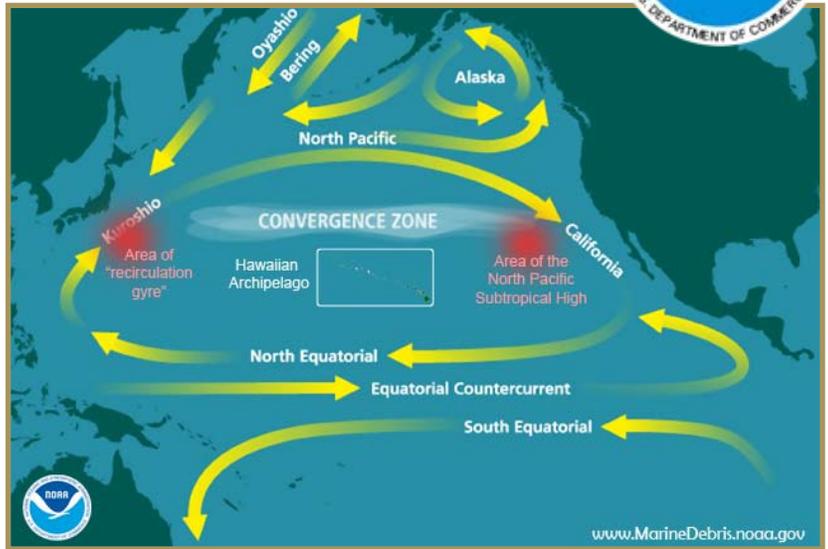


What is the “Garbage Patch”?



The “garbage patches” (both the eastern and western) are areas of marine debris concentration in the North Pacific Ocean. Because there has been little scientific research conducted in these areas, the exact size and content of these areas are difficult to accurately predict.



This map shows the locations of the eastern and western “garbage patches.” Keep in mind that this is an oversimplification of the constantly moving and changing features of the North Pacific Ocean.

Here is what we know...

- Contrary to what its name implies, these areas are not “patches” or “blankets” of trash visible with satellite or even aerial photographs. While litter items can be found in this area, along with other debris such as derelict fishing nets, much of the debris mentioned refers to small bits of floating plastic debris (e.g., microplastics) difficult to see with the naked eye.
- Marine debris concentrates in various areas of the North Pacific—not just the garbage patches.
- The eastern garbage patch lies within the North Pacific Subtropical High, an area between Hawaii and California. There are higher concentrations of debris within the calm center (“doldrums”) of this high-pressure zone compared to areas outside this zone.
- The western garbage patch is noted to be within a small “recirculation gyre” located off the coast of southern Japan.
- Another area known to concentrate marine debris is the North Pacific Subtropical Convergence Zone (see map). Not only is this an area of high productivity, species feeding



Small plastic pieces, such as microplastics (< 5mm), may be found in areas of marine debris concentration, such as the “garbage patches.”

and migration, and documented marine debris concentration, it is also one of the reasons for marine debris accumulation in the Hawaiian Islands.

*Regardless of the exact size, mass, and location of the “garbage patch,”
**manmade debris does not belong in our oceans
and waterways.***



“Microplastics” are one of the more common types of floating debris found within areas of marine debris accumulation in the open ocean.

Frequently Asked Questions

How big are the “garbage patches” and how many pounds of debris are in them?

There has never been a comprehensive study to measure debris amounts in the North Pacific, thus there is currently no accurate estimate on the size or mass of either of the two garbage patches or any other concentration of marine debris in the open ocean. One challenge is a lack of standardized sampling methodology. This is currently one of the NOAA Marine Debris Program’s research areas.

What are the impacts of marine debris in these areas of concentration?

Debris found in these areas can easily be ingested by marine species causing starvation and other impairments. Additionally, plastic debris act as “sponges,” absorbing organic contaminants such as PCBs (polychlorinated biphenyls). It is possible, though not proven, that plastics could also desorb these contaminants to marine life that ingest plastics.

Is there a “garbage patch” in the Atlantic Ocean?

There have not been many studies on marine debris in the Atlantic Ocean. Similar oceanographic features exist in the Atlantic as in the Pacific; however, while oceanographers predict that these areas may concentrate debris, we currently do not know that a notable Atlantic “garbage patch” exists. NOAA is currently working with our partners to expand our research and knowledge about marine debris the Atlantic Ocean.

For more information visit:

<http://marinedebris.noaa.gov/info/patch.html>