

Groundwater Use for America

9/2010

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Total

Groundwater (mgd—fresh, not saline)	79,600
Percentage of total water supply for nation.....	26.4%
Estimated annual economic value of pumped water ¹	\$20.09 bil. ²

Public Supply

Groundwater (mgd)	14,600
Percentage of total groundwater	18.3%
Percentage of total public supply	33.03%
Estimated annual economic value of pumped water.....	\$12.91 bil. ³
Estimated value of installed well/pump infrastructure	\$3.73 bil. ⁴

Individual Household

Groundwater (mgd)	3,740
Percentage of total groundwater	4.7%
Percentage of total individual household supply	97.7%
Estimated annual economic value of pumped water.....	\$3.3 bil. ⁵
Estimated value of installed well/pump infrastructure	\$64.31 bil.

Irrigation

Groundwater (mgd)	53,500
Percentage of total groundwater	67.2%
Percentage of total irrigation.....	41.8%
Estimated annual economic value of pumped water.....	\$1.07 bil. ⁶
Estimated value of installed well/pump infrastructure	\$6.0 bil.

Livestock/Aquaculture

Groundwater (mgd)	3,200
Percentage of total groundwater	4.02%
Percentage of total livestock/aquaculture.....	29.3%
Estimated annual economic value of pumped water.....	\$64.0 mil. ⁷

Industrial, Self-Supplied (fresh)

Groundwater (mgd)	3,070
Percentage of total groundwater	3.86%
Percentage of total industrial	18.06%
Estimated annual economic value of pumped water.....	\$2.71 bil. ⁸

Mining (fresh)

Groundwater (mgd)	1,020
Percentage of total groundwater	1.28%
Percentage of total mining	44.16%
Estimated annual economic value of pumped water.....	\$20.4 mil. ⁹

Thermoelectric (fresh)

Groundwater (mgd)	510
Percentage of total groundwater	0.64%
Percentage of total thermoelectric.....	0.36%
Estimated annual economic value of pumped water.....	\$10.2 mil. ¹⁰

(mgd = million gallons per day)

Groundwater's Role in America's Economic Vitality

- 43.8%¹¹ of America's population regularly depends upon groundwater for its drinking water supply¹²
- 41,913,300 American residents served by privately owned individual wells¹³
- 88,032,021 American residents served by groundwater supplied community water systems¹⁴
- 13,249,000 occupied American households served by privately owned individual wells¹⁵
- 107,848 community supply¹⁶ wells serving 40,025¹⁷ American community water systems
- 17,688 nontransient, noncommunity water systems serving 5,415,937 people¹⁸
- 81,492 transient, noncommunity water systems serving 10,754,201 people¹⁹
- 407,913 irrigation wells used serving 97,690 farms²⁰
- The U.S. bottled water industry used 5.34 billion gallons of groundwater in 2001²¹



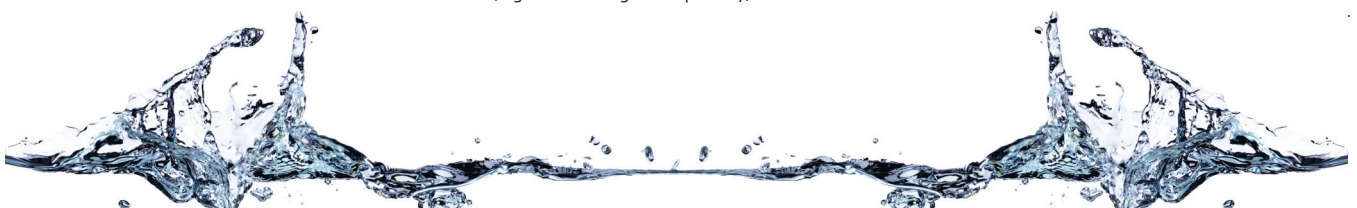
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America's Groundwater Industry Employment

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

America'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 multigeneration family-owned and operated.²²

- 8,085 firms employ an estimated 44,358 people
- Annual estimated sales of \$2,466,137,000

America's Scientists and Engineers Employment

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

Environmental Consulting²³

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.

- 9,747 firms employ an estimated 83,631 people
- Annual estimated sales of \$6,533.3 million

Remediation²⁴

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

- 3,833 firms employ an estimated 73,332 people
- Annual estimated sales of \$6,584.5 billion

Government, Research Institutes, Universities and Colleges

- Hundreds more

America's Community Water Systems Employment

Some 38,588 community water systems rely upon groundwater across the United States, and employ an estimated 211,989 professionals.²⁵

American Manufacturers and Wholesalers

In 2009, shipments of domestic water systems used for wells equaled 1,507,329 pumps valued at \$265,701,000.²⁶ Shipments of new machines used to drill water wells totaled 207 units at a combined value of \$119,417,000 in 2009.²⁷ Shipments of ground and groundwater source heat pumps, fossil fuel-saving technology, totaled 86,260 units in 2009, at a value of \$286,071,000.²⁸

There are hundreds of firms employing thousands of individuals throughout the nation.

¹ Value of extracted water as a resource before the water is applied for noted economic use

² Sum of all estimates below

³ Calculated by using value of \$0.0024227 per gallon for treated water from a Midwest utility; American Water Works Association, 2004

⁴ Based on dollar values for wells and pumps reported in *Ground Water Contracting Industry Survey*, September 2003, ResearchUSA Inc.; same source for individual household and irrigation segments

⁵ Calculated by using value of \$0.0024227 per gallon for treated water from a Midwest utility; American Water Works Association, 2004

⁶ Calculated by using value of \$17.86 of direct agricultural impact per acre-foot of groundwater in Kansas, or \$0.0000548 per gallon; the Docking Institute of Public Affairs; *The Value of Ogallala Groundwater*, 2001, chapter 4

⁷ Calculated by using the value of groundwater for irrigation

⁸ Calculated by using the value of \$0.0024227 per gallon of treated water from a Midwest utility; American Water Works Association, 2004

⁹ Calculated by using the value of groundwater for irrigation

¹⁰ Calculated by using the value of groundwater for irrigation

¹¹ Resident population of U.S. 2005 was 296,410,404, U.S. Census, July 2005

¹² U.S. Geological Survey, October 2009 report on 2005 water use

¹³ U.S. Geological Survey, October 2009 report on 2005 water use

¹⁴ U.S. EPA, *FY2009 Drinking Water Factoids*

¹⁵ American Housing Survey, U.S. Census, 2007

¹⁶ U.S. EPA, 2004

¹⁷ U.S. EPA, *FY2009 Drinking Water Factoids*

¹⁸ U.S. EPA, *FY2009 Drinking Water Factoids*

¹⁹ U.S. EPA, *FY2009 Drinking Water Factoids*

²⁰ U.S. Dept. of Agriculture, Farm and Ranch Irrigation Census, 2009

²¹ Drinking Water Research Foundation, May 2005

²² U.S. Census data for employee (1997) and nonemployee firms (2002)

²³ Barnes Reports: Environmental Consulting Services Industry (NAICS 54162);

C. Barnes & Co., 2010 Edition.

²⁴ Barnes Reports: Remediation Services Industry (NAICS 56291); C. Barnes & Co., 2010 Edition

²⁵ U.S. EPA, March 2008, *2000 Community Water Systems Survey*

²⁶ U.S. Census, Current Industrial Reports – Pumps and Compressors, 2009

²⁷ U.S. Census, Current Industrial Reports – Mining and Construction Machinery, 2009

²⁸ U.S. Census, Current Industrial Reports – Refrigeration, Air Conditioning, and Warm Air Heating Equipment, 2009