

# Green Alternatives to Bottled Water

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The enemy of environmentalists: Evian bottles at a supermarket.



Demand for bottled water is quite healthy. Consumers purchased nine trillion gallons of it last year in the U.S., according to the Earth Policy Institute (EPI), an environmental think tank.

But it turns out there may be some sickening side effects.

"There are a lot of negative feelings about bottled water now," says Dr. Alex Mayer, a professor at Michigan Technological University and the director of the Michigan Tech Center for Water and Society, based in Houghton, Mich.

It costs a lot of money and energy to transport and store plastic water bottles,

both of the single-use and water-cooler variety — even more so when you factor in how double-parked delivery trucks snarl traffic in cities and suburbs.

"It's mind-boggling how much gas and oil it takes to make single-serve plastic bottles," says John Van Newenhizen, director of commercial product development at water-supplier Culligan International Corp., based in Rosemont, Ill. "It's also mind-boggling how the bottles stay in a landfill."

Many of the single-use water and soda bottles, made from polyethylene terephthalate or PETE, get recycled and end up in China being re-used to make clothing, carpets, PolarFleece and straps.

"The Chinese are the biggest users of recycled plastic bottles," says Peter H. Gleick, president of the Oakland, Calif.-based Pacific Institute for Studies in Development, Environment and Security, author of "The World's Water" and a recipient of a MacArthur fellowship for his work on water issues. "No one else comes close."

**Still, about 86 percent of water bottles in the U.S. are not recycled, according to the Washington, D.C.-based EPI.**

**Thirty-eight billion bottles are plowed into landfills every year**, according to Lindsay McKinley, a spokeswoman for PUR Water Filtration System, owned by the home products giant Procter & Gamble.

**So the U.S. Conference of Mayors proposes that 1,100 American cities investigate the "environmental impact" of discarded water bottles — and encourage consumers to drink good, old-fashioned municipal tap water.**

The city of Chicago has imposed a 5-cent tax on each new plastic bottle of water, hoping to discourage consumption. San Francisco banned purchases of both single-use and water-cooler bottles last year, and New York's Suffolk County may do the same.

But the municipalities themselves don't get rave reviews from environmentalists.

**"Sometimes tap water does not taste good or smell good," says Dr. Mayer. "There's a deep-seated fear that you can't trust that." That's what drove consumers, initially, to embrace bottled water, even though much of it is simply reprocessed tap water.**

"I grew up in San Diego drinking water from the Colorado River" says Dr. Mayer. "It definitely had a taste to it."

"In some places in Texas, there are so many minerals in the water that you can almost chew them," says Van Newenhizen, though he adds that "municipal water supplies in this country are very highly regulated. It's safe water."

**Still, America's water infrastructure is aging, and some fear it's endangering quality and health. "When water travels through corroded pipelines, it picks up contaminants, such as sediment, lead and microbial cysts," says McKinley.**

Arsenic contamination is also a concern in some areas of the U.S. where it's found naturally in the soil.

"That's one reason that municipalities are adding even more chlorine to the water," says Gleick. "They want to make sure it kills the contaminants in the old pipes."

The U.S. Conference of Mayors notes that America already spends \$43 billion a year to clean its tap water, and the U.S. Senate is moving forward with legislation to upgrade the infrastructure.

"I can understand the psychology of people worrying about putting drinking water from the tap into their bodies," says Dr. Mayer.

One solution may be so-called point-of-use water coolers. They're much like the coolers office workers have stood around for generations. But instead of being replenished by five-gallon jugs brought in on a truck, they're connected directly to a tap with water from the local town. Fitted with filters that can remove chlorine and other chemicals and minerals, the point-of-use coolers may be the next big thing in water consumption.

**"It's somewhat akin to putting the treatment filter under the kitchen sink," says Culligan's Van Newenhizen. "But it has more — you can have a chiller tank. So you can drink chilled water. Also, you can have a hot-water tank, and can make instant coffee or ramen noodles."**

A number of firms offer this kind of green technology. Other than Culligan and Water Logic, they include Source H2O, which offers "filtered water, but no bottle," as well as **Everpure** and Aquaverve, which sells water coolers made from stainless steel rather than plastic.

These coolers "reduce your carbon footprint, decrease contribution to landfills, reduce energy consumption," claims Water Logic International. They also "reduce dependence on oil and oil-derived products, and are an efficient, hygienic and unlimited water source."

They also don't have the old 5-gallon plastic jugs on top, familiar to anyone who's had to replace one by himself. After 90 or so uses, those jugs get stinky and have to be discarded — and that means more PETE for the recycling heap.

Starting at about \$40 a month for rentals, point-of-use water-coolers aren't cheap. And consumers have to be cautious when asking about their options for point-of-use water coolers.

"Water treatment companies might say that no water is safe without their equipment installed," says Tom Cartwright, CEO of PureOFlow, a maker of reverse-osmosis filters.

There are other environmental concerns. What about the filters from the point-of-use water cooler makers? Are they being recycled?

That's a question that bothers a lot of scientists.

"There are studies that need to be done about how consumers dispose of filters and how often they do so," says Dr. Mayer. "At this point, we just don't know."

And green groups aren't rushing out to endorse point-of-use water coolers.

"There is concern about the plastic and materials used in making those coolers," says Gleick. "There could be leaching. But there needs to be science done on that."

Given all those facts, how green are these newfangled, high-tech water coolers?

They're greener than bottled water, that's for sure, whether it's of the single-use or the reusable 5-gallon-jug variety.

The newer technologies promise to keep plastic out of landfills, and plastic particulate, leaching from large and small bottles alike, out of the mouths of consumers.