

Groundwater Use in North Carolina

Overview¹

Total

Groundwater (mgd — fresh, not saline)..... 520
 Percentage of total freshwater* supply for state..... 5.83%

Public Supply

Groundwater (mgd) 158
 Percentage of total groundwater..... 30.38%
 Percentage of total public supply 16.84%

Individual Household

Groundwater (mgd) 169
 Percentage of total groundwater..... 32.5%
 Percentage of total individual household supply 100%

Irrigation

Groundwater (mgd) 83.8
 Percentage of total groundwater..... 16.12%
 Percentage of total irrigation..... 25.78%

Livestock/Aquaculture

Groundwater (mgd) 65.2
 Percentage of total groundwater..... 12.54%
 Percentage of total livestock/aquaculture..... 6.11%

Industrial, Self-Supplied

Groundwater (mgd) 15.0
 Percentage of total groundwater..... 2.88%
 Percentage of total industrial, self-supplied 7.77%

Mining

Groundwater (mgd) 30.0
 Percentage of total groundwater..... 5.77%
 Percentage of total mining..... 78.33%

Thermoelectric

Groundwater (mgd) 0.18
 Percentage of total groundwater..... 0.03%
 Percentage of total thermoelectric..... 0.00%

(mgd = million gallons per day)

*All totals and ratios are measures of freshwater only.

¹ US Geological Survey, Estimated Use of Water in the United States in 2015, released 2018.

² US Census Bureau 2013 American Housing Survey.

³ US Census Bureau 2013 American Community Survey.

⁴ US Geological Survey, Estimated Use of Water in the United States in 2015, released 2018.

⁵ US EPA Federal Safe Drinking Water Information System Data for 2019.

⁶ *Ibid.*

⁷ *Ibid.*

⁸ Census of Agriculture 2013 Farm and Ranch Irrigation Survey.

Groundwater's Role in North Carolina's Economic Vitality

- Few states can accurately or confidentially determine how many residential wells are in place. For each region, the American Housing Survey by the U.S. Census provides regional data. North Carolina is found in the South, along with these other states: Maryland, Delaware, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Texas, Oklahoma, Arkansas, Tennessee, and Kentucky. The last American Housing Survey Census indicates this region had 4,360,000² households served by residential wells, with an average of 2.55³ persons per household. The USGS estimates the population of self-supplied water supply users in North Carolina to be 2,410,000, with 100% of their water supply from groundwater.⁴
- 1,542 community water systems use groundwater for 1,513,800 people⁵
- 329 non-community, non-transient water systems use groundwater for 89,200 people⁶
- 3,068 non-community, transient water systems use groundwater for 283,500 people⁷
- 2,310 irrigation wells used serving 1,290 farms and 38,400 acres⁸



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North Carolina's Groundwater Industry Employment

Men and women working to provide and protect North Carolina's groundwater resources for the benefit of people, business, and our environment.

North Carolina's Contracting Employment

Drill and service water wells, install and service pumps, install and service point of use water treatment devices. This portion of the industry is characterized by small firms, many of which are multi-generation family-owned and operated.⁹

- 153 firms employ an estimated 1,154 people
- Annual estimated sales of \$137.8 million

North Carolina's Scientists and Engineers Employment

Geologists, hydrogeologists, engineers, geochemists, geophysicists, microbiologists, regulators.

Environmental Consulting¹⁰

NAICS 54162: Establishments primarily engaged in providing advice and assistance on environmental issues, such as the control of environmental contamination from pollutants, toxic substances, and hazardous materials.

- 858 firms employ an estimated 2,744 people
- Annual estimated sales of \$510.5 million

Remediation¹¹

NAICS 56291: Establishments include those engaged in remediation and cleanup of contaminated buildings, mine sites, soil, or groundwater.

- 170 firms employ an estimated 1,651 people
- Annual estimated sales of \$417.8 million

Public Service and Universities, Colleges, and Research Centers

- Many more dedicated individuals



⁹ InfoUSA, SIC 1781, June 2019.

¹⁰ Barnes Reports: Environmental Consulting Services Industry (NAICS 54162); C. Barnes & Co., 2019.

¹¹ Barnes Reports: Remediation Services Industry (NAICS 56291); C. Barnes & Co., 2019.