



HELP STOP THE JOURNEY OF OUR TRASH

Photo by Ingrid Taylor

SOURCES OF MARINE DEBRIS

1. Litter dropped on the ground and beach
2. Overflowing trash bins
3. Lost shipping containers
4. Lost/discharged fishing gear
5. Poorly managed landfill sites
6. Microbeads and microplastics
7. Litter from sewage and industrial waste discharges

LITTER, by definition, is any solid or liquid waste product that has been disposed of **IMPROPERLY** at an **UNDESIRABLE** location. Litter is detrimental to people, animals and the environment. Although states spend millions of dollars each year for litter removal, more often than not it ends up in our oceans.

HOW DOES THE JOURNEY OF OUR TRASH BEGIN?

Trash that is not disposed of properly is easily blown away or transported by rainwater into the nearest **STORM DRAIN**. Stormwater flows untreated into the nearest waterway and litter enters the Chesapeake Bay, ultimately ending up in the ocean.

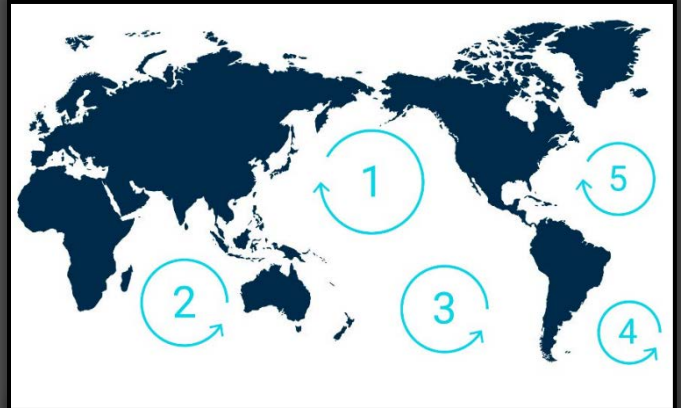
Litter in our waterways not only detracts from the area's beauty, but it can smother aquatic plants and bottom-dwelling organisms, be ingested by wildlife, and add toxic contaminants to the water.

Not everyone realizes that litter has become a **MAJOR WORLDWIDE PROBLEM**. Can you name the biggest components of the litter waste stream?

TRASH TRAVELS FAR AND WIDE

GARBAGE PATCHES are large areas of the ocean where litter, fishing gear, and other debris collects. They are formed by rotating ocean currents called "gyres." The debris is spread across the surface and column of the water, extending all the way down to the ocean floor due to different debris densities.

There are **five gyres** in the ocean (shown on the map to the right) where garbage patches of varying sizes and composition form. The debris ranges in size, and although patches are immense, it's difficult to determine their exact size due to the trash constantly moving with ocean currents and winds. The most well-known patch is the "**Great Pacific Garbage Patch**" (GPGP), located in the North Pacific Gyre between Hawaii and California. **Each year, thousands of pounds of trash wash up on the remote shores of Hawaiian Islands and Pacific atolls.**



Visualizing How Garbage Patches are formed by Ocean Currents (Video):

<https://response.restoration.noaa.gov/about/media/visualizing-how-ocean-currents-help-create-garbage-patches.html>

*"A lot of the plastic comes onto the island inside the birds' bellies. They are foraging across the entire expanse of the North Pacific Ocean and collecting the plastic that's floating out there. **They are telling us our story, which is that we are not very good at taking care of our waste.**"*

- Kristina McOmber, atolls Field Crew Leader

TAKING A CLOSER LOOK AT GPGP

- The mass of plastic in the GPGP was approx. 80,000 tons, equivalent to 500 Jumbo Jets.
- Debris larger than 5 cm accounted for over 3/4 of the GPGP mass and at least 46% was comprised of fishing nets.
- In terms of object count, 94% of the total is represented by microplastics.

[Click here to view the research article.](#)

CLEANUP EFFORTS

As part of a massive cleanup effort at the Hawaiian islands and Pacific atolls, every year staff and volunteers from U.S Fish and Wildlife Service (USFW), the State of Hawaii, and the National Oceanic and Atmospheric Administration (NOAA) work together to collect washed-up marine debris.

In 2017, they filled 12 shipping containers with 100,000 pounds of debris!

Have you heard about the **Mr. Trash Wheel Family** in Baltimore, Maryland? They have successfully removed **1,151 TONS of trash and debris** from the river!

Find out which are the items most commonly collected [HERE!](#)



HOW TO REDUCE AND PREVENT LITTER FROM REACHING OUR WATERWAYS

While LaRC has multiple trash receptacles in convenient locations, there are still incidents of **LITTER POLLUTION ON CENTER**. One of the most common sources of litter on Center are **CIGARETTE BUTTS**. Tossing cigarette butts may not seem like a big problem but they are one of the most littered items internationally - of the **5.6 trillion cigarettes** manufactured worldwide, **two-thirds are dumped irresponsibly**-. Once on the ground, they are carried via **storm drains** to the closest body of water. Not only do cigarettes release toxins into the environment, but around 98% of **CIGARETTE FILTERS ARE MADE OF PLASTIC FIBERS**, called *cellulose acetate*, which can take up to a **DECADE TO BREAK DOWN INTO MICROPLASTICS**.

The unfortunate truth is that any litter found in our local waters, and even miles away in the middle of the ocean, comes from us. Every single person has the power and responsibility to stop the harmful journey of our trash and prevent it from being detrimental to others.

EVERY ACTION COUNTS!

- ✓ Limit your use of single-use, disposable plastics by choosing reusable alternatives.
- ✓ Don't throw cigarette butts or any trash on the floor. Instead, properly dispose of them in receptacles provided.
- ✓ Participate in recycling. At LaRC, clean plastic bags and films are collected annually during the months of April and October!
- ✓ Beautify your city by volunteering in cleanup groups. Check the Environment section of @LaRC headlines for advertised activities.
- ✓ Encourage others by setting the example.

Outreach for proper disposal of trash is essential to increase awareness of the associated risks and impacts of littering, and to ultimately avoid discharging any non-stormwater materials into the storm sewer. Although prevention is key, relying on public reporting can be effective as well. The LaRC Water Program team asks that you report any illegal dumping, pollution, or spills that could impact water quality or the environment. **PLEASE CONTACT SPEEB AT 4-7517, 4-4791 OR 4-7243.**

