

# Groundwater Use in West Virginia

## Overview<sup>1</sup>

### Total

Groundwater (mgd — fresh, not saline)..... 121  
Percentage of total freshwater\* supply for state..... 3.43%

### Public Supply

Groundwater (mgd) ..... 34.2  
Percentage of total groundwater..... 28.30%  
Percentage of total public supply ..... 18.10%

### Individual Household

Groundwater (mgd) ..... 30.9  
Percentage of total groundwater..... 25.50%  
Percentage of total individual household supply ..... 98.10%

### Irrigation

Groundwater (mgd) ..... 0.05  
Percentage of total groundwater..... 0.04%  
Percentage of total irrigation..... 55.60%

### Livestock/Aquaculture

Groundwater (mgd) ..... 13.4  
Percentage of total groundwater..... 11.00%  
Percentage of total livestock/aquaculture..... 23.30%

### Industrial, Self-Supplied

Groundwater (mgd) ..... 35.1  
Percentage of total groundwater..... 29.00%  
Percentage of total industrial, self-supplied ..... 4.59%

### Mining

Groundwater (mgd) ..... 5.53  
Percentage of total groundwater..... 4.57%  
Percentage of total mining..... 38.10%

### Thermoelectric

Groundwater (mgd) ..... 1.4  
Percentage of total groundwater..... 1.16%  
Percentage of total thermoelectric..... 0.06%

(mgd = million gallons per day)

\*All totals and ratios are measures of freshwater only.

<sup>1</sup> US Geological Survey, November 2014 report on 2010 water use.

<sup>2</sup> US Census Bureau 2013 American Housing Survey.

<sup>3</sup> US Census Bureau 2013 American Community Survey.

<sup>4</sup> US Geological Survey, November 2014 report on 2010 water use.

<sup>5</sup> *Ibid.*

<sup>6</sup> US EPA Federal Safe Drinking Water Information System Data for 2014.

<sup>7</sup> *Ibid.*

<sup>8</sup> Census of Agriculture 2013 Farm and Ranch Irrigation Survey.

## Groundwater's Role in West Virginia'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. West Virginia 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 4,360,000<sup>2</sup> households served by residential wells, with an average of 2.44<sup>3</sup> persons per household. The U.S. Census stopped asking citizens their source of water supply following the 1990 Census. The USGS estimates the population of self-supplied water supply users in West Virginia to be 393,000<sup>4</sup>.
- 173 community water systems use groundwater for 250,000 people<sup>5</sup>
- 83 non-community, non-transient water systems use groundwater for 31,600 people<sup>6</sup>
- 392 non-community, transient water systems use groundwater for 28,000 people<sup>7</sup>
- 150 irrigation wells used serving 119 farms and 821 acres<sup>8</sup>



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# West Virginia's Groundwater Industry Employment

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

## West Virginia'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.<sup>9</sup>

- 47 firms employ an estimated 282 people<sup>10</sup>
- Annual estimated sales of \$53.4 million

## West Virginia's Scientists and Engineers Employment

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

### Environmental Consulting<sup>11</sup>

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.

- 115 firms employ an estimated 430 people
- Annual estimated sales of \$62.1 million

### Remediation<sup>12</sup>

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

- 36 firms employ an estimated 304 people
- Annual estimated sales of \$41.4 million

### Public Service and Universities, Colleges, and Research Centers

- Many more dedicated individuals



<sup>9</sup> InfoUSA, SIC 1781, March 2015.

<sup>10</sup> Barnes Reports: Remediation Services Industry (NAICS 56291); C. Barnes & Co., 2015.

<sup>11</sup> Barnes Reports: Environmental Consulting Services Industry (NAICS 54162); C. Barnes & Co., 2015.

<sup>12</sup> Barnes Reports: Remediation Services Industry (NAICS 56291); C. Barnes & Co., 2015.