

# Wildlife Populations: Canada Goose - Atlantic Flyway Resident Population

## Background

Canada geese (*Branta canadensis*) are native to North America, where they occur in every state in the United States except Hawaii, every Province of Canada, and many states of Mexico. They are readily recognized by their characteristic black neck and white cheek patch. Most authorities currently recognize 11 extant subspecies of Canada geese which differ primarily in body size and color.<sup>1</sup> New Jersey is home to a portion of the Atlantic Flyway Resident Population (AFRP), a typically non-migratory population that nests in seventeen eastern states and parts of Canada. This present-day population was established during the early 20<sup>th</sup> century and is comprised of various subspecies of Canada geese.<sup>1</sup> In addition to these resident geese, migratory geese pass through or remain in New Jersey from October through March. In 2010, the mid-winter goose population was estimated to be 152,565 birds, including about 76,109 resident birds and about 76,456 migratory birds.<sup>2</sup>

Many people enjoy the sight of and welcome the presence of a few geese, but large numbers of nonmigrating geese can be unaesthetic and cause erosion and crop losses. In addition, high populations of resident geese can lead to the accumulation of fecal matter on land. This fecal matter can cause degraded water quality by increasing the inputs of bacteria, nitrogen, and phosphorus to a waterbody. High Canada goose populations can also be hazardous to aircraft at airports.<sup>2</sup>

Canada geese are grazers with a preference for tender, mowed, and fertilized turf grass. However, they also feed heavily on small grains such as corn and soybeans during the fall and winter. They prefer to feed in large open areas with few obstructions giving the birds a 360° view of potential predators.

AFRP Canada geese are non-migratory and usually begin nesting at three years of age. Pairs frequently stay together for life. In New Jersey, nesting occurs from late March through early May. Canada geese typically nest within 100 feet of open water, although they prefer islands, shorelines, and peninsulas. An egg is laid about every other day, and typical clutches are made up of four to seven eggs. If the nest or eggs are destroyed, geese will frequently renest.



Canada goose. Photograph by Getty Images.

Canada geese are highly adaptable and adult Canada geese undergo a complete replacement of their wing feathers (molting) from mid-June to mid-July. During this period, the birds are unable to fly. High annual Canada goose survival and recruitment and preference for human-dominated landscapes result in human-geese conflicts throughout the US.

Canada goose management includes both lethal and non-lethal techniques. Non-lethal methods include hazing, habitat modification, institution of no-feeding ordinances, and nest and egg control. Lethal techniques include shooting under damage situations, round-up and culls during the molt, and the use of hunting seasons. Hazing refers to scaring the geese into leaving the area through the use of noisemakers, scarecrows, dogs, or other techniques. Habitat modification consists of eliminating, modifying, or reducing access to areas that provide attractive spots for geese. It can include increasing time between mowings in order to reduce the

palatability of turf grasses; changing the grass cover mixture; erecting fencing, rock barriers, or vegetative buffers. Nest and egg control consists of nest removal, which is seldom used, or egg management. Egg management includes the shaking (addling), puncturing or oiling of the eggs, or the removal and replacement of the eggs with dummy eggs. These techniques terminate the viability of the eggs without the geese being aware of the tampering; it is done in lieu of simply removing or destroying the eggs, which would cause the geese to lay more eggs.

Efforts to reduce goose populations often are undermined by people who feed the birds, which concentrates them near roads and heavy human-use areas. Feeding also results in geese becoming more tame and ultimately more aggressive toward people. When geese become acclimated to people, they are more likely to approach them for food, which can often cause conflict. In addition, overcrowding increases their susceptibility to avian disease.

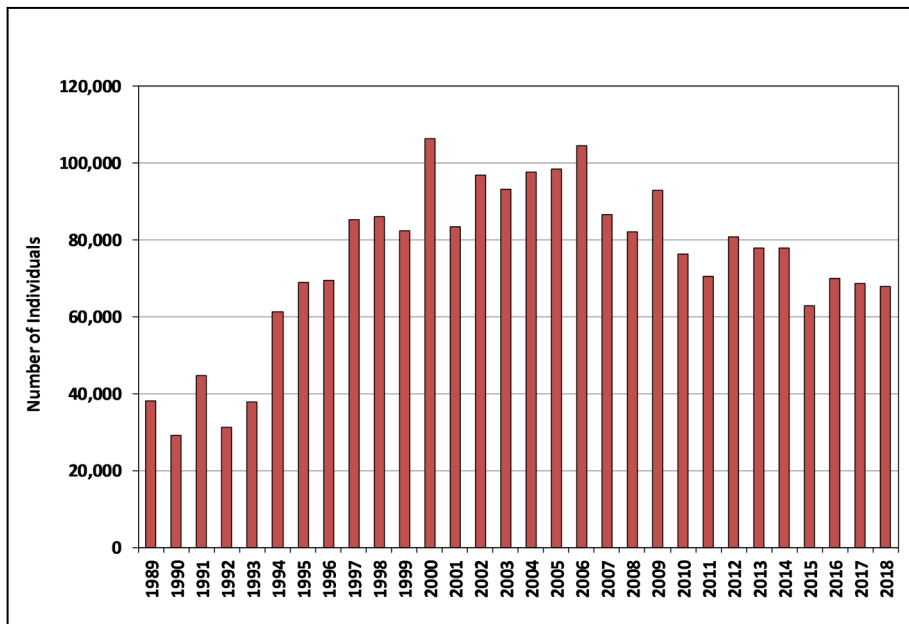


Figure 1. Annual Canada goose population of New Jersey estimated from the Atlantic Flyway Resident Population surveys conducted by NJDEP Division of Fish and Wildlife (1989 to 2018).

The Department's Division of Fish and Wildlife conducts a survey of AFRP each spring in concert with other states in the Atlantic Flyway. The ground survey is conducted using observers in boats, vehicles, and on foot. Two hundred and fifty randomly located, one-kilometer plots are sampled, and the results are extrapolated to estimate the statewide population. In 2018, the resident Canada goose population in New Jersey was estimated to be 62,926 birds.

## Status and Trends

Population estimates of AFRP Canada geese as measured by the Division of Fish and Wildlife during the spring Atlantic Flyway Breeding Waterfowl Survey are shown in Figure 1. In New Jersey, AFRP Canada geese increased rapidly during the 1990's and peaked during 2000 largely due to curtailment of hunting seasons in response to the poor status of migrant (Atlantic Population) Canada geese. After 2000, with the expansion of hunting opportunities, increases in nest and egg treatment, as well as round-up and cull operations, the population of AFRP geese has generally decreased.



Canada geese. Photograph by Getty Images

## Outlook and Implications

AFRP Canada geese thrive in the human-dominated landscapes of New Jersey. Continued implementation of an integrated management approach that utilizes non-lethal and lethal techniques will be critical to maintain a Canada goose population at a socially acceptable level.

## ***More Information***

[https://www.nj.gov/dep/fgw/waterfowl\\_info.htm](https://www.nj.gov/dep/fgw/waterfowl_info.htm)

[https://www.aphis.usda.gov/wildlife\\_damage/downloads/canada\\_goose.pdf](https://www.aphis.usda.gov/wildlife_damage/downloads/canada_goose.pdf)

[https://animaldiversity.ummz.umich.edu/site/accounts/information/Branta\\_canadensis.html](https://animaldiversity.ummz.umich.edu/site/accounts/information/Branta_canadensis.html)

## ***References***

<sup>1</sup>U.S. Fish and Wildlife Service and U.S. Department of Agriculture. 2005. Final environmental impact statement: resident Canada goose management. U.S. Department of the Interior, Washington, D.C., USA. <https://www.fws.gov/birds/surveys-and-data/reports-and-publications.php>, accessed 2/14/2019.

<sup>2</sup>U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services, 2011, Fact Sheet Managing Canada Goose Damage. <https://www.nj.gov/agriculture/pdf/managingcanadagoosedamage.pdf>, accessed 8/28/2019.