

Chapter 8:

SUMMARY

This chapter contains the major points within *The Status of Ross's Geese* that address management issues regarding North American Ross's geese. The items are grouped by the chapter in which more information can be found.

Distribution and Abundance

More than 90% of Ross's geese nest in the Queen Maud Gulf region of the central Arctic.

Prior to the 1960s, most Ross's geese wintered in California. In recent decades, there has been a significant eastward expansion of the wintering range of Ross's geese.

The number of breeding Ross's geese estimated from photographic surveys at known breeding colonies has increased from 34,000 birds in 1966 to 619,000 in 1998.

The 1998 photographic survey estimate of 619,000 breeding Ross's geese was more than 600% of the continental goals of the NAWMP and Pacific Flyway Council.

Estimated spring populations of breeding and non-breeding Ross's geese at known colonies exceeded 800,000 birds in 1998. At the recent growth rate of 9.0% annually, the indicated total spring population for 2001 is 1.04 million Ross's geese.

Increasing trends in annual winter indices of Ross's geese corroborate rapid population growth and range expansion documented in Arctic nesting areas.

Interaction with Habitats

Ross's geese have degraded lowland habitats in the Queen Maud Gulf Migratory Bird Sanctuary predominantly due to grubbing in nesting areas. There is also evidence of Ross's goose impact on wetland habitats during the brood-rearing period at QMGBS.

Ross's geese have degraded lowland vegetation on west Hudson Bay, but the area of impact is small at this time.

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.

Disease Mortality

Avian cholera is the primary disease affecting Ross's geese in North America. Waterfowl appear to be the likely reservoir for avian cholera, and Ross's and lesser snow geese are indicated carriers of the disease.

An increased abundance and density of light geese likely pose an increased risk in the spread, transmission, and frequency of avian cholera outbreaks that occur in North America. Increases in avian cholera outbreaks are also more likely to affect the other species of birds using wetland ecosystems.

Harvest

Indices of harvest indicate a progressive eastward expansion in U.S. wintering range of Ross's geese from the 1960s through the 1990s.

Regular-season harvest of Ross's geese in the U.S. and Canada increased exponentially during 1968-99. Recent harvest appears to be increasing linearly at approximately 12,000 Ross's geese per year during 1993-99.

Harvest of Ross's geese in Mexico appears negligible.

Subsistence harvest of Ross's geese in North America appears negligible.

Estimated take of Ross's geese during the 1998/99 and 1999/00 Conservation Order periods in the Mississippi and Central Flyways were approximately 17,500 and 43,000, respectively.

Estimated harvest rates (recovery rate/reporting rate) of juvenile and adult Ross's geese during 1987-95 are lower than estimates for 1961-86. Analysis indicates adult harvest rates since 1995 have been about 3%, the lowest rate since 1961. Juvenile harvest rates from 1995 to 1999 have increased from 5% to 7%, are lower than harvest rates during 1961-85, and are similar to those during 1986-94.

Population Dynamics

Several observed and modeled estimates of Ross's goose population growth rate indicate Ross's geese are increasing 8-10% per year.

The impact on Ross's goose populations of harvest strategies directed at midcontinent lesser snow geese depends on initial Ross's goose population size.

A Ross's goose population comprised of <496,000 females is predicted to decline under harvest pressure associated with liberalized regular seasons and new special

harvest provisions directed at midcontinent lesser snow geese. A Ross's goose population comprised of >496,000 females is predicted to continue to increase under this harvest pressure.

Ross's geese have a high capacity to recover from any population declines associated with increased harvest.

Effects of increased harvest associated with new harvest provisions are anticipated to be higher in the recently pioneered midcontinent range of Ross's geese where liberalization of regulations and special harvest provisions have been implemented.

Modeling indicated that the continental population of Ross's geese will remain above North American Waterfowl Management Plan and the Pacific Flyway Council population goals even under sustained (10-year) implementation of new harvest provisions.

Continued estimation of survival and recruitment of Ross's geese is strongly urged to evaluate effects of increased harvest.