## **Groundwater Use in Virginia**

### Overview<sup>1</sup>

| - |  |
|---|--|
|   |  |
|   |  |

| Groundwater (mgd — fresh, not saline)            |       |
|--------------------------------------------------|-------|
| Percentage of total freshwater* supply for state |       |
|                                                  |       |
| Public Supply                                    |       |
| Groundwater (mgd)                                | 82.8  |
| Percentage of total groundwater                  | 29.2% |
| Percentage of total public supply                | 11.9% |

### Individual Household

| Groundwater (mgd)                               | . 125.0 |
|-------------------------------------------------|---------|
| Percentage of total groundwater                 |         |
| Percentage of total individual household supply | 100%    |

### Irrigation

| Groundwater (mgd)               | 7.93  |
|---------------------------------|-------|
| Percentage of total groundwater | 2.79% |
| Percentage of total irrigation  |       |

### Livestock/Aquaculture

| Groundwater (mgd)                         | 6.7   |
|-------------------------------------------|-------|
| Percentage of total groundwater           | 2.36% |
| Percentage of total livestock/aquaculture | 4.79% |

### **Industrial, Self-Supplied**

| Groundwater (mgd)                             | 66.0  |
|-----------------------------------------------|-------|
| Percentage of total groundwater               | 23.2% |
| Percentage of total industrial, self-supplied | 17.8% |

### Mining

| Groundwater (mgd)               | 6.20  |
|---------------------------------|-------|
| Percentage of total groundwater |       |
| Percentage of total mining      | 24.9% |

### **Thermoelectric**

| Groundwater (mgd)                  | 1.08  |
|------------------------------------|-------|
| Percentage of total groundwater    | 0.38% |
| Percentage of total thermoelectric | 0.04% |

(mgd = million gallons per day)

- <sup>1</sup> US Geological Survey, Estimated Use of Water in the United States in 2015, released 2018.
- <sup>2</sup> Virginia Department of Environmental Quality, Office of Water Supply
- <sup>3</sup> US EPA Federal Safe Drinking Water Information System Data for 2019.
- <sup>4</sup> Ibid.
- 5 Ibid.
- <sup>6</sup> Census of Agriculture 2013 Farm and Ranch Irrigation Survey.

# **Groundwater's Role in Virginia's Economic Vitality**

- Approximately 42,800 known residential wells statewide.<sup>2</sup>
- 734 community water systems use groundwater for 399,100 people<sup>3</sup>
- 513 non-community, non-transient water systems use groundwater for 166,800 people<sup>4</sup>
- 1,234 non-community, transient water systems use groundwater for 185,800 people<sup>5</sup>
- 1,190 irrigation wells used serving 834 farms and 7,570 acres<sup>6</sup>



<sup>\*</sup>All totals and ratios are measures of freshwater only.

## Virginia's Groundwater Industry Employment

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

## **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>7</sup>

- 103 firms employ an estimated 799 people
- Annual estimated sales of \$186.4 million

## **Virginia's Scientists and Engineers Employment**

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

### **Environmental Consulting8**

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.

- 793 firms employ an estimated 3,420 people
- Annual estimated sales of \$646.7 million

#### Remediation9

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

- 167 firms employ an estimated 1,750 people
- Annual estimated sales of \$424.2 million.

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

• Many more dedicated individuals



<sup>&</sup>lt;sup>7</sup> InfoUSA, SIC 1781, June 2019.

<sup>&</sup>lt;sup>8</sup> Barnes Reports: Environmental Consulting Services Industry (NAICS 54162); C. Barnes & Co., 2019.

<sup>&</sup>lt;sup>9</sup> Barnes Reports: Remediation Services Industry (NAICS 56291); C. Barnes & Co., 2019.