

RECOMMENDATIONS TOWARDS THE RECOVERY
OF MOOSE AND CARIBOU POPULATIONS IN
THE WHITEHORSE-SOUTHERN LAKES AREA

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by

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SUMMARY

A combination of excessive hunting and high levels of predation has resulted in local population declines of moose and woodland caribou in the Whitehorse-Southern Lakes area. This situation has led to a number of conflicts between Indian hunters, licensed resident hunters, and outfitters, centered around the question of who has priority access to the dwindling big game resource. At current population levels, the sustainable harvest of moose and caribou is limited and far from satisfying the consumptive demands of local hunters.

This plan seeks to facilitate the recovery of moose and caribou populations in the Whitehorse-Southern Lakes area by reducing their major sources of mortality: hunting, grizzly bear predation, and wolf predation. A strong commitment by all user groups to significantly reduce their harvest should be the first phase and a prerequisite to any predator reduction program. Recent regulation changes have already restricted licensed hunting of moose to a limited permit system. It has also been recommended that the current permit hunts on caribou be cancelled in favour of complete closure of caribou hunting in the Whitehorse-Southern Lakes area. Indian hunters should be encouraged, through their Band Councils, to voluntarily restrict their harvest of moose and caribou and to stop hunting females. The cooperation of Indian hunters is critical to the implementation of this recovery plan. Once it can be demonstrated that the total harvest has decreased significantly, numbers of grizzly bears and wolves will be reduced to allow for an increase in the moose and caribou populations.

Monitoring of the harvest will continue through the existing annual questionnaire surveys that now include all 3 user groups. An initiative to train and hire local Renewable Resource Specialists to assist each Band should be supported. These resource persons could become active participants in the recovery plan, on behalf of the Band, by monitoring the Indian harvest, assisting in wildlife population surveys, and keeping Band members informed about the progress of the plan. Monitoring of moose and caribou populations should be done prior to any predator reduction program. It is recommended that portions of the Whitehorse-Southern Lakes area be surveyed intensively for both moose and caribou in 1990.

TABLE OF CONTENTS

SUMMARY i

BACKGROUND 1

 Declining Moose and Caribou Populations 1

 Competing Resource Demands 2

 The Need For a Recovery Plan 3

RECOVERY PLAN 6

 Considerations 6

 Recommendations 8

 Harvest Reduction (Phase 1) 8

 Predator Population Reduction (Phase 2) 9

 Monitoring 9

APPENDIX A: Moose Population Status 11

APPENDIX B: Caribou Population Status 12

BACKGROUND

Declining Moose and Caribou Populations

The Whitehorse-Southern Lakes area¹ lies adjacent to approximately 3/4 of the population of Yukon while occupying only about 3% of the land area. This area also has more roads and, thus, more access for the purposes of hunting than any other area in Yukon. As much as 25% of the total licensed moose harvest has occurred in this small area and has contributed to the decline in moose populations over the last decade. By 1987, only about 5% of the total moose harvest was reported taken in the same area.

Within the Whitehorse-Southern Lakes area, the most serious moose declines have occurred in areas accessible by roads and waterways. Between 1980 and 1984, moose in the Carcross and Haines Junction areas declined by 58% and 43%, respectively. A combination of excessive hunting and high rates of predation are believed to be responsible for declines in these accessible areas. These same factors have prevented the moose populations from recovering in numbers (Appendix A).

Caribou in the Whitehorse-Southern Lakes area have also declined dramatically since the turn of the century when the Carcross Caribou Herd probably numbered in the thousands and ranged between Teslin Lake and the Haines Road. It presently exists as 5 remnant herds with a total population of 400-500 caribou.

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The Whitehorse-Southern Lakes area extends from the Atlin Road in the east to the Haines Road in the west and from the British Columbia-Yukon border north to the Alaska Highway (GMZ 7 and parts of GMZ 9).

Excessive hunting, including recent cases of poaching, is believed to be largely responsible for the decline and for the inability of these small herds to increase in numbers (Appendix B).

Competing Resource Demands

The situation in the Whitehorse-Southern Lakes area has led to a number of conflicts that center around the question of who is going to be given priority hunting access to the dwindling big game resources, provided a harvestable surplus exists.

In 1978, disputes over access to big game populations between resident and non-resident hunting interests in the Rose Lake and Teslin Burn areas (outfitting area 18) led to the expropriation of this concession by the Yukon Government and gave resident hunters priority access to the area. Resident hunters are continuing to express concern that their hunting opportunities for moose in other areas of GMZ 7 are being restricted while those of non-resident and Indian hunters are not. For the past 3 years, outfitters in GMZ 7 have been given special permits to guide clients on moose hunts after the regular season closure (15 September). Indian hunters, under Section 17(3) of the Yukon Act, are currently exempt from harvest regulations when hunting for food.

In turn, the Champagne/Aishihik and the Carcross/Tagish Bands have noted their concerns about outfitters continuing to guide moose hunts while the population is declining. These concerns have been further reinforced by the general belief that meat wastage commonly occurs during trophy hunting of moose. Although

Indians are generally not affected by harvest regulations, they are affected by declines in game abundance. As a result, Bands in the Whitehorse area have become increasingly vocal about the need to rebuild big game populations and to protect their share of the harvest. Under the Yukon Land Claim Framework Agreement, Indian Bands will be entitled to a harvest that approximates their "basic needs level" provided that the big game populations can support a sustained harvest. At current population levels, the allowable harvest of moose and caribou in the Whitehorse-Southern Lakes area is limited and far from satisfying the consumptive demands of local hunters.

Finally, local big game outfitters have been asking for assurances from the Yukon Government that their share of the harvest will not be eliminated. When harvest restrictions are imposed on one area, resident and Indian hunters can access other areas where game are more abundant while the outfitter is restricted to guiding hunts on his concession. The outfitting industry will find it difficult to remain economically viable if, from time to time, individual outfitters are denied access to moose and caribou.

The Need For a Recovery Plan

Moose and caribou populations in the Whitehorse-Southern Lakes area will not recover on their own in the near future unless the major sources of mortality, ie. hunting, grizzly bear predation, and wolf predation, are reduced. Without decisive management actions and full cooperation from the major user groups, it will become increasingly more difficult for moose and caribou to reach and maintain abundant population levels in this area. Low densities of moose and

caribou will mean that few, if any, animals will be available for recreational purposes, be they consumptive or non-consumptive. In addition to these values, healthy prey populations will, in the long term, support more predators. With higher densities of both predator and prey species, the importance of the wildlife resource can be more successfully argued for in the face of other competing, land-based interests that may result in the change or destruction of wildlife habitat.

The current low densities of moose and caribou have resulted in a dispersal of both resident and Indian hunters from the Whitehorse area into other, more game-rich, areas of Yukon with a growing feeling of resentment by local residents and Indian Bands. A sustained, albeit, limited harvest of moose and caribou from the Whitehorse-Southern Lakes area could relieve some of this hunting pressure on other areas.

In response to the consumptive demands from the different user groups and the biological arguments for managing ungulates at a higher density, a draft plan has been prepared to facilitate the recovery of moose and caribou in the Whitehorse-Southern Lakes area. The plan was originally developed in 1987 within the following guidelines:

- 1) Restore moose populations to 1981 levels within 10 years (ie. by 1997); in the Haines Junction and Carcross areas, this means moose densities of 250 and 440 moose/1000 km², respectively, or approximately a doubling of the densities observed during the most recent surveys in 1984.
- 2) Restore the Carcross herd to at least 1000 caribou by 1997; this would require an average population growth rate of about 10% annually.

- 3) Reduce predator populations only after the total hunter harvest, both Indian and non-Indian, has been significantly reduced.
- 4) Maintain, if possible, the continued economic viability of the local outfitters.

In view of current land claims negotiations and their effect on future harvest allocation, another guideline has been added to the recovery plan:

- 5) Ensure the basic needs level negotiated for each Indian Band is consistent with the objectives of the recovery plan and is within the sustained yield of the local moose and caribou populations.

RECOVERY PLAN

Considerations

The time required to rebuild moose and caribou populations in the Whitehorse-Southern Lakes area to the specified target levels will depend on which combination of mortality sources are reduced and to what degree. For moose, reducing grizzly bear predation would cause the quickest recovery and hunting the slowest recovery. Reductions of all 3 sources would provide the most effective and shortest solution to the problem.

Technically, these reductions can be achieved; however, social and financial considerations complicate the solution. As a result, public attitudes are critical when developing a recovery plan that includes both harvest restrictions and predator reductions. While further restrictions to licensed hunters can be quickly and easily legislated, such regulations do not generally apply to Indian hunters. It is acknowledged that harvest of big game is an integral part of the subsistence lifestyle of many Indians. The total elimination of their harvest in the Whitehorse-Southern Lakes area would be unrealistic. It is, however, crucial to the success of this plan that they become active participants in the plan and reduce their harvest as much as possible.

A recent survey of active hunters in the Carcross/Tagish, Champagne/Aishihik, Kwanlin Dun and Ta'an Dun Bands, as recommended by the Wildlife Management Board, showed that a majority of hunters (77%) were willing to take an active part in a recovery plan by limiting their harvest in areas of GMZ 7 and 9 where game populations have declined. A commitment from the local Bands to

voluntarily restrain their harvest is fundamental to the plan and to the cooperation of the other user groups. While the same survey of Indian hunters also resulted in strong support for control of wolves (89%) and grizzly bears (77%), public opinion on this issue will likely be heated and polarized.

Plans to reduce grizzly bear numbers would have to be done in consideration of the values attached to this species by Yukoners and Canadians generally, as well as our international obligations to maintain the species. Grizzly bears throughout North America have declined to the point where Yukon is now one of their last strongholds. Grizzly bear densities are low compared to most other big game species and difficulties in making accurate population estimates mean that any reduction targets are often bounded by a wide range of uncertainty. Low recruitment rates also mean that grizzly populations will recover slowly when reductions have been completed.

Similarly, reductions in wolf population size must be done with consideration of the many values attached to this species and with an eye on the status of wolves in North America. Unlike grizzly bears, however, wolf populations have tremendous capacities for increase and can recover from a 70% reduction in about 2 years. This fact alone makes wolf reductions at levels needed to rebuild game populations nearly impossible just by increasing hunting and trapping opportunities. This is why the Yukon Government has, in addition to providing incentives to hunters and trappers, undertaken their own wolf control measures in order to rebuild game populations in the past. Experience has shown that at least 70% of the wolf population must be removed from an area in order to achieve any measurable recovery in game populations over a reasonable period of time.

Recommendations

In light of public attitudes, it is recommended that the recovery plan for moose and caribou populations in the Whitehorse-Southern Lakes area be achieved through a program of harvest reductions by all user groups followed by predator reduction programs. The plan is subdivided into 2 phases. In the first phase, the harvest will be restricted through regulation changes and voluntary compliance. Once it can be shown that the harvest of moose and caribou has been curtailed, the numbers of grizzly bears and wolves will be reduced concurrently (phase 2).

a) Harvest Reduction (Phase 1)

Regulation changes, that came into effect during the fall 1989 hunting season, have limited licensed hunting of moose by resident and non-resident hunters to a permit system. Currently, 10 permits for bull moose in GMZ 7 and part of GMZ 9 (9-01 to 9-07) are available to resident hunters while permits for the harvest of another 10 bull moose have been divided between the 2 outfitters in the area.

It has also been recommended that the current permit system for hunting caribou in the Whitehorse-Southern Lakes area be cancelled in favor of complete closure of caribou hunting. A proposal to that effect has been forwarded to the Regulations Review Committee.

Indian hunters will be encouraged, through their Band Councils, to reduce their total harvest of moose and caribou in the Whitehorse-Southern Lakes area and to stop hunting females. A continued harvest of female moose or caribou will not

only lengthen the time required for populations to recover but will also result in resentment, and probable lack of cooperation, from the other user groups.

Community meetings with representatives from the 3 main user groups (Indian Bands, Yukon Fish and Game Association, and Yukon Outfitter Association) should be arranged to facilitate information exchange and to seek firm support for the recovery plan.

b) Predator Population Reduction (Phase 2)

Reductions in the size of grizzly bear and wolf populations should not be implemented until a strong commitment by the user groups to restrict their harvest of moose and caribou has been demonstrated. Harvest monitoring will continue for at least 2 years, or until fall 1990, before a decision to proceed with predator population reduction will be made.

During phase 2, attempts will be made to reduce the number of grizzly bears by 25% through a system of liberalized hunting regulations. Concurrently, wolf numbers will be temporarily reduced by at least 70% through incentives provided to hunters and trappers, and through direct control by government personnel. Details of the predator control programs will be developed when the objectives of phase 1 (harvest reduction) have been achieved.

c) Monitoring

The permit system of hunting is easily monitored and can be compared with total licensed harvest of moose and caribou from previous years. The Indian harvest in the Whitehorse-Southern Lakes area has been monitored since 1988 through an annual questionnaire survey administered by local fieldworkers in each of the Bands. Initial cooperation by Indian hunters in this survey has been good and further data collection should be encouraged to allow for comparisons of reported harvest between years.

Throughout the course of the harvest survey, virtually all Bands have expressed a keen interest in having a local Renewable Resource Specialist trained to provide the Band with assistance in matters relating to resource management. This initiative should be encouraged as it has direct benefits to the implementation of a big game recovery plan for the Whitehorse-Southern Lakes area. The local resource person would not only be responsible for monitoring the Indian harvest but would also be directly involved in various aspects of the recovery plan, including taking part in wildlife population surveys and keeping Band members informed about the progress of the plan.

Monitoring of moose and caribou populations should be done prior to any predator reduction program. The Yukon-wide moose survey program will be completed in 1989 with surveys in the Dawson area. A return to southwestern Yukon in 1990 would provide timely updates on moose population trends in portions of the Whitehorse-Southern Lakes area that have been previously surveyed. The annual rut counts of caribou in the Ibex herd will be done in October 1989 and should be followed up with more intensive surveys in 1990 that also include the remaining woodland caribou herds in the area.

APPENDIX A

Moose Population Status

Moose populations in all areas with easy road and water access within the Whitehorse-Southern Lakes area have likely undergone substantial declines over the past several decades. Between 1981 and 1984, estimated moose numbers in the Haines Junction area (GMZ 7-01 to 7-06) decreased from about 570 to 330 individuals, a decline of about 43%. A similar situation was found in the Carcross area (GMZ 9-01, 9-02, and 9-04) where moose numbers declined from approximately 400 in 1980 to less than half (170) in 1983.

The reasons for the decline are believed to be a combination of overharvesting (including a cow moose season from the early 1970's through to the early 1980's) and high natural predation rates by grizzly bears and wolves. The moose harvest by licensed hunters in the Haines Junction area has averaged 9% of the fall population and, between 1981 and 1985, this harvest declined from 63 moose annually to 17 moose. In the Carcross area, the total harvest by licensed hunters averaged 19 moose (or 6% of the fall population) between 1979 and 1983. By 1985, the estimated harvest in this area had declined to 2 moose. These harvest estimates do not include the Indian harvest which was not monitored systematically until 1987. It is believed that the size of the Indian harvest was, at least, similar to that estimated for licensed hunters.

Studies in the Rose Lake area between 1983 and 1985 indicate that of all adult and calf moose mortalities over 1 year, grizzly bears accounted for 50%, wolves for 26% and licensed hunters for 9%.

APPENDIX B

Caribou Population Status

Based on traditional knowledge, a large (2000+) contiguous population of caribou, the "Carcross Caribou Herd", ranged throughout southwestern Yukon at the turn of the century, from the Haines Road to Teslin Lake. Since then, the Carcross herd has declined and become fragmented, largely due to road construction and subsequent overharvesting. At present, a total of 400-500 caribou are believed to be distributed between 5 remnant herds. The Montana Mountain, Nares/Mount Lorne, and the Teslin herds are estimated at 80-100 caribou each. The Jubilee Mountain herd contains 50-70 animals while the Ibex herd is estimated at 100-125 caribou.

The Ibex herd has been surveyed annually during the rut (Oct.) since 1983. While composition counts have confirmed good calf survival (38-65 calves/100 cows), the total counts of herd size have not increased in the last 6 years to suggest a growing population. The annual reported harvest by licensed resident hunters has averaged 2-3 bull caribou under a permit system limited to 5 permits. However, an additional harvest by Indian hunters and the illegal kill by poachers is believed to have restricted herd growth. Since the Ibex herd is probably the least accessible of the herds, it is only reasonable to assume that similar limiting factors also operate on the other herds. Due to the small herd sizes and the easy access that hunters have, particularly to winter range, these remnant herds must be considered vulnerable to any harvest if viable populations are to be maintained.

Policy for the Management of Large Carnivores

Purpose: This policy statement outlines the Yukon Government approach to the management of large carnivores.

Scope: The policy covers the management of wolf and bear populations.

Background: Large carnivores have historically been treated by western societies as problem species to be eliminated by whatever means available if they threaten human safety or economic activity. With an increase in our understanding of their ecological role, and a shift in societal attitudes about wildlife, large carnivores are no longer automatically treated as a problem.

Over the past several decades, our understanding of the interactions between some large carnivores and their prey has increased dramatically. We know that it is possible for a predator to limit the growth of a prey species, that prey densities in turn determine numbers of some predators, and that there isn't a fast acting feedback mechanism between predator and prey species such that there is a continuous balance. The latter results in natural, long term fluctuations in both predator and prey numbers.

Large carnivores are naturally regulated in most areas of the Yukon and there is normally no need to interfere with these processes. It is where intensive human interests are harvesting big game species or competing for habitats that large carnivores need to be intensively managed.

This policy is based on a policy analysis undertaken by the Department of Renewable Resources in 1986-1987 and it is intended to protect the full range of values that are represented by large carnivores within the Yukon environment. Intensive predator management in the Yukon in recent years has provided important information on the management of northern populations of large carnivores and prey. However, a comprehensive policy framework is needed to develop future management strategies for simple and complex predator-prey systems in the Yukon.

General Policy:

All management activities will be undertaken in a manner that recognizes the full range of values that large carnivores represent. These include: ecological roles; the recreational (sport and trophy) harvests; fur resources; non-harvest recreational uses; heritage and intrinsic wilderness values; research and education values; and socioeconomic effects as predators.

In normal circumstances harvesting of large carnivores will be maintained within sustainable levels ensuring that present populations are maintained or enhanced.

Specific
Policy:

The possible exceptions to this general policy are outlined below.

- 1.1 Programs to temporarily reduce the size of carnivore populations ("predator control programs") will be undertaken only in particular circumstances. These circumstances are:
 - a. When it is shown that a population of a wild prey species has fallen significantly below desired levels; and
 - b. When it is shown or there is reasonable evidence from previous studies that predation by the carnivore(s) is one of the limiting factors preventing recovery of the prey population; and
 - c. When there are adequate data on the carnivore population to plan temporary population size reduction and to ensure it is reduced only to a level from which it can recover; or

Programs will also be considered when a threatened or endangered ungulate population is being limited or potentially extirpated by predation by large carnivores. (as defined by the Committee on the Status of Endangered Wildlife in Canada)

- 1.2 If harvesting by humans is a factor which limits the recovery of the population, the harvesting will be reduced or eliminated either before or in conjunction with the carnivore reduction programme.
- 1.3 A large carnivore population reduction programme will not be undertaken only to maximize the harvest by humans of a prey population (e.g., moose or caribou), but may be undertaken to restore the harvestable surplus to an appropriate level if a prey population has been reduced by overhunting (Section 1.2 would also apply here).
- 1.4 Population reduction programmes will not be undertaken to protect domestic livestock (although individual problem wildlife will be treated on a case by case basis).
- 1.5 Population reduction programmes will only be undertaken following the failure of other methods to increase the prey species or evidence to suggest that these methods would not increase prey numbers.
- 1.6 A reduction programme will usually consist of an increase in the allowable harvest of the large carnivore population. In the event that this proves to be insufficient, killing of large carnivores will be carried out by the Department of Renewable Resources only:
 - a. To supplement the harvest, or
 - b. To remove an individual carnivore that has a disproportionately heavy effect on the prey population.

- 1.7 Large carnivore population reduction programmes will be carried out using target-specific techniques only. In most cases this will mean the use of aerial hunting: to reduce suffering; to allow monitoring of the numbers killed; and to allow the recovery of pelts and carcasses. Poisons will not be used.
- 1.8 Intensive reduction of carnivore populations will only be carried out in those areas that directly affect the survival of the prey population. The reductions will be conducted only for the period that is considered necessary to allow the prey species to achieve the recovery objectives.
- 1.9 Predator reduction programmes will involve a properly constituted experimental design, including long term monitoring of the effects of the project.
- 1.10 Population reduction programs will not be undertaken solely for scientific experimentation.
- 1.11 No reduction programme will reduce a large carnivore population to a level from which it cannot recover. In particular it is recognized that grizzly bears reproduce at rates many times lower than other large carnivores, and hence that their populations are highly susceptible to long term reductions. Reduction of a grizzly bear population will therefore be conducted with particular caution and restraint.
- 1.12 Any reduction programme following these guidelines will be initiated and planned in consultation with the Wildlife Management Board, the local Renewable Resource Council(s) concerned, and the resource users concerned: native harvesters, resident non-native harvesters, outfitters, and non-consumptive users.
- 1.13 In cooperation with the Yukon Outfitters Association, the Yukon Trappers Association, and other interested parties, the Department of Renewable Resources will explore ways of improving the effectiveness of harvest techniques.