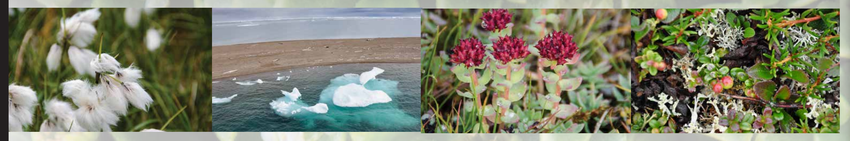
ShoreZone for Alaska's Arctic

ShoreZone's new Arctic data form part of a continental-scale characterization of the coast which can be used for planning related to oil spills, coastal development and climate change.



The web-posted aerial imagery and mapping makes it possible to view and download many thousands of georeferenced Arctic coastal images or shoreline maps directly to your desktop.

Visit *www.shorezone.org* to fly the coastal imagery or view the ShoreZone maps and reports.

By the Numbers:

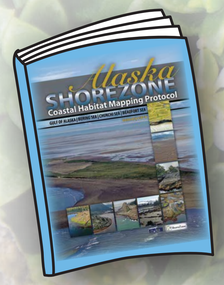
Alaska's Arctic:*

Total shoreline length: ~ 10,600 km

Total number of ShoreZone Units: 9409

Average length per Unit: 1,125 meters

*Wales to the Canadian border…

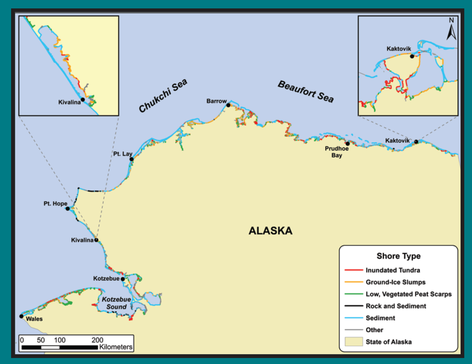


The new *Alaska ShoreZone Coastal Habitat Mapping Protocol* now includes Arctic coasts.

Over *60 ground stations* have been added to the ShoreZone shore station on-line dataset, with detailed observations and photos of shore sites.

Arctic coastline now part of ShoreZone, showing BOEM North Slope project (red) and NPS Kotzebue project (blue).

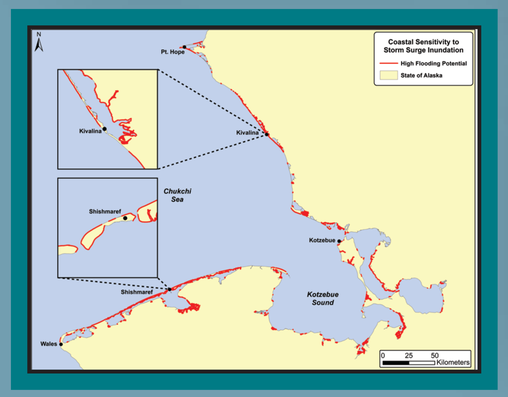
New Shore Types were added to SZ protocols to describe periglacial coasts: Inundated Tundra, Ground Ice Slumps, and Low Vegetated Peat, which together make up ~40% of the coastline mapped.



Summary of Arctic Shore Types.

Salt marsh vegetation (dominated by mixture of salt tolerant grass, herbs and sedges) is very common (70 % of shoreline) and is considered highly sensitive to spills.

A new Coastal Vulnerability Module (CVM) for ShoreZone was part of the classification of shore units in the Kotzebue project, and provides an index of coastal sensitivity to climate change. Details of CVM are included in the new ShoreZone protocol document.



Example of Flooding Sensitivity Index of CVM where the observed storm surge inundation indicated by the highest logline was >100m inland from high water line.

Inundated polygons, Beaufort coast

Permafrost, Beaufort coast

Barrier island and lagoon, Beaufort coast

Lagoon north of Kivalina

Marshes East of Kotzebue, in Holtham Inlet

Chukchi coast near Wales

Kivalina, Chukchi coast

Acknowledgments & CREDITS

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