

Banning Bottled Water

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Here's another story from Dr. Mir Ali which I'm happy to post. I have never understood why people buy bottled water when tap water is so prevalent and we spend so much of our tax dollars keeping a health water supply. The cost is ridiculous. I'm thinking canned fresh air from Alaska and Yukon might be a great seller.

The following photo is from photographer [Chris Jordon](#) and depicts 2 million plastic bottles (not all water)...the same amount used every 5 minutes in the US.



Resolution to Banning Bottled Water in the Municipalities

Dr. Mir F. Ali

Early bottled mineral [water was so expensive](#) that only the rich and upper classes could afford it. The situation began changing in the mid-1800s with the advent of the industrial revolution and shipping by railway. As early as the mid-20th century, worldwide production had already climbed to several hundred million bottles per year.

Even though bottled water didn't take off in a real sense until the late 1980's the world was absolutely amazed with the brilliant idea of using the plastic bottle that Vittel introduced in 1968. The affordability as well as the dazzling marketing strategy stimulated commoners around the world to pay more for a bottle of water than for gasoline. Perhaps [the biggest boon](#) to the bottled water industry was the introduction of the PET plastic 500 ml water bottle in 1989 which is made from fossil fuels. Light, cheap, durable and — at least in

theory — completely recyclable, it helped make bottled water a convenience many of us couldn't do without.

In a simple terms, bottled water is defined as drinking water that is put into bottles and offered for sale. There are **three main types** of bottled water:

1. **Natural mineral water** is, in the European Union, an extremely specific product responding to strict criteria. It is underground still or aerated water, protected against pollution hazards and characterized by a constant level of minerals and trace elements. This water cannot be treated, nor can it have any exogenous elements, such as flavours or additives.
2. **Spring water** in Europe is also underground water protected against pollution hazards. It cannot be treated, but it doesn't need to have a constant mineral composition. Water from different springs can be sold under the same brand name.
3. **Purified water** is surface or underground water that has been treated in order to be suitable for human consumption. It differs from tap water only through the way it is distributed (in bottles rather than through pipes) and its price.

The global market for bottled water grew by 7 percent in 2006 to reach a value of \$60.94 billion and 8.1 percent to reach a volume of 115.39 billion litres. They expect the growth of 41.8 percent in 2011 which is estimated to be a value of \$86.42 billion. In 2011, the market is forecast to have a volume of 174.29 billion litres, an increase of 51% since 2006. Europe is the leading region in bottled water sales, holding a 52.9% share of the global market. 46.2% of all bottled water revenues are generated through supermarkets and hypermarkets. In 2006, 38 billion plastic drinking bottles ended up in Global Landfills which will begin to decompose in the year 2706.

The U.S. is the largest consumer market for bottled water in the world, followed by Mexico, China, and Brazil. In 2008, U.S. bottled water sales topped 8.6 billion gallons for 28.9% of the U.S. liquid refreshment beverage market, exceeding sales of all other beverages except carbonated soft drinks, followed by fruit juices and sports drinks.

In Canada, pre-packaged water (bottled water) is considered to be a food and is regulated under Division 12 of the Food and Drug Regulations. A Canadian study notes that a one-litre brand-name bottle of flat water costs about \$1.50. That's about 3,000 times more expensive than an equal amount of municipal tap water. \$730 million of water bottles were sold in Canada in 2007 which is translated into 1.8 billion litres of water that Canadians drank in 2007. 30 per cent Canadians drink bottled water as a primary source of water. 1 billion: is the conservative estimate of the number of single-serve plastic water bottles Canadians go through each year. Unfortunately, 200 million of those water bottles end up in landfill sites each year in Canada.

A recent report summarized why consumers choose to drink bottled water: In many cases, bottled water is an alternative to tap water. Consumers think it tastes better than tap water (no chlorine taste), they perceive it as being safer and of better quality. They also look for security - food scandals in

industrialised countries and water-borne diseases in developing countries have a great impact on their attitude. Bottled water is perceived as pure and safe, although it is not necessarily the case. Consumers care for their health and their well-being - they buy bottled water to feel well, to lose weight. Bottled water is a healthy alternative to other beverages.

However, bottled water processed with distillation or reverse osmosis lacks fluoride ions which are sometimes naturally present in ground water. The drinking of distilled water may conceivably increase the risk of tooth decay due to a lack of this element. According to a 1999 NRDC study, about 22 percent of brands tested contained, in at least one sample, chemical contaminants at levels above strict state health limits, some of which may pose health risks, if consumed over a long period of time. However, the NRDC report conceded that "Most waters contained no detectable bacteria, and the levels of synthetic organic chemicals and inorganic chemicals of concern for which were tested were either below detection limits or well below all applicable standards." Meanwhile, a report by the Drinking Water Research Foundation found that of all samples tested by NRDC, "federal FDA or EPA limits were allegedly exceeded only four times, twice for total coliforms and twice for fluorides.

Here are some facts about bottled water:

- The Pacific Institute, a California-based organization, estimates that the total amount of energy required for every bottle of water, from making the bottle to transporting, cooling and disposing of the empties, "is equivalent, on average, to filling a plastic bottle one-quarter full with oil;"
- 17 million barrels of crude oil are used annually to produce the plastic used to bottle water, according to the Earth Policy Institute. Bottled water is hauled long distances for distribution, burning massive quantities of fuel;
- In 2006, the equivalent of 2 billion half-litre bottles of water were shipped to U.S. ports, creating thousands of tons of global warming pollution and other air pollution. In New York City alone, the transportation of bottled water from Western Europe released an estimated 3,800 tons of global warming pollution into the atmosphere. In California, 18 million gallons of bottled water were shipped in from Fiji in 2006, producing about 2,500 tons of global warming pollution;
- In addition, plastic bottles constitute a long-term environmental hazard as they are not biodegradable and reactions between them and various chemicals in the environment may result in the emission of gases that are hazardous to human health; and
- In the case of bottled water, microbial monitoring results may not be typical of the entire water volume. Only a small amount of water is checked and the use of indicators might not reflect the presence of certain pathogens such as protozoa.

It was reported that the shift in public opinion about the environmental consequences of plastic in general prompted some Canadian municipalities to ban the sale of bottled water from their properties. Nelson was the first to prohibit its sales in city buildings last May, followed by London in August and Toronto in December. School boards across the country are also starting to ban their sale to students.

[Federal Canadian Municipalities \(FCM\)](#) passed a resolution on March 7, 2009 in Victoria, encouraging municipalities to “phase out the sale and purchase of bottled water at their own facilities where appropriate and where potable water is available.” Even though municipalities have no jurisdiction over banning on the sale of bottled water as regulating bottled water for public consumption falls under provincial and federal jurisdiction, it illustrates how municipalities are leading by example to encourage environmentally sustainable water choices. The resolution also calls on municipalities to develop awareness campaigns about the positive benefits and quality of municipal water supplies. Municipalities will determine their local course of action.

The reasoning behind this resolution is that bottled water containers may be recyclable but they still have to be manufactured and transported, which uses significant energy, between 40 and 80 per cent end up in the local landfill which is a burden on the environment and a cost for municipal taxpayers.

“If this resolution at the FCM goes through, it will send an important message to the rest of the world about the leadership of Canadian municipalities in reclaiming water as a public resource,” says Maude Barlow, senior advisor on water to the President of the United Nations General Assembly and national chairperson of the Council of Canadians. “The FCM adopting a policy opposing bottled water would also be an important step toward a national water policy that would improve the public system and ensure clean drinking water standards for all communities across the country.”

[In January](#), the London chapter of the Council of Canadians worked with the city of London to have this resolution tabled at the FCM. So far, 27 municipalities across Canada have phased out the sale of bottled water in their facilities. In June 2008 the US Conference of Mayors passed a resolution encouraging mayors to phase out city spending on bottled water and to promote the importance of municipal water.

Far from being an urban myth, several peer-reviewed studies show chemicals can migrate from bottles into water.

According to [a study](#) by the University of Heidelberg in Germany, there is substantial leaching of carcinogens from PET containers into water. The study shows toxin levels can climb to 90 per cent for water that has been in single-use bottles for more than six months. Challinor says 93 per cent of Canadians have access to recycling. This does not mean they actually recycle. They stand by their statement that municipal water is more regulated than bottled water.

In the absence of provincial regulations for banning bottled water, Canadian municipalities are faced with a real dilemma. While they are interested in joining the municipalities which have already decided to ban bottled water in their jurisdictions, they don't like to be responsible for the elimination of jobs associated with the bottled water industry. However, municipalities do have a choice to follow the example of the city of London, Ontario where the decision to eliminate bottled water sales in city-run facilities was passed by London's city council. London's new restrictions are being implemented in buildings that are already equipped with water fountains. Bottled water will still be permitted at many city-run events, such as upcoming summer festivals. Privately-owned retailers will not be affected by the ban.

Obviously, London chose a compromising approach to implementing the ban which may not be acceptable to every municipality, but it is entirely up to the public to decide. Here is a video which summarizes the findings:

<http://www.youtube.com/watch?v=jPLx8MhLcpQ>

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