

History of Drinking Fountains (Toryn)

In 1896, Halsey W. Taylor lost his father to typhoid fever caused by contaminated water. Years later, as a plant superintendent for the Packard Motor Car Company, Taylor noticed dysentery spreading quickly through the workers, and again suspected drinking water.

These personal experiences inspired Halsey W. Taylor to dedicate his life to providing a safe drink of water in public places. In 1912 he developed the Puritan Sanitary Fountain and began producing it at the original manufacturing site in Warren, Ohio.

The first drinking fountains produced room temperature water but they soon figured out a way to have chilled water by using 20-pound blocks of ice to keep the water cold.

<http://www.halseytaylor.com/about-ht.aspx>

<http://www.squidoo.com/drinking-fountains-history>

Number of Drinking Fountains on UM Main Campus in Missoula (Toryn)

Toryn's own count: 260

UM plumbers' estimate (including residence halls): 300

Water as a Human Right (Meghann F.)

While water has not been explicitly recognized as a self-standing human right in international treaties, international human rights law entails specific obligations related to access to safe drinking water. These obligations require States to ensure everyone's access to a sufficient amount of safe drinking water for personal and domestic uses, defined as water for drinking, personal sanitation, washing of clothes, food preparation, and personal and household hygiene. These obligations also require States to progressively ensure access to adequate sanitation, as a fundamental element for human dignity and privacy, but also to protect the quality of drinking-water supplies and resources.

The concept of basic water requirements to meet fundamental human needs was first established at the 1977 United Nations Water Conference in Mar del Plata, Argentina. Its Action Plan asserted that all peoples, whatever their stage of development and their social and economic conditions, had the right to have access to drinking water in quantities and of a quality equal to their basic needs. Agenda 21, adopted at the United Nations Conference on Environment and Development in 1992, confirmed this. Subsequently, a number of other plans of action have referred to safe drinking water and sanitation as a human right.

In the Programme of Action of the 1994 International Conference on Population and Development, States affirmed that all people have the right to an adequate standard of living for themselves and their families, including adequate food, clothing, housing, water and sanitation. The Habitat Agenda, adopted by the United Nations Conference on Human

Settlements (Habitat II) in 1996, also recognized water and sanitation as part of the right to an adequate standard of living.

In November 2002, the Committee on Economic, Social and Cultural Rights adopted its general comment No. 15 on the right to water, defined as the right of everyone to sufficient, safe, acceptable and physically accessible and affordable water for personal and domestic uses. While the International Covenant on Economic, Social and Cultural Rights does not explicitly refer to the right to water, the Committee underlined that the right to water was part of the right to an adequate standard of living, as were the rights to adequate food, housing and clothing. The Committee also stressed that the right to water was inextricably linked to

the rights to health, adequate housing and food.

<http://www.ohchr.org/Documents/Publications/FactSheet35en.pdf>

Cost of bottled water (Meghann F.)

2011 total bottled water sales in US hit 9.2 billion gallons; meaning 29.2 gallons of bottled water per person. The 2011 numbers are the highest total volume of bottled water ever sold in the U.S., and also the highest per-person volume. Translated to the handy half-liter size Americans find so appealing, that comes to 222 bottles of water for each person in the country — four bottles of water for every man, woman and child, every week.

At retail, Americans spent \$21.7 billion on bottled water in 2011, just under 2007's spending.

The big three bottled water companies — Coke, Pepsi and Nestlé — have been discounting water heavily in the last few years, to sustain sales through the recession and the growing opposition.

<http://newswatch.nationalgeographic.com/2012/05/17/u-s-bottled-water-sales-are-booming-again-despite-opposition/>

The typical cost for tap water is \$0.0015/gallon vs. a gallon of bottled water at prices ranging from \$0.89 to \$8.26 per gallon.

<http://www.hydratelife.org/?p=751>

Assuming the average student drinks 30 gallons of bottled water per year, and pays 75 cents per 12-ounce bottle at the Country Store, he/she spends \$250 per year on bottled water. (Henriette's calculation)

Tap water is as healthy as bottled water (Meghann F.)

This is very hard to answer. How good the tap water is depends on the community you live in. Missoula's meets all standards set by the EPA. In other communities, you might want to filter your tap water. Some organizations say bottled water is less rigorously tested than tap water, but of course, the bottled water companies say that's not true. Most bottled water companies don't say on their labels where their water comes from.

Consumer Reports says nearly half (47 percent) of the bottled water sold in the U.S. comes from tap water. This is particularly true for water labeled P.W.S. or Purified Water. Spring Water, on the other hand, must be collected at the spring.

<http://www.consumerreports.org/cro/magazine/2012/07/do-you-know-where-your-bottled-water-comes-from/index.htm>

Consumer Reports said 2010 about drinking water in the US:

The U.S. has some of the safest drinking water in the world. But it's not perfect. Almost \$10 billion in federal funding has been earmarked in the last two years to protect the nation's waters, including almost doubling the size of the Environmental Protection Agency's 2010 Drinking Water State Revolving Fund, targeted to smaller public water systems. "Most health-based violations occur in these smaller systems," says Steve Heare, director of the agency's Drinking Water Protection Division. Either they don't have enough trained operators

or they lack the rate base to keep their facilities up to speed, he explains.

Large public water systems aren't immune, but they tend to have more resources to fix problems. Violations occur when water contains too much of one or more of the 91 contaminants, or groups of contaminants, regulated under the Safe Drinking Water Act. Water systems don't test for many other substances, including pharmaceuticals and some petrochemicals, because they're not covered by the act.

Some states have used the authority given to them by the act to enact tougher laws. California and New York, for example, both regulate MTBE, a fuel additive and potential human carcinogen. The EPA has added MTBE to its contaminant-candidate list, but its risk assessment of MTBE has been unusually difficult. Still, critics point out that no new contaminants have been added to the Safe Drinking Water Act since a 1996 provision called for a continuous five- to six-year review. The EPA stands behind the process. "There are a host of concerns out there," says Eric Burneson, chief of targeting and analysis for the Office of Ground Water and Drinking Water. "Some of them we have a handle on and some we're still pulling the science together to understand what constitutes a real public health threat."

The EPA can impose hefty fines on water systems that are significantly out of compliance. But given the financial strain some systems face, the agency appears more willing to dangle a carrot than brandish a stick. "As a practical matter, many systems are already struggling to meet the regulations," Heare says. "There's a cost to treatment and monitoring."

Even if the water coming out of the treatment plant is clean, contaminants could get into water after it leaves the facility. That's because millions of miles of distribution pipe are nearing their end of life. And household plumbing remains a main cause of lead contamination in homes built before 1986.

The bottom line? A point-of-use filter makes sense if you're worried about contaminants. And even if you're not, a filter can improve taste, odor, and clarity.

<http://www.consumerreports.org/cro/magazine-archive/2010/may/appliances/water-filters/whats-in-your-water/water-filters-whats-in-your-water.htm>

Mountain Water Company, which provides Missoula's tap water, says:

According to a scientific study by the National Resources Defense Council (1999) bottled water sold in the United States is not necessarily cleaner or safer than most tap water.

Out of more than 1,000 bottles representing 103 brands of bottled water tested, the study found that about one-third contained some levels of contamination – including synthetic organic chemicals, bacteria, and arsenic.

The NRDC study attributed the findings to FDA rules that exempt waters packaged and sold within the same state (60-70 percent of all bottled water sold in the U.S.) from federal regulation. Not all states, they found, bother to regulate these bottled waters either and less than half of U.S. states require carbonated water to meet the same standards as noncarbonated bottled water.

In addition, bottled waters that are covered by the FDA's rules are subject to less rigorous testing and purity standards than municipal tap water. Bottled water is tested less frequently for chemical contaminants and bacteria, is not required to be disinfected or tested for parasites like cryptosporidium and giardia, and is sometimes permitted to contain small amounts of contamination by E. coli or fecal coliform.

By contrast, Mountain Water Company rigorously tests for the presence of metals, pesticides, inorganic and organic chemicals, and microbiological organisms every year. We follow the strict regulations established by the United States Environmental Protection

Agency (USEPA) and the Montana Department of Environmental Quality (DEQ) to ensure that your tap water is clean and safe to drink.

It's pure, fresh water from our own aquifer at a fraction of the cost of most bottled water.

<http://www.mtnwater.com/bottledwater.htm>

Here are the results of Mountain Water Company's 2012 Quality Report:

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) and the Montana Department of Environmental Quality (DEQ) have established regulations for more than 90 substances in drinking water that limit the amount of certain contaminants in water provided by public water systems. Every year Mountain Water Company tests for the presence of metals, pesticides, inorganic and organic chemicals, and microbiological organisms, that provide our customers with the results in a detailed water quality report. The tables in these reports compare the levels of contaminants in your tap water to the USEPA health regulations so you can understand and be assured of the quality of the water delivered to your home. To view our Water Quality Reports, select one from the list to the left.

Mountain Water Company is proud to tell you that there have been no contaminants detected that exceed any federal or state drinking water standards.

<http://www.mtnwater.com/waterqualityreport.htm>

Top-Selling Bottled Water Companies (Megan H.)

In 2009, the top 10 water brands in the US and their total sales were

- 1) Aquafina (PepsiCo, \$1.18 billion)
- 2) Dasani (Coca-Cola, \$ 1.16 billion)
- 3) Poland Spring (Nestle, \$830 million)
- 4) Nestle Pure Life (Nestle, \$699 million)
- 5) Arrowhead (Nestle, \$479 million)
- 6) Crystal Geyser (CG Roxane, \$475 million)
- 7) Deer Park (Nestle, \$457 million)
- 8) Ozarka (Nestle, \$320 million)
- 9) Ice Mountain (Nestle, \$262 million)
- 10) Zephyrhills (Nestle, \$226 million)

<http://documents.foodandwaterwatch.org/doc/PureLife-web.pdf>

Top 10 BW companies in the US in 2011:

- 1) Nestle
- 2) PepsiCo

- 3) Coca-Cola
- 4) DS Waters Enterprises
- 5) Danone
- 6) CG Roxane
- 7) Culligan International
- 8) Dr Pepper Snapple Group
- 9) Crystal Rock
- 10) Glacier Water Services

<http://www.beveragemarketing.com/?service=publications§ion=bottledwaterustoc>

Information about people without access to clean water (Kim)

More than 3.4 million people die each year from water, sanitation, and hygiene-related causes (that is almost the entire city of Los Angeles). Nearly all deaths, 99 percent, occur in the developing world.

Diarrhea is the second leading cause of death among children under five in the world. Around 1.5 million deaths each year - nearly one in five - are caused by diarrhea. It kills more children than malaria, AIDS, and measles combined. Every 21 seconds, a child dies from diarrhea.

Worldwide, 780 million people (2.5 times the US population) lack access to an improved water source, meaning clean drinking water. That's approximately one in nine people worldwide.

An estimated 200 million hours are spent each day globally collecting water. Surveys from 45 developing countries show that women and children bear the primary responsibility for water collection in the majority of households. This is time not spent working at an income-generating job, caring for family members, or attending school. In just one day, it is estimated that more than 152 million hours of women and girls' time is consumed for the most basic of human needs — collecting water for domestic use.

<http://water.org/water-crisis/water-facts/water/>

Colleges and universities in the US that have banned the sale of bottled water (Elaine)

Total in the US to date: 28

- Washington University (Missouri)
- University of Portland
- Gonzaga University
- Belmont University
- Brandeis University
- Seattle University

- DePauw University
- Brown University- Rhode Island
- Central Michigan University- Michigan
- College of St. Benedict- Minnesota
- Cornell University- New York
- Dartmouth College- New Hampshire
- Emerson College- Massachusetts
- Evergreen State College- Washington
- Hampshire College- Massachusetts
- Harvard University- Massachusetts
- Loyola University- Illinois
- Macalester College- Minnesota
- Muhlenberg College- Pennsylvania
- Princeton University- New Jersey
- Seattle Central Community College
- St. Michael's College- Vermont
- St. Norbert College- Wisconsin
- UC Berkeley- California
- University of Nevada, Las Vegas- Nevada
- University of Vermont- Vermont
- University of Wisconsin at Stevens Point- Wisconsin
- Vassar College- New York

<http://www.banthebottle.net/map-of-campaigns/>

What bottled water does to the environment (Meghann F.)

Bottled water is a drain on the environment: The U.S. public goes through about 50 billion water bottles a year, and most of those plastic containers are not recycled, according to Elizabeth Royte's 2008 book *Bottlemania: How Water Went on Sale and Why We Bought It*.

Transporting the bottles and keeping them cold also burns fossil fuels, which give off greenhouse gases. And groundwater pumping by bottled-water companies draws heavily on underground aquifers and harms watersheds, according to the Sierra Club, an environmental nonprofit. And according to some estimates, it takes up to three liters of water to produce one liter of bottled water.

More than 80 percent of recyclable plastic bottles end up in landfills each year. They do not break down naturally and release toxic chemicals when they finally do decompose, according to the Columbia Water Center.

<http://news.nationalgeographic.com/news/2010/03/100310/why-tap-water-is-better/>

The Pacific Institute estimates that in 2006:

- Producing the bottles for American consumption required the equivalent of more than 17 million barrels of oil, not including the energy for transportation

- Bottling water produced more than 2.5 million tons of carbon dioxide
- It took 3 liters of water to produce 1 liter of bottled water

http://www.pacinst.org/topics/water_and_sustainability/bottled_water/bottled_water_and_energy.html