

HIDDEN HAZARDS:

THE CHEMICAL FOOTPRINT OF A PLASTIC BOTTLE

WASTE DISPOSAL

In the U.S., more than **70% of plastic bottles are landfilled, incinerated, or littered.**

Plastic bottles, mostly PET, were the most common type of plastic litter found in North America in 2022.

1,4-DIOXANE in DRINKING WATER

PET plastics manufacturers discharged **93,000 pounds of 1,4-dioxane** to sewage plants and rivers in the Southeast U.S., more than any other industry in 2021.

1,4-dioxane, a byproduct of PET manufacture, is a probable human carcinogen and is a very persistent pollutant in water.

ANTIMONY in FOOD and BEVERAGES

Antimony, used as catalyst to make PET plastic, **can cause cancer and is toxic to the liver, thyroid and heart.**

GREENHOUSE GAS EMISSIONS

PET plastics demand results in **8.8 million tons of carbon-dioxide-equivalent emissions annually** in North America, about equal to 2 million cars.

PET PLASTIC

+ Plastic Additives
+ Processing Aids

150 chemicals have been shown to escape from plastic bottles and packaging into food and beverages; studies indicate that many are not authorized for food contact

PETROCHEMICALS

Manufacturers released an estimated **200 million pounds of toxic chemicals** to the air, water, and land across the chemical supply chain of PET plastic in North America in 2021.

FOSSIL CARBON

Bottles are made from non-renewable fossil resources – **natural gas and crude oil.**

WASTE RECYCLING

In the U.S., **fewer than 30% of bottles are collected for recycling**, but of those:

- 1/3rd are wasted in the process
- 1/3rd are down-cycled to fibers
- Only 1/3rd are recycled to bottles.

Recycling of PET can form toxic benzene and styrene due to waste contaminants.

ETHYLENE OXIDE in the AIR

More than **3 million people, mostly in the Gulf Coast, face serious cancer risks** from air emissions of ethylene oxide (EtO), more than from any other hazardous pollutant.

About half of all EtO produced in the U.S. is used as a building block chemical to make PET. EtO exposure is linked to leukemia, lymphoma and breast cancer in humans.

ENVIRONMENTAL RACISM

The majority of PET supply chain chemical plants in the U.S. are in communities where the proportion of residents of color exceeds the national average.

Black and Brown residents face serious cancer risks from EtO air emissions in greater numbers than white residents, making up 64% of the at-risk community.

FOSSIL FUEL EXTRACTION

Fracking and drilling for oil and gas **results in serious air and water pollution, and greenhouse gas emissions.**