

# Japanese tsunami debris scatters in the Pacific Ocean, possibly heading to US

December 28 2011

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Debris from the tsunami that devastated Japan in March could reach the United States as early as this winter, according to predictions by NOAA scientists. However, they warn there is still a large amount of uncertainty over exactly what is still floating, where it's located, where it will go, and when it will arrive. Responders now have a challenging, if not impossible situation on their hands: How do you deal with debris that could now impact U.S. shores, but is difficult to find?

To learn more about the [tsunami debris](#), NOAA researchers have been working with the U.S. [Environmental Protection Agency](#), U.S. [Fish and Wildlife Service](#), and other partners to coordinate data collection activities.

NOAA and its partners are also coordinating an interagency assessment and response plan to address the wide-range of potential scenarios and threats posed by the [debris](#).

"We're preparing for the best and worst case scenarios — and everything in between," says Nancy Wallace, director for NOAA's Marine Debris Program.

As the tsunami surge receded, it washed much of what was in the coastal inundation zone into the ocean. Boats, pieces of smashed buildings, appliances, and plastic, metal, and rubber objects of all shapes and sizes washed into the water — either sinking near the shore or floating out to sea. The refuse formed large debris fields captured by satellite imagery

and aerial photos of the coastal waters.

The Japanese government estimated that the tsunami generated 25 million tons of rubble, but there is no clear understanding of exactly how much debris was swept into the water nor what remained afloat.

Nine months later, debris fields are no longer visible. Winds and ocean currents scattered items in the massive North Pacific Ocean to the point where debris is no longer visible from satellite. Vessels regularly traveling the North Pacific have reported very few sightings. Only two pieces have been clearly linked to the tsunami.

NOAA is coordinating new interagency reporting and monitoring efforts that will provide critical information on the location of the marine debris generated by the [tsunami](#). Ships can now report significant at-sea debris sightings and individuals or groups can request shoreline monitoring guides at [DisasterDebris@noaa.gov](mailto:DisasterDebris@noaa.gov).

Computer models run by NOAA and University of Hawaii researchers show some debris could pass near or wash ashore in the Northwestern Hawaiian Islands (in the Papahānaumokuākea Marine National Monument) as early as this winter, approach the West Coast of the United States and Canada in 2013, and circle back to the main Hawaiian Islands in 2014 through 2016.

Researchers caution that models are only predictions based on location of debris when it went into the water, combined with historical ocean currents and wind speeds.

Conditions in the ocean constantly change, and items can sink, break down, and disperse across a huge area. Because it is not known what remains in the water column nor where, scientists can't determine with certainty if any debris will wash ashore.

The worst-case scenario is boats and unmanageable concentrations of other heavy objects could wash ashore in sensitive areas, damage coral reefs, or interfere with navigation in Hawaii and along the U.S. West Coast. Best case? The debris will break up, disperse and eventually degrade, sparing coastal areas.

Debris will not go away completely, even in a best-case scenario. Marine debris is an ongoing problem for Hawaii and West Coast states, where garbage and other harmful items regularly wash up on beaches, reefs and other coastal areas.

Provided by NOAA

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