EXECUTIVE SUMMARY

During the second half of the 20th century, North American light geese (i.e., lesser snow geese {*Chen caerulescens caerulescens*}, greater snow geese {*Chen caerulescens atlantica*}, and Ross's geese {*Chen rossii*}) have exhibited geometric population growth and reached historically unprecedented population levels. The large and rapidly expanding numbers of light geese have resulted in serious ecological and economic damage. Lesser and greater snow geese have been the subject of previous Arctic Goose Joint Venture reports and much media attention, but relatively little information has been compiled regarding the less conspicuous Ross's goose. This report of the Arctic Goose Joint Venture compiles current information on Ross's geese in North America regarding population status, population dynamics, harvest, disease, Ross's goose impact on tundra ecosystems, and projected impacts of current harvest strategies on Ross's goose population growth.

Estimates of Ross's goose population size have increased from 5,000-6,000 wintering geese in 1931 to more than 800,000 in spring of 1998. Although more than 90% of Ross's geese still breed in their traditional Queen Maud Gulf nesting areas, increasing numbers now nest along west Hudson Bay, Southampton Island, the Hudson Bay Lowlands, and Baffin Island. Photo-inventory surveys of the Ross's goose breeding population in 1998 were 6 times higher than population goals of the North American Waterfowl Management Plan and the Pacific Flyway Council.

The wintering distribution of Ross's geese has also greatly expanded eastward from their traditional haunts in California. Once rare outside the Pacific Flyway, Ross's geese comprise a small to substantial proportion of light geese observed during species composition surveys in the Central and Mississippi Flyways. Although harvest and the abundance of Ross's geese continues to increase in the Pacific Flyway, nearly 40% of banded Ross's geese are now recovered in the more easterly Central and Mississippi Flyways.

Ross's geese can degrade the ecosystems in which they reside. Ross's geese have degraded lowland vegetation at Queen Maud Gulf Migratory Bird Sanctuary and west Hudson Bay, predominantly through grubbing in nesting colonies. Because of their ability to closely crop above-ground vegetation, Ross's geese may delay or prevent the recovery of tundra vegetation at sites already impacted by snow geese. Ross's and lesser snow geese are suspected carriers of avian cholera and are among the species that are thought to be reservoirs for the disease. Therefore, the increased abundance and density of Ross's and snow geese likely pose an increased risk in the spread, transmission, and frequency of avian cholera outbreaks in North America.

The continental harvest of Ross's geese has increased substantially since 1962; however, Ross's goose populations have increased rapidly over the last 40 years under harvest rates well above recent and current levels. Harvest rates of adult Ross's geese during 1995-99 were about 3%, the lowest harvest rates since 1961. Juvenile harvest rates during 1995-99 have increased from 5% to 7%, but are lower than estimated harvest rates during 1961-85 and are similar to those during 1986-94.