

# Monitoring for Marine Debris



*Marine debris is a threat to our environment, safety, economy, and health. What can you do to help monitor and alleviate this form of pollution?*



## What is marine debris?

Marine debris is human-generated waste that pollutes the ocean and may subsequently wash up on our shores. The most common materials that make up marine debris include: plastics, paper, rubber, wood, metals, and abandoned fishing gear. Marine debris can have detrimental impacts on wildlife and habitats, both in the water and on the beach. While some marine debris is jettisoned at sea, more than 80% washes out to sea via rivers and streams, and often comes from far inland. Debris can easily be ingested by marine species causing choking, starvation, and other impairments. Debris can be anything from plastic nets that can entangle large animals to tiny pellets that may be mistaken for food by shorebirds or invertebrates

Marine debris, especially plastics, can persist in the ocean indefinitely, circling around in what is known as "the Great North Pacific Garbage Patch" (and similar gyres in other oceans), until storms drive it onshore. These ever-shifting

"garbage patches" concentrate debris over huge marine areas. The U.N. Environment Program estimates that 6.4 million tons of garbage reaches the ocean every year. The "Great Pacific Garbage Patch" is a massive collection of marine debris (litter) in the North Pacific Ocean. The exact size of the "garbage patch" is difficult to predict because of the constant wind and water moving them around.

## Tsunami Debris

In March 2011, a tsunami struck Japan and washed an estimated five million tons of debris into the Pacific Ocean. It is expected that a portion of this debris will reach U.S. shores over the next several years. Because marine debris washes ashore continually, it is sometimes difficult to distinguish what is tsunami debris and what isn't. However, significant changes in the types and quantities of debris at a shoreline over time may be a sign that tsunami debris is washing ashore. To observe a potential shift in debris types and abundance the Oregon Marine

Debris Team, its partners, and dedicated volunteers are conducting monthly shoreline surveys. Objects pulled to sea from Japan's shores by the tsunami may harbor non-native species and carry them to Oregon's coast. Some known invasive species currently being brought to the U.S. West Coast include: wakame, red alga, skeleton shrimp, and acorn barnacles.

## What's been found in Oregon?

All of the ordinary types of debris, such as plastic bottles and aluminum cans, have been found throughout the various beaches along the Oregon coast. In 2014 alone, nearly 60 tons of debris have been picked up by volunteers, according to SOLVE. Almost 15 months after the tsunami, a large concrete dock made its way to Agate Beach. Since then there has been a significant increase in the amount of styrofoam and plastic pieces washing ashore as well. These types of marine debris are especially threatening to wildlife and may carry potentially invasive species.



## The Oregon Marine Debris Team

To organize debris monitoring, identification, cleanup, and public education, CoastWatch has teamed up with Surfrider, SOLVE, Washed Ashore, and Oregon Sea Grant to form the Oregon Marine Debris Team (OMDT).

OMDT is structured to:

1. Organize debris scouting for the entire length of the Oregon coast (with a particular concern for locating tsunami debris).
2. Organize cleanups where they are needed.
3. Conduct marine debris monitoring at selected sites to develop scientifically useful data about the amounts and types of debris reaching Oregon. This project is being directed by CoastWatch, with support provided by Oregon Sea Grant, on behalf of the OMDT.

We are seeking volunteers to help with this project by joining the monitoring teams. Volunteers are a crucial, and much needed, aspect of these marine debris-monitoring

efforts. No prior experience is necessary. The Oregon Marine Debris Team will provide training on protocols and procedures, as well as provide support to your team. We also need one entirely new team to start a fresh site. For more information please contact our volunteer coordinator, Fawn Custer: [fawn@oregonshores.org](mailto:fawn@oregonshores.org) (541) 270-0027.

## Marine debris monitoring

Participating groups will employ a “protocol” developed by the National Oceanic and Atmospheric Administration (NOAA) to gather data on the types and amounts of marine debris reaching the shore. Monitoring sites are approximately 100 meters (325 feet) long and are pre-selected according to specific criteria. Within each area, preference will be given to proposals for more remote areas with less human traffic and where it is less likely that litter will be picked up between monitoring sessions. Surveys must be conducted regularly on a monthly basis.

## How can everyone help?

Our partnership efforts depend on citizens like you and there are many ways in which everyone can help us. You can attend cleanups, scout and monitor debris, collect data, and recycle and re-purpose. Please visit the Oregon Marine Debris Team website (<http://www.omdt.org>) to sign up for updates as well as check our calendar for upcoming events to participate in.

## Oregon Marine Debris Monitoring Teams

**Site:** Cannon Beach North  
**CoastWatch mile #** 315  
**Team leader:** Robin Risley

**Site:** Cape Falcon Marine Reserve:  
 Arch Cape  
**CoastWatch mile #** 306  
**Team leaders:** Al Maslowski, Lianne Thompson

**Site:** Cascade Head Marine Reserve:  
 Camp Westwind  
**CoastWatch mile #** 247  
**Team leader:** Matt Taylor

**Site:** Otter Rock Marine Reserve  
**CoastWatch mile #** 225  
**Team leader:** Virginia Tardaewether

**Site:** Otter Rock Marine Reserve 68<sup>th</sup>  
 Street  
**CoastWatch mile #** 221  
**Team leader:** Teresa Mealy, Kathy Kuebbing

**Site:** Muriel Ponsler State Park  
**CoastWatch mile #** 182  
**Team leaders:** Jonathan Hornung, Brittany Getz

**Site:** Tahkenitch Creek  
**CoastWatch mile #** 158  
**Team leaders:** Alexis Wells, Andy Marohl

**Site:** Seven Devils Wayside  
**CoastWatch mile #** 111  
**Team leader:** Mike Mueller

**Site:** Redfish Rocks Marine Reserve  
**CoastWatch mile #** 46  
**Team leader:** Tyson Rasor

**Site:** Gold Beach  
**CoastWatch mile #** 28  
**Team leader:** Dave Lacey