Surfbird

Calidris virgata

Class: Aves
Order: Charadriiformes

Review Status: Peer-reviewed **Version Date:** 19 April 2019

Conservation Status

NatureServe:	*Agency:*		
G Rank: G4	ADF&G: Species of Greatest Conservation Need	IUCN: Least Concern	Audubon AK: Yellow
S Rank: S2N,S3B	USFWS:	BLM:	

Final Rank

Conservation category: **V. Orange**

unknown status and either high biological vulnerability or high action need

Category	Range	Score
Status	-20 to 20	0
Biological	-50 to 50	-17
Action	-40 to 40	12

Higher numerical scores denote greater concern

Status - variables measure the trend in a taxon's population status or distribution. Higher status scores denote taxa with known declining trends. Status scores range from -20 (increasing) to 20 (decreasing). **Score**

Population Trend in Alaska (-10 to 10) 0

Unknown (ASG 2019).

Distribution Trend in Alaska (-10 to 10) 0

Unknown.

Status Total: 0

Biological - variables measure aspects of a taxon's distribution, abundance and life history. Higher biological scores suggest greater vulnerability to extirpation. Biological scores range from -50 (least vulnerable) to 50 (most vulnerable). **Score**

Population Size in Alaska (-10 to 10) -10

Morrison et al. (2006) estimated a North American population of 70,000 birds, of which at least 52,500 individuals (>75%) are estimated to breed in Alaska (ASG 2019).

Range Size in Alaska (-10 to 10) -8

Disjunct breeding distribution in high-elevation areas of the state including the Brooks Range (Senner and McCaffery 1997; Tibbitts et al. 2006), the Kuskokwim Mountains (Petersen et al. 1991), the Alaska Range (Tomkovich et al. 1998; Phillips et al. 2017), the Chugach Mountains, and the Wrangell Mountains (Senner and McCaffery 1997; Phillips et al. 2017). Wintering range is more restricted and includes shorelines on Kodiak Island and in southcentral and southeast Alaska (Senner and McCaffery 1997). Estimated wintering range is 126,000 sq. km., calculated in GIS and based on

range map from ACCS (2017a).

Population Concentration in Alaska (-10 to 10) -2

Does not concentrate during breeding season. During spring migration, hundreds to a few thousand birds have been observed along the Cook Inlet shores e.g. Kachemak Bay, Redoubt Bay (Gill and Tibbits 1999; Matz et al. 2011) and in Prince William Sound (PWS; Isleib and Kessel 1973). In northern PWS, a 2010 survey at Unakwik Inlet recorded >10,600 surfbirds in early May over an 8-day period (Bishop 2011; Bishop, unpubl. data). Additionally, as late as the 1990s, >8,800 birds stopped on Montague Island in PWS (Bishop 2011); however, recent surveys show very few surfbirds frequenting this area (Bishop and Taylor 2010; Bishop 2011). Other stop-over sites have not been identified, but given this species' propensity to congregate in large numbers during migration, we assume that there are >1 site but less than 250. We therefore rank this question as 0.5 * B + 0.5 * C.

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5) 0

Unknown.

Number of Young (-5 to 5) 1

Usually 4 eggs per clutch, with females laying one clutch per year (Senner and McCaffery 1997; Nouvet et al. 2008)

Ecological Specialization in Alaska

Dietary (-5 to 5) 1

Little information available. During breeding season, consumes terrestrial and aerial insects including flies and beetles (Dixon 1927, qtd. in Senner and McCaffery 1997). During spring migration, mainly consumes herring roe and mussels, but also crustaceans and other intertidal invertebrates (Wright et al. 1991; Senner and McCaffery 1997; Bishop and Green 2001).

Habitat (-5 to 5) 1

During breeding season, nests in high-elevation, alpine sites. Nest habitat includes sparsely vegetated scree and boulders fields, and bare ground along ridges and plateaus (Petersen et al. 1991; Tomkovich et al. 1998; Tibbitts et al. 2006; Ruthrauff et al. 2007). During spring migration, found in intertidal habitats such as small islands, rocky beaches, and mudflats (Isleib and Kessel 1973).

Biological Total: -17

Action - variables measure current state of knowledge or extent of conservation efforts directed toward a given taxon. Higher action scores denote greater information needs due of lack of knowledge or conservation action. Action scores range from -40 (lower needs) to 40 (greater needs). **Score**

Management Plans and Regulations in Alaska (-10 to 10) -10

Protected under the Migratory Bird Treaty Act (MBTA 1918). Closed to recreational (ADFG 2018e) and subsistence harvest (AMBCC 2018).

Knowledge of Distribution and Habitat in Alaska (-10 to 10) 2

Breeding distribution is broadly known through multi-species bird surveys (e.g. Petersen et al. 1991; Tibbitts et al. 2006; Ruthrauff et al. 2007; Phillips et al. 2017), but the extent of its range is not well-understood. A southern range extension was discovered as recent as 2007 (Ruthrauff et al. 2007). Important stop-over sites have been described (Isleib and Kessel 1973; Gill and Tibbitts 1999; Bishop 2011), but the number of individuals visiting these sites has declined in recent years (Bishop 2011; Matz et al. 2011; DeCicco et al. 2015b) and additional sites have not been discovered.

Additional information is needed about migration patterns (VanderWerf 2013). Habitat associations are consistent and fairly well-known throughout the state (see Habitat section above),

Knowledge of Population Trends in Alaska (-10 to 10) 10

Not currently monitored in Alaska. Surveys on wintering grounds outside of Alaska cover only a small portion of this species' range (Andres et al. 2012a).

Knowledge of Factors Limiting Populations in Alaska (-10 to 10) 10

Little is known about the ecology of this species and the factors that limit its population in Alaska. Recent surveys in Kachemak Bay (Matz et al. 2011) and on Montague Island in PWS (Bishop 2011) show a drastic decline in the number of individuals using these locations compared to the 1990s. However, it is unknown whether this species is using other, unidentified stop-over sites or whether it has undergone a drastic decline (Bishop 2011). The location of stop-over sites during spring migration may be related to the abundance of herring roe, which is their main food source at that time of year (ASG 2019). Herring roe has declined in the PWS region (Haught et al. 2017), but a relationship between roe abundance and surfbird populations has not been established.

Action Total: 12

Supplemental Information - variables do not receive numerical scores. Instead, they are used to sort taxa to answer specific biological or management questions.

Harvest:	None or Prohibited
Seasonal Occurrence:	Year-round
Taxonomic Significance:	Monotypic species
% Global Range in Alaska:	>10%
% Global Population in Alaska:	≥75%
Peripheral:	No

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