

# Plastic: a Wonder Material, But....

Submitted by Don Hamp, EAC Member. An excerpt from the [Single Use Plastic Bags Guidebook](#) by the Montgomery County Single Use Plastic Coalition



Plastic is a fantastic material. It's lightweight, easily shaped, engineered, colored, does not crack or rust, is waterproof, can be made sterile, heat and cold stable is generally non-toxic (relatively speaking), and lasts forever. But It is the manufacturing and disposal of plastic that makes it a wrong choice especially when the item is used just once. Scientists are more and more saying if given a choice go with the non-plastic solution. Here's why:

- **Near impossible to recycle plastic economically.** [\(See\)](#)  
“...All used plastic can be turned into new things, but picking it up, sorting it out and melting it down is expensive. Plastic degrades each time it is reused, meaning it can't be reused more than once or twice”. Other challenges [\(See\)](#). include
  - [Impurities in recycled materials.](#)
  - [Complex plastic products](#) such as multi-layer film and electronics housings are more difficult to recycle.
  - [The technology to sort different varieties of plastic is lagging](#)
  - [Different kinds of plastics can't be mixed together to be recycled.](#)
  - [Even resins with the same number can't always be recycled together.](#) #2's margarine tubs are injection molded, milk bottles are blow molded. These react differently when they are melted down.
  - [Bottom line:](#) the percentage of plastic recycled has remained very low for decades and may be dropping. [\(See\)](#).
- **Microplastics in our lakes and waterways.** Plastic (especially bags) in water break down into small particles that are already found in our air, food, and bodies. 100% of PA waterways contain microplastics. Microplastics also attract pollutants that may already exist in the environment at trace levels, accumulating toxins like DDT & PCBs and delivering them to the wildlife that eat them, often bioaccumulating through the food chain. [\(See\)](#) Microplastic pollution has been detected in human blood for the first time, with scientists finding the tiny particles in almost 80% of the people tested. [\(See\)](#)

- **Plastics are overflowing our landfills.** Less than 5% of all plastics are recycled. The U.S. throws out enough plastic every 16 hours to fill the Dallas Cowboys stadium, and that amount is increasing.
- **Plastic, especially bags, are dangerous to wildlife** Chemical leachates from plastic bags impair the growth of the world's most important microorganisms, *Prochlorococcus*, a marine bacterium that provides one tenth of the world's oxygen. [\(See\)](#) Whales have washed ashore with hundreds of pounds of plastic waste in their stomachs. 60% of all seabird species have ingested plastic.
- **Plastics Contribute Significantly to Greenhouse Gas Emissions:** Oil, gas, and coal are the fossil-fuel building blocks of plastics. There are emission impacts from - extraction (Fracking especially) -transport (forest degradation, spills) -Plastics manufacture (energy consumption, pollution from side products) -disposal (incineration) See [How plastics contribute to climate change](#)