Glaucous-winged Gull

Larus glaucescens

Class: Aves Order: Charadriiformes Review Status: Peer-reviewed Version Date: 26 June 2020

Conservation Status

Table 1 Conservation status according to state, national, and international organizations and agencies.

Organization	Rank	
NatureServe	G5/S5	
ADF&G	Species of Greatest Conservation Need	
IUCN	Least Concern	
Audubon AK	Watch	

Final Rank

Conservation Category: V. Orange

Unknown status and either high biological vulnerability or high action need

Table 2 ASRS categorical scores. Higher numerical scores denote greater concern.

Category	Range	Score
Status	-20 to 20	0
Biological	-50 to 50	-29
Action	-40 to 40	4

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).

Population Trend in Alaska (-10 to 10)

Trends vary based on location. Data from 2009-2018 suggest that some colonies are declining, while others are stable or increasing (Dragoo et al. 2019). Given these conflicting trends, we rank this question as 0- Unknown.

Score: 0

Distribution Trend in Alaska (-10 to 10)

Unknown.

Score: 0 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).

Population Size in Alaska (-10 to 10)

Statewide population is unknown, but likely >25,000, based on counts from several colonies across its range (Denlinger 2006; Evans et al. 2018; Youngren et al. 2019).

Range Size in Alaska (-10 to 10)

Year-round range includes islands and coastal areas from southwestern Alaska to Southeast Alaska, and west to the Aleutian Islands. Breeding range is limited to southwestern Alaska and portions of southcentral Alaska (Denlinger 2006; Hayward and Verbeek 2020). Estimated breeding range is 86,000 sq. km., based on range map from ACCS (2017a).

Score: -2

Score: -10

Population Concentration in Alaska (-10 to 10)

Breeds in both colonies and scattered pairs (Hayward and Verbeek 2020). There are 825 colonies estimated in Alaska (Denlinger 2006).

Score: -10

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5)

Unknown in Alaska. Elsewhere, estimated between 4-7 years (Hayward and Verbeek 2020).

Score: 1

Number of Young (-5 to 5)

Ranges from 1 to 4 eggs; means of 2.1 to 2.9 have been reported for Alaska (Schaefer et al. 2019; Hayward and Verbeek 2020). Lays a single clutch per year; laying replacement eggs or clutches are possible, though rare (Schaefer et al. 2019). Because the means span 2 categories, we rank this question as 0.5 * B + 0.5 * C.

Score: 2

Ecological Specialization in Alaska

Alaska Species Ranking System – Glaucous-winged Gull

Dietary (-5 to 5)

Omnivorous and generalist feeder. Dietary items include marine invertebrates, fish, birds and their eggs, garbage, and carrion (Irons et al. 1986; Baird 1990; Hayward and Verbeek 2020).

Score: -5

Habitat (-5 to 5)

Typically nests in coastal areas and on small islands in a variety of habitats including in grassy meadows, on rocky beaches, on the tundra, and on cliff ledges (Gibson and Byrd 2007; Hayward and Verbeek 2020). Forages nearshore in tidal lagoons and intertidal reefs. During the non-breeding season, can be found offshore and in coastal areas including beaches, garbage dumps, and canneries (Denlinger 2006; Hayward and Verbeek 2020).

Score: -5

Biological Total: -29

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 to lack of knowledge or conservation action. Action scores range from -40 (lower needs) to 40 (greater needs).

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

Protected under the Migratory Bird Treaty Act (MBTA 1918). Birds and their eggs are open to subsistence harvest and subject to closed seasons (AMBCC 2020).

Score: -10

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

Habitat associations and range during the breeding season are fairly well-known from multispecies surveys (e.g., Evans et al. 2018; Dragoo et al. 2019) and from species-specific studies, including fine-scale studies on foraging behavior and movements (e.g., Irons et al. 1986; Ahlstrom et al. 2019). The northern extent of their breeding range is unclear and may extend as far north as the Seward Peninsula (see map in Hayward and Verbeek 2020; Winker et al. 2002). Comparatively little is known about their range during migration and winter (but see Hatch et al. 2011a; Schaefer et al. 2020).

Score: 2

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

Count data are available for some colonies e.g., some Aleutian Islands, islands of the Kodiak Archipelago, Kenai Fjords National Park (Corcoran 2016; Curl 2018; Dragoo et al. 2019), however, surveys are not consistently conducted across years or locations, and no statewide data are available.

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

Little is known about the factors that limit this species' population or distribution in Alaska. Increased human activities in some areas may have contributed to increases in local populations on Middleton Island and Egg Island by artificially increasing food availability (Hatch et al. 2011a). Meanwhile, nest predation and intraspecific competition may limit population growth, though data for Alaska are scarce (Schaefer et al. 2019; Hayward and Verbeek 2020). Although gulls are not identified to species in bycatch reports, mortality rates from fishery lines seem minimal relative to population size (Krieger et al. 2019). Harvest rates may be substantial in some communities (Naves and Otis 2017; Krieger et al. 2019). Egg harvest may reduce clutch size since most females do not lay replacement eggs (Schaefer et al. 2019).

Score: 10

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.

Harvest: Substantial, regulations

Seasonal Occurrence: Year-round

Taxonomic Significance: Monotypic species

% Global Range in Alaska: >10%

% Global Population in Alaska: 25-74%

Peripheral: No

References

Alaska Center for Conservation Science (ACCS). 2017a. Wildlife Data Portal. University of Alaska Anchorage. Available online: http://aknhp.uaa.alaska.edu/apps/wildlife

- Ahlstrom, C. A., J. Bonnedahl, H. Woksepp, J. Hernandez, J. A. Reed, ..., and A. M. Ramey. 2019. Satellite tracking of gulls andgenomic characterization of faecal bacteria reveals environmentally mediated acquisition and dispersal of antimicrobial-resistant Escherichia coli on the Kenai Peninsula, Alaska. Molecular Ecology 28(10):2531–2545. DOI:
- Alaska Migratory Bird Co-Management Council (AMBCC). 2020. Regulations for the 2020 Alaska Subsistence Spring/Summer Migratory Bird Harvest. Office of the Alaska Migratory Bird Co-Management Council, U.S. Fish & Wildlife Service, Anchorage, AK, USA.
- Baird, P. H. 1990. Influence of abiotic factors and prey distribution on diet and reproductive success of three seabird species in Alaska. Ornis Scandinavica 21(3):224-235. DOI: 10.2307/3676782
- Corcoran, R. M. 2016. Nearshore marine bird and mammal surveys in the Kodiak Archipelago, 2011-2013. Refuge report no. 2016-1, Kodiak National Wildlife Refuge, U.S. Fish and Wildlife Service, Kodiak, AK, USA.
- Curl, J. A. 2018. Estimating seabird abundance: a case study in Kenai Fjords National Park, Alaska. masters, University of Alaska Fairbanks, Fairbanks, AK, USA.

- Denlinger, L. M., comp. 2006. Alaska Seabird Information Series. Unpublished report, U.S Fish and Wildlife Service, Migratory Bird Management, Anchorage, AK, USA.
- Dragoo, D. E., H. M. Renner, and R. S. A. Kaler. 2019. Breeding status and population trends of seabirds in Alaska, 2018. AMNWR 2019/03, U.S. Fish and Wildlife Service, Homer, AK, USA.
- Evans, S. A., D. J. Schultz, and B. A. Drummond. 2018. Biological monitoring at Saint Lazaria Island, Alaska in 2018. AMNWR 2018/13, U.S. Fish and Wildlife Service, Homer, AK, USA.
- Gibson, D. D., and G. V. Byrd. 2007. Birds of the Aleutian Islands, Alaska. Nuttall Ornithological Club, Cambridge, MA, USA.
- Hatch, S.A., Gill, V.A., and D.M. Mulcahy. 2011a. Migration and Wintering Areas of Glaucous-Winged Gulls from South-Central Alaska. Condor 113(2): 340-351.
- Hayward, J. L. and N. A. Verbeek. 2020. Glaucous-winged Gull (*Larus glaucescens*), version 1.0. In Billerman, S. M., ed. Birds of the World. Cornell Lab of Ornithology, Ithaca, NY, USA. doi.org/10.2173/bow.glwgul.01
- Irons, D. B., R. G. Anthony, and J. A. Estes. 1986. Foraging strategies of glaucous-winged gulls in a rocky intertidal community. Ecology 67(6):1460–1474. DOI: 10.2307/1939077
- Krieger, J. R., A. M. Eich, and S. M. Fitzgerald. 2019. Seabird bycatch estimates for Alaska groundfish fisheries: 2018. NOAA Technical Memorandum NMFS-F/AKR-20, U.S. Department of Commerce, Washington, DC. DOI: 10.25923/hgft-we56
- Migratory Bird Treaty Act (MBTA). 1918. U.S. Code Title 16 §§ 703-712 Migratory Bird Treaty Act.
- Naves, L. C., and D. Otis. 2017. Alaska subsistence harvest of birds and eggs, 2016, Alaska migratory bird co-management council. Alaska Department of Fish and Game, Division of Subsistence, Anchorage, AK, USA.
- Schaefer, A. L., M. A. Bishop, and K. Jurica. 2019. Effects of egg harvest on egg laying of glaucous-winged gulls *Larus glaucescens*. Marine Ornithology 47(2):179–183.
- Schaefer, A. L., M. A. Bishop, and R. Thorne. 2020. Marine bird response to forage fish during winter in subarctic bays. Fisheries Oceanography 29(4): 297-308. http://doi.wiley.com/10.1111/fog.12472
- Winker, K., D. D. Gibson, A. L. Sowls, B. E. Lawhead, P. D. Martin, E. P. Hoberg, and D. Causey. 2002. The birds of St. Matthew Island, Bering Sea. The Wilson Bulletin 114(4):491– 509.
- Youngren, S. M., D. C. Rapp, and N. A. Rojek. 2019. Biological monitoring at Aiktak Island, Alaska in 2018. AMNWR 2019/02, U.S. Fish and Wildlife Service, Homer, AK, USA.

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