

ShoreZone in the Arctic – 8,000 km of Coastal Habitat Mapping

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ShoreZone coastal habitat mapping is being conducted along 8,000 km of arctic shoreline, stretching from Cape Prince of Wales in the Bering Strait to the Canada - US border in the Beaufort Sea. Mapping interpretations following the ShoreZone mapping protocol are based on a variety of imagery sources ranging from 2001 NOAA videography to 2012 imagery collected specifically for ShoreZone. The ShoreZone protocol has been revised to incorporate periglacial landforms and arctic coastal biota (Harper and Morris 2011). Over 60 ground stations provide high-resolution detail to support and to validate the mapping interpretations. The extensive dataset will provide a continental-scale characterization of the arctic shoreline and support planning efforts related to oils spills, coastal development, and climate change. Web-posting of aerial imagery provides an operational planning tool for site-scale issues whereas the regional mapping data (e.g., occurrence of salt marsh habitat) provides a tool for large-scale planning issues. A coastal hazards map for selected areas will identify locations most sensitive to erosion, thaw subsidence, and storm-surge/sea-level-rise inundation.

Project support is provided by the Bureau of Ocean Energy Management (BOEM), National Park Service (NPS), Arctic Landscape Conservation Cooperative (ALCC), Western Arctic Landscape Conservation Cooperative (WALCC), Alaska Department of Natural Resources, and NOAA (Ted Stevens Laboratory and Alaska Regional Office).



Near Cape Krusenstern, north of Kotzebue

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Acknowledgments & Credits

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The *extensive dataset* will provide a continental-scale characterization of the Arctic shoreline and support planning efforts related to oil spills, coastal development, and climate change.



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Web-posting of aerial imagery provides access to spatial imagery and the regional *mapping of coastal habitat features* provides a broad-scale planning tool.



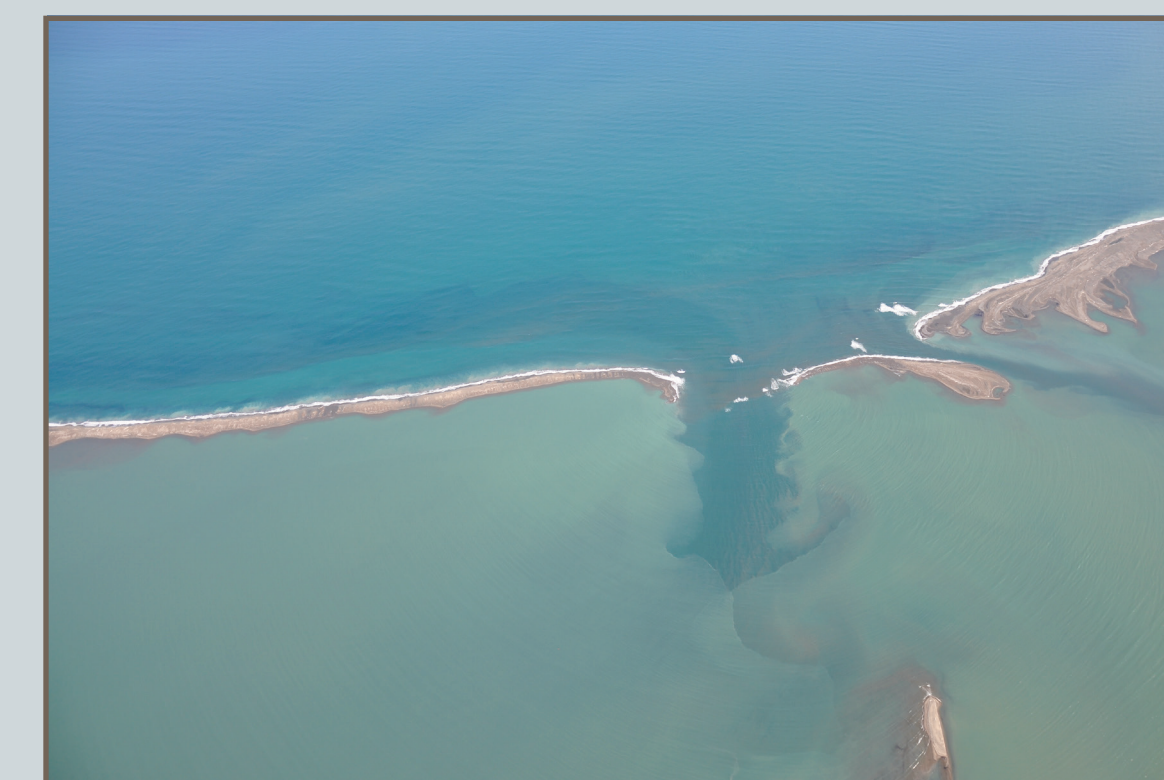
Over **60 ground stations** provide high-resolution descriptions and photos.



Inundated polygons, Beaufort coast



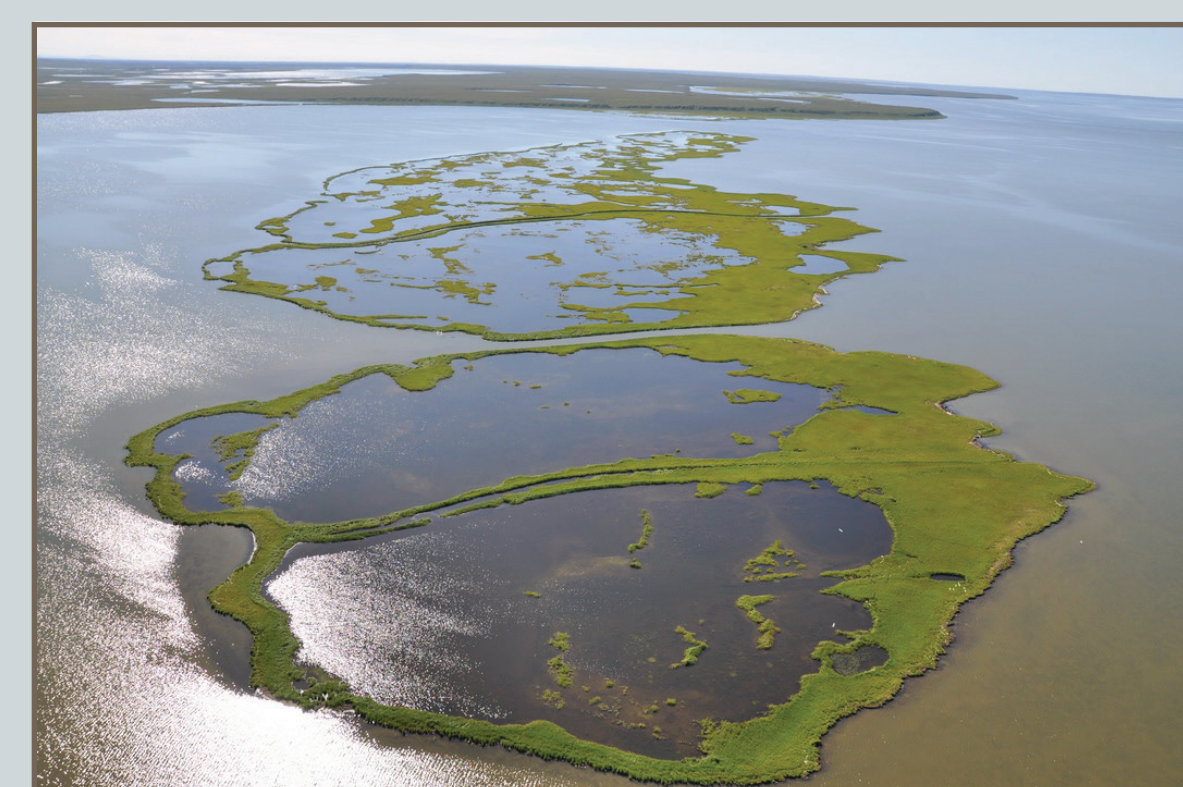
Permafrost, Beaufort coast



Barrier island and lagoon, Beaufort coast



Lagoon north of Kivalina



Marshes East of Kotzebue, in Holtham Inlet



Chukchi coast near Wales

ShoreZone coastal habitat mapping is underway along 8,000 km of Arctic shoreline.

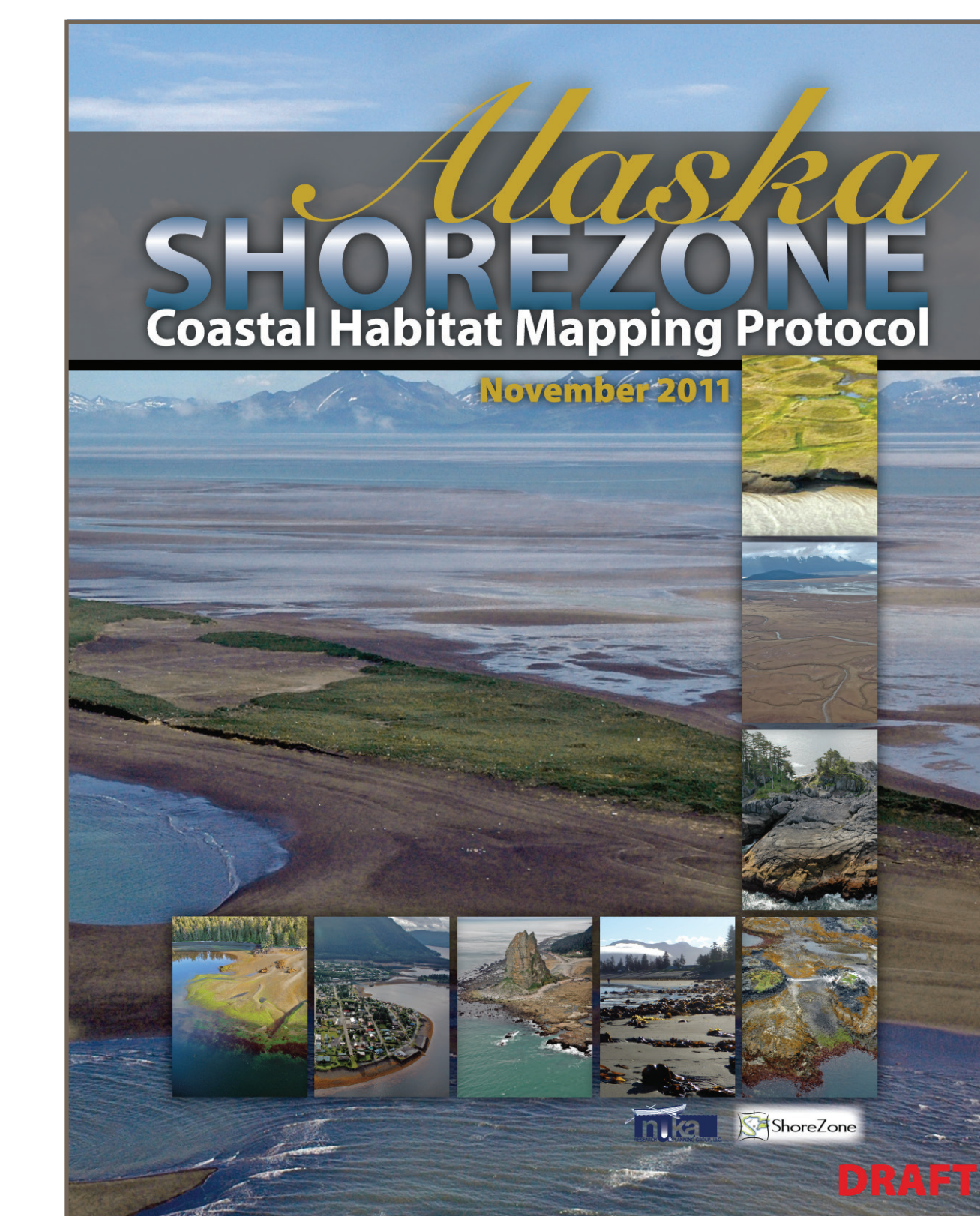


Kivalina, Chukchi coast

A *coastal hazards map* for selected areas will identify locations most sensitive to erosion, thaw subsidence, and storm-surge/sea-level-rise inundation.



Deering, south Kotzebue Sound



The *Alaska ShoreZone Coastal Habitat Mapping Protocol* has been updated to incorporate descriptions for periglacial landforms and biota observed on Arctic coastlines.

