



Arctic Marine Synthesis:
Atlas of the Chukchi and Beaufort Seas

January 2010

Audubon ALASKA **OCEANA** | Protecting the World's Oceans

Long-tailed Duck

Clangula hyemalis

Distribution

- Terrestrial Use Area^{1,2,3,4,5,6}
(Areas used for nesting, foraging, staging, or wintering in southern areas of the map)
- Concentrated Breeding Area⁵
- Marine Use Area^{1,6,7}
(Areas used for foraging, molting, staging, or wintering in open water areas)
- Marine Concentration Area^{1,2,6,8}
- Long-tailed Duck Important Bird Area⁹
- Migration (May - June)¹
- Migration (September - November)¹

Sources: (1) NOAA. 1988. Bering, Chukchi, and Beaufort seas coastal and ocean zones strategic assessment data atlas; (2) NOAA. 2002. Environmental sensitivity index, version 3.0. NOAA, Seattle, Washington; (3) USFWS. 1992-2008. Arctic Coastal Plain aerial breeding pair survey; (4) USFWS. 1992-2006. Eider breeding population survey; (5) USFWS. 1992-2005. Density polygons (based on USFWS Eider breeding population survey and USFWS Arctic Coastal Plain aerial breeding pair survey); (6) Portenko, L.A. 1981. Birds of the Chukchi Peninsula and Wrangel Island (translated from Russian). Published for the Smithsonian Institution and the National Science Foundation, Washington, D.C. Amerind, Springfield, Virginia; (7) Audubon Alaska. 2009. Important Bird Areas. GIS feature class; (8) Alexander, S.A., D.L. Dickson, and S.E. Westover. 1997. Spring migration of eiders and other waterbirds in offshore areas of the western Arctic. In King and Common eiders of the western Canadian Arctic. D.L. Dickson, editor. Occasional Paper Number 94. Canadian Wildlife Service, Edmonton, Alberta; (9) BirdLife International. 2009. Important Bird Areas. GIS feature class.

150 75 0 150 300 Miles

This map is based on the best available data, which varies in quality across the project area. For more information on data quality and knowledge gaps, see the introduction to the *Arctic Marine Synthesis* and the description of this map.