

# How much water do you use? Americans aren't sure, survey shows

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Morning traffic makes its way toward downtown Los Angeles along the Hollywood Freeway past an electronic sign warning of severe drought on Feb. 14, 2014. California is taking to the highways to spread the word about water conservation after months of drought. AP Photo/Richard Vogel

Americans use twice the amount of water they think they do, according to a new study. Households appear to be particularly clueless about how much H<sub>2</sub>O they flush down the toilet every day.

In a paper published online Monday in PNAS, a researcher concluded that Americans use double the amount of water they think they do. And they were only slightly aware of how much water goes into growing the food they eat. PNAS is the magazine of the National Academy of Sciences.

"In general, people tend to underestimate water," said study author Shahzeen Attari, who's a professor at Indiana University. Not only do they think they use less water, but they are wrong by a large amount, she added.

The study's conclusions were based on an Internet survey of 1,020 people. The findings come in the middle of a national drought that extends from the Pacific Coast to portions of the Mississippi Valley. California is facing the most severe conditions.

## Toilets Use The Most Water

“Most Americans assume that water supply is both reliable and plentiful,” Attari wrote. “However, research has shown that with climate change water supply will become more variable.” [Climate change \(https://www.newsela.com/?tag=global+warming\)](https://www.newsela.com/?tag=global+warming) is blamed for increased salt content in ground water and inconsistent rainfall. These issues may lead to less water for crops or drinking.

Previous research has shown that 28 percent of the water used within the average household is the result of toilet flushing. The Environmental Protection Agency says that installing low-flow toilets will result in the greatest savings in household water use. Yet fewer than 2 percent of the surveyed adults realized this, according to the study.

“That to me was really surprising,” Attari said. “We may be underestimating how much water toilets use, because we use them frequently throughout the day.”

A standard toilet uses about 3.5 gallons of water per flush. A low-flow toilet uses just 1.6 gallons or less, Attari noted.

Reducing the number of times people flush would also decrease the amount of water used in the home, she said. “If it’s yellow, let it mellow,” she recommends.

## Clothes Washers Next In Line

Experts say that after installing a water-efficient toilet, the next greatest water saver is a high-efficiency clothes washer. A standard top-loading washer will use about 34 gallons per load. But, a high-efficiency front-loading clothes washer will use less than 15 gallons.

Yet when asked to name the single best thing Americans could do to conserve water, almost half of survey participants got it wrong. Roughly 43 percent of those surveyed said that taking fewer, or shorter, showers would save the most water.

The next most popular response was turning off the water while doing other activities, including brushing their teeth. Roughly 17 percent of those surveyed chose that.

Attari said that taking shorter showers would help to save water, and shouldn’t be discounted. However, the savings are less than many people realize.

“The average length of a shower is 8.2 to 8 minutes,” Attari said. “So if you were to decrease the length of the shower from 8 minutes to 5 minutes, that would save roughly 8 percent of your total water use in the home.”

Water expert Peter Gleick, of the Pacific Institute in Oakland, Calif., has estimated that humans require 13 gallons of clean water each day to meet basic needs. Yet, in 2005, the average American was estimated to use about 98 gallons per day.

## Clueless About Crops

However, it wasn't only personal use of water that people had a loose grasp on in the survey. They also tended to underestimate how much water was "embodied," or used to cultivate, different foods common in our diets.

The survey asked respondents to estimate how much water was used to produce a pound each of sugar, rice, cheese and coffee. Most people said they were all about the same.

In fact, each require vastly different amounts of water: 157 gallons were required to make a pound of sugar; 299 gallons for a pound of rice; 606 gallons for a pound of cheese and a whopping 2,264 gallons for a pound of coffee.

People don't realize how much water is in the different foods that we eat, Attari said.

The author said that Americans had a somewhat better sense of how much water they use than they did about the amount of power they use. She said this was understandable. Energy is changed into many different things — light, heat, motion, sound, etc. Water is much more familiar, although rarely thought about.

"Water is a really essential but neglected resource," Attari said. "We need to start paying more attention to water just in general."

## Quiz

- 1 Which of the following pieces of evidence BEST support the article's main idea?
  - (A) Americans are willing to take fewer and shorter showers; they are slightly aware of how much water goes into growing food.
  - (B) Americans use twice the amount of water they think they do; they are unaware of how much water goes into growing food.
  - (C) Americans use twice the amount of water they think they do; the study's conclusion was based on an Internet survey of 1,020 people.
  - (D) Americans living from the Pacific Coast to portions of the Mississippi Valley are in a drought; Energy is changed into many different things.
  
- 2 According to the article, what are two things people can do to cut back on water usage at home?
  - (A) use less water; eat much less food
  - (B) use a low-flow toilet; drink less coffee
  - (C) use a low-flow toilet; use a high-efficiency clothes washer
  - (D) reduce climate change; use a high-efficiency clothes washer
  
- 3 What are the two central ideas of the article?
  - (A) Americans use a lot of water every day; they don't know about it.
  - (B) Americans use a lot of water every day; "if it's yellow, let it mellow."
  - (C) Americans purchase water-reliant food; they are taking shorter and fewer showers.
  - (D) Americans purchase water-reliant food; they don't know about their actual water usage.
  
- 4 Which of the following is an objective summary of the text?
  - (A) Americans refuse to care about their actual water usage.
  - (B) Americans are causing climate change and the water drought.
  - (C) Americans are the world's most careless water users.
  - (D) Americans are not informed enough about their actual water usage.