Stilt Sandpiper (*Calidris himantopus*)

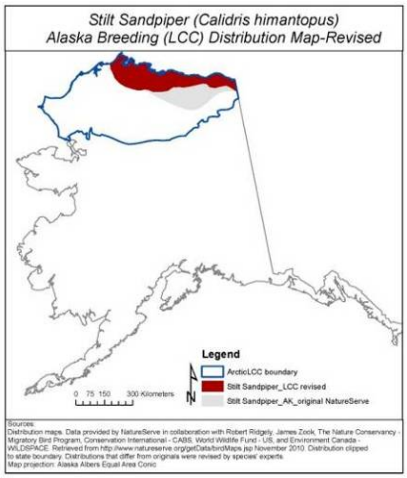
Vulnerability: **Presumed Stable** Confidence: Low

The Stilt Sandpiper is an uncommon to common breeding shorebird on the Arctic Coastal Plain of Alaska that typically nests near the coast from the Canadian border to the Barrow area (Johnson et al. 2007, Klima and Jehl 2012). Highest known breeding densities occur in Arctic Canada where they often nest in taiga and boreal habitats. In Alaska, they prefer nesting in wet, poorly drained tundra and forage mainly in marshes, pools, damp pond margins, and on shorelines of drying ponds during the breeding season (Klima and Jehl 2012). Stilt Sandpipers primarily migrate through the central North American Flyway toward core wintering areas throughout South America. Current population estimate is 820,000 and stable (Morrison et al. 2006).

Range: We modified the NatureServe map based on recent studies (Johnson et al. 2007, Bart et al. 2012) and the Birds of North America account descriptions (Klima and Jehl (2012).

Physiological Hydro Niche: Among the indirect exposure and sensitivity factors in the assessment (see table on next page), Stilt Sandpipers scored neutral in most categories with the exception of "physiological hydrologic niche", for which they were deemed to be potentially sensitive to a tundra drying impact. While in Alaska this species is known to primarily nest in wetter tundra habitats (e.g. strangmoor), in Canada it often nests in drier tundra and taiga habitats (Klima and Jehl 2012), indicating that the species may be able to adapt to drying conditions. Current projections of annual potential evapotranspiration suggest negligible atmospheric-driven drying for the foreseeable future (TWS and SNAP). Thus atmospheric moisture, as an exposure factor (most influential on the "hydrological niche" sensitivity category), was not heavily weighted in the assessment.

Natural Barriers: Natural barriers are likely not an issue for this species although their proclivities for nesting near the coast leaves them little option for shifting their range northward. Again their flexibility in nesting habitat as demonstrated by Canadian populations may signal flexibility in nesting habitat use.



Disturbance Regime: In terms of disturbance regimes, this species could be impacted by habitat degradation along the coast (from more severe storms and subsequent overwash and erosion; Jones et al. 2009), which they utilize post-breeding for fueling up before migration (although their use of coastal habitats during post-breeding is minimal compared to other shorebird species, Taylor et al. 2010). More tundra fires (Racine et al. 2004) could theoretically reduce nesting and foraging habitat, but such fires are relegated to inland areas so they would likely not be impacting current Stilt habitats in Alaska in the foreseeable future.

Interactions with Other Species: Climate change may reduce the amplitude of lemming cycles (Ims and Fuglei 2005) and thus could expose this species to greater nest predation pressure if lemmings become less available as alternative prey.

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Vulnerability Factors	D	SD	N	SI	I	GI	Uknown 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.

Also, this species will communally feed and flock with other shorebirds during breeding and migration and will join other shorebird species in mobbing potential predators during the nesting season (particularly just after hatch; Kilma and Jehl 2012), but it unknown if these behaviors increase species persistence.

In summary, Stilt Sandpipers have enough versatility in their life history traits and behaviors on the breeding grounds to likely allow them to adjust to changing climate conditions and remain "stable" at least during the timeframe of this assessment (to 2050).

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