

## Greater White-fronted Goose, Midcontinent Pop.

Class: Aves  
Order: Anseriformes

*Anser albifrons frontalis*

Note: Two populations of *A. a. frontalis* are recognized in Alaska: the Pacific population, which nests on the Yukon-Kuskokwim Delta, and the Midcontinent population, which nests in central, northwestern, and northern Alaska (USFWS 2018). This assessment focuses only on the Midcontinent population.

**Review Status:** Peer-reviewed

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### Conservation Status

*NatureServe:*

*Agency:*

G Rank: G5

ADF&G: Species of Greatest Conservation Need

IUCN: Least Concern

Audubon AK:

S Rank: S5B

USFWS:

BLM:

Final Rank		
Conservation category: <b>IX. Blue</b>		
low status and low biological vulnerability and action need		
<u>Category</u>	<u>Range</u>	<u>Score</u>
Status	-20 to 20	-11
Biological	-50 to 50	-22
Action	-40 to 40	-4
<b>Higher numerical scores denote greater concern</b>		

**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)*

-6

Ten-year trends (2008-2017) based on fall survey counts, which includes breeders in northern Canada, indicate an increase of 4% per year; this increase is not statistically significant (USFWS 2018). This stable to increasing trend for the entire Midcontinent Population is consistent with trends over the last several decades (Kraai et al. 2015). In Alaska, the breeding population on the Arctic Coastal Plain peaked at the turn of the 21st century, but now appears to be decreasing (Amundson et al. 2019). It is unknown whether these declining trends will continue or stabilize. For the time being, we rank this question as D- Stable, but encourage readers to consult the most recent literature for updated trends.

*Distribution Trend in Alaska (-10 to 10)*

-5

Suspected to be increasing on the Arctic Coastal Plain (J. B. Fischer, USFWS, pers. comm.). Nest densities on 40 plots near the CD5 drill site increased from 2013 to 2019 (Rozell et al. 2020). Distribution in interior Alaska is unknown.

Status Total: -11

**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**

<i>Population Size in Alaska (-10 to 10)</i>	-10
Unknown, but >25,000. Stehn et al. (2013) estimated an average breeding bird index of 60,257 for the Arctic Coastal Plain. The most reliable estimate of population size comes from counts on fall staging grounds; however, these surveys include individuals that breed in northern Canada. In 2017, fall surveys counted 771,600 geese (USFWS 2018).	
<i>Range Size in Alaska (-10 to 10)</i>	-8
Summer resident only. In Alaska, the Midcontinent Population has a discontinuous breeding range that includes parts of the Arctic Coastal Plain, the Seward Peninsula, and interior Alaska (Fig. 1 in Kraai et al. 2015; ACCS 2017a). During fall and spring migration, stages in Alberta and Saskatchewan (Ely et al. 2013). Overwinters in the southcentral United States and Mexico (Ely et al. 2013). Breeding range is estimated to cover ~224,743 sq. km, calculated in GIS and based on range map from ACCS (2017a; modified to include Midcontinent breeding grounds only).	
<i>Population Concentration in Alaska (-10 to 10)</i>	-6
During migration, flies in large flocks and concentrates at molting sites in northwest and interior Alaska (Marks and Fischer 2015). Marks and Fischer (2015) identify 5 large molting areas, each encompassing >10,000 sq. km. Areas include the Koyukuk-Nowitna Complex, Innoko National Wildlife Refuge (NWR), and Kanuti NWR. Given population size and size of molting areas, we estimate that the number of discrete aggregation sites is between 25 and 250.	
<i>Reproductive Potential in Alaska</i>	
<u>Age of First Reproduction (-5 to 5)</u>	-3
First breeds at age 3 (Ely et al. 2020).	
<u>Number of Young (-5 to 5)</u>	3
Average clutch size is between 4 to 6 eggs; however, many females do not breed every year (Ely et al. 2020). The proportion of annual versus skipped breeders in Alaska is unknown. We have tentatively scored this question as B- 1-2 eggs/year until further information is available.	
<i>Ecological Specialization in Alaska</i>	
<u>Dietary (-5 to 5)</u>	1
During breeding, feeds on facultative and obligate wetland plants including sedges, horsetails, and willows (Ely et al. 2020). Diet is more specialized during the molting period, when they require highly nutritious, emerging sedges to support feather production (Flint and Meixell 2017). Carrière et al. (1999) also noted a more restricted diet following spring arrival on breeding grounds when most of their study area was still covered in snow.	
<u>Habitat (-5 to 5)</u>	1
Typically nests near fresh or brackish water in wet habitats including lowland tundra, boreal wetlands, and deltas (Ely et al. 2020). Occasionally nests in upland or rocky areas (Ely et al. 2020). During migration, uses wetlands, riparian habitats, and agricultural lands (Ely et al. 2020; Marks and Fischer 2015). During the molting period, white-fronted geese in the Teshekpuk Lake Special Area used a variety of wet vegetation classes; they appeared to stay within 100 m of a wetland (Flint and Meixell 2017).	
	Biological Total: -22

**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 (MBTA 1918). Recreational and subsistence hunting are permitted and are subject to closed seasons and bag limits (ADFG 2020c; AMBCC 2020). A management plan is in place for this species (Kraai et al. 2015).	
<i>Knowledge of Distribution and Habitat in Alaska (-10 to 10)</i>	2
Staging, wintering, and breeding distribution are relatively well-understood, with knowledge of migration routes (Anderson and Haukos 2003; Ely et al. 2013; Schock 2014; Vonbank 2020). Habitat associations on the Arctic Coastal Plain are known from aerial surveys, nest count surveys, and GPS transmitters (Flint and Meixell 2017; USFWS 2018; Rozell 2020). Additional studies are needed to investigate habitat associations of breeding populations in northwestern and interior Alaska.	
<i>Knowledge of Population Trends in Alaska (-10 to 10)</i>	2
No single survey encompasses the entire range of the Mid-continent population in Alaska. Each survey contains important limitations (see Marks and Fischer 2015 for a review). Trend estimates are available for the Arctic Coastal Plain (USFWS 2018; Amundson et al. 2019), but not for northwestern Alaska, where surveys are local and sporadic (Marks and Fischer 2015). Surveys from interior Alaska are prone to high, interannual variation, which precludes a reliable assessment of trends. In light of these limitations, we score this question as B- Inadequate to detect statewide trends.	
<i>Knowledge of Factors Limiting Populations in Alaska (-10 to 10)</i>	2
Some knowledge of factors that influence population dynamics. Hunting (Schmutz and Ely 1999; Ely et al. 2020) and food availability in winter (Ackerman et al. 2006; Askren 2016) are likely have a large effect on survival. Other potential factors include: predation, disease, and climate-driven changes to habitat and forage availability (Flint et al. 2008; Ely et al. 2020).	
Action Total:	-4

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

<b>Harvest:</b>	Substantial, regulations
<b>Seasonal Occurrence:</b>	Breeding
<b>Taxonomic Significance:</b>	Population
<b>% Global Range in Alaska:</b>	>10%
<b>% Global Population in Alaska:</b>	25-74%
<b>Peripheral:</b>	No

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