Flotsam from Japan's tsunami to hit US West Coast

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Oceanographer Curt Ebbesmeyer displays debris--a survey marker, child's toy and Nike shoe--he's picked up from ocean beaches, Wednesday, March 30, 2011, in Seattle. Ebbesmeyer, who has traced Nike sneakers, rubber bath toys and hockey gloves spilled from Asian shipping containers over the decades, expects the first items of flotsam from Japan's tsunamis and earthquake to hit West Coast beaches in a year. He says derelict fishing vessels may show up first, while other items like pieces from wooden homes and rubber survey stakes may take two to three years. (AP Photo/Elaine Thompson)

(AP) -- John Anderson has discovered just about everything during the 30 years he's combed Washington state's beaches - glass fishing floats, hockey gloves, bottled messages, even hundreds of mismatched pairs of Nike sneakers that washed up barnacled but otherwise unworn.

The biggest haul may come in one to three years when, scientists say, wind and ocean currents eventually will push some of the massive debris

from Japan's tsunami and earthquake onto the shores of the U.S. West Coast.

"I'm fascinated to see what actually makes it over here, compared to what might sink or biodegrade out there," said Anderson, 57, a plumber and avid beachcomber who lives in the coastal town of Forks, Wash.

The floating debris will likely be carried by currents off of Japan toward Washington, Oregon and California before turning toward Hawaii and back again toward Asia, circulating in what is known as the North Pacific gyre, said Curt Ebbesmeyer, a Seattle oceanographer who has spent decades tracking flotsam.

Ebbesmeyer, who has traced Nike sneakers, plastic bath toys and hockey gloves accidentally spilled from Asia cargo ships, is now tracking the massive debris field moving across the Pacific Ocean from Japan. He relies heavily on a network of thousands of beachcombers such as Anderson to report the location and details of their finds.

"If you put a major city through a trash grinder and sprinkle it on the water, that's what you're dealing with," he said.

As to whether any of the debris might be radioactive from the devastation at Japanese nuclear power plants, James Hevezi, chair of the American College of Radiology Commission on Medical Physics, said there could be.

"But it would be very low risk," Hevezi said. "The amount that would be on the stuff by the time it reached the West Coast would be minimal."

Only a small portion of that debris will wash ashore, and how fast it gets there and where it lands depends on buoyancy, material and other factors. Fishing vessels or items that poke out of the water and are more

likely influenced by wind may show up in a year, while items like lumber pieces, survey stakes and household items may take two to three years, he said.

If the items aren't blown ashore by winds or get caught up in another oceanic gyre, they'll continue to drift in the North Pacific loop and complete the circle in about six years, Ebbesmeyer said.

"The material that is actually blown in will be a fraction" of the tsunami debris, said Curt Peterson, a coastal oceanographer and professor of in the geology department at Portland State University in Oregon. "Some will break up in transit. A lot of it will miss our coast. Some will split up and head up to Gulf of Alaska and (British Columbia)."

"All this debris will find a way to reach the West coast or stop in the Great Pacific Garbage Patch," a swirling mass of concentrated marine litter in the Pacific Ocean, said Luca Centurioni, a researcher at Scripps Institution of Oceanography, UC San Diego.

"The dispersion is pretty large, so it's not like a straight shot from Tokyo to San Francisco," said Centurioni, the principal investigator for the Global Drifter Program funded by NOAA. The program deploys about 900 satellite-tracked drifting buoys each year throughout the world to collect sea surface temperature and other data.

Much of the debris will be plastic, which doesn't completely break down. That raises concerns about marine pollution and the potential harm to marine life. But the amount of tsunami debris, while massive, still pales in comparison to the litter that is dumped into oceans on a regular basis, Ebbesmeyer said.

Ebbesmeyer and retired NOAA researcher Jim Ingraham are using a computer program to plot the path of debris from March 11 tsunami to

add to growing knowledge about ocean currents. The modeling relies on weather data collected by U.S. Navy, and the researchers are waiting for the monthly release of that data to make their first projections.

Ingraham developed the program to figure out the effects of ocean currents on salmon migration, but the two also have been using it plot the path of a multitude of floating junk.

Ebbesmeyer first became interested in flotsam when he heard reports of beachcombers finding hundreds of water-soaked shoes in Washington, Oregon and Alaska. An Asia cargo ship bound for the U.S. in 1990 had spilled thousands of Nike shoes into the middle of the North Pacific Ocean. He was able to trace serial numbers on shoes to the cargo ship, giving him the points where they began drifting in the ocean and where they landed.

The oceanographer also has tracked plastic bath toys - frogs, turtle, ducks and beavers - that fell overboard a cargo ship in 1992 in the middle of the Pacific Ocean and were later found in Sitka, Alaska.

Anderson says he constantly scans the beaches watching for something that catches his eye. He's found about 20 bottled messages, mostly from schoolchildren, and the several hundred Nike sneakers, which he cleaned up by soaking in water and eventually gave away, sold or swapped.

"In two years, there's going to be stuff coming in (from Japan), and probably lots of it," he said. "Some of it is bound to come in."