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Technology Of Bottled Water



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Introduction

Bottled water is a drinking water (e.g., well water, distilled water, mineral water, or spring water) packaged in plastic or glass water bottles. Bottled water may be carbonated or not. Sizes range from small single serving bottles to large carboys for water coolers. The bottled water industry is a great field with lot's to know. In this book we will take you in a trip in this industry, starting from the different types of water used in making bottled water and ending with constrains about the using it in general.

Also this industry is following a lot of regulation as it's considered as a packed food products according to the FDA standards which make this industry a very challenging one.

Chapter 1- Bottled water

Although vessels to bottle and transport water were part of the earliest human civilizations, bottling water began in the United Kingdom with the first water bottling at the Holy Well in 1621. The demand for bottled water was fueled in large part by the resurgence in spa-going and water therapy among Europeans and American colonists in the 17th and 18th centuries. The first commercially distributed water in America was bottled and sold by Jackson's Spa in Boston in 1767. Early drinkers of bottled spa waters believed that the water at these mineral springs had therapeutic properties and that bathing in or drinking the water could help treat many common ailments.

The popularity of bottled mineral waters quickly led to a market for imitation products. Carbonated waters developed as means for approximating the natural effervescence of spring-bottled water, and in 1809 Joseph Hawkins was issued the first U.S. patent for "imitation" mineral water. As technological innovation in nineteenth century lowered the cost of making glass and improved production speed for bottling, bottled water was able to be produced on a larger scale and the beverage grew in popularity. Bottled water was seen by many as a safer alternative to 19th century municipal water supplies that could be contaminated with pathogens like cholera and typhoid. By the middle of the century, one of America's most popular bottlers, Saratoga Springs, was producing more than 7 million bottles of water annually.

In the United States, the popularity of bottled water declined in the early 20th century, when the advent of water chlorination reduced public concerns about water-borne diseases in municipal water supplies. However, it remained popular in Europe, where it spread to cafes and grocery stores in the second half of the century. In 1977, Perrier launched a successful advertisement campaign in the United States, heralding a rebirth in popularity for bottled water. Today, bottled water is the second most popular commercial beverage in the United States, with about half the domestic consumption as soft drinks.

Water chemistry

Many of the early developments in the field of chemistry can be attributed to the study of natural mineral waters and attempts to replicate them for commercial sale. Joseph Priestley, who would discover oxygen in 1775, made his first contributions to the field of chemistry by dissolving carbon dioxide in water, for which he was awarded the Copley Medal in 1773. He would go on to work with Jacob Schwepes, founder of Schwepes, in developing "aerated" waters for commercial sale.

PET plastic bottles

In 1973, DuPont engineer Nathaniel Wyeth patented polyethylene terephthalate (PET) bottles, the first plastic bottle to be able to withstand the pressure of carbonated liquids. Today, PET plastic has replaced glass as the preferred material for single-serving bottled water containers due to its light weight and resistance to breaking.

Chapter 2- Types and Forms of Bottled water

Some of the more common types of bottled water are:

- Artesian water – this is water that originates from a confined aquifer that has been tapped and in which the water level stands at some height above the top of the aquifer.
- Fluoridated – this type of water contains added fluoride. This category includes water classified as “For Infants” or “Nursery.”
- Groundwater – this type of water is from an underground source that is under a pressure equal to or greater than atmospheric pressure.
- Mineral water – water from a mineral spring that contains various minerals, such as salts and sulfur compounds. It comes from a source tapped at one or more bore holes or spring, and originates from a geologically and physically protected underground water source. No minerals may be added to this water.
- Purified water – this type of water has been produced by distillation, deionization, reverse osmosis, or other suitable processes. Purified water may also be referred to as “demineralized water”.
- Sparkling water – Sparkling water contains the same amount of carbon dioxide that it had at emergence from the source. The carbon dioxide may be removed and replenished after treatment.
- Spring water – this type of water comes from an underground formation from which water flows naturally to the Earth’s surface.
- Sterile water – this type of water meets sterilization requirements, for example, those specified under “sterility tests” in the United States Pharmacopoeia.
- Well water – well water is taken from a whole tapping, etc. This hole may be bored, drilled, or otherwise constructed in the ground.

Product forms

The Beverage Marketing Corporation defines the bottled water market segment as “retail PET, retail bulk, home and office delivery, vending, domestic sparkling and imports”, but excluding “flavored and enhanced water.”

Purified water vending machines

A number of cities and companies worldwide have vending machines that dispense purified water into customer’s own containers. All dispensers filter the location’s tap water. In North America, these machines are typically located outside of supermarkets.

Of all the water vending companies, Glacier Water is by far the largest. Since its inception in 1983, Glacier Water has experienced significant growth in machine placements and has created an extensive network of approximately 17,000 water vending machines (year 2010) located throughout the United States and Canada.



A bottle-less drinking water vending machine in Pattaya, Thailand. Customers bring their containers

Bottled water service

It is not uncommon for business or individuals to subscribe to a bottled water service. These services deliver water either monthly or weekly, sometimes even daily. Traditionally, water in glass bottles (jugs) was provided to electric coolers in areas of businesses without plumbing. Plastic containers have replaced those glass jugs, however, dispensers at businesses now may stand alongside existing water taps or fountains.

Storage

Bottled water is often stored as part of an emergency kit in case of natural disaster. The U.S. Federal Emergency Management Agency (FEMA) says the “safest” and “most reliable” source of drinking water is store bought bottled water. Commonly, disaster management experts recommend storing 1-US-gallon (3.8 L) of water per person, per day for at least three days. This amount is intended to include water for drinking and cooking as well as water for hand washing, washing dishes, and personal hygiene. Factory-containers of water have an indefinite shelf life, as long as they remain unopened and undamaged. The sell-by date is voluntarily and individually set by manufacturers to indicate the length of time that they believe the water will taste and smell fresh, rather than to indicate any issue of contamination or food safety.

Regulation of Bottled water

Food and Drug Administration

Bottled water is comprehensively regulated by the U.S. Food and Drug Administration (FDA) as a packaged food product. By law, the FDA regulations for bottled water must be at least as stringent as the Environmental Protection Agency standards for tap water.

The FDA has established “Standards of Identity” for bottled water products sold in the U.S. For a product to be considered “bottled water”, it cannot contain sweeteners or chemical additives (other than flavors, extracts or essences) and must be calorie-free and sugar-free. If flavors, extracts and essences—derived from spice or fruit—are added to the water, these additions must comprise less than 1% by weight of the final product. The FDA Code of Federal Regulations establishes limitations for the amount of fluoride that can added to water. Mineral water contains at least 250 parts per million total dissolved solids (TDS). “Purified water” is defined in the United States Pharmacopoeia.

Food Standards Australia New Zealand

Food Standards Australia New Zealand’s Food Standards Code limits fluoride in bottled water to between 0.6 and 1.0 milligrams per litre, and requires any addition to be specified on the product label.

Chapter 3- Bottled water Markets

Global sales

Global bottled water sales have increased dramatically over the past several decades, reaching a valuation of around \$60 billion and a volume of more than 115,000,000 cubic metres (3.0×10 US gal) in 2006. U.S. sales reached around 30 billion bottles of water in 2008, a slight drop from 2007 levels .

The rate of consumption more than quadrupled between 1990 and 2005. Spring water and purified tap water are currently the leading global sellers. By one estimate, approximately 50 billion bottles of water are consumed per year in the U.S. and around 200 billion bottles globally.

Australia

The Australasian Bottled Water Institute is a regional member of the International Council of Bottled Water Associations. The bottled water industry in Australia is worth approximately \$400 million per year, An upmarket restaurant in Sydney has stopped selling bottled water and started using a machine costing a \$5000 to filter, chill and carbonate tap water to get the same quality water.

European Union

Directive 2009/54/EC deals with the marketing and exploitation of natural mineral waters in the European Union. The two main types of bottled water recognized are mineral water and spring water.

Broadly speaking, “mineral water” is groundwater that has emerged from the ground and flowed over rock. Treatment of mineral water is restricted to removal of unstable elements such as iron and sulfur compounds. Treatment for such minerals may extend only to filtration or decanting with oxygenation. Free carbon dioxide may be removed only by physical methods, and the regulations for introduction (or reintroduction) of CO₂ are strictly defined. Disinfection of natural mineral water is completely prohibited, including the addition of any element that is likely to change bacterial colony counts. If natural mineral water is effervescent, it must be labelled accordingly, depending on the origin of the carbon dioxide: naturally carbonated natural mineral water (no introduction of CO₂); natural mineral water fortified with gas from the spring (reintroduction of CO₂); carbonated natural mineral water (CO₂ added following strict guidelines).

Directive 2001/83/EC deals with bottled water that is considered a “medicinal product” and is thus excluded from the scope of the other regulation.

India

The bottled water industry in India witnessed a boom in the late 1990s soon after Bisleri launched its packaged drinking water in the country. This significant growth was fuelled by a surge in advertising by the industry players that “bottled water was pure and healthy”.

The total market was valued at ₹60 billion (US\$890 million) in 2013, of which the top five players (Bisleri, PepsiCo, Coca-Cola, Dhariwal and Parle) accounted for 67% of the market share. This market is expected to grow at a CAGR of 22%, to reach ₹160 billion (US\$2.4 billion) in 2018.

In 2016, Sikkim announced restrictions on the usage of plastic water bottles (in government functions and meetings) and styrofoam products.

Lebanon

Lebanon has one of the fastest growth rate of per capita consumption of bottled water. Lebanon has seven major brands of bottled mineral water for local consumption and for exportation to the water-starved countries on the Arabian Peninsula and in the Persian Gulf.

New Zealand

Bottled water in New Zealand is regulated by Food Standards Australia New Zealand and must comply with the Food Act 1981. From July 2009 fluoride was allowed to be present in bottled water as an additive or as a natural occurring mineral.

Pakistan

Due to contaminated water being widespread, in the mid-1980s urban families started installing filtration units at home. This later developed into companies providing mineral water delivery services at home. Use of these 1-US-gallon (3.8 L) bottles that could be attached to a dispenser is still widespread.

Bottled water was made famous by one of the largest marketing campaigns in Pakistan history undertaken by Nestle. Eventually, other bottlers including dozens of local ones, Coca-Cola, Pepsi, Mineral Drops by water icon, Nature, Vey, Nova Pure Water Larkana, Mina Water, Great Water Islamabad, Dew Drop, and other imported brands such as Evian began marketing in the country.

United States

The U.S. is the second largest consumer market for bottled water in the world, followed by Mexico, Indonesia, and Brazil. China surpassed the United States to take the lead in 2013. In 2008, U.S. bottled water sales topped 8.6 billion US gallons (33,000,000 m) for 28.9% of the U.S. liquid beverage market, exceeding sales of all other beverages except carbonated soft drinks, they are followed by fruit juices, and sports drinks. Americans drink 21 US gallons (79 L) of bottled water per capita per year.

In the United States, bottled water and tap water are regulated by different federal agencies: the Food and Drug Administration (FDA) regulates bottled water and the Environmental Protection Agency (EPA) regulates the quality of tap water. The International Bottled Water Association (IBWA) is headquartered in Alexandria, VA.

From 1970 (16 brands) over 1998 (50 brands) to 2012 (195 brands), the number of mineral water brands in the U.S. has grown exponentially.

Chapter 4- Consumer information

Labeling

In the United States, the Food and Drug Administration (FDA) regulates all packaged foods and beverage products, including bottled water, and mandates labeling requirements. FDA labeling requirements include a statement of the type of water in the container, compliance with the applicable definitions in the FDA Standards of Identity, ingredient labeling, name and place of business of the manufacturer, packer or distributor, net weight, and, if required, nutrition labeling.

Consumer information

Public water systems are required by the U.S. Environmental Protection Agency (EPA) to provide households in their service territories with a Consumer Confidence Report (CCR) that provides information on the quality of their water during the previous year. Such disclosures are not required by the FDA of any packaged food or beverage product, including bottled water. All packaged foods and beverages, must be manufactured according to FDA regulations and must meet all applicable quality and safety standards.

In Canada, bottled water must meet the standards in the Food and Drugs Act & Regulations (FDAR) as it is considered a food. The FDAR works in partnership with Health Canada and Canadian in developing the policies regarding bottled water. The CFIA focuses more on regulations pertaining to packaging, labeling, advertising, and other safety practices, whereas the FDAR focuses more on the water itself.

For example, the bottled water must meet the Food Inspection Agency (CFIA) Regulations in Division 12, Part B of the Act must be met before it is approved for sale.



A bottled water refill station in a Canadian grocery store

Some of the regulations include: labeling terms, safety standards (i.e.: what is/isn't acceptable), and microbiological standards (i.e.: chlorine). In addition to this, the type of filtration method the water has gone through must be shown on the label, as stated in Section B.12.009 Additional information regarding regulations can be found on the CFIA website. The regulations specific to bottled water is in Division 12 and 15, which specify what can be added, such as the amount of arsenic and lead. Regulations are always being updated to conform to new scientific data, laws, new products, and new improvements. In terms of the types of water sold, spring and mineral water must meet the following criteria:

- originate from an underground source which is not part of a community water supply; and
- be naturally fit to drink (potable) at the source; and
- Before bottling, not be treated in any way that changes the original chemical composition of the water. (The allowable treatments are discussed in section 1.2.)

In Canada, there are two categories of bottled water: 1) spring/mineral water, or 2) water other than mineral water or spring water.

Chapter 5- Emergency Preparedness

Emergency preparedness refers to the steps taken prior to a natural disaster or emergency to ensure safety throughout the event. The American Red Cross and Federal Emergency Management Agency (FEMA) recommend that individuals and families maintain disaster supply kits in the event that an emergency disrupts food supply or public water systems, blocks roads, or leaves people unable to find essentials. Following disasters such as floods, blizzards, or earthquakes, water sources can be cut off or contaminated, limiting access to safe, clean drinking water. For this reason, FEMA recommends that all disaster supply kits include one gallon of water per person per day for at least three days for drinking and sanitation. In hot climates, FEMA recommends doubling this quantity.

For the safest water supply, FEMA recommends commercially bottled water kept in a cool, dark place. As an alternative, FEMA recommends using disinfected food-grade water containers to store tap water and replacing the water every six months.

Bottled Water in Emergency Response

Hurricanes

Following Hurricane Sandy, FEMA requested 5.4 million bottles of water from Nestle North America to aid in disaster relief efforts. Nestle donated 3 million bottles of water to Haiti following the 2010 earthquake. In the wake of Hurricane Katrina in 2005, FEMA requested 100 tractor trailers' worth of bottled water (approximately 200,000 cases) from the American Beverage Association.

Tornadoes

AmeriCares, an international disaster relief non-profit, donated 109,000 bottles of water to residents in and around Moore, Oklahoma following the tornadoes. Members of the International Bottled Water Association donated more than 400,000 additional bottles of water to the victims of the tornado.

Bottled water debates

Bottled water is bought for many different reasons including taste, convenience, poor tap water quality and safety concerns, health concerns and as a substitute for sugary drinks. The environmental impact, container safety, water origin, emergency supplies and role of the bottled water industry continue to be areas of concern for many people.

Most bottled water containers are made from recyclable PET plastic, and some of these bottles end up in the waste stream in landfills. The financial and environmental costs of transportation of bottled water has been another concern because of the energy used and the consequent release of carbon dioxide and the potential impact on climate change.

In some cases it can be shown that bottled water is actually tap water. However, it is also argued that the quality specifications for some bottled waters in some jurisdictions are more stringent than the standards for tap-water. In the USA, bottled water that comes from municipal suppliers must be clearly labeled as such unless it has been sufficiently processed to be labeled as "distilled" or "purified".

It has been argued that bottled water companies should only exist for emergency situations when public water supplies are unsafe, unavailable or overwhelmed. The contrary view is that if regulations are placed on the availability of bottled water, bottled water companies will not have the sufficient supplies when a water system is compromised and that the only reason bottled water is readily available during emergencies is because the industry is maintained by routine purchases.

One American study showed that “even in areas with safe tap water, African American, Polish American and Latino parents were three times more likely to give their children mostly bottled water compared to non-Latino white children, because of their belief that bottled water is safer, cleaner, better tasting, or more convenient”. The economic implications of this also showed serious inequities: as a percentage of household income, whites reported median spending of 0.4% of their income on bottled water; African Americans and Latinos reported median spending to be more than twice as high.” The study volunteers that: “For poor families, the use of bottled water may lead to less availability of resources for other health needs.....by the rather striking levels of expenditure on water relative to household income.” On a global scale, markets for bottled water in poorer developing countries are growing rapidly due to increased fears of “contaminated tap water, inadequate municipal water systems, and increased marketing on the part of bottled water companies.” Sales of bottled water in Mexico, China, and parts of India, are rising steeply.

Perceptions about bottled water

Bottled water is perceived by many as being a safer alternative to other sources of water such as tap water. Bottled water usage has increased even in countries where clean tap water is present. This may be attributed to consumers disliking the taste of tap water or it's organoleptic. Another contributing factor to this shift could be the marketing success of bottled water. The success of bottled water marketing can be seen by Perrier's transformation of a bottle of water into a status symbol. However, while bottled water has grown in both consumption and sales, the industry's advertising expenses are considerably less than other beverages. According to the Beverage Marketing Corporation (BMC), in 2013, the bottled water industry spent \$60.6 million on advertising. That same year, sports drinks spent \$128 million, sodas spent \$564 million, and beer spent \$1 billion.

Consumers tend to choose bottled water due to health related reasons. In communities that experience problems with their tap water, bottled water consumption is significantly higher. The International Bottled Water Association guidelines state that bottled water companies cannot compare their product to tap water in marketing operations. Consumers are also affected by memories associated with particular brands. For example, Coca-Cola took their Dasani product off the UK market after finding levels of bromate that were higher than legal standards because consumers in the UK associated this flaw with the Dasani product.

“Bottled water sales are higher amongst African – American, Asians and Hispanic groups, which typically have lower incomes than whites.” Some hypothesize that these differences are due to the geographic distribution of ethnic groups. It was theorized that ethnic differences in bottled water usage “mirror the variability of water system quality between urban, suburban and rural areas (Abrahams et al. 2000) and it was also pointed out that they might reflect the memory of past problems caused by deficient tap-water systems in deprived areas (Olson 1999).” In France, a similar geographic study in the early 1970s found that bottled water consumption was found to be much higher in urban areas (Ferrier 2001).

This finding was “also explained in terms of the poor quality of urban tap water and of the bad condition of the old lead pipes in French cities. Nonetheless, while poor tap water quality may motivate the public to search for alternative sources, it alone does not necessarily lead to higher consumption of bottled water.”

Some surveys “found that bottled water, far from being an alternative to tap water, seems to be mostly consumed as a substitute for alcoholic and traditional soft drinks (e.g. AWWA-RF 1993; FWR 1996) – the exception being when water contamination presents serious health risks and the trust in the tap water company is highly eroded (e.g. Lonnon 2004).” Another explanation for the rise in popularity of bottled water is alternative explanation is that “the consumption of ‘pure’ and ‘natural’ bottled water in degraded environments may represent a symbolic purging behavior.”

Many low-income families avoid drinking tap water because they fear it may cause sickness. Bottled, filtered, and tap water are all for the most part safe in the United States. The Environmental Protection Agency regulations for tap water are “actually stricter than the Food and Drug Administration regulations for bottled water.” A study of drinking water in Cincinnati, Ohio, discovered that bacterial counts in bottled water were often higher than those in tap water and fluoride concentration was inconsistent.

Globally, there is an intensifying environmental backlash against bottled water usage. As global consumption of bottled water soars, environmental groups such as the World Wide Fund for Nature (WWF) and Greenpeace have warned of the huge environmental footprint of the plastic in which the water is packaged.

In 2001 a WWF study, “Bottled water: understanding a social phenomenon”, warned that in many countries, bottled water may be no safer or healthier than tap water and it sold for up to 1,000 times the price. It said the booming market would put severe pressure on recycling plastics and could lead to landfill sites drowning in mountains of plastic bottles. Also, the study discovered that the production of bottled water uses more water than the consumer actually buys in the bottle itself.

Pricing

Bottled water is more expensive than municipally-supplied tap water. Tap water sources and delivery systems (taps and faucets) are fixed in place while bottled water is available at many differing price points and in a variety of size formats.



A street vendor selling bottled water in Istanbul, Turkey

“The consumption of bottled and filtered water has dramatically increased in the United States during the past decade, with bottled water sales tripling to about \$4 billion a year. More than 50% of the US population drinks bottled water and ‘people spend from 240 to over 10,000 times more per gallon for bottled water than they typically do for tap water.’ An annual supply of bottled water for a person who consumes 8 glasses a day would cost approximately \$200; the same amount of tap water would cost approximately \$0.33. In general, women are more likely to drink bottled water than men, and Hispanic women are the group most likely to drink bottled water.”

The Beverage Marketing Corporation (BMC) states that in 2013, the average wholesale price per gallon of domestic non-sparkling bottled water was \$1.21. BMC's research also shows that consumers actually tend to buy bottled water in bulk from supermarkets (25.3%) or large discount retailers (57.9%) because it costs significantly less. Convenience stores are likely to have higher prices (4.5%), as do drug stores (2.8%). The remaining 9.5% is accounted for through vending machines, cafeterias and other food service outlets, and other types of sales.

Bans

In response to environmental and financial concerns, a few localities and U.S. colleges are banning bottled water sales.

In 2009, the small New South Wales town of Bundanoon voted to become the first town in the world to ban the selling or dispensing of bottled water. Bundanoon caught the attention of many other cities around the world.

After a Sydney-based beverage company wanted to open a water extraction plant in the New South Wales town Bundanoon, residents outlawed the sale of bottled water. The town continues to fight the company's proposal in court. "In the same week the New South Wales state premier also banned all state departments and agencies from buying bottled water because of its huge environmental footprint, joining more than 70 cities in the United States, Canada and the United Kingdom that have banned bottled water in their departments."

In 2012, the town of Concord, Massachusetts became the first in the United States to ban the sale of bottled water. Specifically, sales of non-sparkling, unflavored drinking water in single-serving polyethylene terephthalate (PET) bottles of 1 liter (34 ounces) or less are prohibited. The ban went into effect on 1 January 2013.

Health concerns

In the United States, bottled water and tap water are regulated by different federal agencies: the Food and Drug Administration (FDA) regulates bottled water and the Environmental Protection Agency (EPA) regulates the quality of tap water. Under the Safe Drinking Water Act the EPA has set maximum contaminant levels for approximately 90 contaminants that might be found in drinking water and 15 secondary maximum contaminant levels.

In some areas, tap water may contain added fluoride, which helps prevent tooth decay and cavities. Some bottled water manufacturers in the United States add fluoride to their product, or provide a fluoridated bottled water product. The Food and Drug Administration of the United States does not require bottled water manufacturers to list the fluoride content on the label. However, unlike tap water where the amount of fluoride added by municipalities to drinking water is not federally regulated, the FDA has set specific limits for how much fluoride may be found in bottled water. Water fluoridation remains controversial in countries that require it (the United States, United Kingdom, Ireland, Canada, Australia, and a handful of other countries).

Safety

There have been no major outbreaks of illness or serious safety concerns associated with bottled water in the past decade, an FDA official stated in testimony before a July 9, 2009 Congressional hearing. Conversely, as noted in the Drinking Water Research Foundation's (DWRF) 2013 report, "Microbial Health Risks of Regulated Drinking Waters in the United States," EPA researchers reported an estimated 16.4 million cases of acute gastrointestinal illness per year are caused by tap water. Subsequent research has estimated that number of illnesses to be closer to 19.5 million cases per year. In addition, the Centers for Disease Control and Prevention (CDC) reports that waterborne diseases, such as Cryptosporidiosis and Giardiasis, cost the U.S. healthcare system as much as \$539 million a year in hospital expenses.

Bottled water vs carbonated beverages

Bottled noncarbonated drinking water competes in the marketplace with carbonated beverages (including carbonated water) sold in individual plastic bottles. Consumption of water often is considered a healthier substitute for sodas.

According to the Container Recycling Institute, sales of flavored, non-carbonated drinks are expected to surpass soda sales by 2010. In response, Coca-Cola and Pepsi-Cola have introduced new carbonated drinks that are fortified with vitamins and minerals, Diet Coke Plus and Tava, marketed as "sparkling beverages."

Bottled water versus tap water

Bottled water may have reduced amounts of copper, lead, and other metal contaminants since it does not run through the plumbing pipes where tap water is exposed to metal corrosion, however, this varies by the household and plumbing system.

In much of the developed world chlorine often is added as a disinfectant to tap water. If the water contains organic matter, this may produce other byproducts in the water such as trihalomethanes and halo acetic acids, which has shown to increase the risk of cancer. The level of residual chlorine found at around 0.0002 g per litre, which is too small to cause any health problems directly. The chlorine concentration recommended by World Health Organization is between 0.0005 and 0.0002 g/L.

The Natural Resources Defense Council, Sierra Club, and World Wildlife Fund have urged their supporters to consume less bottled water. Anti-bottled-water-campaigns and organizations, such as Corporate Accountability International, typically argue that bottled water is no better than tap water, and emphasize the detrimental environmental side-effects of disposable plastic bottles.

In a 2003 episode of the Showtime series Penn & Teller: Bullshit! Restaurant diners appeared unable to discern between bottled water and water from a garden hose behind the restaurant.

The recent documentary Tapped argues against the bottled water industry, asserting that tap water is healthier, more environmentally sustainable, and more ecologically sound than bottled water. The film focuses on the bottled water industry in the United States. The film has received largely positive reviews, and has spawned college campus groups such as Beyond the Bottle. Yet, as many people remain generally unaware of the negative health and environmental impacts associated with bottled water, recent research in environmental psychology has started to investigate how to reduce the public's consumption of bottled water.