



SNOW GEESE



in the Lower Mainland
of British Columbia

Where do Snow Geese in the Lower Mainland come from?

The Lower Mainland is the only place in Canada where Snow Geese spend the winter. In summer, the geese breed on Wrangel Island in northern Siberia. In the fall, they migrate south along the Pacific Coast to their wintering grounds. Half of the flock travels to California's Central Valley.

The other half comes to the Fraser River delta in British Columbia and the Skagit River delta in Washington State. The Snow Geese wintering in the Lower Mainland are known as the Fraser-Skagit sub population.

Why are they here? What habitats do they use?

The Snow Geese come to the Fraser River delta to overwinter and take advantage of the abundant food resources. Historically, Snow Geese fed on bulrushes, sedges, and other plants in the extensive saltmarshes found along Robert's Bank and Sturgeon Bank. More recently, Snow Geese have adapted to using

agricultural and urban areas. In agricultural areas they feed on waste grain and vegetable crops, winter cover crops, and grass in hay and pasture fields. In urban areas, they may also consume grass in playing fields, parks, and school grounds.



Why is it important to conserve Snow Geese? Are they at risk?

The population of Snow Geese nesting on Wrangel Island is of global significance. These geese have been red-listed as a species of concern in Russia, as they are the only remaining population of Snow Geese in Asia. In 1976, Russia designated Wrangel Island as a federal nature reserve, in part to protect the Snow Geese. In addition, this is the only population of Snow Geese wintering in North America that breeds outside North America.

Due to their unique status, Wrangel Island Snow Geese are of conservation concern to Canadian, American and Russian wildlife agencies. Snow Geese are also highly valued by bird watchers, hunters and the general public. Environment and Climate Change Canada's Canadian Wildlife Service manages winter habitat for the geese in Canada to maintain the population at a healthy level while also managing the conflicts the geese can cause in the Lower Mainland and Washington State.

What conflicts do Snow Geese cause?

Due to their large size, flocking behaviour, and preference for eating grass, Snow Geese can cause a variety of conflicts. Snow Geese are attracted to the saltmarshes west of the Vancouver International Airport. When flushed they usually take flight in large numbers, often rising straight up into the air. This poses a safety hazard for arriving and departing aircraft.

When the Snow Goose population grows too large, the geese can graze so extensively on the saltmarsh that they can kill the bulrush and degrade or even destroy the saltmarsh habitat. Saltmarshes provide important foraging habitat year round to a variety of wildlife in the Fraser River delta. The saltmarsh habitat is particularly critical to the geese during freezing weather when

their ability to feed on upland areas is limited. At these times they must rely almost exclusively on the saltmarsh for food until the weather improves.

Snow Geese will also feed on hay crops and pasture lands. If they forage too extensively in one area they can reduce the hay harvest or damage the turf, causing a lower yield for farmers. Their attraction to grassy areas can also cause conflict in urban areas. The geese can remove or trample vegetation, muddy fields and deposit feces in school grounds, sports fields, parks and public green spaces. The trampling and soil compaction they cause can also create pools of standing water that attract large flocks of gulls, which add to the damage.

How are Snow Geese managed?

In the Lower Mainland, Snow Geese are managed to achieve a healthy, sustainable population and maintain natural habitat values, while concurrently minimizing conflicts with aviation, agriculture and other land use. Managing Snow Geese typically consists of a combination of managing bird behaviour, habitat, and population size.

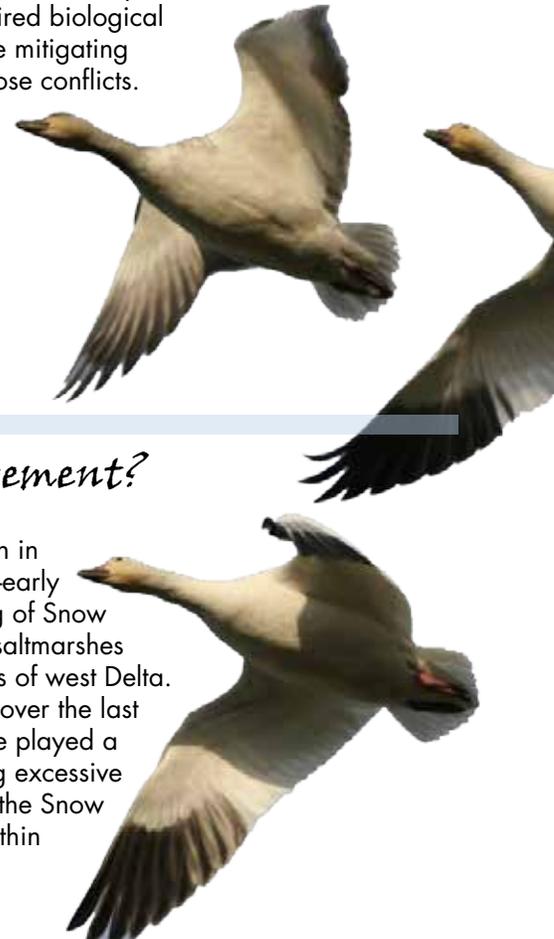
A variety of techniques are used to haze Snow Geese from areas where they pose the greatest risk of damage or danger. The Vancouver Airport Authority uses a variety of non-lethal techniques, including pyrotechnics, trained eagles, boats, and even a hovercraft to systematically move Snow Geese away from aircraft operating areas

and the approach paths to the runways at the Vancouver International Airport. Hazing programs may also be used to limit the use of parks, school grounds and playing fields.



In conjunction with hazing programs, many organizations have worked to ensure that sufficient habitat is available for Snow Geese at a safe distance from the airport, primarily in west Delta. Federal and provincial protected areas and conservation lands owned or managed by non-profit conservation organizations are managed to provide habitat for waterfowl and other wildlife. Partner organizations, such as Ducks Unlimited Canada and Delta Farmland & Wildlife Trust work with local farmers to increase the amount of farmland that is planted with winter cover crops, once cash crops are harvested. These crops provide alternative feeding areas for Snow Geese and other waterfowl over the winter and can lure Snow Geese away from hayfields and pastures, leaving them less susceptible to damage. The winter crops also reduce soil erosion and provide organic matter that improves soil structure.

Hunting also plays an important role in Snow Goose management. While hazing and habitat management can influence the distribution of the birds, they cannot control numbers. By updating harvest regulations in relation to the goose population size as determined by annual surveys, the Snow Goose population can be kept within desired biological limits while mitigating human-goose conflicts.



How does hunting contribute to Snow Goose management?

Ideally, goose abundance is desired to range between 50,000-70,000 birds. Hunting regulations in both British Columbia and Washington State can be adjusted to increase or decrease hunting activity in response to year-to-year and long-term fluctuations in population to maintain the population at a healthy, sustainable size. Open seasons for Snow Geese in British Columbia occur in fall (October-

December) and again in spring (late February-early March). Most hunting of Snow Geese occurs in the saltmarshes and agricultural fields of west Delta. Liberal hunting limits over the last number of years have played a key role in preventing excessive growth and keeping the Snow Goose population within desired limits.

Who regulates hunting?

The *Migratory Birds Convention Act, 1994* (MBCA) and its associated regulations lay out the legal framework for the hunting of migratory birds in Canada. The Canadian Wildlife Service is responsible for the implementation of the MBCA. For each species of hunted waterfowl, season opening and closing dates, daily limits, and possession limits are revised by the Canadian Wildlife Service, in consultation with provincial governments. The Canadian Wildlife Service and the US Fish and Wildlife Service work together to monitor waterfowl populations across Canada and the US each year. Hunting regulations are adjusted to increase hunting opportunities when populations increase above desired levels, or limit hunting when populations become too low.

Municipal and other local governments have the authority to regulate or prohibit the discharge of firearms, and all cities and municipalities in the Lower Mainland have bylaws of this type. Local discharge of firearms bylaws do not regulate hunting of wildlife, but do impact where hunting can take place. The provisions of the MBCA and its associated regulations apply throughout Canada, including areas covered by local discharge of firearms bylaws, though regulations may vary by species and jurisdiction.

Are conflicts increasing? Is there less habitat for the geese?

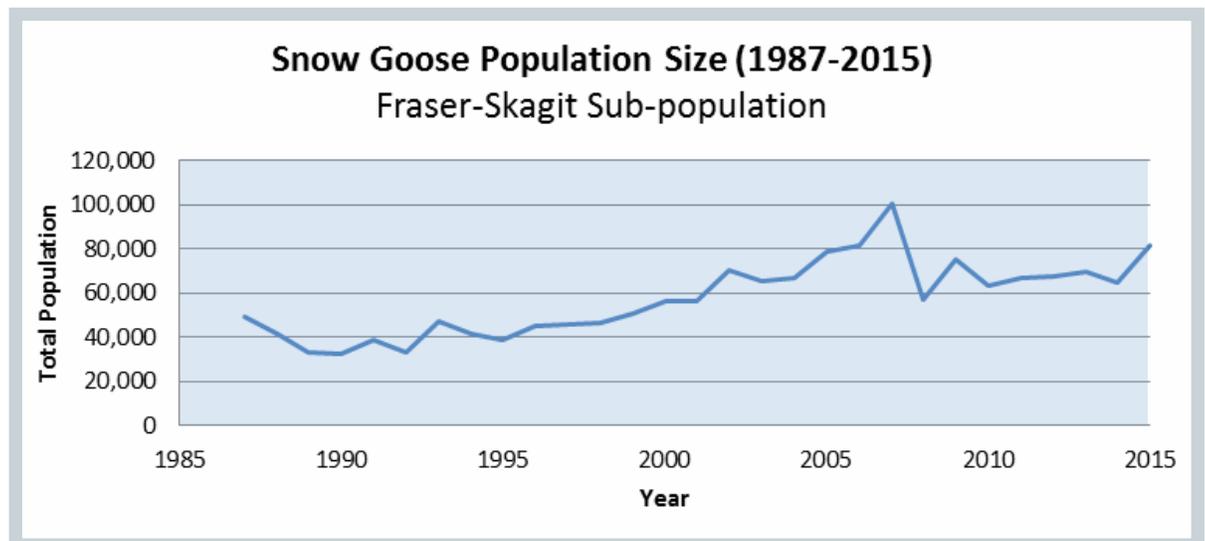
The loss of habitat to development has the potential to impact many kinds of wildlife, and can be a conservation concern. There is still a wide variety of habitat available to Snow Geese throughout the Lower Mainland, including agricultural fields and protected areas. There are a number of reasons why Snow Geese may choose to use urban areas rather than agricultural fields or bulrush marshes. Urban fields and lawns are particularly attractive because the grass is maintained and fertilized, making it a consistent and abundant food

source. In addition, since firearm discharge bylaws prohibit hunting in most municipalities, the birds quickly learn that these areas are a safe refuge. Conflicts can increase late in winter when food resources become depleted, and the geese search for alternative food sources. Conflicts can also increase when Snow Goose populations are larger than average. Snow Geese are known to increase their use of agricultural areas and occur further east of the Fraser delta in years when the population is large.

How many geese are there now, how many were there in the past, and what is the target population size?

Mid-winter air-photo surveys have been conducted annually since 1987 to track the Fraser-Skagit sub-population of Snow Geese. The population varies from year to year but has generally been increasing, from 30,000-50,000 geese in the late 1980s and early 1990s to 60,000-80,000 birds in the past decade. Despite year-to-year variation, overall the Snow Goose population is increasing. In 2011, the Pacific

Flyway Council formally adopted a desired population target of 50,000-70,000 total geese in the Fraser-Skagit sub-population. This target population size was developed jointly between the Canadian Wildlife Service and US Fish and Wildlife Service, in consultation with Russia, and seeks to maintain a healthy, sustainable population size while limiting conflicts on the geese's wintering grounds.





For additional information:

For more information on the Migratory Birds Convention Act, 1994 and the conservation and management of migratory birds, please visit the Environment and Climate Change Canada website at www.ec.gc.ca; email us at ec.enviroinfo.ec@canada.ca; or call us toll-free at 1-800-668-6767.

For current hunting regulations in British Columbia, please view or download the Hunting and Trapping Regulations Synopsis at <http://www.env.gov.bc.ca/fw/wildlife/hunting/regulations/>. Paper copies are also available free of charge at Front Counter BC locations.

To report poaching or other violations of hunting regulations, please contact the Environment and Climate Change Canada Wildlife Enforcement by email at ec.enviroinfo.ec@canada.ca, or the British Columbia Conservation Officer Service by toll-free phone at 1-877-592-RAPP (7277) or email at Conservation.Officer.Service@gov.bc.ca.

For questions about birds and air traffic safety, and wildlife control at airports, please visit Transport Canada's website at: <https://www.tc.gc.ca/eng/contact-us.htm>.

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