U.S. Fish & Wildlife Service

Waterfowl

Population Status, 2026

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September 1, 2026

In the United States, the process of establishing hunting regulations for waterfowl is conducted annually. This process involves a number of scheduled meetings in which information regarding the status of waterfowl is presented to individuals within the agencies responsible for setting hunting regulations. In addition, the proposed regulations are made available for public comment. This report includes the most current breeding population and production information available for waterfowl in North America and is a result of cooperative efforts by the U.S. Fish and Wildlife Service (USFWS), the Canadian Wildlife Service (CWS), various state and provincial conservation agencies, and private conservation organizations. In addition to providing current information on the status of populations, this report is intended to aid the development of waterfowl harvest regulations in the United States for the 2027–2028 hunting season.

Cover: 2026 Federal Duck Stamp contest winner, James Hautman. Three buffleheads. Used with permission from the Federal Duck Stamp Office.

Acknowledgments

The information contained in this report is the result of the efforts of numerous individuals and organizations. Principal contributors include the Canadian Wildlife Service, U.S. Fish and Wildlife Service, state wildlife conservation agencies, and provincial conservation agencies from Canada. In addition, several conservation organizations, other state and federal agencies, universities, and private individuals provided information or cooperated in survey activities. Appendix A.1 provides a list of individuals responsible for the collection and compilation of data for the "Status of Ducks" section of this report. Appendix A.2 provides a list of individuals who were primary contacts for information included in the "Status of Geese and Swans" section. We apologize for any omission of individuals from these lists, and thank all participants for their contributions.

This report was compiled by the U.S. Fish and Wildlife Service, Division of Migratory Bird Management, branches of Assessment and Decision Support, Monitoring and Data Management, and Migratory Bird Surveys. The principal authors are Joshua Dooley, Walt Rhodes, and Nathan Zimpfer. The preparation of this report involved substantial efforts on the part of many individuals. Support for the processing of data and publication was provided by Meghan Eyler, John Yeiser, Frank Rivera, and Jeff Hostetler. Phil Thorpe provided the habitat map. We especially would like to recognize Lara Mitchell for her statistical support while detailed to the Division of Migratory Bird Management.

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All Waterfowl Population Status reports are available from our website (`https://www.fws.gov/library/collections/waterfowl-population-status-reports`).

Executive Summary

This report summarizes the most recent information about the status of North American waterfowl populations and their habitats to facilitate the development of harvest regulations. The annual status of these populations is monitored and assessed through abundance and harvest surveys. This report details abundance estimates; harvest survey results are discussed in separate reports. The data and analyses were those most currently available when this report was written. Future analyses may yield slightly different results as databases are updated and new analytical procedures become available.

Habitat conditions during the 2026 WBPHS generally improved over a large portion of the surveyed area relative to 2025. Most of the increase was due to a modest improvement from poor to fair conditions in the traditional survey area of interior Canadian provinces and portions of the north-central U.S. The prairies largely received average to above-average winter precipitation, except southern Manitoba and along the U.S. border and southward. Spring precipitation was above average. Except for December 2025, most of the Canadian prairies had average winter temperatures followed by a very cold spring, delaying ice-out in the boreal region by as much as two weeks. Phenology was closer to normal in the north-central U.S. prairies. Eastern Canada and the Maritimes and the northeastern U.S. had an average winter with average to below-average precipitation, particularly in southern Quebec and eastward. Average to above-average spring precipitation greatly improved wetland conditions but spring phenology was delayed slightly by cooler spring temperatures. Nearly all of eastern Canada and the Great Lakes, except Minnesota, continued to have good to excellent habitats since 2024. In 2026, spring phenology was initially delayed across many areas in the Subarctic and Arctic, although warmer temperatures as spring advanced led to more average phenology and conditions around peak nesting periods. The total pond estimate (Prairie Canada and northcentral U.S. combined) was 4.8 ± 0.2 million, which was 14% above the 2025 estimate of 4.2 ± 0.1 million, and 9% below the long-term average (5.2 ± 0.03 million; Table 1, Figure 3). The 2026 estimate of ponds in Prairie Canada was 3.3 ± 0.2 million. This estimate was 29% above the 2025 estimate of 2.6 ± 0.1 million and similar to the long-term average (3.5 ± 0.02 million). The pond estimate for the northcentral U.S. was 1.5 ± 0.1 million, which was similar to the 2025 estimate (1.6 ± 0.08 million) and 15% below the long-term average of 1.7 ± 0.01 million.

Summary of Duck Populations

In the traditional survey area, which includes strata 1–18, 20–50, and 75–77, the total duck population estimate (excluding scoters [*Melanitta* spp.], eiders [*Somateria* spp. and *Polysticta* spp.], long-tailed ducks [*Clangula hyemalis*], mergansers [*Mergus* spp. and *Lophodytes cucullatus*], and wood ducks [*Aix sponsa*]) was 33.4 ± 0.6 million birds. This estimate was similar to the 2025 estimate and 6% below the long-term average of 35.4 ± 0.09 million. Estimated total mallard (*Anas platyrhynchos*) abundance was 5.9 ± 0.2 million, which was 11% below the 2025 estimate and 26% below the long-term average of 7.9 ± 0.04 million.

The 2026 estimate of gadwall (*Mareca strepera*; 2.4 ± 0.1 million) was similar to their 2025 estimate and 13% above their long-term average of 2.1 ± 0.02 million. Estimates of American wigeon (*M. americana*; 2.9 ± 0.2 million) and green-winged teal (*Anas crecca*; 2.3 ± 0.1 million) were similar to their 2025 estimates and their respective long-term averages. The estimate for blue-

winged teal (*Spatula discors*; 4.0 ± 0.2 million) was similar to the 2025 estimate and 22% below the long-term average of 5.1 ± 0.04 million. Estimates of northern shovelers (*S. clypeata*; 3.3 ± 0.2 million) were 19% above their 2025 estimate of 2.8 ± 0.2 million and were 24% above their long-term average of 2.6 ± 0.02 million. The northern pintail (*Anas acuta*) estimate was 2.0 ± 0.1 million, which was similar to the 2025 estimate of 2.2 ± 0.2 million and 48% below the long-term average of 3.8 ± 0.03 million. Estimates of redheads (*Aythya americana*) and canvasbacks (*A. valisineria*) were 0.9 ± 0.08 million and 0.8 ± 0.07 million, respectively, which were similar to their 2025 estimates and were 26% and 32% above their long-term averages of 0.7 ± 0.01 million and 0.6 ± 0.01 million, respectively. The combined estimate of lesser and greater scaup (*A. affinis* and *A. marila*; 4.2 ± 0.2 million) was similar to the 2025 estimate and 15% lower than the long-term average of 4.9 ± 0.04 million.

A time series for assessing changes in green-winged teal, ring-necked duck (*A. collaris*), goldeneye (*Bucephala clangula* and *B. islandica*), merganser, and American black duck (*Anas rubripes*) population status in the eastern survey area is provided by breeding waterfowl surveys conducted by the U.S. Fish and Wildlife Service (USFWS) and Canadian Wildlife Service (CWS) in Maine and eastern Canada. In the eastern survey area, the estimate of goldeneyes was 0.7 ± 0.2 million, which was similar to the 2025 estimate and to the long-term average. The green-winged teal estimate was 0.3 ± 0.08 million, which was similar to the 2025 estimate and 12% below the long-term average. Estimates of ring-necked ducks were 0.8 ± 0.1 million, which was similar to the 2025 estimate and 16% above the long-term average. The 2026 estimate of mergansers (0.7 ± 0.1 million) and American black ducks in the eastern survey area (0.7 ± 0.09 million) were similar to their 2025 estimates and to their the long-term averages. Eastern mallard population status is derived by integrating data from the eastern survey area and ground plot surveys conducted in the northeastern U.S. states of Virginia north to New Hampshire. The estimated abundance of mallards in eastern North America was 0.9 ± 0.09 million, which was similar to the 2025 estimate and 23% below the long-term average.

Summary of Goose and Swan Populations

Of the 26 goose and tundra swan (*Cygnus columbianus*) populations, the primary monitoring indices for 9 of these populations had significant ($P < 0.05$) negative trends (% change per year) during the most recent 10-year period: Mississippi Flyway Giant Population (–1%) and Southern Hudson Bay Population (–7%) Canada geese (*Branta canadensis*), cackling/minima cackling geese (*B. hutchinsii*; –7%), Midcontinent Population lesser (–8%) and greater (–6%) snow geese (*Anser caerulescens*), Pacific Population greater white-fronted geese (*A. albifrons*; –5%), Pacific brant (*B. bernicla*; –6%), emperor geese (*A. canagicus*; –4%), and Western Population tundra swans (–7%). One population had a significant positive trend: Wrangel Island Population lesser snow geese (+7%). Of the 21 populations for which primary indices included variance estimates, the most recent estimate for 2 populations significantly increased from the prior year's estimate: cackling/minima cackling geese (+38%) and greater snow geese (+20%). Four population's most recent estimate decreased from the prior year's estimate: Southern Hudson Bay Population (–34%) and Western Prairie and Great Plains Population (–25%) Canada geese, Aleutian cackling geese (–47%), and Ross's geese (*A. rossii*; –61%). Of the 5 populations for which primary indices did not include variance estimates, the most recent count was greater than the prior count for Atlantic brant (+2%) and Eastern Population tundra swans (+25%) and less than the prior count for Mississippi Flyway Giant Population Canada geese (–5%) and Western Arctic (–11%) and Wrangel Island (–14%) Population lesser snow geese.

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Status of Ducks

This section summarizes the most recent information about the status of North American duck populations and their habitats. The annual status of these populations is assessed using databases resulting from surveys which include estimates of breeding populations and harvest. This report details abundance estimates; harvest survey results are discussed in separate reports. The data and analyses were the most current available when this report was written. Future analyses may yield slightly different results as databases are updated and new analytical procedures become available.

Methods

Waterfowl Breeding Population and Habitat Survey (WBPHS)

Federal, provincial, and state agencies conduct surveys each spring to estimate the size of breeding waterfowl populations and to evaluate habitat conditions. These surveys are conducted by ground (Atlantic Flyway Breeding Waterfowl Survey; Sauer et al. 2014) or by airplanes and helicopters, and cover over 2.0 million square miles that encompass principal breeding areas of North America. The traditional survey area (strata 1–18, 20–50, and 75–77) comprises parts of Alaska, Canada, and the northcentral U.S., and covers approximately 1.3 million square miles (Figure 1). Specifics on the survey design are provided in Smith (1995). The eastern survey area (strata 51–53, 56, and 62–72) includes parts of Ontario, Quebec, Labrador, Newfoundland, Nova Scotia, Prince Edward Island, New Brunswick, and Maine, covering an area of approximately 0.7 million square miles (Figure 1). Historically, surveys in the east were also conducted in strata 54, 55, and 57–59. Surveys in strata 57–59 were discontinued in 2011 due to a reduction in aviation staff. In 2012, stratum 55 was discontinued primarily because it overlapped with an existing ground survey. In 2017, stratum 54 was discontinued due to increased aviation hazards such as wind turbines and power lines. None of the discontinued strata in the eastern survey are part of existing management frameworks. In Prairie and Parkland Canada and the northcentral U.S., aerial waterfowl counts are corrected annually for visibility bias by conducting ground counts along a subsample of survey segments. In some northern regions of the traditional survey area, visibility corrections were derived from comparisons between airplane and past helicopter surveys. In the eastern survey area, duck estimates are adjusted using visibility-correction factors derived from a comparison of airplane and helicopter counts. Annual estimates of duck abundance are available since 1955 for the traditional survey area and since 1996 for the eastern survey area (except stratum 69); however, some portions of the eastern survey area have been surveyed since 1990 (strata 51–53, 56, 63–64, 66–68, 70–72). In the traditional survey area, visibility-corrected estimates of pond abundance in Prairie Canada are available since 1961, and in the northcentral U.S. since 1974. Several provinces and states also conduct breeding waterfowl surveys using various methods; some have survey designs that allow for calculation of measures of precision for their estimates. Information about habitat conditions was supplied primarily by biologists working in those survey areas. Unless otherwise noted, z-tests were used for assessing statistical significance, with alpha levels set at 0.1; P-values are given in tables along with wetland and waterfowl estimates.

Since 1990, the U.S. Fish and Wildlife Service (USFWS) has conducted aerial transect surveys using airplanes in portions of the eastern

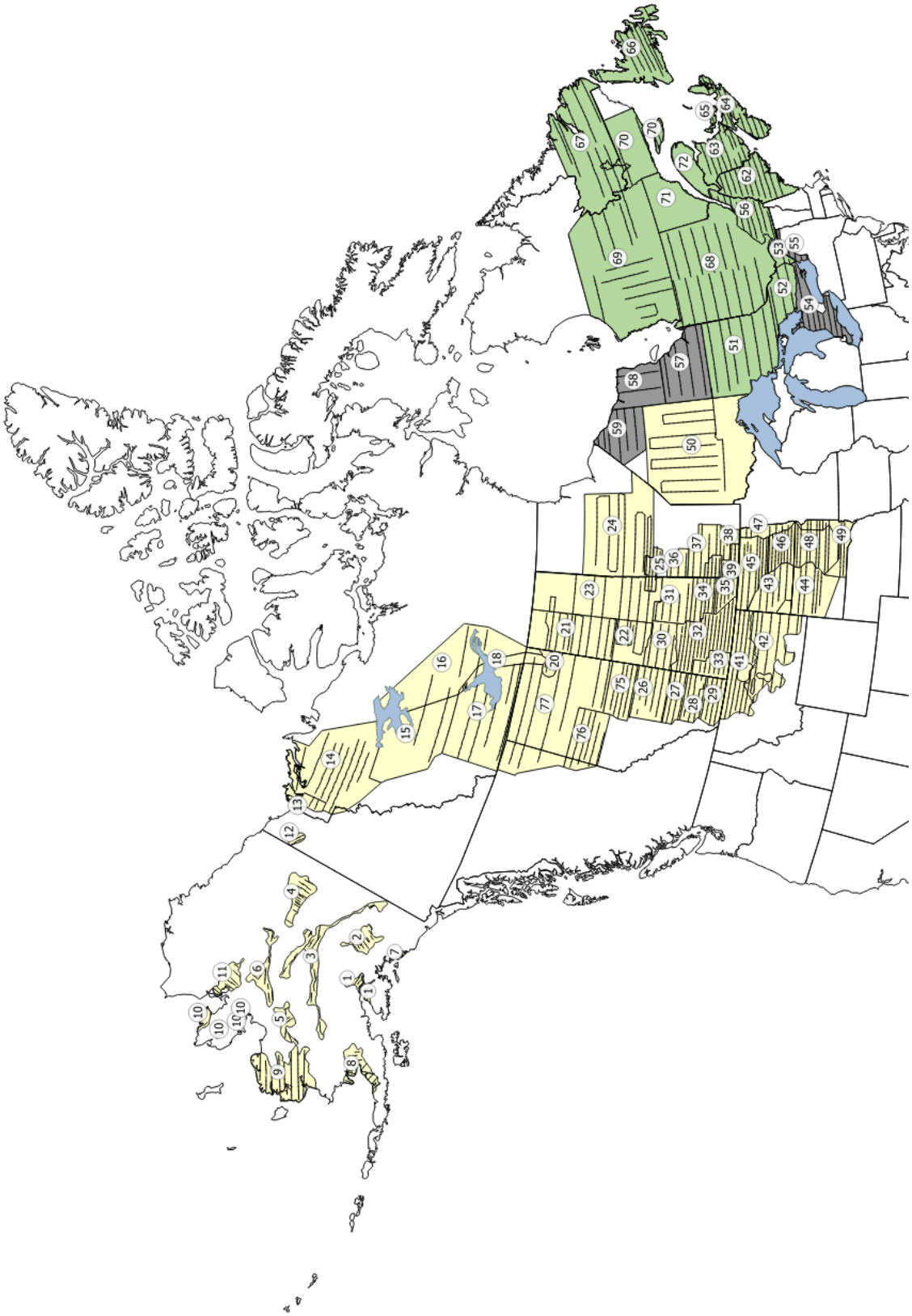

Figure 1. Strata and transects of the Waterfowl Breeding Population and Habitat Survey (yellow = traditional survey area, green = eastern survey area, grey = discontinued strata).

survey area, similar to those in the traditional survey area, to estimate waterfowl abundance. Additionally, the Canadian Wildlife Service (CWS) has conducted a helicopter-based aerial plot survey in core American black duck (*Anas rubripes*) breeding regions of Ontario, Quebec, and the Atlantic Provinces. Initially, data from these surveys were analyzed separately despite overlap in geographic areas of inference. In 2004, the USFWS and CWS agreed to integrate the two surveys, produce composite estimates from both sets of survey data, and expand the geographic scope of the survey in eastern North America. Consequently, since 2005, waterfowl abundances for eastern North America have been estimated using a hierarchical-modeling approach that combines USFWS and CWS data (Zimmerman et al. 2012). In cases where the USFWS has traditionally not recorded observations to the species level (e.g., mergansers, goldeneyes), estimates are produced for multi-species groupings. Previously, this report provided composite estimates for the eastern survey area using only data collected in strata 51, 52, 63, 64, 66–68, and 70–72, which corresponds to the area covered by the CWS plot survey. These strata contain either (1) both USFWS airplane survey transects and CWS helicopter plots or (2) only helicopter plots (strata 71 and 72). Since 2018, eastern breeding waterfowl population estimates have been presented at the full eastern survey scale (strata 51–53, 56, 62–72) or eastern North America scale, depending on the breeding distribution of the species. The eastern North America scale includes the full eastern survey area plus data from the Atlantic Flyway Breeding Waterfowl Survey (AFBWS, Sauer et al. 2014). The AFBWS is a ground-based survey conducted annually from Virginia north to New Hampshire. The time series at these larger scales is shorter (1998–present) but provides a more complete assessment of the status of waterfowl in the east.

For widely distributed and abundant species including American black ducks, mallards (*A. platyrhynchos*), green-winged teal (*A. crecca*), ring-necked ducks (*Aythya collaris*), goldeneyes (common [*Bucephala clangula*] and Barrow's [*B. islandica*]) and mergansers (common [*Mergus merganser*], red-breasted [*M. serrator*], and hooded [*Lophodytes cucullatus*]), composite estimates of abundance were constructed using a hierarchical model (Zimmerman et al. 2012), which estimated the mean count per unit area surveyed for each stratum, year, and method (i.e., airplane or helicopter). These mean counts were then extrapolated over the area of each stratum to produce a stratum-year-method- specific population estimate. Estimates from the airplane surveys were adjusted for visibility bias by multiplying them by the total CWS helicopter survey estimates for all years, divided by the total USFWS airplane survey estimates for all years that the two surveys overlapped. For strata containing both CWS and USFWS surveys (51, 52, 63, 64, 66–68, and 70), USFWS estimates were adjusted by visibility-correction factors derived from CWS plot estimates, and the CWS and adjusted USFWS estimates were then averaged to derive stratum-level estimates. For strata containing just USFWS surveys (strata 53, 56, 62, 65, and 69) visibility-correction factors based on the ratio of counts from helicopters to fixed-wing aircraft along selected segments were used to adjust counts (Zimmerman et al. 2012). No visibility adjustments were made for strata with only CWS plots (strata 71 and 72). For two species groups, goldeneyes and mergansers, for which there are many survey units with no observations, a zero-inflated Poisson distribution (Martin et al. 2005) was used to fit the model. Using this technique, the binomial probability of encountering the species on a transect or a plot is modeled separately. Not enough green-winged teal, ring-necked ducks, goldeneyes, and mergansers were counted in the AFBWS to fit the models for those species at the eastern North America scale. Black duck and mallard counts were adequate to fit the model to the AFBWS data and derive breeding population estimates at the eastern North America scale. We present estimates for American black ducks, green-winged teal, ring-necked ducks, goldeneyes, and mergansers at the eastern survey scale, and estimates for mallards at the eastern North

America scale. The zero-inflated Poisson modeling approach was not adequate for the following species that occur at lower densities and are more patchily distributed in the eastern survey area: scaup (lesser [*Aythya affinis*] and greater [*A. marila*]), scoters (black [*Melanitta americana*], white-winged [*M. deglandi*], and surf [*M. perspicillata*]), bufflehead (*Bucephala albeola*), and American wigeon (*Anas americana*). This model-based approach and changes in analytical procedures for some species may preclude comparisons with results from previous reports. We will continue to investigate methods that might allow us to estimate abundance of these rarer species within a hierarchical-modeling framework.

Since the implementation of the Eastern Breeding Waterfowl and Habitat Survey and associated composite estimation procedure (Zimmerman et al. 2012), American black duck total indicated pairs were calculated using the CWS method of scaling. The CWS scaling is based on sex-specific observations collected during previous CWS helicopter surveys in eastern Canada, which indicated that approximately 50% of black duck pair observations are actually two males. Thus, observed black duck pairs were scaled by 1.5 rather than the 1.0 scaling traditionally applied by the USFWS. These indicated pairs were then used to calculate indicated birds based on the USFWS protocol. The Black Duck Joint Venture completed a review of this estimation procedure using updated observation data from Quebec and New Jersey for the period 1990–2009. The results indicated that the majority of 2-bird observations consisted of female/male pairings in similar proportions to mallards and green-winged teal. Therefore, starting in 2023 the full time series for black duck total indicated pairs are estimated using the standard USFWS protocols that 2 birds equal 1 breeding pair. Further, total indicated birds are calculated using standard USFWS protocols.

Total Duck Species Composition

In the traditional survey area, our estimate of total ducks excludes scoters, eiders (common [*Somateria mollissima*], king [*S. spectabilis*], spectacled [*S. fisheri*], and Steller's [*Polysticta stelleri*]), long-tailed ducks (*Clangula hyemalis*), mergansers, and wood ducks (*Aix sponsa*) because the traditional survey area does not include a large portion of their breeding ranges (Smith 1995).

Results and Discussion

2026 Overall Habitat Conditions and Population Status

Habitat conditions during the 2026 WBPHS generally improved over a large portion of the surveyed area relative to 2025. Most of the increase was due to a modest improvement from poor to fair conditions in the traditional survey area of interior Canadian provinces and portions of the north-central U.S. The prairies largely received average to above-average winter precipitation, except southern Manitoba and along the U.S. border and southward. Spring precipitation was above average. Except for December 2025, most of the Canadian prairies had average winter temperatures followed by a very cold spring, delaying ice-out in the boreal region by as much as two weeks. Phenology was closer to normal in the north-central U.S. prairies. Eastern Canada and the Maritimes and the northeastern U.S. had an average winter with average to below-average precipitation, particularly in southern Quebec and eastward. Average to above-average spring precipitation greatly improved wetland conditions but spring phenology was delayed slightly by cooler spring temperatures. Nearly all of eastern Canada and the Great Lakes, except Minnesota, continued to have good to excellent habitats since 2024.

The total pond estimate (Prairie Canada and northcentral U.S. combined) was 4.8 ± 0.2 million, which was 14% above the 2025 estimate of 4.2 ± 0.1 million, and 9% below the long-term average (5.2 ± 0.03 million; Table 1, Figure 3). The 2026 estimate of ponds in Prairie Canada was 3.3 ± 0.2 million. This estimate was 29% above the 2025 estimate of 2.6 ± 0.1 million and similar the long-term average (3.5 ± 0.02 million).

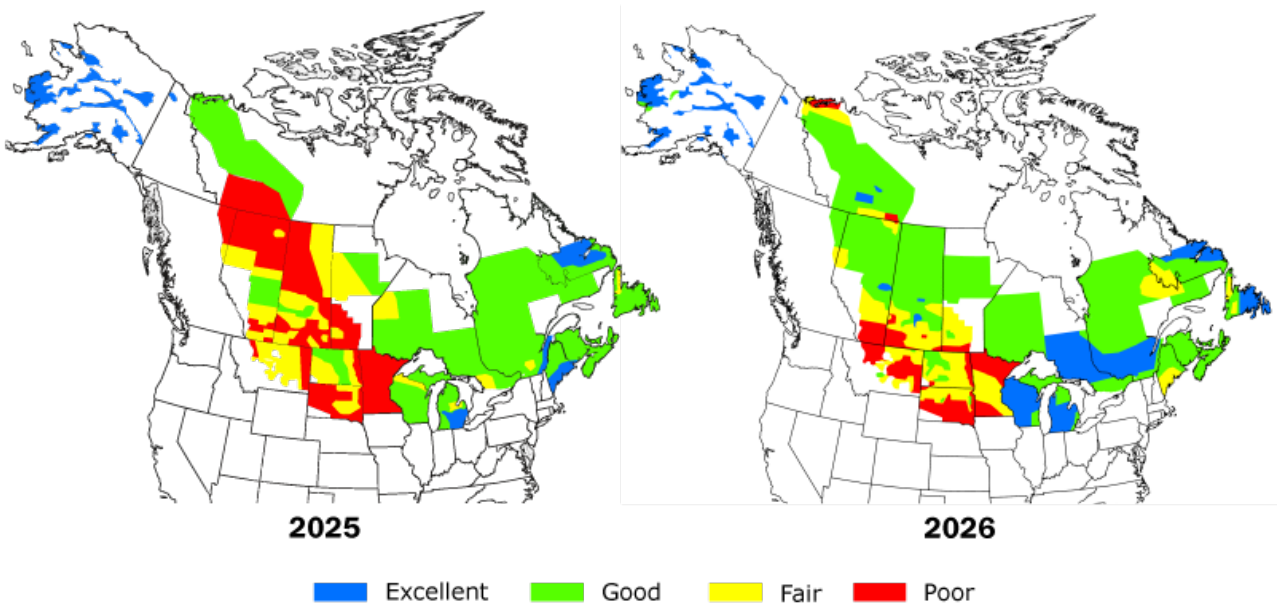

Figure 2. Breeding waterfowl habitat conditions during the 2025 and 2026 Waterfowl Breeding Population and Habitat Surveys, as judged by U.S. Fish and Wildlife Service and Canadian Wildlife Service biologists.

The pond estimate for the northcentral U.S. was 1.5 ± 0.1 million, which was similar to the 2025 estimate (1.6 ± 0.08 million) and 15% below the long-term average of 1.7 ± 0.01 million. In the WBPHS traditional survey area, the total duck population estimate (33.4 ± 0.6 million) remained unchanged from 2025 and was 6% below the long-term average of 35.4 ± 0.09 million.

In the Alaska—Yukon Territory—Old Crow Flats crea area, the total duck estimate was 2.3 ± 0.1 million. This estimate was similar to the 2025 estimate and 37% below the long-term average of 3.6 ± 0.02 million. Total duck numbers in the Southern Manitoba area (0.9 ± 0.05 million) were 23% below the 2025 estimate (1.2 ± 0.07 million) and 40% below the long-term average of 1.5 ± 0.01 million. In the eastern Dakotas, the total duck estimate (3.5 ± 0.2 million) was 24% below the 2025 estimate and 33% below the long-term average (5.3 ± 0.04 million). The total duck estimate for the Montana—western Dakotas crew area was 1.6 ± 0.08 million, which was 13% below the 2025 estimate and 11% below the long-term average of 1.8 ± 0.02 million. Total duck estimates for the northern Saskatchewan—northern Manitoba—western Ontario (3.6 ± 0.3 million) and southern Saskatchewan (7.8 ± 0.3 million) regions, were 21% and 16% above their 2025 estimates of 3.0 ± 0.2 million and 6.7 ± 0.2 million, and were similar to their respective long-term averages. In the central and northern Alberta—northeastern British Columbia—Northwest Territories (10.7 ± 0.4 million) and southern Alberta crew areas (3.0 ± 0.2 million), total duck estimates were similar to their 2025 estimates and were 40% above and 29% below their respective long-term averages.

Several states and provinces conduct breeding waterfowl surveys in areas outside the geographic extent of the WBPHS (estimates are provided in Appendix B.2). Where possible we report year-over-year changes relative to the last year surveyed. In California, Oregon, Washington, British Columbia, Michigan, and Wisconsin, measures of precision for estimates of total duck numbers are available (Table 2). The total duck estimate in California was similar to the 2025 estimate and 18% below the long-

term average (1992–2025). In Washington, the total duck estimate was 21% above the 2025 estimate and similar to the long-term average (2010–2025). Oregon's total duck estimate was 22% below the 2025 estimate and 21% below the long-term average (1994–2025). Wisconsin's 2026 total duck estimate was similar to the 2025 estimate and the long-term average (1973–2025). In Michigan, the total duck estimate was 255% above the 2025 estimate and similar to the long-term average (1991–2025). British Columbia's total duck estimate was 15% above the 2025 estimate and 32% above the long-term average (2006–2025). In Minnesota, which does not have a measure of precision for total duck numbers, the 2026 estimate of total ducks was 62% higher than the 2025 estimate and 11% above the long-term average (1968–2025).

Trends and annual breeding population estimates for 10 principal duck species for the traditional survey area are provided in this report (Tables 3–12, Figure 4, Appendix B.3). Percent change was computed prior to rounding of estimates and therefore may not match the rounded values presented in the tables and text. Estimated total mallard abundance was 5.9 ± 0.2 million, which was 11% below the 2025 estimate (6.6 ± 0.3 million) and 26% below the long-term average of 7.9 ± 0.04 million (Table 3). In the eastern Dakotas, the mallard estimate (0.6 ± 0.04 million) declined 26% from the 2025 estimate (0.8 ± 0.05 million) and was 44% below the long-term average (1.1 ± 0.01 million). The estimated abundance of mallards in the Montana—western Dakotas survey area (0.3 ± 0.03 million) was 33% below the 2025 estimate (0.5 ± 0.03 million) and 37% below the long-term average (0.5 ± 0.01 million). In the southern Manitoba survey area, the estimate of mallards (0.2 ± 0.02 million) was 42% below the 2025 estimate (0.3±0.03 million) and 51% below the long-term average of 0.4 ± 0.01 million. Mallard numbers in southern Saskatchewan (1.2 ± 0.9 million) and southern Alberta (0.7 ± 0.06 million) were similar to their 2025 estimates and 40% and 36% below their long-term averages of 2.1 ± 0.02 million and 1.1 ± 0.01 million, respectively. Mallard estimates in the northern Saskatchewan—northern Manitoba—western Ontario survey area were similar to their 2025 estimates and their long-term average. In the central and northern Alberta—northeastern British Columbia—Northwest Territories the estimate of mallards was similar to the 2025 estimate and 22% above the long-term average of 1.2 ± 0.02 million. In the Alaska—Yukon Territory—Old Crow Flats survey area, the mallard estimate of 0.4 ± 0.05 million was similar to both the 2025 estimate (0.4 ± 0.04 million) and the long-term average of 0.4 ± 0.01 million.

The estimated abundance of mallards in eastern North America was 0.9 ± 0.09 million, which was similar to the 2025 estimate and 23% below the long-term average (Table 13, Figure 5). Estimates of mallards from the AF-BWS have been integrated into the estimate of mallards for eastern North America since 2018 and are no longer reported separately. Mallard abundances with estimates of precision are also available for other areas where surveys are conducted (British Columbia, California, Michigan, Minnesota, Oregon, Washington, and Wisconsin; Table 3). Mallard estimates in California, Oregon, Washington, British Columbia, Minnisota and Wisconsin, were similar to the 2025 estimates and to their long-term averages (California: 1992–2025, Oregon: 1994–2025, Washington: 2010–2025, British Columbia: 2006–2025, Minnesota: 1968–2025, Wisconsin: 1973–2025). In Michigan, the mallard estimate was similar to the 2025 estimate and 54% below the long-term average (1991–2025).

In the traditional survey area, the 2026 estimate of gadwall (2.4 ± 0.1 million) was similar to their 2025 estimate and 13% above their long-term average of 2.1 ± 0.02 million (Table 4). Estimates of American wigeon (2.9 ± 0.2 million) and green-winged teal (2.3 ± 0.1 million) were similar to their 2025 estimates and their respective long-term averages (Table 5 and 6). Estimates of northern shovelers (3.3 ± 0.2 million) were 19% above their 2025 estimate of 2.8 ± 0.2 million and were 24% above their long-term average of 2.6 ± 0.02 million (Table 7). The estimate for blue-winged teal (4.0 ± 0.2

Table 1. Estimated number (in thousands) of May ponds in portions of Prairie and Parkland Canada and the northcentral U.S.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Prairie & Parkland Canada							
S. Alberta	716	580	+23	0.157	775	−8	0.504
S. Saskatchewan	1,906	1,508	+26	0.029	2,056	−7	0.305
S. Manitoba	671	465	+44	<0.001	652	+3	0.680
Subtotal	3,293	2,552	+29	<0.001	3,483	−5	0.283
Northcentral U.S.							
Montana & Western Dakotas	416	540	−23	0.013	590	−29	<0.001
Eastern Dakotas	1,052	1,088	−3	0.772	1,133	−7	0.429
Subtotal	1,468	1,628	−10	0.231	1,723	−15	0.021
Total	4,761	4,180	+14	0.022	5,207	−9	0.033

[a] Long-term average. Prairie and Parkland Canada, 1961–2025; northcentral U.S. and Total 1974–2025.

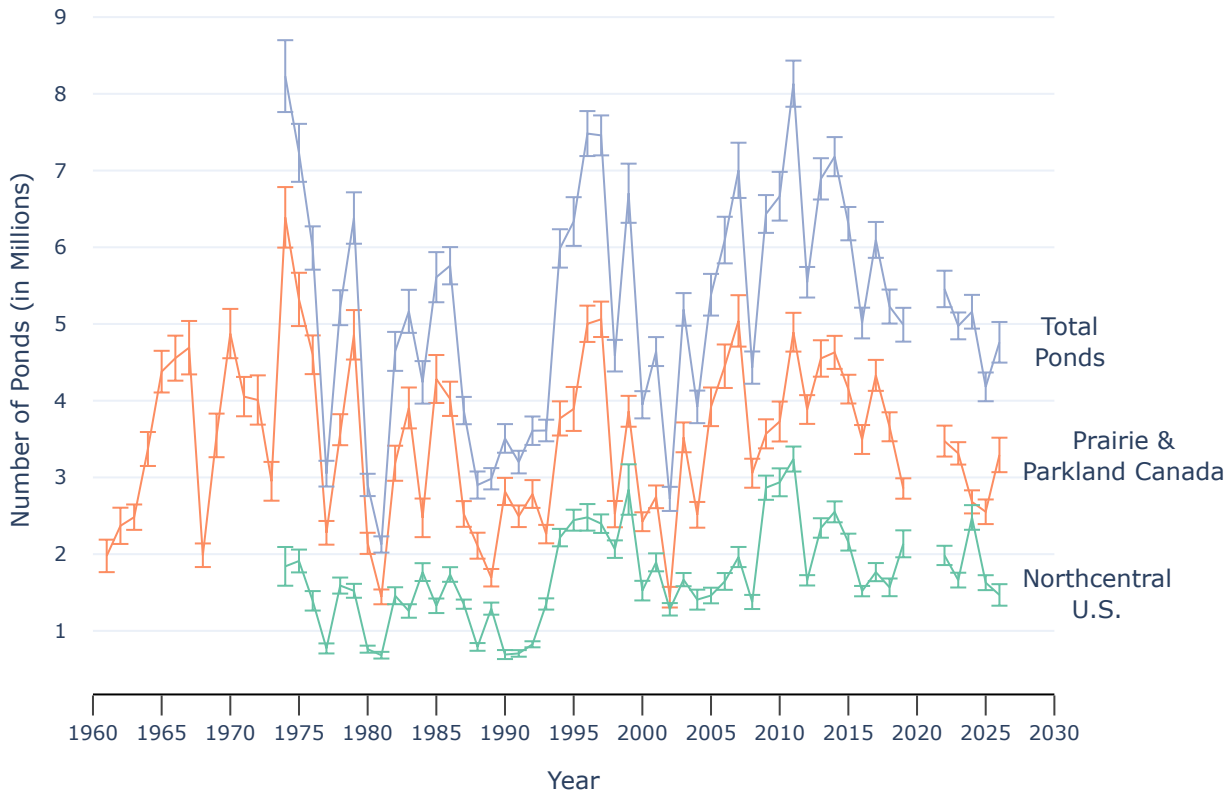

Figure 3. Number of ponds in May and 90% confidence intervals in Prairie and Parkland Canada, the northcentral U.S., and both areas combined (Total ponds).

Table 2. Total duck[a] breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[b]	%	*P*
Traditional Survey Area							
Alaska—Yukon Territory—Old Crow Flats	2,280	2,560	−11	0.136	3,623	−37	<0.001
C. & N. Alberta—N.E. British Columbia—NWT	10,723	10,975	−2	0.685	7,657	+40	<0.001
N. Saskatchewan—N. Manitoba—W. Ontario	3,608	2,990	+21	0.058	3,404	+6	0.426
S. Alberta	3,042	3,132	−3	0.655	4,291	−29	<0.001
S. Saskatchewan	7,759	6,690	+16	0.007	7,869	−1	0.729
S. Manitoba	923	1,193	−23	0.003	1,535	−40	<0.001
Montana & Western Dakotas	1,568	1,798	−13	0.040	1,764	−11	0.019
Eastern Dakotas	3,537	4,642	−24	<0.001	5,254	−33	<0.001
Total	33,439	33,980	−2	0.547	35,397	−6	0.002
Other Regions							
British Columbia	477	417	15	0.026	362	+32	<0.001
California	436	482	−10	0.474	533	−18	0.027
Michigan	505	142	+255	0.060	588	−14	0.666
Oregon	209	267	−22	0.009	263	−21	<0.001
Washington	189	156	+21	0.026	189	0	0.987
Wisconsin	477	547	−13	0.527	448	+6	0.618

[a] Includes 10 species in Appendix B.3, plus American black ducks, ring-necked ducks, goldeneyes, bufflehead, and ruddy ducks (*Oxyura jamaicensis*); excludes eiders, long-tailed ducks, scoters, mergansers, and wood ducks for regions within the traditional survey area, British Columbia, Michigan, and Wisconsin. California, Washington and Oregon include wood ducks as part of the total duck estimate.

[b] Long-term average for regions in the traditional survey area, 1955–2025; years for other regions vary (see Appendix B.2)

million) was similar to the 2025 estimate and 22% below the long-term average of 5.1 ± 0.04 million (Table 8). The northern pintail estimate was 2.0 ± 0.1 million, which was similar to the 2025 estimate of 2.2 ± 0.2 million and 48% below the long-term average of 3.8 ± 0.03 million (Table 9). Estimates of redheads and canvasbacks were 0.9±0.08 million and 0.8±0.07 million, respectively, which were similar to their 2025 estimates and were 26% and 32% above their long-term averages of 0.7 ± 0.01 million and 0.6 ± 0.1 million, respectively (Tables 10 and 11). The combined estimate of lesser and greater scaup (4.2 ± 0.2 million) was similar to the 2025 estimate and 15% lower than the long-term average of 4.9 ± 0.04 million (Table 12).

In the eastern survey area, the estimate of goldeneyes was 0.7 ± 0.2 million, which was similar to the 2025 estimate and to the long-term average (Table 13, Figure 5, Appendix B.5). The green-winged teal estimate was 0.3 ± 0.08 million, which was similar the 2025 estimate and 12% below the long-term average. Estimates of ring-necked ducks were 0.8 ± 0.1 million, which was similar to the 2025 estimate and 16% above the long-term average. The 2026 estimate of mergansers (0.7 ± 0.1 million) and American black ducks in the eastern survey area (0.7 ± 0.09 million) were similar to their 2025 estimates and to their the long-term averages.

Table 3. Mallard breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Traditional Survey Area							
Alaska—Yukon Territory—Old Crow Flats	404	389	+4	0.818	392	+3	0.783
C. & N. Alberta—N.E. British Columbia—NWT	1,424	1,332	+7	0.658	1,167	+22	0.071
N. Saskatchewan—N. Manitoba—W. Ontario	968	1,152	−16	0.391	1,145	−15	0.165
S. Alberta	685	696	−2	0.891	1,072	−36	<0.001
S. Saskatchewan	1,234	1,314	−6	0.519	2,062	−40	<0.001
S. Manitoba	194	336	−42	<0.001	393	−51	<0.001
Montana & Western Dakotas	336	502	−33	<0.001	535	−37	<0.001
Eastern Dakotas	614	833	−26	0.002	1,103	−44	<0.001
Total	5,859	6,554	−11	0.048	7,868	−26	<0.001
Other Regions							
British Columbia	88	81	+9	0.439	80	+10	0.259
California	267	270	−1	0.951	318	−16	0.154
Michigan	142	88	+61	0.156	312	−54	<0.001
Minnesota	240	164	+47	0.172	227	+5	0.791
Oregon	76	80	−5	0.709	88	−14	0.123
Washington	83	77	+8	0.487	91	−8	0.303
Wisconsin	175	149	+18	0.490	180	−3	0.867

[a] Long-term average, 1955–2025; years for other regions vary (see Appendix B.2)

In addition, black duck population estimates for northeastern states from New Hampshire south to Virginia were also available from the Atlantic Flyway Breeding Waterfowl Survey. For the northeastern states, the estimate of black ducks was 28,800, which was 56% below the 2025 estimate and 48% below the long-term average (1993–2025). These northeastern state estimates for American black ducks are not explicitly integrated with the eastern survey area as is done for mallards.

Trends in wood duck populations are available from the North American Breeding Bird Survey (BBS). The BBS, a series of roadside routes surveyed during May and June each year, provides the only long-term range-wide breeding population index for this species. Wood ducks are encountered with low frequency along BBS routes, which limits the amount and quality of available information (Sauer and Droege 1990). However, hierarchical analysis of these data (J. Hostetler, U.S. Geological Survey Biological Resources Division, unpublished data) incorporated adjustments for spatial and temporal variation in BBS route quality, observer skill, and other factors that may affect detectability (Link and Sauer 2002). This analysis also produces annual abundance indices and measures of variance, in addition to the trend estimates (average % change per year) and associated 95% credible intervals (lower, upper credible interval in parentheses following trend estimates) presented in this report.

In the Atlantic and Mississippi flyways combined, the BBS wood duck index increased by an average of 0.67% per year (0.29%, 1.03%) over

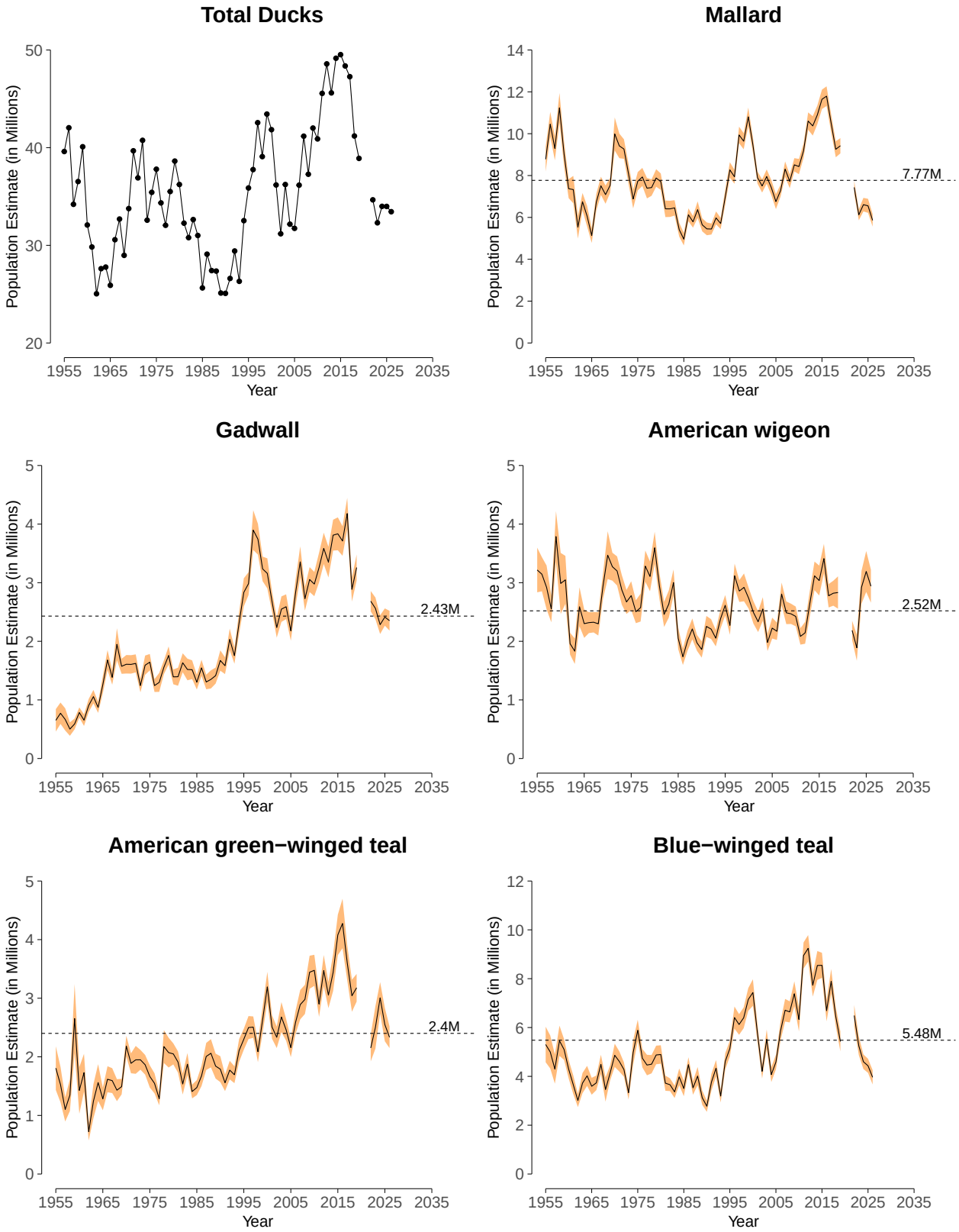

Figure 4. Breeding population estimates, 90% confidence intervals, and North American Waterfowl Management Plan population objectives (dashed line; North American Waterfowl Management Plan Committee 2024) for selected species in the traditional survey area (strata 1–18, 20–50, 75–77).

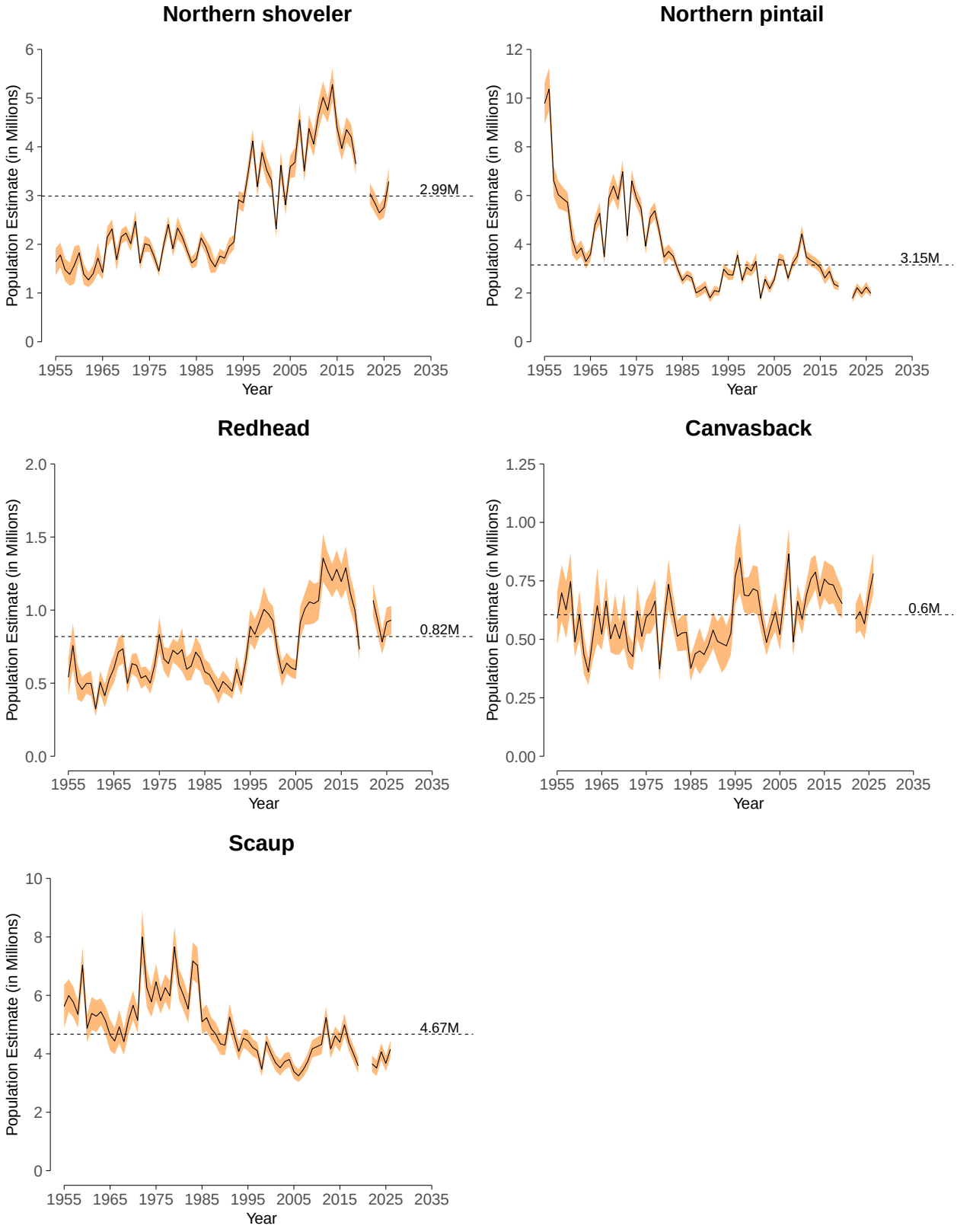

Figure 4. Continued.

Table 4. Gadwall breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	5	0	+1,202	0.068	2	+132	0.257
C. & N. Alberta—N.E. British Columbia—NWT	78	155	−50	0.111	55	+41	0.341
N. Saskatchewan—N. Manitoba—W. Ontario	28	8	+266	0.015	24	+16	0.627
S. Alberta	402	428	−6	0.751	349	+15	0.430
S. Saskatchewan	864	871	−1	0.947	708	+22	0.073
S. Manitoba	139	74	+87	0.007	82	+70	<0.001
Montana & Western Dakotas	274	228	+20	0.223	229	+20	0.136
Eastern Dakotas	562	649	−13	0.272	624	−10	0.315
Total	2,351	2,414	−3	0.721	2,073	+13	0.036

[a] Long-term average, 1955–2025

Table 5. American wigeon breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	218	295	−26	0.171	546	−60	<0.001
C. & N. Alberta—N.E. British Columbia—NWT	2,049	2,108	−3	0.860	979	+109	<0.001
N. Saskatchewan—N. Manitoba—W. Ontario	234	233	+1	0.979	223	+5	0.776
S. Alberta	145	155	−7	0.767	268	−46	<0.001
S. Saskatchewan	182	168	+8	0.680	379	−52	<0.001
S. Manitoba	6	3	+88	0.136	48	−88	<0.001
Montana & Western Dakotas	66	104	−36	0.041	112	−41	<0.001
Eastern Dakotas	41	125	−67	0.003	66	−38	0.014
Total	2,940	3,191	−8	0.474	2,621	+12	0.149

[a] Long-term average, 1955–2025

Table 6. Green-winged teal breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	237	196	+20	0.354	407	−42	<0.001
C. & N. Alberta—N.E. British Columbia—NWT	885	1,419	−38	0.024	944	−6	0.608
N. Saskatchewan—N. Manitoba—W. Ontario	231	160	+44	0.108	201	+15	0.363
S. Alberta	164	166	−1	0.958	204	−20	0.192
S. Saskatchewan	592	354	+67	0.004	279	+113	<0.001
S. Manitoba	63	34	+88	0.060	56	+14	0.562
Montana & Western Dakotas	137	99	+38	0.296	43	+220	<0.001
Eastern Dakotas	24	122	−80	<0.001	67	−64	<0.001
Total	2,334	2,550	−8	0.414	2,201	+6	0.364

[a] Long-term average, 1955–2025

Table 7. Northern shoveler breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	163	179	−9	0.690	296	−45	<0.001
C. & N. Alberta—N.E. British Columbia—NWT	446	305	+46	0.204	255	+75	0.020
N. Saskatchewan—N. Manitoba—W. Ontario	46	17	+166	0.052	37	+23	0.534
S. Alberta	479	397	+21	0.289	442	+8	0.568
S. Saskatchewan	1,551	1,016	+53	0.016	808	+92	<0.001
S. Manitoba	80	68	+17	0.594	111	−28	0.088
Montana & Western Dakotas	178	210	−15	0.363	182	−2	0.870
Eastern Dakotas	347	566	−39	0.007	518	−33	<0.001
Total	3,289	2,758	+19	0.057	2,649	+24	0.005

[a] Long-term average, 1955–2025

Table 8. Blue-winged teal breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	0	0	0	0	1	−100	<0.001
C. & N. Alberta—N.E. British Columbia—NWT	490	552	−11	0.671	312	+57	0.012
N. Saskatchewan—N. Manitoba—W. Ontario	201	45	+348	0.007	213	−6	0.830
S. Alberta	427	573	−26	0.110	644	−34	<0.001
S. Saskatchewan	1,320	1,109	+19	0.248	1,433	−8	0.455
S. Manitoba	164	280	−42	0.026	365	−55	<0.001
Montana & Western Dakotas	267	478	−44	<0.001	322	−17	0.181
Eastern Dakotas	1,094	1,394	−22	0.084	1,821	−40	<0.001
Total	3,962	4,432	−11	0.144	5,112	−22	<0.001

[a] Long-term average, 1955–2025

Table 9. Northern pintail breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	446	712	−37	0.019	893	−50	<0.001
C. & N. Alberta—N.E. British Columbia—NWT	765	736	+4	0.838	383	+100	<0.001
N. Saskatchewan—N. Manitoba—W. Ontario	27	10	+175	0.010	33	−19	0.321
S. Alberta	105	125	−16	0.470	606	−83	<0.001
S. Saskatchewan	301	302	0	0.988	1,036	−71	<0.001
S. Manitoba	14	17	−14	0.659	90	−84	<0.001
Montana & Western Dakotas	125	100	+24	0.306	248	−50	<0.001
Eastern Dakotas	205	237	−14	0.480	503	−59	<0.001
Total	1,988	2,239	−11	0.207	3,791	−48	<0.001

[a] Long-term average, 1955–2025

Table 10. Redhead breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	0	6	−100	0.133	2	−100	<0.001
C. & N. Alberta—N.E. British Columbia—NWT	147	164	−11	0.737	44	+233	0.010
N. Saskatchewan—N. Manitoba—W. Ontario	26	4	+530	0.007	23	+12	0.723
S. Alberta	88	84	+5	0.872	132	−33	0.020
S. Saskatchewan	306	306	0	0.999	242	+27	0.160
S. Manitoba	64	101	−37	0.206	78	−18	0.290
Montana & Western Dakotas	38	16	+139	0.026	12	+214	0.002
Eastern Dakotas	262	236	+11	0.613	207	+26	0.181
Total	931	918	+1	0.907	740	+26	0.013

[a] Long-term average, 1955–2025

Table 11. Canvasback breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	97	53	+84	0.304	82	+18	0.639
C. & N. Alberta—N.E. British Columbia—NWT	132	108	+22	0.571	79	+67	0.122
N. Saskatchewan—N. Manitoba—W. Ontario	57	52	+9	0.854	49	+17	0.650
S. Alberta	76	49	+56	0.188	67	+14	0.620
S. Saskatchewan	234	246	−5	0.810	203	+16	0.393
S. Manitoba	63	58	+8	0.826	58	+8	0.766
Montana & Western Dakotas	33	13	+162	0.013	10	+216	0.004
Eastern Dakotas	89	112	−20	0.443	45	+99	0.018
Total	782	690	+13	0.320	593	+32	0.007

[a] Long-term average, 1955–2025

Table 12. Scaup (greater and lesser combined) breeding population estimates (in thousands) for regions in the traditional survey area.

			Change from 2025			Change from LTA	
Region	2026	2025	%	*P*	LTA[a]	%	*P*
Alaska—Yukon Territory—Old Crow Flats	553	575	−4	0.809	868	−36	<0.001
C. & N. Alberta—N.E. British Columbia—NWT	2,441	1,983	+23	0.079	2,470	−1	0.880
N. Saskatchewan—N. Manitoba—W. Ontario	433	444	−2	0.910	525	−18	0.304
S. Alberta	233	250	−7	0.805	325	−28	0.110
S. Saskatchewan	316	225	+40	0.183	407	−22	0.109
S. Manitoba	44	68	−35	0.267	120	−63	<0.001
Montana & Western Dakotas	33	17	+92	0.095	46	−28	0.110
Eastern Dakotas	102	114	−10	0.683	136	−25	0.058
Total	4,155	3,675	+13	0.122	4,896	−15	0.002

[a] Long-term average, 1955–2025

the entire survey period (1966–2025), while the 10-year (2016–2025) and 20-year trend indices (2006–2025) declined by an average of −0.68% (−1.96%, 0.64%) and −0.27% (−0.95%, 0.43%), respectively. The Atlantic Flyway wood duck index increased 0.24% (−0.35%, 0.78%) annually over the entire time series (1966–2025). The 10-year (2016–2025) and 20-year (2006–2025) trends also showed annual increases of 0.08% (−1.69%, 1.92%) and 0.08% (−0.88%, 1.10%), respectively. In the Mississippi Flyway, the corresponding BBS wood duck indices increased by 0.88% (0.41%, 1.66%, 1966–2025), decreased by −0.40% (−1.25%, 0.49%) from 2006 to 2025, and decreased by −0.95% (−2.60%, 0.71%) from 2016 to 2025 (J. Hostetler, U.S. Geological Survey Biological Resources Division, unpublished data). A model-based estimate of wood duck populations using data from the Atlantic Flyway incorporates the Atlantic Flyway Breeding Waterfowl Survey data for the northeast states from New Hampshire south to Virginia with the Breeding Bird Survey. The 2026 estimate of wood ducks in the Atlantic Flyway was 0.9 ± 0.1 million, which was similar to the long-term average.

Regional Habitat Conditions

A description of habitat conditions and duck populations for each of the major breeding areas follows. In the past this information was taken from more detailed reports of specific regions. Although these reports are no longer produced, habitat and population status for each region will continue to be summarized in this report. More detailed information on regional waterfowl and habitat conditions during the May waterfowl survey is also available on the USFWS website (`https://www.fws.gov/library/collections/waterfowl-breeding-population-and-habitat-survey-field-reports`).

Southern Alberta (strata 26–29, 75–76)
reported by Rob Spangler

Average to above-average precipitation fell across southern Alberta over the last year, improving habitat conditions, but some areas remain in drought status. Habitat conditions near Lethbridge and Medicine Hat remained poor in 2026 and production was expected to be low. Average annual precipitation was received (85–115%) but it was not enough to overcome the prolonged dry weather pattern of recent years, and the area remains in moderate

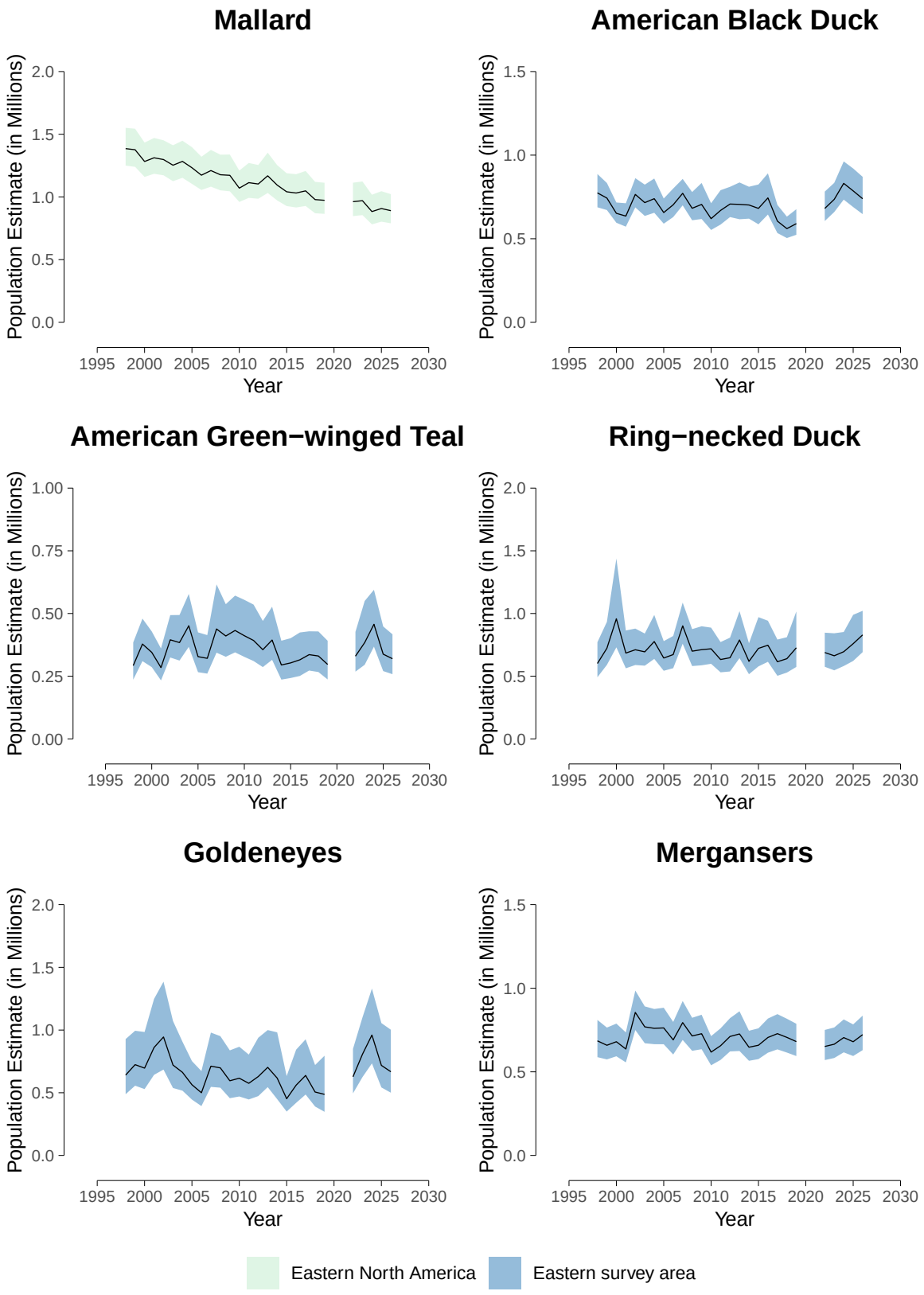

Figure 5. Breeding population estimates and 90% credible intervals from Bayesian hierarchical models for species in the eastern survey area. Time series are presented for two spatial scales: eastern survey area (Blue; strata 51–53, 56, 62–72 for black ducks, green-winged teal, ring-necked ducks, goldeneyes, and mergansers) and eastern North America (Light green; eastern survey area plus the northeastern states from Virginia north to New Hampshire for mallards).

Table 13. Duck breeding population estimates (in thousands) for the six most abundant species in the eastern survey area. Estimates for black ducks, green-winged teal, ring-necked ducks, goldeneyes, and mergansers are at the eastern survey scale (strata 51–53, 56, 62–72) and mallards at the eastern North America scale (eastern survey area plus Virginia north to New Hampshire).

			% Change from		% Change from
	2026	2025	2025	Average[a]	average
Mallard	890	908	−2	1,188	−23[b]
American Black Duck	739	786	−6	699	+6
American Green-winged Teal	320	338	−6	362	−12[b]
Ring-necked Duck	829	759	+9	709	+16[b]
Goldeneye (common and Barrows's)	668	718	−7	662	0[c]
Merganser (common, red-breasted, and hooded)	722	680	+6	703	+2

[a] Average for 1998–2025.
[b] Indicates significant change. Significance ($P \leq 0.10$) determined by non-overlap of Bayesian credibility intervals.
[c] Rounded values mask change in estimates.

drought status. Above-average precipitation (115–150%), especially during spring 2026, near Calgary modestly improved previously dry habitats but the region remained fair for waterfowl production. Good habitat conditions remained near Edmonton in 2026. The region benefitted from frequent precipitation, including a wet spring with precipitation amounts exceeding 100% of normal in April and May. Good-to-excellent waterfowl production was expected to the east near Lloydminster. Well-above-average precipitation (150–200%) greatly improved habitats there since 2025. Precipitation was average (85–115%) in the Grand Prairie region where, like 2025, fair habitat conditions were observed. Areas to the east near Peace River and Slave Lake improved from fair to good in spring 2026 where annual precipitation was average to well-above average (85–150%). Overall, good and excellent habitat conditions were observed near Edmonton and eastward, with poor habitat found closer to the United States border and fair conditions elsewhere.

Southern Saskatchewan (strata 30–33)
reported by Phil Thorpe

Southern Saskatchewan had areas of improved waterfowl habitat for the first time in several years. While the southwest and western grasslands were still in poor condition due to moderate drought, eastern grassland habitat ranged from fair to excellent. Fall and winter precipitation in southern Saskatchewan was mostly below average (60–85%), but the Parklands and parts of the central grasslands received above-average precipitation (115–200%) during late winter. Spring brought more spotty moisture to the drought-plagued western grasslands but a four-day spring storm in mid-May brought record amounts of rain (30–90 mm) and heavy wet snow through the western grasslands into the northwest Parklands. Fall and early winter temperatures were above to well-above average (2° to 5°C) but returned to average to well-below average in March and April (-2°C to -5°C). May temperatures were above to well-above average (2° to 3°C), including a heat wave in late May when temperatures exceeded 33°C across the province. Poor recruitment was expected over the southwest and western grasslands from the U.S. border northwest towards Kindersley. Southern and central grasslands may see fair-to-good recruitment. Southeast of Saskatoon, excellent recruitment was expected in the small area of mixed grassland/parkland habitat of the Allan Hills. The Parklands were wetter than 2025 and good recruitment was expected across most of the Parklands, with areas

of excellent recruitment east of Saskatoon and in the northeast boreal transition area surrounding and east of Prince Albert. Predicting waterfowl production and recruitment without widespread ground truthing is difficult because of changing conditions during the month. The large spring storm that moved across the province brought record amounts of rain and heavy wet snow in mid-May and could have had dire consequences for nesting hens and newly hatched broods; however, storm timing may have occurred early enough to allow some early-nester waterfowl time to re-nest if needed. Improved conditions across the province should benefit later-nesting ducks.

Southern Manitoba (includes southeast Saskatchewan; strata 34–40)
reported by Sarah Yates

Southern Manitoba and southeastern Saskatchewan experienced mainly dry conditions and a late spring. Fall temperatures through November 2025 were above average (2° to 4°C). December 2025 was cold with below-average temperatures (-2° to -4°C) before warming to average to above average through February 2026. March and April 2026 were very cold (greater than -4°C), which led to a delayed ice out and many groups of staging waterfowl observed as late as mid-May in the southern prairies. Precipitation was well-above average (85 to >200%) in September and October 2025, marginally improving some habitats. However, precipitation was generally well-below average (<40–85%) from November 2025 through May 2026. The exception was average precipitation in December 2025 and over southeastern Saskatchewan in February 2026. Most of southern Manitoba remains quite dry. Stratum 39 was mainly considered poor due to the lack of seasonal and semi-permanent wetlands. Southeastern Manitoba (stratum 38) remained poor mainly because of a general lack of habitat but also dry conditions. Between Dauphin and Minnedosa in stratum 40 conditions were considered good but were drier near the Saskatchewan border and rated poor. Most of the crew area in southeastern Saskatchewan was considered fair, with poor areas near Regina and the U.S. border. The Yorkton area did improve from last year with an increase in seasonal wetlands and was rated as good. The northern strata (36 and 37) around Swan River, the Duck Mountains, and Lake Winnipegosis have improved but wetlands remained low and fair production was expected in this region.

Montana and western Dakotas (strata 41–44)
reported by Jeff Drahota

Eastern and southeastern Montana (strata 41 and 42) experienced an unusually dry and warm winter and spring again in 2025–2026. Snowpack was well-below average to the extent that the National Weather Service called it a "winter for the history books" for many high-elevation sites. Winter precipitation was the eighth driest on record. Record-breaking warmth continued into spring and very little precipitation resulted in poor wetland conditions across most of Montana. North-central portion of stratum 41 near Malta and Glasgow did receive near-average precipitation from February to April 2026 but warm temperatures negated any wetland improvements. Approximately 60 percent of strata 41 and 42 were in moderate-to-severe drought, with most of the region rated as poor or fair and only a few pockets of good habitat. Western North and South Dakota both had below-average winter precipitation. South Dakota, in fact, had the fifth driest winter on record. With above-average temperatures across strata 43 and 44 and the lack of precipitation, most natural wetlands were dry apart from a few semi-permanent wetlands that may not have held water into the brood-rearing period. The only real promising area was centered near Dickinson, in the central areas of stratum 43. This region benefitted from cooler-than-average temperatures in early May and nearly average rainfall, however, if no significant rainfall occurred later in spring any nesting effort may have low success. Most of strata 43 and 44 were rated as poor or fair with most good areas located in North Dakota (stratum 43).

Eastern Dakotas (strata 45–49)
reported by Walt Rhodes

Waterfowl habitat conditions in the Eastern Dakota survey area have exhibited a south-to-north gradient in recent years and 2026 was no different. Most of South Dakota was classified as abnormally dry to severe drought. There was no drought near the South Dakota/North Dakota border and that continued north through North Dakota. South Dakota recorded well-below to below-average precipitation (25–80%) since October 2025. The exceptions were average fall precipitation around Eureka and average winter precipitation near Aberdeen. Spring precipitation was near normal along the North Dakota border. Above-average fall and winter temperatures (2° to 6°C) in South Dakota only exacerbated the dry conditions, although spring temperatures were near normal. North Dakota fared slightly better than South Dakota since near-average to above-average (100–120%) precipitation was recorded since last fall, with winter precipitation in the Red River Valley well-above average (120–150%). Only the extreme southeastern portion of the state received below-average precipitation (60–80%) since October 2025. North Dakota also experienced a warm fall with above-average temperatures (2° to 6°C) but winter temperatures were near normal to slightly-above average. Like South Dakota, spring temperatures were near normal.

Habitat conditions in strata 48 and 49 ranged from poor to fair with a small area rated as good over the Prairie Coteau. The southernmost transects near Lake Andes and northward to Mitchell were extremely dry. A slight improvement was noted around Brookings and Madison but declined again west of Huron. It was evident that some wetlands that had been seeded in 2025 were too wet to seed this spring but surface water levels remained well below an average year. Again, a very slight improvement in wetland conditions continued north through Mansfield to Aberdeen but wetland levels were still below average. The Prairie Coteau was the only good area but wetland levels were reduced here as well.

The drought conditions eased at the North Dakota border and overall average precipitation was welcomed across the state but wetlands remained low. The Missouri Coteau remained in good condition, albeit with lower wetland levels, and the Drift Prairie was improved over 2025 but remained fair. It was obvious there that farmers attempted to move machinery this spring through wetlands that had been farmed in 2025 but were thwarted by slightly wetter conditions. The Red River Valley to the east was wetter but the lack of suitable habitat limited waterfowl production.

Overall, most of the eastern Dakotas crew area was rated poor to fair. The coteau regions of both states were rated as good and should produce average numbers of waterfowl. Average to below-average production was expected across the rest of the Dakotas.

Northern Saskatchewan, northern Manitoba, and western Ontario (strata 21–25, 50)
reported by Walt Rhodes, Phil Thorpe, Sarah Yates, and John Rayfield

Northern Saskatchewan and northern Manitoba (strata 21–25) generally experienced average to above-average precipitation amounts since September 2025 and had a mild fall followed by bitter cold in late winter and early spring. Winter precipitation across the Parklands and southern boreal forest north along the Saskatchewan/Alberta border was average to above average (85–115%). It was slightly-below average (40–85%) through north-central Saskatchewan and in the extreme southeastern portion of the crew area near Norway House. Spring precipitation was average to above average throughout the entire crew area, with areas near the Saskatchewan/Alberta border and Thompson, well-above average (115–200%). Fall temperatures were warm (0–4°C), followed by a cold December (-4° to -5°C), an average January, and a bitter cold March and April (-3°C to greater than -5°C). May temperatures were generally average, but the latter part of the month received temperatures >30°C. The cold spring delayed ice-out by as much as two weeks and additional precipitation kept wildfires

at bay this spring, a welcome change from several recent springs. The abundant moisture also improved wetlands that had been suffering in recent years, but the late spring probably delayed early-nesting efforts. Good waterfowl production was expected.

Western Ontario (stratum 50) was characterized by average to slightly-above average (0° to 3°C) fall and winter temperatures followed by a late spring with below-average temperatures (0° to -3°C). Precipitation from September 2025 through February 2026 tended to be average to above average (85–150%) west of Thunder Bay towards Sioux Lookout and Red Lake and generally below average (<40–85%) east of Thunder Bay towards Kapuskasing. The exception was December 2025 when the entire stratum had average to well above-average precipitation (85–200%). Spring 2026 started off with average to above-average precipitation (115–200%) in the south from Kenora east to Kapuskasing and below-average precipitation (40–85%) in the north starting from about Fort Hope and from Sandy Lake east to Attawapiskat. April and May 2026 recorded well above-average precipitation (150–200%) across the region. Despite delayed ice-out of approximately one week good production was expected.

Central and northern Alberta, northeastern British Columbia, and Northwest Territories (strata 13–18, 20, 77)
reported by Garrett Wilkerson

Most of northern Alberta, northeastern British Columbia and the Northwest Territories received abundant winter snowfall, and rain and snow showers persisted through mid-June in the northern surveyed portion of the Northwest Territories. Temperatures across the survey area ranged from 2° to 7°C cooler than average and phenology was delayed approximately 7 to 12 days. Overall, habitat conditions were much improved over recent years, although delayed phenology likely impacted early-nesting waterfowl in some areas. Northern Alberta received average to above-average winter and spring precipitation (85–150%), which greatly improved habitat conditions compared to the last two years. Phenology was delayed approximately 5 to 7 days, and many larger water bodies remained ice covered through late-May. Most of northern Alberta has recovered from the persistent drought and good waterfowl production was expected. Boreal plains and taiga shield habitat in extreme northeastern Alberta received less precipitation although early spring temperatures were average. Fair-to-poor waterfowl production was expected because this region remained in moderate drought and many wetlands were dry. Similar habitat types in northeastern British Columbia benefitted from abundant snowfall and subsequent runoff and no longer were in a drought. Wetland basins were inundated and margins appeared favorable for nesting. Spring temperatures were average and phenology was not delayed. Good production was expected in northeastern British Columbia. The taiga plains of the Northwest Territories received average snowfall, and snow and rain continued through early June. Phenology was slightly delayed south of Colville Lake, but wetlands were full and many semi-permanent wetlands appeared to have more vegetation than normal within the basins, likely benefiting overwater nesting species. Waterfowl production was rated good in this region. Although habitats north of Colville Lake received ample winter and spring precipitation and wetlands appeared to be good condition, a very late spring (approximately 10 days) was likely to restrict waterfowl production due to limited habitat availability. The taiga shield of the Northwest Territories received average to below-average winter and early spring precipitation and temperatures were slightly cooler (approximately 2°C) than average. Most wetland basins were inundated, and riverine influence serve to keep wetland conditions fairly stable in this region. Production was expected to be good. The southern arctic portion of the Northwest Territories experienced a bitterly cold winter, and temperatures remained 4° to 7°C below average throughout early-to-mid June. Snow and rain showers also persisted. The abundant precipitation introduced sheetwater to the tundra, though it is uncertain how long this

condition would be available. Wetlands were in largely good-to-excellent condition, but their availability was restricted until mid-June. Due to the phenology delay, poor-to-fair production was expected in the southern arctic.

Alaska, Yukon Territory, and Old Crow Flats (strata 1–12)
reported by Heather Wilson and Tamara Zeller

Spring across Alaska and Old Crow Flats in Yukon Territory brought a mix of early thaw, lingering snow, and changing wetland conditions that were strongly influenced by an unusually warm fall and stormy 2025–2026 winter. Southern and western Alaska thawed earlier while northern and interior regions remained colder with later river breakup and snowmelt. A warm spring in southcentral Alaska rapidly melted snow at lower elevations, filing wetlands, ponds, and rivers with runoff that created good breeding-waterfowl habitat conditions. Higher elevations retained significant snowpack that continued feeding rivers and wetlands into late spring. Interior Alaska experienced a more dramatic spring transition. Above-average snowfall and cold temperatures led to a late spring, but longer April daylight quickly accelerated melting and river breakup. Habitats generally received good recharge from snowmelt, although severe flooding along parts of the Yukon River reduced habitat availability in some areas. Southwest Alaska and the Yukon-Kuskokwim Delta entered spring with abundant moisture and good snow cover from repeated Bering Sea winter storms. Favorable nesting habitat was available for early-nesting migratory birds as tundra wetlands and shallow ponds filled during spring thaw; however, lingering coastal ice and some adverse weather may have delayed nesting for some species. Long-term ecological impacts of ex-typhoon Halong last fall to habitat conditions remain uncertain, with visible tundra and landscape damage observed during the survey. Northwest Alaska experienced a cold, late spring with persistent sea ice and snow cover present well into May before tundra lowlands began to thaw and improve for breeding waterfowl. Widespread flooding across wetlands of Old Crow Flats was observed, likely creating productive breeding habitat, although some areas were slow to green up due to lingering snow and ice. Overall, good waterfowl production was expected across much of Alaska and Old Crow Flats.

Eastern survey area (strata 51–72)
reported by Mark Koneff, John Rayfield, and Steve Earsom

Central and southern Ontario and Quebec (strata 51–53, 56 & 68) had normal winter temperatures with generally below-average precipitation. A significant area east of the St. Lawrence River valley from Montreal to just south of Quebec City and stretching east to Maine experienced below-average winter precipitation (60–85%). Smaller, patchy areas elsewhere also had below-average precipitation, mainly in southwest Ontario near Windsor. Average winter precipitation occurred in the rest of the crew area, except above-average precipitation (115–150%) fell in the region north of Georgian Bay. April was a wetter-than-average month for almost the entire crew area. Areas near Windsor, Ottawa, and Montreal received average to above-average precipitation (85–150%), whereas the rest of the crew area was well-above average (>150%), particularly much of the area east of the Georgian Bay that received twice as much precipitation as normal. May, however, was mainly dry as most areas only received 40–85% of normal precipitation. Winter temperatures were near average over most of the crew area. An exception was in March in northern portions of strata 51 and 68, roughly from Timmins, east to Chibougamou, where temperatures were well-below average (-4° to -5°C). Ice-out was near normal, except northern transects in stratum 68 which were delayed. Most streams, beaver ponds, string bogs, and lakes and reservoirs were full or nearly so. Waterfowl production was rated as mainly good or excellent

Fall and winter temperatures in northern Quebec (stratum 69) were average, except October 2026 and February 2026, which were slightly-above average (2° to 4°C). March 2026 was

extremely cold (>-5°C) and April and May were average (-2° to 0°C). Fall and winter precipitation was generally below average (40–85%) while spring recorded average to well above-average precipitation (85–150%). Habitat conditions were similar to 2025 and waterfowl production was expected to be good.

Maine and the Canadian Maritime Provinces (New Brunswick, Nova Scotia, and Prince Edward Island) entered the winter of 2025–2026 in widespread, long-term drought. Winter was cold with average to slightly-below average snowfall and drought conditions persisted through late winter. Substantial early-spring precipitation greatly improved wetland conditions just prior to the survey. While wetland conditions improved, spring phenology was delayed due to persistent cold and windy conditions. May in Maine was relatively dry and by the end of the survey streams were again at low flow and many smaller wetlands were receding. Overall, fair to good production was expected across Maine and the Maritimes. In Newfoundland, heavy winter snows resulted in improved wetland conditions compared to the abnormally dry conditions of 2025, especially on the western side of the island. Except for higher elevations in western Newfoundland, snowmelt was rapid. Following a rapid thaw, as in the Maritimes, the advance of spring slowed across Newfoundland and cold and windy conditions continued during the survey period. Except in the higher elevations in western Newfoundland, production was rated as good. Similarly, on the Quebec North Shore of the Gulf of St. Lawrence and in Labrador winter was cold with a heavy snowpack, except for western Labrador where abnormally dry conditions persisted. Spring conditions were again cold and windy, however, clear skies and warmer temperatures in late May quickly advanced phenology and ice-out, resulting in normal to slightly advanced phenology by the time of the survey. Conditions and production were rated as good to excellent in eastern Labrador, while the persistent drought in western Labrador and portions of eastern Quebec resulted in those areas being rated as fair.

Other areas

Pacific Flyway breeding-waterfowl habitat conditions outside of Alaska were generally dry or in drought status across the region, with minor exceptions, due mainly to reduced winter precipitation. Fall and winter precipitation in interior British Columbia was generally well-below average (40–85%) and as of April 2026 only the Nechako region had above-average snowpack. Spring precipitation was also well-below average with slightly above-average temperatures (0–3°C). Conditions across Washington were variable in 2026. The west side improved from 2025 as most of the western Washington strata were not in drought status. Only a portion of the South Puget Lowlands and Dungeness strata were categorized as abnormally dry. Few sheetwater habitats appeared to be available and urban retention ponds once again seemed lower than normal. East side habitats declined in 2026. All strata were categorized as either abnormally dry or moderate drought, with even a small area of severe drought along the Idaho border. Oregon snowpack was well-below average in all basins. After above-average snowpack last year, Klamath, Oregon Closed, John Day, and Baker basins had record or near-record low snowpack this past winter. Despite the low snowpack, water year precipitation ranged from 75 to 88% of average as of April 2026, depending on the basin. Habitat conditions in western Oregon are less affected by snowpack, though heavy snowpack is usually correlated with low-elevation rainfall that maintains abundant temporary and seasonal wetlands in the Willamette Valley into spring. There was minimal precipitation in April before the survey and a lack of sheetwater and flooded low depressions was noticeable again this year. Wetland conditions in Klamath, Lake, and Harney counties in eastern Oregon declined in 2026. Above-average precipitation during the winter and spring periods from 2023 to 2025 recharged basins and resulted in excellent wetland conditions. This helped to maintain fair-to-good conditions in 2026, however, seasonally-flooded wetlands were noticeably reduced from prior years. Northeast

Oregon suffered from reduced snowpack as well and habitat conditions were rated as fair. Accumulated California 2026 precipitation was below average. Northeastern and southern California were the driest, with the Sacramento Valley closest to the long-term average. Notwithstanding, statewide water storage levels were at or above historical averages, except Millerton and Pine Flat reservoirs, which were 89% and 76% of their historical averages, respectively. Spring water allocations for Central Valley Project areas were 100%, however, there were planned reductions in supplemental water through fall 2026. Klamath Basin National Wildlife Refuge Complex in northeastern California water allocation was currently unknown; however, water deliveries were expected to remain limited. Other areas in northeastern California were unlikely to have adequate water supply for wetland management due to below-average snowpack.

The midwestern U.S. was once again dry in the west but improved slightly as spring progressed and excellent wetland conditions continued across the Great Lakes region. Ice out was three to four weeks early in southern Minnesota but about a week later in the north. Conditions were dry across most of the state, however, some rain provided drought relief across central Minnesota in mid-April. While spring precipitation remained below average the April rains did create better habitat conditions than in 2024 and 2025. Poor production was expected in the southwest, northern, and northeastern portions of Minnesota with the remainder of the state rated as fair. Important waterfowl wetland types in Wisconsin continued to improve in 2026. Non-linear wetland types, such as temporary, seasonal, semi-permanent, and permanent, increased in all survey regions and remain well above (100–250%) above their long-term averages. Linear wetlands, like ditches and streams, had mixed results in 2026 but remain above their long-term average in all surveyed regions. Good-to-excellent production was expected statewide. Michigan habitat conditions improved greatly in 2026. The statewide wetland index increased 40% in 2026 and was 9% above the long-term average. Great Lakes water levels for Superior, Michigan-Huron, St. Clair, and Erie were all above the May long-term average. Excellent waterfowl production was expected in northwest Michigan, Saginaw Bay and Lake Huron shorelines, and the remainder of the southern Lower Peninsula. The St. Clair-Detroit River system, Lake Erie coastal corridor, Upper Peninsula, and the northeast Lower Peninsula were rated as good.

Habitat conditions during the Atlantic Flyway Breeding Waterfowl Survey in the northeast U.S. (Virginia to New Hampshire) were dry, and temperatures were higher than average. Drought conditions were widespread but varied in intensity from extreme and severe in many areas to minor in other areas. Areas experiencing extreme or severe drought were characterized by reduced quality and quantity of seasonal wetlands and beaver impoundments, but many creeks, rivers, and tidally influenced wetlands remained available. A few areas saw normal to slightly improved wetlands due to late winter snow or spring precipitation. Overall duck production is expected to be slightly below average to average across the survey region.

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Status of Geese and Swans

This section summarizes information on the status of goose and swan populations in North America. Information was compiled from a broad geographic area and is provided to assist managers in regulating harvest. Most populations of geese and swans in North America nest in the Arctic and Subarctic regions of Alaska and northern Canada (Figure 6), but several Canada goose (*Branta canadensis*) populations nest in temperate regions of the United States and southern Canada ("temperate-nesting" populations). Arctic-nesting geese rely predominantly on stored reserves for egg production. Thus, persistent snow cover reduces nest site availability, delays nesting activity, and often results in depressed reproductive effort and productivity. In general, goose productivity will be above average if nesting begins by late May in western and central portions of the Arctic and by early June in the eastern Arctic. Production usually is poor if nest initiation is delayed much beyond 15 June. For temperate-nesting Canada goose populations, productivity is generally less variable among years, but recruitment can be affected by local factors such as drought or weather events.

Methods

We have used common nomenclature for various goose and swan populations, but they may differ from other published information. Species nomenclature follows the List of Migratory Birds in Title 50 of the Code of Federal Regulations, Section 10.13, revised 31 July 2023 (88 FR 49310). Some of the goose populations described herein are composed of more than one subspecies, and some light goose populations contain two species (i.e., snow and Ross's geese). Population estimates for geese (Appendix C.1, C.2, and C.3) are derived from a variety of surveys conducted by biologists from federal, state, and provincial agencies, or from universities (Appendices A.2). Surveys include the Waterfowl Breeding Population and Habitat Survey (WBPHS), the Midwinter Survey (MWS), the Yukon–Kuskokwim Delta (YKD) Coastal Zone Survey, the Arctic Coastal Plain (ACP) Survey, and surveys that are specifically designed for various goose populations. Where survey methodology allowed, 95% confidence intervals were calculated. Trends of population estimates were calculated by regressing the natural logarithms of survey results on year, and slope coefficients were presented and tested for equality to zero (t-statistic). Changes in population indices between the most recently available and previous years were calculated and, where possible, assessed with a two-tailed z-test using the sum of sampling variances for the two estimates. All statistical tests and analyses were conducted using an alpha level of 0.05. Primary abundance indices used as management plan population objectives are described, graphed, and included in appendices. Beginning in 2019, we only report the primary abundance indices for goose populations. Other survey information can be found in the Flyway Databooks at: `https://fws.gov/library/collections/migratory-bird-flyway-data-books`. Information was the best available at the time of finalizing this report but can differ from final estimates or observed conditions.

Results and Discussion

Conditions in the Arctic and Subarctic

In 2026, spring phenology was initially delayed across many areas in the Subarctic and Arctic, although warmer temperatures as spring advanced led to more average phenology and conditions around peak nesting periods. Spring phenology in Alaska was earlier than average

Figure 6. Important goose and swan nesting areas in Arctic and Subarctic North America.

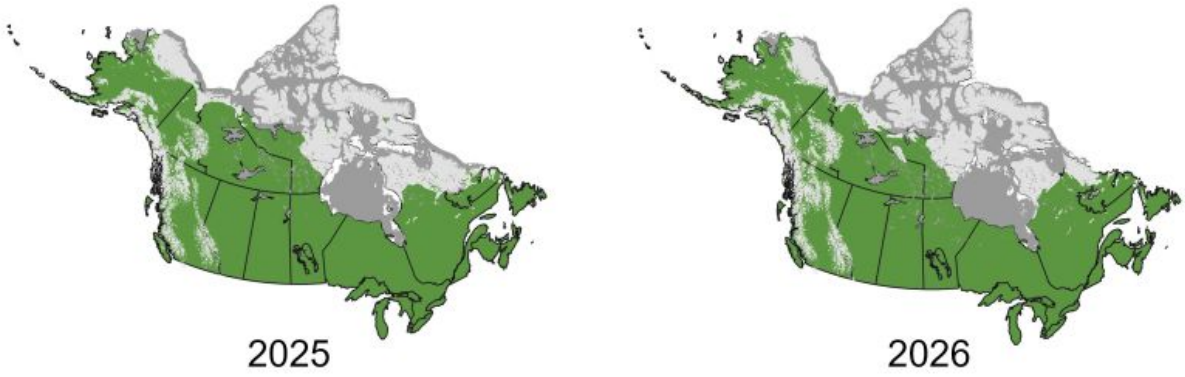

Figure 7. The extent of snow (light gray) and ice (dark gray) cover in North America on 2 June 2025 and 2 June 2026 (National Ice Center 2026).

in southern and western areas but later than average in northern and interior areas. Biologists noted drier than normal conditions in some areas of central and eastern Canada. Snow and ice cover (Figure 7) on 2 June 2026 compared to the same date in 2025 was generally similar across many areas, although snow and ice cover was slightly less around Hudson Bay and portions of the eastern Canadian Arctic and slightly greater in some portions of the western and central Canadian Arctic (National Ice Center 2026).

Conditions in Southern Canada and the United States

In 2026, habitat conditions in many lower 48 U.S. states and Canadian prairie provinces remained relatively dry, similar to 2025. Through June, most western and central lower 48 states, and many southern states in the Mississippi and Atlantic Flyways, experienced some level of drought, although June precipitation was above-average in some areas of the northern prairies and eastern Canadian prairie provinces. Biologists noted later spring phenology in some central and eastern states and provinces.

Description of Populations and Primary Monitoring Surveys

Canada and Cackling Geese

See Figure 10, Table 14, and Appendices C.1.

North Atlantic Population

North Atlantic Population Canada geese principally nest in Newfoundland and Labrador. They commingle during winter with other Atlantic Flyway Canada goose populations, although North Atlantic Population Canada geese have a more coastal distribution than other populations (Figure 8). In 2016, biologists revised the index used to monitor this population to a composite estimate that combines data from both the Canadian Wildlife Service (CWS) helicopter plot survey and the WBPHS (strata 66, 67, and 70). The new composite time series is updated annually due to the estimation procedure. Estimates presented are mean and 2.5% and 97.5% Bayesian credible intervals.

Atlantic Population

Atlantic Population Canada geese nest throughout much of Quebec, especially along Ungava Bay, the eastern shore of Hudson Bay, and on the Ungava Peninsula. This population winters from New England to South Carolina, but the largest concentrations occur on the Delmarva Peninsula (Figure 8). This population

is monitored by a spring survey of the Ungava Peninsula in northern Quebec (Atlantic Flyway Council 2008).

Atlantic Flyway Resident Population

Atlantic Flyway Resident Population Canada geese were introduced and established throughout the Atlantic Flyway during the early 20^{th} century and are composed of various subspecies. This population of large Canada geese inhabits all states of the Atlantic Flyway and southern portions of Quebec and the Maritime provinces (Figure 8). The breeding population is estimated during the spring via the Atlantic Flyway Breeding Waterfowl Plot Survey (Atlantic Flyway Council 2011).

Southern Hudson Bay Population

Southern Hudson Bay Population Canada geese nest in the Hudson Bay Lowlands, on Akimiski Island, and along the eastern and southern portions of Hudson and James Bays, and they concentrate during fall and winter throughout Manitoba, Ontario, and the Mississippi Flyway states (Figure 8). This population is comprised of the former Southern James Bay, Mississippi Valley, and Eastern Prairie Populations of Canada geese. In 2016 a new aerial survey was developed to monitor Southern Hudson Bay Population Canada geese along the south and west coastal areas of the Hudson and James Bays (Mississippi Flyway Council 2021*a*).

Mississippi Flyway Giant Population

Mississippi Flyway Giant Population Canada geese nest in the Mississippi Flyway states and in southern Ontario and southern Manitoba. Giant Canada geese were reestablished or introduced in all Mississippi Flyway states (Figure 8), and they now represent a large proportion of all Canada geese in the Mississippi Flyway. The total population is estimated during spring surveys within the Mississippi Flyway states and provinces (Mississippi Flyway Council 2021*a*).

Western Prairie and Great Plains Populations

Western Prairie Population Canada geese nest in eastern Saskatchewan and western Manitoba. Great Plains Population Canada geese are composed of large Canada geese resulting from restoration efforts in Saskatchewan, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. These two populations are managed jointly. Geese from these breeding populations commingle during migration and winter with Canada geese from other populations (Figure 8). The WBPHS (strata 21–25, 31, 34–40, 43–49) provides indices of this population within its primary breeding range.

Midcontinent Cackling Geese

Midcontinent cackling geese (*B. hutchinsii*) nest across the Canadian Arctic and winter throughout the Central and Mississippi Flyways (Figure 8). Lincoln estimates of the adult cohort are the primary management indices for this population (Central Flyway Council 2025, Mississippi Flyway Council 2026). Lincoln estimates are derived from annual estimates of total harvest and harvest rate and represent an indirect measure of abundance. Due to the methodology, Lincoln estimates are typically not available from the most recent years.

Hi-line Population

Hi-line Population Canada geese nest in southeastern Alberta, southwestern Saskatchewan, eastern Montana and Wyoming, and Colorado. This population winters in these states and New Mexico (Figure 8). A breeding index of Hi-line Population geese is based on the WBPHS estimates from portions of Alberta (strata 26–29), Saskatchewan (strata 30, 32, 33), and Montana (strata 41–42; (Central Flyway Council 2010).

Western Population

Western Population Canada geese nest and winter in the Pacific Flyway west of the Rocky Mountains from northern Alberta and British Columbia to southern California and Arizona (Figure 8). The Pacific Flyway updated the

management plan for this population in 2023, which replaced prior management guidelines for Pacific and Rocky Mountain Populations of Canada geese. An index of breeding Western Population Canada geese is based on standardized surveys in British Columbia, Washington, Oregon, and California and the WBPHS estimates from strata 76 in Alberta, portions of strata 26–29 in Alberta, and portions of strata 41–42 in Montana (Pacific Flyway Council 2023).

Dusky Canada Geese

Dusky Canada geese nest on the Copper River Delta of south-central Alaska and winter in the Willamette and Lower Columbia River Valleys of Oregon and Washington (Figure 8). Dusky Canada geese are surveyed on their breeding grounds on the Copper River Delta and Middleton Island, Alaska (Pacific Flyway Council 2015).

Cackling/minima Cackling Geese

Cackling/minima cackling geese nest on the YKD of western Alaska and primarily winter in the Willamette and Lower Columbia River Valleys of Oregon and Washington (Figure 8). The total fall population is estimated from counts of adults during the YKD Coastal Zone Survey during the spring, expanded by a ratio derived from neck-collared individuals observed in the fall and winter (Pacific Flyway Council 2016*a*).

Lesser Canada Geese

Lesser Canada geese nest throughout interior and south-central Alaska and winter in Washington, Oregon, and California (Figure 8). Population indices are based on WBPHS estimates in stratum 1 (Kenai-Susitna), stratum 2 (Nelchina), stratum 3 (Tanana-Kuskokwim), stratum 4 (Yukon Flats), and stratum 12 (Old Crow Flats).

Taverner's Cackling Geese

Taverner's cackling geese nest throughout tundra areas of the North Slope and western Alaska and winter in Washington, Oregon, and California (Figure 8). Population indices are derived from three breeding survey efforts: the Arctic Coastal Plain Survey, the YKD Coastal Zone Survey, and the WBPHS (stratum 9 [inland portions of the YKD], stratum 10 [Seward Peninsula], and stratum 11 [Kotzebue Sound]).

Aleutian Cackling Geese

Aleutian cackling geese nest primarily on the Aleutian Islands and winter along the Pacific Coast as far south as central California (Figure 8). The total population during the fall and winter is estimated from mark-resight observations of neck-banded geese (Pacific Flyway Council 2006*a*).

Light Geese

See Figure 11, Table 15, and Appendices C.2.

The term light geese collectively refers to Ross's geese (*Anser rossii*) and both the lesser (*A. caerulescens caerulescens*) and greater (*A. c. atlantica*) snow goose subspecies (including all hybrids and both white and blue color phases). There are three populations of lesser snow geese based on their breeding ranges (Wrangel Island, Western Arctic, and Midcontinent). Lesser snow geese and Ross's geese occur in many wintering areas together and are not typically differentiated during the Midwinter Survey, so we report indices of light geese from this survey.

Ross's Geese

Ross's geese nest primarily in the Queen Maud Gulf region, but increasing numbers are nesting in other areas of the central and eastern Arctic and along the western coast of Hudson Bay. Ross's geese primarily winter in California, New Mexico, Texas, and Mexico, with increasing numbers wintering in other portions of the Central and Mississippi Flyways (Figure 9). The management plan for Ross's geese was updated in 2021 (Mississippi Flyway Council 2021*b*), and Lincoln estimates of the adult cohort are now the primary management indices.

Midcontinent Population

Midcontinent Population lesser snow geese winter in the Central and Mississippi Flyways and nest primarily east of Banks Island in the western Arctic to Baffin Island in the eastern Arctic (Figure 9). The management plan for this population was updated in 2018 and replaced prior management guidelines for Midcontinent and Western Central Flyway Population lesser snow geese (Mississippi Flyway Council 2018, Central Flyway Council 2018). Lincoln estimates of the adult cohort are now the primary management indices.

Western Arctic and Wrangel Island Populations

Lesser snow geese in the Pacific Flyway originate from nesting colonies in the western and central Arctic and on Wrangel Island, Russia. Western Arctic lesser snow geese nest primarily on Banks Island, with smaller colonies in coastal areas of the Northwest Territories, and along the Alaskan Arctic Coastal Plain. Wrangel Island lesser snow geese nest on Wrangel Island. Both populations mix during winter and also occur with Midcontinent Population lesser snow geese and Ross's geese. Western Arctic lesser snow geese primarily winter in central and southern California, the western Central Flyway, and the northern highlands of Mexico. Wrangel Island lesser snow geese principally winter in the Skagit-Fraser River Deltas in British Columbia and Washington and in northern and central California (Figure 9). In 2023, the Pacific Flyway updated the harvest strategies for these populations. The primary monitoring indices for Western Arctic lesser snow geese are winter indices of snow geese in California. The primary monitoring indices for Wrangel Island lesser snow geese are winter indices of adult snow geese in the Skagit-Fraser area. In the past, breeding ground surveys were conducted for Western Arctic (Pacific Flyway Council 2013) and Wrangel Island lesser snow geese (Pacific Flyway Council 2006*b*).

Greater Snow Geese

Greater snow geese nest on Bylot, Axel Heiberg, Ellesmere, and Baffin Islands, and in Greenland, and winter along the Atlantic coast from New Jersey to North Carolina (Figure 9). This population is monitored on spring staging areas near the St. Lawrence Valley in Quebec by an annual aerial photographic survey (Atlantic Flyway Council 2009).

Greater White-fronted Geese

See Figure 12, Table 16, and Appendices C.3.

Pacific Population

Pacific Population greater white-fronted geese (*A. albifrons*) primarily nest on the YKD in Alaska and winter in the Central Valley of California (Figure 9). This population is monitored using a predicted fall population index, which is based on the number of indicated total birds from the YKD Coastal Zone Survey and the WBPHS in the Bristol Bay area (stratum 8) and interior portions of the YKD (stratum 9) and expanded by a factor derived from the correlation of these indices with past fall counts in Oregon and California (Pacific Flyway Council 2026).

Midcontinent Population

Midcontinent Population greater white-fronted geese nest from central and northwestern Alaska to the west coast of Hudson Bay and the Melville Peninsula. This population concentrates in southern Saskatchewan and Alberta during the fall and in southern Central and Mississippi Flyway states and Mexico during the winter (Figure 9). The management plan for this population was updated in 2023, and Lincoln estimates of the adult cohort are now the primary management indices (Central, Mississippi, and Pacific Flyway Councils 2023).

Brant

See Figure 12, Table 16, and Appendices C.3.

Atlantic Brant

Atlantic brant (*B. bernicla hrota*) primarily nest on islands in the eastern Canadian Arctic and winter along the Atlantic Coast from Massachusetts to North Carolina (Figure 9). The Midwinter Survey provides an index of this population within its winter range in the Atlantic Flyway (Atlantic Flyway Council 2002).

Pacific Brant

Pacific brant include black brant (*B. b. nigricans*) and western high arctic brant (*B. b. hrota*). Black brant nest across the YKD and North Slope in Alaska, Banks Island, other islands of the western and central Arctic, the Queen Maud Gulf, and Russia. They stage during fall at Izembek Lagoon, Alaska, and winter as far south as Mexico. Western high arctic brant nest on the Parry Islands of the Northwest Territories and Nunavut. They stage during fall at Izembek Lagoon, Alaska, and predominantly winter in the Padilla, Samish, and Fidalgo Bays of Washington and near Boundary Bay, British Columbia, although some individuals have been observed as far south as Mexico (Figure 9). In 2024, the Pacific Flyway updated the primary monitoring indices for this population to a photographic survey conducted at Izembek Lagoon, Alaska during the fall (Pacific Flyway Council 2018).

Emperor Geese

Emperor geese (*A. canagicus*; Figure 12, Table 16, and Appendices C.3) breed along coastal areas of the Bering Sea, with the largest concentration on the YKD in Alaska. Emperor geese stage along the Alaska Peninsula during the fall and spring and winter along the Aleutian Islands (Figure 9). This population is monitored during spring by the YKD Coastal Zone Survey (Pacific Flyway Council 2016*b*).

Swans

See Figure 12, Table 16, and Appendices C.3.

Western Population Tundra Swans

Western Population tundra swans (*Cygnus columbianus*) nest along the coastal lowlands of western Alaska, and the YKD is a primary breeding area. Western Population tundra swans primarily winter in California, Utah, and the Pacific Northwest (Figure 9). The management plan for Western Population tundra swans was updated in 2017, and the primary management indices are derived from the YKD Coastal Zone Survey and the WBPHS (stratum 8 [Bristol Bay], stratum 9 [inland portions of the YKD], stratum 10 [Seward Peninsula], and stratum 11 [Kotzebue Sound]; Pacific Flyway Council 2017).

Eastern Population Tundra Swans

Eastern Population tundra swans nest from the Seward Peninsula of Alaska to the northeast shore of Hudson Bay and Baffin Island. The Mackenzie River Delta and adjacent areas in the Northwest Territories are of particular importance. This population predominantly winters in coastal areas from Maryland to North Carolina (Figure 9). The Midwinter Survey provides an index of this population within its winter range of the Atlantic and Mississippi Flyways (Atlantic, Mississippi, Central, and Pacific Flyway Councils 2007).

Trumpeter Swans

Trumpeter swans (*C. buccinator*) nest south of the Brooks Range and east of the YKD in Alaska and within localized areas of Yukon Territory, western Northwest Territories, southern Canadian provinces from British Columbia to Quebec, and some northern U.S. states from Washington to New York. There are three recognized North American populations: the Pacific Coast, Rocky Mountain, and Interior Populations. Trumpeter swan information can be found at: `https://www.fws.gov/species/trumpeter-swan-cygnus-buccinator`.

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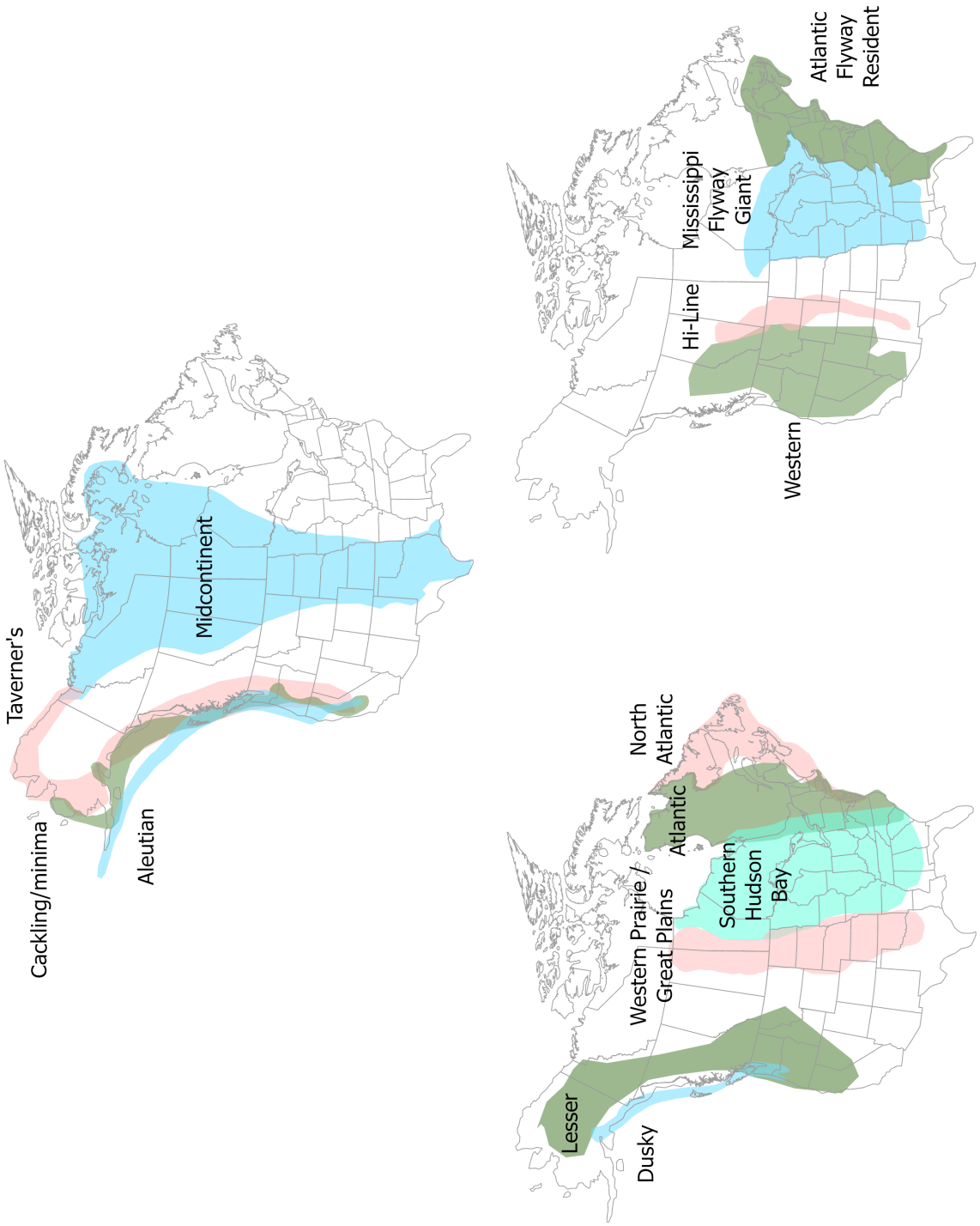

Figure 8. Approximate ranges of Canada and cackling goose populations in North America.

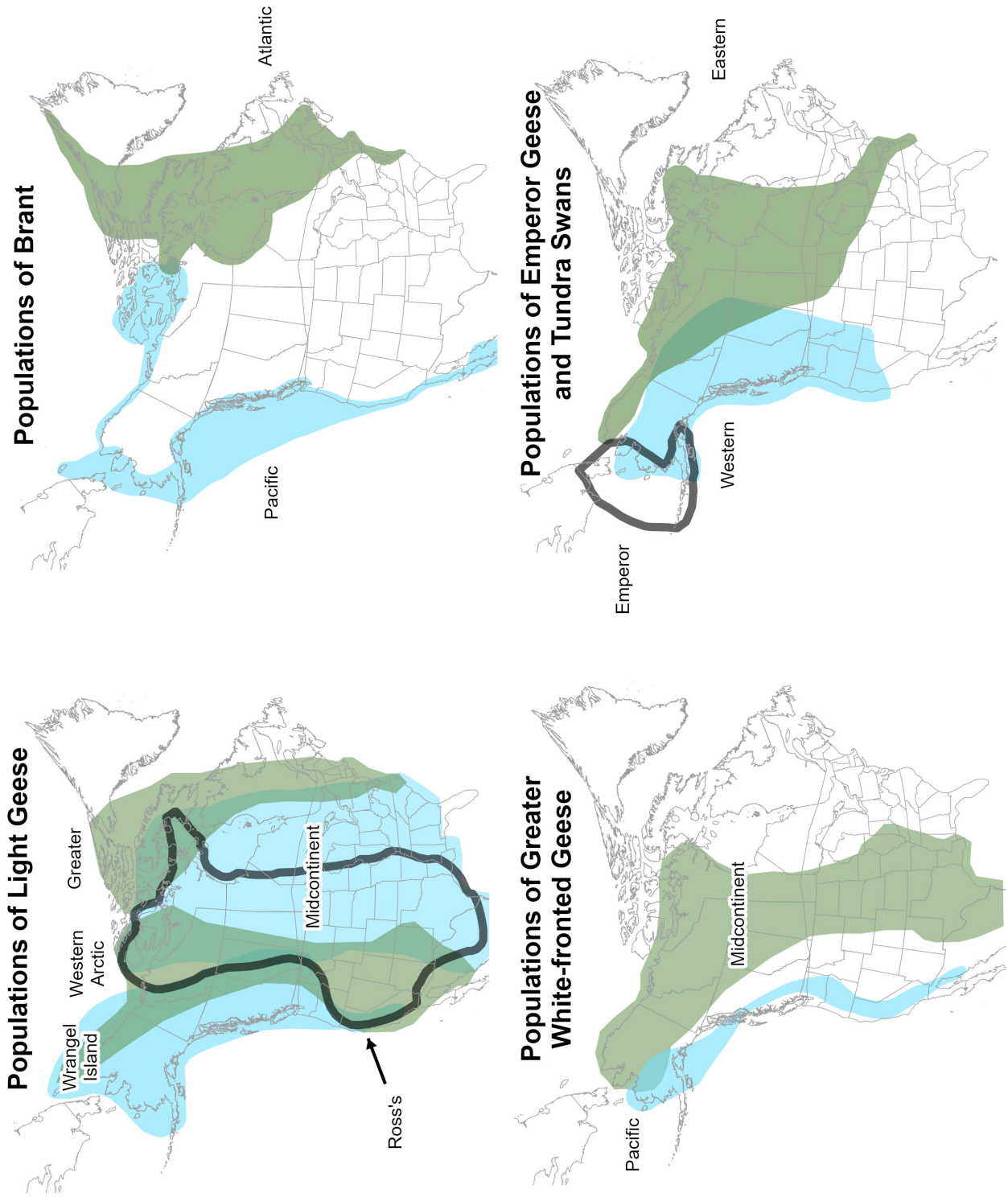

Figure 9. Approximate ranges of light goose, brant, greater white-fronted goose, emperor goose, and tundra swan populations in North America.

Table 14. Canada and cackling goose indices (in thousands) from primary monitoring surveys.

	Most recent		Previous		Change from previous		10-year trend	
Population	Year	Estimate	Year	Estimate	%	*P*	%/yr	*P*
North Atlantic	2026	55	2025	58	–5	0.849	+1	0.225
Atlantic	2026	170	2025	150	+14	0.407	0	0.858
Atlantic Flyway Resident	2026	1,009	2025	1,003	+1	0.963	0	0.625
Southern Hudson Bay	2026	55	2025	84	–34	0.031	–7	0.016
Mississippi Flyway Giant	2026	1,348	2025	1,418	–5	–	–1	0.042
Western Prairie & Great Plains	2026	873	2025	1,168	–25	0.008	–4	0.106
Midcontinent	2024	1,894	2023	1,836	+3	0.878	–4	0.151
Hi-Line	2026	317	2025	331	–4	0.760	–2	0.187
Western	2026	351	2025	425	–18	0.401	–2	0.197
Dusky	2026	10	2025	12	–12	0.312	–4	0.089
Cackling/minima	2026	171	2025	124	+38	0.001	–7	0.017
Lesser	2026	6	2025	11	–49	0.257	+4	0.614
Taverner's	2026	41	2025	34	+22	0.279	–3	0.130
Aleutian	2026	104	2025	196	-47	0.015	–1	0.637

Table 15. Light goose (Ross's and snow goose) indices (in thousands) from primary monitoring surveys.

	Most recent		Previous		Change from previous		10-year trend	
Population	Year	Estimate	Year	Estimate	%	*P*	%/yr	*P*
Lesser snow geese								
Midcontinent	2024	7,179	2023	8,420	–15	0.252	–8	0.031
Western Arctic	2025	1,007	2024	1,132	–11	–	–2	0.352
Wrangel Island	2023	87	2022	101	–14	–	+7	<0.001
Greater snow geese	2026	515	2025	428	+20	<0.001	–6	0.011
Ross's geese	2024	1,394	2023	3,594	–61	<0.001	–5	0.296

Table 16. Greater white-fronted goose, brant, emperor goose, and tundra swan indices (in thousands) from primary monitoring surveys.

	Most recent		Previous		Change from previous		10-year trend	
Population	Year	Estimate	Year	Estimate	%	*P*	%/yr	*P*
White-fronted goose								
Pacific	2026	506	2025	475	+7	0.636	–5	0.034
Midcontinent	2024	3,068	2023	2,925	+5	0.802	–1	0.789
Brant								
Atlantic	2026	137	2025	134	+2	–	–2	0.147
Pacific	2025	196	2024	189	+4	0.847	–6	0.038
Emperor goose	2026	24	2025	22	+8	0.389	–4	0.046
Tundra swan								
Western	2026	76	2025	73	+4	0.889	–7	0.008
Eastern	2026	95	2025	76	+25	–	–3	0.267

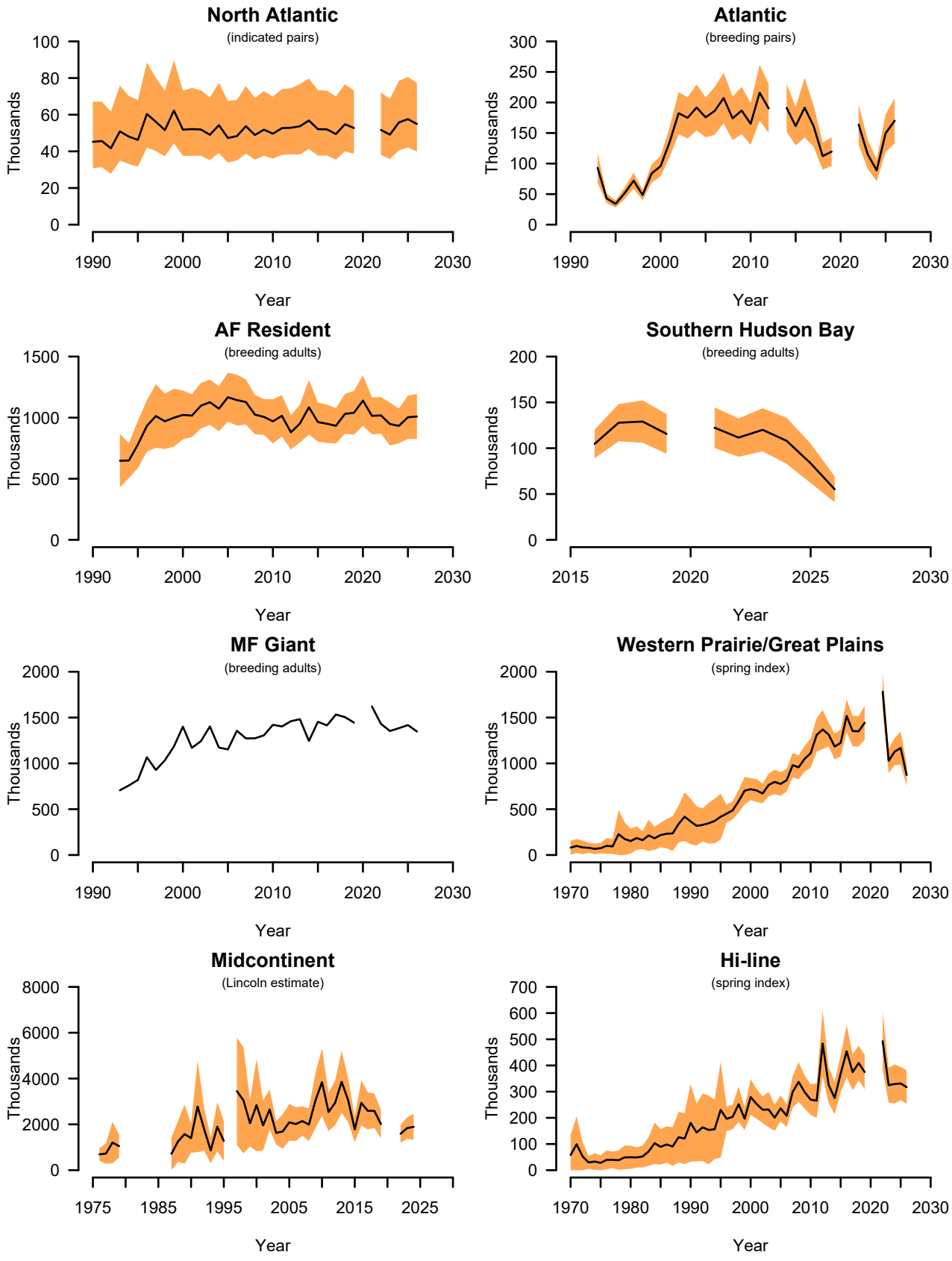

Figure 10. Abundance indices (and 95% confidence intervals, where applicable) of Canada and cackling goose populations based on primary management surveys.

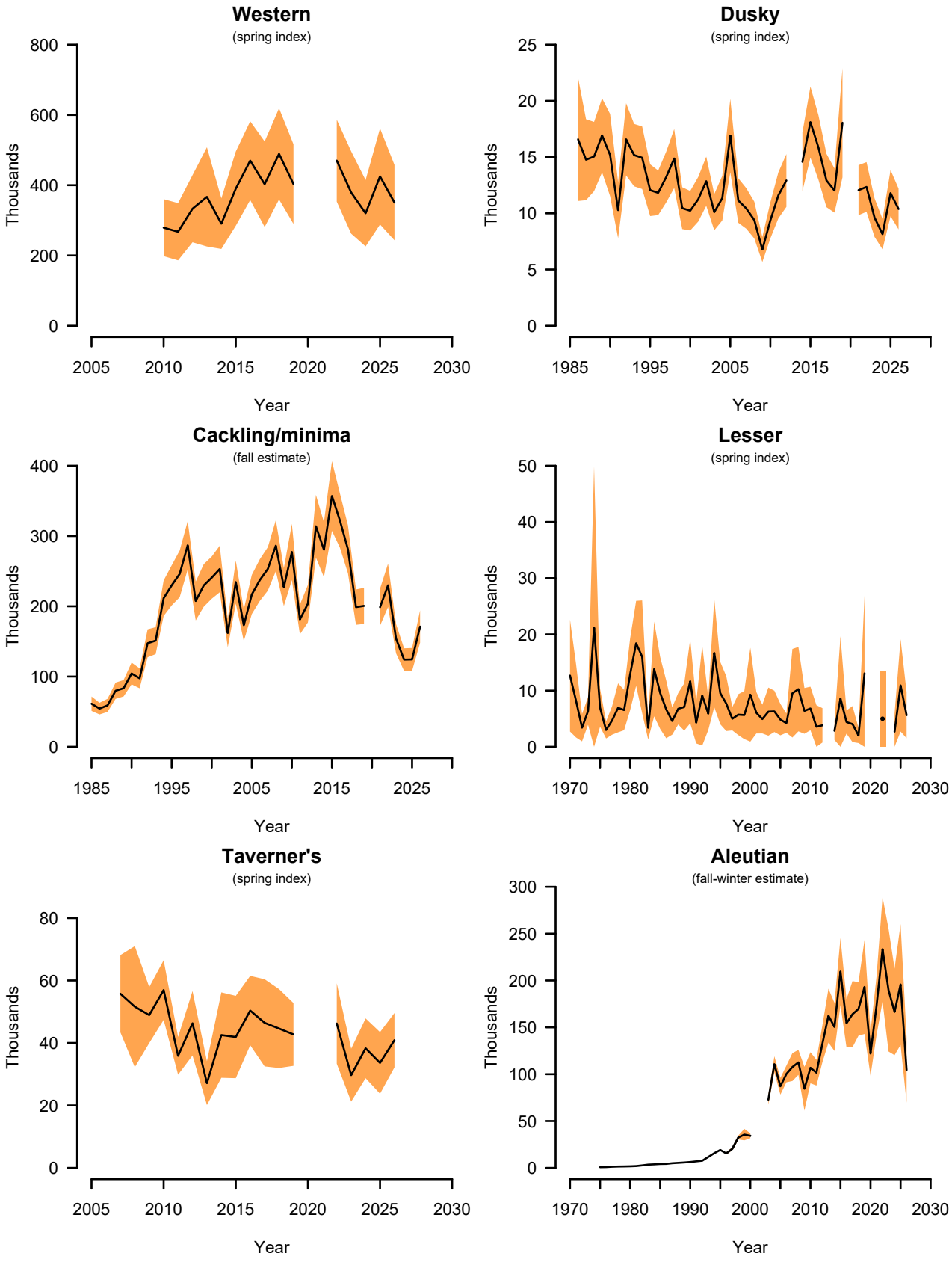

Figure 10. Continued.

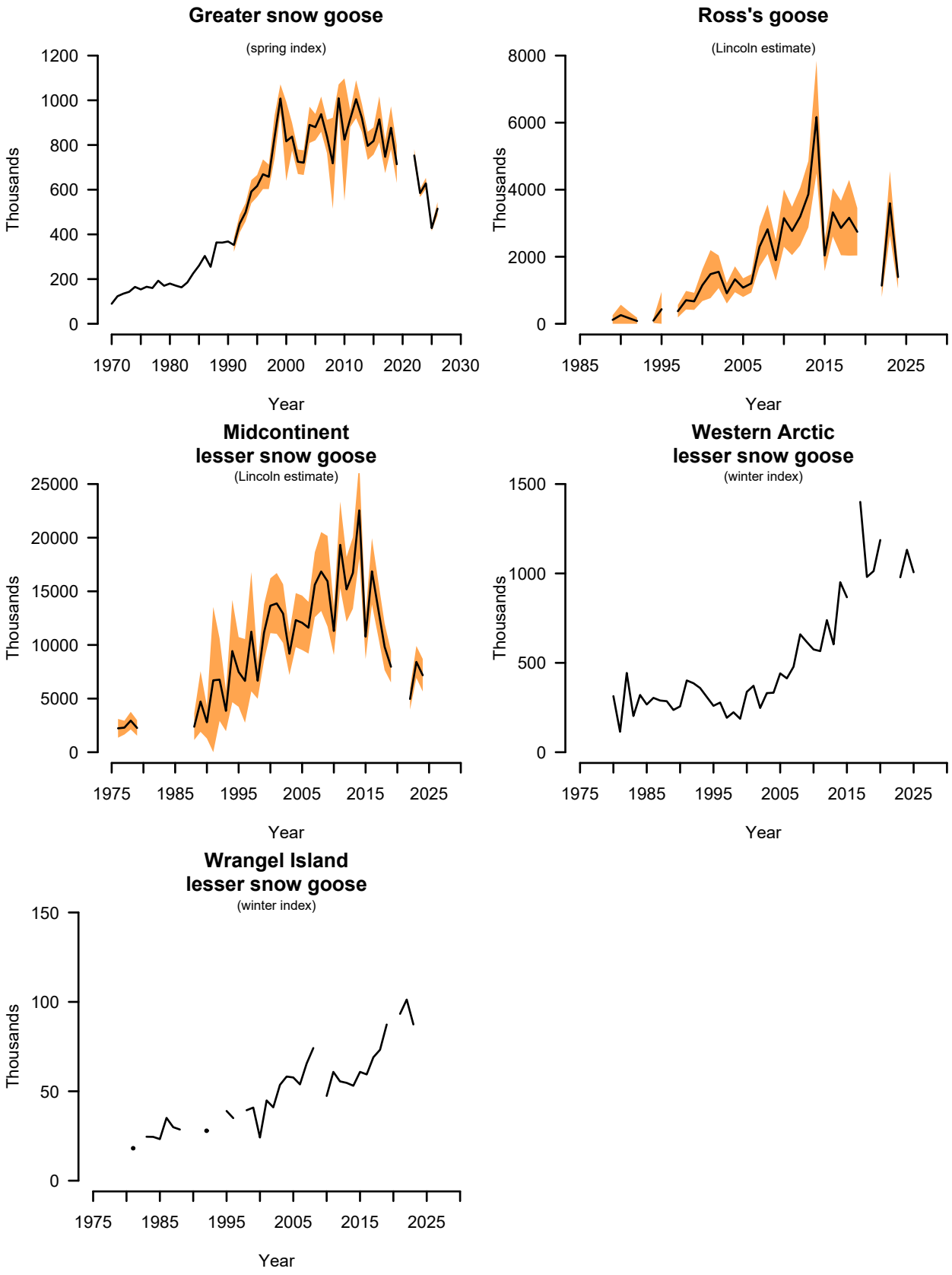

Figure 11. Abundance indices (and 95% confidence intervals, where applicable) of light goose (Ross's and snow goose) populations based on primary management surveys.

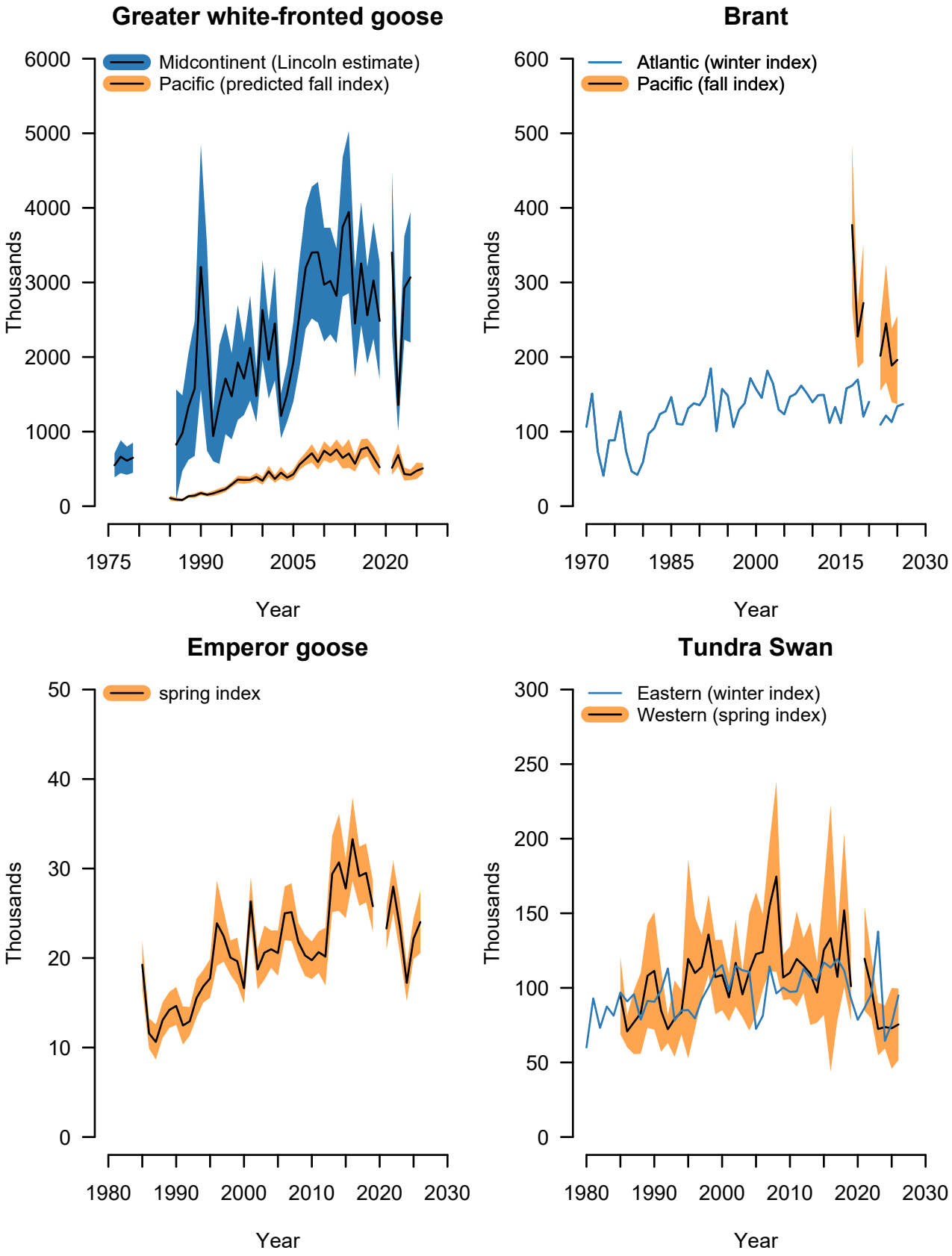

Figure 12. Abundance indices (and 95% confidence intervals, where applicable) of greater white-fronted goose, brant, emperor goose, and tundra swan populations based on primary management surveys.

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Air	B. Nigus and T. Zeller

Northern Alberta, Northeastern British Columbia, and Northwest Territories (Strata 13–18, 20, and 77)

Air	G. Wilkerson and B. Fortier

Northern Saskatchewan and Northern Manitoba (Strata 21–25)

Air	W. Rhodes and C. Cain
Air	P. Thorpe and S. Chandler
Air	S. Yates and R. Shafique-Sabir

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Air M. Koneff and J. Dooley

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Air M. Weaver[b] and C. Brady[b]

Michigan

Air B. Barlow[b], K. Barnes[b], B. Dybas-Berger[b], C. Dole[b], C. Eckloff[b], R. Leggett[b], H. Pulling[b], and A. Shook[b]

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Air B. Davis[b], A. Fischer[b], N. Brown[b], T. Drake[b] and R. Hanna[b]

Ground W. Brininger, J. Rien, K. Spaeth, J. Strege[b], N. Foreman[b], N. Larson, G. Dehmer, G. Smith, A. Sidie-Slettedahl, M. Martin, K. Emerson, and N. Purifoy

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Air B. Reishus[b], K. Walton[b], D. Speten[b], M. Cline[b], C. Crossley[b], L. Hardt[b], J. Journey[b], and helicopter service provided by JL Aviation Inc.[d]

Washington

Air M. Hamer[b], M. Wilson[b], and J. McHargue[d]

Wisconsin

Air P. Eyers[b], T. Finger[b], C. Grape[b], N. Gaskins[b], J. Malinowski[b], and M. Worth[b]

Ground E. Belling[b], E. Borchert[b], J. Christopoulos[b], A. Civrro[b], J. Cotter[b], N. Dhuey[b], S. Easterly[b], R. Hanson[b], B. Stroede[b], A. McDonnell[b], T. Finger[b], G. Friedbauer[b], G. Gagliardi[b], D. Goltz[b], K. Gosenheimer[b], A. Kakatsch[b], T. Klein[b], C. Knab[b], D. Mittelstadt[b], S. O'brien[b], S. Sauber[b], A. Seitz[b], H. Stanley[b], B. Stefanski[b], S. Stellmacher[b], J. Voigt[b], J. Wanner[b], C. Wehler[b], B. Woodbury[b], M. Woodford[b], G. Wolf[b], C. Young[b], and Z. Zuleger[b]

A.2: Individuals who supplied information on the status of geese and swans.

Flyway and Regional Survey Reports

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Information from the Waterfowl Breeding Population and Habitat Survey

See Appendix A.1

Atlantic Population Canada Geese

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Southern Hudson Bay Population Canada Geese

R. Brook[b]

Mississippi Flyway Population Giant Canada Geese

O. Jones[b]

Midcontinent Arctic-nesting Geese

F. Baldwin[a], J. Fischer, V. Patil[c], R. Raftovich, G. Raven[a], A. Smith[a], L. Walker[c], M. Weegman[c]

Western Arctic and Wrangel Island Population Lesser Snow Geese

K. Spragens[b] and M. Weaver[b]

Greater Snow Geese

J. Lefebvre[a]

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[a]Canadian Wildlife Service
[b]State, Provincial or Tribal Conservation Agency
[c]Ducks Unlimited Canada
[d]Other Organization
All others—U.S. Fish & Wildlife Service
[a]Canadian Wildlife Service
[b]State, Provincial or Tribal Conservation Agency
[c]Other Organization
All others–U.S. Fish and Wildlife Service

B. Historical estimates of May ponds and regional waterfowl populations

Table B.1. Estimated number of May ponds and standard errors (in thousands) in portions of Prairie and Parkland Canada and the northcentral U.S.

	Prairie Canada		Northcentral U.S.[a]		Total	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
1961	1,977.2	165.4				
1962	2,369.1	184.6				
1963	2,482.0	129.3				
1964	3,370.7	173.0				
1965	4,378.8	212.2				
1966	4,554.5	229.3				
1967	4,691.2	272.1				
1968	1,985.7	120.2				
1969	3,547.6	221.9				
1970	4,875.0	251.2				
1971	4,053.4	200.4				
1972	4,009.2	250.9				
1973	2,949.5	197.6				
1974	6,390.1	308.3	1,840.8	197.2	8,230.9	366.0
1975	5,320.1	271.3	1,910.8	116.1	7,230.9	295.1
1976	4,598.8	197.1	1,391.5	99.2	5,990.3	220.7
1977	2,277.9	120.7	771.1	51.1	3,049.1	131.1
1978	3,622.1	158.0	1,590.4	81.7	5,212.4	177.9
1979	4,858.9	252.0	1,522.2	70.9	6,381.1	261.8
1980	2,140.9	107.7	761.4	35.8	2,902.3	113.5
1981	1,443.0	75.3	682.8	34.0	2,125.8	82.6
1982	3,184.9	178.6	1,458.0	86.4	4,642.8	198.4
1983	3,905.7	208.2	1,259.2	68.7	5,164.9	219.2
1984	2,473.1	196.6	1,766.2	90.8	4,239.3	216.5
1985	4,283.1	244.1	1,326.9	74.0	5,610.0	255.1
1986	4,024.7	174.4	1,734.8	74.4	5,759.5	189.6
1987	2,523.7	131.0	1,347.8	46.8	3,871.5	139.1
1988	2,110.1	132.4	790.7	39.4	2,900.8	138.1
1989	1,692.7	89.1	1,289.9	61.7	2,982.7	108.4
1990	2,817.3	138.3	691.2	45.9	3,508.5	145.7
1991	2,493.9	110.2	706.1	33.6	3,200.0	115.2
1992	2,783.9	141.6	825.0	30.8	3,608.9	144.9
1993	2,261.1	94.0	1,350.6	57.1	3,611.7	110.0
1994	3,769.1	173.9	2,215.6	88.8	5,984.8	195.3
1995	3,892.5	223.8	2,442.9	106.8	6,335.4	248.0
1996	5,002.6	184.9	2,479.7	135.3	7,482.2	229.1

Table B.1. Continued.

	Prairie Canada		Northcentral U.S.[a]		Total	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
1997	5,061.0	180.3	2,397.2	94.4	7,458.2	203.5
1998	2,521.7	133.8	2,065.3	89.2	4,586.9	160.8
1999	3,862.0	157.2	2,842.2	256.8	6,704.3	301.2
2000	2,422.5	96.1	1,524.5	99.9	3,946.9	138.6
2001	2,747.2	115.6	1,893.2	91.5	4,640.4	147.4
2002	1,439.0	105.0	1,281.0	63.4	2,720.0	122.7
2003	3,522.3	151.8	1,667.8	67.4	5,190.1	166.1
2004	2,512.6	131.0	1,407.0	101.7	3,919.6	165.8
2005	3,920.5	196.7	1,460.7	79.7	5,381.2	212.2
2006	4,449.5	221.5	1,644.4	85.4	6,093.9	237.4
2007	5,040.2	261.8	1,962.5	102.5	7,002.7	281.2
2008	3,054.8	147.6	1,376.6	71.9	4,431.4	164.2
2009	3,568.1	148.0	2,866.0	123.1	6,434.0	192.5
2010	3,728.7	203.4	2,936.3	142.3	6,665.0	248.2
2011	4,892.7	197.5	3,239.5	127.4	8,132.2	235.0
2012	3,885.1	146.5	1,658.9	52.7	5,544.0	155.6
2013	4,550.5	185.5	2,341.2	99.0	6,891.7	210.2
2014	4,629.9	168.3	2,551.3	106.5	7,181.2	199.2
2015	4,151.0	146.3	2,156.8	86.0	6,307.7	169.7
2016	3,494.5	147.2	1,518.0	52.7	5,012.5	156.4
2017	4,330.3	157.7	1,765.7	92.2	6,096.0	182.7
2018	3,660.2	147.6	1,567.2	90.2	5,227.4	173.0
2019	2,855.6	103.8	2,134.7	137.3	4,990.3	172.1
2020						
2021			No Survey			
2022	3,473.5	157.5	1,983.4	98.2	5,456.9	185.6
2023	3,313.6	114.2	1,661.5	75.2	4,975.1	136.7
2024	2,681.2	117.4	2,478.2	125.5	5,159.5	171.9
2025	2,552.3	125.3	1,628.2	75.9	4,180.5	146.5
2026	3,293.2	175.5	1,468.3	109.6	4,761.5	206.9

[a] No comparable survey data available for the northcentral U.S. during 1961–1973.

Table B.2. Breeding population estimates (in thousands) for total ducks[a] and mallards for states, provinces, or regions that conduct spring surveys.

	British Columbia		California		Michigan		Minnesota		Oregon		Washington		Wisconsin	
Year	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard
1968							321.0	83.7						
1969							323.2	88.8						
1970							324.2	113.9						
1971							277.1	78.5						
1972							217.2	62.2						
1973							389.5	99.8					412.7	107.0
1974							281.6	72.8					435.2	94.3
1975							471.6	175.8					426.9	120.5
1976							684.1	117.8					379.5	109.9
1977							501.1	134.2					323.3	91.7
1978							462.5	146.8					271.3	61.6
1979							552.4	158.7					265.7	78.6
1980							690.6	172.0					248.1	116.5
1981							439.8	154.8					505.0	142.8
1982							465.2	120.5					218.7	89.5
1983							367.1	155.8					202.3	119.5
1984							528.7	188.1					210.0	104.8
1985							562.9	216.9					192.8	73.9
1986							520.8	233.6					262.0	110.8
1987							589.0	192.3					389.8	136.9
1988							725.2	271.7					287.1	148.9
1989							813.6	273.0					462.5	180.7
1990							807.9	232.1					328.6	151.4
1991					408.4	289.3	753.7	225.0					435.8	172.4
1992			497.4	375.8	867.5	385.8	973.3	360.9					683.8	249.7
1993			666.7	359.0	742.8	437.2	837.2	305.8					379.4	174.5
1994			483.2	311.7	718.1	420.5	1,115.6	426.5	322.8	116.4			571.2	283.4
1995			589.7	368.5	791.9	524.1	797.1	319.4	216.2	77.8			592.4	242.2
1996			843.7	536.7	680.5	378.2	889.1	314.8	289.2	102.7			536.3	314.4

Table B.2. Continued.

	British Columbia		California		Michigan		Minnesota		Oregon		Washington		Wisconsin	
Year	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard	Total ducks	Mallard
1997			824.3	511.3	784.0	489.3	868.1	407.4	360.1	121.8			409.3	181.0
1998			706.8	353.9	1,068.5	523.0	693.1	368.4	345.7	126.0			412.8	186.9
1999			851.0	560.1	744.6	466.1	680.5	316.4	320.6	126.1			476.6	248.4
2000			562.4	347.6	793.9	427.2	747.8	318.1	309.7	105.9			744.4	454.0
2001			413.5	302.2	497.8	324.2	716.4	320.6					440.1	183.5
2002			392.0	265.3	742.5	323.2	1,171.5	366.6	260.4	103.5			740.8	378.5
2003			533.7	337.1	535.4	298.9	721.8	280.5	244.3	87.9			533.5	261.3
2004			412.8	262.4	624.5	342.0	1,008.3	375.3	226.9	82.5			651.5	229.2
2005			615.2	317.9	468.3	258.1	632.0	238.5	207.8	74.1			724.3	317.2
2006	364.5	90.4	649.4	399.4	412.2	244.6	521.1	160.7	248.5	81.1			522.6	219.5
2007	383.9	98.8	627.6	388.3	641.9	337.7	488.5	242.5	318.2	92.4			470.6	210.2
2008	377.1	81.1	554.3	297.1	437.5	200.5	739.6	297.6	220.7	75.4			626.9	188.4
2009	349.7	72.5	510.8	302.0	493.6	258.9	541.3	236.4	182.5	72.6			502.4	200.5
2010	339.2	81.1	541.4	367.9	596.8	339.9	530.7	241.9	204.7	66.8	200.1	92.9	386.5	199.1
2011	277.8	69.7	558.5	314.7	472.3	259.4	687.5	283.3	155.9	61.6	155.0	71.4	513.7	187.9
2012	313.7	75.6	529.7	387.1	860.7	439.3	468.6	225.0	260.0	88.8	167.3	89.5	521.1	196.9
2013	333.6	82.9	451.3	298.6	678.6	289.4	682.9	293.2	250.6	84.3	156.1	74.4	527.3	181.2
2014	355.8	82.6	448.7	238.7	395.3	230.1	474.4	257.0	313.0	85.3	172.8	86.3	395.1	158.7
2015	365.8	81.4	315.6	173.9	431.1	237.8	524.2	206.2	278.5	87.4	191.3	86.4	372.8	176.2
2016	321.3	74.0	417.4	263.8	502.6	278.1	787.1	250.2	213.3	87.3	119.0	59.9	390.5	164.1
2017	351.3	70.9	395.0	198.4	684.5	298.1	636.0	213.6	238.9	71.7	239.0	103.4	479.1	180.9
2018	346.3	79.3	548.8	272.9	452.4	251.4	692.6	295.4	293.5	97.1	277.3	124.9	439.4	216.7
2019	418.9	75.7	469.8	239.8	333.9	179.2	694.8	286.4	251.0	83.9	244.0	126.2	413.7	204.3
2020														
2021					973.1	310.0			260.1	76.3			585.0	147.4
2022	390.6	80.9	368.2	170.3	202.0	138.7	606.9	231.1	344.0	79.4	215.2	87.4	647.1	185.6
2023	369.1	70.8	443.3	200.4	136.4	82.7	496.0	222.2	197.5	68.6	201.8	102.0	431.1	166.7
2024	437.2	96.7	360.0	173.3	673.8	250.6	444.9	140.9	302.1	71.0	156.0	86.4	375.1	117.7
2025	416.6	81.3	482.4	270.3	142.3	88.0	417.5	163.5	267.2	79.5	156.1	77.0	547.4	149.1
2026	477.3	88.3	435.6	267.1	505.2	141.9	678.2	239.6	208.7	75.7	189.2	83.4	476.7	175.3

[a] Species composition for the total duck estimate varies by state.

Table B.3. Breeding population estimates and standard errors (in thousands) for 10 species of ducks from the traditional survey area (strata 1–18, 20–50, 75–77), 1955–2026.

	Mallard		Gadwall		American wigeon		Green-winged teal		Blue-winged teal	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
1955	8,777.3	457.1	651.5	149.5	3,216.8	297.8	1,807.2	291.5	5,305.2	567.6
1956	10,452.7	461.8	772.6	142.4	3,145.0	227.8	1,525.3	236.2	4,997.6	527.6
1957	9,296.9	443.5	666.8	148.2	2,919.8	291.5	1,102.9	161.2	4,299.5	467.3
1958	11,234.2	555.6	502.0	89.6	2,551.7	177.9	1,347.4	212.2	5,456.6	483.7
1959	9,024.3	466.6	590.0	72.7	3,787.7	339.2	2,653.4	459.3	5,099.3	332.7
1960	7,371.7	354.1	784.1	68.4	2,987.6	407.0	1,426.9	311.0	4,293.0	294.3
1961	7,330.0	510.5	654.8	77.5	3,048.3	319.9	1,729.3	251.5	3,655.3	298.7
1962	5,535.9	426.9	905.1	87.0	1,958.7	145.4	722.9	117.6	3,011.1	209.8
1963	6,748.8	326.8	1,055.3	89.5	1,830.8	169.9	1,242.3	226.9	3,723.6	323.0
1964	6,063.9	385.3	873.4	73.7	2,589.6	259.7	1,561.3	244.7	4,020.6	320.4
1965	5,131.7	274.8	1,260.3	114.8	2,301.1	189.4	1,282.0	151.0	3,594.5	270.4
1966	6,731.9	311.4	1,680.4	132.4	2,318.4	139.2	1,617.3	173.6	3,733.2	233.6
1967	7,509.5	338.2	1,384.6	97.8	2,325.5	136.2	1,593.7	165.7	4,491.5	305.7
1968	7,089.2	340.8	1,949.0	213.9	2,298.6	156.1	1,430.9	146.6	3,462.5	389.1
1969	7,531.6	280.2	1,573.4	100.2	2,941.4	168.6	1,491.0	103.5	4,138.6	239.5
1970	9,985.9	617.2	1,608.1	123.5	3,469.9	318.5	2,182.5	137.7	4,861.8	372.3
1971	9,416.4	459.5	1,605.6	123.0	3,272.9	186.2	1,889.3	132.9	4,610.2	322.8
1972	9,265.5	363.9	1,622.9	120.1	3,200.1	194.1	1,948.2	185.8	4,278.5	230.5
1973	8,079.2	377.5	1,245.6	90.3	2,877.9	197.4	1,949.2	131.9	3,332.5	220.3
1974	6,880.2	351.8	1,592.4	128.2	2,672.0	159.3	1,864.5	131.2	4,976.2	394.6
1975	7,726.9	344.1	1,643.9	109.0	2,778.3	192.0	1,664.8	148.1	5,885.4	337.4
1976	7,933.6	337.4	1,244.8	85.7	2,505.2	152.7	1,547.5	134.0	4,744.7	294.5
1977	7,397.1	381.8	1,299.0	126.4	2,575.1	185.9	1,285.8	87.9	4,462.8	328.4
1978	7,425.0	307.0	1,558.0	92.2	3,282.4	208.0	2,174.2	219.1	4,498.6	293.3
1979	7,883.4	327.0	1,757.9	121.0	3,106.5	198.2	2,071.7	198.5	4,875.9	297.6
1980	7,706.5	307.2	1,392.9	98.8	3,595.5	213.2	2,049.9	140.7	4,895.1	295.6
1981	6,409.7	308.4	1,395.4	120.0	2,946.0	173.0	1,910.5	141.7	3,720.6	242.1
1982	6,408.5	302.2	1,633.8	126.2	2,458.7	167.3	1,535.7	140.2	3,657.6	203.7
1983	6,456.0	286.9	1,519.2	144.3	2,636.2	181.4	1,875.0	148.0	3,366.5	197.2
1984	5,415.3	258.4	1,515.0	125.0	3,002.2	174.2	1,408.2	91.5	3,979.3	267.6
1985	4,960.9	234.7	1,303.0	98.2	2,050.7	143.7	1,475.4	100.3	3,502.4	246.3
1986	6,124.2	241.6	1,547.1	107.5	1,736.5	109.9	1,674.9	136.1	4,478.8	237.1
1987	5,789.8	217.9	1,305.6	97.1	2,012.5	134.3	2,006.2	180.4	3,528.7	220.2
1988	6,369.3	310.3	1,349.9	121.1	2,211.1	139.1	2,060.8	188.3	4,011.1	290.4
1989	5,645.4	244.1	1,414.6	106.6	1,972.9	106.0	1,841.7	166.4	3,125.3	229.8
1990	5,452.4	238.6	1,672.1	135.8	1,860.1	108.3	1,789.5	172.7	2,776.4	178.7
1991	5,444.6	205.6	1,583.7	111.8	2,254.0	139.5	1,557.8	111.3	3,763.7	270.8
1992	5,976.1	241.0	2,032.8	143.4	2,208.4	131.9	1,773.1	123.7	4,333.1	263.2
1993	5,708.3	208.9	1,755.2	107.9	2,053.0	109.3	1,694.5	112.7	3,192.9	205.6
1994	6,980.1	282.8	2,318.3	145.2	2,382.2	130.3	2,108.4	152.2	4,616.2	259.2
1995	8,269.4	287.5	2,835.7	187.5	2,614.5	136.3	2,300.6	140.3	5,140.0	253.3
1996	7,941.3	262.9	2,984.0	152.5	2,271.7	125.4	2,499.5	153.4	6,407.4	353.9

Table B.3. Continued.

	Mallard		Gadwall		American wigeon		Green-winged teal		Blue-winged teal	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
1997	9,939.7	308.5	3,897.2	264.9	3,117.6	161.6	2,506.6	142.5	6,124.3	330.7
1998	9,640.4	301.6	3,742.2	205.6	2,857.7	145.3	2,087.3	138.9	6,398.8	332.3
1999	10,805.7	344.5	3,235.5	163.8	2,920.1	185.5	2,631.0	174.6	7,149.5	364.5
2000	9,470.2	290.2	3,158.4	200.7	2,733.1	138.8	3,193.5	200.1	7,431.4	425.0
2001	7,904.0	226.9	2,679.2	136.1	2,493.5	149.6	2,508.7	156.4	5,757.0	288.8
2002	7,503.7	246.5	2,235.4	135.4	2,334.4	137.9	2,333.5	143.8	4,206.5	227.9
2003	7,949.7	267.3	2,549.0	169.9	2,551.4	156.9	2,678.5	199.7	5,518.2	312.7
2004	7,425.3	282.0	2,589.6	165.6	1,981.3	114.9	2,460.8	145.2	4,073.0	238.0
2005	6,755.3	280.8	2,179.1	131.0	2,225.1	139.2	2,156.9	125.8	4,585.5	236.3
2006	7,276.5	223.7	2,824.7	174.2	2,171.2	115.7	2,587.2	155.3	5,859.6	303.5
2007	8,307.3	285.8	3,355.9	206.2	2,806.8	152.0	2,890.3	196.1	6,707.6	362.2
2008	7,723.8	256.8	2,727.7	158.9	2,486.6	151.3	2,979.7	194.4	6,640.1	337.3
2009	8,512.4	248.3	3,053.5	166.3	2,468.6	135.4	3,443.6	219.9	7,383.8	396.8
2010	8,430.1	284.9	2,976.7	161.6	2,424.6	131.5	3,475.9	207.2	6,328.5	382.6
2011	9,182.6	267.8	3,256.9	196.9	2,084.0	110.1	2,900.1	170.7	8,948.5	418.2
2012	10,601.5	324.0	3,585.6	208.7	2,145.0	145.6	3,471.2	207.9	9,242.3	425.1
2013	10,371.9	360.6	3,351.4	204.5	2,644.3	169.2	3,053.4	173.7	7,731.7	363.2
2014	10,899.8	347.6	3,811.0	206.0	3,116.7	190.4	3,439.9	247.4	8,541.5	461.9
2015	11,643.3	361.8	3,834.1	219.4	3,037.0	199.2	4,080.9	269.8	8,547.3	401.1
2016	11,792.5	367.4	3,712.0	197.3	3,411.3	196.4	4,275.4	329.8	6,689.4	340.1
2017	10,488.5	333.9	4,180.0	209.0	2,777.1	156.0	3,605.3	233.3	7,888.9	395.8
2018	9,255.2	298.9	2,885.9	161.7	2,820.4	166.5	3,042.7	213.9	6,450.5	307.7
2019	9,423.4	284.5	3,258.7	173.5	2,832.1	215.8	3,178.2	184.4	5,427.6	318.8
2020	No Survey									
2021										
2022	7,434.3	243.3	2,684.7	135.3	2,186.9	128.7	2,150.9	178.2	6,491.1	337.5
2023	6,125.7	206.1	2,561.4	145.1	1,889.7	173.3	2,502.6	284.0	5,250.3	297.0
2024	6,609.3	253.8	2,284.4	124.6	2,922.0	219.1	3,005.5	210.2	4,599.0	233.7
2025	6,553.6	261.9	2,413.9	115.1	3,191.1	273.0	2,550.2	222.4	4,431.7	225.2
2026	5,859.3	233.1	2,351.5	131.8	2,940.2	220.2	2,333.5	144.2	3,961.9	229.8

Table B.3. Continued.

Year	Northern shoveler		Northern pintail		Redhead		Canvasback		Scaup	
	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
1955	1,642.8	218.7	9,775.1	656.1	539.9	98.9	589.3	87.8	5,620.1	582.1
1956	1,781.4	196.4	10,372.8	694.4	757.3	119.3	698.5	93.3	5,994.1	434.0
1957	1,476.1	181.8	6,606.9	493.4	509.1	95.7	626.1	94.7	5,766.9	411.7
1958	1,383.8	185.1	6,037.9	447.9	457.1	66.2	746.8	96.1	5,350.4	355.1
1959	1,577.6	301.1	5,872.7	371.6	498.8	55.5	488.7	50.6	7,037.6	492.3
1960	1,824.5	130.1	5,722.2	323.2	497.8	67.0	605.7	82.4	4,868.6	362.5
1961	1,383.0	166.5	4,218.2	496.2	323.3	38.8	435.3	65.7	5,380.0	442.2
1962	1,269.0	113.9	3,623.5	243.1	507.5	60.0	360.2	43.8	5,286.1	426.4
1963	1,398.4	143.8	3,846.0	255.6	413.4	61.9	506.2	74.9	5,438.4	357.9
1964	1,718.3	240.3	3,291.2	239.4	528.1	67.3	643.6	126.9	5,131.8	386.1
1965	1,423.7	114.1	3,591.9	221.9	599.3	77.7	522.1	52.8	4,640.0	411.2
1966	2,147.0	163.9	4,811.9	265.6	713.1	77.6	663.1	78.0	4,439.2	356.2
1967	2,314.7	154.6	5,277.7	341.9	735.7	79.0	502.6	45.4	4,927.7	456.1
1968	1,684.5	176.8	3,489.4	244.6	499.4	53.6	563.7	101.3	4,412.7	351.8
1969	2,156.8	117.2	5,903.9	296.2	633.2	53.6	503.5	53.7	5,139.8	378.5
1970	2,230.4	117.4	6,392.0	396.7	622.3	64.3	580.1	90.4	5,662.5	391.4
1971	2,011.4	122.7	5,847.2	368.1	534.4	57.0	450.7	55.2	5,143.3	333.8
1972	2,466.5	182.8	6,979.0	364.5	550.9	49.4	425.9	46.0	7,997.0	718.0
1973	1,619.0	112.2	4,356.2	267.0	500.8	57.7	620.5	89.1	6,257.4	523.1
1974	2,011.3	129.9	6,598.2	345.8	626.3	70.8	512.8	56.8	5,780.5	409.8
1975	1,980.8	106.7	5,900.4	267.3	831.9	93.5	595.1	56.1	6,460.0	486.0
1976	1,748.1	106.9	5,475.6	299.2	665.9	66.3	614.4	70.1	5,818.7	348.7
1977	1,451.8	82.1	3,926.1	246.8	634.0	79.9	664.0	74.9	6,260.2	362.8
1978	1,975.3	115.6	5,108.2	267.8	724.6	62.2	373.2	41.5	5,984.4	403.0
1979	2,406.5	135.6	5,376.1	274.4	697.5	63.8	582.0	59.8	7,657.9	548.6
1980	1,908.2	119.9	4,508.1	228.6	728.4	116.7	734.6	83.8	6,381.7	421.2
1981	2,333.6	177.4	3,479.5	260.5	594.9	62.0	620.8	59.1	5,990.9	414.2
1982	2,147.6	121.7	3,708.8	226.6	616.9	74.2	513.3	50.9	5,532.0	380.9
1983	1,875.7	105.3	3,510.6	178.1	711.9	83.3	526.6	58.9	7,173.8	494.9
1984	1,618.2	91.9	2,964.8	166.8	671.3	72.0	530.1	60.1	7,024.3	484.7
1985	1,702.1	125.7	2,515.5	143.0	578.2	67.1	375.9	42.9	5,098.0	333.1
1986	2,128.2	112.0	2,739.7	152.1	559.6	60.5	438.3	41.5	5,235.3	355.5
1987	1,950.2	118.4	2,628.3	159.4	502.4	54.9	450.1	77.9	4,862.7	303.8
1988	1,680.9	210.4	2,005.5	164.0	441.9	66.2	435.0	40.2	4,671.4	309.5
1989	1,538.3	95.9	2,111.9	181.3	510.7	58.5	477.4	48.4	4,342.1	291.3
1990	1,759.3	118.6	2,256.6	183.3	480.9	48.2	539.3	60.3	4,293.1	264.9
1991	1,716.2	104.6	1,803.4	131.3	445.6	42.1	491.2	66.4	5,254.9	364.9
1992	1,954.4	132.1	2,098.1	161.0	595.6	69.7	481.5	97.3	4,639.2	291.9
1993	2,046.5	114.3	2,053.4	124.2	485.4	53.1	472.1	67.6	4,080.1	249.4
1994	2,912.0	141.4	2,972.3	188.0	653.5	66.7	525.6	71.1	4,529.0	253.6
1995	2,854.9	150.3	2,757.9	177.6	888.5	90.6	770.6	92.2	4,446.4	277.6
1996	3,449.0	165.7	2,735.9	147.5	834.2	83.1	848.5	118.3	4,217.4	234.5
1997	4,120.4	194.0	3,558.0	194.2	918.3	77.2	688.8	57.2	4,112.3	224.2

Table B.3. Continued.

	Northern shoveler		Northern pintail		Redhead		Canvasback		Scaup	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
1998	3,183.2	156.5	2,520.6	136.8	1,005.1	122.9	685.9	63.8	3,471.9	191.2
1999	3,889.5	202.1	3,057.9	230.5	973.4	69.5	716.0	79.1	4,411.7	227.9
2000	3,520.7	197.9	2,907.6	170.5	926.3	78.1	706.8	81.0	4,026.3	205.3
2001	3,313.5	166.8	3,296.0	266.6	712.0	70.2	579.8	52.7	3,694.0	214.9
2002	2,318.2	125.6	1,789.7	125.2	564.8	69.0	486.6	43.8	3,524.1	210.3
2003	3,619.6	221.4	2,558.2	174.8	636.8	56.6	557.6	48.0	3,734.4	225.5
2004	2,810.4	163.9	2,184.6	155.2	605.3	51.5	617.2	64.6	3,807.2	202.3
2005	3,591.5	178.6	2,560.5	146.8	592.3	51.7	520.6	52.9	3,386.9	196.4
2006	3,680.2	236.5	3,386.4	198.7	916.3	86.1	691.0	69.6	3,246.7	166.9
2007	4,552.8	247.5	3,335.3	160.4	1,009.0	84.7	864.9	86.2	3,452.2	195.3
2008	3,507.8	168.4	2,612.8	143.0	1,056.0	120.4	488.7	45.4	3,738.3	220.1
2009	4,376.3	224.1	3,225.0	166.9	1,044.1	106.3	662.1	57.4	4,172.1	232.3
2010	4,057.4	198.4	3,508.6	216.4	1,064.2	99.5	585.2	50.8	4,244.4	247.9
2011	4,641.0	232.8	4,428.6	267.9	1,356.1	128.3	691.6	46.0	4,319.3	261.1
2012	5,017.6	254.2	3,473.1	192.4	1,269.9	99.2	759.9	68.5	5,238.6	296.8
2013	4,751.0	202.3	3,335.0	188.4	1,202.2	90.5	787.0	57.6	4,165.7	250.8
2014	5,278.9	265.3	3,220.3	179.7	1,278.7	102.5	685.3	50.7	4,611.1	253.3
2015	4,391.4	219.0	3,043.0	182.5	1,195.9	92.9	757.3	63.3	4,395.3	252.5
2016	3,966.9	189.0	2,618.5	204.2	1,288.8	115.4	736.5	68.8	4,991.7	297.6
2017	4,353.1	202.3	2,889.2	206.2	1,115.4	91.8	732.5	61.7	4,371.7	228.7
2018	4,207.9	196.5	2,365.3	150.2	999.0	85.3	686.1	59.1	3,989.3	212.5
2019	3,649.2	169.0	2,268.5	123.3	732.2	63.7	651.9	49.1	3,590.8	207.0
2020										
2021					No Survey					
2022	3,036.3	167.1	1,783.6	150.1	1,066.6	87.1	586.6	50.6	3,655.1	223.8
2023	2,858.4	165.1	2,218.5	148.3	929.9	80.6	618.9	63.9	3,517.1	211.7
2024	2,645.8	125.0	1,975.0	146.1	782.0	64.8	566.3	52.3	4,069.1	231.8
2025	2,758.2	164.4	2,238.8	167.8	918.2	77.9	690.2	60.0	3,675.5	206.0
2026	3,288.7	225.4	1,987.5	107.2	931.0	76.6	781.6	69.6	4,155.4	231.8

Table B.4. Total breeding duck estimates for the traditional survey area, in thousands.

	Traditional Survey Area[a]	
Year	$\widehat{N}$	$\widehat{SE}$
1955	39,603.6	1,264.0
1956	42,035.2	1,177.3
1957	34,197.1	1,016.6
1958	36,528.1	1,013.6
1959	40,089.9	1,103.6
1960	32,080.5	876.8
1961	29,829.0	1,009.0
1962	25,038.9	740.6
1963	27,609.5	736.6
1964	27,768.8	827.5
1965	25,903.1	694.4
1966	30,574.2	689.5
1967	32,688.6	796.1
1968	28,971.2	789.4
1969	33,760.9	674.6
1970	39,676.3	1,008.1
1971	36,905.1	821.8
1972	40,748.0	987.1
1973	32,573.9	805.3
1974	35,422.5	819.5
1975	37,792.8	836.2
1976	34,342.3	707.8
1977	32,049.0	743.8
1978	35,505.6	745.4
1979	38,622.0	843.4
1980	36,224.4	737.9
1981	32,267.3	734.9
1982	30,784.0	678.8
1983	32,635.2	725.8
1984	31,004.9	716.5
1985	25,638.3	574.9
1986	29,092.8	609.3
1987	27,412.1	562.1
1988	27,361.7	660.8
1989	25,112.8	555.4
1990	25,079.2	539.9
1991	26,605.6	588.7
1992	29,417.9	605.6
1993	26,312.4	493.9
1994	32,523.5	598.2
1995	35,869.6	629.4
1996	37,753.0	779.6

Table B.4. Continued.

	Traditional Survey Area[a]	
Year	$\widehat{N}$	$\widehat{SE}$
1997	42,556.3	718.9
1998	39,081.9	652.0
1999	43,435.8	733.9
2000	41,838.3	740.2
2001	36,177.5	633.1
2002	31,181.1	547.8
2003	36,225.1	664.7
2004	32,164.0	579.8
2005	31,734.9	555.2
2006	36,160.3	614.4
2007	41,172.2	724.8
2008	37,276.5	638.3
2009	42,004.8	701.9
2010	40,893.8	718.4
2011	45,554.3	766.5
2012	48,575.3	796.8
2013	45,607.3	749.8
2014	49,152.2	831.1
2015	49,521.7	812.1
2016	48,362.8	827.6
2017	47,265.6	773.6
2018	41,193.2	662.1
2019	38,898.9	658.3
2020	No Survey	
2021		
2022	34,657.2	613.6
2023	32,304.8	633.0
2024	33,988.1	610.7
2025	33,980.4	643.3
2026	33,439.5	627.5

[a] Total ducks in the traditional survey area include species in Appendix B.3 plus American black ducks, ring-necked duck, goldeneyes, bufflehead, and ruddy duck.

Table B.5. Breeding population estimates and 90% credibility intervals (in thousands) for the 6 most abundant species of ducks in the eastern survey area, 1998–2026[a].

	Mallard		American black duck		Green-winged teal		Ring-necked duck		Goldeneyes[b]		Mergansers[c]	
Year	$\hat{N}$	90% CI	$\hat{N}$	90% CI	$\hat{N}$	90% CI	$\hat{N}$	90% CI	$\hat{N}$	90% CI	$\hat{N}$	90% CI
1998	1,385.3	(1,249.9, 1,550.9)	774.1	(688.0, 886.9)	292.2	(236.0, 384.4)	601.4	(491.6, 771.0)	640.7	(488.2, 928.0)	685.4	(587.8, 810.6)
1999	1,376.4	(1,240.1, 1,544.0)	743.3	(671.6, 833.4)	378.2	(310.1, 479.5)	722.8	(590.0, 933.3)	724.2	(556.3, 994.5)	659.0	(574.4, 764.8)
2000	1,282.7	(1,159.5, 1,433.4)	651.9	(595.5, 716.7)	345.2	(286.2, 428.6)	957.8	(730.2, 1,438.3)	696.3	(529.3, 984.5)	680.3	(593.2, 788.5)
2001	1,312.1	(1,184.7, 1,470.2)	635.4	(572.1, 712.1)	284.3	(233.2, 360.6)	684.4	(563.1, 864.4)	860.9	(642.9, 1,248.4)	636.6	(556.6, 735.9)
2002	1,298.2	(1,172.6, 1,451.8)	765.1	(687.4, 862.2)	395.1	(324.5, 493.6)	710.8	(589.1, 879.8)	944.8	(684.8, 1,385.7)	855.6	(750.1, 986.2)
2003	1,252.9	(1,125.5, 1,412.0)	715.8	(636.4, 823.6)	384.1	(312.3, 494.0)	694.1	(583.8, 840.2)	720.7	(538.0, 1,072.3)	769.0	(671.0, 891.5)
2004	1,283.4	(1,152.5, 1,448.4)	739.6	(655.3, 860.0)	451.1	(366.9, 578.0)	776.4	(637.8, 988.2)	662.7	(516.6, 906.9)	760.4	(665.4, 876.0)
2005	1,232.9	(1,104.1, 1,397.0)	656.6	(589.9, 740.6)	327.9	(265.9, 424.7)	644.8	(543.1, 779.5)	564.0	(445.5, 752.4)	762.7	(665.1, 883.4)
2006	1,173.3	(1,055.3, 1,320.7)	703.2	(629.5, 800.3)	321.1	(260.3, 413.9)	672.4	(563.8, 820.7)	500.0	(393.6, 672.9)	691.2	(603.8, 798.7)
2007	1,210.2	(1,081.8, 1,374.7)	771.6	(699.6, 857.7)	438.3	(343.9, 616.0)	901.5	(758.8, 1,086.8)	712.1	(546.8, 979.8)	794.6	(690.8, 923.6)
2008	1,176.9	(1,052.6, 1,337.1)	682.1	(610.5, 779.3)	410.3	(327.4, 537.0)	699.4	(580.7, 875.3)	698.2	(540.4, 951.4)	714.6	(625.8, 823.4)
2009	1,172.4	(1,044.9, 1,338.1)	705.1	(618.0, 833.6)	432.3	(345.1, 571.3)	711.4	(586.9, 898.2)	595.5	(456.6, 838.0)	728.1	(635.4, 841.5)
2010	1,070.2	(959.9, 1,210.1)	620.0	(552.4, 712.3)	411.4	(327.0, 554.5)	718.3	(598.8, 887.2)	616.0	(470.3, 867.0)	618.0	(539.2, 713.7)
2011	1,113.8	(992.4, 1,270.9)	669.4	(584.7, 790.3)	392.4	(310.4, 535.5)	632.8	(530.7, 772.2)	575.2	(446.5, 804.3)	656.2	(571.4, 760.3)
2012	1,103.0	(985.6, 1,254.8)	707.4	(629.5, 810.5)	355.6	(286.3, 470.3)	647.3	(537.7, 807.6)	629.2	(473.2, 938.6)	711.8	(622.2, 821.4)
2013	1,168.6	(1,031.6, 1,353.0)	705.4	(616.6, 836.7)	394.1	(315.2, 526.9)	788.8	(643.8, 1,018.7)	702.6	(544.9, 1,000.0)	726.7	(624.8, 862.2)
2014	1,094.4	(971.9, 1,253.5)	701.8	(620.1, 810.9)	294.7	(236.3, 391.4)	618.3	(515.7, 763.1)	616.9	(448.8, 981.8)	647.3	(566.1, 745.8)
2015	1,041.1	(927.2, 1,189.0)	681.5	(586.3, 824.4)	302.9	(242.7, 401.4)	721.8	(578.1, 970.9)	452.3	(350.0, 633.0)	659.1	(576.3, 760.3)
2016	1,031.2	(915.7, 1,181.2)	744.2	(644.7, 891.0)	315.3	(251.0, 424.4)	746.8	(614.7, 942.1)	560.5	(419.6, 843.6)	705.7	(614.5, 818.8)
2017	1,048.5	(927.8, 1,207.2)	605.3	(533.9, 702.1)	335.9	(272.5, 429.0)	615.0	(503.1, 792.3)	638.0	(485.7, 926.0)	728.3	(634.5, 845.3)
2018	978.8	(869.8, 1,120.1)	560.5	(504.1, 632.1)	330.5	(266.6, 428.4)	639.6	(528.8, 810.8)	505.8	(390.1, 721.1)	706.2	(615.3, 817.6)
2019	973.1	(865.0, 1,113.3)	590.2	(523.5, 676.6)	296.9	(236.9, 391.2)	726.5	(573.8, 1,016.1)	487.2	(348.1, 795.4)	681.0	(594.5, 787.6)
2020												
2021						No Survey						
2022	962.1	(847.1, 1,113.4)	681.2	(605.9, 782.0)	329.8	(268.2, 426.7)	688.8	(575.0, 846.9)	627.2	(494.9, 849.6)	651.8	(570.5, 750.7)
2023	970.2	(855.0, 1,123.4)	735.5	(659.7, 834.2)	384.0	(295.4, 549.9)	662.8	(546.8, 842.2)	806.8	(624.4, 1,100.4)	665.3	(582.8, 765.4)
2024	883.2	(781.3, 1,017.7)	831.2	(733.9, 962.4)	457.1	(367.8, 594.5)	695.1	(581.1, 852.4)	960.2	(734.1, 1,330.7)	705.0	(616.7, 813.5)
2025	907.6	(802.8, 1,045.7)	786.1	(689.4, 920.3)	337.8	(270.4, 448.3)	759.1	(621.4, 989.3)	718.2	(542.4, 1,055.6)	680.1	(594.7, 783.8)
2026	890.3	(789.7, 1,022.2)	739.2	(647.2, 870.3)	319.6	(258.0, 417.0)	829.3	(691.9, 1,021.5)	667.5	(500.4, 1,002.5)	722.5	(629.9, 836.2)

[a] Estimates for the six most abundant species in the eastern survey area. Estimates for black ducks, green-winged teal, ring-necked ducks, goldeneye, and mergansers are at the eastern survey scale (strata 51–53, 56, 62–72) and mallards are at the eastern North America scale (eastern survey area plus northeastern states from Virginia north to New Hampshire.)

[b] Common and Barrow's.

[c] Common, red-breasted, and hooded.

C. Historical estimates of goose and swan populations

Table C.1. Abundance indices (in thousands) for North American Canada and cackling goose populations, 1969–2026.

	North Atlantic[a,b]		Atlantic[a,b]		Atlantic Flyway Resident[a]		Southern Hudson Bay[a]		Mississippi Flyway Giant[a]
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$
1969/70									
1970/71									
1971/72									
1972/73									
1973/74									
1974/75									
1975/76									
1976/77									
1977/78									
1978/79									
1979/80									
1980/81									
1981/82									
1982/83									
1983/84									
1984/85									
1985/86									
1986/87									
1987/88									
1988/89									
1989/90	45.2	9.3							
1990/91	45.6	9.2							
1991/92	41.7	8.6							
1992/93	50.9	10.6	93.0	12.5	647.5	111.8			705.8
1993/94	48.0	9.5	43.2	4.0	648.7	73.0			759.3
1994/95	46.3	9.3	34.0	3.0	780.0	98.8			818.9
1995/96	60.4	12.0	51.5	4.8	932.7	107.4			1,066.5
1996/97	56.1	10.2	72.1	6.6	1,013.3	132.5			927.6
1997/98	51.6	9.2	48.6	4.5	970.1	115.7			1,034.0
1998/99	62.2	11.5	83.8	7.6	999.5	120.8			1,183.8
1999/00	51.8	9.2	95.8	8.4	1,022.3	101.9			1,400.5
2000/01	52.1	9.5	135.2	12.5	1,016.6	89.3			1,169.5
2001/02	51.9	9.2	182.4	17.6	1,097.1	95.1			1,241.9
2002/03	49.0	8.8	174.9	17.2	1,126.7	94.5			1,403.0
2003/04	54.3	9.8	191.8	19.2	1,073.1	93.8			1,172.5
2004/05	47.3	8.6	175.7	16.7	1,167.1	102.3			1,152.3
2005/06	48.3	8.6	186.1	20.0	1,144.0	106.2			1,356.1
2006/07	53.7	9.5	207.3	21.1	1,128.0	94.5			1,272.8

Table C.1. Continued.

	North Atlantic[a,b]		Atlantic[a,b]		Atlantic Flyway Resident[a]		Southern Hudson Bay[a]		Mississippi Flyway Giant[a]
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$
2007/08	48.9	8.6	174.0	18.2	1,024.9	82.1			1,273.3
2008/09	51.9	9.1	186.8	19.7	1,006.1	74.8			1,306.0
2009/10	49.6	8.6	165.1	17.5	969.9	92.1			1,420.7
2010/11	52.7	9.3	216.0	23.2	1,015.1	86.5			1,403.0
2011/12	52.9	9.2	190.3	20.4	879.8	71.6			1,459.9
2012/13	53.7	9.8			951.9	79.1			1,482.2
2013/14	56.8	9.9	191.2	20.0	1,084.9	114.4			1,244.5
2014/15	52.1	9.1	161.3	16.0	963.8	81.7			1,453.9
2015/16	52.0	9.2	191.5	24.9	950.0	80.1	104.7	8.0	1,414.5
2016/17	49.4	8.8	161.1	17.2	933.3	74.0	127.8	10.4	1,532.6
2017/18	54.8	9.4	112.2	11.3	1,030.9	83.2	129.1	11.8	1,505.0
2018/19	52.8	9.0	119.5	12.0	1,039.5	91.3	115.6	11.1	1,445.2
2019/20					1,139.6	105.6			
2020/21					1,014.8	77.0	122.3	11.3	1,621.0
2021/22	51.7	8.7	163.7	16.7	1,018.7	76.4	111.6	10.7	1,431.3
2022/23	49.1	8.4	115.3	12.2	947.5	89.6	120.0	12.0	1,352.9
2023/24	55.8	9.8	88.9	9.1	932.8	72.3	108.0	12.8	1,384.3
2024/25	57.6	9.9	149.8	15.7	1,003.3	90.7	83.5	11.0	1,417.8
2025/26	54.9	9.6	170.1	18.8	1,009.3	93.6	55.2	7.2	1,347.7

Table C.1. Continued.

Year	W. Prairie & Great Plains[a]		Midcontinent[c]		Hi-line[a]		Western[a]	
	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
1969/70	80.4	38.8			58.3	39.2		
1970/71	98.9	38.3			99.0	54.3		
1971/72	83.0	38.0			52.4	27.8		
1972/73	78.8	28.2			29.5	12.5		
1973/74	66.8	29.7			32.9	16.2		
1974/75	74.4	28.5			28.0	14.9		
1975/76	99.9	43.7	689.9	140.4	39.3	18.3		
1976/77	94.0	42.0	725.0	228.4	39.4	16.3		
1977/78	227.9	135.4	1,206.8	459.9	38.1	18.8		
1978/79	174.7	92.0	1,050.7	255.4	48.9	23.2		
1979/80	152.1	69.0			49.3	22.5		
1980/81	184.9	66.2			48.7	19.8		
1981/82	162.1	50.1			52.4	21.3		
1982/83	214.2	86.5			71.5	27.7		
1983/84	182.4	64.2			103.1	40.5		
1984/85	217.7	68.7			89.1	34.6		
1985/86	232.1	81.3			98.2	35.4		
1986/87	235.0	97.1	713.0	362.3	90.6	37.8		
1987/88	338.9	103.3	1,250.4	454.8	126.0	49.3		
1988/89	418.3	136.2	1,573.2	658.7	120.6	49.7		
1989/90	366.3	126.5	1,400.6	323.8	180.9	75.6		
1990/91	318.2	109.6	2,778.4	1,017.0	143.7	55.9		
1991/92	328.1	91.9	1,791.7	476.9	163.8	66.0		
1992/93	346.5	113.1	860.3	283.8	153.7	67.0		
1993/94	371.0	124.5	1,896.3	544.5	156.2	57.8		
1994/95	417.7	127.5	1,276.8	446.3	230.3	93.1		
1995/96	451.4	49.8			196.2	24.1		
1996/97	487.3	50.0	3,448.8	1,195.3	203.7	24.1		
1997/98	587.1	63.0	3,049.0	1,179.5	252.0	34.3		
1998/99	702.1	76.8	2,045.9	518.1	196.6	22.3		
1999/00	717.7	61.6	2,840.4	1,026.5	279.3	34.9		
2000/01	704.5	63.8	1,953.3	560.8	252.8	29.0		
2001/02	670.9	54.6	2,650.0	446.6	231.0	26.1		
2002/03	764.1	62.8	1,628.2	262.9	231.5	34.4		
2003/04	797.7	68.5	1,690.7	383.0	200.5	25.6		
2004/05	775.6	65.9	2,088.0	409.7	236.2	25.2		
2005/06	816.1	62.8	2,012.9	375.5	208.0	22.2		
2006/07	979.6	68.3	2,144.2	329.2	298.8	30.5		

Table C.1. Continued.

	W. Prairie & Great Plains[a]		Midcontinent[c]		Hi-line[a]		Western[a]	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
2007/08	957.1	66.5	1,987.1	363.7	337.3	38.4		
2008/09	1,049.7	71.8	3,044.6	613.3	298.4	32.5		
2009/10	1,111.1	82.0	3,843.4	753.4	269.5	29.9	279.2	41.4
2010/11	1,309.9	93.4	2,541.8	427.1	265.4	33.6	267.6	41.5
2011/12	1,369.6	109.0	2,938.7	499.4	483.6	64.4	333.2	48.8
2012/13	1,314.7	65.5	3,859.1	694.4	325.5	35.3	366.8	72.1
2013/14	1,183.4	72.8	3,049.2	484.7	275.9	31.5	290.6	36.7
2014/15	1,223.1	75.3	1,783.3	288.4	368.5	36.6	390.2	53.9
2015/16	1,517.7	91.2	2,938.6	504.6	453.9	50.8	469.9	57.2
2016/17	1,352.8	84.8	2,588.6	413.5	374.6	35.4	402.9	62.1
2017/18	1,349.7	85.2	2,589.5	381.7	409.2	33.4	489.2	66.2
2018/19	1,443.4	94.4	2,010.2	319.0	374.9	33.5	403.3	57.8
2019/20								
2020/21								
2021/22	1,783.0	107.5	1,591.3	200.0	492.7	56.5	470.0	59.6
2022/23	1,028.1	68.6	1,836.5	240.7	324.8	34.1	379.3	59.8
2023/24	1,127.7	75.7	1,893.7	286.8	329.0	38.0	320.3	48.2
2024/25	1,168.0	92.0			331.2	32.3	425.0	69.8
2025/26	873.0	61.4			317.2	32.8	350.6	54.7

[a] Surveys conducted in spring.
[b] Number of breeding pairs.
[c] Lincoln estimates of adults.
[d] Fall-winter indices.

Table C.1. Continued.

	Dusky[a]		Cackling/minima[d]		Lesser[a]		Taverner's[a]		Aleutian[d]	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
1969/70					12.7	5.1				
1970/71					8.2	3.3				
1971/72					3.4	1.2				
1972/73					6.4	1.3				
1973/74					21.2	14.6				
1974/75					6.9	1.7			0.8	
1975/76					3.0	0.8			0.9	
1976/77					4.7	1.3			1.3	
1977/78					6.9	2.2			1.5	
1978/79					6.5	1.8			1.6	
1979/80					12.9	3.3			1.7	
1980/81					18.4	3.9			2.0	
1981/82					16.0	5.1			2.7	
1982/83					3.4	1.1			3.5	
1983/84					13.8	4.3			3.8	
1984/85			61.3	5.2	9.6	3.3			4.2	
1985/86	16.6	2.8	54.4	4.2	6.7	2.6			4.3	
1986/87	14.8	1.8	59.0	4.8	4.6	1.2			5.0	
1987/88	15.1	1.6	79.8	5.9	6.8	1.4			5.4	
1988/89	16.9	1.7	83.4	5.9	7.1	2.1			5.8	
1989/90	15.2	1.9	104.4	7.9	11.7	3.8			6.3	
1990/91	10.3	1.3	97.5	7.2	4.3	1.9			7.0	
1991/92	16.6	1.6	147.4	10.1	9.1	4.5			7.7	
1992/93	15.2	1.4	151.1	9.8	5.9	1.5			11.7	
1993/94	14.9	1.4	211.5	12.9	16.7	4.9			15.7	
1994/95	12.1	1.2	229.7	14.6	9.6	2.8			19.1	
1995/96	11.8	1.0	246.1	17.0	7.7	2.5			15.5	0.6
1996/97	13.2	1.2	286.8	17.5	5.0	1.1			20.4	0.8
1997/98	14.9	1.3	207.5	14.1	5.7	1.9			32.5	1.1
1998/99	10.5	0.9	229.6	15.4	5.7	2.2			35.6	3.1
1999/00	10.2	0.9	240.7	15.3	9.3	4.3			34.3	1.3
2000/01	11.3	1.0	253.0	16.9	6.1	1.9				
2001/02	12.9	1.1	161.9	10.3	4.9	1.3				
2002/03	10.1	0.8	234.4	15.6	6.3	2.2			72.9	2.7
2003/04	11.3	1.0	173.1	11.5	6.3	1.9			110.7	4.3
2004/05	16.9	1.7	216.8	14.2	4.8	1.4			87.2	4.6
2005/06	11.1	1.0	237.3	15.1	4.2	0.9			100.3	4.5
2006/07	10.4	0.9	253.2	15.8	9.5	4.0	55.8	6.3	107.6	7.6

Table C.1. Continued.

	Dusky[a]		Cackling/minima[d]		Lesser[a]		Taverner's[a]		Aleutian[d]	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$
2007/08	9.4	0.8	286.3	18.5	10.3	3.8	51.6	9.9	112.6	6.8
2008/09	6.8	0.6	227.3	13.7	6.4	2.1	48.9	4.6	84.5	11.9
2009/10	9.4	0.8	277.3	20.4	6.8	2.0	56.9	4.9	106.9	8.5
2010/11	11.6	1.0	181.3	10.8	3.6	2.0	35.9	3.1	101.6	7.0
2011/12	12.9	1.2	203.8	13.6	3.8	1.6	46.3	5.3	132.7	10.1
2012/13			313.9	22.8			27.1	3.6	162.5	14.7
2013/14	14.6	1.3	280.5	20.0	2.8	0.8	42.5	7.0	150.5	13.1
2014/15	18.1	1.6	356.9	25.3	8.6	5.6	41.9	6.7	209.6	18.3
2015/16	15.9	1.5	321.8	19.7	4.4	1.1	50.4	5.7	154.4	13.1
2016/17	12.9	1.2	281.0	17.4	4.0	1.6	46.4	7.1	164.1	18.0
2017/18	12.0	1.0	198.8	12.8	2.0	0.7	44.6	6.4	169.7	14.6
2018/19	18.1	2.5	200.6	13.1	13.1	7.0	42.7	5.1	193.1	25.6
2019/20									122.0	12.1
2020/21	12.1	1.1	198.7	13.4					173.1	16.0
2021/22	12.3	1.1	229.8	15.7	5.0	4.3	46.2	6.6	233.4	28.4
2022/23	9.6	0.9	153.9	10.6			29.7	4.3	189.7	33.4
2023/24	8.2	0.7	124.1	8.2	2.7	1.6	38.3	4.9	166.5	23.5
2024/25	11.8	1.0	124.4	8.3	10.9	4.2	33.6	5.0	195.7	32.9
2025/26	10.4	0.9	171.1	11.8	5.6	2.1	40.9	4.4	104.4	17.7

[a] Surveys conducted in spring.
[b] Number of breeding pairs.
[c] Lincoln estimates of adults.
[d] Fall-winter indices.

Table C.2. Abundance indices (in thousands) for light goose (Ross's and snow goose) populations, 1969–2026.

			Snow Goose					
	Ross's goose[a]		Midcontinent[a]		Western Arctic[b]	Wrangel Island[b]	Greater[c]	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{N}$	$\widehat{N}$	$\widehat{SE}$
1969/70							89.6	
1970/71							123.3	
1971/72							134.8	
1972/73							143.0	
1973/74							165.0	
1974/75							153.8	
1975/76			2,229.4	446.0			165.6	
1976/77			2,292.0	329.1			160.0	
1977/78			2,945.4	419.1			192.6	
1978/79			2,262.9	369.4			170.1	
1979/80					313.7		180.0	
1980/81					114.5	18.1	170.8	
1981/82					443.4		163.0	
1982/83					202.5	24.6	185.0	
1983/84					320.3	24.5	225.4	
1984/85					267.2	23.2	260.0	
1985/86					304.0	35.1	303.5	
1986/87					289.3	29.9	255.0	
1987/88			2,377.5	633.4	285.4	28.6	363.8	
1988/89	116.9	71.0	4,726.9	1,442.4	236.5		363.2	
1989/90	258.5	158.0	2,792.0	772.6	256.5		368.3	
1990/91	168.0	102.1	6,703.6	3,489.6	401.5		352.6	15.7
1991/92	83.3	50.4	6,763.7	1,961.7	386.0	27.9	448.1	20.1
1992/93			3,857.2	966.0	359.0		498.4	20.8
1993/94	94.5	37.2	9,430.6	2,432.3	309.1		591.4	26.5
1994/95	434.3	264.0	7,482.9	1,660.3	259.6	39.0	616.6	25.1
1995/96			6,650.2	1,989.2	277.8	35.0	669.1	33.9
1996/97	375.4	95.1	11,234.3	2,835.6	192.7		657.5	28.0
1997/98	702.5	141.5	6,663.4	858.9	223.3	39.4	836.6	49.2
1998/99	669.4	130.2	11,162.7	1,337.9	187.0	40.9	1,008.0	32.3
1999/00	1,150.3	241.6	13,660.1	1,304.6	337.7	24.1	816.5	90.5
2000/01	1,480.7	365.2	13,870.2	1,446.4	371.6	44.9	837.4	31.6
2001/02	1,551.5	248.8	12,922.4	1,397.3	247.6	41.0	725.0	28.0
2002/03	909.8	155.7	9,181.6	1,014.5	330.7	53.6	721.0	28.2
2003/04	1,327.7	197.1	12,314.3	1,285.4	332.8	58.2	890.0	41.4
2004/05	1,077.8	141.8	12,067.7	1,295.3	441.0	57.7	880.0	30.2
2005/06	1,205.2	140.0	11,608.3	1,230.8	413.1	53.9	938.0	40.2
2006/07	2,294.1	305.9	15,613.0	1,545.6	478.0	65.5	838.0	38.1
2007/08	2,819.3	376.7	16,844.8	1,876.0	659.5	74.2	718.0	104.1

Table C.2. continued.

			Snow Goose					
	Ross's goose[a]		Midcontinent[a]		Western Arctic[b]	Wrangel Island[b]	Greater[c]	
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{N}$	$\widehat{N}$	$\widehat{SE}$
2008/09	1,897.0	312.0	15,941.5	2,155.2	616.1		1,009.0	31.6
2009/10	3,151.5	436.4	11,303.7	1,147.0	575.0	47.4	824.0	139.8
2010/11	2,769.1	367.9	19,331.5	2,061.8	565.5	60.8	917.0	18.9
2011/12	3,197.8	438.8	15,182.5	1,542.9	739.1	55.6	1,005.0	43.4
2012/13	3,863.6	505.0	16,716.3	1,698.3	603.4	54.7	921.0	32.1
2013/14	6,165.8	856.6	22,545.9	2,285.1	950.9	53.1	796.0	32.1
2014/15	2,036.7	237.2	10,772.0	1,068.8	866.9	60.8	818.0	31.1
2015/16	3,324.3	368.1	16,862.1	1,578.1		59.4	915.0	52.6
2016/17	2,858.9	415.0	13,328.2	1,316.9	1,400.1	69.0	747.0	37.2
2017/18	3,161.9	576.6	9,823.8	1,108.3	980.4	73.2	877.0	49.0
2018/19	2,744.7	360.5	7,969.3	750.1	1,013.2	87.3	714.0	42.9
2019/20					1,186.9			
2020/21						93.3		
2021/22	1,138.2	174.2	4,963.6	509.1		101.3	753.0	14.8
2022/23	3,594.2	489.0	8,420.5	759.3	978.4	87.4	585.0	9.2
2023/24	1,394.0	177.4	7,178.7	775.0	1,132.3		628.0	12.8
2024/25					1,006.6		428.0	6.6
2025/26							515.0	15.1

[a] Lincoln estimates of adults.
[b] Fall-winter indices.
[c] Surveys conducted in spring.

Table C.3. Abundance indices (in thousands) of North American greater white-fronted goose, brant, emperor goose, and tundra swan populations, 1969–2026.

	White-fronted goose				Brant					Tundra swan		
	Pacific[a]		Midcontinent[b]		Atlantic[a]	Pacific[a]		Emperor goose[c]		Western[c]		Eastern[a]
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$
1969/70					106.5							
1970/71					151.0							
1971/72					73.3							
1972/73					40.8							
1973/74					88.1							
1974/75					88.4							
1975/76			548.4	82.9	127.0							
1976/77			663.7	112.4	73.8							
1977/78			609.9	96.7	46.7							
1978/79			649.4	103.0	42.0							
1979/80					59.2							60.1
1980/81					97.0							93.0
1981/82					104.5							73.2
1982/83					123.5							87.5
1983/84					127.3							81.4
1984/85	108.7	17.2			146.3			19.3	1.4	94.8	13.2	96.9
1985/86	89.2	13.1	824.9	377.7	110.4			11.6	0.9	70.8	5.4	90.9
1986/87	83.0	10.5	978.7	259.2	109.4			10.6	1.0	76.9	10.9	95.8
1987/88	133.1	10.2	1,338.2	365.8	131.2			13.1	1.0	83.0	13.8	78.7
1988/89	141.0	15.7	1,577.8	461.5	137.9			14.2	1.0	108.1	17.8	91.3
1989/90	175.3	15.1	3,207.4	839.0	135.4			14.6	1.1	111.4	20.1	90.6
1990/91	153.8	12.8	2,118.5	701.9	147.7			12.5	1.1	84.8	14.1	98.2
1991/92	170.9	17.9	939.3	171.9	184.8			12.9	0.8	72.3	4.8	113.0
1992/93	199.4	20.5	1,363.7	406.5	100.6			15.5	1.1	79.4	13.1	78.2
1993/94	227.7	17.9	1,710.6	379.8	157.2			16.8	0.9	83.5	7.6	84.8
1994/95	290.9	18.9	1,473.8	294.4	148.2			17.7	1.1	119.4	34.1	85.1
1995/96	357.0	25.1	1,926.8	393.4	105.9			23.9	2.4	109.9	19.2	79.5
1996/97	351.2	26.1	1,710.9	249.0	129.1			22.4	1.5	114.1	10.9	92.4
1997/98	353.3	20.4	2,122.5	359.9	138.0			20.0	1.0	135.7	13.7	100.6
1998/99	393.6	27.7	1,477.9	180.2	171.6			19.7	1.3	107.2	12.7	111.0
1999/00	341.4	27.4	2,630.8	342.5	157.2			16.6	0.9	108.6	12.1	115.3
2000/01	467.1	39.0	1,963.1	265.8	145.3			26.3	1.4	93.6	8.2	98.4
2001/02	365.1	25.7	2,448.8	389.1	181.6			18.7	1.1	116.7	14.9	114.7
2002/03	449.3	40.2	1,209.6	153.2	164.5			20.6	1.5	95.6	7.8	111.7
2003/04	382.8	25.4	1,510.7	192.3	129.6			21.0	1.1	110.8	20.1	110.8
2004/05	427.6	34.8	1,934.3	272.6	123.2			20.6	1.3	122.7	21.1	72.5
2005/06	557.4	35.3	2,581.7	369.6	146.6			25.0	1.5	124.0	12.9	81.3
2006/07	634.1	43.6	3,194.4	415.2	150.6			25.1	1.6	154.7	22.1	114.4
2007/08	708.6	63.0	3,400.8	451.1	161.6			21.8	1.1	174.6	32.6	96.2

Table C.3. continued.

	White-fronted goose				Brant					Tundra swan		
	Pacific[a]		Midcontinent[b]		Atlantic[a]	Pacific[a]		Emperor goose[c]		Western[c]		Eastern[a]
Year	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$	$\widehat{SE}$	$\widehat{N}$
2008/09	592.4	52.2	3,404.0	482.0	151.3			20.3	1.2	107.0	7.8	100.2
2009/10	743.6	64.6	2,970.2	389.3	139.3			19.8	1.1	110.2	9.0	97.3
2010/11	682.4	54.1	3,019.7	364.4	148.9			20.7	1.2	119.4	16.3	97.6
2011/12	758.5	68.8	2,820.3	324.6	149.2			20.2	1.6	115.0	9.4	112.7
2012/13	648.0	73.3	3,743.6	476.5	111.8			29.4	2.2	109.6	17.6	107.1
2013/14	706.4	97.6	3,944.5	555.7	132.9			30.7	2.8	96.9	10.3	105.0
2014/15	568.8	53.4	2,449.8	370.3	111.4			27.8	1.7	125.4	22.2	117.1
2015/16	761.0	69.6	3,254.7	421.6	157.9			33.3	2.4	133.3	45.6	113.6
2016/17	788.1	61.4	2,560.1	330.9	161.7	377.0	55.8	29.1	1.7	107.4	14.9	119.3
2017/18	652.0	76.6	3,027.4	399.1	169.7	227.4	21.7	29.5	1.7	152.0	26.3	111.6
2018/19	521.9	57.6	2,483.9	399.0	120.1	272.5	40.7	25.8	1.5	101.1	11.9	92.8
2019/20					139.9							78.6
2020/21	515.1	48.8	3,400.6	557.5				23.3	1.2	119.5	17.8	86.7
2021/22	685.5	78.0	1,356.3	178.9	109.2	201.6	24.0	28.0	1.5	100.3	10.7	95.7
2022/23	431.1	44.7	2,925.4	354.2	121.5	245.1	40.2	23.4	1.5	72.4	9.0	137.8
2023/24	420.4	35.2	3,068.2	445.6	112.8	188.6	25.1	17.2	1.0	73.7	7.3	64.4
2024/25	474.6	56.4			133.9	196.2	30.3	22.2	1.2	72.9	13.8	76.0
2025/26	506.5	36.8			136.8			24.0	1.8	75.5	12.3	94.9

[a] Fall-winter indices.
[b] Lincoln estimates of adults.
[c] Surveys conducted in spring.

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