

## Long-tailed Jaeger (*Stercorarius longicaudus*)

Vulnerability: Presumed Stable

Confidence: High

The Long-tailed Jaeger, the most sleek and graceful of the three jaegers, is a common bird in Arctic Alaska. Similar to the larger Pomarine Jaeger, this species diet consists primarily of lemmings and voles, however, unlike the Pomarine Jaeger, Long-tailed Jaegers can withstand cyclical rodent crashes as they can readily switch to other food sources (Wiley and Lee 1998). The Long-tailed Jaegers breeding range in Alaska extends more deeply into the interior than either the Pomarine or Parasitic Jaeger and typically nests in drier upland tundra (Wiley and Lee 1998). The current global population estimate is >150,000 – 5,000,000 (BirdLife International 2012). There is no Alaska population estimate available.



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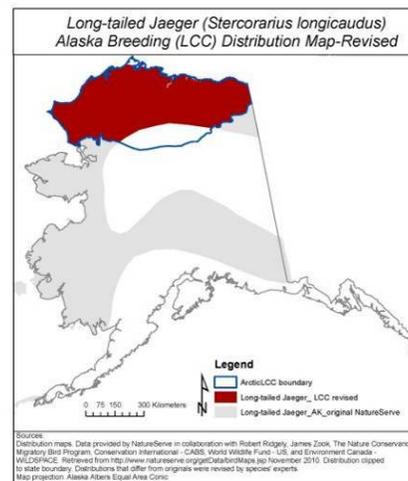
**Range:** We used the extant NatureServe range map for the assessment as it closely matched the Birds of North America (Wiley and Lee 1998) and other range descriptions (Johnson and Herter 1989, Bart et al. 2012).

For most of the indirect exposure and sensitivity categories in the assessment, Long-tailed Jaegers were ranked with a neutral response (see table on next page). Only in one category (Physiological hydro niche), was this species ranked with the potential for significant vulnerability to climate change as wetter tundra habitats may be impacted by a drying trend.

**Physiological Hydro Niche:** Long-tailed Jaegers use wet tundra habitats for foraging, particularly non-breeding individuals that congregate around edges of ponds or swamps where arthropods are numerous (Wiley and Lee 1998). Also sometimes they will nest near water bodies. However, in general, they tend to nest and hunt more often in drier tundra. Therefore, any tundra drying will likely have a minimal impact. Current projections of annual potential evapotranspiration suggest negligible atmospheric-driven drying for the foreseeable future (TWS and SNAP), and its interaction with hydrologic processes is very poorly understood (Martin et

al. 2009). Thus atmospheric moisture, as an exposure factor was not heavily weighted in the assessment.

**Human Response to CC:** Long-tailed Jaegers (mostly non-breeders) do utilize coastal habitats during the breeding season to some extent. Human response to climate change related to the extension of levees and coastline hardening may occur but the extent of these activities will be localized and thus unlikely to significantly impact Long-tailed Jaeger populations.



**Disturbance Regime:** In terms of disturbance regime, the expected increase in storm intensity could result in deeper snow cover (Martin et al. 2009). Early arriving jaegers could have difficulty foraging for their key lemming and vole prey. However, because of their ability to switch to other prey, this will likely not be a significant problem for them. Unlike, Pomarine Jaeger's dependency on lemmings the Long-tailed Jaeger will likely be able to cope with climate-mediated changes in lemming abundance and cycling (Ims and Fuglei 2005).

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Vulnerability Factors	D	SD	N	SI	I	GI	Unknown or N/A
B1. Sea level rise			*				
B2a. Natural barriers			*				
B2b. Anthropogenic barriers			*				
B3. Human response to CC			*	*			
C1. Dispersal/Movement			*				
C2ai. Historical thermal niche (GIS)			*				
C2aii. Physiological thermal niche			*				
C2bi. Historical hydro niche (GIS)			*				
C2bii. Physiological hydro niche			*	*	*		
C2c. Disturbance regime			*	*			
C2d. Ice & Snow habitats			*				
C3. Physical habitat restrictions		*					
C4a. Biotic habitat dependence			*				
C4b. Dietary versatility				*			
C4d. Biotic dispersal dependence			*				
C4e. Interactions with other species			*	*			
C5a. Genetic variation							*
C5b. Genetic bottlenecks							*
C6. Phenological response		*	*	*			*
D1. CC-related distribution response							*

D=Decrease vulnerability, SD=Somewhat decrease vulnerability, N=Neutral effect, SI=Slightly increase vulnerability, I=Increase vulnerability, GI=Greatly increase vulnerability.

**Physiological Thermal Niche:** Long-tailed Jaegers breeding range extends farther into the interior than the other Jaegers, suggesting they can withstand higher temperatures and thus possess greater thermal tolerance.

**Phenological Response:** There currently exists little or no information regarding the genetic or phenological traits that would make Long-tailed Jaegers more or less vulnerable to changing climate conditions.

In summary, although Long-tailed Jaegers may experience some negative impacts from climate change, overall their use of varied nesting and foraging habitats, their dietary versatility, and large geographic range will likely enable this species to remain stable for the near future.

## Literature Cited

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