

Aquatic Trash & Single-Use Plastic

From the Great Pacific Garbage Patch to Boston's North Shore, aquatic trash affects us all, but did you know that many of our everyday habits are contributing to the problem?

Now you use it, now you don't

Each year, over 300 million tons of fossil-fuel derived plastics are produced worldwide, half of which is for single-use items. Designed to be used once, **single-use plastics** include packaging, beverage bottles, plastic utensils, wrappers, straws and bags. Recycling plastic reduces its footprint, but 91% of it isn't recycled.

Most ocean debris starts on land

60 to 80% of all marine debris comes from plastic products and packaging. Unfortunately, about 8 million metric tons of plastic wind up in the oceans annually, mostly as a result of improper waste management or littering. The presence of plastics has been documented throughout the entire water column, including on the floor of nearly every ocean and sea.

Plastic you can barely see

Plastics don't break down, they just break up. Plastic particles or fibers that are less than 5 millimeters in diameter, are known as **microplastics**. Over time, sun and heat will slowly turn plastics into smaller and smaller pieces, while some microplastics are small by design—such as microbeads or the micro-fibers in synthetic clothing, or plastic dust from sawing plastic objects. Approximately 90% of the plastics in the oceans are microplastics. **There is increasing evidence that microplastics are entering marine food webs.**

Small items are creating big problems

Plastic waste impacts the whole food chain—from plankton, fish, coral reefs, and seabirds all the way up to marine mammals and humans. For wildlife, microplastics can be particularly dangerous because they can build up inside an animal's body and cause punctured organs or fatal intestinal blockages. In addition, as plastic debris accumulates in our oceans, habitat structure can be modified—light levels may be reduced in underlying waters and oxygen levels may be depleted.

Many plastics attract and absorb toxic chemicals and heavy metals, sometimes in concentrations as much as one million times higher than the surrounding environment. These contaminants can be released back out into the environment when the plastics break down into smaller particles and even make their way into the food chain.

RESOURCES All information on this page was adapted from the Environmental Protection Agency's *Trash-Free Waters* website (www.epa.gov/trash-free-waters), the Natural Resources Defence Council's article *Single-Use Plastic 101* (www.nrdc.org/stories/single-use-plastics-101), the NRDC's fact sheet: *Plastic Peril* (www.nrdc.org/sites/default/files/plastic-peril-oceans-pollution-fs.pdf), and the Ocean Conservancy's *International Coastal Cleanup 2020 Report: Together We are Team Ocean* (https://oceanconservancy.org/wp-content/uploads/2020/10/FINAL_2020ICC_Report.pdf).

Top 10 Items Collected on Beaches

during the International Coastal Cleanup, 2020

- 1 plastic food wrappers (candy, chips, etc.)
- 2 cigarette butts
- 3 plastic beverage bottles
- 4 plastic bottle caps
- 5 plastic straws, stirrers
- 6 plastic cups, plates
- 7 plastic grocery bags
- 8 plastic takeout containers
- 9 other plastic bags
- 10 plastic lids



What You Can Do

Change your personal habits

Individual choices add up quickly. Making just one swap, like using a reusable water bottle, can save hundreds of plastic bottles each year.

Seek out zero-plastic retailers

Support companies that cut the plastic, both in their products and packaging. A quick web search can point you to dozens of companies committed to plastic-free shopping.

Talk to your favorite restaurants

Ask the owners if they are willing to use your personal containers for takeout or if they have alternatives to plastic straws, bags, boxes, etc.

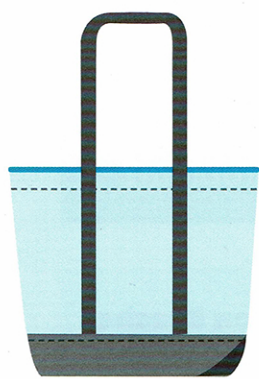
Let them know you care

Tweet, call, or send letters to the makers of your favorite products to ask them to switch to more durable, recyclable, compostable or renewable packaging that uses less fossil fuel-derived plastic.

Speak out and speak up

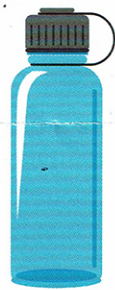
Call your local government representative, submit an op-ed to your city's newspaper, or start conversations with your neighbors to share what you know about the perils of single-use plastics.

10 Easy Ways to Break the Single-Use Plastic Habit



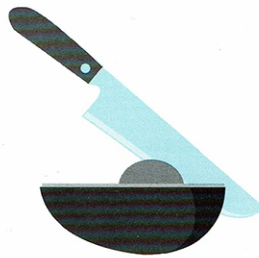
1 Bring a bag.

Everywhere! To the grocery store, the hardware store, or drycleaners. Bring reusable produce bags for fruit and veggies—or even better don't bag them at all.



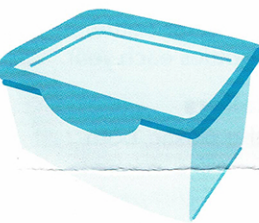
2 Stop buying water.

Every year nearly 20 billion plastic water bottles are thrown away. Carry your own refillable water bottle. If you have concerns about your local tap water opt for spring water in large exchangeable bottles or investigate water filtration.



3 Cook more often.

Takeout food is a huge source of single-use plastics—straws, utensils, food and beverage containers and doggie bags. Making your own meals at home is not only good for the environment, but is also healthy and economical.



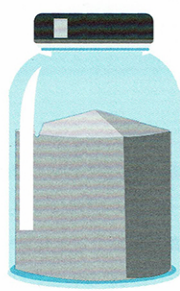
4 Bring your own containers and utensils.

Use a lunch box with food in reusable containers and flatware. When dining out, bring your own containers for leftovers. When ordering takeout, ask that they not include plastic cutlery and tiny bags of condiments if you don't need them.



5 Use your own to-go cup.

Bringing your own travel mug (and spoon) to the coffee shop or work avoids the waste of single-use cups, lids and stirrers. Many coffee shops offer a discount for bringing your own.

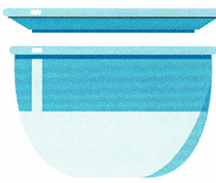


6 Buy in bulk. Buying fresh foods and bulk ingredients cuts down on excess packaging. Avoid purchasing food like yogurt, snacks and juices in single-serving containers and instead buy in larger sizes; serve portions in reusable containers.



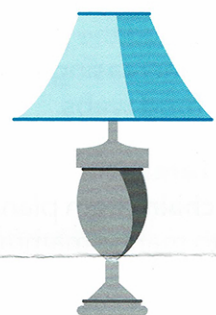
7 Look for paper packaging.

Make the choice to buy products that are packaged in recyclable, compostable or renewable materials. Swap out plastic milk and juice jugs for those sold in cardboard cartons. Buy laundry detergent in cardboard boxes. Buy eggs in cardboard cartons.



8 Make simple switches.

For leftovers avoid plastic wrap. Instead, try compostable beeswax wrap, waxed paper, or simplest of all, a bowl covered with a plate. Buy reusable straws and ditch single-use plastic ones.



9 Buy secondhand.

Avoid new items with plastic packaging, and instead, buy like-new items from online sellers, garage sales and thrift stores—and save in the process!



10 Recycle.

By some estimates, less than 14% of plastic packaging is recycled. Diligently recycle the plastic you use. Return single-use plastic bags to retailers. Follow your community's recycling rules, such as cleaning food containers before they go in the bin and not tossing in prohibited items.



About Nahant S.W.I.M. Inc.

Our mission is to protect our environment. Since 1967, Nahant S.W.I.M. Inc. (Safer Waters in Massachusetts) has worked to protect our regional waters, beaches and land from pollution and other harm by participating in the planning and implementation of environmental initiatives, contributing scientific and technical expertise, organizing community action, monitoring water quality, working with other environmental groups, and informing and educating the public via educational events and the media. www.nahantswim.org NAHANT S.W.I.M. INC. 2021 PRINTED ON PARTIALLY RECYCLED PAPER.

EDITOR: VI PATEK, DESIGNER: AMY KLEE