

# Alaska Dispatch News

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## Main Image:

[CoastGuard140804-01.JPG](#) <sup>[1]</sup>

## Main Image Caption:

The U.S. Coast Guard Cutter Healy, a 420-foot ice breaker and scientific research vessel shown in a August 2014 file photo visiting Seward. The vessel will take Arctic researchers to the North Pole this summer.

One of the nation's few icebreakers will take a team of researchers this summer through the Bering Strait and to the North Pole -- as part of an international effort to study the chemistry of Arctic waters.

The Geotraces project has completed expeditions in seas and oceans across the globe -- from the Atlantic to the Antarctic -- and this summer it is sending four separate voyages to the Arctic.

"Part of the plan is that we'll have a crossover station with the Europeans and a crossover station with the Canadians. And we will compare our measurements with their measurements to sort of quality control that our measurements are indeed what we think," said Ana Aguilar-Islas, an assistant professor of chemical oceanography at the University of Alaska-Fairbanks.

Those "measurements" include things like nutrient levels, as well as toxins like mercury and lead. Some will be compared to past surveys, while others will be made for the first time. "For some of the elements that we will be analyzing, this will be the first time they are ever measured in the Arctic, so we will be setting a baseline with those."

The American Geotraces project will cut a path through the Bering Sea after leaving Dutch Harbor in early August. Traveling on the U.S. Coast Guard cutter Healy -- part icebreaker, part ocean-faring science lab -- a team of more than 50 researchers will make their way through the Norton Sound and the Bering Strait -- aiming to reach the North Pole by mid-September.

"We are hoping it is possible," Aguilar-Islas laughed. "The Healy's able to break ice, and thick ice, so it'll be slow progress but indeed we are hoping that we have enough time to reach the North Pole."

Another reason for the trip North: observing how waters from different parts of the planet mix in the Arctic. That includes warmer water passing through the Bering Strait from the Pacific, but also "heavy water" from the Atlantic.

"It's water that is very salty, and has cooled as it went north. This water comes into the Arctic Ocean through the European side of the Arctic. So it moves along the shelf, towards the Canada Basin, but it is deeper water that is overlaid by the Pacific water. So you have different layers of different water masses."

The voyage itself -- and its 24 research projects -- are all being funded through the National Science Foundation. The Geotraces expedition is set to return to Dutch Harbor by Oct. 12.

*This article [originally appeared](#) <sup>[2]</sup> on [KNOM Radio Mission](#) <sup>[3]</sup>, a Nome-based radio station sharing stories from around Western Alaska. It is republished here with permission.*

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[2] <http://www.knom.org/wp/blog/2015/06/05/over-50-arctic-researchers-on-coast-guard-cutter-healy-preparing-north-pole-voyage/>

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