

# SNOW GEESE

The **Lesser Snow Goose** (*Chen caerulescens*) breeds in Wrangel Island, Siberia, and in fall migrates down the Pacific Coast of North America to spend the winter in food-rich river estuaries in southern British Columbia, Washington and northern California. It is a large, long-lived bird, weighing 2.5 to 2.7 kg and living 10-20 years in the wild. Adults have snow-white bodies, black-tipped wings, a pink bill with black markings and pink feet. Juveniles have a grey wash to the feathers, grey bills and grey feet. The birds that we see in Richmond from October to April are a subgroup of the Wrangel Island breeding population known as the Fraser-Skagit flock.



## History and Habitat in Richmond

For tens of thousands of years prior to permanent human habitation, snow geese migrated through and spent the winter on the marshlands of the islands that eventually became Richmond. Once Richmond was settled, the geese continued their annual cycle, foraging outside the dykes, using their stout bills to dig for the rhizomes (starchy, underground stems) of marsh plants. The influx from marsh to suburban neighbourhood is a recent phenomenon, a continuation of trends that can be traced back several decades that have accompanied an increase in population size. In the late 1960s and early 70s, small groups began making occasional short forays into nearby farmlands to feed. Since 1980, snow geese have been feeding in farm lands every year, eating waste grain, unharvested vegetables, winter hay, or other crops. Over the same time period, the population size of the Fraser-Skagit flock increased steadily, from 30-50 thousand birds in the late 1980s and early 1990s to 60-80 thousand in the 2000s. Numbers of snow geese in the Fraser Delta are highest in November, but then drop as a large number continue to the Skagit Delta in Washington State. They start increasing again in late winter and reach a second peak in late March as the Skagit birds return north. In 2017, the population of snow geese in the Fraser Delta peaked at between 108,000 and 112,000 birds.

## Conflict with People

### Damage to Fields

Given their increasing numbers and recent habit of moving inland in search of food, the use of Richmond's parks and schoolyards as grazing habitat was almost inevitable. Well-tended sports fields provide a uniform, abundant source of nutrition. Concentrating in soft, damp areas of turf, geese are able to pull up the rhizomes of grass. Their feeding and trampling in parks can convert large areas of grass to wet mud or standing water, which attract gulls, whose probing for worms further damages the turf. Their use of suburban fields ebbs and flows throughout the winter season, depending on snow cover, soil temperature, number of resident birds, and other unknown factors, but in December through March it is not uncommon in years when geese are locally plentiful to see flocks on Richmond schoolyards as far inland as No. 5 Road.



In large numbers snow geese can overwhelm and damage even their natural habitat, particularly in cold or snowy years when inland food sources are covered or the ground is frozen solid. In some years, large areas of the Sturgeon Banks have been reduced to muddy areas almost devoid of marsh vegetation.

Setting aside fields and planting crops meant specifically for snow geese to draw them away from areas that are sensitive or economically vulnerable to goose damage, has met with some success in Richmond and Delta, B.C. The Delta Farmland and Wildlife trust have found that by March, 70 percent of crops grown for geese have been consumed, but these positive results may have been offset by the continuing increase in snow goose population size.

Richmond may be particularly attractive to snow geese, because unlike in nearby Delta hunting is banned. The geese have found sanctuary with plenty of food but few threats. Occasionally a cull of the geese will be called for. It is important to understand that the management of snow goose population size is an international issue, falling under the Migratory Birds Convention Act, a Canadian federal law based on an agreement between the United States and Canada, implemented in 1918. Snow goose management is overseen by the Canadian Wildlife Service and the US Department of Fish and Wildlife, in consultation with Russia. The Wrangel Island snow geese are considered a critical subgroup, because they are the only remaining population of snow geese that breed in Asia. Partly for this reason, Russia in 1976 declared Wrangel Island a nature preserve. It is generally agreed among countries that the geese may now be reaching numbers that are unsustainable, and are damaging both their breeding and wintering habitats. Snow geese throughout the arctic, not just the Wrangel Island population, are reaching historical numbers and are having deleterious impacts on arctic ecosystems as well as the habitats of their wintering grounds in the central and eastern United States. Snow goose population and regulation are complicated intercontinental concerns, and on that scale, what happens in Richmond is a minor side-effect of a huge, complex, and poorly understood system.



## Updated Snow Geese Deterrence - Pilot Program

The Richmond Parks Department is piloting the use of specialized light beacons to deter snow geese from landing on sports fields at night. These beacons feature solar-powered lights that are safe and hardly noticeable to humans but appear to be an effective deterrent to geese. Beacons will be installed at the Hugh Boyd Oval sports field. For further product information visit [www.awaywithgeese.com](http://www.awaywithgeese.com). If successful, the pilot program may be expanded to other sports fields. Priority fields will be selected for the program to prevent the geese from flying around the community. Site selection will be coordinated with staff at the Vancouver Airport Authority in YVR.

For more information about this project, please contact City of Richmond Parks Services at 604-244-1208 or email [parks@richmond.ca](mailto:parks@richmond.ca)

## Aircraft

The proximity of large flocks of geese to Vancouver International Airport creates an obvious hazard to aircraft. The birds tend to explode almost straight upward when taking flight, so cannot be allowed to rest or graze near runways. They are a focus of bird control officials, who use pyrotechnics, noise-cannons, dogs, falcons and other hazing techniques to keep them far from planes.

## Benefits

It should also be stated that the visits of snow geese to Richmond are worthy of wonder. It is rare to see a large flock in a school yard that is not being photographed by one or more people. Then, when the geese take off en masse, the buffeting of their wings, the cacophony of their voices, and the frantic motion of several thousand large birds, which every year fly to Siberia and back, is an unforgettable experience.

## Additional Information:

For more information on the Migratory Birds Convention Act, 1994 and the conservation and management of migratory birds, visit the [Environment and Climate Change Canada](http://EnvironmentandClimateChangeCanada.ca) or email [ec.enviroinfo.ec@canada.ca](mailto:ec.enviroinfo.ec@canada.ca)

For questions about birds and air traffic safety, and wildlife control at airports, visit [Transport Canada](http://TransportCanada.ca).

## [Snow Geese in the Lower Mainland](#)

