

MR-18-05

LICENSED HARVEST TRENDS IN YUKON
1980 to 2014

Yukon

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MINISTER'S MESSAGE



Harvesting animals has been an integral way of life in the Yukon, from the beginning to now. Being out on the land—hunting—both inspires and feeds us. There is a shared and inherent responsibility on everyone to be considerate of future generations, ensuring that hunting today allows for hunting tomorrow.

This harvest trends report provides an overview of licensed harvest trends in Yukon over the last 35 years. Understanding harvest dynamics helps us to monitor wildlife populations, recognize hunting patterns, and identify information gaps. This information generates collective awareness and appreciation of our wilderness values. I encourage you to read this report, share it with others, and be a part of ensuring sustainable wildlife management in Yukon.

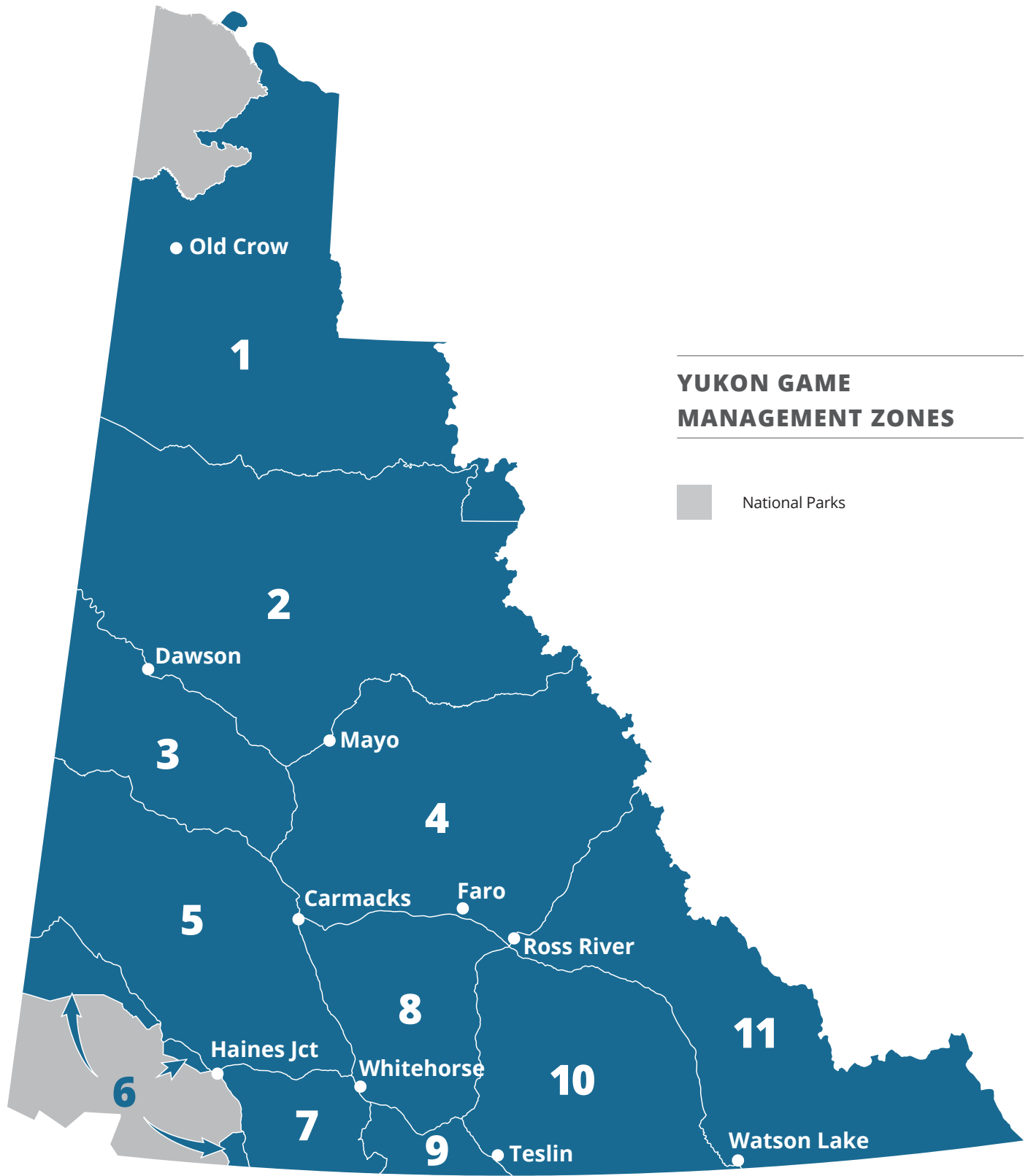
A handwritten signature in black ink, appearing to read 'P. Frost'.

Pauline Frost
Minister of Environment

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**YUKON GAME
MANAGEMENT ZONES**

■ National Parks

Note that zone 6 is the Kluane Wildlife Sanctuary and is closed to all licensed hunting except the Kluane sheep permit hunt.

INTRODUCTION

Yukon's wildlife are integral to the lives and cultures of Yukoners. Effective stewardship of the territory's wildlife demands partnerships among governments and organizations who share the responsibility to safeguard our natural environment. In this document, we provide a 35-year overview of wildlife harvest trends in Yukon from 1980 to 2014. This retrospective analysis identifies how the harvest of Yukon wildlife has changed over time and provides a context for all partners managing wildlife harvest into the future.

This document focuses on the commonly hunted large mammals: moose, caribou, thinhorn sheep, wood bison, black bears and grizzly bears. For each species, several trends are examined: number of hunters, number of animals harvested, the proportion of hunters with a seal that harvested an animal (success rate), and when and where harvest occurred. We also examine the age composition for species with required harvest submissions of the skull or incisor bar (sheep, bison, black bears, and grizzly bears). This document presents harvest information in a way that is easy to understand and does not attempt to explain observed trends in recognition of the many contributing factors that can influence these trends.

Data in this document come from licensed hunters who are required to obtain licences and seals, and report their harvest. This document does not include information from First Nation and Inuvialuit hunters except in the case of bison, as all hunters are required to obtain licences and seals for this reintroduced species. Some First Nation governments gather harvest information from their citizens and share summarized harvest data with the Department of Environment; however, First Nation and Inuvialuit hunters are not required to obtain licences and report their harvest to the department for most big game species when hunting within their traditional territory. Since this information is not systematically available for all regions in Yukon, it was not included in this document. Continuing to share information between the Department of Environment, First Nation governments and Inuvialuit will help provide a more complete and reliable account of all harvest, which is essential for effective wildlife management.

LICENSED HUNTER SUMMARY

From 1980 to 2014, the number of people obtaining hunting licences has remained fairly constant despite an increase in Yukon's population (Figure 1). The proportion of Yukon's public that obtained a big game hunting licence was highest in 1981 at 17% and has been stable at around 10% since 1991. On average, 3,844 big game hunting licences were purchased each year with Yukon residents obtaining 3,265 licences (85%) and non-residents obtaining 579 licences (15%). The majority of non-resident hunters were guided by outfitters (511 of 579, or 88%), and the remaining non-resident hunters were guided by a Yukon resident with a special guide licence (68 of 579, or 12%).



Photo: Peter Mather

Hunter Effort Surveys

Thank you to all of the hunters who have filled out a hunter effort survey in the past few years. These surveys will be repeated for certain species over the coming years which will help identify changes in hunter effort over time. Trends play a critical role in informing decisions about species management and hunting opportunities.

FIGURE 1 — Number of big game hunting licences and Yukon census population from 1980 to 2014 (Yukon Bureau of Statistics).

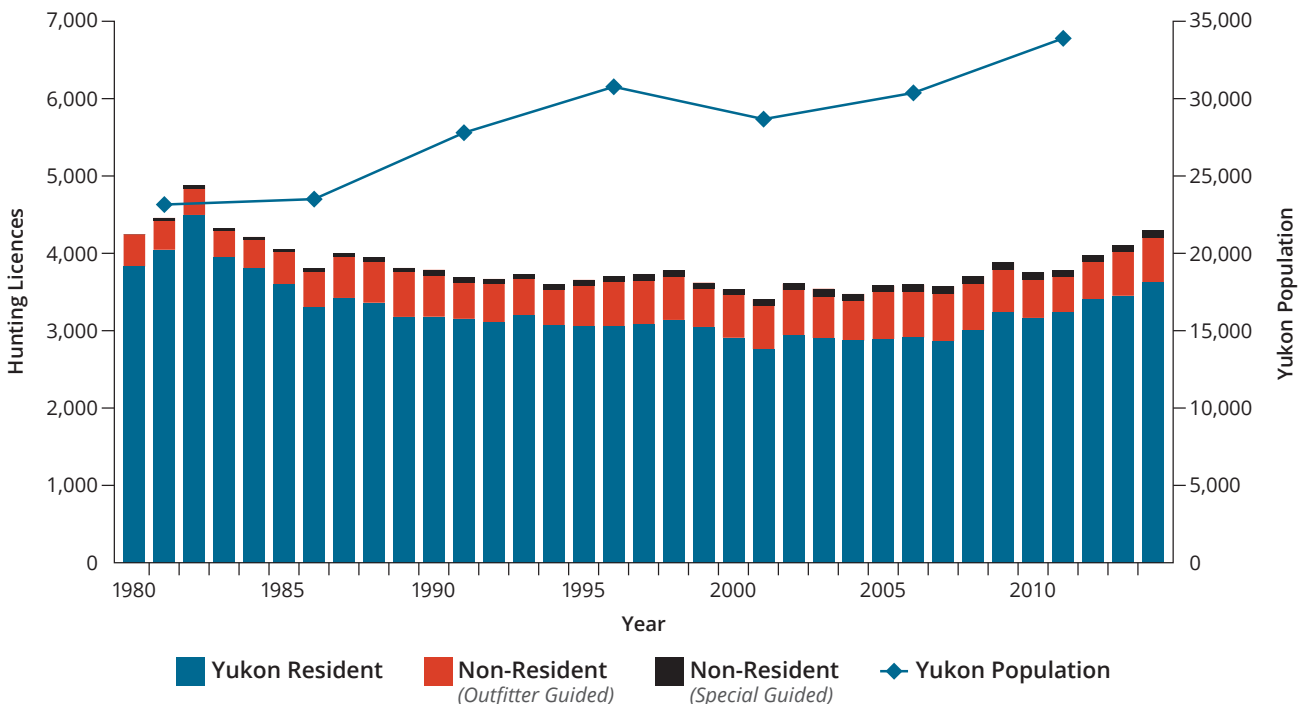
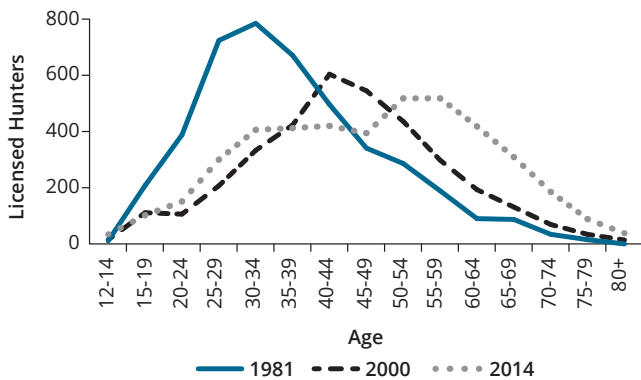
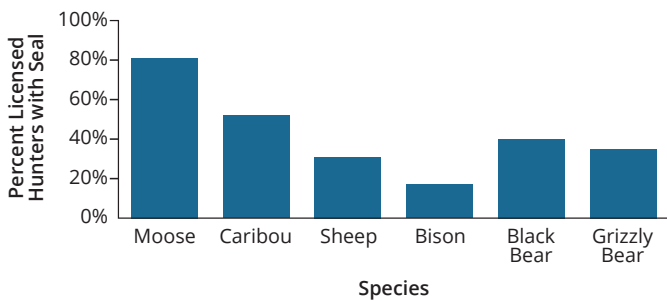


FIGURE 2 — Age demographics of Yukon licensed hunters in 1981, 2000, and 2014.



In 1981, the average Yukon hunter was a 37-year-old resident male (Figure 2). By 2014, the age of the average Yukon hunter increased to 48. Throughout the last 35 years, 10% of licensed hunters were female.

FIGURE 3 — Average percentage of licensed hunters in Yukon that had a seal for moose, caribou, sheep, bison, black bears and grizzly bears from 2005 to 2014.



Licensed hunters are required to obtain a big game seal for each animal they plan to hunt. Moose are the most sought after species. In recent years (Figure 3), 81% of hunters obtained a moose seal, followed by caribou (52%), black bear (40%), grizzly bear (35%), sheep (31%), and bison (17%).



Photo: Shawn Hughes

Non-Resident Hunters and Special Guide Licences

Hunters that are not Yukon residents must be guided when hunting big game animals. Most non-resident hunters are guided by registered outfitters. A special guide licence allows a Yukon resident hunter to guide a Canadian citizen or permanent resident that is not a resident of Yukon. This guiding opportunity is limited and accounts for fewer than 2% of hunting licences sold in Yukon each year. A non-resident hunter is eligible to be special guided once every three years and is able to hunt moose, caribou, black bears, coyotes, and wolves (as of 2014). The harvest of moose, caribou, and black bears by special guided hunters is described in text on pages 13, 18, and 31. In the remainder of this document, special guided and outfitter guided hunters are grouped together as non-resident hunters.

TIMING OF HARVEST

The timing of wildlife harvest varies from species to species (Figure 4). A hunting licence year runs from April 1st to March 31st the following year. The fall hunting season generally runs from August to the end of October, and is open for moose, caribou, and sheep. A winter hunting season runs from November to the end of January for the Porcupine caribou, a barren-ground herd. Bison hunting opportunities are available from September to the end of March. The hunting season for black and grizzly bears is open in the spring (mid-April to the third week of June) and the fall (August to mid-November). The timing of harvest for each species was calculated by combining harvest records from 2005 to 2014 because this time period had consistent hunting season dates relative to the past 35 years. Throughout this document a year represents the licence year (for example 2014 is equivalent to the 2014-2015 licence year).

MOOSE

Seventy-nine percent (79%) of moose harvest occurred in September. More than one third (36%) of the harvest occurred during the third week of September and this timing usually overlaps with the moose rutting season. The most recent moose hunter effort survey in 2014 supported this trend and found that the majority of hunting trips occur in September (Dametto and Sawatzky 2014).

CARIBOU

The majority of barren-ground caribou harvest (86%) occurred in October and November, when the Porcupine caribou herd is accessible from the Dempster Highway. The harvest of Northern Mountain caribou herds occurred primarily in August (38%) and September (51%). The most recent caribou hunter effort survey supported the trends seen in Northern Mountain caribou harvest, with the majority of hunts occurring in August and September (Environment Yukon, unpublished data). This hunter effort survey was conducted in 2010, which was a year when few Porcupine caribou were accessible from the Dempster Highway.

SHEEP

Sheep are generally harvested early in the hunting season. Seventy-seven percent (77%) of sheep harvest occurred in August, with more than one third (34%) of the sheep harvested during the first week of August. The most recent sheep hunter effort survey in 2012 supported this trend and found that the majority of hunts occur in August (Westfall 2013).

BISON

The majority of bison harvest occurred during the winter hunting season (87% from November to March), with nearly half (44%) of the bison harvested in March. The most recent bison hunter effort survey in 2015 supported this trend and found that the majority of hunts occur during the winter season with March being the most popular month (Kanary and Sawatzky 2015).

BLACK BEARS

More than three quarters of black bear harvest (76%) occurred during the spring season, with nearly two-thirds (64%) of the black bears harvested in May. Based on the most recent black bear hunter effort survey in 2013, May is the most popular month for hunts; however, more than half of hunts occur in the fall season (Sawatzky 2013).

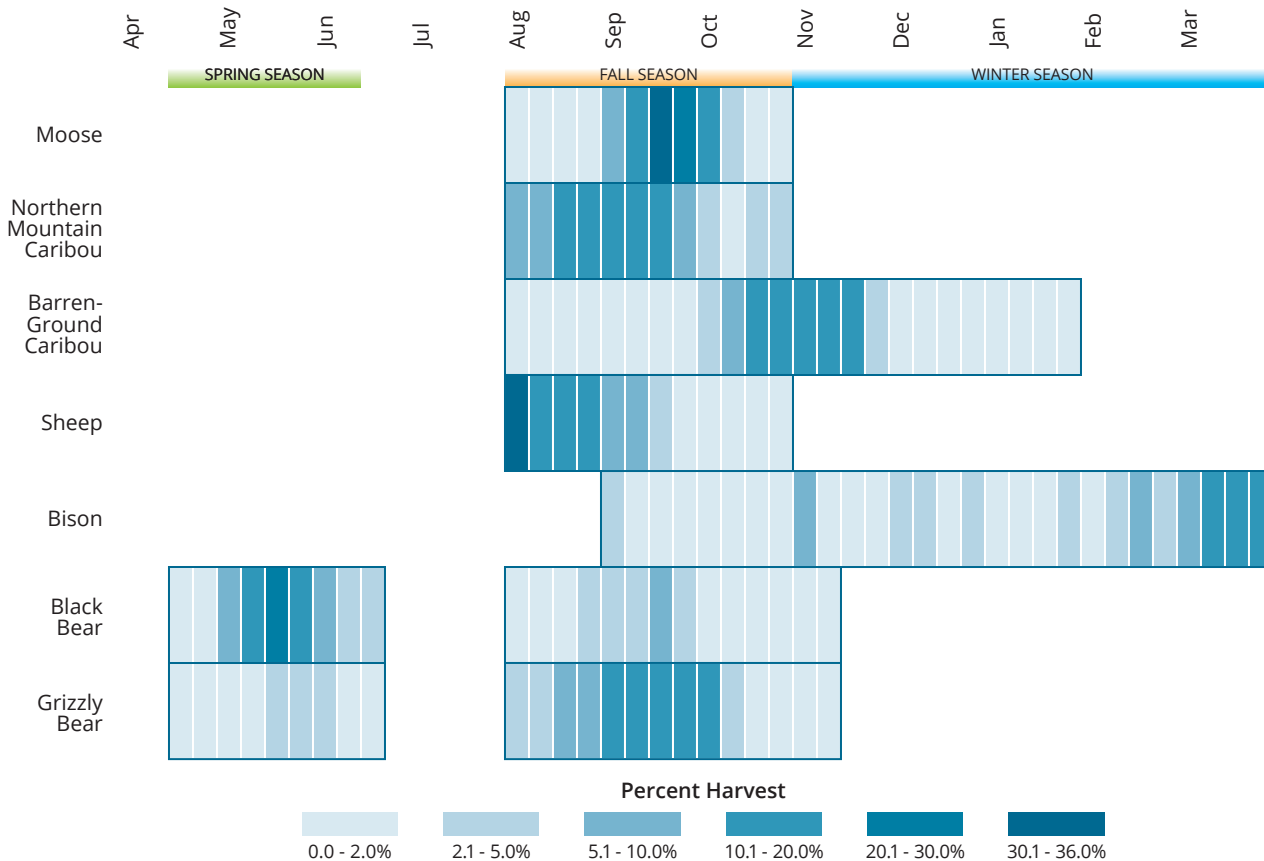
GRIZZLY BEARS

The majority of grizzly bear harvest (86%) occurred during the fall season, with half (52%) of the grizzly bears harvested in September. Although grizzly bears are generally harvested during the fall season, May is the most popular month for grizzly bear hunts based on the most recent grizzly bear hunter effort survey in 2013 (Sawatzky 2013). September is the second most popular month for grizzly bear hunts and half of grizzly bear hunts occur during the fall season (Sawatzky 2013).



Photo: archbould.com

FIGURE 4 — Percentage of wildlife harvested by week for licensed hunters in Yukon from 2005 to 2014.



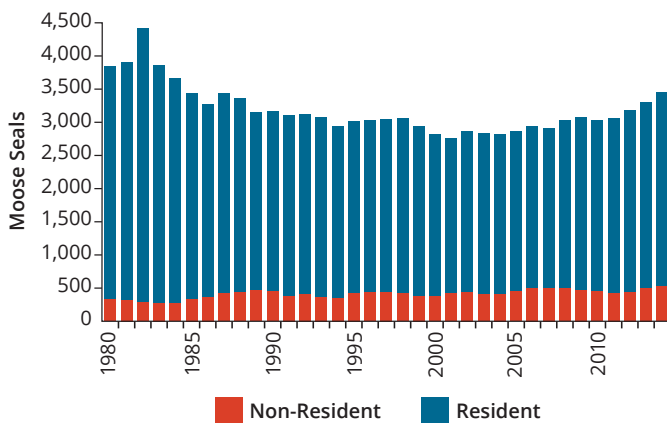
HARVEST BY SPECIES

MOOSE

There are an estimated 70,000 moose in Yukon. Moose densities throughout Yukon generally range between 100 and 250 moose for every 1,000 km² of suitable moose habitat, although densities in excess of 400 moose for every 1,000 km² have been recorded. Moose are currently managed by moose management units that encompass, to the best extent possible, biologically distinct moose populations (Environment Yukon 2016a). Changes to

hunting regulations over the years have been implemented to address conservation concerns, including varying season dates, placing game management subzones on permit, implementing threshold hunts, and closing hunting in certain areas. In 1984, licensed hunting was closed for cow moose. Licensed hunters can harvest one bull moose each year from an open subzone or when drawn for a permit in a specific subzone.

FIGURE 5 — Number of moose seals in Yukon obtained by resident and non-resident hunters from 1980 to 2014.



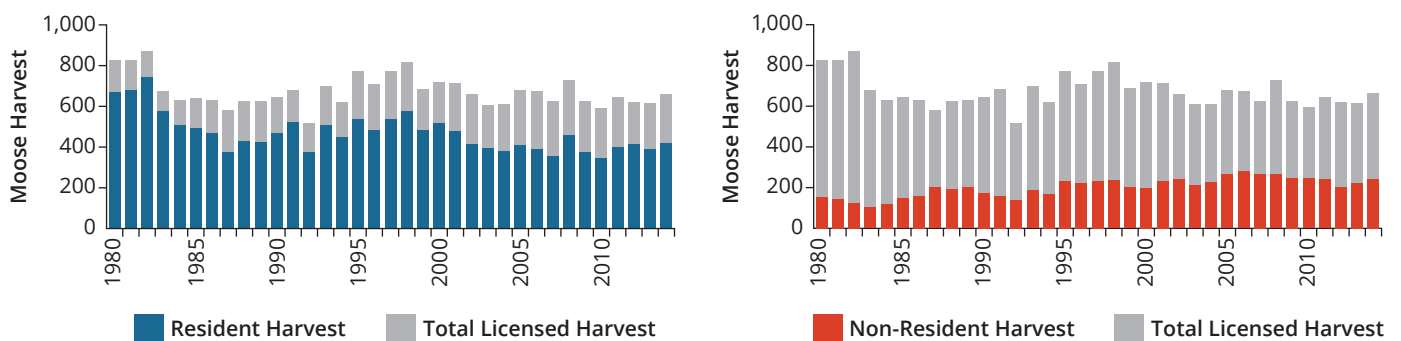
Hunters by Year

On average, licensed hunters purchased 3,196 moose seals each year (Figure 5). Eighty-seven percent (87%) of those seals were obtained by resident hunters. The annual number of moose seals obtained by resident hunters closely matched total big game licence sales, which declined in the 1980s and increased beginning in 2010. Based on the 2014 hunter effort survey, 70% of resident moose seal holders actively hunted moose (Dametto and Sawatzky 2014).



Photo: archbould.com

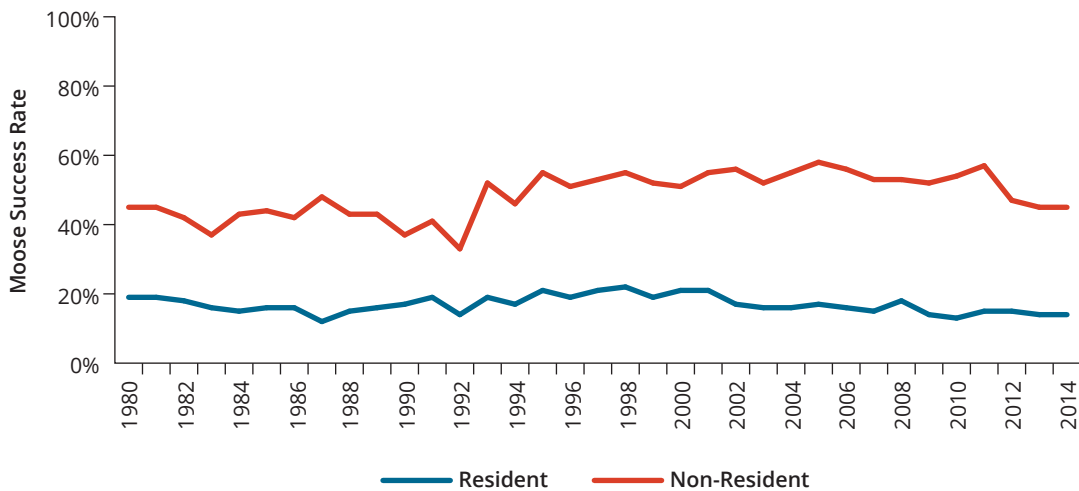
FIGURE 6 — Number of moose harvested in Yukon by resident and non-resident hunters from 1980 to 2014.



Harvest by Year

More moose are harvested per year in Yukon than any other big game species. On average, 674 moose were harvested each year; 470 (70%) by resident hunters and 204 (30%) by non-resident hunters (including 15 by special guided hunters; Figure 6). The cow hunting closure in 1984 resulted in a bull-only licensed harvest and the number of moose harvested each year has remained relatively the same since.

FIGURE 7 — Percentage of hunters with a moose seal that successfully harvested a moose from 1980 to 2014.




Harvest Success Rate

On average, 17% of resident hunters and 48% of non-resident hunters with a moose seal were successful in harvesting a moose (Figure 7). The success rate of resident hunters has remained relatively the same, whereas the success rate of non-resident hunters increased from 43% before the mid-1990s to 53% after the mid-1990s.

Harvest by Game Management Zone

See Figure 8 for moose harvest trends by game management zone. From 2010 to 2014, licensed harvest rates, meaning the percentage of the estimated moose population harvested annually by licensed hunters, ranged from 0 to 2.5%. Licensed harvest rates are generally higher in easily accessible areas. *Science-based guidelines for management of moose in Yukon* (Environment Yukon 2016a) specify that a total harvest rate (including harvest by First Nations) of 10% of the adult bull population is generally sustainable in areas where survey information is available. In areas that have not been surveyed, recommended harvest rates are based on estimated population densities. In these areas, a total harvest rate of 2 to 3% of the estimated population is generally sustainable (estimated population densities from 145 to 180 moose per 1,000 km²). Sustainable harvest rates are lower in areas with lower moose densities. Higher harvest rates may be considered in areas with higher moose densities.



Moose Management Guidelines

In 2016, the Department of Environment released *Science-based guidelines for management of moose in Yukon*. These guidelines provide a consistent framework for monitoring and harvest management decisions specific to moose populations in Yukon. Wildlife managers consider these guidelines along with traditional and local knowledge, as well as First Nation and Inuvialuit perspectives when making management decisions related to harvest.

Photo: Hans G. Pfoff

FIGURE 8 — Moose harvest by game management zone (GMZ) from 1980 to 2014. Note that zone 6 is not shown because it is closed to moose hunting.

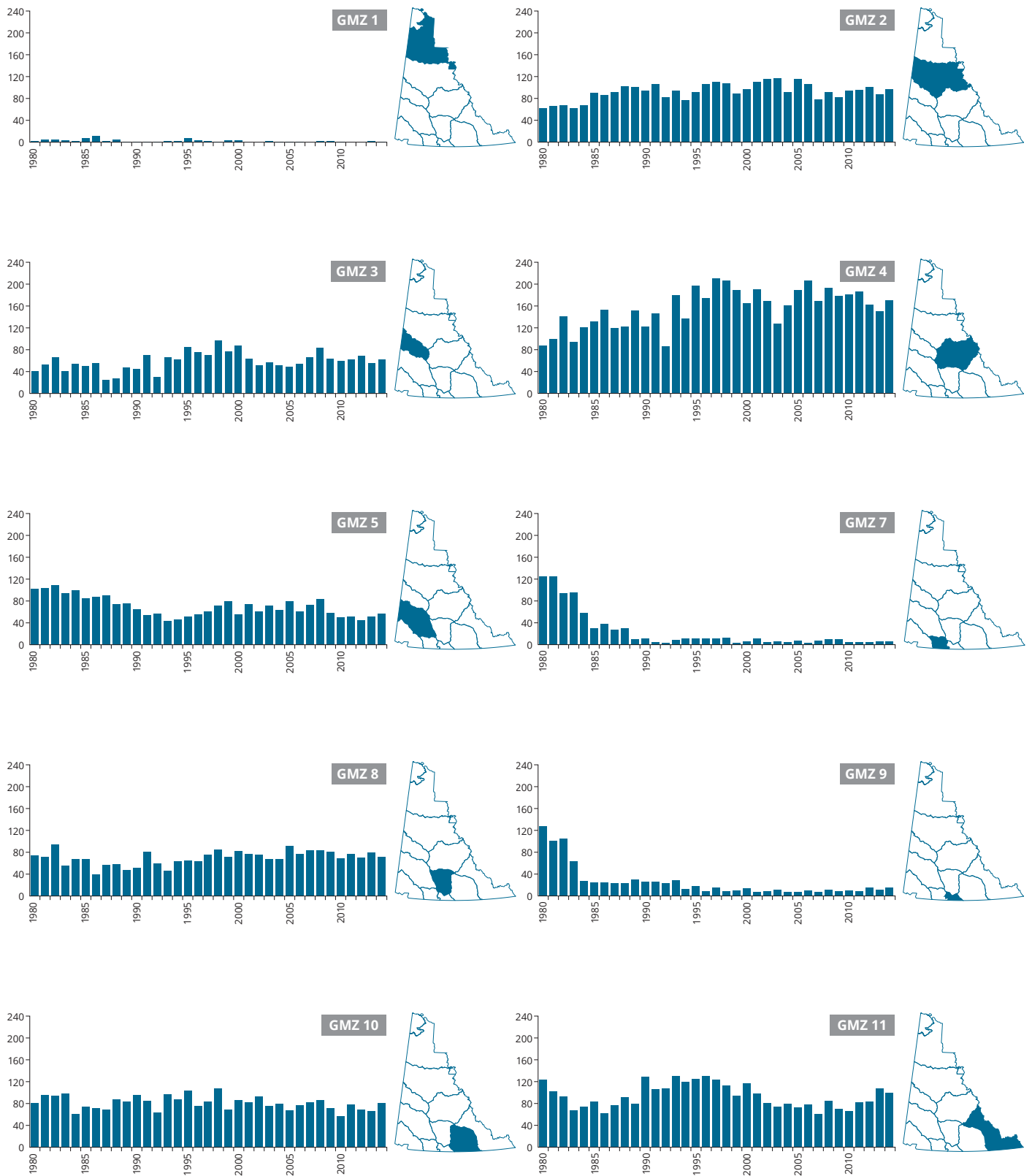




Photo: archbould.com

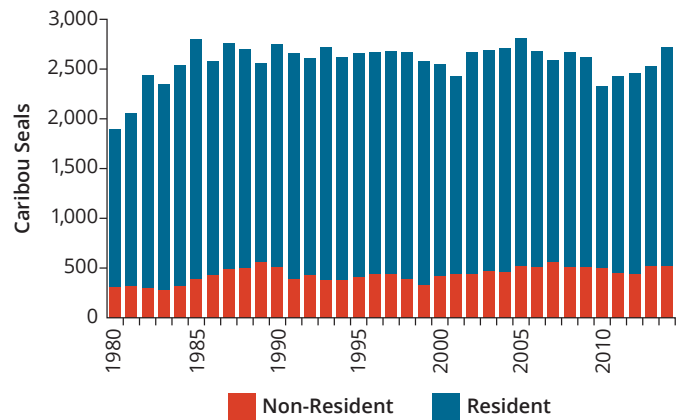
CARIBOU

There are an estimated 30,000 to 35,000 Northern Mountain caribou and 250,000 to 285,000 barren-ground, Nelchina and Fortymile caribou that range in Yukon. Caribou are managed by herd, several of which are transboundary (Figure 10). In Yukon, there are 26 Northern Mountain caribou herds, and one migratory barren-ground caribou herd (Porcupine). The Nelchina and Fortymile herds were grouped as barren-ground caribou during the 35-year period of this report and as such, their harvest numbers are included in the barren-ground data. These two herds are now considered independent from barren-ground caribou.

Northern Mountain caribou were listed nationally as a species of special concern in 2005 under Canada's *Species at Risk Act*. In 2016, barren-ground caribou were assessed as threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

Changes to hunting regulations over the years have been implemented to address conservation concerns, including varying season dates and bag limits, placing game management subzones on permit, and closing hunting in certain areas to allow for the recovery of specific herds. In the 1990s, hunting was closed for several Northern Mountain herds in southern Yukon (Chisana Caribou Herd Working Group 2012, Southern Lakes Wildlife Coordinating Committee 2012). By 1987, licensed hunting of female Northern Mountain caribou was closed for all herds. Licensed cow hunting for the Porcupine caribou herd closed in 2010. Licensed hunters are limited to a territory-wide bag limit of two bull caribou each year, they can harvest one Northern Mountain caribou and one Porcupine caribou, or two Porcupine caribou.

FIGURE 9 — Number of caribou seals in Yukon obtained by resident and non-resident hunters from 1980 to 2014.



Hunters by Year

On average, licensed hunters purchased 2,576 caribou seals each year (Figure 9). Eighty-three percent (83%) of those seals were obtained by resident hunters. The number of obtained seals remained relatively the same since the mid-1980s. Based on the 2010 hunter effort survey, 30% of resident caribou seal holders actively hunted caribou (Environment Yukon, unpublished data).

FIGURE 10 — Caribou herd ranges in Yukon as of 2014.

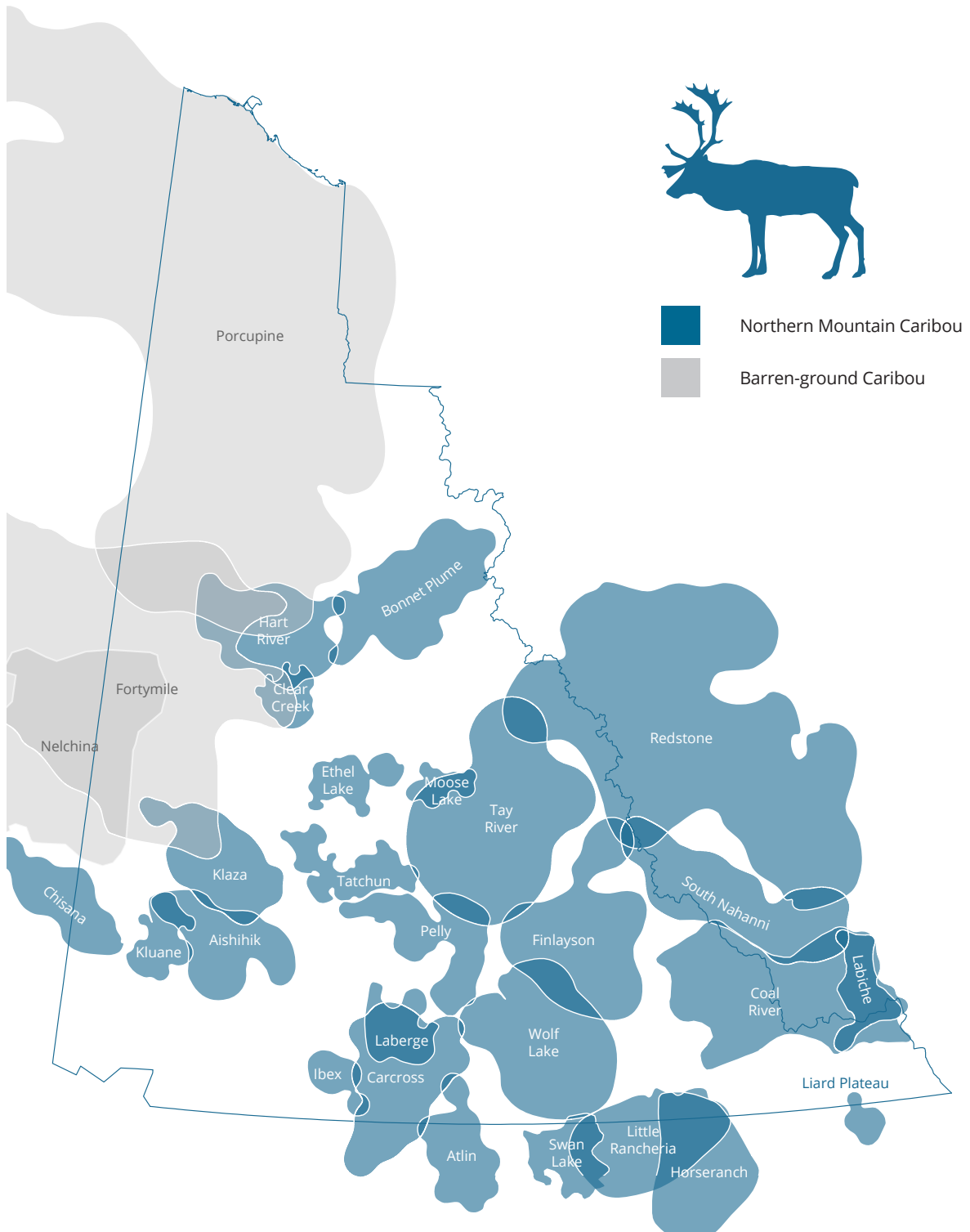
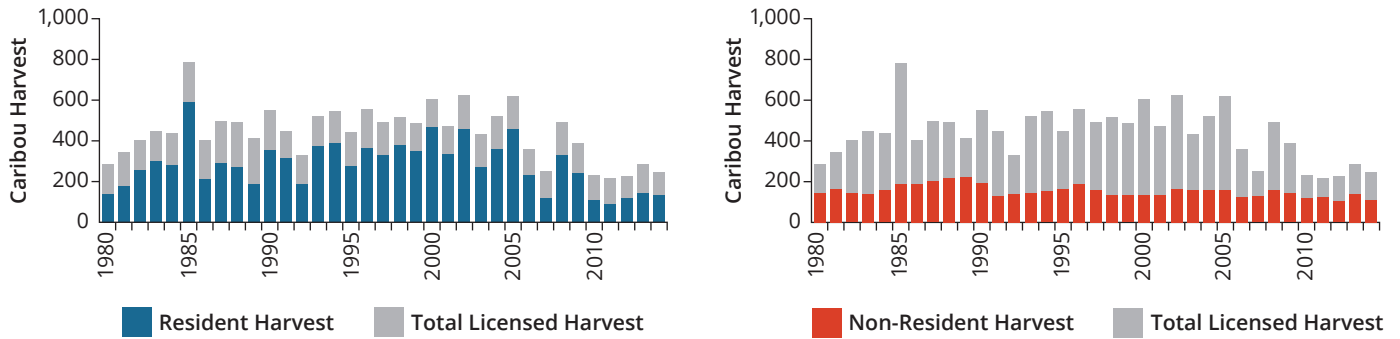


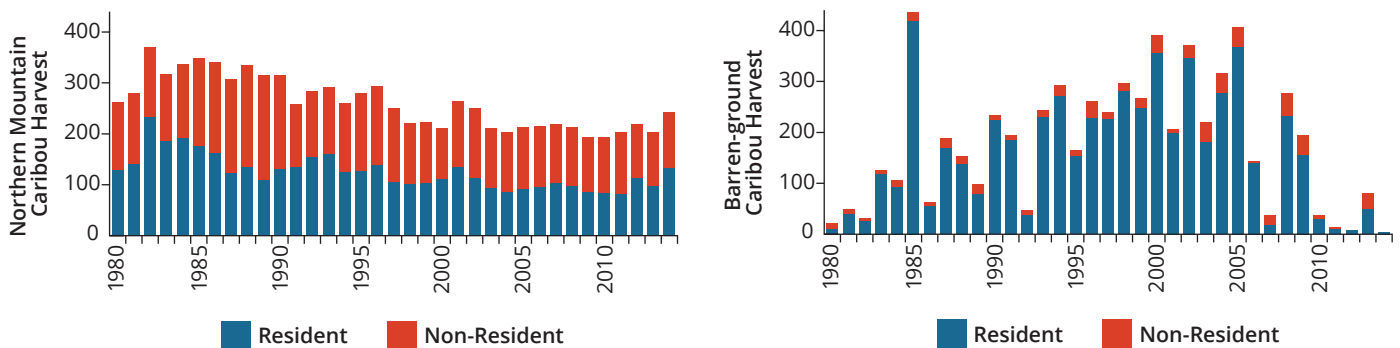
FIGURE 11 — Number of caribou harvested in Yukon by resident and non-resident hunters from 1980 to 2014.



Harvest by Year

On average, 439 caribou were harvested annually; 284 (65%) by resident hunters and 155 (35%) by non-resident hunters (including 15 by special guided hunters; Figure 11).

FIGURE 12 — Number of Northern Mountain and barren-ground caribou harvested in Yukon by resident and non-resident hunters from 1980 to 2014.



Northern Mountain Caribou

On average, 261 Northern Mountain caribou were harvested each year; 125 (48%) by residents hunters and 136 (52%) by non-residents hunters (Figure 12). Approximately 70 fewer caribou were harvested per year from 2000 to 2014 compared to 1980 to 1999.

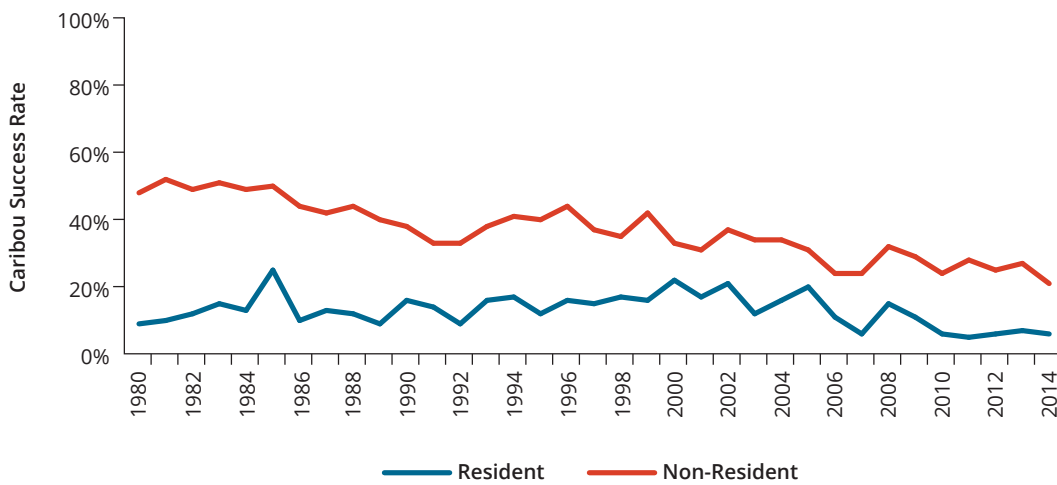
Barren-ground Caribou

On average, 178 barren-ground caribou were harvested each year; 160 (90%) by resident hunters and 18 (10%) by non-resident hunters. The number of harvested caribou has fluctuated between years based on the accessibility of the Porcupine caribou herd (Figure 12). The smallest number of caribou harvested in any year by licensed hunters occurred in 2014 (4 caribou) and the largest harvest occurred in 1985 (418 caribou).



Photo: archbould.com

FIGURE 13 — Percentage of hunters with a caribou seal that successfully harvested a caribou from 1980 to 2014.



Harvest Success Rate

On average, 13% of resident hunters and 37% of non-resident hunters with a caribou seal were successful in harvesting a caribou (Figure 13). The success rate of resident hunters varied from year to year, whereas the success rate of non-resident hunters declined from 50% in the early 1980s to 25% in the early 2010s.

Harvest by Game Management Zone

See Figure 14 for caribou harvest trends by game management zone. Most of the caribou harvest occurred in game management zone 2, which is directly related to the availability of the Porcupine caribou herd. From 2005 to 2014, licensed harvest rates of caribou herds ranged from 0 to 1.7% in Yukon.

Science-based guidelines for management of Northern Mountain caribou in Yukon (Environment Yukon 2016b) specify that a total harvest (including harvest by First Nations) up to 3 to 4% of the estimated population is generally sustainable for herds that are increasing. Harvest rate recommendations are more conservative for Northern Mountain herds with stable (up to 2%) and decreasing (up to 1%) population trends. Harvest rates are below 0.5% for 12 Northern Mountain herds. The hunting of many of these herds is restricted to permits or is closed.

Licensed harvest rates are below 0.5% for the Porcupine caribou herd. *A Harvest management plan for the Porcupine caribou herd in Canada* (Porcupine Caribou Management Board 2010) coordinates management actions for the Porcupine caribou herd's conservation. In recent years, the Porcupine caribou herd was not easily accessible to many communities in its range.

A Fortymile caribou herd harvest plan (Harvest Management Coalition 2012) coordinates management actions for the Fortymile caribou herd's conservation and allocates 35% of the harvest to Yukon hunters. The Yukon government and the Tr'ondëk Hwëch'in First Nation have agreed not to harvest the herd to allow the population to recover and reoccupy its former range in Yukon. Thus, game management subzones are closed to licensed harvest within the Fortymile caribou range to protect the herd. The Tr'ondëk Hwëch'in First Nation requests its citizens to not hunt the herd.



Northern Mountain Caribou Management Guidelines

In 2016, the Department of Environment released *Science-based guidelines for management of Northern Mountain caribou in Yukon*. These guidelines provide a consistent framework for monitoring and harvest management decisions specific to caribou populations in Yukon. Wildlife managers consider these guidelines along with traditional and local knowledge, as well as First Nation and Inuvialuit perspectives when making management decisions related to harvest.

FIGURE 14 — Caribou harvest by game management zone (GMZ) from 1980 to 2014. Note that zone 6 is not shown because it is closed to caribou hunting.

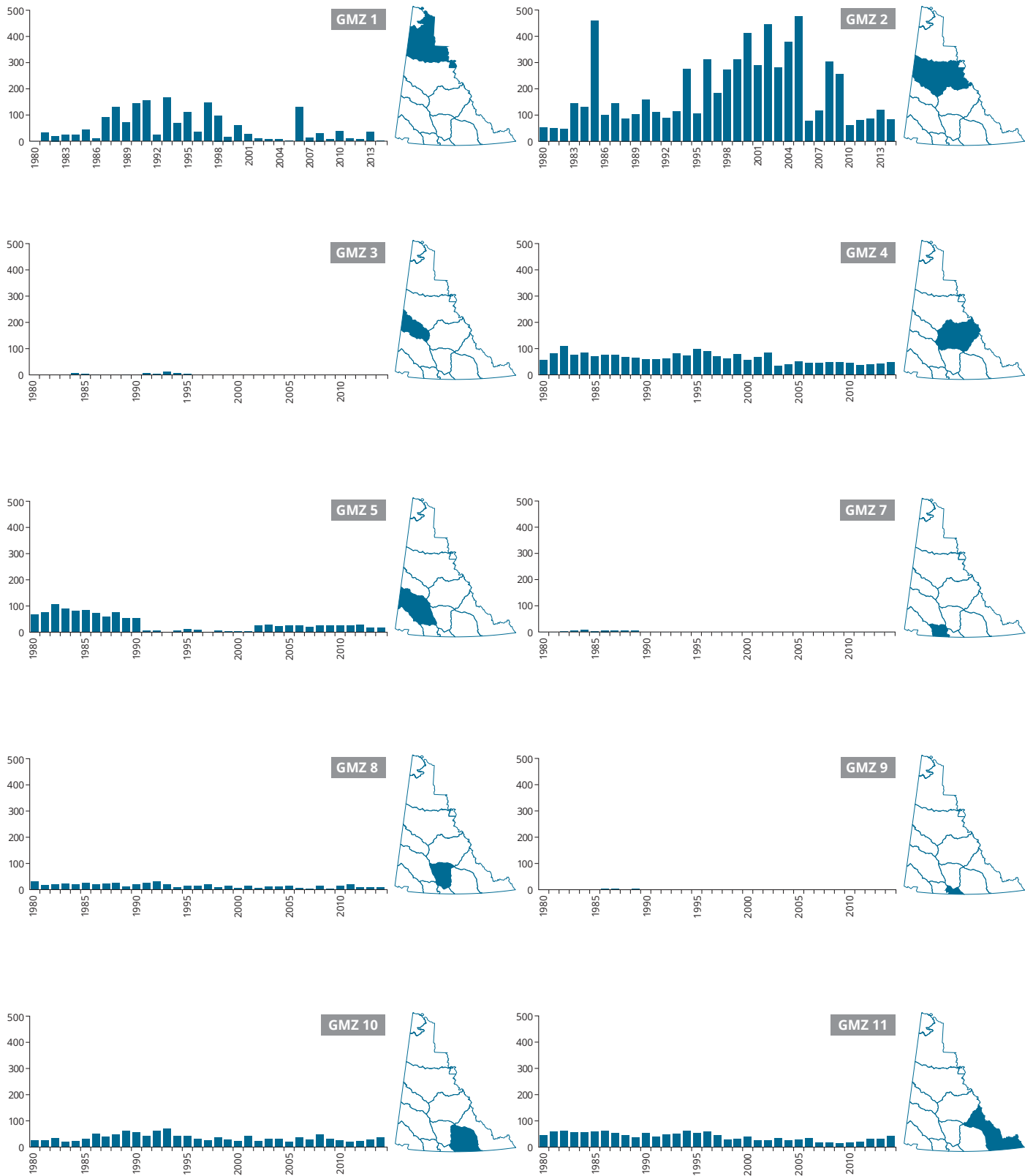




Photo: Gerry Perrier

THINHORN SHEEP

There are an estimated 22,000 thinhorn sheep in Yukon. Thinhorn sheep distribution is limited to specific mountain ranges. They are managed by individual game management subzones or groups of subzones. Changes to hunting regulations over the years have been implemented to address conservation concerns including varying season dates, placing game management subzones on permit, and closing hunting in certain areas. Licensed hunting was closed for ewes and their young in 1975. In 1981, licensed hunting was closed for rams with horns less than full curl, unless growth rings of the horns showed the animal was nine years of age or older. In 1985, the nine-year age restriction was reduced to eight years. Licensed hunters can harvest one legal ram each year from an open subzone or when drawn for a permit in a specific subzone. Compliance with regulations is monitored by compulsory submissions and measurements of sheep horns.

Hunters by Year

On average, licensed hunters purchased 1,044 sheep seals each year (Figure 15). Seventy percent (70%) of those seals were obtained by resident hunters. The number of sheep seals obtained by resident hunters has steadily increased since 2000. Based on the 2012 hunter effort survey, 54% of resident sheep seal holders actively hunted sheep (Westfall 2013).

FIGURE 15 — Number of sheep seals in Yukon obtained by resident and non-resident hunters from 1980 to 2014.

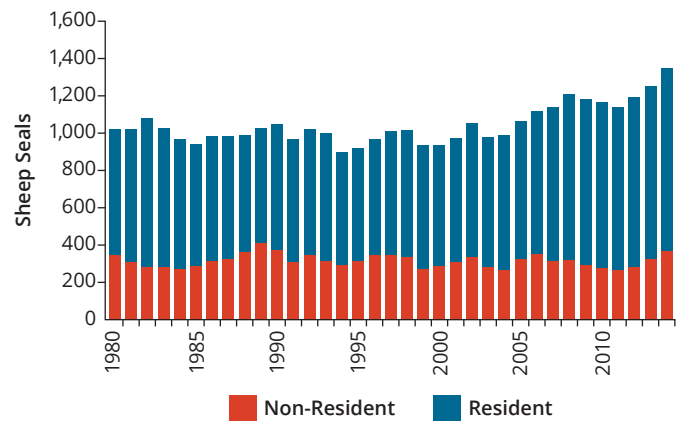
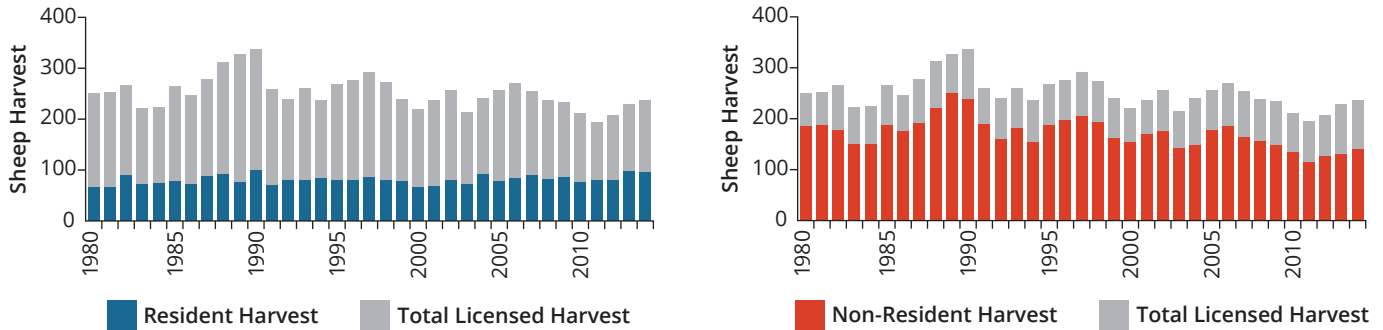


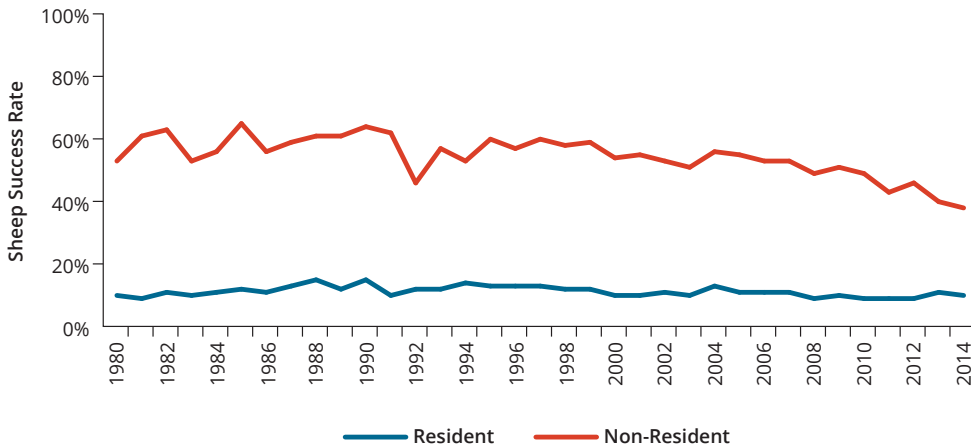
FIGURE 16 — Number of sheep harvested in Yukon by resident and non-resident hunters from 1980 to 2014.



Harvest by Year

On average, 252 sheep were harvested annually; 80 (32%) by resident hunters and 172 (68%) by non-resident hunters (Figure 16). The proportion of non-resident harvest declined from 70% in the early 1980s to 60% in the early 2010s. The number of sheep harvested by non-resident hunters has declined in the past few years.

FIGURE 17 — Percentage of hunters with a sheep seal that successfully harvested a sheep from 1980 to 2014.



Harvest Success Rate

On average, 11% of resident hunters and 55% of non-resident hunters with a sheep seal were successful in harvesting a sheep (Figure 17). The success rate of resident hunters has remained relatively the same, whereas the success rate of non-resident hunters declined from 57% in the early 1980s to 43% in the early 2010s.

FIGURE 18 — Age composition of legally harvested sheep from 1980 to 2014. The oldest harvested sheep reported was 17.

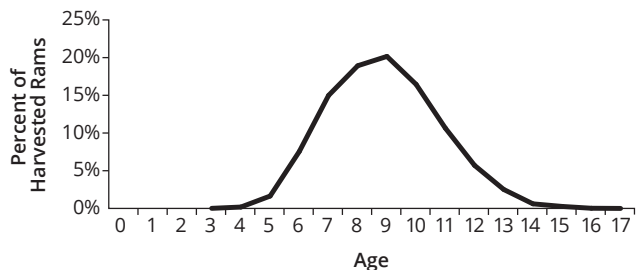
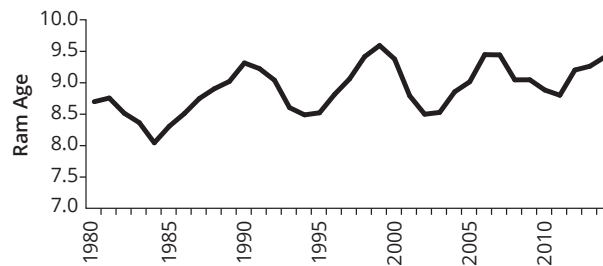


FIGURE 19 — Average age of legally harvested sheep from 1980 to 2014.



Harvest Composition

Harvesting full-curl rams is the lowest risk strategy for the long-term maintenance of hunting opportunities and sheep populations, provided that harvest rates are less than 4% of the adult population (Renewable Resources 1996; see box below). From 1980 to 2014, 76% of harvested rams were between eight and 17 years old. Overall, the average age of harvested rams was nine (Figure 18). The annual average age of harvested rams appears to cycle every 10 years (Figure 19).

Sheep horn growth and lamb survival in Yukon parallel climate cycles (Hik and Carey 2000; Loehr et al. 2010). Years with favourable conditions, primarily in April and May, coincide with higher lamb survival and faster growth rates, which may result in a higher number of full-curl rams six to eight years later.

Harvest by Game Management Zone

See Figure 20 for sheep harvest trends by game management zone. Most of the sheep harvest occurred in mountain ranges in southwest Yukon (game management zones 5 and 7) and north of Dawson and Mayo (game management zone 2). In game management subzones where harvest occurred from 2010 to 2014, an average of 2.3 sheep were harvested annually for every 1,000 km².

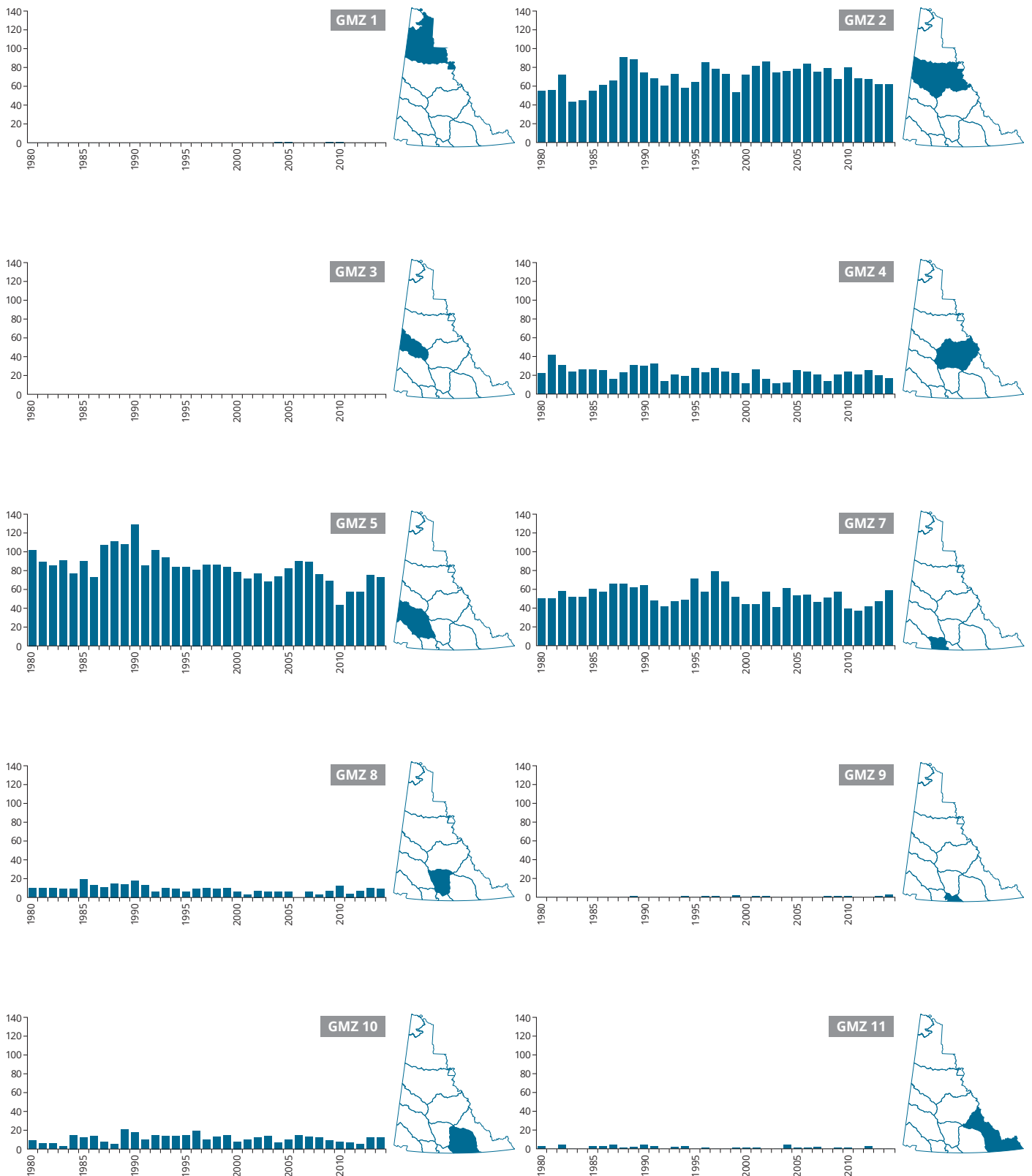


Photo: Gerry Perrier

Thinhorn Sheep Management Guidelines

The Department of Environment is updating *Science-based guidelines for the management of thinhorn sheep in Yukon*. These guidelines will provide a consistent framework for monitoring and harvest management decisions specific to sheep populations in Yukon. Wildlife managers consider these guidelines along with traditional and local knowledge, as well as First Nation and Inuvialuit perspectives when making management decisions related to harvest.

FIGURE 20 — Sheep harvest by game management zone (GMZ) from 1980 to 2014. Note that 12 sheep were harvested in zone 6 since 2006 when the Kluane sheep permit hunt was opened.





WOOD BISON

Wood bison were reintroduced to Yukon in the late 1980s as part of a national wood bison recovery program. Wood bison were federally listed as a threatened species under Canada's *Species at Risk Act* in 2003. Since the reintroduction of 170 bison, the herd has grown to about 1,470 animals (as of 2014) and has expanded its range in the Aishihik area of southwest Yukon. To ensure the long-term viability of the herd, and reduce environmental and social conflicts, the current management objective for this herd is to maintain it at or near 1,000 animals (Government of Yukon 2012). Bison harvesting under a permitted hunt began in 1997. An annual harvest target is set each year. The number of permits and season dates have changed over the years. There are no First Nation subsistence rights for harvesting bison. Yukon First Nation hunters harvest bison by obtaining a hunting licence and seal. Hunters can harvest one bison each year from an open subzone.

Hunters by Year

The number of licensed hunters obtaining a seal to hunt bison increased from 86 in 1999 to 1,334 in 2014 (Figure 21). The number of hunters with bison seals increased as hunting opportunities were made available. In 1997, several opportunities were opened to hunt bison. A lottery permit system and seals were introduced in 1999. In 2008, the limit on the number of permits was removed and the permit lottery was discontinued. In 2012, the cost of the seal was reduced from \$50 to \$10. Based on the 2015 hunter effort survey, 74% of resident bison seal holders actively hunted bison (Kanary and Sawatzky 2015).

FIGURE 21 — Number of bison seals in Yukon obtained by resident and non-resident hunters from 1980 to 2014. On average, 3 seals were issued to non-resident hunters each year.

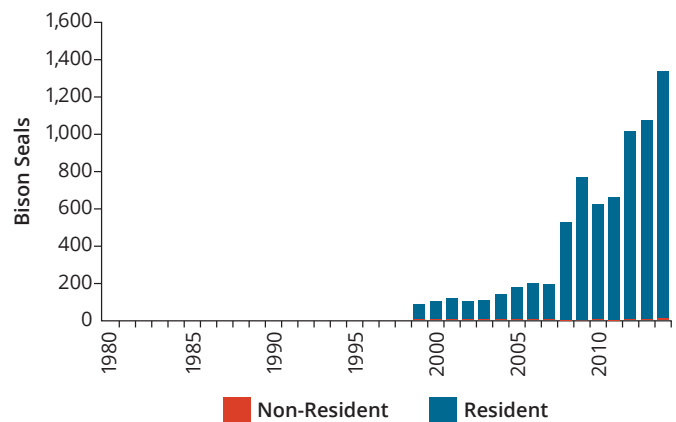
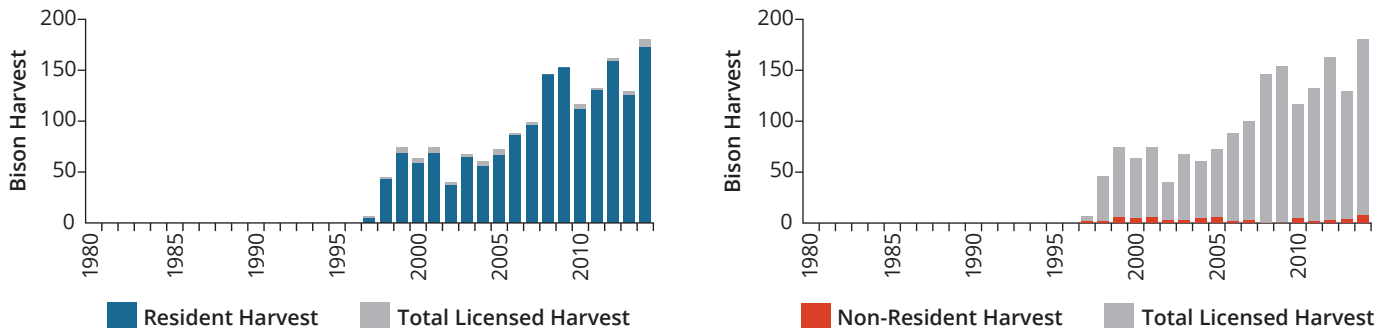


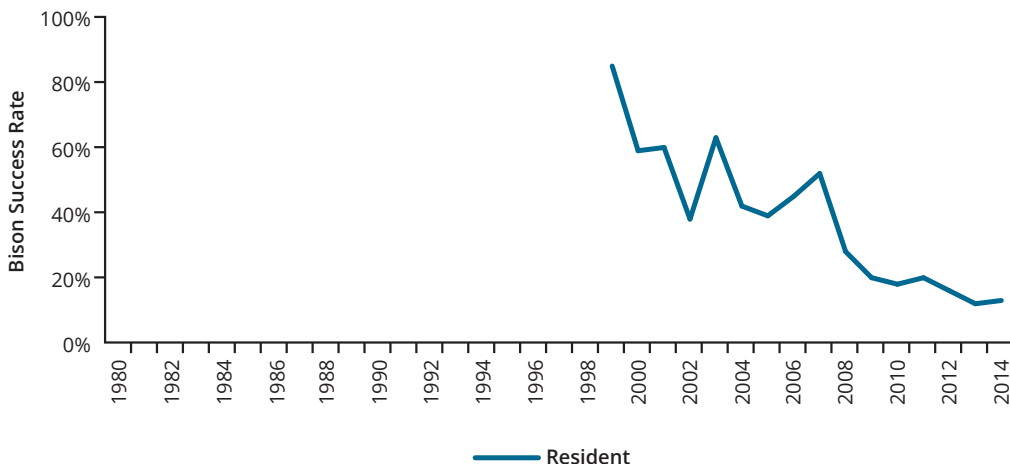
FIGURE 22 — Number of bison harvested in Yukon by resident and non-resident hunters from 1980 to 2014.



Harvest by Year

Yearly bison harvest increased from 6 bison in 1997 to 180 bison in 2014 (Figure 22). Collectively, a total of 1,706 bison have been harvested. For the five years between 2010 and 2014, an average of 143 bison were harvested annually; 140 (98%) by resident hunters and 3 (2%) by non-resident hunters.

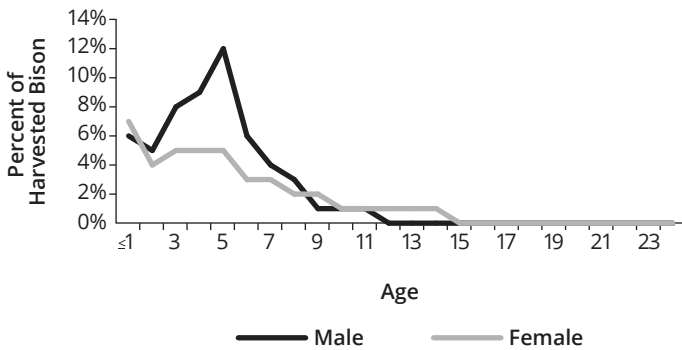
FIGURE 23 — Percentage of hunters with a bison seal that successfully harvested a bison from 1980 to 2014. Bison seals were first introduced in 1999. Due to the limited amount of non-resident harvest (on average three bison per year), success rate data are not informative for this figure.



Harvest Success Rate

On average, 38% of resident hunters and 94% of non-resident hunters with a bison seal were successful in harvesting a bison (Figure 23). The percentage of resident hunters with a bison seal that harvested a bison declined with more people hunting bison.

FIGURE 24 — Age and sex composition of harvested bison from 2000 to 2012 based on available data. The oldest harvested bison reported was 24. Calves and yearlings are grouped together (age ≤ 1).



Harvest Composition

Hunters are currently encouraged to harvest female bison to help reduce herd growth and maintain an even number of males and females in the herd. Based on the 2015 hunter effort survey, 36% of hunters would prefer to harvest a cow and 7% prefer bulls (the remainder of hunters show no preference for either sex; Canary and Sawatzky 2015). Over all years, 63% of harvested bison were male (Figure 24). A male-biased harvest may be the result of hunter preferences or a distribution of males that makes them more vulnerable to harvest. The oldest bison harvested was 24 years old, although the majority of harvested bison were less than 6 years old.

Harvest by Game Management Subzone

Most of the bison harvest occurred between Aishihik and Kluane Lakes, which is in the centre of the herd’s core range (Figure 25). From 2010 to 2014, game management subzones 5-38 and 5-48 had the highest harvest with 16 and 22 bison harvested annually for every 1,000 km², respectively.

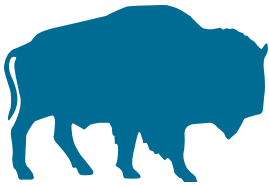





Photo: Kathi Egli

Aishihik Wood Bison Management Planning

The Management plan for the Aishihik wood bison (*Bison bison athabasca*) herd in southwestern Yukon was completed in 2012. It outlines the management framework for wood bison in Yukon. The Yukon Wood Bison Technical Team, including the Department of Environment and multiple partners, are working together to review the plan.

FIGURE 25 — Game management subzones with bison harvest from 2010 to 2014. The numbers on this map correspond to the subzone name.



-  Subzones with bison harvest
-  Subzones with no bison harvest
-  Closed to licensed hunting

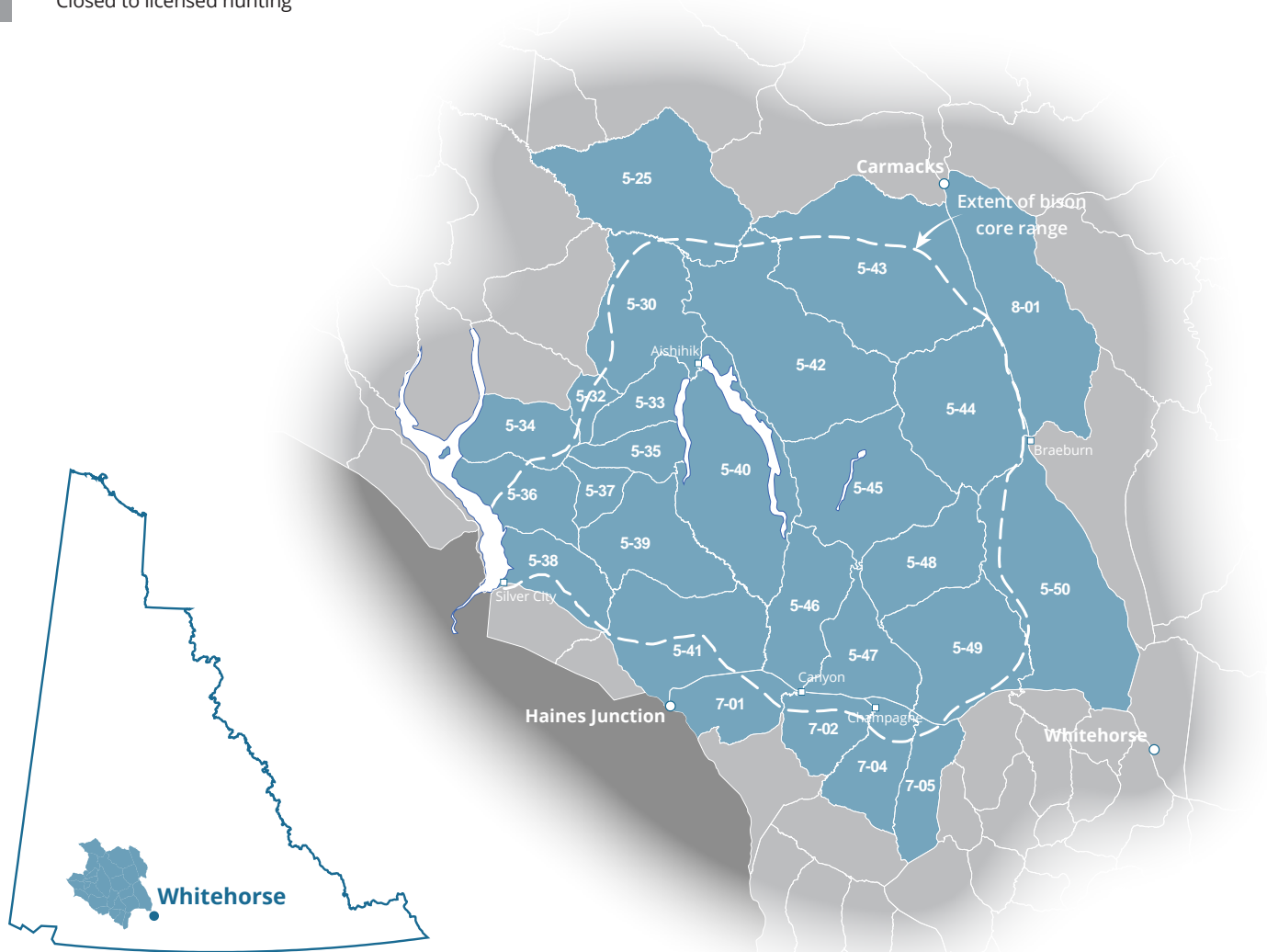




Photo: Lisa Moore

BLACK BEAR

There are an estimated 10,000 black bears in Yukon and they occur from southern Yukon to the northern treeline near Old Crow. Changes to hunting regulations over the years have included varying season dates and bag limits. Season length was extended and bag limits were increased in the Southern Lakes region from 1984 to 2001 to support a moose recovery initiative. Several protected areas and game management subzones are closed to black bear hunting. Licensed hunting was closed for cubs and sows with cubs in 1975. A cub includes any bear that is less than two years old. Licensed hunters can harvest two bears each year from an open subzone. Reported cases of bears killed in defence of life and property are not included in this summary; however, some harvest may be attributed to defence of life and property.

Hunters by Year

On average, licensed hunters purchased 1,456 black bear seals each year (Figure 26). Seventy-five percent (75%) of those seals were obtained by resident hunters. The annual number of obtained seals has doubled since 1980, primarily due to an increase in resident hunters purchasing seals. Based on the 2013 hunter effort survey, 31% of resident hunters with a black bear seal planned to hunt black bears and the remaining 69% obtained a seal in case there was a conflict with a bear (Sawatzky 2013).

FIGURE 26 — Number of black bear seals in Yukon obtained by resident and non-resident hunters from 1980 to 2014.

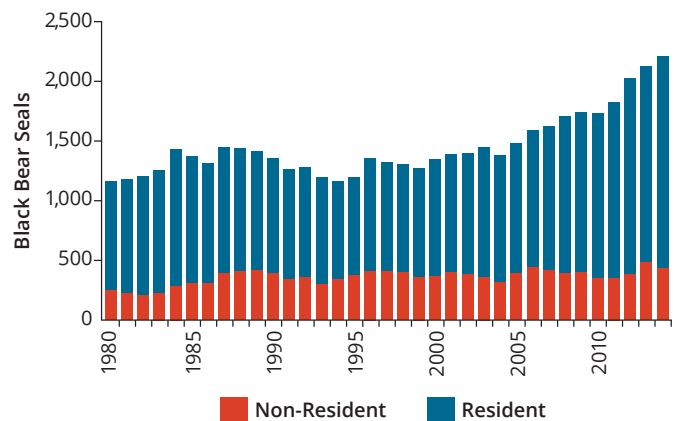
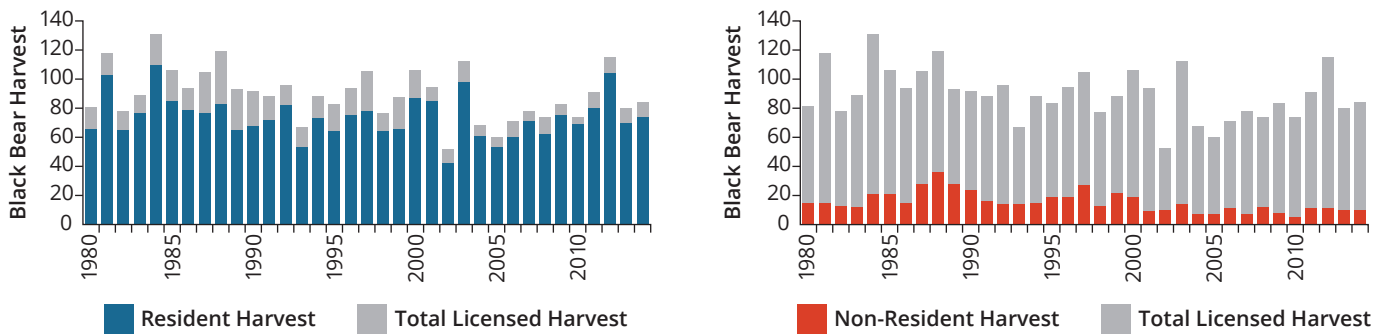


FIGURE 27 — Number of black bears harvested in Yukon by resident and non-resident hunters from 1980 to 2014.



Harvest by Year

On average, 89 black bears were harvested annually; 74 (83%) by resident hunters and 15 (17%) by non-resident hunters (including 0.6 by special guided hunters; Figure 27).

FIGURE 28 — Percentage of hunters with a black bear seal that successfully harvested a black bear from 1980 to 2014.

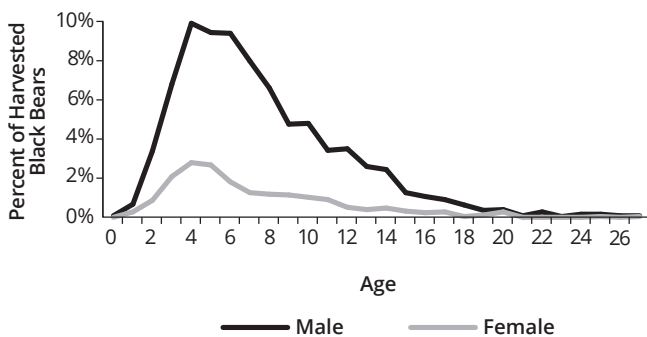


Harvest Success Rate

On average, 7% of resident hunters and 4% of non-resident hunters with a black bear seal were successful in harvesting a bear (Figure 28). The success rate of resident hunters declined slightly from 8% in the early 1980's to 5% in the early 2010's. The success rate of non-resident hunters declined slightly from 6% in the early 1980s to 2% in the early 2010s.



FIGURE 29 — Age and sex composition of harvested black bears from 1980 to 2014. The oldest harvested black bear reported was 27.



Harvest Composition

Most black bear harvest occurred during the spring season. Hunters are encouraged to hunt male bears and 99% of hunters say they preferred to harvest male bears based on the 2013 hunter effort survey (Sawatzky 2013). Over all years, 18% of harvested black bears were female (Figure 29). The proportion of females in the harvest is larger in the fall (25%) than the spring (14%). Fewer females are available for harvest in the spring because sows with cubs are protected and they often remain in their dens for part of the season. The oldest black bear harvested was 27 years old, although the majority of harvested black bears were subadults and young adults less than 6 years old.

Harvest by Game Management Zone

See Figure 30 for black bear harvest trends by game management zone. From 2005 to 2014, between 0 and 1.2 black bears were harvested annually for every 1,000 km². Licensed harvest was below 0.3 black bears for every 1,000 km² for three quarters of the territory. Most of the licensed black bear harvest occurred in southwest and central Yukon. Harvest densities were generally higher in easily accessible areas.

FIGURE 30 — Black bear harvest by game management zone (GMZ) from 1980 to 2014. Note that zone 6 is not shown because it is closed to black bear hunting.

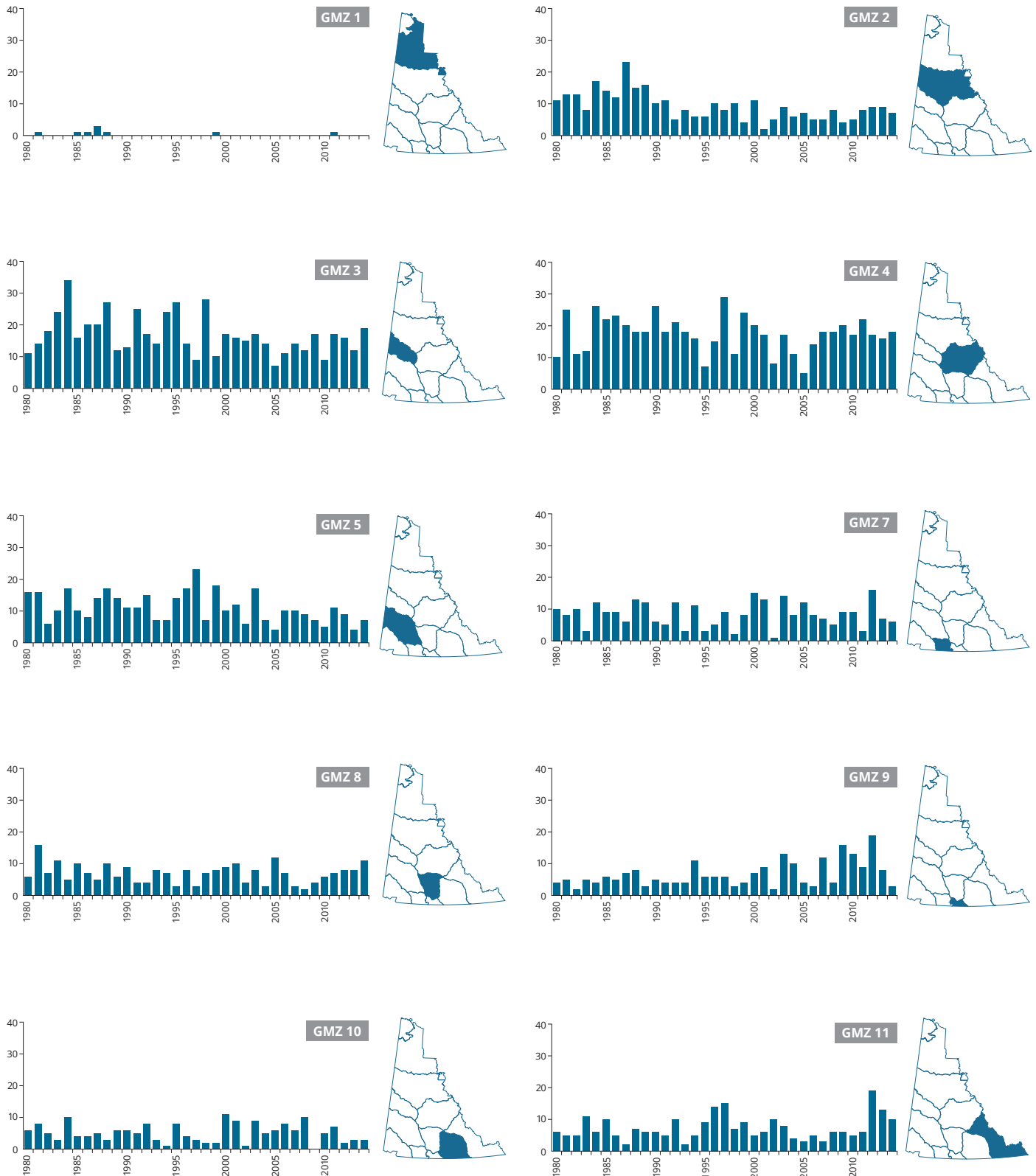




Photo: archbould.com

GRIZZLY BEAR

There are an estimated 6,000 to 7,000 grizzly bears in Yukon. In 1991, grizzly bear populations in western Canada, including Yukon, were assessed as a species of special concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Grizzly bears are currently managed by bear management units, which are generally defined by outfitting concession boundaries. Changes to hunting regulations over the years have included varying season dates and bag limits from one grizzly bear per lifetime (for non-residents) to one grizzly bear every one to five licence years. Season length was extended and bag limits were increased in the Southern Lakes region from 1984 to 2001 to support a moose recovery initiative. Several protected areas and game management subzones are closed to grizzly bear hunting. Licensed hunting was closed for cubs and sows with cubs in 1975. A cub includes any bear that is less than three years old. Licensed hunters are permitted to harvest one bear every three licence years from an open subzone. Reported cases of bears killed in defence of life and property are not included in this summary; however, some harvest may be attributed to defence of life and property.

Hunters by Year

On average, licensed hunters purchased 995 grizzly bear seals each year (Figure 31). Sixty-four percent (64%) of those seals were obtained by resident hunters. The number of obtained seals more than doubled since 1980, primarily due to an increase in resident hunters purchasing seals. Based on the 2013 hunter effort survey, 25% of resident hunters with a grizzly bear seal planned to hunt grizzly bears and the remaining 75% obtained a seal in case there was a conflict with a bear (Sawatzky 2013).

FIGURE 31 — Number of grizzly bear seals in Yukon obtained by resident and non-resident hunters from 1980 to 2014.

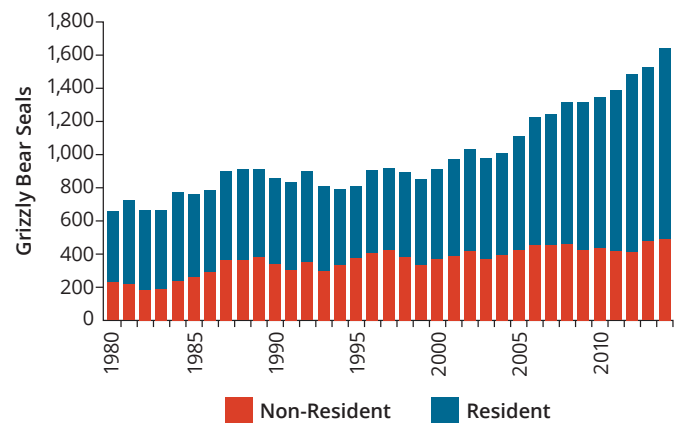
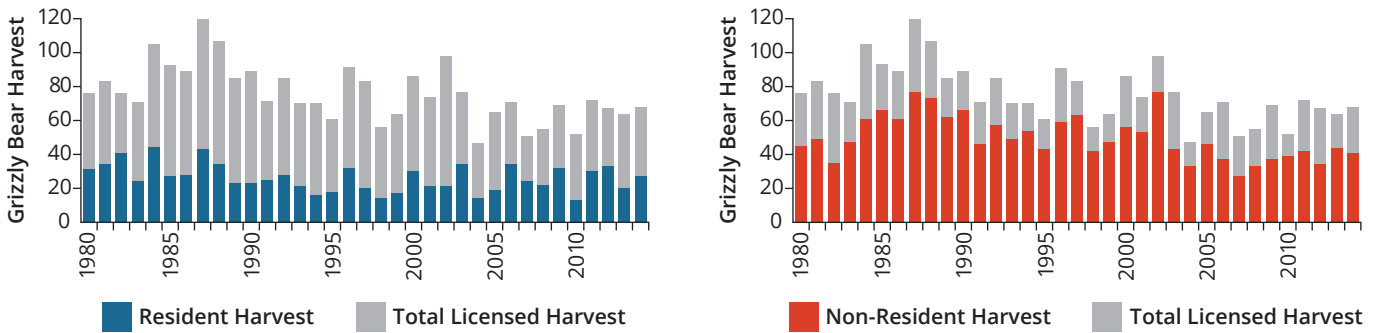


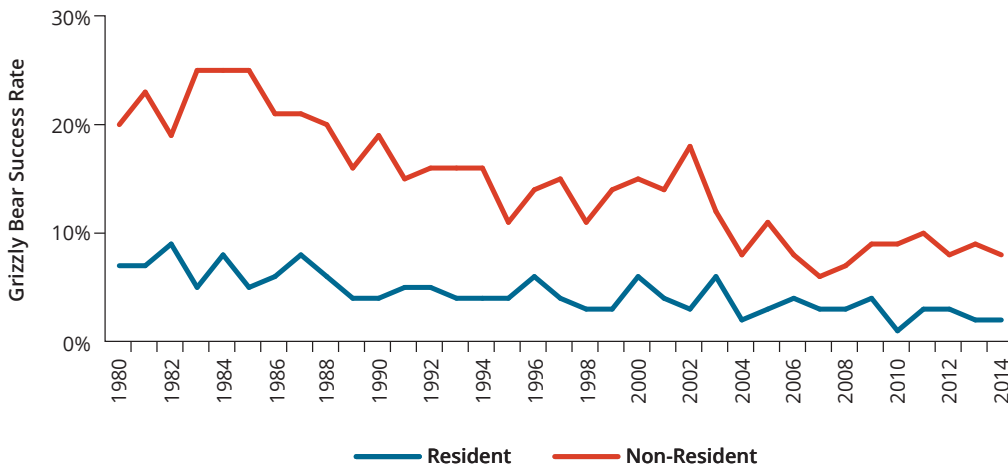
FIGURE 32 — Number of grizzly bears harvested in Yukon by resident and non-resident hunters from 1980 to 2014.



Harvest by Year

On average, 76 grizzly bears were harvested annually; 26 (34%) by resident hunters and 50 (66%) by non-resident hunters (Figure 32). Grizzly bear harvest was highest in the late 1980s and has been declining.

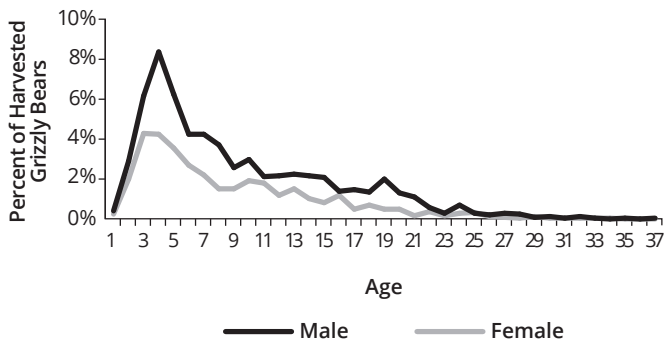
FIGURE 33 — Percentage of hunters with a grizzly bear seal that successfully harvested a grizzly bear from 1980 to 2014.



Harvest Success Rate

On average, 4% of resident hunters and 15% of non-resident hunters with a grizzly bear seal were successful in harvesting a grizzly bear (Figure 33). The success rate of resident hunters declined slightly from 7% in the early 1980's to 2% in the early 2010's. The success rate of non-resident hunters declined from 22% in the early 1980s to 9% in the early 2010s.

FIGURE 34 — Age and sex composition of harvested grizzly bears from 1980 to 2013. The oldest harvested grizzly bear reported was 37.



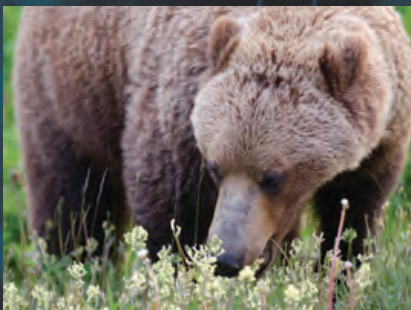
Harvest Composition

Most grizzly bear harvest occurred during the fall season. Hunters are encouraged to hunt male bears and 99% of hunters say they preferred to harvest male bears based on the 2013 hunter effort survey (Sawatzky 2013). Over all years, 34% of harvested grizzly bears were female (Figure 34). The proportion of females in the harvest is higher in the fall (38%) than the spring (22%). Fewer females are available for harvest in the spring because sows with cubs are protected and they often remain in their dens for part of the season. The oldest grizzly bear harvested was 37 years old.

Harvest by Game Management Zone

See Figure 35 for grizzly bear harvest trends by game management zone. From 2005 to 2014, between 0 and 0.6 grizzly bears were harvested annually for every 1,000 km². Most of the licensed grizzly bear harvest occurred in bear management units in southwest and central Yukon. From 1980 to 2014, game management zone 5 north of Haines Junction and Kluane Lake had a reduction in grizzly bear harvest.

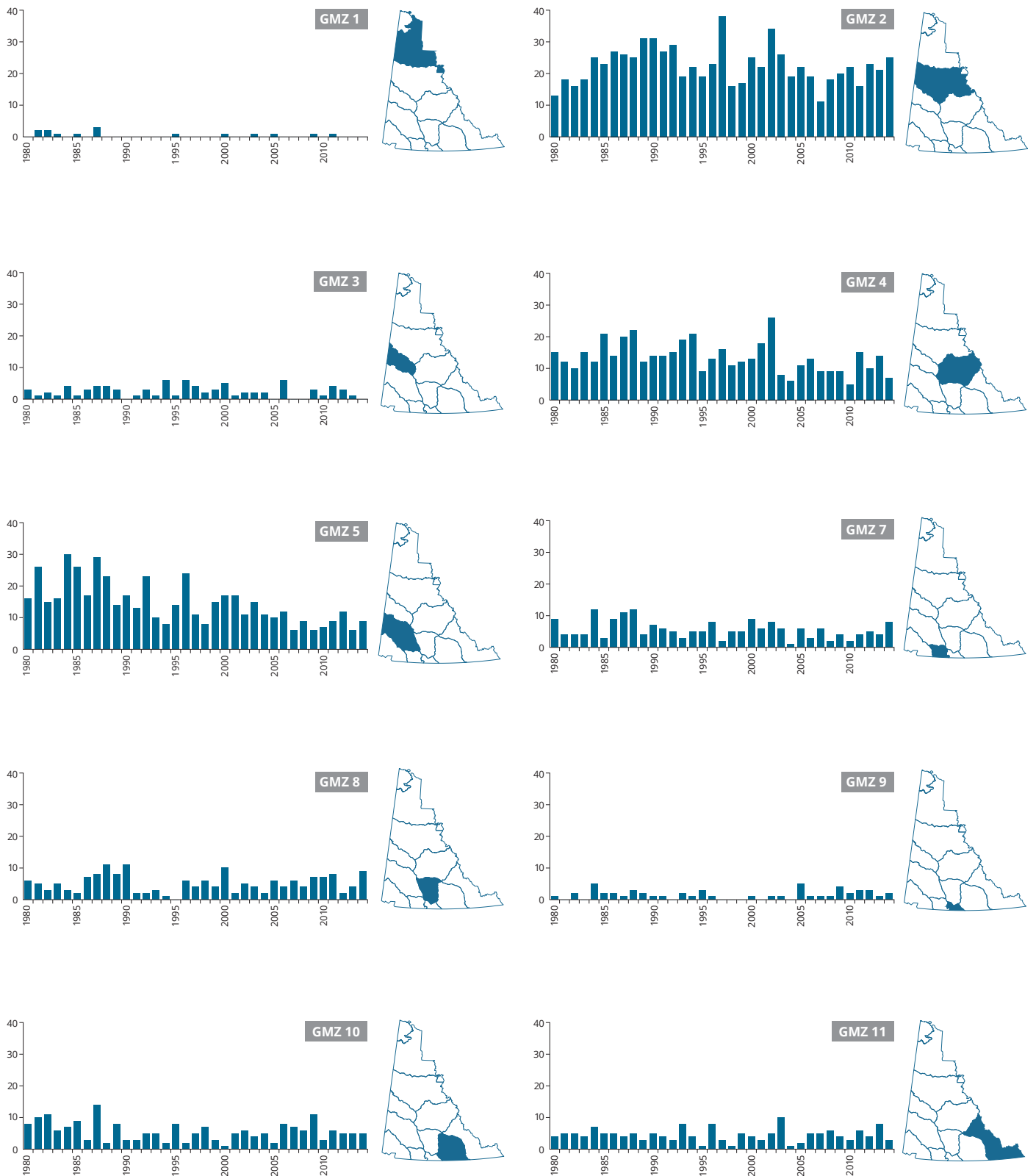
Under the Inuvialuit Final Agreement, Inuvialuit beneficiaries exercise their harvest rights for grizzly bears on the Yukon North Slope. The grizzly bear harvest is by quota and permits are administered by the Aklavik Hunters and Trappers Committee.



Grizzly Bear Conservation and Management Planning

The Yukon Fish and Wildlife Management Board and the Department of Environment are working together to develop a Yukon grizzly bear conservation and management plan.

FIGURE 35 — Grizzly bear harvest by game management zone (GMZ) from 1980 to 2014. Note that zone 6 is not shown because it is closed to grizzly bear hunting.



CONCLUSION

Harvest trends are a valuable tool for wildlife managers to monitor changes in harvest over time. This document contains the harvest information for six Yukon wildlife species from 1980 to 2014 using data provided by licensed hunters. The Department of Environment is committed to sharing this harvest trend information to ensure Yukoners have an opportunity to engage in informed discussions about sustainable wildlife harvest management.

The trends in this document help to identify the challenges and opportunities to be considered by all Yukoners involved in wildlife management. Changing land-use patterns, impacts to habitat related to climate change, and evolving harvest interest and opportunities may all impact future harvest trends. Demographic changes in the Yukon population may change society's values and perspectives in relation to the food we eat. These are only some of the factors wildlife managers may address in future wildlife management decisions.

Licensed harvest trends are only part of the overall harvest for most species. Wildlife management works best when managers have access to all of the information. Success is more likely when all hunters, governments, and agencies with a mutual interest in wildlife management share their information and work collaboratively to steward this resource. This report is a testament to the goodwill and responsible reporting by licensed hunters. We thank all of those hunters whose information is reflected in this report.

DEFINITIONS

Game Management Subzones and Zones: Legal boundaries that define an area within which harvest management objectives can be met through the setting of area-specific regulations. There are 443 game management subzones in Yukon, which are grouped together into 11 game management zones. Subzone boundaries generally follow creeks and rivers and zone boundaries mostly follow highways. Licensed hunters are required to report the subzone in which a big game animal was harvested.

Harvest Rates: The estimated percentage of the total animal population harvested annually. Harvest rates are based on animal population estimates from population surveys when available. For those areas that have not been surveyed, wildlife managers rely on population and density estimates from nearby surveys and other available information.

Harvest Density: The annual number of animals harvested for every 1,000 km². Harvest density calculations are not based on animal population estimates.

Licensed Hunter: Licensed hunters means Yukon residents and guided non-residents with a valid hunting licence. In this document, licensed hunters do not include First Nation and Inuvialuit subsistence hunters, with the exception of bison hunting. Under First Nation final agreements, bison are considered a transplanted species for which there is no First Nation subsistence harvest. Yukon First Nations can harvest bison by obtaining a hunting licence and a seal.

Non-Resident Hunter: All hunters that are not Yukon residents must be guided when hunting big game animals. Most of this is done by registered outfitters but Yukon residents may apply for a special guide licence to guide a Canadian citizen or permanent resident of Canada once every three years for moose, caribou, black bears, coyotes, and wolves (as of 2014).

Outfitter: There are 20 registered Yukon outfitters that guide non-resident hunters and hold outfitting concession areas, which are geographic areas prescribed in regulations.

Seal: Licensed hunters are required to obtain a big game seal for each animal they plan to hunt. When a hunter kills a big game animal, he or she is required to immediately cancel the seal by cutting out the triangular tabs to indicate the date, sex of the animal, and the game management subzone in which it was taken.

Success Rate: The percentage of hunters with a seal that harvested an animal in a given year:

$$\left(\frac{\text{Number of Animals Harvested}}{\text{Number of Seals}} \times 100 \right)$$

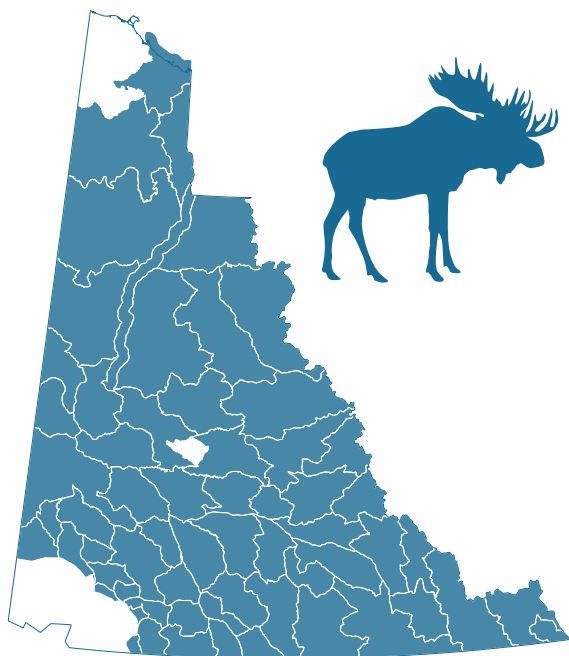
Success rate is not a measure of hunting effort.

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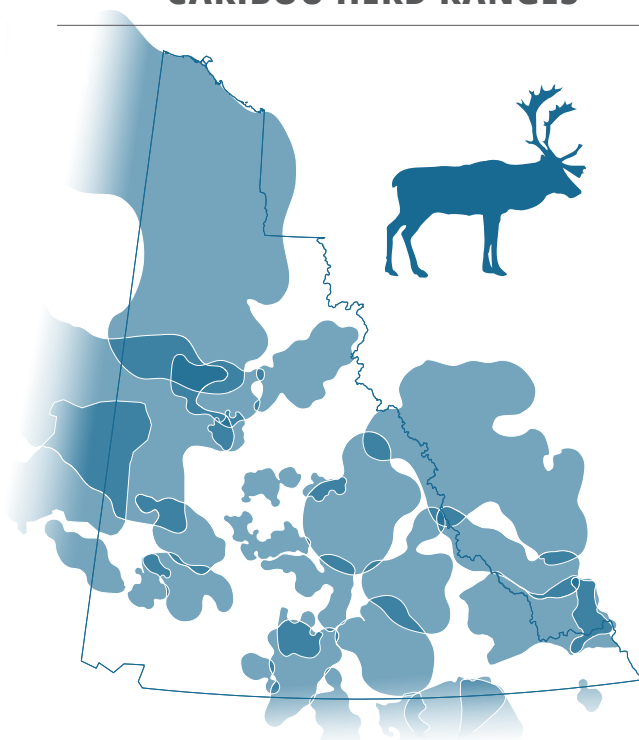
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APPENDIX

MOOSE MANAGEMENT UNITS



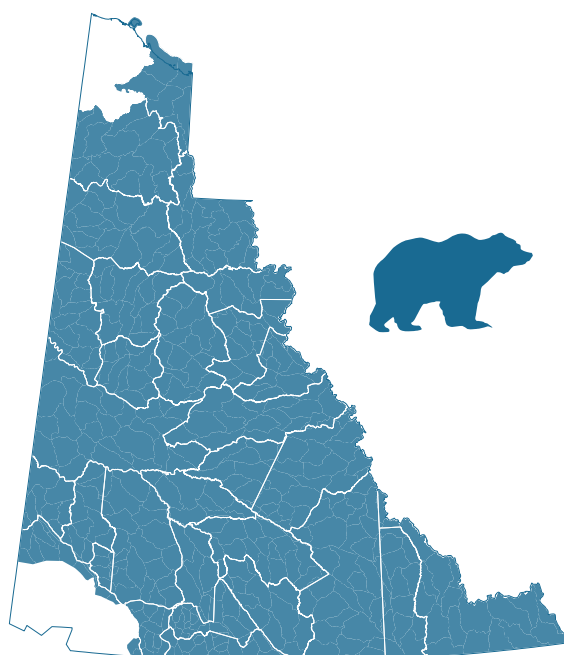
CARIBOU HERD RANGES



GAME MANAGEMENT SUBZONES



GRIZZLY BEAR MANAGEMENT UNITS



MAP OF YUKON

