



MARINE DEBRIS FACTS

What Is Marine Debris?



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The National Oceanic and Atmospheric Administration defines marine debris as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes. Since the 1960s, the world's dependence upon natural materials has been largely replaced with durable, highly buoyant synthetic items. Once they enter the ocean environment these products, such

as cigarette filters, food wrappers, beverage bottles and cans, grocery and trash bags, and fishing line, nets and gear, can travel for hundreds of thousands of miles on ocean currents, posing a threat to ocean ecosystems and wildlife along the way. Consequently, marine debris has become one of the most widespread pollution problems facing the world's oceans and waterways.

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Where Does It Come From?



While the types of debris are as diverse as the products found around the world, it all shares a common origin – people. Since trash can travel long distances before settling on shorelines or the ocean floor, determining exactly how debris reaches the ocean can be difficult. In an effort to understand the activities that cause debris, researchers traditionally classify marine debris as coming from **land-** or **ocean/waterway-based** sources.

Land-based sources

People's mishandling of waste materials and a host of other items while on land constitutes a good portion of the marine debris we see on shorelines. Debris is also blown into the water or carried by creeks, rivers, storm drains, and sewers into the ocean.

Sources of land-based debris include:

- Inappropriate disposal of trash from many land-based activities, including picnicking, beachgoing, fishing, and waterside sporting events;
- Debris items from lawns, parking lots, streets, and storm drains being blown, swept or washed out to sea;
- Inappropriate handling of packaging materials;
- Inadvertent or intentional release of waste from shore-based solid waste disposal and waste processing

facilities; and

- Sewage overflows.

Ocean/waterway-based sources

People also generate debris while at sea. Like land-based debris, much of the ocean/waterway-based debris reaches the ocean through people's failure to properly dispose of or stow their trash while onboard their boats and vessels. Ocean-based debris also includes derelict (lost or abandoned) fishing gear. Natural disasters, such as hurricanes and storms, can also deposit debris into the ocean.

Sources of ocean/waterway-based debris include:

- Abandoning or losing fishing gear, including line, nets, ropes, bait boxes, fish tags, and trawl floats;
- Intentional or inadvertent discharge of trash, galley waste and boating materials, including oil lube bottles, engine cleaning and maintenance products; and
- Inappropriate handling of undersea exploration and oil and gas extraction items, including hard hats, sheeting and tarps, computer equipment and survey materials.





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Impacts of Marine Debris



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In addition to being unsightly, marine debris poses significant threats to ocean ecosystems, wildlife, and human health and safety.

Effects on ocean ecosystems

- Abandoned nets, plastic tarps, fishing gear and other debris can smother and crush sensitive coral reef and seagrass bed ecosystems and their benthic (bottom-dwelling) species.

Effects on marine wildlife

- Fishing line, nets, rope and grocery and trash bags can entangle, maim, and even drown many wildlife species, including sea turtles, marine mammals, seabirds, and other species.
- Cigarette filters, food bags, pieces of plastic, and packaging look like food to many animals. Once ingested, these materials can cause starvation and possibly even death.



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Effects on people

- Medical and personal hygiene debris can enter waterways when sewer systems fail or overflow. These items often contain harmful bacteria and pathogens.
- Syringes, broken glass and other hazardous items pose obvious dangers to bare-footed beachgoers.
- Grocery and trash bags, fishing line, nets, rope, and other debris can wrap around boat propellers and clog seawater intakes, causing costly damage and becoming a safety hazard.



Working Toward Solutions

While an important first step, physically removing existing debris only provides temporary relief to the problem. The only way to truly manage the marine debris pollution issue is through prevention – changing the behaviors that cause marine debris to enter the environment. Consequently, multiple organizations and local, state, and

federal agencies are collaborating on outreach projects designed to bring awareness to and alleviate the problem of marine debris. Several efforts are focusing on monitoring the behaviors and activities that result in marine debris and developing prevention strategies that educate people on marine debris issues, their role in the

problem and how to prevent it.

For more information on programs that are working to foster change, visit www.MarineDebris.noaa.gov.



What You Can Do

Here are some steps that you can take to help solve the marine debris problem:

- Reduce, reuse, recycle. Choose reusable items and use fewer disposable ones (e.g., use fewer disposable bags when shopping, or bring your own reusable bags).
- Retain all pieces of fishing line, net, or other litter for proper disposal in trash containers.
- Keep streets, sidewalks, parking lots, and storm drains free of trash – remember our land and ocean are connected.
- Stow all trash on your boat for proper disposal on land. At the beach, park or playground, dispose of all trash in the proper receptacles or take your trash home with you. Pick up any debris you see while out.
- Serve as an example to others. Get involved in cleanups in your area and encourage others to help keep the beaches and oceans clean.
- Learn about the problem of marine debris and its impacts then tell your friends and family!



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