Interannual Variability of Marine Debris on Select Gulf of Alaska Beaches

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Objective:

To determine if temporal change of marine debris abundance on select Gulf of Alaska (GOA) beaches has occurred following the 2011 Tōhoku Tsunami.

Background:

An estimated 1.5 million tons of floating marine debris was generated by the March 2011 Tōhoku Tsunami.

Debris items first reached Pacific Northwest coast during the winter of 2011-2012.

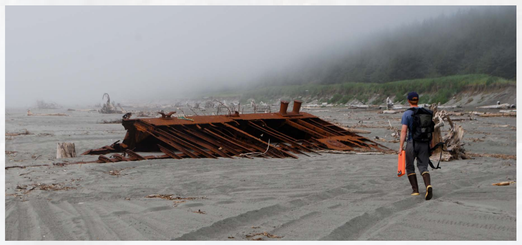
Models predict wide scattering of tsunami debris to continue washing up along Pacific shorelines over the coming years, mixed in with non-tsunami marine debris.

Methods:

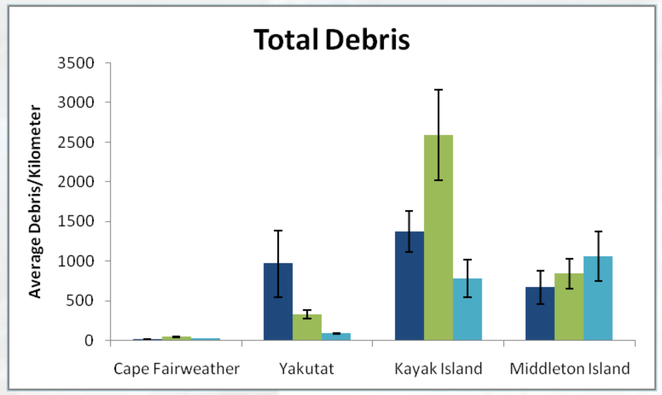
Summer field surveys were conducted at select GOA locations in 2008, 2012, and 2013: Cape Fairweather, Yakutat, Kayak Island, and Middleton Island.

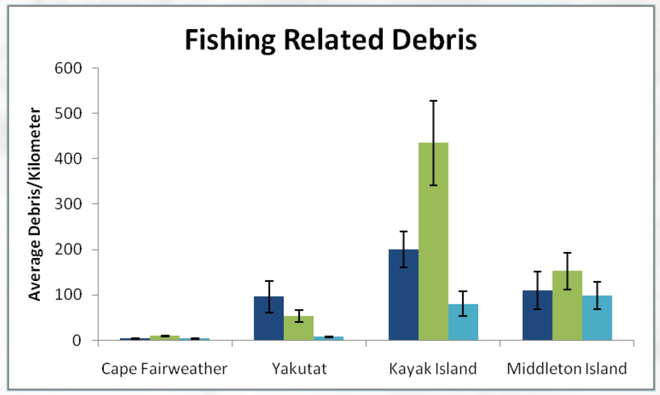
Beach segments of about one kilometer were marked by GPS and surveyed.

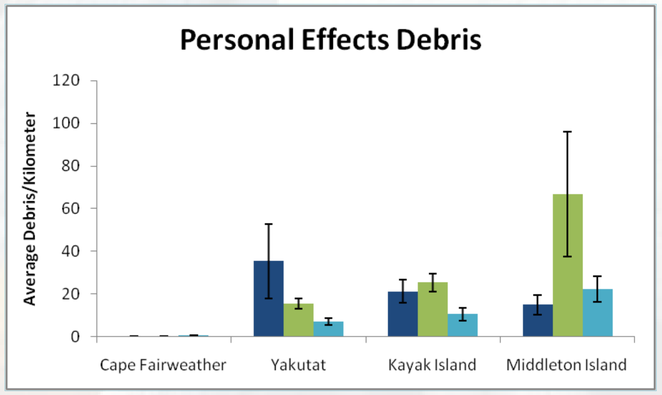
All debris observed below winter high-tide mark was recorded and categorized.

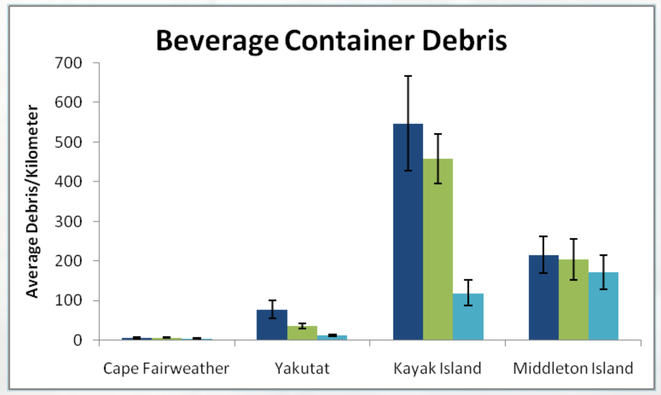


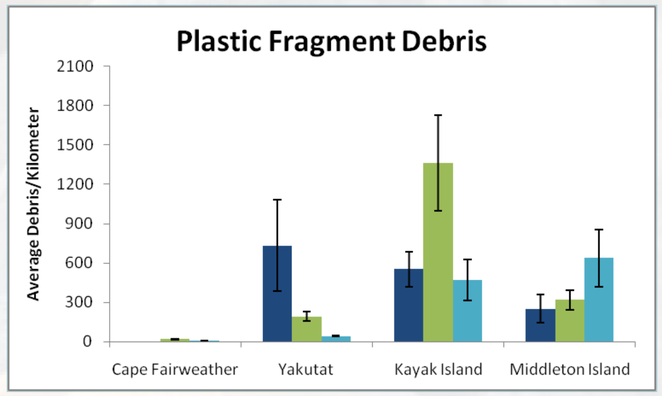
Results:











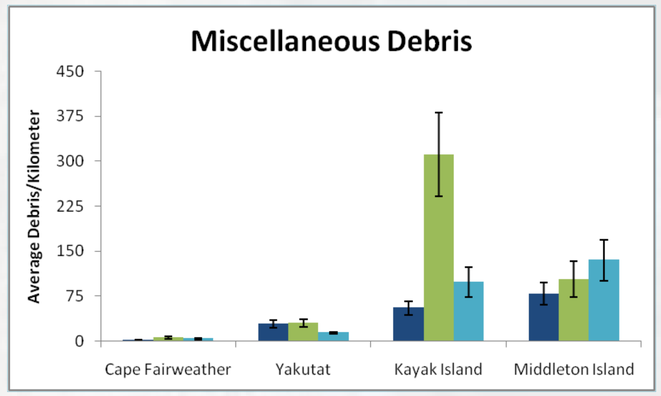


Chart Legend: 2008 2012 2013

Conclusions:

A significant increase in debris abundance was observed at sites in 2012 when compared to 2008.

A significant decrease in debris abundance was observed at sites in 2013 when compared to 2012.

Circumstantial evidence of Tōhoku Tsunami marine debris was observed at all sites.

The recommendations and general content presented in this poster do not necessarily represent the views or official position of the Department of Commerce, the National Oceanic and Atmospheric Administration, or the National Marine Fisheries Service.

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