

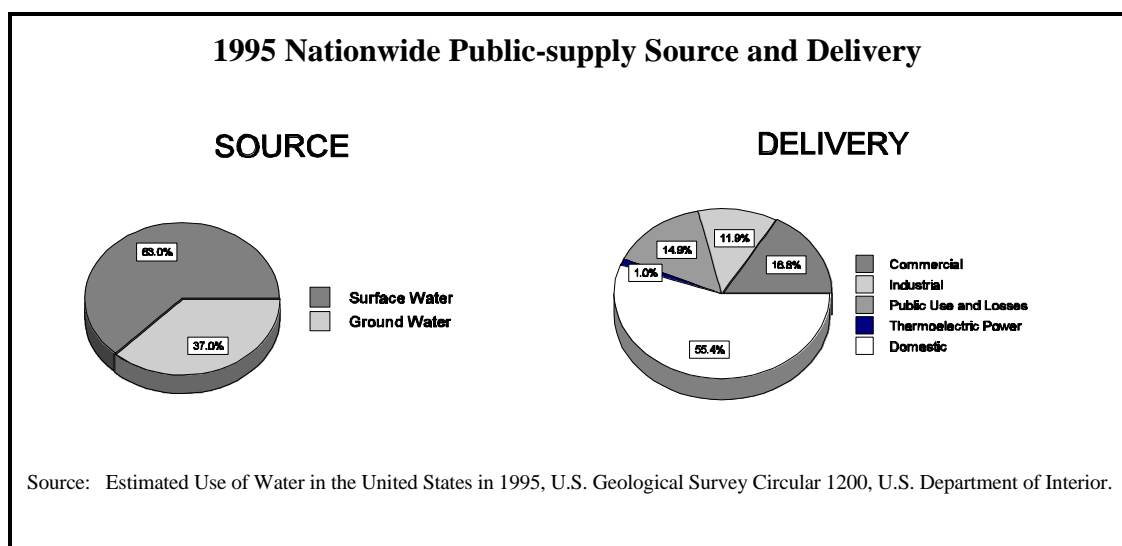


Water Usage

Water has always been a very precious resource. However, many of us do not fully understand or appreciate water's value until there is a shortage. According to the U.S. Geological Survey (USGS), "the United States as a Nation possesses abundant water resources and has developed and used those resources extensively." As consumers and users, we must be good managers today, and teach future generations the importance of water-use efficiency.

Just how are we doing? According to recent water statistics compiled by the USGS, the United States is using *less water* (402 billion gallons per day of fresh and saline water) for all uses. This 1995 data represents a 2 percent drop since 1990, and almost a 10 percent decrease since 1980 despite a continuous gain in the number of users (population). The USGS has been compiling statistics since 1950 and reports findings in five year intervals. The drop in water usage is believed to be the result of enhanced citizen awareness of the value of water, conservation programs undertaken in many communities, improved irrigation techniques, and more efficient use of water by industry. Irrigation is the leading freshwater use category at 134 billion gallons a day, down 2% since 1990. Other categories include public supply (up 4%), rural domestic and livestock (up 13%), industrial (down 3%), mining, and thermoelectric (down 3%). In a state-by-state comparison, California leads the nation in largest total water use followed by Texas, Illinois and Florida.

According to the survey, public suppliers served approximately 225 million people during 1995. The term *public supply* refers to water used by public and private water suppliers and delivered to multiple users. The chart below reflects water sources and the delivery of water for public supply.



In terms of publically supplied water, the major water-use categories are domestic, commercial, industrial, public use and losses, and thermoelectric power (representing less than 1 percent). Domestic water use includes water used for normal household purposes such as drinking, food preparation, bathing and personal hygiene, dish washing, laundry, general household cleaning, watering lawns and gardens. The average consumption per person per day is estimated at 80 gallons. This figure has stayed the same or slightly declined in some areas over the past five years. Kentucky reported an average use of 50 gallons per person per day by individuals using private water supplies (wells, cisterns, springs, etc.), and 70 gallons per person per day by individuals using public water supplies.

Water use inside the home varies from household to household, individual to individual. The American Water Works Association provides us with the following statistics for water use in a *single family home* without the use of any type of conservation measures:

Activity	Gallons Used per day	Percent of Total
Toilets	19.3	26
Clothes Washer	16.8	22.7
Showers	13.2	17.8
Faucets	11.4	15.4
Leaks	9.4	12.7
Other domestic use	1.6	2.1
Baths	1.3	1.8
Dish washer	1.0	1.4

With some minor conservation measures, the average household can reduce the inside water use by approximately 30 percent. Conservation measures can include installing water efficient fixtures and appliances, minimizing leaks and adjusting some personal water usage habits. Consider the following suggestions. Just how many of these techniques are you using? Are there some other ideas that you will consider trying?

- installing ultra-low flush toilets with 1.6 gallons Savings = 9.3 gallons per day
- use water-wise showerheads that use 2.5 gallons per minute when open Savings = 2.1 gallons per day
- use faucets that flow at 2.2 gallons per minute Savings = .2 gallons per day
- replace agitator washing machine with newer horizontal-axis high efficiency machine Savings = 5 gallons per day
- practice routine common sense leak detection periodically “zero read” water meter for leaks replace worn valves, faucet washers, O rings Savings = 4.7 gallons per day

- take shorter showers --15 minutes instead of 20 (showers using 5 gallon per minute) Savings = 25 gallons per shower
- take a 10 minute shower instead of a bath (full tub bath uses 35 gallons) Savings = 15 gallons per bathing
- turn water off in shower to soap up/shave Savings = 15 - 20 gallons per shower
- on older/conventional toilets, displace water in tank using plastic jug Savings = 15 gallons per day
- turn water off to brush teeth, shave Savings = 10 gallons per day
- run a full load of dishes in dishwasher Savings = 15 gallons per load
- peel and clean vegetables in a bowl of water instead of letting water run Savings = 15 gallons per meal
- hand washing dishes--soak dirty dishes in a basin then rinsing them off Savings = 15 gallons per meal
- use "small load" designation on washing machine for less than full load Savings = 20 to 30 gallons per load
- wait and launder clothing when you have a full load; however, DON'T over load washing machine as clothing will not be clean and re-washing will be necessary! Savings = 30 to 60 gallons per load

Even though we have seen a decrease in the amount of water used, there remains heightened concern for the quality of water. The quantity of water is a given; water quality is not! With increases in population comes increased demands for water-based recreation activities in addition to good quality drinking water. As a household, a community, a state and a nation, we must continue to make good decisions and good use of our precious water resource.

References:

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- United States Geological Survey, USGS web site, *Trends in Domestic Water Use*, Water Science for Schools.

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