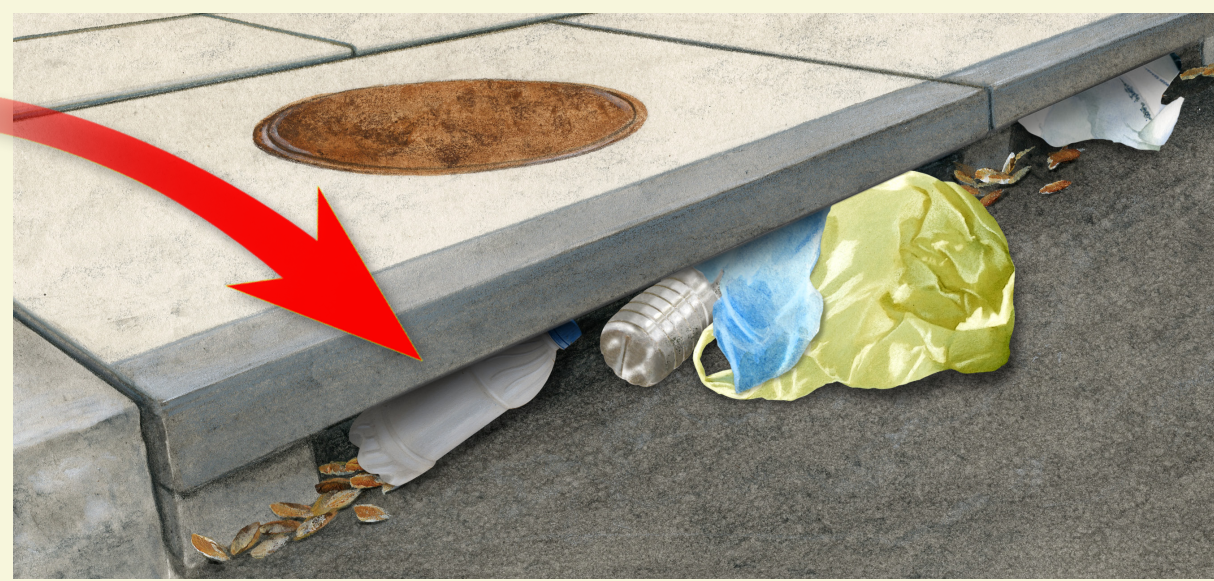


# Microplastics in Estuaries

Most plastic containers can take up to 450 years to completely degrade. But well before it's gone, plastic litter breaks into smaller and smaller pieces that continue to persist in the environment. These tiny plastic particles, called microplastics, can be consumed by marine organisms. Effects from microplastics are especially pronounced in the estuaries that foster a diversity of wildlife species.

## All That Plastic... Where Does It Go?

Drains, gutters, ditches, and streams lead to our rivers, estuaries, and the sea, where plastics that get flushed, tossed, or washed away end up.

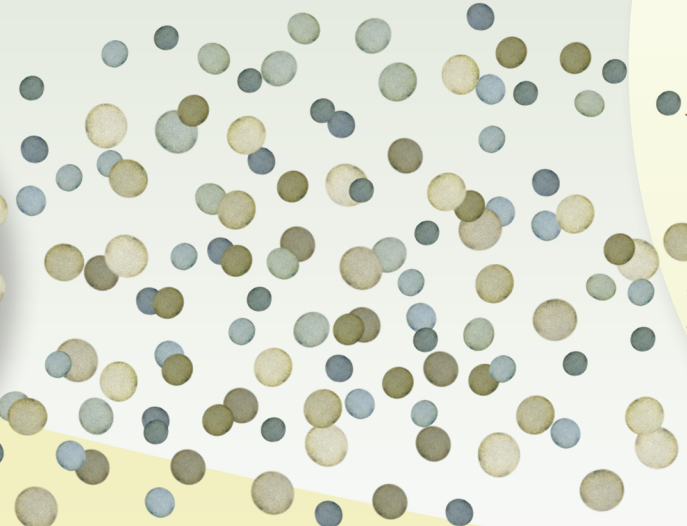
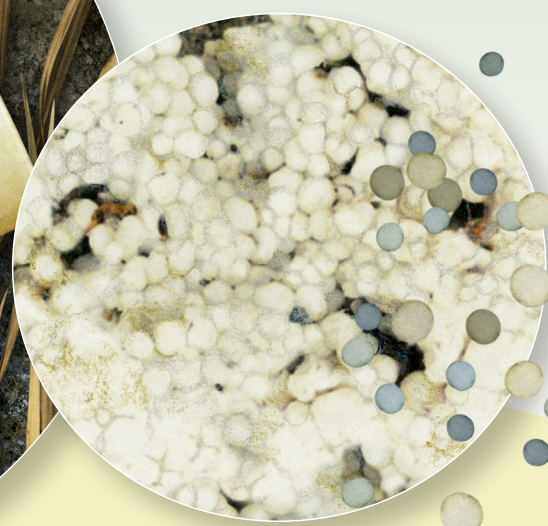


Plastic litter eventually degrades into microplastics. These particles also come from microbeads used in toothpastes and facial scrubs, and from laundry fibers shed by synthetic fabrics. Many wastewater-treatment facilities are unable to filter out these particles.



## Plastics, Microplastics, and Wildlife

Litter finds its way into our estuaries. Plastics break into tiny particles that are hard to see, but their molecules are resilient enough to remain intact for thousands of years.



**1 Deposition and Weathering** — A discarded piece of plastic is exposed to sunlight and wave action.

**2 Disintegration and Microplastic Formation** — In a few months, microplastic particles are released from its surface. After about a year, the plastic begins to break apart.

**3 Adsorption** — Toxic chemicals stick (adsorb) to the surfaces of microplastics in concentrations that are a million times higher than in the surrounding water.

**4 Ingestion** — Microplastics can be mistaken for food and ingested by small organisms and larger filter-feeders. After ingestion, adsorbed chemicals can seep into the tissues of the animals.

**5 Secondary Ingestion** — Chemicals and microplastics in the tissues of small organisms can transfer up the food chain as small organisms are eaten by larger ones.

## Did You Know

You could fit more than 400 microplastic particles on the head of a pin. The best way to keep waters free of microplastics is to clean up plastics before they break apart.



Picking up one plastic bottle and properly disposing of it will prevent tens of thousands of microplastic particles from being released into the environment.



## You Can Help

- Buy fabrics made of natural materials like cotton, flax, and wool.
- Carry a refillable drink bottle instead of using single-use beverage bottles.
- If you do drink from a disposable container, be sure it gets recycled.
- Take part in clean-up efforts to make our neighborhoods and estuaries free of plastics.

*Think about all the plastics you use, and strive to Reduce, Reuse, and Recycle.*



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