

# The Overpopulation of Two Native Species

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Greater snow geese (*Chen caerulescens atlantica*) flock in a Forsythe NWR (NJ) wetland

Each year, tens of thousands of greater snow geese (*Chen caerulescens atlantica*) winter at the U.S. Fish & Wildlife Service's (Service) Edwin B. Forsythe National Wildlife Refuge (NWR). Because increased agriculture has improved the food supply available to these geese during migration, population growth rates have exploded. The continental population of the greater snow goose has expanded from less than 30,000 birds in 1965 to nearly 1 million today. With an annual growth rate of 9 percent, the population is expected to reach 2 million by 2010. Now in large numbers, snow geese graze above-ground portions of plants and "grub" roots before they can sprout, exposing the marsh surface to erosion. Farmers have also suffered extensive winter crop damage caused by snow geese in the mid-Atlantic area. Greater snow geese have already deleteriously affected coastal marshes to the point that the Arctic Goose Habitat Working Group recommended stabilizing the mid-Atlantic wintering population to between 0.8 and 1 million birds by 2002.

The Service's Office of Migratory Birds has developed a draft Environmental Impact Statement to establish a national management strategy for controlling overabundant snow geese by increasing harvest and modifying current habitat management programs. To date, however, efforts to increase snow goose harvests have failed. Despite the

liberalizing of regulations, the total snow goose harvest in the United States today is less than it was 25 years ago. So refuge managers are examining alternatives, which range from no additional action to removing snow geese in their Arctic breeding grounds.

Another challenge for Forsythe refuge personnel is the proliferation of the Canada goose (*Branta canadensis*). The Atlantic Flyway resident Canada goose population has grown to over 1 million birds and has increased at an average rate of 14 percent a year since 1989. At Forsythe NWR the resident flock size in July reaches an average peak of 683 birds. Over the summer, they devour newly established dwarf spikerush (*Eleocharis parvula*) and other vegetation important in the diet of other migratory waterfowl.

In order to reduce harmful impacts to the marsh surface and ensure adequate forage for other migratory birds, restricted areas within Forsythe NWR were opened for resident Canada goose hunts in January 1997 and snow goose in October 1998. Harvests have substantially reduced snow goose—but not resident Canada goose—numbers on the refuge. Forsythe ended restricted area hunting of resident Canada geese in 2002 because it was not effective, but we have continued the greater snow goose hunt because it has

been effective. The Refuge also employs mechanical control techniques, such as egg-addling and nest flooding, to reduce the resident Canada goose population. In 2003 Forsythe was issued a permit to destroy eggs in up to 150 resident Canada goose nests and to take up to 450 resident Canada geese. At the greater snow goose "eat-outs," where habitat is being destroyed, the Refuge uses sand fences in tight, parallel rows near ditch banks to capture detritus and seeds to reduce erosion and help reestablish marsh vegetation. Geese are reluctant to forage in the fence areas. Still, this technique is only a temporary "band-aid" approach to halt marsh surface erosion.

While Canada and snow geese are native to North America, in recent years their populations have escalated beyond the

Refuge's carrying capacity. These increased populations have destroyed the habitats of other waterfowl species and become a nuisance along the Atlantic flyway. Forsythe will continue to use and monitor egg-addling, flooding, and direct take to reduce resident Canada goose populations. Well-timed hunts within restricted areas are still the most effective tool for thinning the Refuge's flock of snow geese.

Canada goose (*Branta canadensis*)  
 Photo Gene Nieminen / USFWS, NJFO