

# *What You Should Know About Plastics*

## *And the Benefits of Plastic Recycling*

“We will be known forever by the tracks we leave.” –Native American Proverb

- ⇒ ***Less than 1 percent of all plastic is recycled.*** Therefore, almost all plastics are incinerated or end up in a landfill. (<http://earth911.com/plastic/plastic-bottles/facts-about-plastic-bottles/>)
- ⇒ ***Americans buy an estimated 29.8 billion plastic water bottles every year.*** Two and one half million plastic bottles are thrown away per hour in the U.S. (<http://earth911.com/plastic/plastic-bottles/facts-about-plastic-bottles/>)
- ⇒ ***Recycling plastics would significantly reduce our oil consumption.*** Plastics are created by combining petroleum or natural gas with oxygen or chlorine. Making new plastic requires significant amounts of fossil fuels. Studies suggest that between 7% and 8% of the world’s fossil fuels are used in producing new plastics — millions of tons of fossil fuel burned per year with the resulting high volume of greenhouse gas emissions.
- ⇒ ***Recycling plastic saves energy.*** Studies show that the energy saved by recycling a single plastic bottle—as compared to producing a new one from scratch—is enough to power a single 60-watt bulb for six hours. (<http://earth911.com/plastic/plastic-bottles/facts-about-plastic-bottles/>)
- ⇒ ***Burning plastic is not recycling.*** Plastic recycling is the process of reprocessing used scrap and waste plastic into new plastic material. Recycling old plastic products uses 20%-40% less energy than manufacturing them from new materials. Recycled plastic is found in many unexpected places including carpeting, the cover on tennis balls, scouring pads, paintbrushes, clothes, industrial strapping, shower stalls, drainpipes, flowerpots, and building materials. Plastic also contains oils that could be recycled and reused as fossil fuels.
- ⇒ ***Plastics contain harmful chemicals.*** These include cadmium, lead, mercury, hydrogen chloride, particulate matter, sulfur dioxide, nitrous oxides, volatile organic compounds, carbon monoxide, PVC, and other pollutants in the form of artificial coloring, plasticizers, and stabilizers. When burned these pollutants are released into the air, into the soil, and the ash seeps into groundwater from landfill runoff. These harmful chemicals are associated with health risks for both wildlife and humans.
- ⇒ ***Burning certain plastics can release dioxins, a known human carcinogen.*** Dioxin is the most potent synthetic carcinogen ever tested in laboratory animals. Dioxins are unintentionally, but unavoidably produced during the manufacture of materials containing chlorine, including PVC (polyvinylchloride and other chlorinated plastics). The National Institute of Standards and Technology characterized the cancer causing potential of dioxin as over 10,000 times more potent than the next highest chemical (diethanol amine), half a million times more potent than arsenic and a million or more times greater than all others. Even when dioxin emissions meet legal levels, their unneeded release and cumulative effect must be considered a risk. “Once dioxins have entered the body, they endure a long time because of their chemical stability and their ability to be absorbed by fat tissue, where they are then stored in the body. Their half-life in the body is estimated to be seven to eleven years. In the environment, dioxins tend to accumulate in the food

chain. The higher in the animal food chain one goes, the higher is the concentration of dioxins.”  
(<http://www.who.int/mediacentre/factsheets/fs225/en/index.html>)

- ⇒ ***Today, most individuals carry in their bodies a mixture of metals, pesticides, solvents, fire retardants, waterproofing agents, and by-products of fuel combustion according to studies of human tissues conducted across the U.S. by the Centers for Disease Control and Prevention.*** Children often carry higher concentrations than adults, with the amounts also varying according to gender and ethnicity. Many of these substances are recognized by the governments of the United States and the European Union to be carcinogens, neurotoxins, reproductive and developmental toxins, or endocrine disruptors that mimic or block human hormones. (Yale Environment 360 is a publication of the Yale School of Forestry & Environmental Studies.)
- ⇒ ***More than a thousand chemicals are now suspected of affecting normal human hormonal activity.*** Normal growth and development among fetuses, infants, children, and adolescents is regulated in the body by a diverse set of hormones that promote or inhibit cell division. These include many pharmaceuticals, pesticides, plasticizers, solvents, metals, and flame-retardants. (Yale Environment 360 is a publication of the Yale School of Forestry & Environmental Studies.)
- ⇒ ***“Waste-to-energy” incineration is not a win-win solution to our waste and energy crises.*** Incinerators actually waste energy. When burning materials that could be reused, recycled, or composted, incinerators destroy the energy-saving potential of putting those materials to better use. Recycling, for instance, saves three to five times the energy that waste incinerator power plants generate. Incinerators are also net energy losers when the embodied energy of the burned materials is taken into account. (This information is taken from GAIA's (Global Alliance for Incinerator Alternatives) web site.)
- ⇒ ***Reducing the need for plastics is even more effective than recycling.*** Opportunities to reduce our use of plastics include using refillable containers, buying in bulk, buying things in recyclable and recycled packages or purchasing products that require no packaging. Plastic resins are made from non-renewable natural resources that could be used for a variety of other applications or conserved if less plastic was created and more plastic was recycled.
- ⇒ ***Increased recycling creates green jobs.*** In recent years, the number of U.S. plastics recycling business has nearly tripled. More than 1,600 businesses are involved in recycling post-consumer plastics.
- ⇒ ***Recycling plastics as a community encourages young people (and older people alike) to adopt this habit in their daily lives.*** It's important that we educate our community to reduce its need for plastic, reuse plastic items when possible and recycle them when necessary.
- ⇒ ***Recycling plastic rather than incinerating it is the right thing to do.*** The bottom line is that it is good for the environment, saves energy, creates jobs, reduces our demand for natural resources, and is good for the health of our children, ourselves and other living organisms.
- ⇒ Building a strong healthy community requires ***visionaries*** who can see the entire picture and understand that what we do today impacts the future's air, soil and water. The health of our soil for farming and the animals that provide milk and meat are all part of the picture. Our food sources directly impact people in our community and the rapidly growing organic economy of our area. The recycling of plastic will help reduce the carbon footprint of this community so future generations can have a healthier quality life.