# Trash Free Waters on Any Timeline

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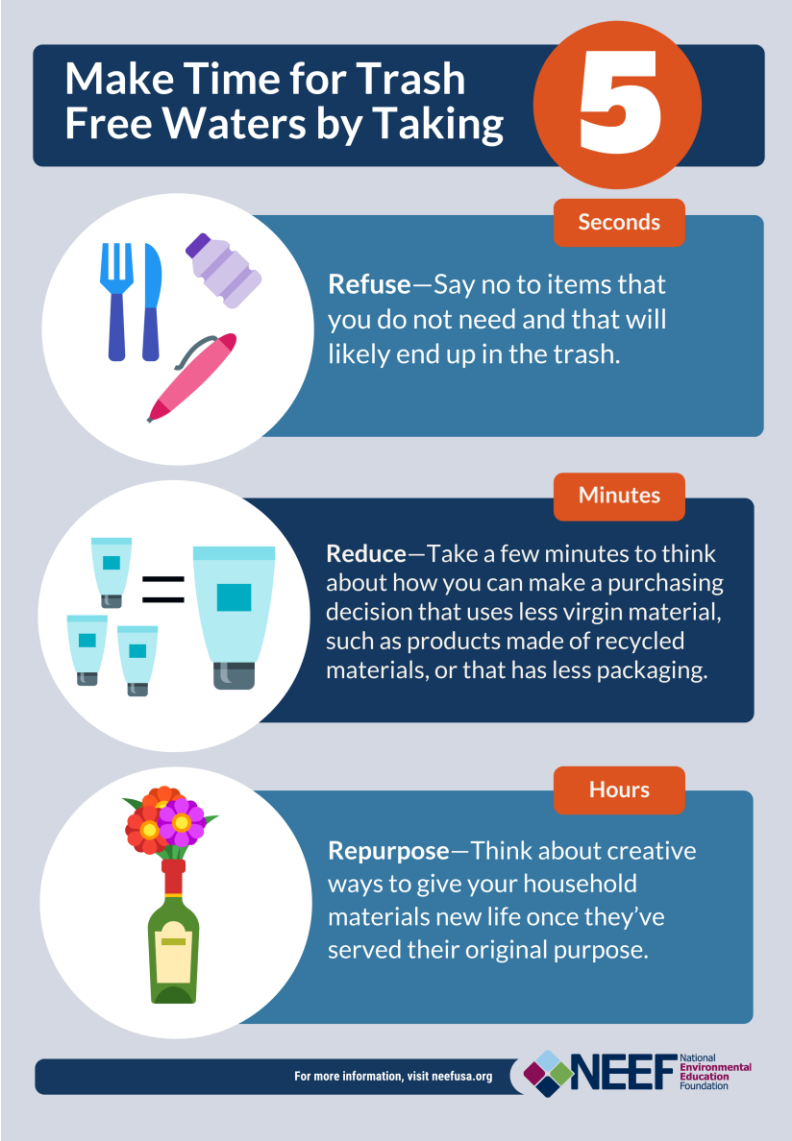
Americans produce about 4.5 pounds of trash per person each day.[1] Our Municipal Solid Waste (MSW), or trash, is comprised of items people throw away, including packaging, food, yard trimmings, furniture, electronics, tires and appliances.[2]

Over the last 60 years or so, the amount of waste produced at the consumer level in the United States has increased by about 300%, from about 88 million tons in 1960 to about 268 million tons in 2017.[3] To put that in perspective, the Washington Monument -- all 555 feet of its height plus the below-ground foundation -- weighs 100,000 tons, meaning that the amount of waste that the U.S. produces in one year weighs as much as 2,680 Washington Monuments.[4] Part of the increase in American waste production over the last six decades can be explained by population increase —in general, more people means more waste. However, the average amount of waste produced *per person* has also




[1] https://www.maplecroft.com/insights/analysis/us-tops-list-of-countries-fuelling-the-mounting-waste-crisis/
[2] https://www.epa.gov/sites/production/files/2019-11/documents/2017_facts_and_figures_fact_sheet_final.pdf
[3] https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#Trends1960-Today
[4] https://www.nps.gov/wamo/faqs.htm

increased by about 68%, from 2.68 pounds of waste per person per day in 1960, up to 4.51 pounds per person per day in 2017.[5]

*Photo courtesy of EPA*

All this waste must go somewhere, and if littered or otherwise improperly dealt with, it can end up in our waterways, threatening water quality, endangering plants and animals, and polluting the outdoor spaces that we depend on for tourism and recreation. A significant percentage of trash – especially plastic waste - comes from land-based sources,[6] including trash that is dumped directly into waterways or carried by stormwater from streets to storm drains or directly into canals, rivers, and the ocean. In 2018, nine of the Ocean Conservancy's top ten items from global beach cleanups were related to food and beverage packaging.[7] Plastic, in particular, has the potential to harm the environment, wildlife, and humans. Once rivers and streams wash it from land to the sea, it can persist for years, spreading out to every level of the water column from surface to substrate as it breaks down over time into smaller pieces.[8]

*Photo courtesy of EPA*

Once in our waterways, trash poses many threats. Animals can become entangled in debris and subsequently suffocate or drown. Once ingested, plastic debris that looks like food to fish, turtles, birds and marine mammals can accumulate and become lodged in their digestive systems, leading to starvation or other health effects. NOAA estimates that more than 100,000 marine mammals die every year from either trash ingestion or entanglement.[9]

Trash in our waters can cause changes to the habitats that aquatic organisms depend on for survival. Debris that accumulates in rivers, lakes or oceans can smother natural habitats, alter the amount of light

[5] https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#Trends1960-Today
[6] https://www.eunomia.co.uk/reports-tools/plastics-in-the-marine-environment/
[7] https://www.nationalgeographic.com/environment/2019/09/plastic-food-packaging-top-trash-global-beach-cleanup-2018/#close
[8] https://www.epa.gov/trash-free-waters/movement-aquatic-trash
[9] https://marinedebris.noaa.gov/sites/default/files/publications-files/2015_TurningTideonTrash_HiRes_Final.pdf

entering underlying waters and deplete oxygen levels in the water.[10]

Humans are also impacted by aquatic trash. Marine debris can lead to declining fish populations, which can hurt the communities that rely on fisheries for subsistence, employment, income, and tourism. Trash washing up on beaches or floating in the water is unattractive and unsafe and may dissuade people from visiting tourist destinations. Boats and ships can be impacted by aquatic debris if the material tangles propellers or clogs vessel intakes, resulting in expensive repairs and delays in shipping and transportation.[11]

Plastic marine debris presents unique toxicological threats to fish and wildlife and to humans who eat them. Certain classes of toxic chemical pollutants adhere to plastic waste in the water in such a way that the plastics act like magnets for these noxious chemicals.[12] Over time, through exposure to UV rays, wind and waves, pieces of plastic break down into smaller and smaller pieces. When aquatic organisms eat these plastic particles, they also ingest any of the toxic persistent chemicals that the plastic had accumulated. Those persistent chemicals make their way up the food chain and may be present in the fish that makes its way to your dinner plate. [13]

The United States relies heavily on healthy waterways and shores for clean drinking water, transportation, fisheries, tourism, recreation, protection from extreme weather, and more, and the presence of trash in these waters threatens our health, economy, and environment.

## What Can You Do?

The good news is that we can help keep trash out of our waterways, and protect our health, economy, and environment. Whether you find yourself with five seconds, five minutes, or five hours to take part in the movement, here are some ways to help keep our waters trash free.

[10] https://www.epa.gov/trash-free-waters/impacts-mismanaged-trash
[11] https://marinedebris.noaa.gov/discover-issue/impacts
[12] https://www.epa.gov/trash-free-waters/toxicological-threats-plastic#pbts
[13] https://www.doi.gov/ocl/marine-debris-impacts

## What you can do if you have…

### 5 Seconds

- **Refuse** – One quick way to keep your trash under control? Don't take it in the first place! Say no to items that you don't need and that will likely end up in the trash, such as the free pen at the bank, or plastic flatware in your takeout order.

### 5 Minutes

- **Reduce –** For the materials that you do need, take a few minutes to think about how to use less (such as going for a larger bottle of oil, vinegar, or spices, instead of many small ones). Opt to purchase items that use less virgin material (such as products made of recycled materials) or that use less packaging (such as a solid shampoo bar in place of shampoo that comes in a plastic bottle) or that are reusable (such as washable food and bowl covers in place of plastic wrap or tin foil).

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- **Reuse –** Before you walk out the door, take a moment to ask yourself if you packed your reusables, like a cloth bag, travel mug, reusable straw and utensils, food containers, or water bottle. By opting to reuse what you have, you can save money and avoid creating waste. For more tips, check out this guide from EPA.

- **Recommend –** Tell a friend or family member about what you're doing to help keep trash out of our waterways and recommend a few of the methods that worked well for you. Maybe they have a few tips to share that you haven't considered yet. With more of your friends and family adopting trash-free behaviors, you can dramatically increase your positive impact on our waterways!

- **Recycle and Rot –** If an item has served its intended purpose and can't be used again in your home, dispose of it in the weekly municipal collection. For recycling, make sure the item is clean and sorted as required by your local ordinances for proper recycling. If it's organic waste (something that will rot, such as food scraps), take your week's collection to a facility that can compost it, or add it to your backyard compost.


*Photo courtesy of EPA*

- **Rein in the Curbside Collection –** Trash can escape from the collection containers on your curb if it isn't properly disposed of. Follow these steps to make sure that your trash and recycling aren't making a break for it:
  - Wait to place your containers on the curb until it's as close to collection time as possible.
  - Only set out what fits into the containers—if the bin is overflowing, that refuse can be blown or washed into a storm drain and into our waterways.
  - Securely close all container lids. An open container is more likely to spill, sending your trash and recycling into the environment.
  - Make sure all your non-recyclable items are bagged before placing them in your container to reduce the chance of spillage during collection.
  - If one of your containers is broken, report it to your municipality and request a repair or a replacement.

*Photo courtesy of EPA*

## 5 Hours

- **Repurpose** – Think about creative ways to give your household materials new life once they've served their original purpose. Growing plants at home? An empty tin can could be a rustic flowerpot, and a cleaned glass bottle could serve as a pretty vase.
- **Read Up** – Interested in taking a deeper dive into the issue of aquatic trash? Check out some of these resources from EPA and NOAA
  - EPA Trash-Free Waters: Sources of Aquatic Trash
  - EPA's Trash-Free Waters Webinar Series
  - Video: EPA: The Messy Impact of Trash in Our Waters
  - Video: EPA: Trash-Free Waters
  - NOAA: Ten Things You Should Know About Marine Debris
  - NOAA: Regional Emmy® Award-Winning Video TRASH TALK
- **Rectify** – While the most effective approach to keeping waters trash-free is to keep the trash from entering the water supply in the first place[1], there is always a need to help address existing problems in rivers, streams, ponds, lakes, and shores with community cleanups. Find a project to participate in a cleanup near you or find a group that could use your help in other ways, such as with communications or administrative tasks. For opportunities volunteering at the federal level, check out Volunteer.gov, and take a look at your state, city or county websites for more information on volunteering at a local level.

*This article is the first in a series produced by EPA's Trash-Free Waters program and the National Environmental Education Foundation.*