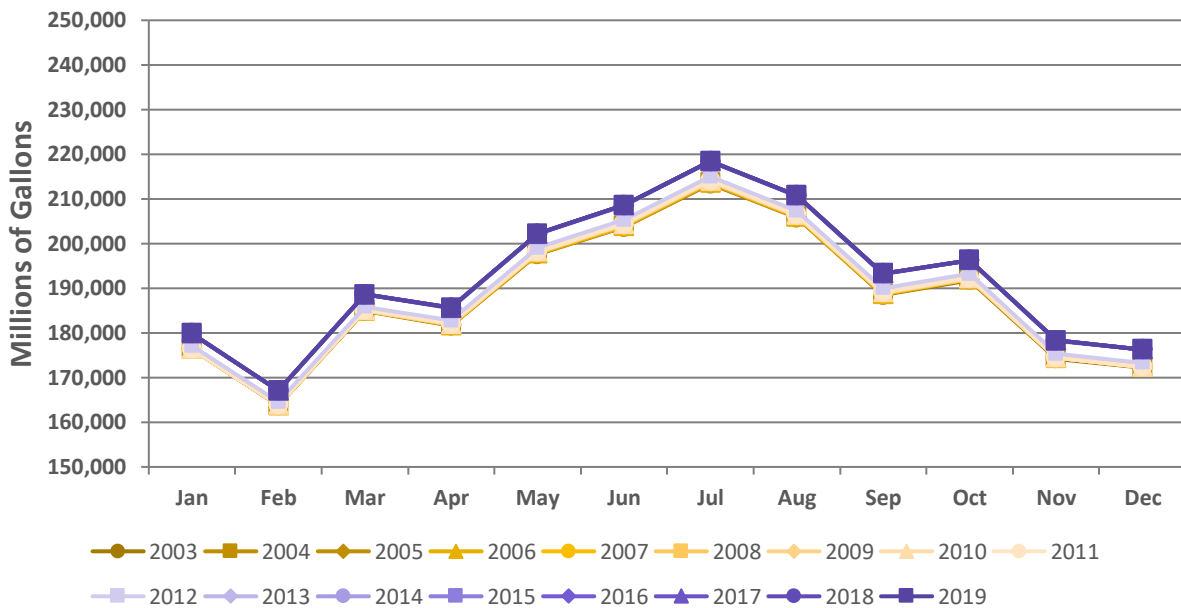


Figure 72: Total Historic Surface Water Monthly Reported Use in the Savannah Basin with no power production users, excluding non-active users, 2003-2019

Total Reported Groundwater Use by Basin 2019

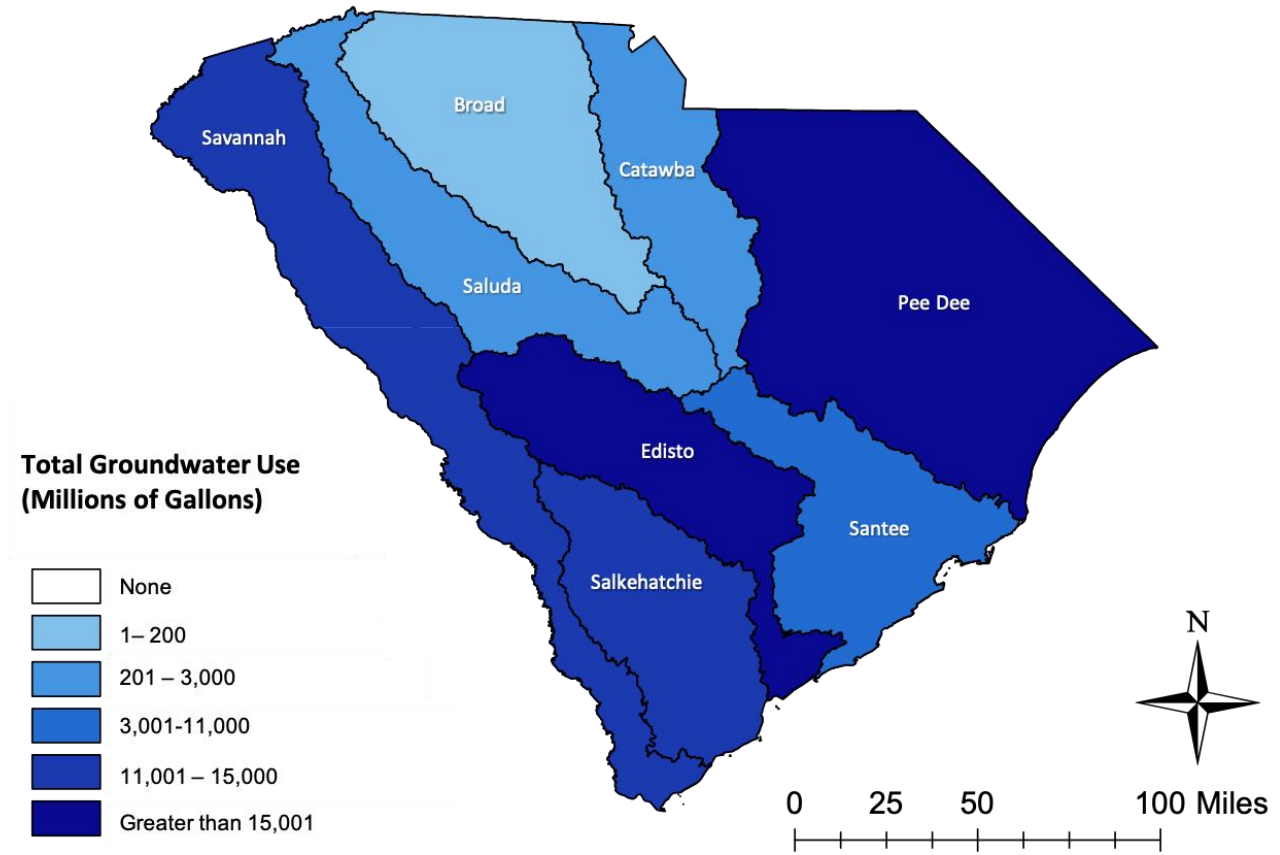


Figure 73: Total Reported Groundwater Use by Basin 2019

Historic Groundwater Use in the Broad Basin*

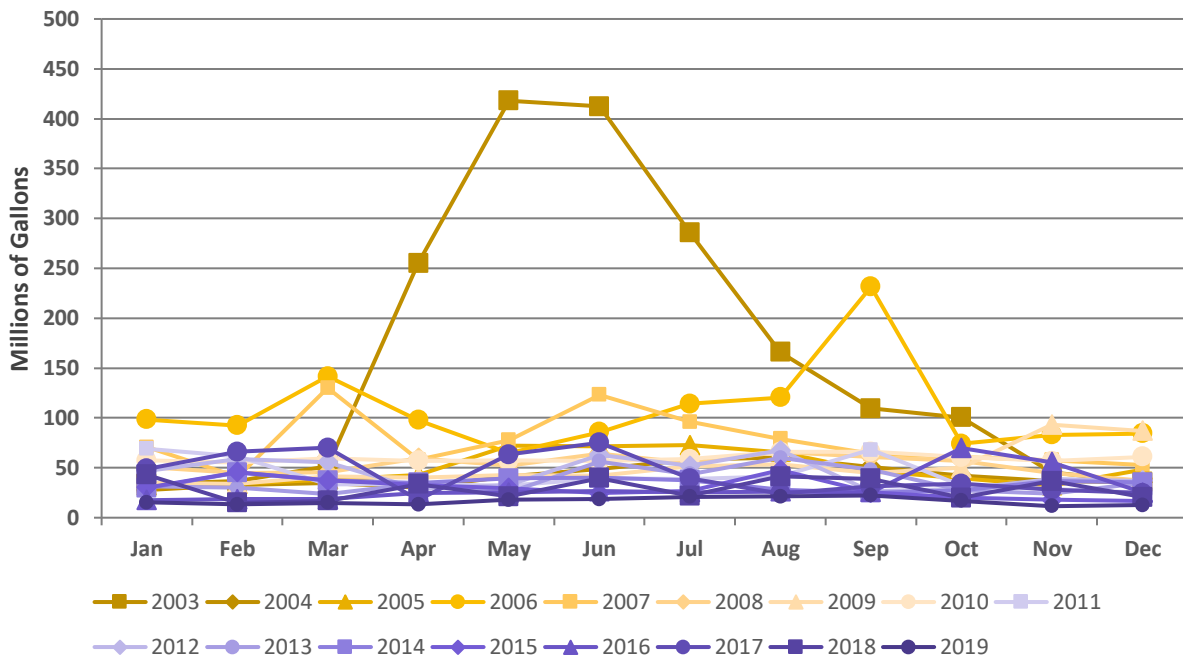


Figure 74: Total Historic Groundwater Monthly Reported Use in the Broad Basin, 2003-2019 *Large use in 2003 due to dewatering operation

Broad Basin Groundwater Use Over Time

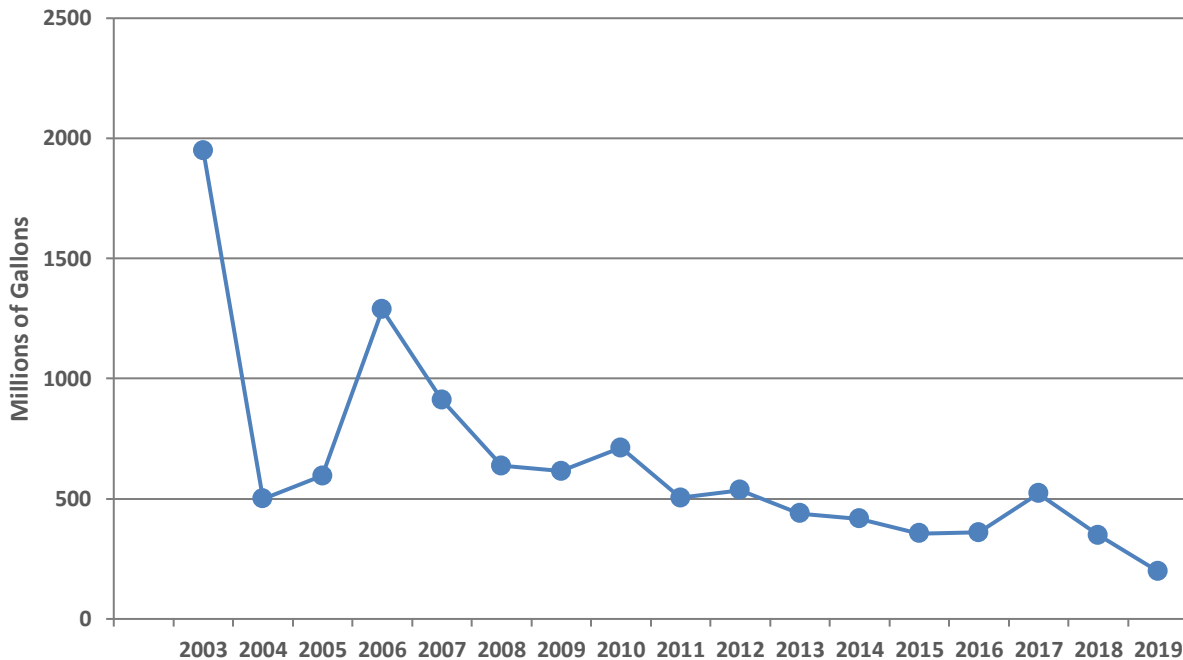


Figure 75: Total Historic Groundwater Reported Use Over Time in the Broad Basin

Historic Groundwater Use in the Catawba Basin

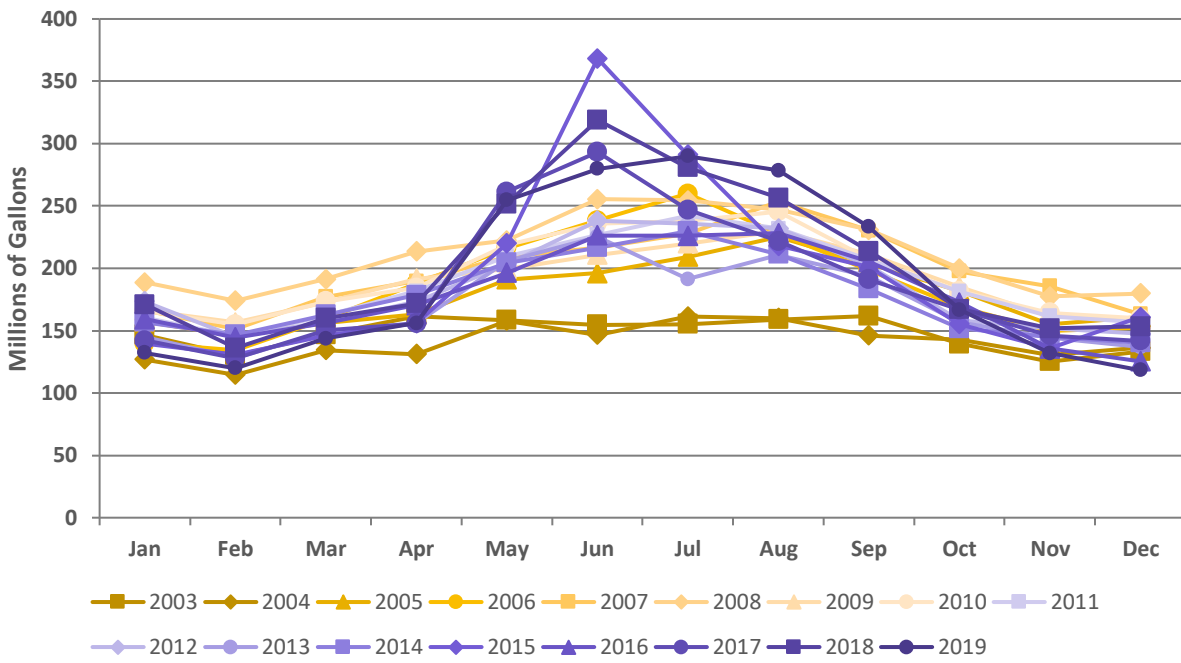


Figure 76: Total Historic Groundwater Monthly Reported Use in the Catawba Basin, 2003-2019

Catawba Basin Groundwater Use Over Time

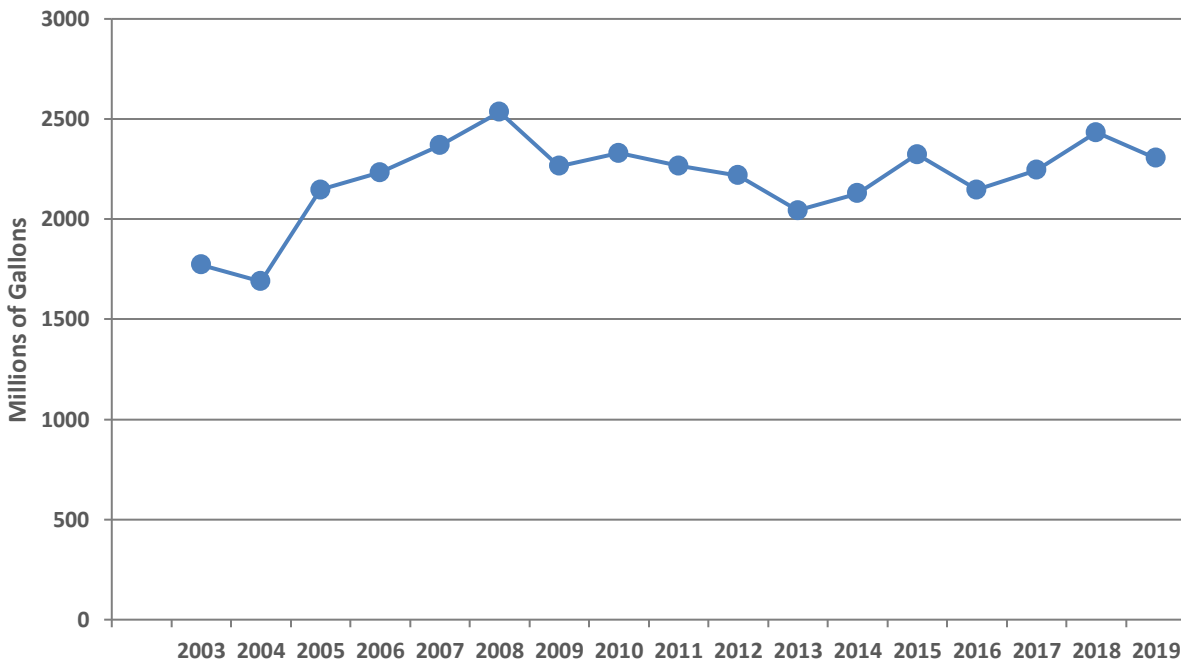


Figure 77: Total Historic Groundwater Reported Use Over Time in the Catawba Basin

Historic Groundwater Use in the Edisto Basin*

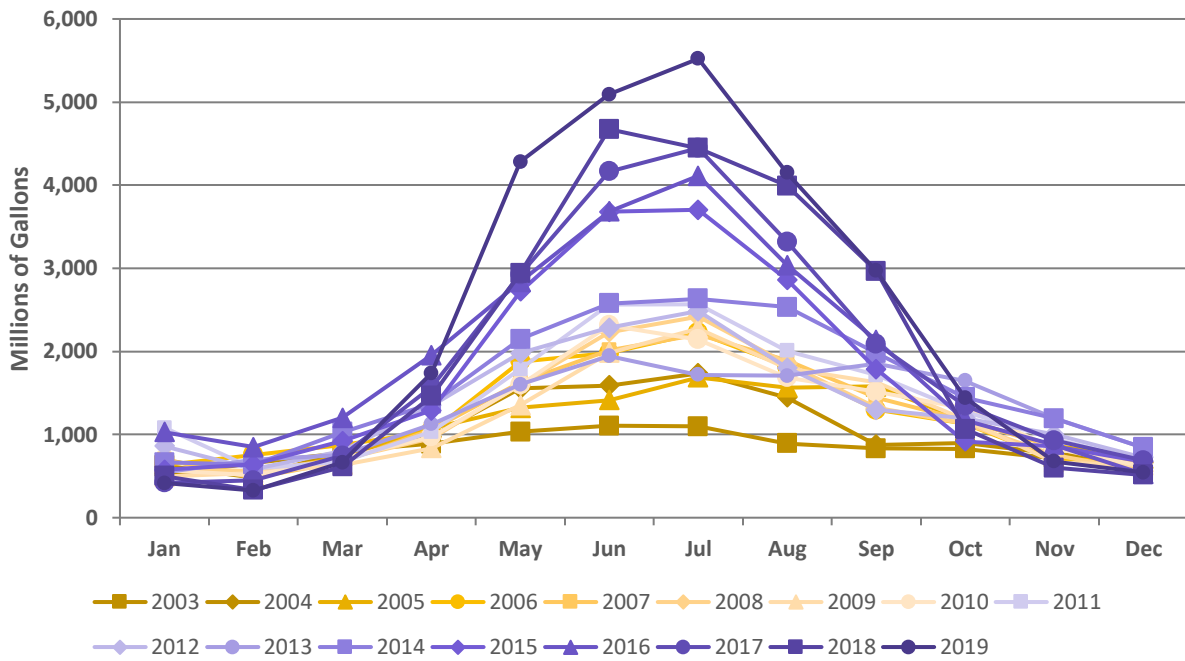


Figure 78: Total Historic Groundwater Monthly Reported Use in the Edisto Basin, 2003-2019 *Increased reported use due to increased compliance with reporting

Edisto Basin Groundwater Use Over Time

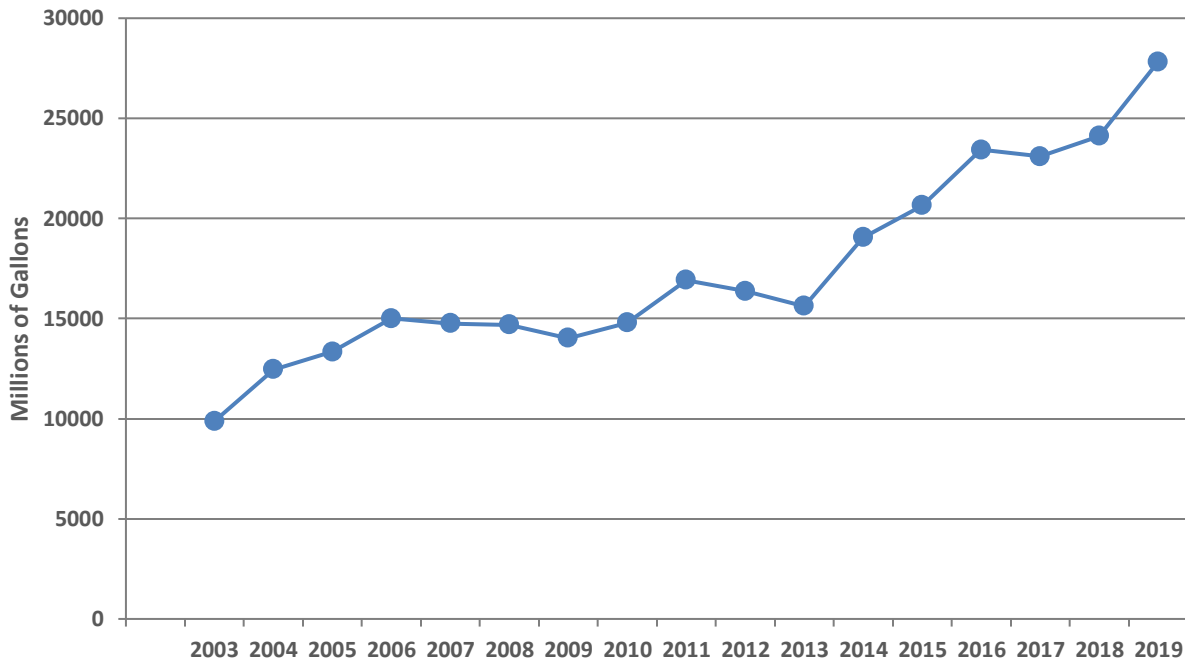


Figure 79: Total Historic Groundwater Reported Use Over Time in the Edisto Basin

Historic Groundwater Use in the Pee Dee Basin

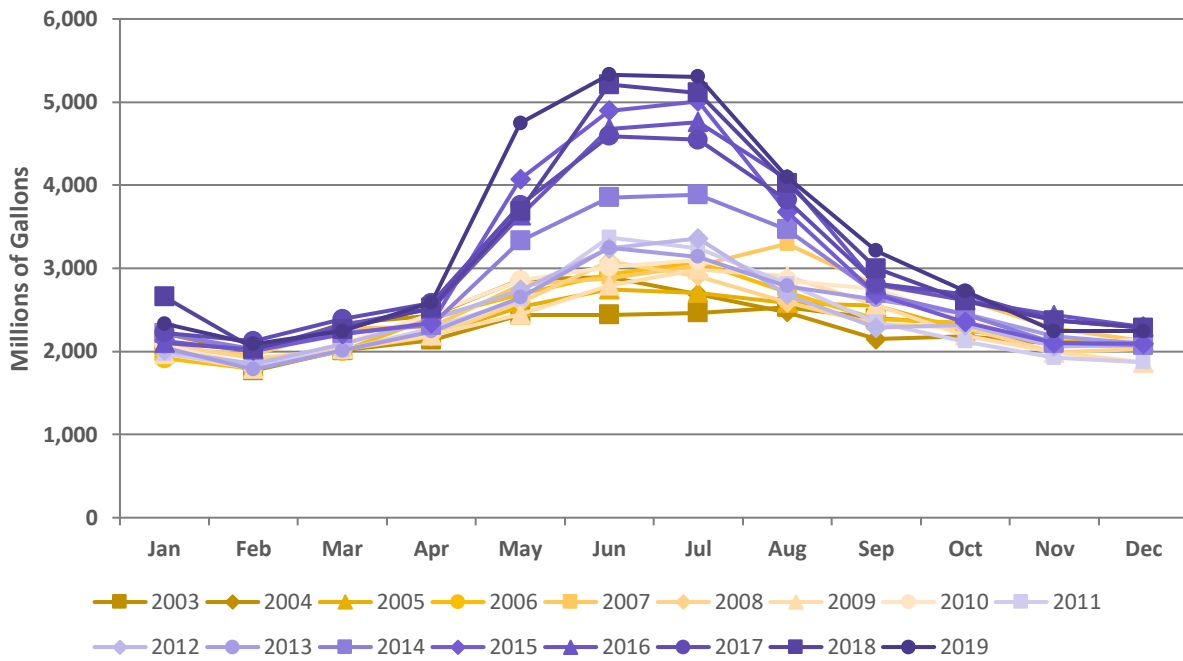


Figure 80: Total Historic Groundwater Monthly Reported Use in the Pee Dee Basin, 2003-2019

Pee Dee Basin Groundwater Use Over Time

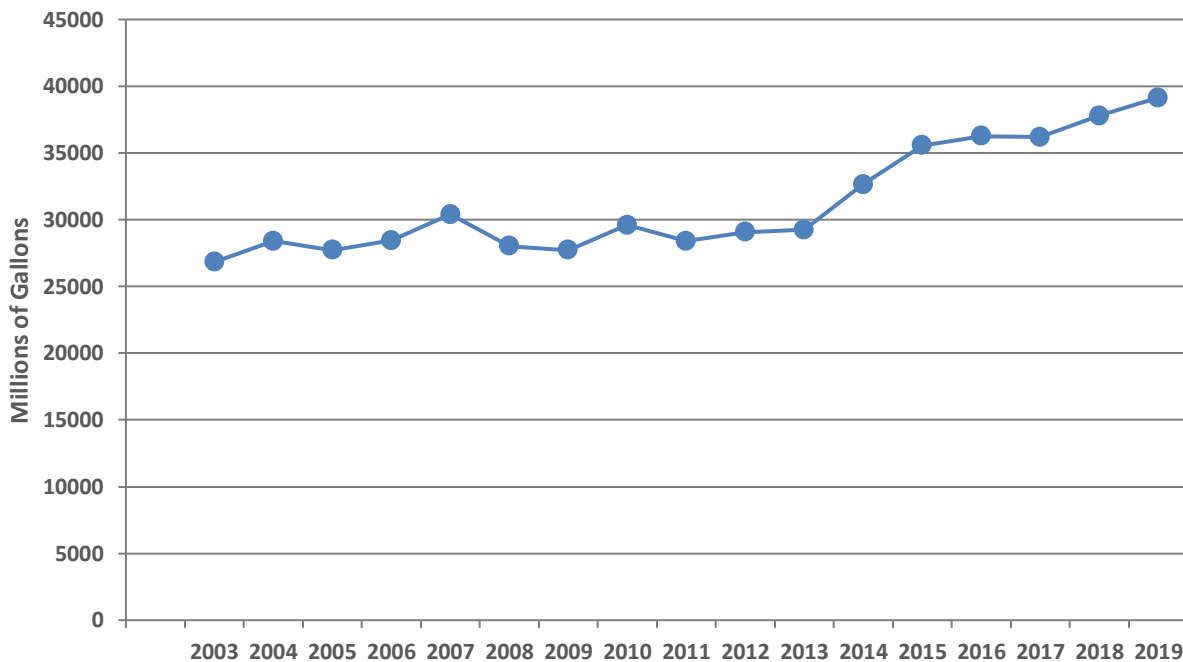


Figure 81: Total Historic Groundwater Reported Use Over Time in the Pee Dee Basin

Historic Groundwater Use in the Salkehatchie Basin

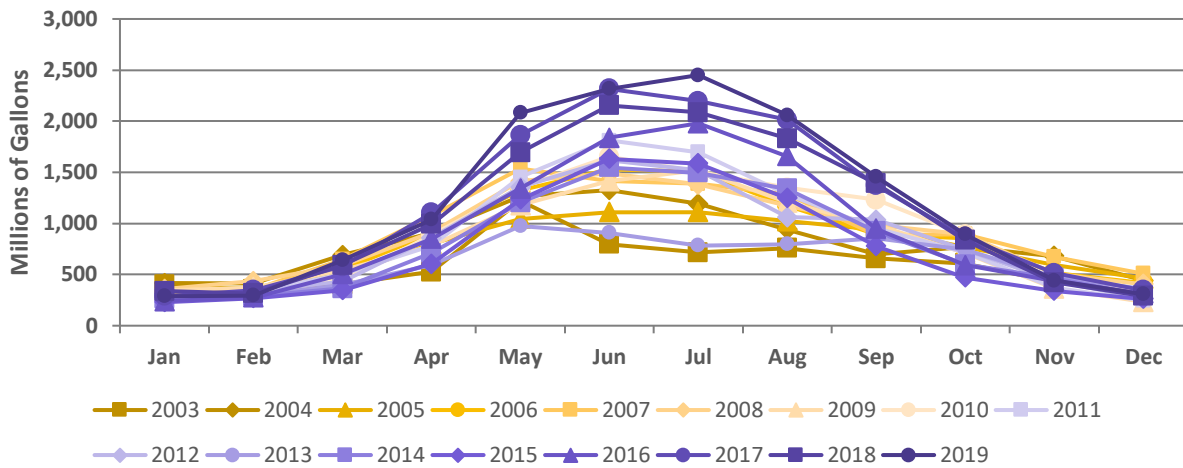


Figure 82: Total Historic Groundwater Monthly Reported Use in the Salkehatchie Basin, 2003-2019

Salkehatchie Basin Groundwater Use Over Time

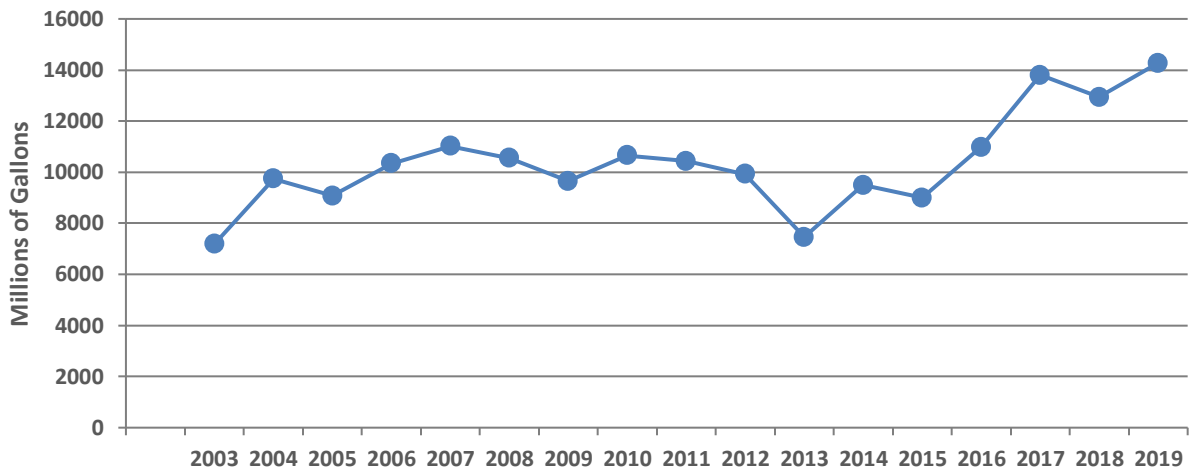


Figure 83: Total Historic Groundwater Reported Use Over Time in the Salkehatchie Basin

Historic Groundwater Use in the Saluda Basin

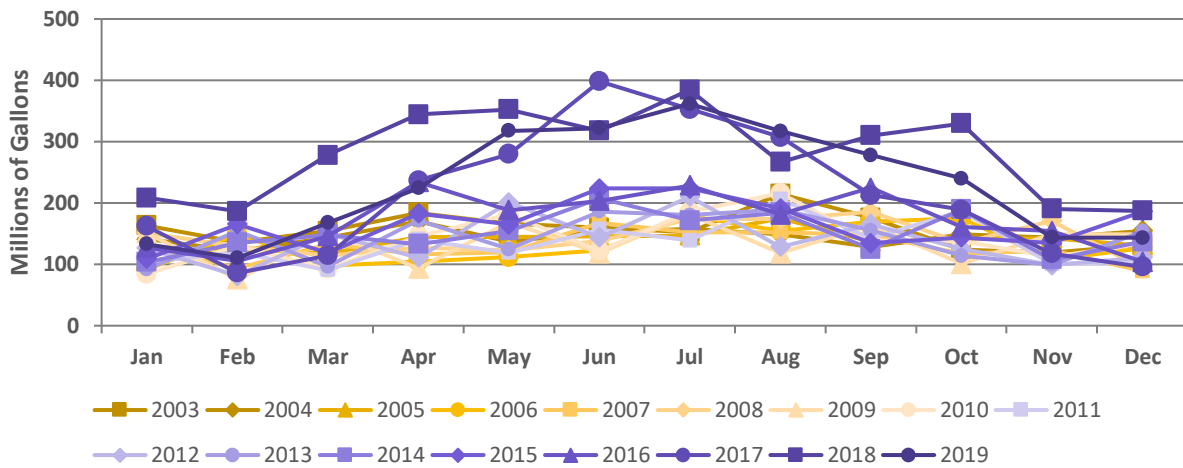


Figure 84: Total Historic Groundwater Monthly Reported Use in the Saluda Basin, 2003-2019

Saluda Basin Groundwater Use Over Time

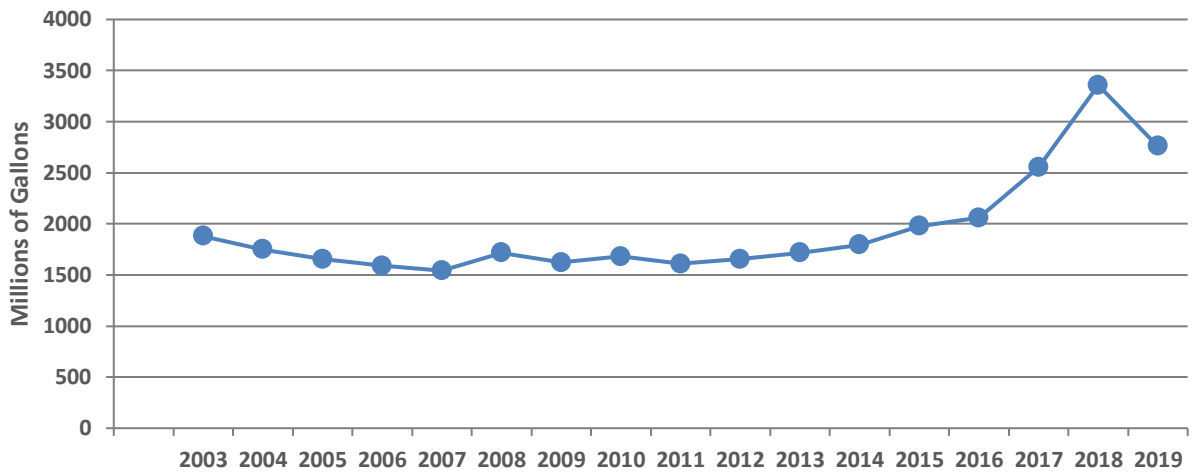


Figure 85: Total Historic Groundwater Reported Use Over Time in the Saluda Basin

Historic Groundwater Use in the Santee Basin

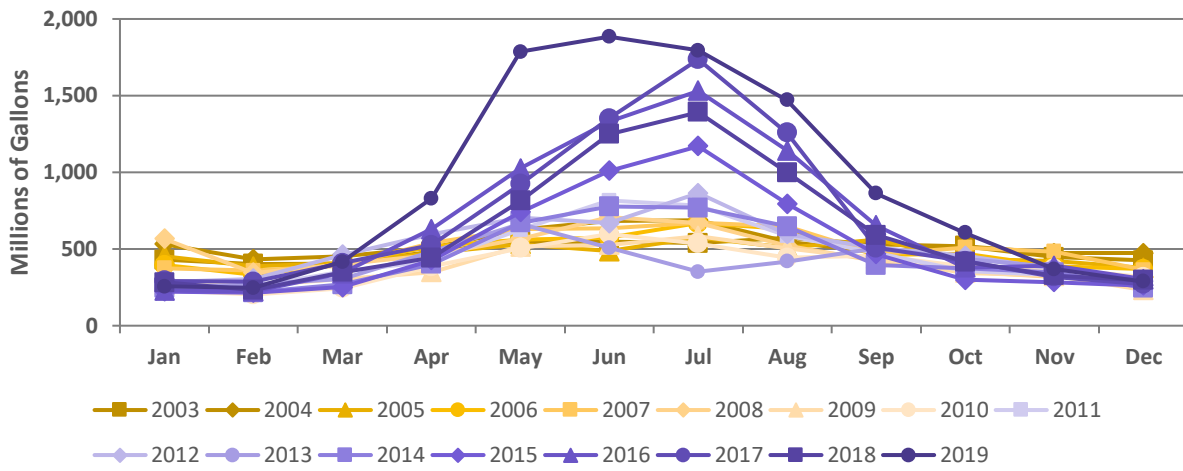


Figure 86: Total Historic Groundwater Monthly Reported Use in the Santee Basin, 2003-2019

Santee Basin Groundwater Use Over Time

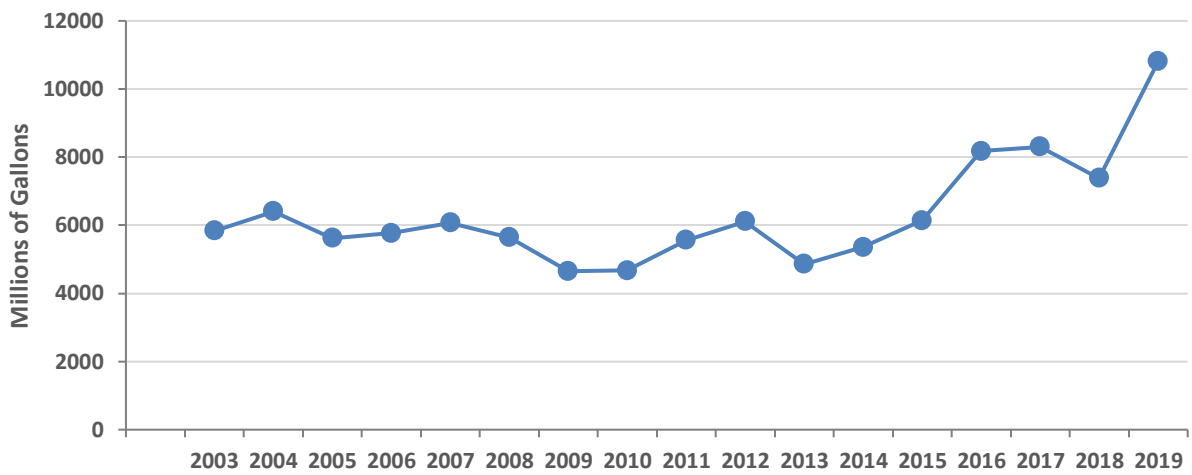


Figure 87: Total Historic Groundwater Reported Use Over Time in the Santee Basin

Historic Groundwater Use in the Savannah Basin

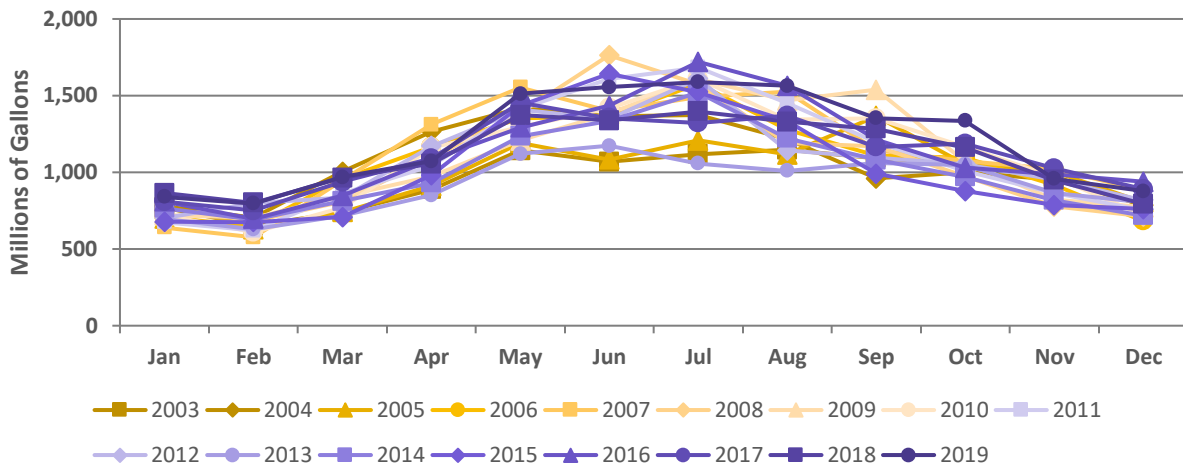


Figure 88: Total Historic Groundwater Monthly Reported Use in the Savannah Basin, 2003-2019

Savannah Basin Groundwater Use Over Time

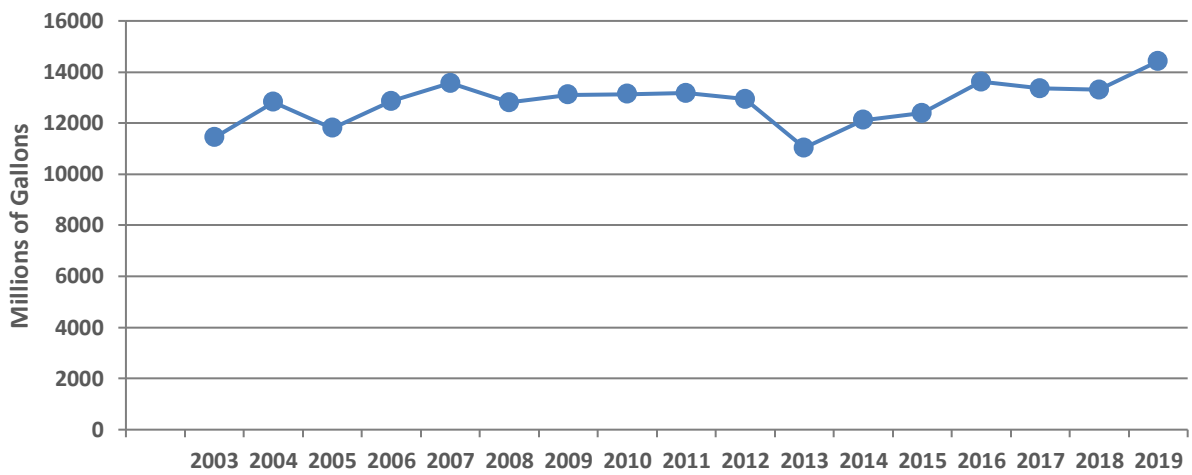


Figure 89: Total Historic Groundwater Reported Use Over Time in the Savannah Basin

Water Use Categories³
Aquaculture

Reported Groundwater for Aquaculture
Use by County 2019

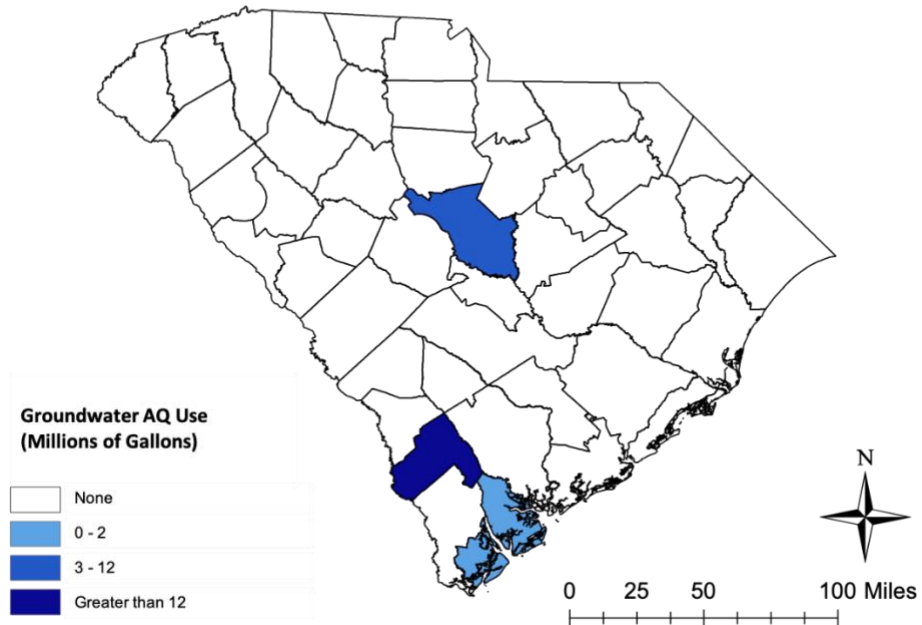


Figure 90: Total Reported Groundwater Use for Aquaculture by County 2019

³ note map legend range differs per map figure

Reported Surface Water for Aquaculture Use by County 2019

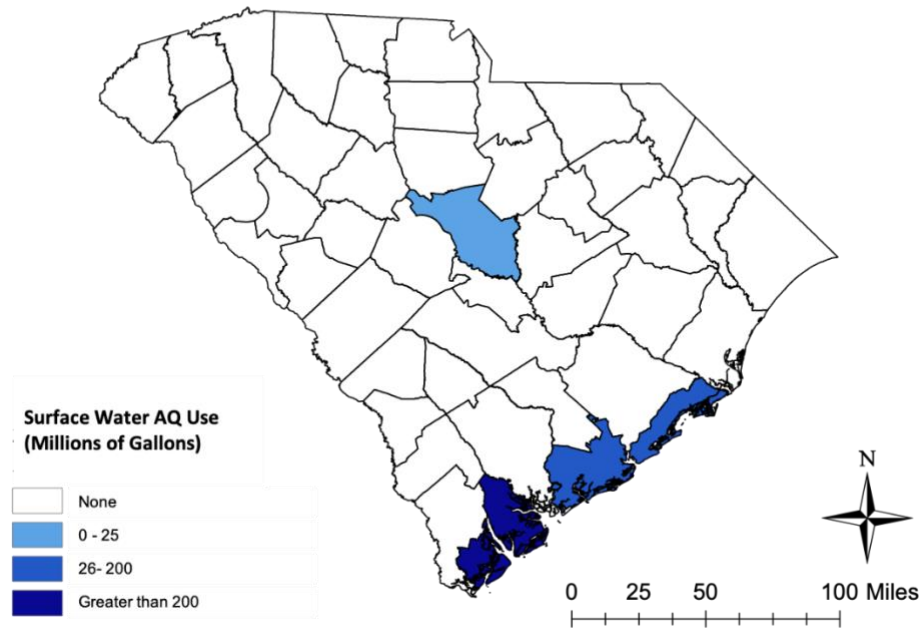


Figure 91: Total Reported Surface Water Use for Aquaculture by County 2019

Reported Groundwater Use for Aquaculture

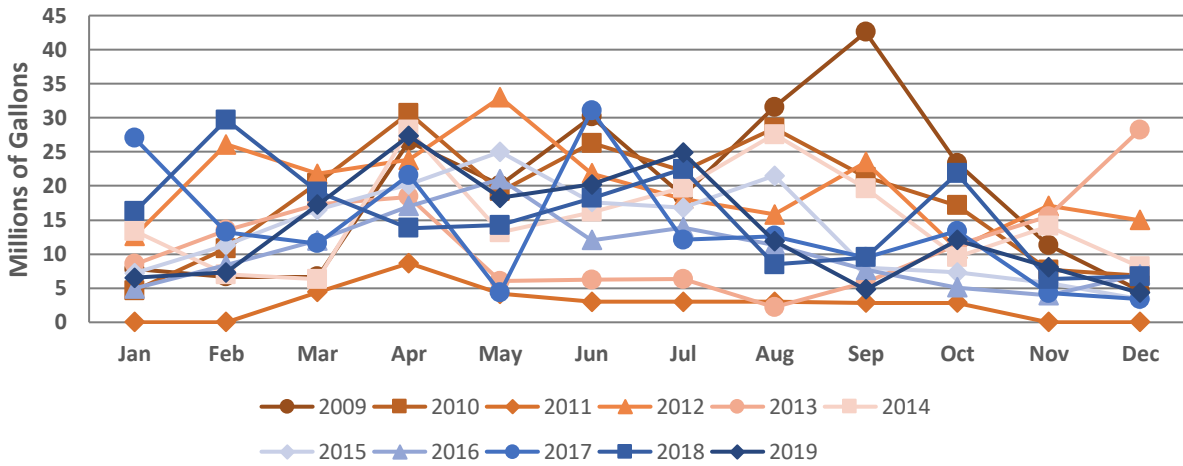


Figure 92: Reported Groundwater Use for Aquaculture by Month, 2009-2019

Reported Surface Water Use for Aquaculture

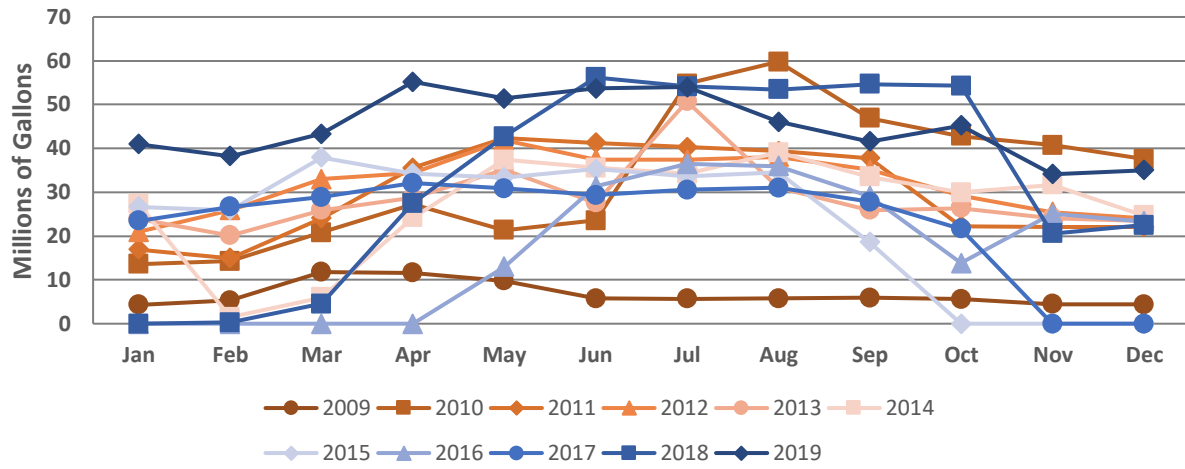


Figure 93: Reported Surface Water Use for Aquaculture by Month, 2009-2019

Golf Courses

Reported Groundwater for Golf Course Use by County 2019

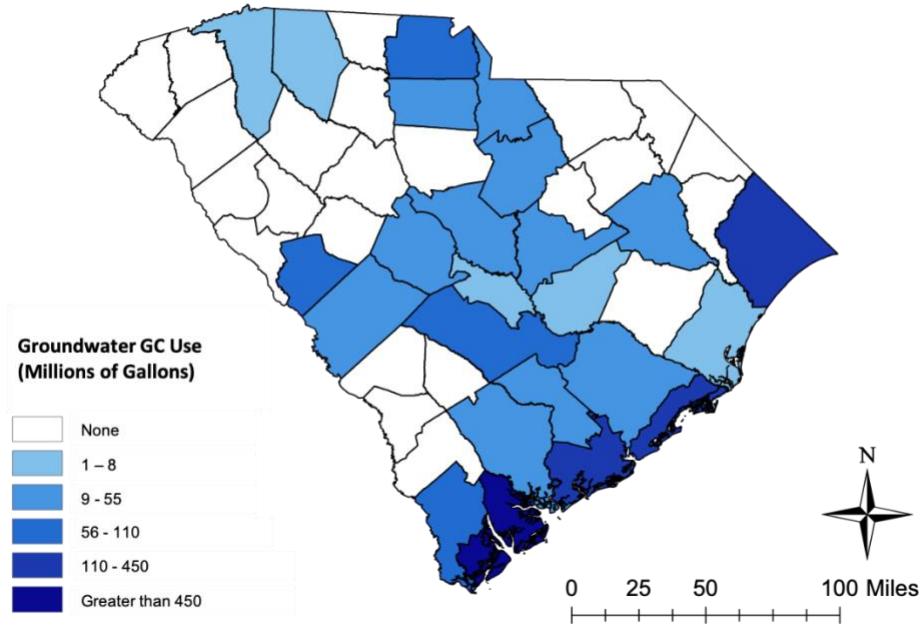


Figure 94: Total Reported Groundwater Use for Golf Courses by County 2019

Reported Surface Water for Golf Course Use by County 2019

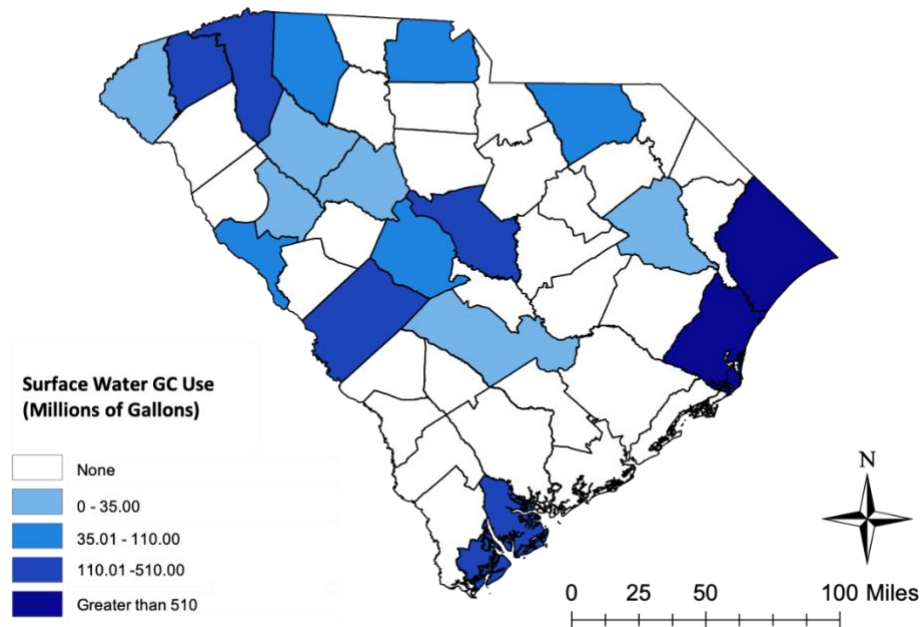


Figure 95: Total Reported Surface Water Use for Golf Courses by County 2019

Reported Groundwater Use for Golf Courses

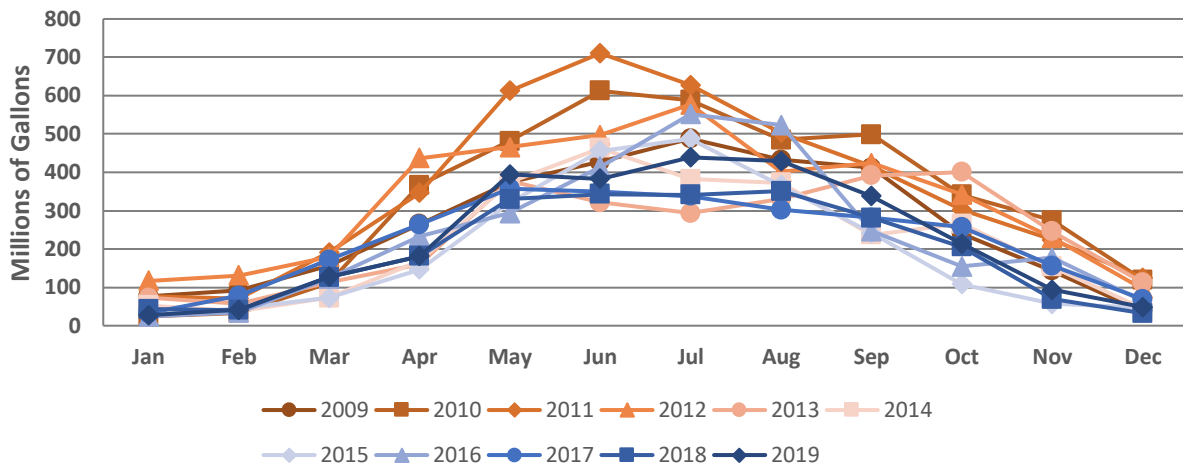


Figure 96: Reported Groundwater Use for Golf Courses by Month, 2009-2019

Reported Surface Water Use for Golf Course

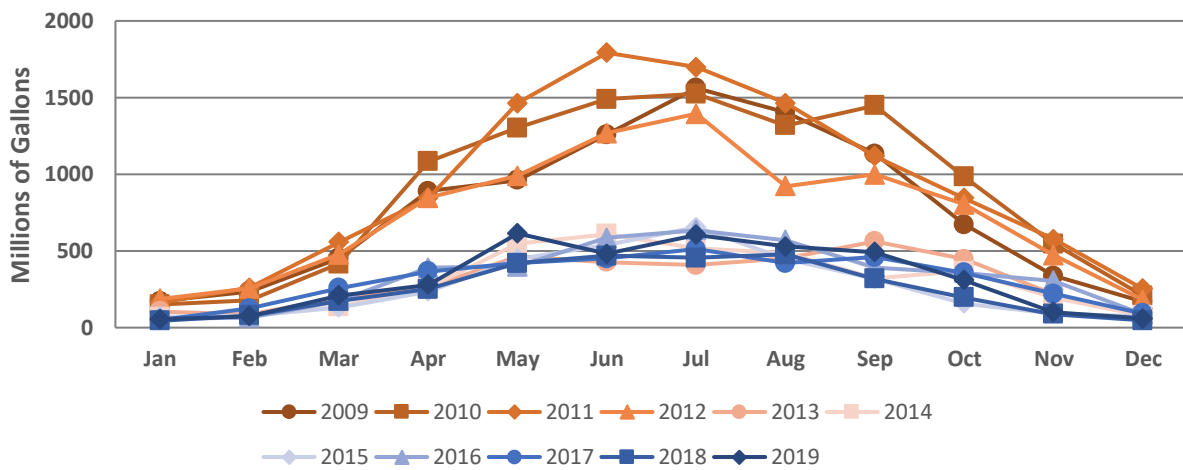


Figure 97: Reported Surface Water Use for Golf Courses by Month, 2009-2019

Hydroelectric Power

Reported Surface Water for Hydroelectric Power Use by County 2019

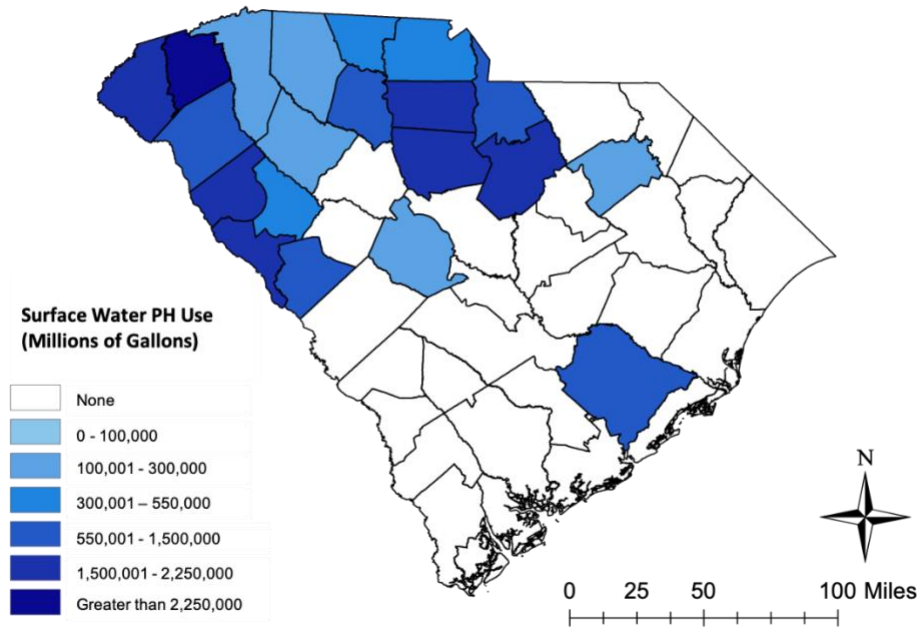


Figure 98: Reported Surface Water Use for Hydroelectric Power by County for 2019. *no Groundwater usage for Hydroelectric use category

Reported Surface Water Use for Hydroelectric

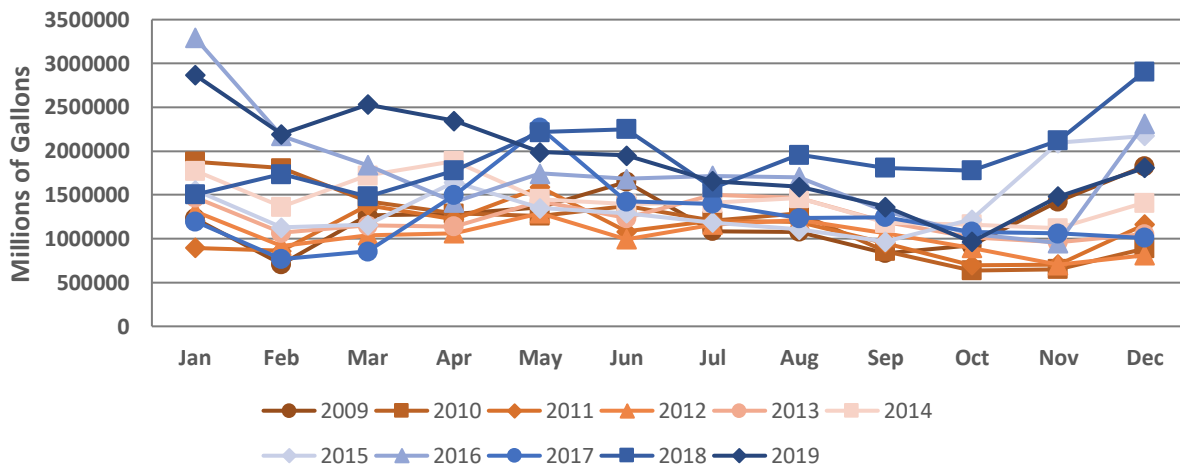


Figure 99: Reported Surface Water Use for Hydroelectric Power by Month, 2009 – 2019

Industry

Reported Groundwater for Industrial Use by County 2019

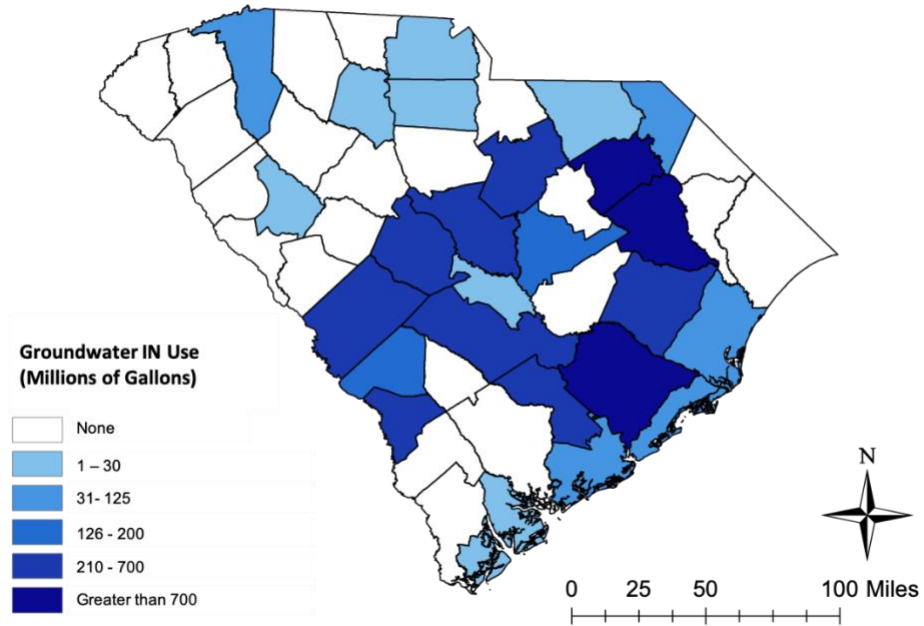


Figure 100: Reported Groundwater Use for Industrial Processes by County, 2019

Reported Surface Water for Industrial Use by County 2019

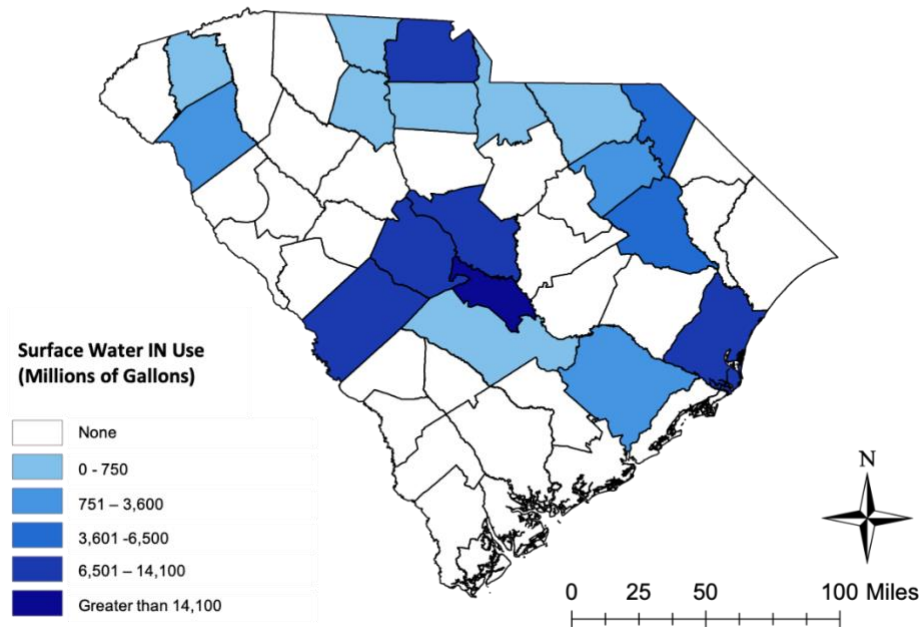


Figure 101: Reported Surface Water Use for Industrial Processes by County, 2019

Reported Groundwater Use for Industrial Processes

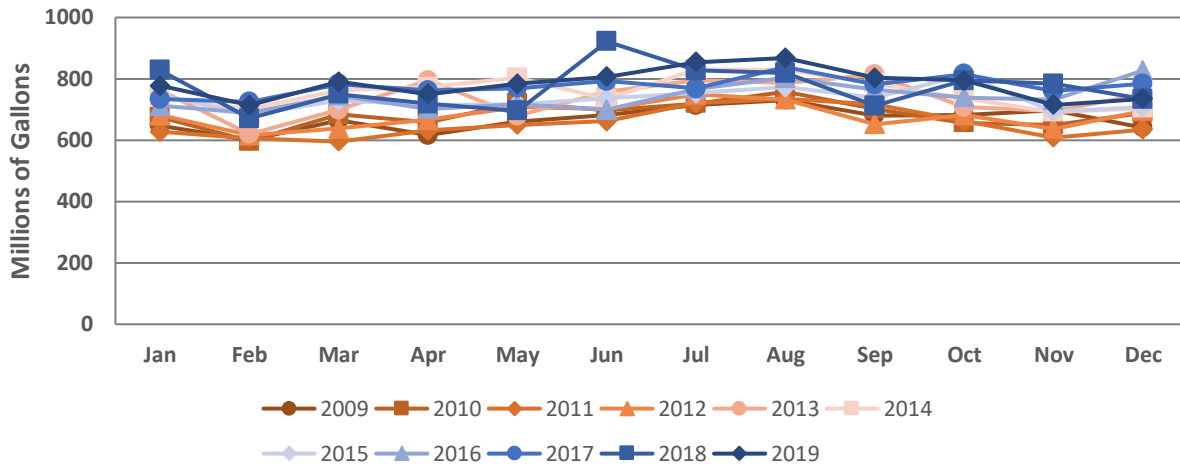


Figure 102: Reported Groundwater Use for Industrial Processes by Month, 2009-2019

Reported Surface Water Use for Industrial Processes

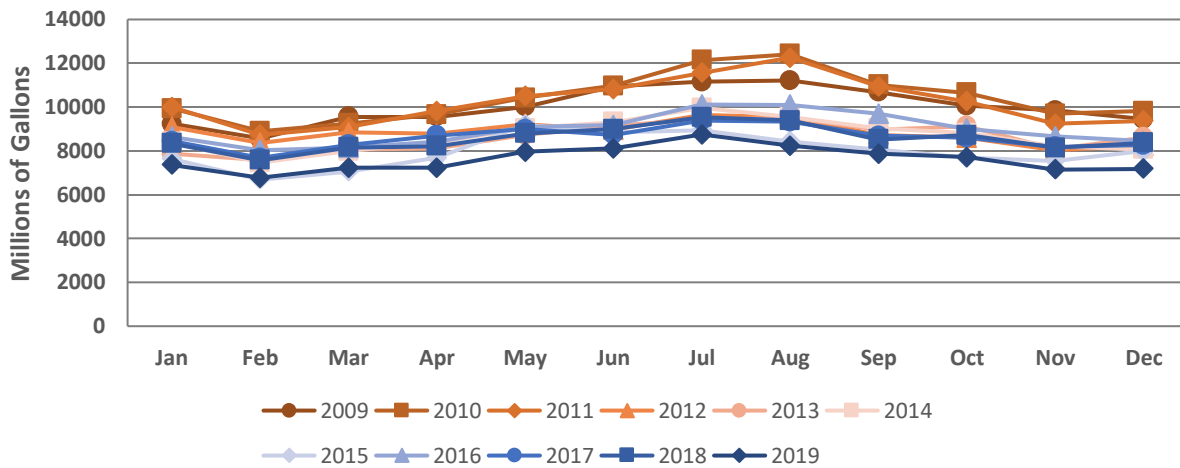


Figure 103: Reported Surface Water Use for Industrial Processes by Month, 2009-2019

Agricultural Irrigation

Reported Groundwater for Irrigation Use by County 2019

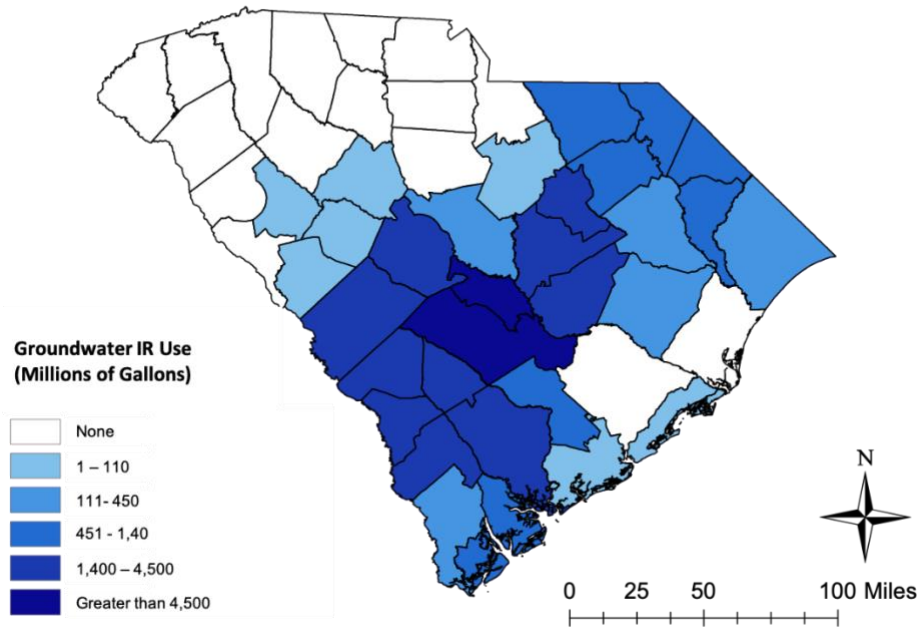


Figure 104: Reported Groundwater Use for Agricultural Irrigation by County for 2019

Reported Surface Water for Irrigation Use by County 2019

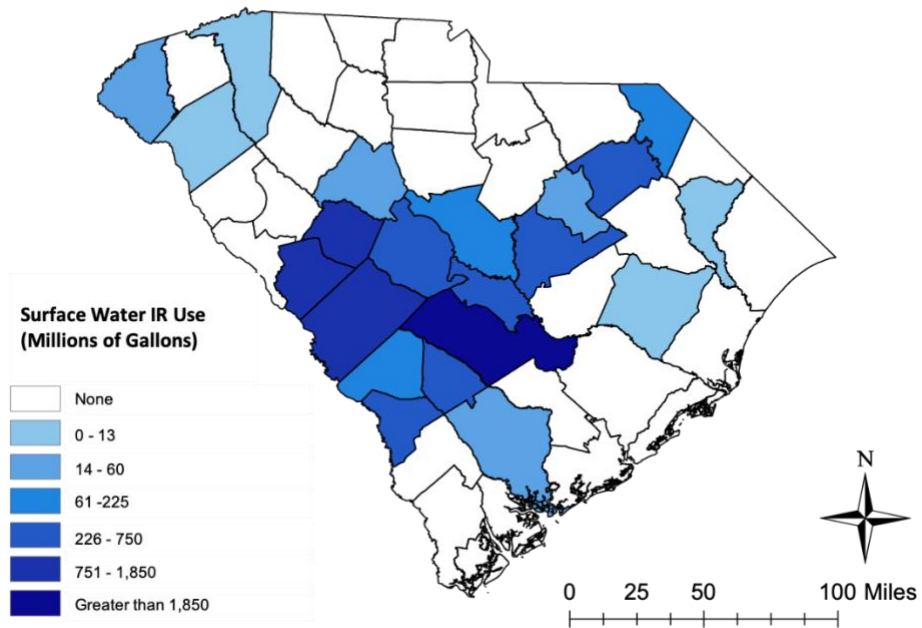


Figure 105: Reported Surface Water Use for Agricultural Irrigation by County for 2019

Reported Groundwater Use for Irrigation

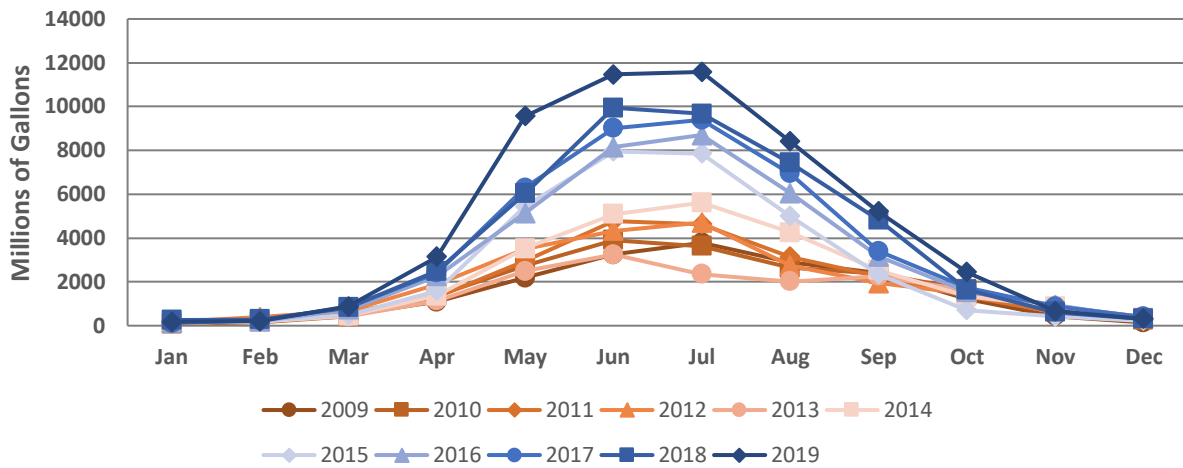


Figure 106: Reported Groundwater Use for Agricultural Irrigation by Month, 2009-2019

Reported Surface Water Use for Agricultural Irrigation

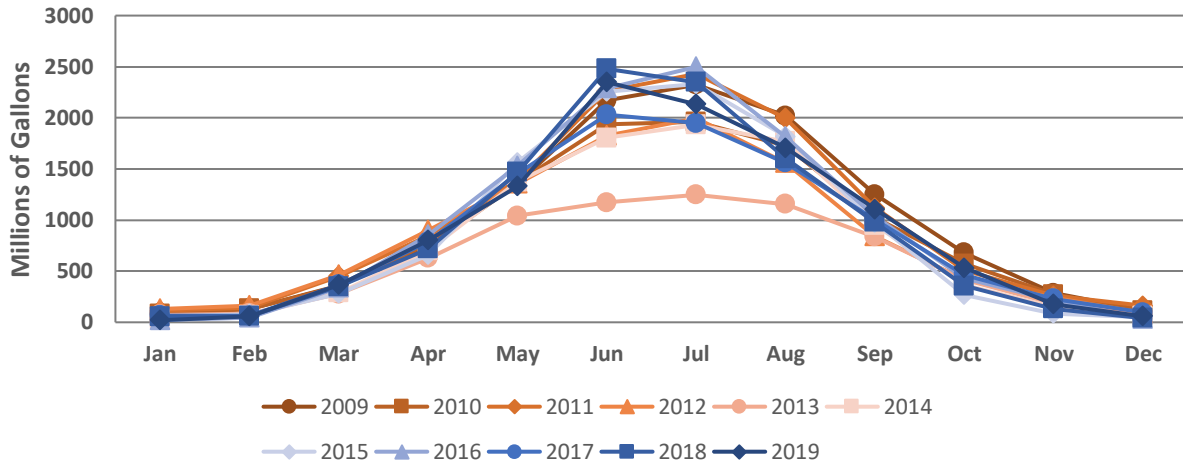


Figure 107: Reported Surface Water Use for Agricultural Irrigation by Month, 2009-2019

Mining

Reported Groundwater for Mining Use by County 2019

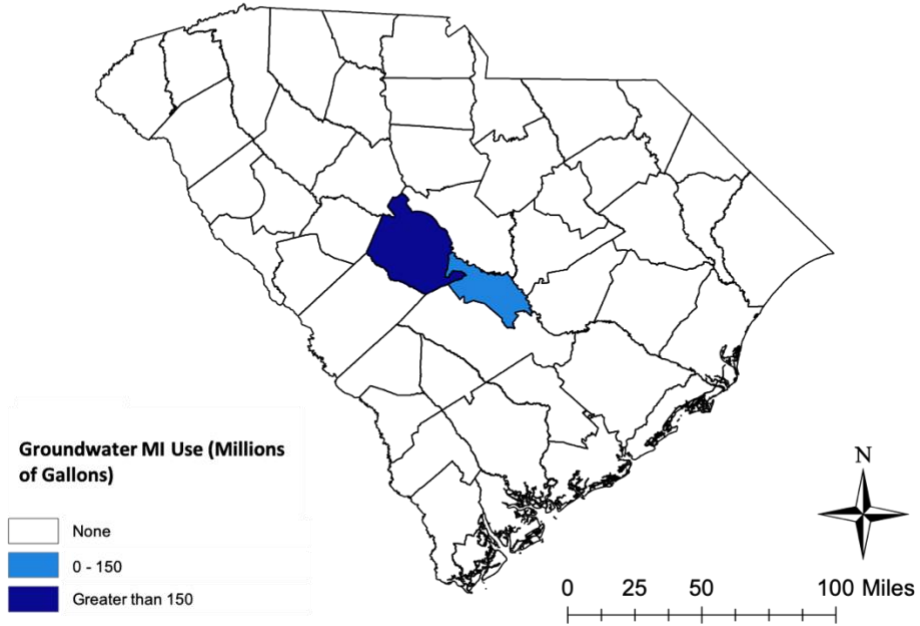


Figure 108: Reported Groundwater Use for Mining Operations by County in 2019

Reported Surface Water for Mining Use by County 2019

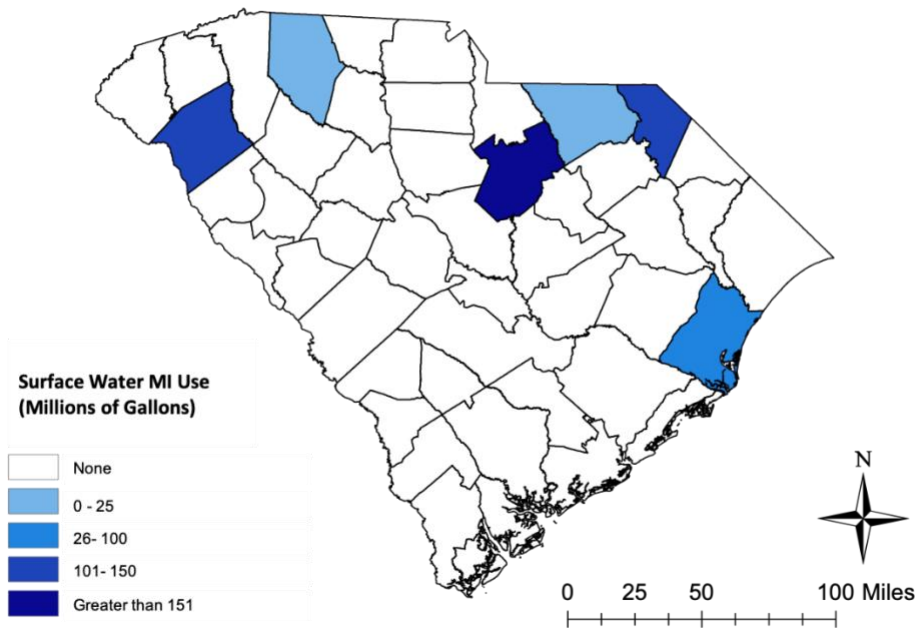


Figure 109: Reported Surface Water Use for Mining Operations by County in 2019

Reported Groundwater Use for Mining

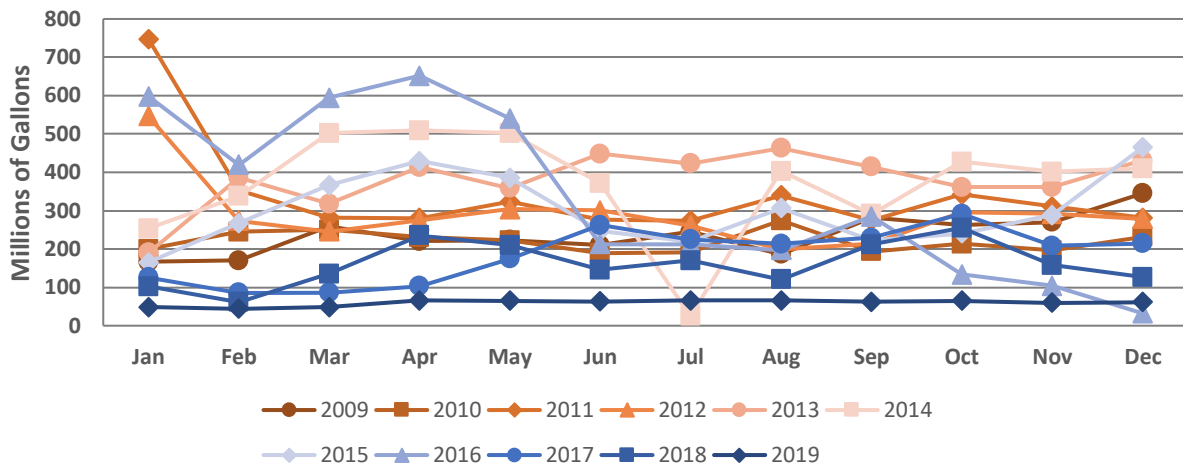


Figure 110: Reported Groundwater Use for Mining Operations by Month, 2009-2019

Reported Surface Water Use for Mining

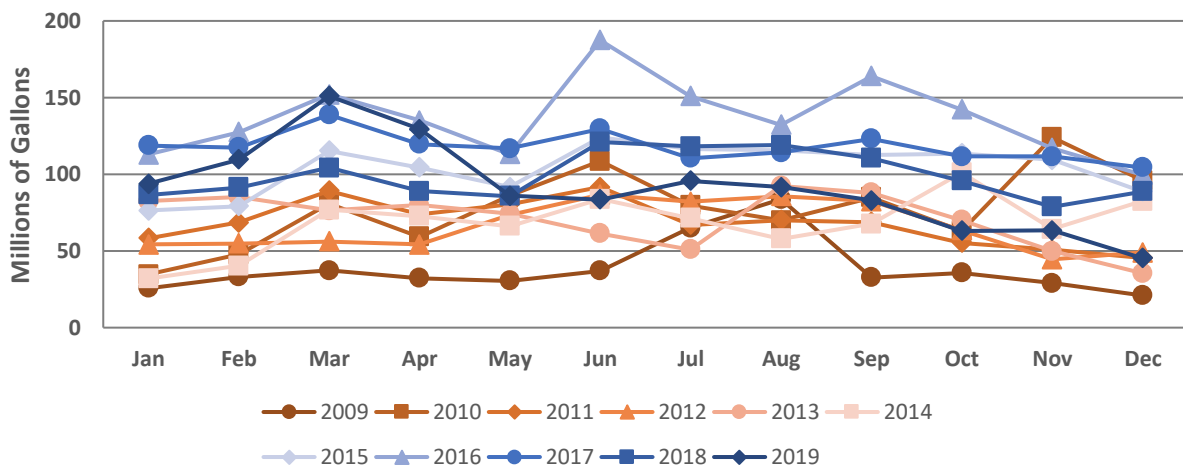


Figure 111: Reported Surface Water Use for Mining Operations by Month, 2009-2019

Nuclear Power

Reported Groundwater for Nuclear Power Use by County 2019

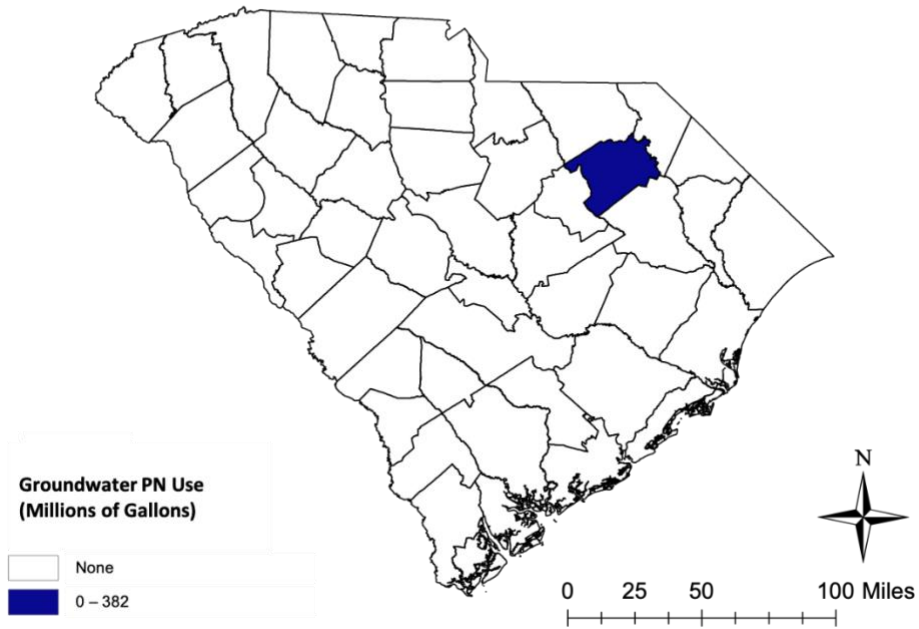


Figure 112: Reported Groundwater Use for Nuclear Power Production by County for 2019

Reported Surface Water for Nuclear Power Use by County 2019

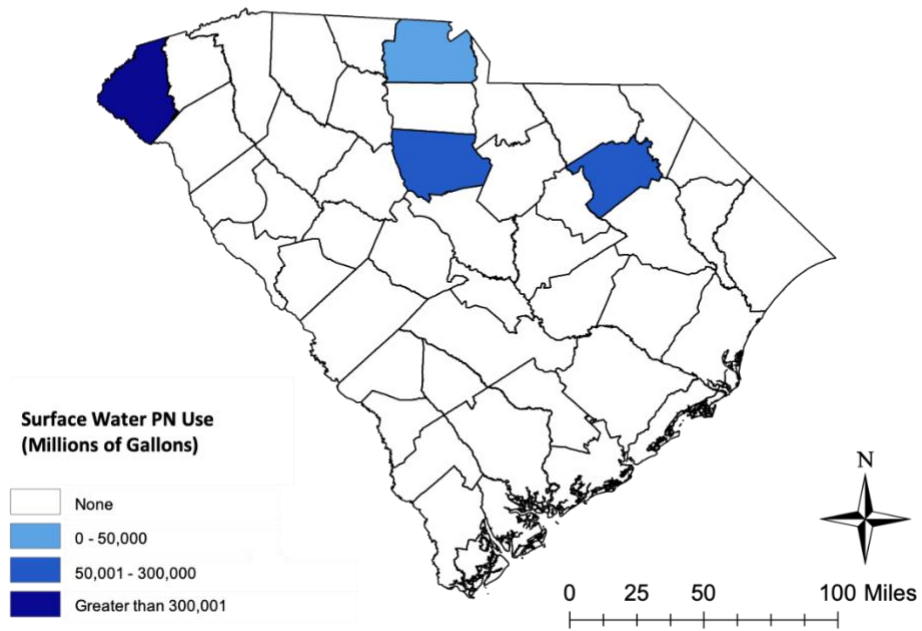


Figure 113: Reported Surface Water Use for Nuclear Power Production by County for 2019

Reported Groundwater Use for Nuclear Power

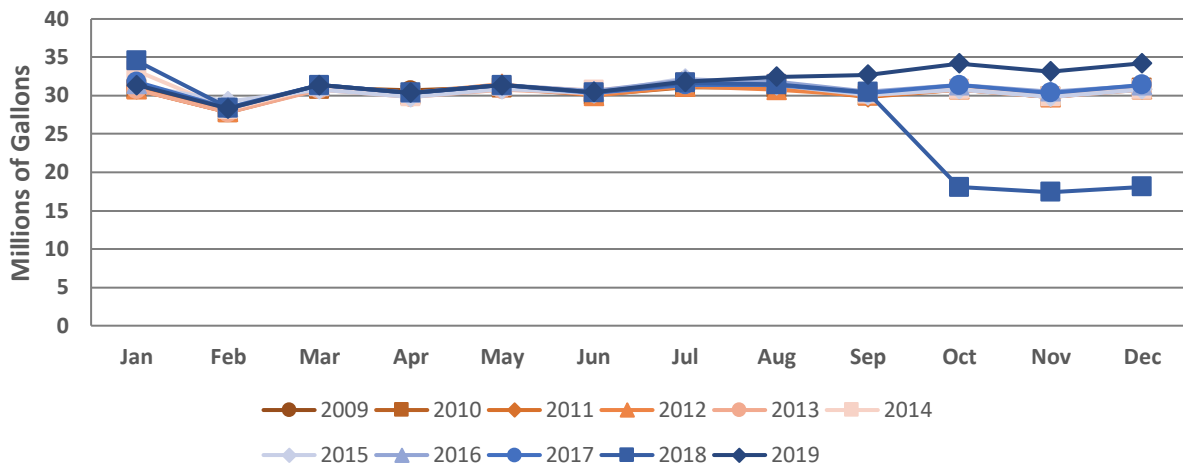


Figure 114: Reported Groundwater Use for Nuclear Power Production by Month, 2009-2019

Reported Surface Water Use for Nuclear Power

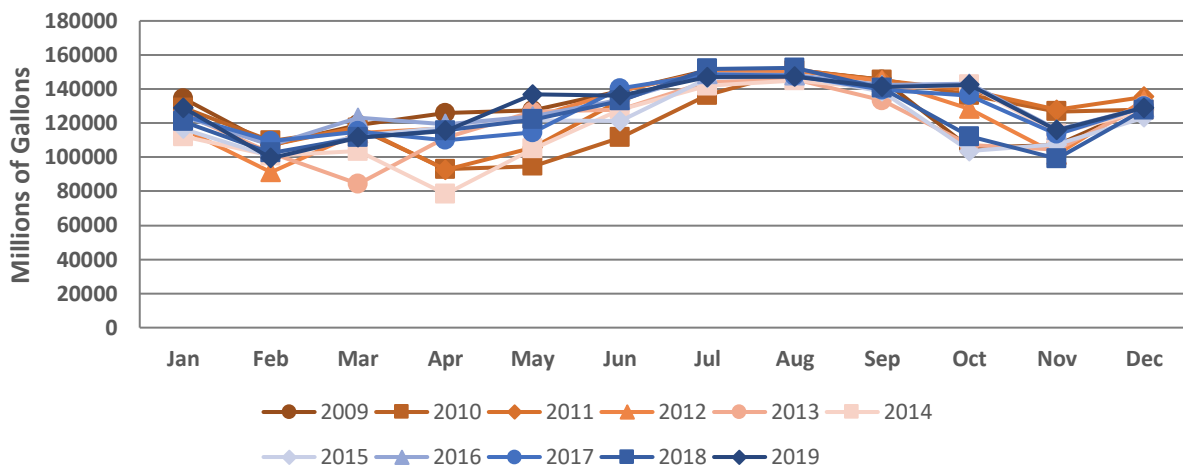


Figure 115: Reported Surface Water Use for Nuclear Power Production by Month, 2009-2019

Other Use

Reported Groundwater for Other Use by County 2019

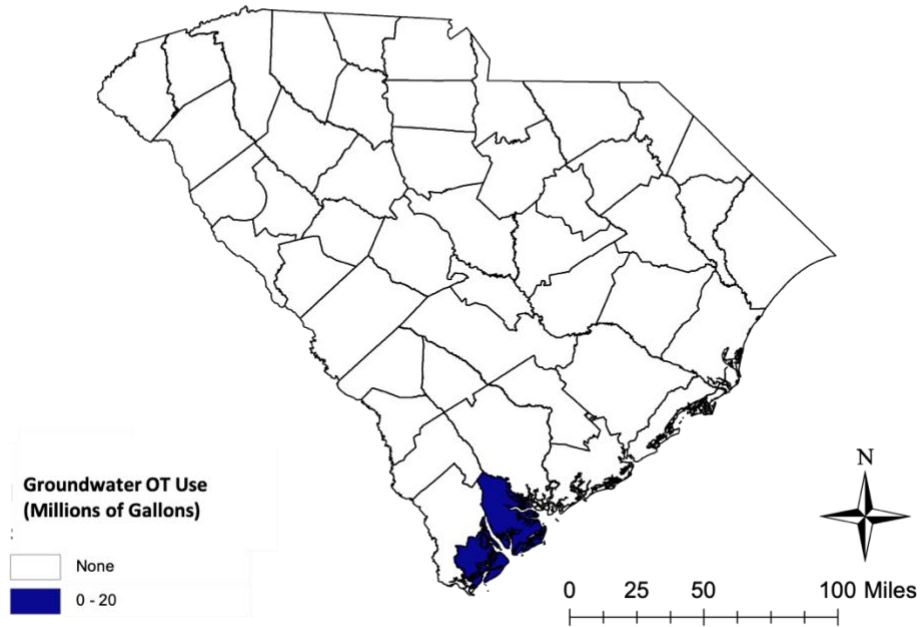


Figure 116: Reported Groundwater Use for Other Use by County 2019. *No Surface Water usage in the Other water category

Reported Groundwater Use for Other

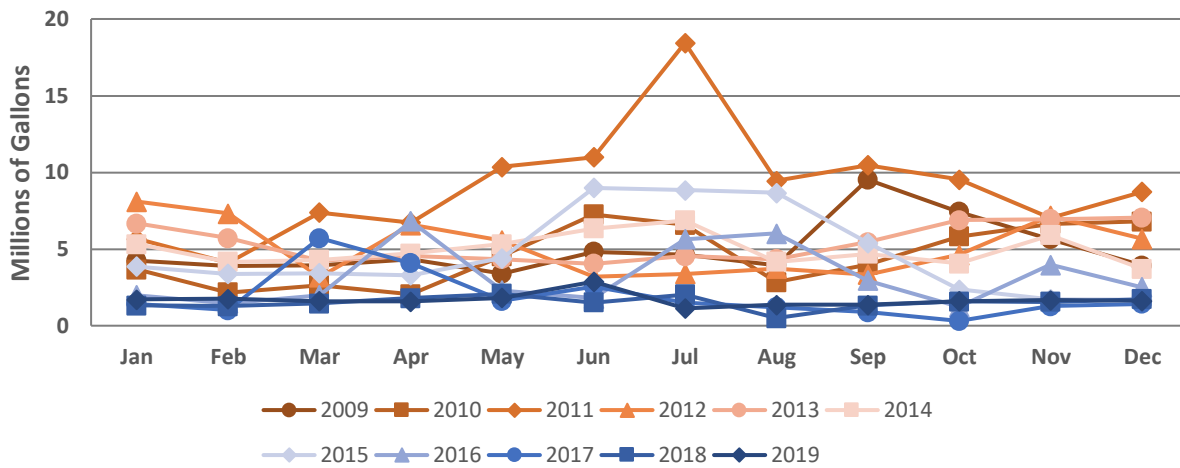


Figure 117: Reported Groundwater Use for Other Use by Month, 2009-2019

Reported Groundwater Use for Thermoelectric Power

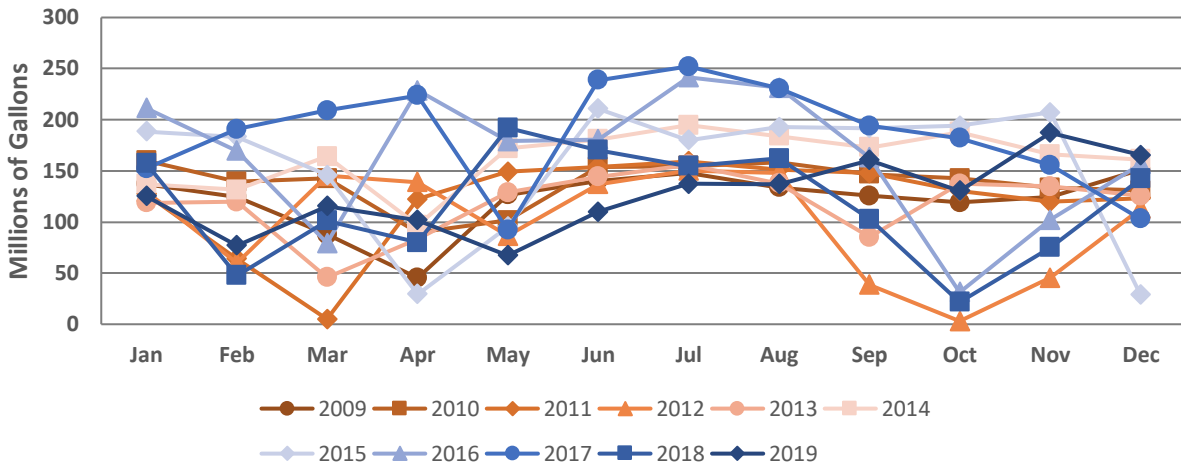


Figure 120: Reported Groundwater Use for Thermal Power Production by Month, 2009-2019

Reported Surface Water Use for Thermoelectric Power

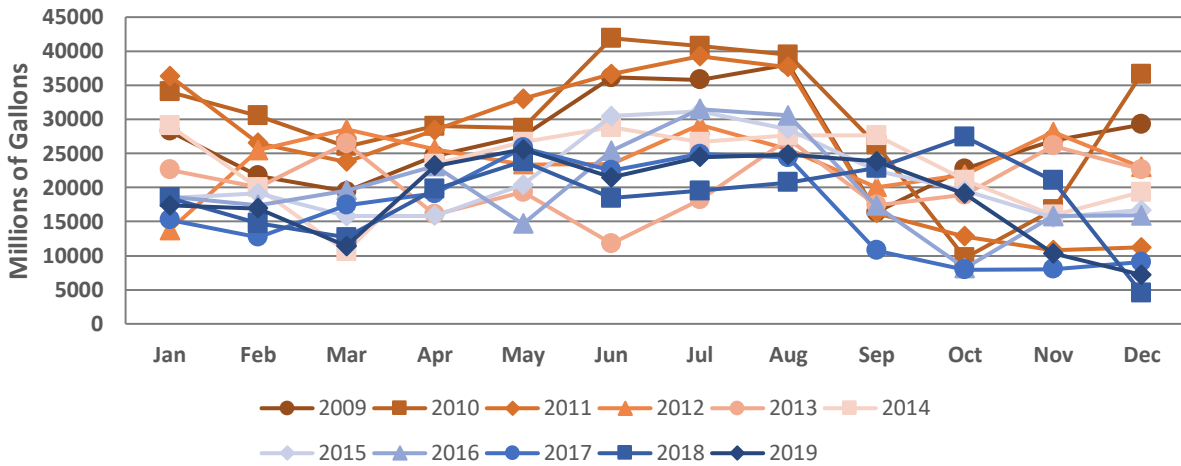


Figure 121: Reported Surface Water Use for Thermal Power Production by Month, 2009-2019

Public Water Supply

Reported Groundwater for Water Supply Use by County 2019

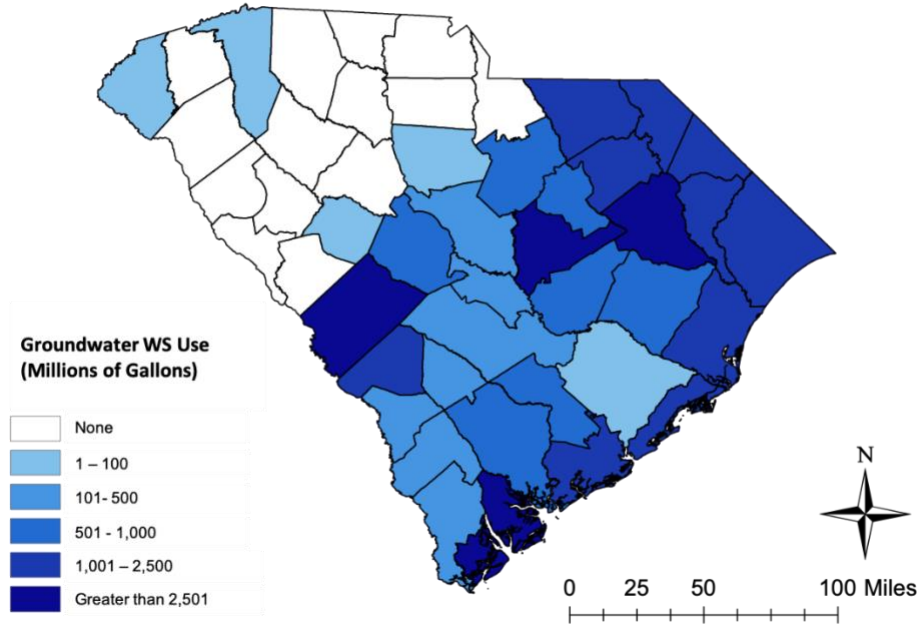


Figure 122: Reported Groundwater Use for Public Water Supply by County 2019

Reported Surface Water for Water Supply Use by County 2019

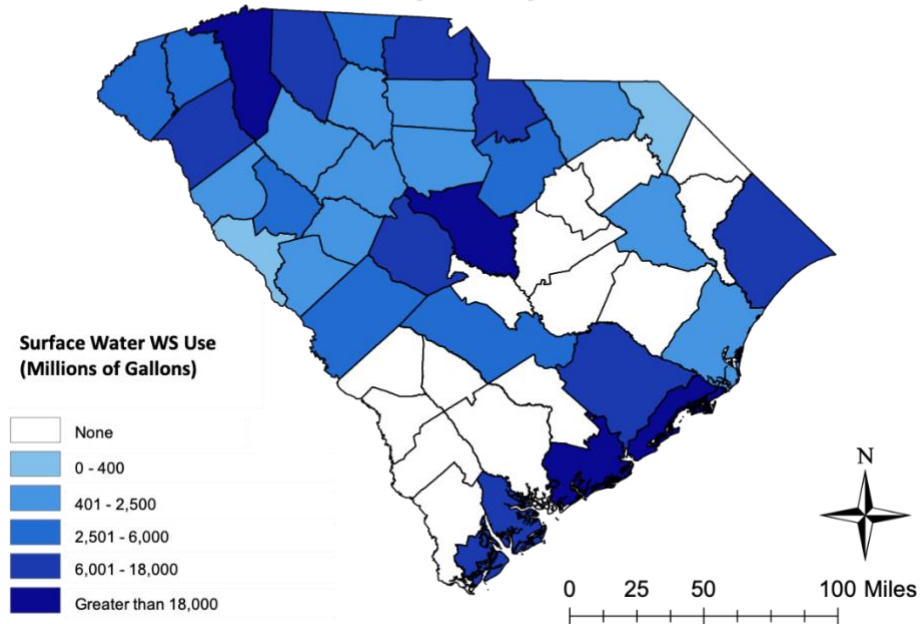


Figure 123: Reported Surface Water Use for Public Water Supply by County for 2019

Reported Groundwater Use for Water Supply

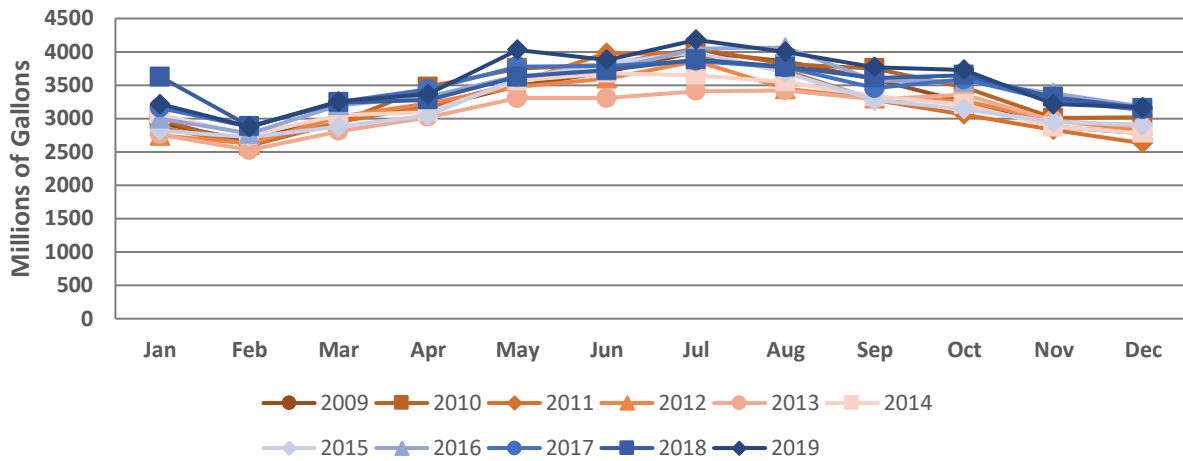


Figure 124: Reported Groundwater Use for Public Water Supply by Month, 2009-2019

Reported Surface Water Use for Water Supply

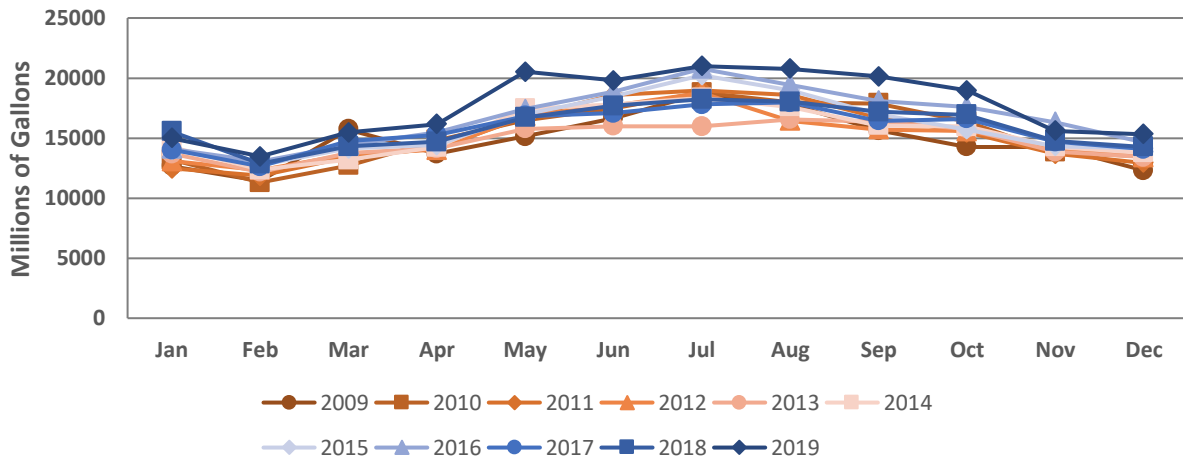


Figure 125: Reported Surface Water Use for Public Water Supply by Month, 2009-2019

Appendix A: Surface and Groundwater Use Summary Table

*Use in Millions of Gallons

±Source Type: G is Groundwater and S is Surface Water

COUNTY	Source	Use Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ABBEVILLE	G	Water Supply	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ABBEVILLE	S	Hydroelectric	282,319.0	151,131.0	211,740.0	195,396.0	110,926.0	138,165.0	139,687.0	157,793.0	154,668.0	150,754.0	110,463.0	133,954.0
ABBEVILLE	S	Water Supply	68.0	56.0	62.0	58.0	71.0	66.0	70.0	74.0	72.0	69.0	69.0	69.0
AIKEN	G	Golf Course	0.0	0.0	0.0	0.0	1.0	8.0	4.6	3.3	1.0	1.0	0.0	0.0
AIKEN	G	Industry	53.7	49.1	52.1	52.9	48.8	44.1	45.9	49.2	46.8	41.8	34.4	46.1
AIKEN	G	Irrigation	10.9	7.1	48.0	136.9	494.6	510.3	531.7	243.7	182.5	82.8	22.1	4.3
AIKEN	G	Water Supply	367.0	330.4	382.0	422.3	529.4	495.2	535.7	532.3	525.7	487.9	402.6	378.6
AIKEN	S	Golf Course	0.1	1.6	11.1	15.7	44.9	23.1	38.9	32.7	41.9	17.7	1.0	0.1
AIKEN	S	Industry	563.0	510.0	559.0	523.0	539.0	522.0	530.0	529.0	520.0	550.0	583.0	575.0
AIKEN	S	Irrigation	4.3	9.3	44.9	138.5	67.3	495.9	242.4	119.0	94.1	45.9	24.1	7.8
AIKEN	S	Thermoelectric	511.3	113.3	2,457.0	3,710.4	1,698.5	2,457.2	3,532.4	3,855.4	3,000.5	3,764.1	2,930.1	195.4
AIKEN	S	Water Supply	341.0	372.5	399.3	448.7	536.4	557.5	591.4	590.9	512.1	509.5	421.8	454.9
ALLENDALE	G	Industry	57.1	56.6	58.3	37.2	59.8	63.0	63.1	58.3	54.1	58.8	54.9	56.4
ALLENDALE	G	Irrigation	3.5	5.1	69.9	201.1	530.2	754.6	710.5	596.8	406.6	300.0	18.8	3.3
ALLENDALE	G	Thermoelectric	11.8	10.8	8.3	12.6	13.3	12.4	13.2	13.3	12.5	10.1	11.3	9.5
ALLENDALE	G	Water Supply	36.0	33.6	37.6	36.7	44.0	41.7	45.7	45.7	42.1	40.4	39.6	39.8
ALLENDALE	S	Irrigation	0.0	0.0	11.1	24.2	90.0	187.0	130.0	37.0	19.0	2.0	1.0	0.0
ANDERSON	G	Industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANDERSON	S	Hydroelectric	280,505.0	155,490.0	222,760.0	224,628.0	112,498.0	93,558.0	84,599.0	66,671.0	56,241.0	43,455.0	67,919.0	54,995.0
ANDERSON	S	Industry	165.0	157.1	184.6	173.0	186.0	168.4	184.1	189.8	188.3	193.1	165.3	178.6
ANDERSON	S	Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.4	1.0	0.0	0.0
ANDERSON	S	Mining	9.2	16.0	16.2	10.1	8.0	12.6	14.1	7.6	9.8	13.2	15.0	16.4
ANDERSON	S	Thermoelectric	186.1	180.0	89.8	129.5	252.7	248.7	1,518.7	2,755.0	1,787.5	2,440.7	653.4	192.4
ANDERSON	S	Water Supply	565.4	525.4	570.6	593.6	712.2	699.3	764.0	771.1	798.1	719.9	595.2	596.8
BAMBERG	G	Irrigation	19.6	27.7	110.0	229.5	424.6	512.3	564.8	454.1	292.8	158.7	52.2	31.9
BAMBERG	G	Water Supply	28.1	25.1	26.5	27.1	29.8	29.1	30.1	29.6	28.1	28.2	27.8	30.6
BAMBERG	S	Irrigation	0.0	6.9	14.6	41.0	57.8	90.0	88.5	65.6	36.8	40.0	12.2	0.0
BARNWELL	G	Industry	22.2	18.9	18.9	17.9	9.2	12.1	23.4	20.6	8.9	9.1	8.6	8.9
BARNWELL	G	Irrigation	13.4	0.0	30.5	136.8	418.5	426.9	524.0	414.5	264.9	62.2	17.3	4.9

BARNWELL	G	Water Supply	87.0	82.6	103.3	87.8	101.9	100.8	91.4	100.1	108.0	112.6	108.6	126.1
BARNWELL	S	Irrigation	0.0	0.0	0.5	3.4	17.2	28.3	49.3	55.2	50.6	14.0	0.0	0.0
BEAUFORT	G	Aquaculture	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.1	0.0	0.0	0.0
BEAUFORT	G	Golf Course	17.1	26.3	72.2	91.7	181.5	164.4	195.8	167.1	107.3	78.2	39.8	20.9
BEAUFORT	G	Industry	1.6	1.6	2.1	2.4	2.3	2.4	2.4	2.2	1.7	2.0	1.7	1.7
BEAUFORT	G	Irrigation	0.0	9.0	25.5	63.4	166.2	138.3	47.7	43.7	34.5	18.7	0.2	0.1
BEAUFORT	G	Other	1.7	1.8	1.6	1.6	1.8	2.9	1.1	1.4	1.4	1.6	1.7	1.6
BEAUFORT	G	Water Supply	377.0	369.4	447.1	492.0	593.0	527.5	647.9	560.4	475.2	494.8	409.7	373.8
BEAUFORT	S	Aquaculture	29.0	26.2	29.0	28.0	24.4	28.1	29.0	29.0	28.1	29.0	28.1	29.0
BEAUFORT	S	Golf Course	8.3	14.1	52.5	50.9	96.7	54.9	77.7	55.9	40.2	34.9	15.4	5.4
BEAUFORT	S	Water Supply	726.6	630.9	818.1	799.9	1,046.6	961.3	1,110.6	1,106.0	1,007.0	996.2	862.8	766.4
BERKELEY	G	Golf Course	0.3	0.1	0.5	2.9	4.2	3.1	5.2	4.0	2.4	2.4	0.9	0.1
BERKELEY	G	Industry	95.0	102.2	116.0	111.2	114.1	117.1	124.1	130.9	108.6	119.6	96.5	104.1
BERKELEY	G	Water Supply	3.5	3.2	3.6	3.6	4.1	4.2	5.0	4.1	3.3	3.6	3.4	3.3
BERKELEY	S	Hydroelectric	95,544.2	102,765.0	115,863.5	105,936.9	102,576.3	102,195.0	119,305.0	129,222.1	123,153.6	100,031.9	98,531.6	116,820.8
BERKELEY	S	Industry	313.0	292.6	305.2	310.9	317.3	326.6	355.0	309.1	270.9	285.1	243.6	246.7
BERKELEY	S	Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BERKELEY	S	Thermoelectric	15,878.1	16,205.4	8,075.4	17,339.4	17,973.9	14,781.6	14,772.0	12,740.9	13,738.4	7,551.4	6,457.3	6,428.2
BERKELEY	S	Water Supply	602.6	501.1	646.1	528.4	787.6	751.5	744.6	751.3	699.3	727.8	604.6	611.7
CALHOUN	G	Golf Course	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.8	2.9	1.4	0.0	0.0
CALHOUN	G	Industry	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.5	0.2
CALHOUN	G	Irrigation	1.3	2.3	161.3	768.7	1,906.7	2,200.0	2,287.9	1,781.9	871.7	303.5	21.3	2.3
CALHOUN	G	Mining	0.0	0.0	0.0	18.7	15.8	14.4	15.8	15.8	14.4	16.6	13.7	14.4
CALHOUN	G	Water Supply	31.2	17.4	33.7	30.7	36.5	34.9	41.2	37.5	41.0	45.8	30.6	35.1
CALHOUN	S	Industry	1,631.0	1,531.0	1,649.0	1,536.0	1,726.0	1,896.0	1,995.0	1,836.0	1,737.0	1,756.0	1,578.0	1,471.0
CALHOUN	S	Irrigation	0.0	2.0	6.6	15.5	56.2	135.0	112.4	86.2	45.2	24.4	0.0	0.0
CHARLESTON	G	Golf Course	4.5	8.9	22.9	21.4	37.9	43.9	64.1	73.8	64.7	40.5	33.5	13.4
CHARLESTON	G	Industry	5.0	4.2	4.4	4.8	4.6	4.6	4.3	4.3	1.4	4.5	3.6	4.1
CHARLESTON	G	Irrigation	0.0	1.0	0.7	1.2	1.8	0.1	0.0	0.7	1.0	1.7	1.1	0.4
CHARLESTON	G	Water Supply	91.9	75.8	118.7	133.8	231.0	193.0	220.3	192.2	158.3	156.8	97.5	80.3
CHARLESTON	S	Aquaculture	12.0	12.0	12.0	24.0	24.0	24.0	24.0	12.0	12.0	12.0	6.0	6.0
CHARLESTON	S	Industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHARLESTON	S	Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHARLESTON	S	Water Supply	2,732.0	2,417.0	2,796.0	2,739.0	3,413.0	3,122.0	3,286.0	3,699.0	3,206.0	3,295.0	2,476.0	2,679.0

CHEROKEE	G	Thermoelectric	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHEROKEE	G	Water Supply	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1
CHEROKEE	S	Hydroelectric	66,628.0	66,037.0	71,682.0	60,246.0	62,451.0	57,081.0	2,811.0	7,000.0	7,505.0	12,596.0	23,162.0	74,290.0
CHEROKEE	S	Industry	68.3	58.1	63.4	70.5	56.7	57.9	60.6	62.3	56.2	71.3	54.3	57.2
CHEROKEE	S	Water Supply	196.1	183.1	205.0	188.8	229.7	219.6	397.2	338.3	436.8	395.3	306.0	211.0
CHESTER	G	Golf Course	0.0	0.0	0.0	0.0	3.5	5.0	6.5	6.5	6.5	6.5	0.0	0.0
CHESTER	G	Industry	0.5	0.2	0.2	0.1	0.1	0.1	0.1	0.5	0.2	0.1	0.1	0.2
CHESTER	S	Hydroelectric	303,068.0	256,999.0	265,422.0	270,427.0	191,389.0	192,492.0	125,108.0	123,910.0	56,387.0	71,987.0	167,995.0	196,969.0
CHESTER	S	Industry	2.5	2.0	1.7	1.8	1.7	1.7	8.4	1.6	3.8	1.9	6.1	1.4
CHESTER	S	Water Supply	81.8	84.7	90.0	78.4	84.7	86.6	87.4	87.8	90.7	86.1	83.1	72.9
CHESTERFIELD	G	Industry	2.6	2.1	2.6	2.5	2.5	3.3	2.7	2.3	2.2	1.9	1.5	1.0
CHESTERFIELD	G	Irrigation	4.8	4.4	3.1	11.8	44.7	106.7	100.3	54.4	40.9	96.2	58.1	2.3
CHESTERFIELD	G	Water Supply	96.9	87.9	97.2	97.3	113.6	109.9	102.4	102.1	97.5	95.9	90.2	83.2
CHESTERFIELD	S	Golf Course	0.1	4.3	5.9	2.1	9.0	9.7	16.9	12.5	10.2	10.0	4.3	0.3
CHESTERFIELD	S	Industry	0.0	0.0	0.0	0.0	7.5	19.3	22.9	6.6	5.6	5.4	0.0	9.8
CHESTERFIELD	S	Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CHESTERFIELD	S	Mining	0.3	0.7	1.0	1.2	1.3	1.4	1.6	1.7	1.6	1.0	0.9	0.8
CHESTERFIELD	S	Water Supply	64.1	57.5	66.8	66.2	78.5	78.7	78.4	76.5	70.0	69.8	58.3	51.4
CLARENDON	G	Aquaculture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CLARENDON	G	Golf Course	0.0	0.3	0.3	0.3	1.0	0.0	0.3	0.8	0.5	0.5	0.0	0.0
CLARENDON	G	Irrigation	0.1	0.4	13.0	68.9	460.0	534.5	474.5	182.6	126.4	91.3	42.4	3.1
CLARENDON	G	Water Supply	57.0	50.1	54.4	53.5	61.5	60.4	65.3	62.7	58.8	60.9	59.5	60.1
COLLETON	G	Golf Course	0.0	0.0	4.5	4.0	10.3	5.6	8.8	3.9	9.1	3.3	1.3	1.3
COLLETON	G	Irrigation	3.0	9.1	72.9	112.3	198.7	215.4	221.0	194.9	146.5	122.5	82.0	22.0
COLLETON	G	Water Supply	50.1	45.5	54.2	62.3	69.4	76.1	79.9	72.5	55.7	64.5	57.8	56.9
COLLETON	S	Irrigation	0.0	0.0	0.0	6.0	8.0	6.0	10.0	0.0	0.0	0.0	0.0	0.0
COLLETON	S	Thermoelectric	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DARLINGTON	G	Golf Course	0.0	0.0	0.5	1.1	7.2	6.5	7.0	5.9	1.1	0.0	0.0	0.0
DARLINGTON	G	Industry	153.0	140.0	152.2	149.5	125.9	157.9	155.4	158.3	181.5	135.9	135.9	134.8
DARLINGTON	G	Irrigation	0.0	0.0	1.0	6.8	190.6	256.9	310.6	149.4	39.2	0.8	0.0	0.0
DARLINGTON	G	Nuclear	31.4	28.3	31.4	30.4	31.4	30.5	31.8	32.5	32.7	34.2	33.2	34.2
DARLINGTON	G	Water Supply	203.6	175.6	190.6	185.9	221.6	219.2	230.2	226.3	216.6	215.5	192.2	197.7
DARLINGTON	S	Industry	156.1	140.8	142.2	146.8	157.9	149.9	174.9	173.9	164.4	157.3	164.5	175.9
DARLINGTON	S	Irrigation	0.0	0.0	1.8	6.9	86.4	146.3	112.8	48.3	24.9	11.6	0.4	0.5

DARLINGTON	S	Nuclear	21,672.1	19,574.8	22,439.4	21,208.3	29,001.8	25,077.0	24,115.8	24,314.5	23,874.6	24,850.6	22,530.0	20,909.2
DILLON	G	Irrigation	0.0	0.0	14.8	30.3	88.0	130.1	113.5	81.5	34.4	29.7	0.0	0.0
DILLON	G	Water Supply	134.7	117.1	124.7	127.2	146.5	141.7	144.1	152.1	142.8	142.9	121.7	129.8
DORCHESTER	G	Golf Course	0.0	0.0	0.4	1.9	4.7	2.7	1.0	3.6	3.0	1.2	0.0	0.0
DORCHESTER	G	Industry	32.2	31.3	31.4	33.2	35.6	32.5	36.7	40.3	33.1	35.0	29.6	29.9
DORCHESTER	G	Irrigation	0.4	0.4	1.7	38.3	171.3	188.4	192.3	99.8	68.2	16.7	2.2	0.4
DORCHESTER	G	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DORCHESTER	G	Thermoelectric	10.2	10.6	9.1	11.7	13.3	12.6	11.1	13.2	12.9	4.7	11.2	11.2
DORCHESTER	G	Water Supply	42.5	42.7	48.2	54.7	61.3	58.6	55.2	53.1	40.9	40.3	39.6	46.6
EDGEFIELD	G	Golf Course	0.0	0.0	0.0	4.6	11.0	13.6	14.6	14.0	12.7	5.2	0.0	0.0
EDGEFIELD	G	Irrigation	2.2	4.8	10.6	10.2	9.4	10.4	11.6	11.6	11.4	9.6	8.4	5.6
EDGEFIELD	S	Hydroelectric	159,107.1	128,694.0	162,329.2	150,521.8	95,276.8	72,859.6	86,674.3	92,325.8	56,518.0	57,269.8	59,839.4	74,596.7
EDGEFIELD	S	Irrigation	0.0	12.0	78.3	166.5	249.9	305.0	340.6	351.1	183.2	90.4	44.0	7.0
EDGEFIELD	S	Water Supply	117.5	114.7	148.5	167.3	167.1	194.4	169.2	192.0	130.0	118.4	96.9	107.9
FAIRFIELD	G	Water Supply	5.4	4.8	4.8	4.4	6.4	5.6	5.6	5.6	5.9	5.5	3.1	3.2
FAIRFIELD	S	Hydroelectric	96,173.1	80,934.6	89,722.3	116,913.6	188,145.6	180,515.0	201,253.3	174,162.2	155,694.4	112,907.1	104,099.1	114,671.9
FAIRFIELD	S	Nuclear	22,918.1	20,699.0	22,885.3	22,176.8	22,914.7	22,175.7	22,914.9	22,915.5	22,176.4	22,916.3	22,207.4	22,915.4
FAIRFIELD	S	Water Supply	50.9	47.3	88.0	78.0	52.0	47.2	94.6	83.9	129.3	88.2	53.7	66.8
FLORENCE	G	Golf Course	0.0	0.0	0.0	0.4	2.0	3.0	2.4	3.0	1.4	0.0	0.0	0.0
FLORENCE	G	Industry	91.5	98.1	98.5	105.1	124.6	113.0	109.8	122.6	114.3	127.3	97.6	98.8
FLORENCE	G	Irrigation	0.0	0.0	2.5	11.5	56.4	57.4	59.2	39.9	14.3	18.3	3.0	0.0
FLORENCE	G	Water Supply	374.2	335.6	363.0	355.1	433.2	423.6	453.4	462.2	443.8	412.7	385.1	395.4
FLORENCE	S	Golf Course	0.3	0.2	0.8	0.1	2.1	1.4	1.6	3.6	4.6	0.4	1.3	1.4
FLORENCE	S	Industry	468.5	420.9	465.2	467.6	494.1	495.9	528.5	488.0	476.5	229.2	340.3	393.1
FLORENCE	S	Water Supply	119.9	108.5	122.0	137.6	138.9	142.5	152.5	134.2	132.8	135.3	108.7	117.4
GEORGETOWN	G	Golf Course	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
GEORGETOWN	G	Industry	10.2	6.9	7.7	7.8	9.6	8.5	9.6	9.6	8.4	9.1	8.9	9.7
GEORGETOWN	G	Water Supply	91.4	78.8	96.3	92.5	113.4	120.8	133.3	102.4	118.3	118.0	89.8	97.2
GEORGETOWN	S	Golf Course	36.4	36.1	58.1	52.1	114.6	101.0	110.0	95.7	68.3	87.3	34.2	32.9
GEORGETOWN	S	Industry	1,183.2	1,082.2	1,026.5	1,121.3	1,202.3	1,145.7	1,218.9	1,160.0	1,147.2	1,289.9	1,241.6	1,272.2
GEORGETOWN	S	Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GEORGETOWN	S	Mining	13.7	13.3	14.0	4.3	4.8	3.3	5.5	6.6	5.9	4.4	4.3	3.2
GEORGETOWN	S	Thermoelectric	233.1	4.6	74.0	71.1	257.9	62.0	63.2	139.6	45.6	54.1	24.8	12.1
GEORGETOWN	S	Water Supply	155.6	151.1	168.5	191.8	234.2	220.2	231.8	228.4	186.3	184.8	164.6	158.3

GREENVILLE	G	Golf Course	0.0	0.0	0.0	0.0	0.4	0.4	0.1	0.1	1.4	1.5	0.0	0.0
GREENVILLE	G	Industry	7.0	6.1	7.4	6.2	7.2	7.3	7.2	7.0	6.8	6.0	5.3	6.5
GREENVILLE	G	Water Supply	2.2	1.8	2.1	2.3	4.2	5.3	5.6	5.7	7.0	5.2	2.7	2.5
GREENVILLE	S	Golf Course	1.4	2.5	8.7	24.5	42.1	48.8	64.3	46.6	58.7	34.0	14.1	4.8
GREENVILLE	S	Hydroelectric	34,142.0	34,075.0	30,886.0	31,249.0	27,329.0	21,797.0	17,027.0	13,368.0	8,577.0	4,747.0	14,475.0	16,868.0
GREENVILLE	S	Irrigation	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
GREENVILLE	S	Water Supply	1,895.0	1,706.0	1,910.7	2,007.2	2,677.7	2,691.1	2,846.6	2,714.7	2,885.2	2,558.2	1,963.7	1,919.8
GREENWOOD	G	Industry	0.0	0.0	0.0	0.8	0.9	0.8	0.9	0.9	0.8	0.9	0.8	0.0
GREENWOOD	G	Irrigation	1.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
GREENWOOD	S	Golf Course	0.0	0.0	0.2	0.9	1.3	2.1	1.9	2.3	2.1	1.4	0.1	0.1
GREENWOOD	S	Hydroelectric	96,310.0	67,975.7	75,043.7	53,199.5	41,092.1	37,933.2	19,811.2	22,788.4	11,333.5	13,552.3	26,941.5	53,238.5
GREENWOOD	S	Water Supply	277.6	241.8	271.2	279.6	330.4	306.4	335.1	326.6	338.5	329.0	264.8	267.3
HAMPTON	G	Aquaculture	6.5	7.3	15.8	26.6	17.7	16.5	21.5	10.1	4.1	11.2	8.1	4.3
HAMPTON	G	Industry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HAMPTON	G	Irrigation	3.3	7.1	54.2	123.3	464.1	535.6	616.0	581.2	334.9	172.1	72.4	0.3
HAMPTON	G	Water Supply	43.8	32.1	36.2	37.0	45.4	40.1	41.9	44.1	42.1	48.9	38.2	37.7
HORRY	G	Golf Course	1.0	2.3	13.7	27.7	64.9	58.2	53.4	63.9	48.1	34.1	10.0	4.9
HORRY	G	Irrigation	9.2	9.6	9.6	8.4	15.0	20.6	26.9	25.9	9.9	17.8	7.7	9.9
HORRY	G	Water Supply	175.1	148.3	162.2	173.7	185.4	216.6	226.1	188.3	179.9	179.4	139.7	137.1
HORRY	S	Golf Course	4.1	7.7	34.6	70.5	169.8	118.1	117.7	112.6	71.7	48.0	12.3	7.7
HORRY	S	Thermoelectric	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HORRY	S	Water Supply	1,221.6	1,124.8	1,373.1	1,463.6	1,875.7	1,754.1	1,878.4	1,613.4	1,402.7	1,635.9	1,336.6	1,288.4
JASPER	G	Golf Course	3.2	1.5	4.3	5.2	14.2	17.3	10.7	11.8	18.7	9.1	2.3	5.4
JASPER	G	Irrigation	0.0	0.5	24.4	40.1	62.3	82.7	68.5	70.2	51.2	35.0	12.6	0.0
JASPER	G	Water Supply	18.4	18.2	24.0	20.5	26.5	23.7	26.5	24.8	24.0	26.6	23.0	23.6
KERSHAW	G	Golf Course	0.0	1.0	3.0	3.0	3.0	4.0	4.0	5.0	5.0	3.0	1.0	0.0
KERSHAW	G	Industry	64.4	59.0	70.4	56.8	55.8	53.9	55.3	55.6	50.6	60.1	53.7	50.9
KERSHAW	G	Irrigation	0.0	0.0	0.0	0.0	0.4	1.3	2.9	0.4	0.8	0.0	0.0	0.0
KERSHAW	G	Water Supply	53.5	47.7	52.1	59.0	78.0	73.8	78.7	77.5	68.5	62.1	56.5	54.3
KERSHAW	S	Hydroelectric	279,345.0	199,320.0	234,233.0	194,852.0	127,625.0	184,086.0	72,029.0	69,769.0	31,756.0	38,474.0	89,937.0	173,098.0
KERSHAW	S	Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KERSHAW	S	Mining	38.9	50.7	87.1	78.2	65.4	62.8	71.1	73.0	62.6	43.0	42.7	24.5
KERSHAW	S	Water Supply	192.6	168.6	186.6	184.7	226.7	216.2	229.9	230.0	231.0	228.2	202.6	205.4
LANCASTER	G	Golf Course	0.0	0.0	0.0	1.3	5.1	5.1	8.2	7.5	7.0	3.9	0.5	0.0

LANCASTER	S	Hydroelectric	173,059.0	155,807.0	161,071.0	167,673.0	119,478.0	114,589.0	74,700.0	71,975.0	33,251.0	38,637.0	85,113.0	126,842.0
LANCASTER	S	Industry	0.1	0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1
LANCASTER	S	Water Supply	673.0	554.3	535.6	966.3	1,135.2	1,131.5	893.6	813.1	880.1	448.1	614.4	551.8
LAURENS	S	Golf Course	0.0	0.0	0.0	0.0	0.0	3.2	2.2	2.2	4.3	0.0	0.0	0.0
LAURENS	S	Hydroelectric	19,423.0	26,080.0	17,290.0	7,291.0	5,175.0	7,627.0	2,906.0	795.0	2,144.0	1,137.0	2,792.0	7,540.0
LAURENS	S	Water Supply	150.4	136.9	144.8	152.7	169.6	167.1	169.6	163.2	170.5	160.2	142.3	147.2
LEE	G	Irrigation	48.2	50.0	4.6	87.2	395.1	601.0	570.2	310.9	85.6	4.8	6.1	66.1
LEE	G	Water Supply	40.1	44.0	49.7	46.1	48.3	47.6	50.0	51.6	48.5	47.8	46.5	44.4
LEE	S	Irrigation	0.0	0.0	0.0	0.0	7.0	11.0	14.0	18.0	10.0	0.0	0.0	0.0
LEXINGTON	G	Golf Course	0.5	0.4	0.6	1.7	3.9	2.7	2.1	5.4	2.0	1.2	0.9	0.4
LEXINGTON	G	Industry	34.6	27.9	27.5	28.0	32.8	23.7	40.4	35.2	24.1	43.8	32.8	31.4
LEXINGTON	G	Irrigation	14.6	14.2	79.1	237.4	689.4	919.2	787.4	627.0	606.5	303.5	92.1	74.3
LEXINGTON	G	Mining	48.6	43.8	47.9	47.3	48.9	48.4	49.6	50.1	48.0	48.3	46.2	46.8
LEXINGTON	G	Water Supply	39.5	34.7	40.9	46.8	59.8	52.6	60.2	59.7	59.7	51.8	40.8	41.5
LEXINGTON	S	Golf Course	0.4	0.3	1.8	4.4	11.2	8.8	15.7	13.7	11.8	4.5	0.4	0.4
LEXINGTON	S	Hydroelectric	4,934.6	2,153.3	21,516.4	34,437.2	18,326.0	13,502.9	1,903.5	1,907.5	4,544.5	1,283.6	5,290.7	76,315.6
LEXINGTON	S	Industry	491.5	542.0	637.0	724.0	960.3	1,142.2	1,202.9	1,005.3	957.9	791.5	558.5	471.3
LEXINGTON	S	Irrigation	0.7	3.3	16.8	27.6	54.1	47.2	41.9	43.4	95.8	52.0	5.5	3.6
LEXINGTON	S	Mining	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEXINGTON	S	Thermoelectric	205.9	118.3	501.5	1,815.3	5,093.2	3,595.7	4,197.9	4,962.9	5,008.3	5,175.3	162.2	140.8
LEXINGTON	S	Water Supply	476.8	425.1	506.1	568.6	800.1	727.2	809.1	812.9	778.6	687.1	560.3	517.6
MARION	G	Irrigation	0.0	0.0	0.1	6.6	132.2	130.7	156.3	89.8	19.7	10.0	0.8	0.0
MARION	G	Water Supply	111.9	85.0	91.0	93.5	105.9	104.2	106.3	106.1	96.3	99.8	94.6	91.5
MARION	S	Irrigation	0.0	0.0	0.0	0.1	0.1	3.0	3.0	0.0	0.0	0.1	0.0	0.0
MARLBORO	G	Industry	4.2	3.9	4.4	4.3	5.9	5.1	25.5	29.3	22.7	8.2	3.9	3.2
MARLBORO	G	Irrigation	0.0	0.0	1.1	7.5	99.7	182.1	192.7	105.4	23.5	5.1	2.4	0.0
MARLBORO	G	Water Supply	104.8	94.6	103.4	103.6	106.5	110.9	111.5	107.1	99.9	102.1	94.7	105.1
MARLBORO	S	Industry	529.0	473.0	522.0	478.0	517.0	512.0	531.0	507.0	520.0	532.0	499.0	527.0
MARLBORO	S	Irrigation	0.0	0.0	0.0	0.0	8.4	23.8	63.0	37.5	0.0	0.0	0.0	0.0
MARLBORO	S	Mining	31.5	28.5	31.5	33.1	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MARLBORO	S	Water Supply	9.6	8.7	9.6	9.2	17.0	15.2	15.6	15.9	16.0	16.8	15.3	16.5
MCCORMICK	S	Golf Course	0.1	1.0	2.6	3.2	14.4	10.2	13.9	9.9	20.3	7.0	0.0	0.0
MCCORMICK	S	Hydroelectric	422,544.0	239,813.0	288,128.0	273,424.0	140,868.0	104,914.0	117,848.0	124,760.0	82,489.0	83,447.0	81,453.0	83,868.0
MCCORMICK	S	Water Supply	21.0	21.0	24.0	28.0	35.0	34.0	36.0	32.0	35.0	34.0	29.0	24.0

NEWBERRY	G	Irrigation	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
NEWBERRY	G	Water Supply	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEWBERRY	S	Golf Course	0.0	0.1	1.4	1.5	4.5	2.6	4.3	1.7	5.1	1.3	0.0	0.0
NEWBERRY	S	Irrigation	1.2	1.2	1.2	1.4	3.9	4.7	8.0	4.9	2.4	2.4	1.2	1.2
NEWBERRY	S	Water Supply	217.6	160.1	163.2	160.9	169.2	163.3	164.3	165.2	160.7	161.1	146.7	143.7
OCONEE	G	Water Supply	2.9	2.8	3.0	2.9	2.6	3.0	3.4	3.3	3.5	3.3	2.8	2.8
OCONEE	S	Golf Course	0.0	0.0	1.2	2.3	6.2	5.8	5.8	5.1	6.4	1.1	0.2	0.0
OCONEE	S	Hydroelectric	135,803.0	154,203.0	135,923.0	124,382.0	193,824.0	167,691.0	177,255.0	147,870.0	166,494.0	123,788.0	134,724.0	111,402.0
OCONEE	S	Irrigation	1.0	1.0	1.5	1.6	2.6	3.7	3.8	3.8	3.6	2.5	2.5	1.5
OCONEE	S	Nuclear	79,940.0	56,246.0	63,159.0	68,781.0	81,620.4	84,468.0	94,810.0	94,817.0	91,653.0	91,373.0	67,677.0	81,769.0
OCONEE	S	Water Supply	306.6	270.7	306.1	306.0	378.2	379.0	404.4	404.9	419.6	382.8	329.8	315.6
ORANGEBURG	G	Golf Course	0.0	0.0	0.8	4.4	17.6	9.0	12.2	16.0	14.9	7.8	0.0	0.5
ORANGEBURG	G	Industry	36.5	13.7	32.1	33.2	40.9	61.0	38.8	40.0	39.0	28.5	37.0	36.8
ORANGEBURG	G	Irrigation	37.5	49.1	103.1	585.2	1,635.6	1,961.0	2,095.5	1,615.0	1,121.6	485.6	131.0	83.7
ORANGEBURG	G	Thermoelectric	103.3	55.7	98.2	77.6	40.6	85.1	113.2	110.4	135.2	115.5	164.6	144.8
ORANGEBURG	G	Water Supply	31.3	28.2	31.8	29.5	35.4	32.1	36.6	32.9	32.4	32.8	27.7	25.7
ORANGEBURG	S	Golf Course	0.5	1.2	1.3	1.5	3.9	0.6	2.4	3.7	7.2	2.5	0.8	1.5
ORANGEBURG	S	Industry	0.5	0.2	0.3	0.1	0.4	1.3	2.1	2.9	4.9	5.7	3.9	3.9
ORANGEBURG	S	Irrigation	1.6	7.2	59.9	143.8	271.6	434.3	486.7	492.7	297.2	113.1	22.0	9.3
ORANGEBURG	S	Thermoelectric	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ORANGEBURG	S	Water Supply	222.3	208.8	224.3	225.7	254.9	249.2	264.5	260.2	254.8	254.7	237.8	229.5
PICKENS	S	Golf Course	0.3	0.7	12.5	16.5	39.6	34.6	39.8	36.6	51.8	18.7	1.6	0.7
PICKENS	S	Hydroelectric	206,160.0	226,485.0	235,014.0	213,223.0	309,280.0	299,853.0	310,138.0	317,165.0	344,418.0	26,588.0	250,718.0	222,269.0
PICKENS	S	Industry	45.9	40.5	46.0	39.0	44.8	42.8	40.4	57.9	85.3	61.5	33.1	33.4
PICKENS	S	Water Supply	333.7	290.2	322.7	336.1	422.9	393.5	415.1	400.6	411.6	375.9	322.9	318.9
RICHLAND	G	Aquaculture	0.0	0.0	1.4	0.7	0.5	3.6	3.0	1.4	0.6	0.8	0.0	0.0
RICHLAND	G	Golf Course	0.2	0.2	0.3	0.5	2.0	5.2	6.4	4.7	3.4	2.1	0.7	0.3
RICHLAND	G	Industry	60.5	51.9	57.8	48.7	51.3	49.2	55.5	53.0	51.8	61.0	65.8	66.7
RICHLAND	G	Irrigation	0.0	0.0	3.5	11.0	64.8	73.2	53.7	36.2	36.8	14.7	0.0	0.0
RICHLAND	G	Water Supply	25.6	27.0	22.9	18.1	17.8	27.7	27.3	26.6	27.4	22.2	22.3	14.9
RICHLAND	S	Aquaculture	0.0	0.0	2.3	3.2	3.0	1.6	1.0	5.1	1.5	4.2	0.0	0.0
RICHLAND	S	Golf Course	3.0	5.5	13.1	24.0	38.4	40.3	60.5	54.5	51.2	20.2	10.5	2.4
RICHLAND	S	Hydroelectric	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RICHLAND	S	Industry	945.0	823.1	852.7	892.1	965.4	952.7	1,008.3	1,022.6	958.5	925.4	885.1	889.5

RICHLAND	S	Irrigation	0.0	3.3	10.9	10.1	11.5	11.7	11.7	11.4	11.0	35.9	31.7	12.5
RICHLAND	S	Thermoelectric	332.3	290.2	188.7	136.1	329.4	307.7	370.2	346.5	262.2	74.5	81.1	216.6
RICHLAND	S	Water Supply	1,511.5	1,386.4	1,534.2	1,625.0	2,117.9	2,113.7	2,260.7	2,278.6	2,185.6	1,996.0	1,678.7	1,618.0
SALUDA	G	Irrigation	0.0	0.0	0.0	0.0	0.0	0.0	40.0	30.0	20.0	0.0	0.0	0.0
SALUDA	G	Water Supply	0.7	0.9	0.8	1.1	1.0	0.4	1.2	0.9	0.6	1.3	0.5	0.4
SALUDA	S	Irrigation	2.0	2.0	52.0	129.0	236.0	304.0	288.0	233.0	160.0	74.0	14.0	0.0
SALUDA	S	Water Supply	0.0	37.0	61.0	65.0	78.0	75.0	85.0	81.0	80.0	74.0	73.0	70.0
SPARTANBURG	G	Golf Course	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	0.0	0.0
SPARTANBURG	G	Water Supply	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPARTANBURG	S	Golf Course	0.0	0.0	3.0	5.0	5.0	6.0	16.0	30.4	22.6	14.0	3.0	1.0
SPARTANBURG	S	Hydroelectric	19,043.0	16,075.0	19,173.0	18,065.0	17,218.0	16,542.0	11,906.0	10,132.0	5,669.0	7,807.0	13,530.0	17,518.0
SPARTANBURG	S	Mining	0.2	0.5	1.2	2.6	3.5	3.4	3.4	2.6	3.1	1.5	0.4	0.3
SPARTANBURG	S	Water Supply	988.6	885.2	1,035.2	1,019.4	1,421.6	1,371.2	1,490.5	1,448.4	1,488.3	1,353.0	1,097.6	1,056.5
SUMTER	G	Golf Course	0.0	0.0	2.4	6.5	8.5	7.1	6.7	4.7	7.2	1.8	0.0	0.0
SUMTER	G	Industry	14.7	13.4	14.3	14.6	12.5	11.3	13.9	11.3	13.4	12.5	14.4	16.1
SUMTER	G	Irrigation	2.5	1.9	18.7	183.0	847.4	900.4	781.1	529.1	353.7	76.6	2.5	1.3
SUMTER	G	Water Supply	430.6	385.1	393.1	413.2	460.9	445.2	464.5	475.0	467.1	469.1	413.6	394.5
SUMTER	S	Irrigation	9.2	10.7	67.5	84.8	102.6	109.9	124.6	98.4	70.0	25.1	19.0	16.6
UNION	G	Industry	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
UNION	S	Hydroelectric	125,400.7	99,735.0	109,817.4	103,813.5	100,523.1	87,601.4	64,382.2	61,523.5	39,676.6	43,848.3	76,630.2	78,298.6
UNION	S	Industry	15.5	14.8	13.8	12.6	14.7	13.6	15.8	16.8	15.2	24.1	20.8	19.3
UNION	S	Water Supply	82.3	71.2	79.6	88.8	93.4	90.5	100.6	96.9	96.3	96.8	84.2	91.9
WILLIAMSBURG	G	Industry	30.6	26.8	31.3	32.2	38.9	35.0	38.7	36.2	32.2	28.2	27.8	27.0
WILLIAMSBURG	G	Irrigation	0.0	0.0	6.0	17.0	33.7	47.4	56.6	33.8	11.0	5.0	0.0	0.0
WILLIAMSBURG	G	Water Supply	56.4	50.8	56.4	51.0	58.3	56.4	51.5	57.0	50.0	51.2	53.2	54.1
WILLIAMSBURG	S	Irrigation	0.0	0.0	0.0	2.0	2.0	3.0	5.0	1.0	0.0	0.0	0.0	0.0
YORK	G	Golf Course	0.3	0.2	1.0	2.8	8.0	17.5	22.5	20.3	15.5	8.4	1.8	0.8
YORK	G	Industry	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.1	0.0	0.0	0.0	0.0
YORK	G	Water Supply	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YORK	S	Golf Course	0.0	0.1	1.9	4.2	10.5	10.8	14.8	8.9	13.7	6.5	1.4	0.0
YORK	S	Hydroelectric	68,370.0	27,856.0	64,961.0	0.0	22,212.0	57,671.0	25,698.0	0.0	21,622.0	30,982.0	66,217.0	74,038.0
YORK	S	Industry	789.1	688.3	757.3	738.7	771.1	661.6	871.5	862.0	762.7	840.9	781.4	858.7
YORK	S	Nuclear	4,491.0	2,929.0	3,059.0	3,318.0	3,322.0	4,493.0	5,195.0	5,198.0	3,688.0	3,360.0	3,466.0	3,423.0
YORK	S	Water Supply	602.5	528.2	594.1	591.4	764.0	760.9	810.2	769.2	815.5	772.6	616.7	583.5

Appendix B: Bibliography

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