

Cackling Cackling Goose

Class: Aves
Order: Anseriformes

Branta hutchinsii minima

Note: This assessment refers to this subspecies only. A species level report, which refers to all associated subspecies, is also available. Prior to 2004, this subspecies was classified as *Branta canadensis minima*.

Review Status: Peer-reviewed

Version Date: 05 March 2018

Conservation Status

NatureServe: Agency:

G Rank: G5T4 ADF&G: Species of Greatest Conservation Need IUCN: Audubon AK:

S Rank: S5B USFWS: BLM:

Final Rank		
Conservation category: VII. Yellow		
low status and either high biological vulnerability or high action need		
<u>Category</u>	<u>Range</u>	<u>Score</u>
Status	-20 to 20	-3
Biological	-50 to 50	-16
Action	-40 to 40	-20
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)

2

Experienced a severe population decline from the 1960s to the 1980s as a result of overharvest (PFC 2016b). Population has been stable or increasing since the mid-1980s (Fischer and Stehn 2015; USFWS 2018).

Distribution Trend in Alaska (-10 to 10)

-5

Unknown, but suspected stable. Although the density of geese changed in response to population increases, the breeding range itself did not change (Butler et al. 1995; PFC 2016b). In 2016 and 2017, breeding habitat on the Yukon-Kuskokwim Delta was considered "good to excellent" (USFWS 2018).

Status Total: -3

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

>25,000. In 2018, the adult population size was estimated at 203,700 (95% CI: 178,300-229,100; USFWS 2018).

<i>Range Size in Alaska (-10 to 10)</i>	-2
Breeds along the coastlines of Yukon-Kuskokwim Delta; overwinters in Washington, Oregon, and California (PFC 2016b; USFWS 2018). Estimated size of breeding range is ~17,000 sq. km, calculated in GIS and based on range map from ACCS (2017a).	
<i>Population Concentration in Alaska (-10 to 10)</i>	2
Breeds at varying densities along the coastlines of the Yukon-Kuskokwim Delta; Butler et al. (1995) documented several high-density breeding areas. Population is most highly concentrated during fall migration, when most of the population stages along the northern tip of the Alaska Peninsula, and specifically near Ugashik Bay, Cinder Lagoon, and Izembek Lagoon (Gill et al. 1996; PFC 2016b). Several thousand individuals can also be found on Nunivak Island. During spring migration, cacklers are widely distributed across southeast, southcoastal, and southwestern Alaska (PFC 2016b).	
<i>Reproductive Potential in Alaska</i>	
<u>Age of First Reproduction (-5 to 5)</u>	-3
Breeds as early as 2 years of age (Mowbray et al. 2002b).	
<u>Number of Young (-5 to 5)</u>	1
Females lay a single clutch per year (Mowbray et al. 2002b). Clutch size can range from 1 to 9 eggs, with averages ranging from 3.64 to 5.12 eggs/year (Fischer and Stehn 2015).	
<i>Ecological Specialization in Alaska</i>	
<u>Dietary (-5 to 5)</u>	-5
Feeds on leaves of coastal graminoids, as well as roots, seeds, berries, and agricultural grains (Mickelson 1975; Sedinger and Raveling 1984; PFC 2016b). Diet occasionally includes invertebrates and clam shells (Sedinger and Raveling 1984; Flint et al. 1998c). Although food preferences have been noted (Sedinger and Raveling 1984; 1986), <i>B. hutchinsi minima</i> has a broad, flexible diet and life history strategies that are adapted to capitalizing on high-energy food sources (Sedinger and Raveling 1986; Mowbray et al. 2002b). We therefore rank this question as C- Highly adaptable.	
<u>Habitat (-5 to 5)</u>	1
Restricted to coastlines of the Yukon-Kuskokwim Delta within 30 km from the sea (Petersen 1990; PFC 2016b). Nests are constructed on islands or shorelines of tundra ponds. At Kokechik Bay, nests were often in short-grass habitat on islands or on the shores of small ponds (Petersen 1990). Islands may be preferred in tall grass habitats where nesting on shore might obscure detection of predators (Mickelson 1975). Nesting habitat may be limiting in some parts of their breeding range (Mickelson 1975). Uses intertidal wetlands during spring and fall migration in Alaska (PFC 2016b).	
Biological Total:	
-16	

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

<i>Management Plans and Regulations in Alaska (-10 to 10)</i>	-10
Protected under the Migratory Bird Treaty Act (1918). Subsistence and recreational hunting are permitted, and are subject to regulations (ADFG 2020c; AMBCC 2020). Management plans are in place, both on their breeding grounds in Alaska (the Yukon-Kuskokwim Delta Goose Management Plan) and across their range in the Pacific U.S. (PFC 2016b).	

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

Distribution is well understood and habitat associations have been studied (e.g. Mickelson 1975; Sedinger and Bollinger 1987; Petersen 1990; Gill et al. 1996; Saalfeld et al. 2017). Key areas for breeding, wintering, and migration have been identified (Butler et al. 1995; see Appendix A in PFC 2016b).

Knowledge of Population Trends in Alaska (-10 to 10) -2

Population estimates are derived from an annual June aerial survey, the Yukon-Kuskokwim Delta Coastal Zone Survey, which has been conducted annually since 1985 (USFWS 2018). Counts are corrected by an expansion ratio to estimate fall population size (USFWS 2018). An intensive mark/recapture study from 2011 to 2014 found that results derived from the aerial surveys were accurate enough for annual monitoring (Sanders 2014).

Knowledge of Factors Limiting Populations in Alaska (-10 to 10) 2

Some knowledge of limiting factors. Human harvest is thought to be responsible for historic population declines and may limit the size of the current population (PFC 2016b; Fischer et al. 2018). Spring weather on breeding grounds influences many population parameters including: timing and length of nesting season, nesting density, clutch size, and nest site selection (Sedinger and Raveling 1986; Mickelson 1975; Petersen 1990; Fischer and Stehn 2015). Early spring onset is favorable for productivity and for ensuring that goslings have access to high-quality forage (Mickelson et al. 1975; Sedinger and Raveling 1986). The main cause of nest failure is predation (Mickelson 1975; Bowman et al. 2004); however, the significance of gosling predation to the overall population dynamics is unknown (Bowman et al. 2004). South of Hooper Bay, Mickelson (1975) suggested that geese were limited either by availability of nesting habitat or by density-dependent territoriality; predation on adults was minimal.

Action Total: -20

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

Harvest:	Substantial, regulations
Seasonal Occurrence:	Breeding
Taxonomic Significance:	Subspecies
% Global Range in Alaska:	>10%
% Global Population in Alaska:	Endemic
Peripheral:	No

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