Geo-Joint: Plastic Water Bottles

This may be an unbelievable thing to younger readers of the Geo-Joint, but 30 or 40 years ago people only very rarely drank water out of a personal container other than a glass or a cup. Sure, there were army surplus canteens, and bottles you could fill with water to take with you on a hike. But outside of some glass liter bottles of mineral water from Europe, there was little containerized water to speak of, and certainly none packaged in plastic. If you were thirsty, you would fill a glass at the kitchen tap, or lean over a drinking fountain at a park, on the street, at a gas station, in almost any business or public building, and have a drink. And today? Single-serving plastic water bottles are everywhere. You may have one within reach while you are reading this, or only steps away from a shrink-wrapped box of 24. Americans use 50 billion of them a year. How did we get here?

There were a lot of factors influencing the growth of bottled water. An increasing movement of people in the 1970s and ’80s was the change to a healthier lifestyle. Those European waters were touted as wonderfully pure, and they had a certain cachet of cool. Drinking healthful water as opposed to

soda or beer helped increase the market as American bottlers grew in number and size. Once it became clear that selling water was big business, bottled water suppliers looked to their main competitor in the market—the tap. Once in a while, municipal water systems have a water quality problem. In this country, it's not very often, but it makes big news when it does happen. Think Flint, Michigan, although that is a particularly egregious example. The vast majority of U.S. tap water is completely safe, but bottled water sellers used subtle, and not-so-subtle advertising to undermine peoples' confidence in what poured out of their kitchen tap. In more recent times such tactics have been disavowed by the industry, but it went on long enough to establish buying habits among millions.

It's hard to imagine that something anyone could get practically for free inside their house could manage to be sold for literally thousands of times as much at the supermarket, but purity, stylishness, and convenience proved to be persuasive marketing techniques. Public drinking fountains fell out of favor amid suggestions that they were sources of possible contamination. New public venues featured fewer or no such outlets, especially where there were food vendors that might have bottled water available. At some point, a myth entered "common knowledge" that stated everyone should drink eight glasses of water a day. Armed with this "rule" for good health, the portable plastic water bottle became the must-have-24/7 companion.

Another marketing ploy is that bottled water has superior taste, and this can be a persuasive argument if you live where naturally dissolved minerals are high in your tap water. But most municipalities have good-tasting water and blind taste tests have proven that water from the tap often scores higher than bottled does. The funny thing is that some brands of bottled water are really no more than filtered tap water! The inferior taste of some bottled water may be due to the slightly plasticky flavor they carry. It's interesting that the blood of 93% of people over the age of 6 tests positive for some chemicals used in

the manufacture of plastic bottles. Whether these chemicals are harmful or benign isn't conclusively known.

What is known is that some of the most "exclusive" waters are those shipped in from exotic places: Fiji, New Zealand, Hawaii, and elsewhere. At 8 pounds to the gallon, water is not cheap to ship, and requires the burning of a lot of fossil fuel to transport across oceans. Some bottled water that does come from environmentally pristine locations has raised the ire of locals who decry the business of hauling away local spring water. This is especially true in drought-stricken locations like the San Bernardino National Forest where Nestle is under fire for their bottling operations, or near Olancha, California in the Owens Valley where Crystal Geyser collects their water. But the demand keeps coming, and while the percentage of water taken from springs for profit is small compared to total water usage, it touches a nerve after years of drought.

The upshot of this massive increase in consumption of water in 12 oz. bites is what's left behind after the drinking is done: a plastic bottle that serves for five minutes or an hour, and then never goes away. But they're recyclable, right? Well they are, to the extent that there is a market for recycled polyethylene, but less than a third of used plastic bottles gets recycled. And those that are, may be "downcycled" into other products soon to be tossed out themselves. The other 80% of plastic bottles not recycled go to landfills…or don't. Carelessly jettisoned bottles are seen everywhere—in gutters, in streams, washed up on beaches and contributing to the plastic trash gyres in all the major oceans. And let us not forget the plastic bottle's faithful companion, the screw-cap, which very rarely maintains its screwy connection and ends up gracing the landscape in even greater numbers than the bottles they came with.

It seems that despite the exorbitant cost, possible chemical contamination,

petrochemical origin, and litter problem, the market for single-use plastic bottles carries on. What's needed is an alternative, and there is one. Gaining in popularity are re-usable bottles. Not that you couldn't buy just one plastic bottle and use it for years, but nobody seems to do that. However, re-usable bottles, available in about 10,000 styles and colors, and made of metal, hard plastic, or glass are slowly being substituted for the too-easy, disposable plastic bottle, especially among the young and well-informed. Re-filling stations are actually appearing in certain forward-thinking venues. In time, a habit that seemed to engulf an entire generation or two may be turning to a new and more sustainable format. And we should all drink to that.