

THE TRUTH BEHIND BOTTLED WATER

(1) Even though your tap water is most likely clean and safe to drink, you've probably used a lot of bottled water in your life, or know people who do. Why would anyone pay for bottled water when they have easy access to drinking water in their home? Our modern day concept of bottled water only began when the French company, Perrier, expanded into the North American market in 1976. They began an intensive advertising campaign to convince Americans that bottled water should be a significant beverage choice. Up to that point, almost everyone got their drinking water from wells or their taps and would never think of buying bottled water.

(2) Initially it was hard for bottled water companies to convince the average citizen to pay for water, so these companies began marketing campaigns that made tap water seem unhealthy and bottled water seem like the safer choice. Huge bottled water brands like Dasani (owned by Coca-Cola) and Aquafina (owned by Pepsi) now admit that they use tap water in their bottles, though years of misleading marketing have made most consumers think that bottled water comes from a superior and healthier natural source. For example, the brand Everest Water isn't from Mount Everest, it's from Corpus Christi Texas, and Glacier Clear isn't from a glacier, it's from taps in Greenville Tennessee.

(3) Why have 30% - 40% of bottled water companies decided to use tap water? It's because they recognize that tap water is safe and also very cheap. They can make huge profits by charging consumers a large price for something that's very inexpensive for them to make. Manufacturers spend less than 10 cents to make one bottle of water while they charge consumers \$0.99 to \$2.50 to buy it. Per liter, bottled water is more expensive than the gasoline we put in cars. Bottled water companies have been so successful that bottled water now outsells alcohol, juice and soda in North America. North Americans spend over \$16 billion on bottled water a year.

(4) Bottled water is usually contained in PET / PETE bottles. PET is short for polyethylene terephthalate which is the most common type of plastic used for soda, juice and water



containers. You will find a number 1 on the bottom of a PET bottle which indicates that the material is PET and can be recycled. PET has been the material of choice for plastic bottles because it seals in liquids, is lightweight, impact resistant and can be made transparent. It's also cheap for manufacturers to make so this helps keep their costs down and keeps their profits high.



(5) PET is a pretty remarkable material, but it has its downsides. PET is made from naphtha, which comes from non-renewable fossil fuels like natural gas and petroleum. Though it's recyclable, only 60%-70% of PET plastic bottles make it into the recycling system, and for those bottles that are recycled, most are actually "down-cycled". This means that used plastic bottles are turned into a lower quality materials that aren't as strong as the original PET. Once PET has been down-cycled into another product, it usually isn't strong enough to be down-cycled again after that product is no longer of use. That's when it ends up in a landfill. Down-cycled PET materials are typically used to make furniture, carpets and polar fleece for clothing.

(6) Before the adoption of plastic beverage bottles, most beverages came in refillable glass containers. To this day, some places in North America still accept glass wine and beer bottle returns. When this happens, the average beer bottle is cleaned and refilled up to 15 times before it finds itself broken and in need of recycling. This type of reuse saves a lot of materials and energy because there was no need to make 14 brand new bottles. Refilling

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glass bottles is made possible because glass is inert so it doesn't absorb beverage particles like PET does. Glass also holds up well under the high heat needed for the sterilization of the bottle, while PET would just begin to melt. Before the widespread use of PET plastic bottles, beverage containers were thought of as multi-use containers except where cans were concerned. Now we've been convinced to think of most beverage containers as single use and ready for the trash after our last sip.

(7) The problem with this disposable attitude is that all the PET eventually ends up in the landfill or in our oceans. PET doesn't biodegrade, but it can photodegrade. This means it needs to be exposed to the Sun to break down. Most plastics in landfills are

buried so they'll never be exposed to the Sun. PET that ends up in the oceans is a different matter. Since PET floats, it will be exposed to the Sun, but this causes the PET to break down into toxins and into small pellets that are ingested by marine life. Turtles and other sea creatures are found with bellies full of plastic.

8) Some parts of the world are beginning to realize that the huge environmental impact of bottled water isn't acceptable. In 2009, Bundanoon, a small town in New South Wales, Australia, decided that it would be the first town in the world to ban the sale of bottled water. Local governments in San Francisco, Toronto, and over 70 cities around the world have also instituted municipal bans on purchasing bottled water for their employees.

Article Questions

- 1) What did bottled water companies do to convince us to buy bottled water?
- 2) What is PET and what are some of its properties?
- 3) What is down-cycling and why is PET down-cycled?
- 4) When PET photodegrades in ocean ecosystems, why is this harmful?
- 5) What are some things governments have done to help decrease the harmful impact of PET?
- 6) What are two things you can do to decrease the number of PET bottles you contribute to landfills? (various answers)