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# What are Microplastics?

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Microplastics are plastic particles that are greater than 1 nanometer (nm) and less than 5 millimeters (smaller than a strand of DNA and up to the diameter of a straw). This definition includes nanoplastics, which range from 1 nm to 1,000 nm.

## What Are Sources of Microplastics?

Primary microplastics are manufactured as raw materials, such as nurdles (small plastic resin pellets designed specifically for use in plastic product manufacturing) and textiles, or for use in other products such as cosmetics and household cleaning products. Secondary microplastics are the result of larger plastic items, such as car tires, cigarette butts, and water bottles, breaking down due to exposure to physical or environmental forces.

## Where Are Microplastics?

Microplastics have been accumulating since early plastic production in the 1940s and are ubiquitous in the environment. They are found in drinking water, surface waters, air, soil, living organisms, and in the food we consume.

Microplastics accumulate and persist for a long

time and can move great distances through different habitats in the environment.

## Why Are We Concerned?

- Microplastics can contain or carry harmful chemical contaminants and additives that are introduced into the environment. Due to their small size, humans and other organisms can inadvertently consume, inhale, or ingest these microplastics, and some organisms can mistake them for food.
- Microplastics pose a potential risk to humans and wildlife through exposure to the chemicals in plastic and through physical impact. More research is needed to better understand potential impacts on human health and the environment.
- Organisms (including humans) are exposed to microplastics from many different sources during daily activities via ingestion, inhalation, and sometimes dermal contact.
- Additional research, education, and regulation are needed to reduce and mitigate the presence of microplastics.

## Want to Know More?

The Interstate Technology & Regulatory Council (ITRC) has a complete, interactive Microplastic Guidance document available at <https://mp-1.itrcweb.org/#gsc.tab=0>.