

Proposals to Amend the Canadian Migratory Birds Regulations

(Including Regulation Proposals for Overabundant Species)

December 2013

Canadian Wildlife Service Waterfowl Committee

CWS Migratory Birds Regulatory Report Number 41





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Environment Canada's Migratory Birds website:

www.ec.gc.ca/nature/default.asp?lang=En&n=FDF836EF-1

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Authors:

This report was prepared by the Canadian Wildlife Service Waterfowl Committee, and edited by Naman Sharma (CWS, National Office).

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Consultation:

The public consultation period is from January 28 to February 28, 2014. During this period, public comments are solicited on the proposed amendments to Schedule 1 of the *Migratory Birds Regulations* for the establishment of the 2014–2015 and 2015–2016 migratory game birds hunting regulations.

Comments regarding the regulation-setting process or other concerns relating to national migratory birds should be sent to the Director of Population and Conservation Management Division at the national office of the Canadian Wildlife Service of Environment Canada at the following postal address:

351 St. Joseph Boulevard, Gatineau QC K1A 0H3 or by email: MbregsReports-RapportsOmregs@ec.gc.ca (address is case-sensitive).

Comments regarding the 2014–2015 and 2015–2016 proposed hunting regulations specific to a region should be sent to the appropriate Regional Director, Canadian Wildlife Service, Environmental Stewardship Branch, at the following postal addresses:

Atlantic Region: 17 Waterfowl Lane, P.O. Box 6227, Sackville NB E4L 1G6 Quebec Region: 801–1550 D'Estimauville Avenue, Québec QC G1J 0C3

Ontario Region: 4905 Dufferin Street, Toronto ON M3H 5T4

Prairie and Northern Region: Twin Atria No. 2, 4999 98 Avenue, Edmonton AB T6B 2X3

Pacific and Yukon Region: 5421 Robertson Road, R.R. #1, Delta BC V4K 3N2

This report may be downloaded from the following website: www.ec.gc.ca/rcom-mbhr/default.asp?lang=en&n=762c28ab-1

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Background

Canadian hunting regulations for migratory game birds are reviewed periodically Environment Canada, with input from the provinces and territories and a range of other interested stakeholders. As part of this process, the Canadian Wildlife Service (CWS) of Environment Canada produces three reports for each review cycle. The first report, Population Status of Migratory Game Birds in Canada (commonly called the November report), contains population and other biological information on migratory game birds, and thus provides the scientific basis for management. The second report, Proposals to Amend the Canadian Migratory Birds Regulations (including Regulation Proposals for Overabundant Species; December report), outlines the proposed changes to the hunting regulations, and other proposed amendments to the Migratory Birds Regulations. Proposals for hunting regulations are developed in accordance with the Objectives and Guidelines for the Establishment of National Regulations for Migratory Game Bird Hunting (see Appendix B of this report). The third report, Migratory Birds Regulations in Canada (the July report), summarizes the hunting regulations for the upcoming hunting seasons. The three reports are distributed to organizations and individuals with an interest in migratory game bird conservation, to provide an opportunity for input into the development of hunting regulations in Canada.

New Approach – Hunting Regulations to Be Established for Two-year Intervals

The objective of this new approach is to reduce the resource burden to government associated with the regulatory process while continuing to ensure that conservation and harvesting objectives are achieved. This two-year cycle approach was developed based on a technical assessment that concluded there would be low conservation risk. In the event of an unanticipated conservation concern, the regulations could still be amended at mid-intervals. Population status will continue to be reviewed annually to ensure that regulations are appropriate.

Why choose a two-year cycle?

- Technical analysis showed that the likelihood of having sub-optimal harvest regulations increased with the length of time between opportunities for regulatory changes.
- These sub-optimal regulations represented the

- sum of lost opportunity (under-harvest) and conservation concern (over-harvest).
- However, the risk was deemed acceptable when regulations were evaluated at two-year intervals and represented a good balance with the reduced regulatory burden.
- CWS had originally proposed to adopt a threeyear cycle, but as a result of consultations, agreed instead to adopt a two-year regulatory cycle coinciding with that already in place in some provinces.

Will there be an effect on existing harvest management plans?

- We retain the ability to make changes in off years if necessary for conservation.
- Having a short delay in regulatory response seldom jeopardizes recovery; when it would, there is good justification to use the regulation's power for responding to emergencies.
- As management plans are updated, they will explicitly accommodate Canada's system.

What about making changes for "other" (non-conservation) reasons?

- Changes not rooted in a conservation concern would be grouped and implemented as part of the new cycle.
- However, two-year stabilized regulations are a policy approach; this means that the two-year interval is not mandated in regulation.
- Therefore, changes could still be made through an off-year process, if needed.

Will the regulations be more conservative?

No, there is no effect on the proposed regulations as a result of the change from an annual to two-year period.

The first new two-year period of hunting regulations will begin with the 2014–2015 hunting season and end with the 2015–2016 hunting season. Regulatory proposals described in the current document, if approved, would be in place starting in September 2014 and remain in effect through winter/spring 2016 inclusively. This first two-year cycle will also establish special conservation measures for overabundant geese in spring 2015 and spring 2016 (Note that the regulations for spring 2014 were made into law as part of the 2013–2014 process – see Appendix A).

Schedule for the Development of Hunting Regulations

The schedule for the development of hunting regulations is based on the requirement to have the hunting regulations made into law by early June:

- ➤ September through November The Population Status of Migratory Game Birds in Canada report, containing biological information on migratory game birds, is developed. In early January, it is distributed and posted on the Environment Canada (EC) Nature website.
- ➤ November CWS regional offices develop proposals for hunting regulations in consultations with the provinces and territories and interested stakeholders.
- Mid-January The Proposals to Amend the Canadian Migratory Birds Regulations report containing the regulation proposals is posted on the EC Nature website and distributed to allow for public, inter-regional and international consultation.
- Early June Hunting regulations become law.
- Early July The Migratory Birds Regulations in Canada report, containing the approved hunting regulations, is distributed and posted on the EC Nature website. The migratory game bird hunting regulation summaries are available on the EC Nature website.
- ➤ Early August Hunting regulation summaries are available with the Migratory Game Bird Hunting Permits at Canada Post outlets.

Migratory game bird hunters are made aware of the migratory game bird hunting regulations at the same time as they receive information on the season dates, bag and possession limits, when they purchase their hunting permits.

Note to United States Readers

The cycle of regulation development in Canada is different than the approach used in the United States. To meet the requirements of the Canadian regulatory process, proposals for hunting regulations must be finalized no later than late February. Canadian representatives at the summer Flyway Council meetings and other hearings are not reporting on what is being considered, but on what has been passed into law.

American Black Duck Harvest Strategy

An international Black Duck harvest strategy was adopted in July 2012 by the CWS and the U.S. Fish and Wildlife Service. The objectives of the strategy, based on the principles of adaptive harvest management, are to:

 maintain a black duck population that provides consumptive and non-consumptive

- use commensurate with habitat carrying capacity;
- maintain societal values associated with the hunting tradition; and
- maintain equitable access to the black duck resource.

As such, the strategy is designed to identify appropriate harvest levels in Canada and the U.S. based on population levels of Black Ducks and sympatric Mallards while sharing the Black Duck harvest equally between the two countries; however, recognizing incomplete control of harvest through regulations, it allows realized harvest in either country to vary between 40% and 60% of the annual continental harvest.

The harvest strategy, used to determine the appropriate Black Duck harvest regulations, was first implemented in 2013–2014. It consists of four pre-defined regulatory packages in Canada and the United States. Country-specific harvest opportunities are determined from a set of expected harvest rate distributions defined as regulatory alternatives. Canada developed four regulatory packages (liberal, moderate, restrictive and closed), with the Canadian moderate alternative defined as 1997 to 2010 average harvest rate. The Canadian packages are:

- Liberal: 30% increase in mean harvest rate over the 1997–2010 mean harvest rate.
- Moderate: 1997–2010 harvest rate (0.035; mean harvest rate for adult males).
- Restrictive: 30% decrease in mean harvest rate over the 1997–2010 mean harvest rate.
- Closed: No Black Duck harvest allowed.

The policy recommendations for the 2014–2015 hunting season calls for a return to 1997–2010 harvest levels, which is equivalent to the Canadian moderate package. The return to moderate levels of harvest is due to a large increase in the Mallard breeding population in the east in 2013 (Canadian Wildlife Service Waterfowl Committee 2013), which is predicted to have a negative impact on the production of Black Ducks and thus result in a Black Duck fall flight that has a moderate potential of harvest.

In general, waterfowl regulations in eastern Canada have remained almost unchanged since harvest restrictions were imposed on Black Ducks in 1984. The implementation of the American Black Duck Harvest Strategy will affect the waterfowl harvest in eastern Canada, as the regulations are now adjusted in relation to the populations' status. Because the moderate regulatory package is based on mean harvest levels from hunting seasons 1997 to 2010, we expect the 2014–2015 Black Duck regulations to be similar to those of

recent years. However, the regulations will continue to reflect changes in harvest opportunity in the future, as was the case in 2013–2014 when liberal Black Duck regulations were implemented in Canada. Details on the proposed Black Duck regulations can be found in the Regulatory Proposals for 2014–2015 and 2015–2016 section below.

Black Duck harvest estimates for the first year of the strategy, with liberal seasons in place, are not yet available. We will report on those in the 2014 report on the Population Status of Migratory Game Birds in Canada. Frequent evaluations of the strategy will be conducted to ensure that it continues to meet the objectives stated above.

Management of Overabundant Geese

Conservation Issue

Most Snow and Ross's Goose populations are well above their population objectives (North American Waterfowl Management Plan 2012). This becomes an important conservation issue when the rapid growth and increasing abundance affect the habitats on which they, and other species, depend. This issue was first highlighted 15 years ago, through comprehensive assessments of the environmental effects of the rapidly growing populations of mid-continent Lesser Snow Geese and Greater Snow Geese. The analyses completed by Canadian and American experts are contained in the reports entitled Arctic Ecosystems in Peril -Report of the Arctic Goose Habitat Working Group (Batt 1997) and The Greater Snow Goose - Report of the Arctic Goose Habitat Working Group (Batt 1998) (http://www.agiv.ca/; choose "publications").

These working groups concluded that the increase in Snow Goose populations was primarily human-induced. Changing farming practices began to supply a reliable, highly nutritious food source for migrating and wintering geese. Combined with the safety found in refuges, the improved nutritional status led to increased survival and higher reproductive rates for Snow Geese. These populations have become so large that they are affecting the plant communities at staging areas and breeding grounds on which they and other species rely. Grazing and grubbing by geese not only permanently removes vegetation, but also changes soil salinity, nitrogen dynamics and moisture levels. The result is the alteration or elimination of the plant communities. Although the Arctic is vast, the areas that support migrating and breeding geese and other companion species are limited in extent, and some areas are likely to become inhospitable for decades. Increasing crop damage is another undesirable consequence of the growing goose populations.

Management Response

Initial management efforts (starting in 1999) focused on mid-continent Lesser Snow Geese and Greater Snow Geese, the populations where there was strong evidence for detrimental effects on habitats. Canada, the United States and Mexico agreed that the habitat damage being caused was a significant conservation issue, and that the populations were overabundant to the detriment of the arctic and sub-arctic ecosystems. Following that declaration, several concurrent management measures were begun to curtail the rapid population growth and reduce population size to a level consistent with the carrying capacity of the habitat. Population models showed that of all the potential management techniques, the most successful approach to control population growth would be to reduce survival rates for adult geese.

Therefore. beginning in 1999, amended the Migratory Birds Regulations and created new tools that could be invoked to help manage overabundant species. These included special conditions under which hunters were encouraged to increase their take for conservation reasons and, in some cases and subject to specific controls, to use exceptional methods and equipment such as electronic calls and bait. The special conservation measures for Snow Geese were implemented in 1999 in selected areas of Quebec and Manitoba, were expanded in 2001 to Saskatchewan and Nunavut, and in 2012 into south-eastern Ontario. The dates and locations of application of these special conservation measures were determined in consultation with the provincial governments, other organizations and communities.

Effectiveness of Special Measures

Evaluations showed that success of the special conservation measures to date has been mixed. In the case of Greater Snow Geese, the special conservation measures were successful in reducing the annual survival rate for adults from about 83% to about 72.5% (Calvert and Gauthier 2005). The growth of the population was stopped, but the special measures have not succeeded in reducing the size of the population, which appears stabilized at about 1 million birds in spring (Lefebvre 2013). Models showed that without the special take by hunters in spring, the population would begin to grow rapidly once more (Gauthier and Reed 2007).

For mid-continent Lesser Snow Geese, the evaluation concluded that the population has continued to grow, although perhaps at a reduced

rate (Leafloor et al. 2012). It also concluded that while the annual harvest increased as a result of the conservation measures, it failed to reduce the size of the population. It was apparent that measures invoked to date have not been successful, and that other measures would be required if population control were deemed essential. The report recommended that special conservation measures be maintained, and that additional measures to increase harvest be sought.

The evaluation report also suggested that the conditions for overabundance designation are being met by Ross's Geese, and predicted that continued growth and expansion of Lesser Snow Goose populations was especially likely in the central and western Arctic of Canada (Leafloor *et al.* 2012). As a result, it is now proposed that the Lesser Snow Geese nesting in the western Arctic and Ross's Geese be designated as overabundant (see the following sections of this report).

Proposal to Designate Western Arctic Lesser Snow Geese as Overabundant

It is proposed to designate western Arctic population of Lesser Snow Goose (*Chen caerulescens* caerulescens) as overabundant.

An overabundant population is one for which the rate of population growth has resulted in, or will result in, a population whose abundance directly threatens the conservation of migratory birds (themselves or others) or their habitats, or is injurious to or threatens agricultural, environmental or other similar interests.

Experience has shown that serious habitat loss from the destructive foraging activities of Lesser Snow Geese and Ross's Geese (*Chen rossii*) occurred in parallel with very rapid population growth in the central and eastern Arctic (Batt 1997). Some localized habitat damage has already occurred on Banks Island from the foraging activities of western Arctic Snow Geese (Hines *et al.* 2010). If the western Arctic population continues to increase at the present rate, the negative impacts to habitat and other species are predicted to expand.

The western Arctic population breeds primarily on Banks Island with smaller breeding colonies on the mainland of the Northwest Territories and Alaska. The population migrates mainly through Alberta and western Saskatchewan in spring and autumn. The majority of birds winter in the Pacific Flyway, mostly in California where they mix with the Wrangel Island population of Lesser Snow Geese and Ross's Geese. Some birds also winter in the western Central Flyway, where they mix with midcontinent Snow Geese.

Western Arctic Snow Geese are already well above the spring population objective of 200 000

birds (North American Waterfowl Management Plan 2012). The total nesting population increased. growing from around 105 000 birds in 1960 to 165 000 in 1976, and exceeding 479 000 in 1995 (Kerbes et al. 1999). Photographic inventories of the colony indicate that the number of nesting birds on Banks Island has remained high, with 570 000 nesting birds in 2002, 427 000 birds in 2009, and a preliminary estimate of 429 000 birds in 2013 (CWS, unpubl. data). The fall estimate of western Arctic / Wrangel Island Snow Geese in the Pacific Flyway was over 1 million birds in 2011; this has increased an average of 6% per year from 2003 to present (U.S. Fish and Wildlife Service 2012). Increases also have been observed in the western Central Flyway population of Snow Geese (U.S. Fish and Wildlife Service 2012).

Based on band return data, adults from the western Arctic population have an 85% chance of surviving from one year to the next (Canadian Wildlife Service, unpubl. data). This survival rate is high and similar to estimates of other increasing white goose populations. Recent recovery rates for banded adult birds were only 2–3%, suggesting that non-hunting mortality is currently more important than hunting mortality (Canadian Wildlife Service, unpubl. data). Increased survival is thought to be mainly due to increased agricultural food supplies, increased use of refuges during migration and winter, and reduced harvest rates by hunters (Abraham *et al.* 1996; Abraham and Jefferies 1997).

The western Arctic population is showing a pattern of rapid population growth similar to that which has been observed in other populations of Snow Geese and Ross's Geese. For this reason, it is important to consider implementation of special conservation measures, such as spring harvest, before the western Arctic population reaches a level that cannot be controlled through increased harvest by hunters. Similar efforts to stabilize Greater Snow Goose numbers in eastern North America were successful because the population was still small enough that it could be controlled through increased harvest (Reed and Calvert 2007). Based on experience with the mid-continent population of Lesser Snow Geese and Ross's Geese, it is likely easier to recover goose populations that reach low levels than to reduce them after they experience runaway growth (Leafloor et al. 2012). It may still be possible to stabilize the western Arctic population if liberalized are implemented measures Designation of the western Arctic population as overabundant would provide tools to liberalize harvest under special conservation measures such as spring harvest, use of electronic calls or baiting.

Proposal to Designate Ross's Geese as Overabundant

It is proposed to designate Ross's Goose (*Chen rossii*) as overabundant.

An overabundant population is one for which the rate of population growth has resulted in, or will result in, a population whose abundance directly threatens the conservation of migratory birds (themselves or others) or their habitats, or is injurious to or threatens agricultural, environmental or other similar interests.

Following publication of the Ecosystems in Peril report (Batt 1997), unprecedented management actions were initiated in 1999 to reduce damage caused to arctic and subarctic ecosystems by the foraging activities of increasing numbers of Lesser Snow Geese (Chen caerulescens caerulescens) and Ross's Geese (Batt 1997; Moser 2001). Most of these actions were aimed at reducing survival of adult geese through increased harvest by hunters throughout the range of the mid-continent population, which was thought to be the most efficient means of reducing population size (Rockwell et al. 1997). Hunting regulations were liberalized during regular seasons, traditional hunting restrictions (e.g., prohibition on use of electronic calls, requirement for plugged shotguns, bag and possession limits) were relaxed or removed to promote increased harvest, and habitat management regimes on some refuges were altered to increase exposure of the birds to hunting outside of refuge areas. Additional amendments to the Migratory Birds Regulations in Canada and the United States were made to allow conservation harvests of such overabundant species outside of hunting seasons.

Though most attention was focused on overabundance of Lesser Snow Geese, Ross's Geese were designated as overabundant in the United States in 1999, and have been included in regulations allowing spring conservation harvests there ever since. In Canada, a court decision in 1999 determined that overabundance regulations could not be applied to Ross's Geese at that time because it had not been demonstrated that they were contributing to the habitat damage.

It is now clear that Ross's Geese contribute to habitat degradation on nesting and staging areas where they occur in large numbers (Alisauskas et al. 2006b; Abraham et al. 2012). Like Lesser Snow Geese, Ross's Geese grub during nest building and during spring staging, when a large portion of their diet is made up of the roots and rhizomes of sedges and grasses (Ryder and Alisauskas 1995). Alisauskas et al. (2006b) found that vegetative cover was removed in areas occupied by nesting Ross's Geese, resulting in exposure of mineral

substrate and peat. This led to reduced vegetative species richness that worsened over time, particularly in low-lying habitats preferred by Ross's Geese for nesting. Reduced graminoid abundance caused by foraging of geese has also led to dramatic declines in small mammal abundance around dense nesting colonies (Samelius and Alisauskas 2009). Didiuk et al. (2001) suggested that use by Ross's Geese of nesting areas previously degraded by Lesser Snow Geese (e.g., on the west coast of Hudson Bay) may slow recovery of those areas due to the ongoing effects of foraging and nest building. The smaller bill morphology of Ross's Geese may allow them to crop vegetation more closely to the ground than do Lesser Snow Geese, adding to the detrimental effects of overgrazing.

Ross's Geese are closely related to Lesser Snow Geese, and co-occur with the latter species throughout the year; their behavioural and morphological similarity historically led to harvest management of the two species in aggregate since 1978 (Moser and Duncan 2001). In the mid-1960s, most Ross's Geese (>90%) nested in the central Arctic of Canada and wintered in the Central Valley of California (Melinchuk and Ryder 1980). Though comprehensive estimates of population size were not available until recently, photographic surveys of known nesting areas indicated fewer than 100 000 nesting Ross's Geese in the mid-1960s (Kerbes 1994). The continental population objective for Ross's Geese has been 100 000 birds since the inception of the North American Waterfowl Management Plan in 1986. By the mid-2000s, Ross's Geese had expanded their range eastward on both nesting and wintering areas (Alisauskas et al. 2006a), and the population was estimated to number between 1.5-2.5 million adult birds (Alisauskas et al. 2009, 2011, 2012), despite efforts to stop the growth of the population through increased harvest by hunters.

Alisauskas et al. (2006a) analyzed hunter recoveries of Ross's Geese captured and marked in the Queen Maud Gulf region of the central Canadian Arctic, and found that survival of adults had declined during the period 1994-2000, reaching a low of approximately 0.80, apparently in response to concurrent increases in harvest. The authors noted, however, that during this same time period, the Ross's Goose population at one of the largest known breeding colonies in the Queen Maud Gulf region had shown sustained growth, suggesting that an adult survival rate of 0.80 was unlikely to have negative consequence for continental Ross's Goose populations. Since 2001 (the last year that Alisauskas et al. [2006a] considered), continental harvest of adult Ross's Geese has apparently stabilized, and harvest rates (the annual proportion of the adult population harvested by hunters) have declined to only about 2–3% (Alisauskas *et al.* 2009, 2012; Dufour *et al.* 2012). Annual survival of Ross's Geese declined from 0.897 (95% CI = 0.789–0.953) to a low of 0.827 (95% CI = 0.801–0.850) during the period 1989–1997, but then increased steadily from 1998 onward, reaching a high of 0.950 (95% CI = 0.899–0.976) in 2009. Notably, this reversal of the survival trajectory occurred in the face of some of the highest annual harvest levels estimated for adult Ross's Geese since 1989 (Alisauskas *et al.* 2012).

Multiple lines of evidence indicate that Ross's Goose populations have continued to grow, both in the central Arctic and at the continental level (Alisauskas et al. 2009, 2012). Collectively, these observations suggest that, like Snow Geese, increases in harvest of Ross's Geese have been outpaced by concurrent increases in abundance, thereby diminishing the effects of harvest on adult survival (Dufour et al. 2012). In fact, Ross's Goose numbers have continued to increase at a higher rate than have Lesser Snow Geese since the start of conservation actions in 1999, and continued growth of the Ross's Goose population is predicted to occur (Alisauskas et al. 2006a; Alisauskas et al. 2012; Dufour et al. 2012). Thus, the environmental damage being caused, with its effects on other species and ecosystem structure and function, is expected to continue to increase.

Designation of Ross's Geese as overabundant is therefore being proposed by the CWS; this designation would provide tools to liberalize harvest under special conservation measures such as spring harvest, use of electronic calls or baiting.

Regulatory Proposals for 2014–2015 and 2015–2016

The special conservation measures for Snow Geese to be implemented in spring 2014 were proposed last year and already made into law. They are posted on the CWS website, at

www.ec.gc.ca/rcom-mbhr/default.asp?

<u>lang=en&n=a297b56f-1</u>, and are shown in Appendix A of this report.

The regulations proposed for Snow Geese and Ross's Geese to be implemented in the 2014–2015 and 2015–2016 hunting seasons are as follows:

- Increase the daily bag limit and eliminate the possession limit for Snow and Ross's Geese (combined) in Manitoba, Alberta, Nunavut and Northwest Territories.
- Establish spring conservation harvest of Ross's Geese in Nunavut.
- Eliminate the possession limit for Snow and Ross's Geese (combined) in Saskatchewan.
- Extend all-day hunting of Snow Geese and Ross's Geese to include the entire

- province of Saskatchewan through all available season dates.
- Expand a spring conservation harvest for Snow Geese and allow spring conservation harvest of Ross's Geese in Saskatchewan.
- Establish a spring conservation harvest for Snow Geese and Ross's Geese in Alberta, Manitoba and Northwest Territories.

See the section below for more detail about these proposals.

Proposed Changes to Hunting Regulations for the 2014–2015 and the 2015–2016 Seasons

CWS and the provinces and territories have jointly developed the regulatory proposals presented here. Other proposals consistent with these may be sent to the appropriate CWS Regional Director by any interested organization or individual (additional information can be found on the title page). To facilitate the comparison of changes proposed in this text with current regulations, the summaries of the 2013–2014 Migratory Birds Hunting Regulations are included in Appendix C.

Newfoundland and Labrador

Implementation of the International Harvest Strategy for American Black Duck

It is proposed to continue to implement the International Harvest Strategy for American Black Ducks in Newfoundland and Labrador. The strategy calls for a return to the moderate regime for the 2014–2015 hunting season; a daily bag limit of four American Black Ducks, and an open season from September 20 to December 27 on the island of Newfoundland, and a bag of six black ducks and an open season from September 7 to December 20 in Labrador.

CWS continues to consider two amendments that may be proposed in the future:

Eider hunting

A notice of intent is given that changes to coastal zone boundaries along the west coast of the Northern Peninsula may be implemented in a subsequent hunting season. The effect of this change on user groups has yet to be fully assessed. Pending the outcomes of further consultation, CWS may consider implementing changes to zone boundaries in future.

- New murre hunting zone in Newfoundland

A notice of intent is given that a new murre hunting zone is proposed to be delineated within the Green Bay area of the existing Murre Hunting Zone 2. In this area, hunters see few murres during the current murre hunting season, and have requested a delay in the season dates to allow access to murres that occur there later in January and early February. The proposal under consideration is to delay the opening and closing dates of the murre hunting season within the new murre hunting zone by about two weeks.

To evaluate this regulatory proposal, CWS undertook a special hunter opinion survey during the winter of 2009–2010. Questionnaires were sent out to 6000 Migratory Game Bird Permit holders. About 1200 questionnaires were returned by hunters, resulting in a response rate of ~20%. The majority of murre hunters who reported that their primary murre hunting area was within the proposed zone supported the proposed new zone and season. Community meetings may be held to determine the exact positioning of the boundaries, and other hunters' concerns.

Prince Edward Island

Implementation of the International Harvest Strategy for American Black Duck

It is proposed to continue to implement the International Harvest Strategy for American Black Ducks in Prince Edward Island. The strategy calls for a return to the moderate regime for the 2014-2015 hunting season. The moderate regulatory package for Prince Edward Island was a daily bag limit of four American Black Ducks, and an open season for ducks (other than Common and Red-Mergansers, Long-tailed breasted Harlequin Ducks, eiders and scoters) and snipe from October 1 to December 8. However, the Province of Prince Edward Island has requested an adjustment of the moderate package that would provide additional hunting opportunity to the end of December. To accommodate this request while meeting the terms of agreement of the International Black Duck Harvest Strategy, the moderate proposal is to reduce the daily bag limit from four to two American Black Ducks after 7 November, and to extend the open season for ducks (other than Common and Red-breasted Mergansers, Longtailed Ducks, Harlequin Ducks, eiders and scoters) and snipe from October 1 to December 31.

CWS is considering the following amendment that may be proposed in the future:

- Eider hunting

A notice of intent is given that restrictions to one or both of bag limits or season length may be implemented in a subsequent hunting season. The status of Common Eider is currently under review. Pending the outcome of this review, CWS may consider implementing harvest restrictions for this species.

Nova Scotia

Implementation of the International Harvest Strategy for American Black Duck

It is proposed to continue to implement the International Harvest Strategy for American Black Ducks in Nova Scotia. The strategy calls for a return to the moderate regime for the 2014–2015 hunting season: a daily bag limit of four American Black Ducks, and an open season for ducks (other than Common and Red-breasted Mergansers, Long-tailed Ducks, Harlequin Ducks, eiders and scoters) and snipe from October 1 to December 31 in Zone 1; and from October 22 to January 15 in Zones 2 and 3.

CWS is considering the following amendment that may be proposed in the future:

Eider hunting

A notice of intent is given that restrictions to one or both of bag limits or season length may be implemented in a subsequent hunting season. The status of Common Eider is currently under review. Pending the outcome of this review, CWS may consider implementing harvest restrictions for this population.

New Brunswick

Implementation of the International Harvest Strategy for American Black Duck

It is proposed to continue to implement the International Harvest Strategy for American Black Ducks in New Brunswick. The strategy calls for a return to the moderate regime for the 2014–2015 hunting season: a daily bag limit of three American Black Ducks, and an open season for ducks (other than Harlequin Ducks, Common and Red-breasted Mergansers, Long-tailed Ducks, eiders and scoters), Geese (other than Canada Geese and Cackling Geese) and snipe from October 15 to January 4 in Zone 1; and from October 1 to December 18 in Zone 2.

CWS is considering the following amendment that may be proposed in the future:

Eider hunting

A notice of intent is given that restrictions to one or both of bag limits or season length may be implemented in a subsequent hunting season. The status of Common Eider is currently under review. Pending the outcome of this review, CWS may consider implementing harvest restrictions for this species.

Quebec

Implementation of the International Harvest Strategy for American Black Duck

It is proposed to continue to implement the International Harvest Strategy for American Black Duck. The strategy calls for a return to the moderate regime for the 2014–2015 hunting season: four American Black Ducks in the daily bag for all hunting districts in Quebec except a zone in district F, west of route 155 and highway 55, where the daily bag will be two American Black Ducks.

Hunting season length for Woodcock

It is proposed that the length of the woodcock season in Quebec in Hunting Districts B, C, D, E and F will be 106 days plus the Waterfowler Heritage Day.

Ontario

Canada Geese and Cackling Geese

- Removing restriction on the daily bag limit

It is proposed to remove the restriction on the daily bag limit for Canada Geese in the Hudson-James Bay (Provincial Wildlife Management Unit [WMU] 1D) and Northern (WMUs 23 to 31 and 37 to 41) Hunting Districts. This change would increase the daily bag limit from three to five Canada Geese from September 10 to December 16. Band recovery data show that this change in daily bag limit has the potential to increase the harvest of temperate-breeding Canada Geese with minimal effect on Southern James Bay Population Canada Geese. Currently, the population of temperate-breeding Canada Geese is above their maximum population objective. while population of Southern James Bay Canada Geese is above their minimum population objective. This change would harmonize the daily bag limit for Canada Geese during the regular hunting season across most of the province, with the exception being in southwestern Ontario.

Implementation of the International Harvest Strategy for American Black Duck

It is proposed to implement the International Harvest Strategy for American Black Duck in Ontario. The strategy calls for a return to the moderate regime for the 2014–2015 hunting season. The moderate regulatory package for American Black Ducks in Ontario is a daily bag limit of two Black Ducks in the Hudson-James Bay and Northern Hunting Districts and one Black Duck in the Central and Southern Hunting Districts. Opening dates remain the same, but season length is 107 days in the Hudson-James Bay, Northern and Central Hunting Districts while the season closes on December 20 in the Southern Hunting District.

Clarifying hunting restrictions

It is proposed to clarify the wording in Table 1, Section 4(c) and (d) by changing the text "natural rush bed" to "area of emergent vegetation". This change would clarify the intent of the hunting restriction for hunters and enforcement.

Manitoba

Increasing the daily bag limit and eliminating the possession limit for Snow and Ross's Geese (combined)

It is proposed that the daily bag limit for Snow and Ross's Geese (combined) be increased from 20 to 50, and that the current possession limit of 80 be removed entirely. This measure would provide additional opportunity to manage these superabundant species, and contribute to reducing the growth of the populations through hunting. At the same time, it will facilitate the proper use of harvested birds.

Allowing spring conservation harvest of Ross's Geese

It is proposed that a spring conservation harvest for Ross's Geese be implemented at the same time as existing conservation harvests for Snow Geese throughout the province. This measure would provide additional opportunity to manage this superabundant species, and contribute to reducing the growth of the population through hunting.

Increasing the daily bag and possession limits of Canada Geese, Cackling Geese, White-fronted Geese and Brant (combined) for non-residents of Canada

It is proposed that the daily bag limit for Canada Geese, Cackling Geese, White-fronted Geese and Brant (combined) for non-residents of Canada be increased from 5 to 8 and the possession limit increased from 15 to 24 in Game Bird Hunting Zone 1. Dark goose harvest in this zone includes Temperate Nesting Giant Canada Geese (molt migrants), Cackling Geese and Eastern Prairie Population Canada Geese, all of which have stable or increasing populations (U.S. Fish and Wildlife Service 2012). Harvest in this zone is expected to remain low due to small numbers of non-resident hunters.

Considering the establishment of a Mourning Dove hunting season

A notice of intent is given that an annual Mourning Dove hunting season in Manitoba is under consideration. A summary of preliminary findings is provided below.

Mourning Doves are one of the most abundant, widely distributed and harvested game birds in North America. They are hunted in 40 states and 2 provinces. Ontario established a season in 2013, after evaluation of long-term data sets concluded that the harvest is already occurring in the United States, and would be sustainable in Ontario. Similar data exist for Manitoba (Breeding Bird Survey [BBS]) and indicate that the dove population is stable, widely distributed across the southern portion of the province, with relative abundance similar to jurisdictions with hunting seasons. Calculations from BBS data suggest a breeding population of 800 000 doves in Manitoba. The Manitoba Lodges and Outfitters Association and Manitoba Wildlife Federation have expressed interest in Mourning Dove hunting opportunity if harvest is biologically sustainable. A formal assessment of the feasibility of a Mourning Dove hunt will be conducted by CWS Prairie and Northern Region by December 2015.

Saskatchewan

Increasing the daily bag and possession limits of White-fronted Geese for non-residents of Canada

It is proposed that the White-fronted Goose daily bag limit for non-residents of Canada be increased from 4 to 5 and the possession limit increased from 12 to 15. This change will

harmonize bag and possession limits for all hunters and remove harvest restrictions placed on nonresident hunters when more restrictive harvest was deemed necessary. Current population estimates are high and have been stable for several years.

Eliminating the possession limit for Snow and Ross's Geese (combined)

It is proposed that the current Snow and Ross's Geese (combined) possession limit of 60 be removed entirely. This measure would provide additional opportunity to manage these superabundant species, and contribute to reducing the growth of the populations through hunting. At the same time, it will facilitate the proper use of harvested birds.

Extending all-day hunting of Snow Geese and Ross's Geese

It is proposed that all-day hunting of Snow and Ross's Geese be extended to include the entire province through all available season dates. This measure would provide additional opportunity to manage these superabundant species, and contribute to reducing the growth of the populations through hunting.

Expanding a spring conservation harvest for Snow Geese and allowing spring conservation harvest of Ross's Geese

It is proposed that a spring conservation harvest for Snow and Ross's Geese be implemented from March 15 to June 15 throughout the province. This measure would provide additional opportunity to manage these superabundant species, and contribute to reducing the growth of the populations through hunting.

Alberta

Increasing the daily bag limit and eliminating the possession limit for Snow and Ross's Geese (combined)

It is proposed that the daily bag limit for Snow and Ross's Geese (combined) be increased from 20 to 50 and the current possession limit of 60 be removed entirely. This measure would provide additional opportunity to manage these superabundant species, and contribute to reducing the growth of the populations through hunting. At the same time, it will facilitate the proper use of harvested birds.

Establishing a spring conservation harvest for

Snow Geese and Ross's Geese

It is proposed that a spring conservation harvest for Snow and Ross's Geese be implemented from March 15 to June 15 throughout the province. This measure would provide additional opportunity to manage these superabundant species, and contribute to reducing the growth of the populations through hunting.

Increasing the daily bag and possession limits of White-fronted Geese for non-residents of Canada

It is proposed that the White-fronted Goose daily bag limit for non-residents of Canada be increased from 4 to 5 and the possession limit increased from 12 to 15. This change will harmonize bag and possession limits for all hunters and remove harvest restrictions placed on non-resident hunters when more restrictive harvest was deemed necessary. Current population estimates are high and have been stable for several years.

British Columbia

No regulatory changes are proposed for the 2014–2015 and 2015-2016 hunting seasons.

Yukon Territory

No regulatory changes are proposed for the 2014–2015 and 2015–2016 hunting seasons.

Northwest Territories

Increasing the daily bag limit and eliminating the possession limit for Snow and Ross's Geese (combined)

It is proposed to increase the daily bag limit for Snow Geese and Ross's Geese to a combined total of 50 birds and to remove the possession limit for these species. This measure may increase the harvest of overabundant species that are above population objectives while maintaining good use of harvested birds.

Establishing a spring conservation harvest for Snow Geese and Ross's Geese

It is proposed to implement a spring special conservation season for Snow Geese and Ross's Geese. This measure would provide additional opportunity to manage these overabundant species, and contribute to reducing the growth of these populations through hunting.

Nunavut

Increasing the daily bag limit and eliminating the possession limit for Snow and Ross's Geese (combined)

It is proposed to increase the daily bag limit for Snow Geese and Ross's Geese to a combined total of 50 birds and to remove the possession limit for these species. This measure may increase the harvest of overabundant species that are above population objectives while maintaining good use of harvested birds.

Establishing a spring conservation harvest for Ross's Geese

It is proposed to implement a spring special conservation season for Ross's Geese. This measure would provide additional opportunity to manage this overabundant species, and contribute to reducing the growth of this population through hunting.

Bag and possession limits in the islands and waters of James Bay

It is proposed to adjust the bag limits and possession limits in the islands and waters of James Bay to match any proposed changes in the adjacent areas of Ontario and Quebec. In western James Bay, the daily bag limit is proposed to increase to 5 Canada Geese or Cackling Geese and no possession limit. Also in western James Bay, the possession limit for ducks is proposed to increase to 18, with not more than 6 American Black Ducks and 1 Barrow's Goldeneye. In eastern James Bay, it is proposed that the possession limit is 20 for geese other than Snow Geese and Ross's Geese, and 18 for ducks, with not more than 1 Barrow's Goldeneye and 2 Blue-winged Teal.

Lifting restrictions on decoy type use with electronic good call recordings

It is proposed to lift restrictions on decoy type use with electronic good call recordings. This has been proposed to make it consistent with other jurisdictions.

Government of Canada Allowing the Temporary Possession of Dead Migratory Birds

The Government of Canada wants to inform the public of a variance to paragraph 6(b) of the Migratory Birds Regulations, to allow for the

temporary possession of found dead migratory birds, which is in effect until 28 August 2014.

As public participation in the study of dead migratory birds is necessary to help conduct surveys on avian viruses, it is permitted to temporarily possess dead migratory birds to allow for swift delivery of such birds to provincial or territorial authorities for analysis. The Government of Canada is responsible, under the *Migratory Birds Convention Act*, 1994, to ensure that migratory birds are protected and conserved, and testing dead birds is believed to be the most effective method available for the detection of avian viruses.

What to do if you find a dead migratory bird:

Contact the Canadian Cooperative Wildlife Health Centre by visiting their website at www.ccwhc.ca/contact_us.php or by telephoning 1-800-567-2033.

Visit the Public Health Agency of Canada website at www.phac-aspc.gc.ca/influenza/fs-hwb-fr-mos-eng.php for guidance on precautions to take when handling wild birds.

For more information on the *Migratory Birds* Convention Act, 1994, visit www.ec.gc.ca/alef-ewe/default.asp? langeen&n=3DF2F089-1.

Literature Cited

- Abraham, K. F., R. L. Jefferies, R. F. Rockwell, and C. D. MacInnes. 1996. Why are there so many white geese in North America? Pages 79–92 in Proceedings of the 7th International Waterfowl Symposium, Memphis, TN. J. T. Ratti, ed.
- Abraham, K. F., and R. L. Jefferies. 1997. High populations, causes, impacts and implications. Pages 7–72 in Batt, B. D. J. (editor). Arctic Ecosystems in Peril: Report of the Arctic Goose Habitat Working Group. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Ottawa, Canada. 126 pp.
- Abraham, K. F., R. L. Jefferies, R. T. Alisauskas, and R. F. Rockwell. 2012. Northern wetland ecosystems and their response to high densities of lesser snow geese and Ross's geese. Pages 9–45 in Leafloor, J. O., T. J. Moser, and B. D. J. Batt (editors). Evaluation of special management measures for midcontinent lesser snow geese and Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife

- Service, Ottawa, Ontario.
- Alisauskas, R. T., K. L. Drake, S. M. Slattery, and D. K. Kellett. 2006a. Neckbands, harvest and survival of Ross's geese from Canada's central arctic. Journal of Wildlife Management 70:89– 100.
- Alisauskas, R. T., J. Charlwood, and D. K. Kellett. 2006b. Vegetation correlates of nesting history and density by Ross's and lesser snow geese at Karrak Lake, Nunavut. Arctic 59:201–210.
- Alisauskas, R. T., K. L. Drake, and J. D. Nichols. 2009. Filling a void: abundance estimation of North American populations of arctic geese using hunter recoveries. In D. L. Thomson, E. G. Cooch, and M. J. Conroy, editors. Modeling demographic processes in marked populations. Environmental and Ecological Statistics 3:463–489.
- Alisauskas, R. T., R. F. Rockwell, K. W. Dufour, E. G. Cooch, G. Zimmerman, K. L. Drake, J. O. Leafloor, T. J. Moser, E. T. Reed. 2011. Harvest, survival, and abundance of midcontinent lesser snow geese relative to population reduction efforts. Wildlife Monographs 179:1–42.
- Alisauskas, R. T., J. O. Leafloor, and D. K. Kellett. 2012. Population status of midcontinent Lesser Snow Geese and Ross's Geese following special conservation measures. Pages 132–177 in Leafloor, J. O., T. J. Moser, and B. D. J. Batt (editors). Evaluation of special management measures for midcontinent lesser snow geese and Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C. and Canadian Wildlife Service, Ottawa, Ontario.
- Batt, B. D. J. (ed.). 1997. Arctic ecosystems in peril: report of the Arctic Goose Habitat Working Group. Arctic Goose Joint Venture Special Publication, U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Environment Canada, Ottawa.
- Batt, B. D. J. (ed.). 1998. The Greater Snow Goose: report of the Arctic Goose Habitat Working Group. Arctic Goose Joint Venture Special Publication, U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Environment Canada, Ottawa.
- Calvert, A. M. and G. Gauthier. 2005. Effects of exceptional conservation measures on survival and seasonal hunting mortality in greater snow geese. Journal of Applied Ecology 42:442–252.
- Canadian Wildlife Service Waterfowl Committee. 2013. Population Status of Migratory Game Birds in Canada: November 2013. CWS Migratory Birds Regulatory Report Number 40.
- Caswell, J. H., A. D. Afton, and F. D. Caswell. 2003. Vulnerability of non-target goose species

- to hunting with electronic snow goose calls. Wildlife Society Bulletin 31(4):1117–1125.
- Didiuk, A. B., R. T. Alisauskas, and R. F. Rockwell. 2001. Interaction with arctic and subarctic habitats. Pages 19–32 in T. Moser, editor. The status of Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Ottawa, Ontario.
- Dufour, K. W., R. T. Alisauskas, R. F. Rockwell, and E. T. Reed. 2012. Temporal variation in survival and productivity of midcontinent lesser snow geese and survival of Ross's geese and its relation to population reduction efforts. Pages 95–131 in Leafloor, J. O., T. J. Moser, and B. D. J. Batt (eds.). Evaluation of special management measures for midcontinent lesser snow geese and Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Ottawa, Ontario.
- Gauthier, G. and E. T. Reed. 2007. Projected growth rate of the Greater Snow Goose population under alternative harvest scenarios. In Reed, E. T., and A. M. Calvert (eds.). Evaluation of the special conservation measures for Greater Snow Geese: Report of the Greater Snow Goose Working Group. Arctic Goose Joint Venture Special Publication. Canadian Wildlife Service, Environment Canada, Sainte-Foy, Quebec.
- Hines, J. E., P. B. Latour, and C. S. Machtans. 2010. The effects on lowland habitat, breeding shorebirds and songbirds in the Banks Island Migratory Bird Sancturay Number 1 by the growing colony of Lesser Snow Geese (*Chen caerulescens caerulescens*). Canadian Wildlife Service Occasional Paper No. 118. Environment Canada, Ottawa.
- Kerbes, R. H. 1994. Colonies and numbers of Ross' geese and lesser snow geese in the Queen Maud Gulf Migratory Bird Sanctuary. Canadian Wildlife Service Occasional Paper No. 81.
- Kerbes, R. H., K. M. Meeres, and J.E. Hines (editors). 1999. Distribution, survival, and numbers of Lesser Snow Geese of the Western Canadian Arctic and Wragle Island, Russia. Canadian Wildlife Service Occasional Paper No. 98. Environment Canada, Ottawa.
- Leafloor, J. O., T. J. Moser, and B. D. J. Batt (editors). 2012. Evaluation of special management measures for midcontinent lesser snow geese and Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Ottawa, Ontario.
- Lefebvre, J. 2013. Population estimate for Spring Population of Greater Snow Goose in southern

- Quebec in 2013. Canadian Wildlife Service, Environment Canada, July 2013. 4 pp.
- Melinchuk, R., and J. P. Ryder. 1980. The distribution, fall migration routes and survival of Ross's geese. Wildfowl 31:161–171.
- Moser, T. J. 2001. The status of Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Ottawa, Ontario.
- Moser, T. J., and D. C. Duncan. 2001. Harvest of Ross's geese. Pages 43–54 in T. J. Moser, editor. The status of Ross's geese. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Ottawa, Ontario.
- North American Waterfowl Management Plan, Plan Committee. 2012. North American Waterfowl Management Plan 2012: People Conserving Waterfowl and Wetlands. Canadian Wildlife Service, U.S. Fish and Wildlife Service, Secretaria de Medio Ambiente y Recursos Naturales. 48 pp.
- Reed, E. T., and A. M. Calvert (editors). 2007. Evaluation of special conservation measures for Greater Snow Geese: Report of the Greater Snow Goose Working Group. Arctic Goose Joint Venture Special Publication. Canadian Wildlife Service, Sainte-Foy, Quebec.
- Rockwell, R. F., E. G. Cooch, and S. Brault. 1997. Dynamics of the midcontinent population of lesser snow geese projected impacts of reductions in survival and fertility on population growth rates. Pages 73–100 in Batt, B. D. J. (editor). Arctic ecosystems in peril: report of the Arctic Goose Habitat Working Group. Arctic Goose Joint Venture Special Publication. U.S. Fish and Wildlife Service, Washington, D.C., and Canadian Wildlife Service, Ottawa, Ontario.
- Ryder, J. P. and R. T. Alisauskas. 1995. Ross' goose. Number 162 in A. Poole and F. Gill, editors. The Birds of North America. The Academy of Natural Sciences, Philadelphia, and the American Ornithologists' Union, Washington, D.C.
- Samelius, G. and R. T. Alisauskas. 2009. Habitat alteration by geese at a large arctic goose colony: consequences for lemmings and voles. Canadian Journal of Zoology 87:95–101.
- U.S. Fish and Wildlife Service. 2012. Waterfowl population status, 2012. U.S. Department of the Interior, Washington, D.C.
- Wildlife Habitat Canada. April 2013. News Letterupdate on activities. 2 pp. www.whc.org/en/about/publications/201updates-on-activities.

Appendices

Appendix A. Special Conservation Measures for Fall 2013–2014 Hunting Season

MEASURES IN QUEBEC CONCERNING OVERABUNDANT SPECIES

	Column 1	Column 2	Column 3	
Item	Area	Period during which Snow Geese may be killed	Additional hunting method or equipment	
1.	District A	September 1 to December 16, 2013 May 1 to June 30, 2014	Recorded bird calls(<i>d</i>)(<i>f</i>) Recorded bird calls(<i>d</i>)	
2.	District B	September 14 to December 28, 2013	Recorded bird calls(d)(f)	
3.	Districts C and D	nd September 1 to September 13, 2013 (a), and September 14 to Recorded bird calls(d)(f) December 28, 2013		
		March 1 to May 31, 2014(a)	Recorded bird calls(d)	
4.	District E	September 1 to September 13, 2013 (a), and September 14 to Recorded bird calls(d)(f); batched because 28, 2013 crop area(e)		
		March 1 to May 31, 2014(a)	Recorded bird calls(d); bait(e)	
5.	Districts F	September 6 to September 20, 2013(a), and September 21, 2013, to January 4, 2014	Recorded bird calls(d)(f); bait crop area(e)	
		March 1 to May 31, 2014 (a)(b)(c)	Recorded bird calls(d); bait(e)	
6.	District G	September 28 to December 26, 2013	Recorded bird calls(d)(f)	

⁽a) Hunting and hunting equipment are allowed only on farmland.

NOTE: Hunters interested in participating in the spring conservation harvest of Snow Geese should keep their 2013–2014 federal permits.

⁽b) In District F, no person shall hunt south of the St. Lawrence River and north of the road right-of-way of Route 132 between the western limit of municipality of Montmagny and the eastern limit of Cap-Saint-Ignace municipality, other than in lots 4 598 472 and 2 611 981 in Montmagny municipality.

⁽c) In District F, on the north shore of the St. Lawrence River, no person shall hunt north of the St. Lawrence River and south of a line located at 1000 m north of Highway 40 between Montée St-Laurent and the Maskinongé River. On the south shore of the St. Lawrence River, no person shall hunt south of the St. Lawrence River and north of the railroad right-of-way located near Route 132 between the Nicolet River in the east and Lacerte Road in the west.

⁽d) "Recorded bird calls" refers to bird calls of a species referred to in the heading of column 2.

⁽e) Hunting with bait or in a bait crop area is permitted if the Regional Director has given consent in writing pursuant to section 23.3.

⁽f) Any species of migratory bird for which it is open season may be taken while hunting Snow Geese with recorded Snow Geese calls.

MEASURES IN ONTARIO CONCERNING OVERABUNDANT SPECIES

	Column 1	Column 2	Column 3
Item	Area	Period during which Snow Geese may be killed	Additional hunting method or equipment
1.	Wildlife Management Unit 65	March 1 to May 31, 2014 (a)	Recorded bird calls(b)

⁽a) Hunting and hunting equipment are allowed only on farmland.

NOTE: Hunters interested in participating in the spring conservation harvest of Snow Geese should keep their 2013–2014 federal permits.

MEASURES IN MANITOBA CONCERNING OVERABUNDANT SPECIES

	Column 1	Column 2	Column 3
Item	Area	Period during which Snow Geese may be killed	Additional hunting method or equipment
1.	Zone 1	August 15 to August 31, 2013, and April 1 to June 15, 2014	Recorded bird calls(a)
2.	Zone 2, 3, 4	March 15 to May 31, 2014	Recorded bird calls(a)

⁽a) "Recorded bird calls" refers to bird calls of a species referred to in the heading of column 2.

NOTE: Hunters interested in participating in the spring conservation harvest of Snow Geese should keep their 2013–2014 federal permits.

MEASURES IN SASKATCHEWAN CONCERNING OVERABUNDANT SPECIES

	Column 1	Column 2	Column 3
Item	Area	Period during which Snow Geese may be killed	Additional hunting method or equipment
1.	East of 106° W Longitude	April 1 to May 31, 2014	Recorded bird calls(a)
2.	West of 106° W Longitude	April 1 to April 30, 2014	Recorded bird calls(a)

⁽a) "Recorded bird calls" refers to bird calls of a species referred to in the heading of column 2.

NOTE: Hunters interested in participating in the conservation harvest of Snow Geese should keep their 2013–2014 federal permits.

⁽b) "Recorded bird calls" refers to bird calls of a species referred to in the heading of column 2.

MEASURES IN NUNAVUT CONCERNING OVERABUNDANT SPECIES

	Column 1	Column 2	Column 3
Item	Area	Period during which Snow Geese may be killed	Additional hunting method or equipment
1.	Throughout Nunavut	August 15 to August 31, 2013	Recorded bird calls(a)(b)
2.	Throughout Nunavut	May 1 to June 30, 2014	Recorded bird calls(a)(b)

⁽a) "Recorded bird calls" refers to bird calls of a species referred to in the heading of column 2.

NOTE: Hunters interested in participating in the conservation harvest of Snow Geese should keep their 2013–2014 federal permits.

⁽b) Snow Goose call recordings may be used but if used with decoys, the decoys may only represent white or blue phase Snow Geese, or any combination of them.

Appendix B. Objectives and Guidelines for the Establishment of National Regulations for Migratory Game Bird Hunting

(Revised June 1999 and updated December 2001 by the Canadian Wildlife Service Executive Committee)

A. Description of Regulations

The Migratory Birds Regulations are part of the regulations respecting the protection of migratory birds in general, as mandated by the Migratory Birds Convention. According to the Migratory Birds Convention Act, 1994, the Governor in Council may make regulations providing for:

- 1. The periods during which, or the geographic areas in which, migratory birds may be killed.
- 2. The species and number of migratory game birds that a person may kill in any period when doing so is permitted by the regulation.
- 3. The manner in which migratory game birds may be killed and the equipment that may be used.
- 4. The periods in each year during which a person may have in possession migratory game birds killed during the season when the taking of such birds was legal, and the number of birds that may be possessed.

This document deals with these four aspects of regulation, although the *Migratory Birds Regulations* deal with other areas as well.

B. Guiding Principles

Guiding principles for migratory bird hunting regulations include those laid out in the Guidelines for Wildlife Policy in Canada as approved by the Wildlife Ministers at the Wildlife Ministers Conference, 30 September 1982. In particular, the most relevant principles are:

- 1. The maintenance of viable natural wildlife stocks always takes precedence over their use.
- 2. Canadians are temporary custodians, not the owners, of their wildlife heritage.
- 3. Canadians are free to enjoy and use wildlife in Canada, subject to laws aimed at securing its sustainable enjoyment and use.
- 4. The cost of management essential to preserving viable populations of wildlife should be borne by all Canadians; special management measures required to permit intensive uses should be supported by the users.
- 5. Wildlife has intrinsic, social and economic values, but wildlife sometimes causes problems that require management.
- 6. Conservation of wildlife relies upon a well-informed public.

C. Objectives of the Migratory Game Birds Hunting Regulations

- 1. To provide an opportunity for Canadians to hunt migratory game birds, by establishing hunting seasons. Guidelines for hunting regulations are described in Section D. Briefly, regulations should be based on a number of features specific to the geographic area under consideration. Factors such as the timing of arrival and departure of migrating birds, the status of local breeding populations, fledging of local broods and completion of the moult of successfully breeding females, and other special issues such as the status of species, should be used to determine the most effective hunting regulations. Sometimes regulations may need to be based on the species of highest conservation concern.
- 2. To manage the take of migratory game birds at levels compatible with the species' ability to sustain healthy populations consistent with the available habitat throughout their range.
- 3. To conserve the genetic diversity within migratory game bird populations.

- 4. To provide hunting opportunity in various parts of Canada within the limits imposed by the abundance, migration and distribution patterns of migratory bird populations, and with due respect for the traditional use of the migratory game bird resource in Canada.
- 5. To limit the accidental killing of a migratory game bird species requiring protection because of poor population status, where there is a reasonable possibility that a hunter might confuse that species with another for which there is an open season.
- 6. To assist, at times and in specific locations, in the prevention of damage to natural habitat or depredation of agricultural crops by migratory game birds.

D. Guidelines for the Regulations on Migratory Game Bird Hunting

- 1. Regulations shall be established according to the requirements of the *Migratory Birds Convention* and the *Migratory Birds Convention Act*, 1994.
- 2. Regulations shall address the principles of Section B and the objectives of Section C.
- 3. Unless needs dictate otherwise, hunting regulations will be changed as little as possible from year to year.
- 4. Regulations should be simple and readily enforceable.
- 5. Where a conflict arises between allocation of harvest among jurisdictions and the conservation of migratory game bird populations, the conservation objective shall take precedence.
- 6. When uncertainty exists about the status of a migratory game bird population, a precautionary approach will be taken in establishing sustainable hunting regulations.
- 7. Hunting regulations may not discriminate among Canadian hunters based on their province or territory of residence. This guideline does not preclude recognition of Aboriginal rights.
- 8. Regulations should be consistent in jurisdictions where important concentration areas for staging waterfowl straddle borders.
- 9. Where possible, regional, national and international harvest strategies will be developed among management agencies that share populations. Regulations will be designed to meet mutual targets for harvest, harvest rate or population size.
- 10. Specific regulation changes will be developed through a process of co-management and public consultation with other interested groups and individuals.
- 11. Hunting regulations should be consistent with terms of agreements in Aboriginal land claim settlements.

E. Regulatory Process

Regulations may be established each year in one of two ways: selection of a regulatory package from a pre-established set of possible packages, or through an annual regulatory consultation process.

Pre-established sets of regulatory alternatives:

Regulatory alternatives may be pre-established according to the guidelines outlined in section D, with the selection made in any year based on a predetermined set of conditions. For example, a set of three regulatory packages with decreasing harvest rates could be described: liberal, moderate and restrictive. The criteria for annual selection among the alternatives could be based on the results of population surveys. This method would reduce the time required to conduct the usual annual process, simplify the implementation of multi-jurisdictional harvest strategies, and increase the predictability of regulations.

Annual regulatory process:

The Minister of the Environment must be in a position to proceed with any changes to the *Migratory Birds Regulations* for the upcoming hunting season by early June. To ensure that the regulations are made with the best possible advice, a broad process of consultation must be carried out. Reports produced as part of this process may be obtained from Regional Directors, Canadian Wildlife Service, or the Director of Population and Conservation Management Division at the national office of the Canadian Wildlife Service.

1. The Canadian Wildlife Service, national office, issues a status report on migratory game bird

- populations at the beginning of December. This report describes the biological information available to determine the status of each population.
- Regional officials (biologists and management) of the Canadian Wildlife Service and provincial and territorial wildlife officials will consult with non-governmental organizations and interested individuals on issues related to hunting regulations for the coming season. To ensure that all parties have access to the best possible biological information, the *Population Status of Migratory Game Birds in Canada* report may be used as an aid.
- 3. The initial suggestions for regulation changes will be developed through regional consultation processes. These processes may vary among regions, but should include active participation by provincial and territorial wildlife agencies, wildlife co-management boards and affected stakeholders. The changes, with rationale and predicted effect (Section F), are described in a regulation report issued at the beginning of January from the national office entitled *Proposals to Amend the Canadian Migratory Birds Regulations*. This report allows inter-regional and international consideration of proposed changes.
- 4. Public and organizational comments on the proposals outlined in the *Proposals to Amend the Canadian Migratory Birds Regulations* report should be sent to the appropriate Regional Director, or the Director of Population and Conservation Management Division at the national office of the Canadian Wildlife Service.
- 5. Final regulation proposals, incorporating input from the consultations, are submitted from the Regional Directors to the Director of Wildlife Program Support Division at the national office of the Canadian Wildlife Service, by the end of February.
- 6. The regulation proposals are moved, by the national office, through the regulatory process for consideration by the government beginning in June.
- 7. Population surveys are carried out throughout the year. From time to time, these surveys may show an unexpected change in migratory game bird populations that require a sudden revision to the national regulation proposals.
- 8. The final regulations, as approved by the Governor-in-Council, are described in a report entitled *Migratory Game Bird Hunting Regulations in Canada*, which is distributed to all involved parties in August. Each purchaser of a migratory game bird hunting permit receives a summary of the regulations for that province.

F. Items to Be Addressed in Regulatory Proposals

Proposals to change migratory game bird hunting regulations should address the following questions:

- 1. What is the goal of the regulatory change?
- 2. How does the change address the objectives and guidelines set out in this document?
- 3. What is the predicted effect of the proposal? An analysis based on existing data sources should be included.
- 4. How will the actual effect of the regulatory change be measured?

The proposals should be as concise as possible, while still including the required elements. A simplified rationale would apply for regulations that carry out previously negotiated harvest strategies and agreements.

Appendix C. Migratory Birds Hunting Regulations Summaries by Province and Territory – 2013–2014 Hunting Season

See the following pages for the summaries. The summaries are also available on the CWS national website: www.ec.gc.ca/rcom-mbhr/default.asp?lang=En&n=8fac341c-1

www.ec.gc.ca

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