Density and Distribution of Marine Debris on Select Beaches in the Gulf of Alaska

Results of the 2012 NOAA Marine Debris Surveys

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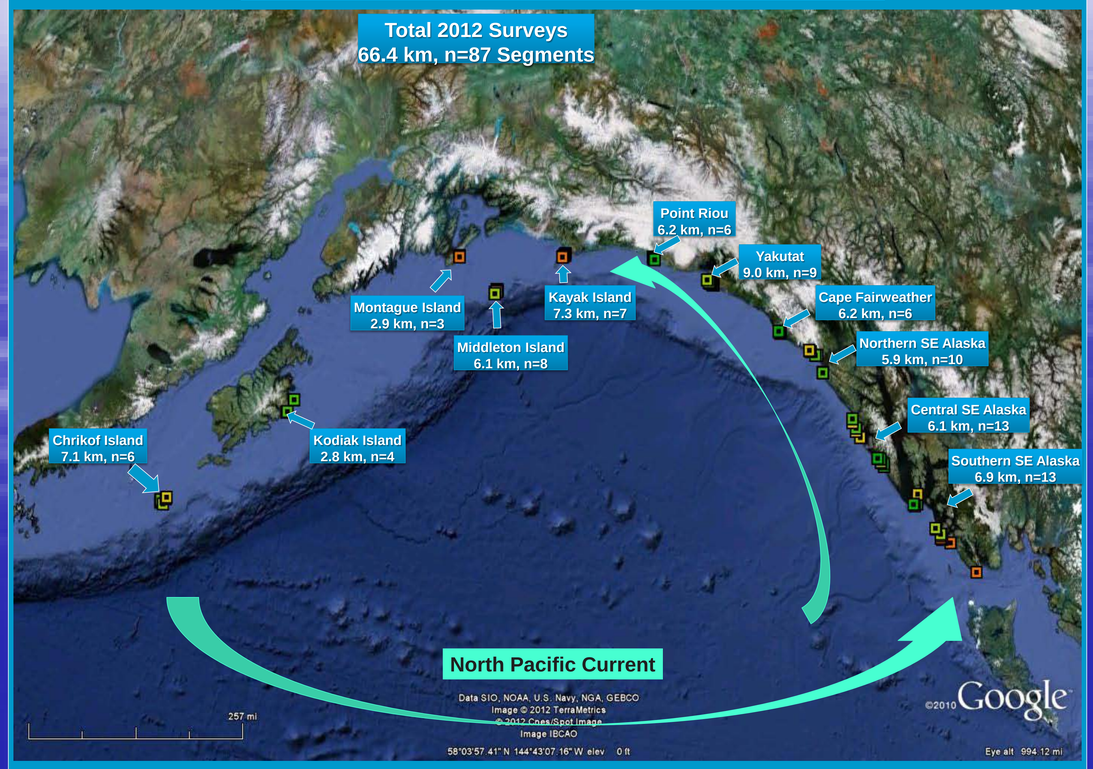
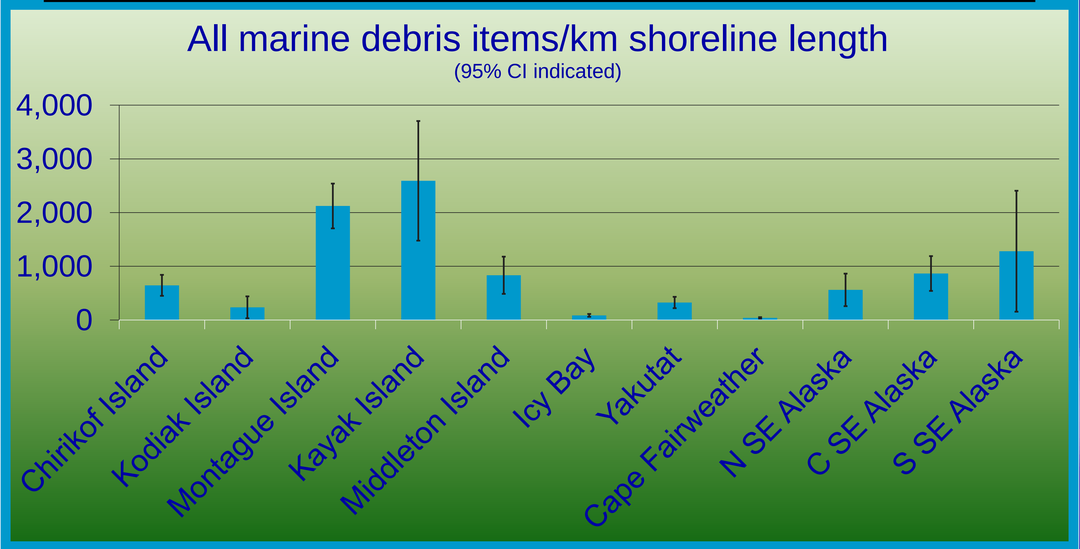
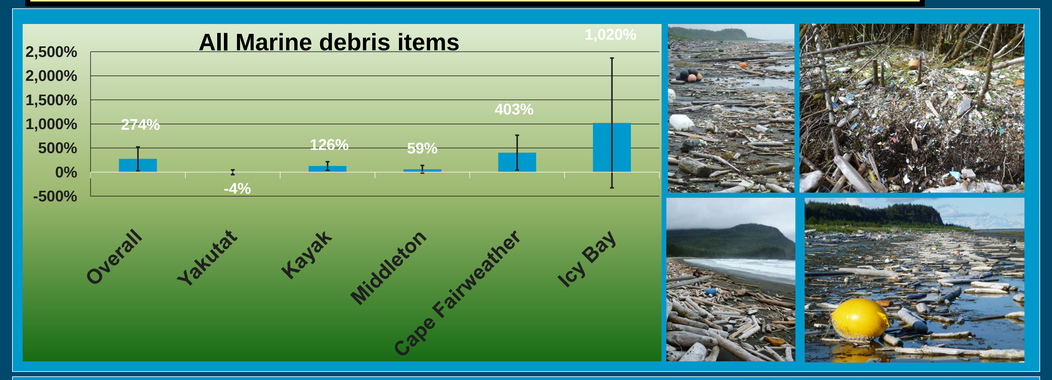
2012 Densities of All Marine Debris
(95% Confidence Intervals indicated)

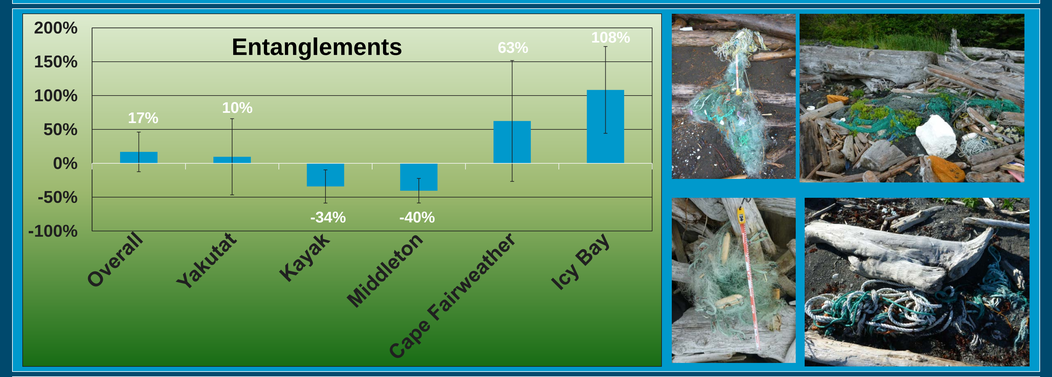


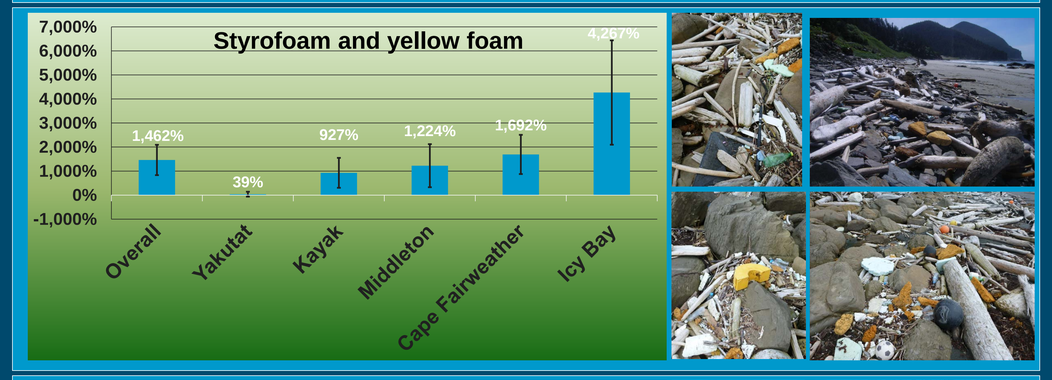
Do ocean currents influence the distribution of marine debris?

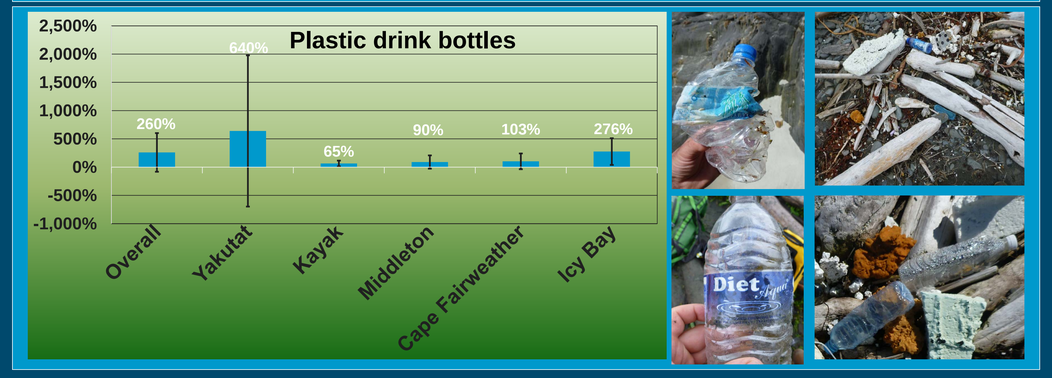


2008 to 2012 Change in Marine Debris Densities









Alaska 2012 marine debris potentially resulting from the 2011 Japanese tsunami

Translations courtesy of Dr. Tokuroh Arimitsu

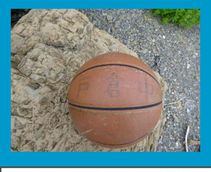
Yakutat, Alaska, July 2012
A buoy bearing the ship's name, "TOKISHIN MARU," from an area called "Shirahama." "Shirahama-cho (Shirahama Village)" is located in Chiba Prefecture, less than 200 km from the epicenter of March 11, 2011 earthquakes, at the southern extreme of Boso Peninsula, facing the Pacific Ocean. Albeit not as severe as those villages devastated by March 11, 2011, Tsunami, this area is also known to have suffered property damages.

Large, oval buoy found on Pt. Riou, Icy Bay, Alaska in July 2012
A buoy bearing the Japanese word "Shin." SHIN refers to NEW in English and must be an abbreviation of a ship name or the owner's.

Cape Fairweather, Alaska, July 2012
A buoy bearing the Japanese word "KAMO." KAMO refers to Goose in English and must be an abbreviation of a ship name or the owner's.

Kayak Island, Alaska, August 2012
"Koizumi Eagles - Miyagi Prefecture); B: This is a punctured volleyball used by "Koizumi Iiguru Team of Miyagi-Pref" where 3/11/2011 Tsunami killed and destroyed countless numbers of citizens and surrounding areas nearby cities.

Kayak Island, Alaska, August 2012
Volleyball belonging to "MOTOKICHI GOU BOY'S or MEN'S TEAM



Kayak Island, Alaska, August 2012
This basketball was once belonged to Tokura Junior High Team. More research is needed to determine the location and whereabouts of this Junior High School in Japan. Parhaps, this school is located in 3/11 Tsunami areas.

Kayak Island, Alaska, August 2012
This is a soccer ball used by "Nakada --" or "--Tanaka" Team in Japan. With exception of the first two or the last two words, two other imprinted words are illegible. Unfortunately this does not indicate where it came from, but definitely from Japan .

Kayak Island, Alaska, August 2012
A basketball named "SENGAN HAMA" may belong to a school or a township. The last work, "HAMA," refers to a general beach front.

Conclusions

- The surveys revealed a 274% increase in the density of all anthropogenic marine debris from the 2008 levels, when the last survey was conducted.
- The highest density in 2012 was found on Kayak Island with an average of 2,656 items per kilometer shoreline length, double the amount found in 2008 (1,412 items/km).
- Circumstantial evidence of the presence of debris from the 2011 Japanese tsunami.

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.