



Taking our own steps to fight ocean pollution

Our Blue World

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Over the past four months, most of my columns have been about the behavior and social lives of marine mammals.

Now, I would like to switch gears and talk about something more "grisly" — marine pollution.

Floating in the middle of the Pacific Ocean, thousands of miles from any land mass, there is a garbage pile twice the size of Texas. Known as the Great Pacific Garbage Patch, this pile of garbage has been steadily growing since the 1950s.

It would take you a week to boat across the millions of tons of garbage strewn across the "Patch." The garbage reaches depths of nearly 100 feet in some places.

An area of swirling ocean currents, called a gyre, causes garbage to concentrate in the Great Pacific Garbage Patch. This gyre acts like a magnetic toilet bowl, attracting garbage from across the North Pacific, then trapping it in an eternal swirling motion. Amazingly, most of this garbage does not even come from marine-based activities. Most marine debris comes from the land — litter left on the beach, litter left on the street which gets carried to the sea via rivers or sewers, or materials lost overboard from shipping containers.

The main component of the Great Pacific Garbage Patch is plastic. Plastics — in the form of bottles, shopping bags, cell phones, computers, even shoes — account for nearly 80 percent of all marine debris. Plastic outweighs zooplankton in the Great Pacific Garbage Patch by a ratio of 6 to 1.

Since plastics are inorganic or not "of the earth," it takes 500 to 1,000 years for plastic to decompose. However, plastic never completely decomposes. Instead, it gets broken down into tiny bits which linger in the earth or ocean for eternity. Compare this with an organic material such as paper which may completely decompose into its component parts (water and carbon dioxide) in just a few months.

Each year, Americans buy nearly 50 billion bottles of water. Many of these bottles will eventually make their way into the Great Pacific Garbage Patch. Not only do plastic bottles take hundreds of years to decompose, they also require huge amounts of energy for production. Thirty billion barrels of oil are necessary to quench Americans' thirst for bottled water. Put another way, the amount of oil required to make one plastic bottle fills one quarter of the bottle itself.

In most cases, there is no need to buy bottled water. We are very fortunate to live in a country where law requires that we have access to clean water. According to the Environmental Protection Agency, bottled water is not safer than tap water. In fact, tap water is tested more regularly and is more regulated than bottled water.

In these tough economic times, drinking tap water is a great way to save money. Most of us are already paying the city to receive water in our homes, so why pay extra for bottled water? If you simply don't like the taste of tap water, inexpensive filtration systems such as Brita or PUR are great alternatives.

This Fourth of July weekend, you can take action to stop the growth of the Great Pacific Garbage Patch, and other ever-growing patches of marine debris circulating in the ocean. Don't buy plastic water bottles. Instead, pack a cooler full of reusable water bottles, filled straight from the tap. Also, please be sure that none of your trash is left behind on the beach or tossed overboard. For those of you living in Gloucester, utilize the city's new weekly recycling program which makes it even more convenient to recycle all of your plastic, paper, glass, metal, and aluminum.

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