

Tłıchǫ, Co-management and the Bathurst Caribou Herd, 2009-2011

Trent University
Peterborough, Ontario, Canada

A Thesis Submitted to the Committee on Graduate Studies in Partial Fulfillment of the
Requirements for the Degree of Master of Arts in the Faculty of Arts and Science

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Canadian Studies & Indigenous Studies M.A. Graduate Program
September 2015

Abstract

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Since time immemorial caribou have been and remain central to Tłıchǫ life and culture. As early as the late 19th century, Canada began to implement wildlife management policies in the NWT in response to concern over the health and future of caribou populations. However, the 2005 Tłıchǫ Land Claims and Self-Government Agreement (Tłıchǫ Agreement) signed by the Tłıchǫ, the Government of the Northwest Territories and the Canadian Government outlines that Tłıchǫ will have a say in wildlife management on Tłıchǫ Lands. Co-management is the power-sharing model used in an effort to ensure that the Tłıchǫ voice is heard in these decisions. My thesis centres on the 2009-2011 co-management process and the resulting final management decisions regarding monitoring and management actions to promote the stabilization and recovery of the Bathurst Caribou herd. I focus my analysis on the Tłıchǫ perspective as expressed during this co-management process. I conclude that while Tłıchǫ perspectives were presented in the hearings and related processes, they were not well represented in the final management actions. This omission speaks to the wider issue of how aboriginal people are treated and understood in Canada.

Keywords: Co-management, Tłıchǫ, Caribou, Northwest Territories, Canada, wildlife management

Acknowledgements

I am thankful for the help and support of Trent University and particularly the Frost Centre during my time as a graduate student. I am grateful for the help and support of my supervisor Julia Harrison for her dedicated guidance, which began when I first applied at Trent. I would like to thank Allice Legat for the valuable input and direction she gave me through the research and writing stages of my thesis. Together, they provided encouragement, advice and critical commentary that was vital my completion of my thesis. I would like to thank the Wek'èezhì Renewable Resource Board for providing me with the map of wildfires in Mqwhì Gogha Dè Nùtlèè 1940-2014 (Map 5) to help me illustrate the effect of forest fires on caribou populations.

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List of Abbreviations and Symbols

ABWLP: Advisory Board on Wildlife Protection

ARC: Alberta Research Council

CWS: Canadian Wildlife Service

DFO: Fisheries and Oceans Canada

ENR: Environment and Natural Resources Department of the Government of the Northwest Territories

GNWT: Government of the Northwest Territories

INAC: Indian and Northern Affairs Canada

NWT: Northwest Territories

RCMP: Royal Canadian Mounted Police

RWED: GNWT's Department of Resources, Wildlife, Economic Development

TRC: Truth and Reconciliation Commission of Canada

WRRB: Wek'èezhì Renewable Resource Board

Chapter 1 – Introduction

The Northwest Territories (NWT) is one of three territories in Canada's north and occupies 1 171 918km² bordered by British Columbia, Alberta, Saskatchewan, Yukon and Nunavut. The Tłıchǵ, who are often referred to in the literature as Dogrib, are members of the Dene Nation in the NWT and have lived between Great Slave Lake and Great Bear Lake since time immemorial. In 2005 the Tłıchǵ signed the Tłıchǵ Land Claims and Self Government Agreement (Tłıchǵ Agreement) with the Government of the Northwest Territories (GNWT) and the Canadian Government. The Tłıchǵ Agreement established the Wek'èezhì Renewable Resources Board (WRRB), which is responsible for managing wildlife, forests, plants, protected areas and commercial activities relating to wildlife (12.4.1),¹ and for determining total allowable harvests of wildlife, forests and plants in Wek'èezhì. Fifty percent of the WRRB membership is appointed by the Tłıchǵ Government and fifty percent from the GNWT Department of Environment and Natural Resources (ENR) and the federal government. In 2009 the Tłıchǵ Government and ENR, GNWT submitted their first joint caribou management proposal to the WRRB. Two years later, in June, 2011, the *Implementation Plan for the Revised Joint Proposal on Caribou Management Actions in Wek'èezhì* was reviewed and approved at a WRRB Board meeting. The Board was satisfied that the *Implementation Plan* addressed how the parties would implement proposed management and monitoring actions to promote the stabilization and recovery of the Bathurst Caribou herd.

¹ Tłıchǵ Agreement, 2005, 119

The Dene are an Athabaskan-speaking group who have inhabited Denendeh since time immemorial.² Denendeh means “Land of the Dene” and covers 1 000 000km², ranging from Hudson Bay to Alaska and south into the prairies.³ The Dene nation includes: Tłıchǫ, Denesółiné, Sahtu, Gwich’in and Yellowknives First Nations. In addition, Inuvialuit who live in the western Canadian Arctic and Métis live in the NWT. The Dene have a vital relationship with the land, which had largely been unaltered until mineral exploration projects and subsequent road construction began in the 1930s.⁴

The Tłıchǫ harvest caribou predominantly from what has come to be known as the Bathurst herd, which migrates through 39 000km² of Tłıchǫ Lands during the spring migration.⁵ In 2009 the herd declined in size from 100 000 in 2006 to 32 000⁶ due to a number of factors, including weather conditions, food availability, forest fires, disturbances from mining and roads, harvesting, predation and animals leaving the herd.

In the same year the Tłıchǫ Government and ENR, GNWT presented to WRRB a joint caribou management proposal suggesting actions to combat this decline. This proposal began a process that included initiating a public hearing around how to reverse the decline and progressively rebuild the population. In 2010 a revised joint management proposal led the WRRB to make recommendations on caribou harvest and monitoring. In 2011 the final management actions and implementation plan on caribou harvesting and management actions were established by ENR and the Tłıchǫ Government, based on the WRRB 2010

² Andrews & Zoe, 1997, 161; Helm, 1981, 291

³ Helm, 2000, xi; Ryan, 1995, 1

⁴ Legat, 2012, 113; Andrews & Zoe, 1997, 160

⁵ Nesbitt & Adamczewski, 2013, 2

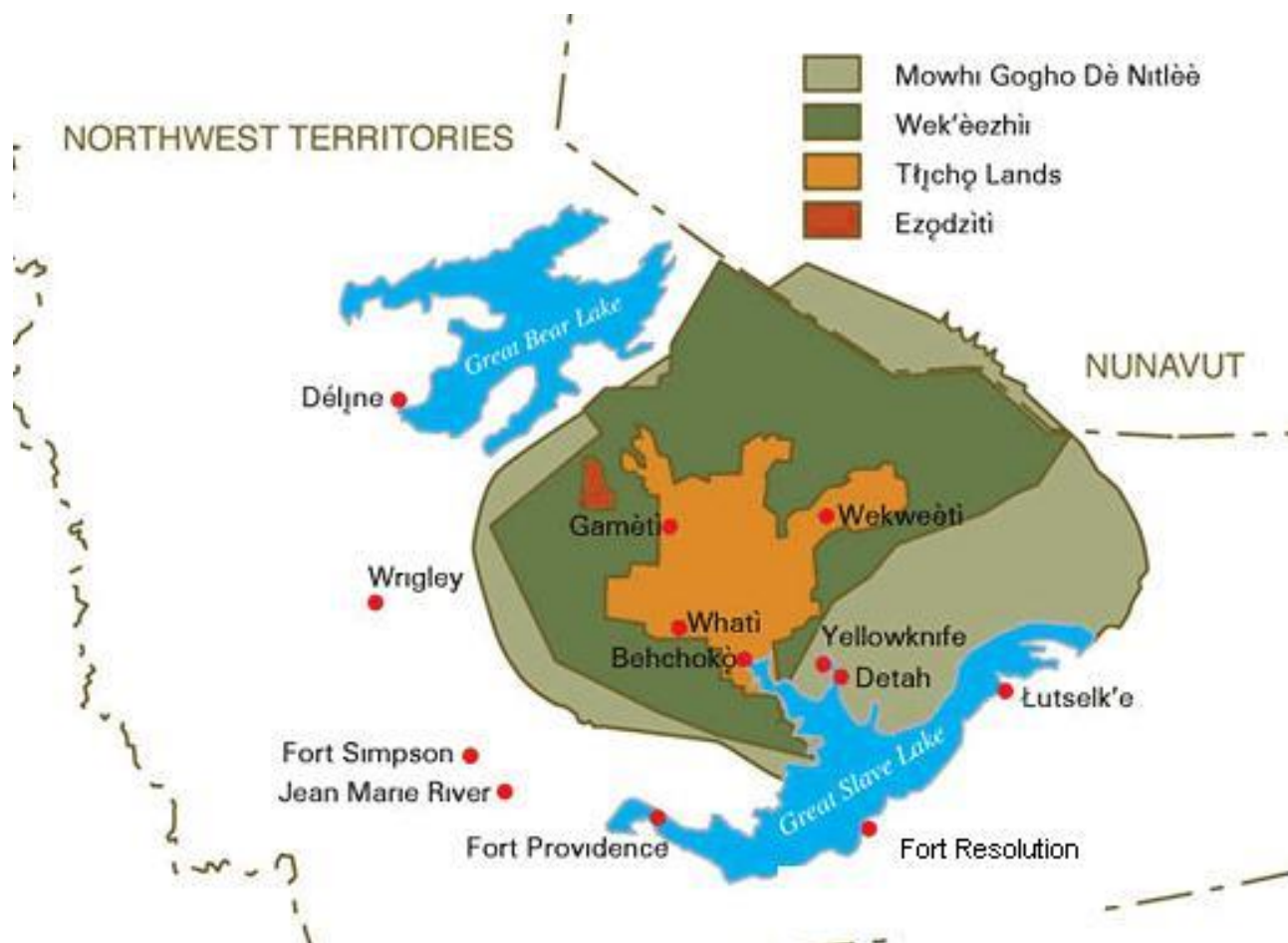
⁶ Jan Adamczewski, Transcripts Day 1, 31

recommendations about the Bathurst caribou herd. Table 1 outlines this process and explains who was responsible for which documents.

Document	Date Submitted	Written By	Submitted To
Proposal to Wek'èezhì Renewable Resource Board Joint Proposal on Caribou Management Actions in Wek'èezhì	November 5, 2009	ENR and Tłıchǫ Government	WRRB
Revised Joint Proposal on Caribou Management Actions in Wek'èezhì	May 31, 2010	ENR and Tłıchǫ Government	WRRB
Report on a Public Hearing Held by the Wek'èezhì Renewable Resources Board 22-26 March 2010, 5-6 August 2010 Behchokǫ, NT and Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst Caribou Herd.	October 8, 2010	WRRB	ENR and Tłıchǫ Government
Joint Response to Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst Caribou Herd. ⁱ	January 13, 2011	ENR and Tłıchǫ Government	WRRB
Revised Joint Proposal on Caribou Management Actions in Wek'èezhì Implementation Plan	June 22, 2011	ENR and Tłıchǫ Government	WRRB

Table 1: The Bathurst Caribou Herd's Co-management Process

Tłıchǫ traditional lands, the Mǫwhì Gogha Dè Nı̄tlèè, as defined by Tłıchǫ Chief Mǫwhì during the signing of Treaty 11 in 1921, are situated between Great Slave Lake and Great Bear Lake in the Northwest Territories (NWT) and Nunavut (see Map 1). It is important to distinguish between the land Tłıchǫ have lived on since time immemorial and



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Map 1 – Tłıchǫ Lands, Wek'èezhì

the land over which the Tłıchǫ Government has power and can implement harvest management actions. The Tłıchǫ Agreement did not award the Tłıchǫ the entirety of Mowhì Gogho Dè Nìtlèè, the lands the Tłıchǫ see as their traditional territory. Instead they received only a 39 000km² parcel of land within Mowhì Gogho Dè Nìtlèè, now referred to as Tłıchǫ Lands. The borders of Mowhì Gogho Dè Nìtlèè overlaps with the borders of the Sahtu Settlement Area, the territory of Nunavut and extends toward the Dehcho and Akaitcho Territory (see Map 1). Other important areas marked on the map include:

⁷ WRRB, About WRRB, Map

Ezqdzìtì, an area of particular cultural and historical importance to the Tłıchq which is protected from development forever; and Wek'èezhì, which encompasses Tłıchq Land, borders Sahtu Settlement Area and Nunavut, and is the region for which the WRRB is responsible. All of this land is predominantly comprised of boreal forests, exposed bedrock, and waterways and lakes.

The WRRB, the federal government, the territorial government and the Tłıchq Government are part of the decision-making process to protect wildlife, forests, plants and preserve the protected areas in Wek'èezhì. In 2010 as mandated in the Tłıchq Agreement Implementation Plan, the WRRB conducted public hearings to hear from the Tłıchq Government, Tłıchq citizens, ENR officials, scientists, legal counsel, outfitters, mining companies, and individuals. The aims of these hearings were to gather the parties' knowledge of caribou, discuss caribou harvesting and what was needed to secure the future of the Bathurst herd.

The Tłıchq Agreement, in its terms and spirit was intended to give the Tłıchq a voice in wildlife management and harvesting decisions in Wek'èezhì. My thesis examines how and to what degree these voices were present in the proposals and recommendations leading to the 2011 final caribou management actions in Wek'èezhì. I draw largely on the transcripts from the WRRB 2010 public hearings, paying particular attention to the input of the territorial government and the Tłıchq Government and citizens. The process by which the final caribou management actions concerning the harvest of the Bathurst caribou herd were reached and the final content of those decisions provide a useful case study to

critically reflect on the capacity of such co-management projects to allow the perspectives and knowledge of aboriginal groups such as the Tłıchǫ to meaningfully shape them.

In the remaining sections of this chapter I discuss briefly the history of aboriginal-Canadian state relations and resource management in the NWT, as structured by proclamations, treaties, court decisions and legislation, the process of co-management and other managerial strategies. I then review some key terms and definitions that I use; the primary stakeholders involved in the co-management of the Bathurst caribou herd; and, finally, the methodology I use.

Chapter 2 focuses on co-management as a wildlife management strategy and its implementation in Wek'èezhì. In the last twenty years, co-management has become a widely utilized strategy as it provides local communities with the ability to engage in resource management decisions. While there are many benefits to co-management, there are also many difficulties, including the complexities of balancing disparate worldviews, overcoming language barriers, and attempting to integrate aboriginal traditional knowledge with scientific knowledge. I discuss the Tłıchǫ Agreement and its implementation plan regarding wildlife harvesting management..

Chapter 3 begins with a discussion of the Tłıchǫ, their worldview, and their relationship with the land and caribou. I describe the importance of caribou to the Tłıchǫ, as they manifest not only in their physical needs but also in their spiritual, emotional and cultural expressions. Integral to this discussion are the laws regulating behaviour when harvesting and handling caribou. I then reflect on the varying understandings of caribou

and caribou management, based on both Tłıchǫ and ENR input as documented in the transcripts of the WRRB 2010 hearings.

In Chapter 4 I explore how and to what extent the Tłıchǫ perspectives identified in Chapter 3 are represented throughout the process leading up to the 2011 Implementation Plan for the Revised Joint Proposal on Caribou Management Actions in Wek'èezhìi. Drawing on the 2009 *Joint Proposal on Caribou Management Actions in Wek'èezhìi* and the 2010 *Revised Joint Proposal on Caribou Management Actions in Wek'èezhìi*, I compare ENR perspective with that of the Tłıchǫ concerning how best to manage caribou. I conclude this chapter by reflecting on what degree the Tłıchǫ perspectives were represented in the final management decisions.

Chapter 5 concludes my thesis with a discussion on how this case study fits into the wider literature on aboriginal-state relations and the recent publications from the Truth and Reconciliation Commission.

History of Resource Management and Tłıchǫ – State Relations

Beginning in the 1700s explorers and fur traders making their way into Mq̄whì Gogha Dè Nı̄tlèè, Tłıchǫ traditional territory (see Map 1) brought different worldviews to this land. These intrusions would have lasting effects on the environment and the lives of the Tłıchǫ people.⁸ June Helm identifies four eras where European contact expanded in the NWT: before the 1800s, 1800-1820, before 1850 and after 1850. Before the 1800s traders ventured to the northern prairies, Nunavut and eastern NWT, coming into contact with

⁸ Zoe, 2012 70

Denesółiné.⁹ In the late 1700s Samuel Hearne, a fur trader and first European explorer travelled across Canada overland to the Arctic ocean via the Coppermine River, guided by Dene.¹⁰ Hearne made the first recorded contact between Europeans and Tłıchǫ in their own territory.¹¹ The Tłıchǫ first learned of European explorers through Whanikw’o, a Tłıchǫ woman who was captured by the Cree, escaped, after seven months, she was found alone by Hearne’s team.¹² She lived among the traders for several years, learning their ways and their technology. Whanikw’o ultimately helped the Tłıchǫ through difficult times by bringing them knowledge of Europeans and their technology.¹³

In 1789 based on information gathered from the North West Company founder Peter Pond, Alexander Mackenzie followed the Dehcho (now known as the Mackenzie River) and made the first European contact with the northern Dene, including the Tłıchǫ.¹⁴ The Northwest Company established Fort Resolution (Denínu Kùè) in 1786 and Fort Simpson (Łíídlı Kùè) in 1803. Further exploration along the Dehcho, Peace River and Fraser River followed from 1800 and 1820 lead to contact with Dene Tha’, Sahtu and Gwich’in Dene. In 1821 the Hudson’s Bay Company merged with the North West Company and subsequently set up Fort Providence, Fort Raeⁱⁱ (Behchokò, 1852) and Fort Smith (Thebacha, 1874) as trading posts. These posts quickly became important hubs of commerce, travel and information for the Tłıchǫ (see Map 2).

⁹ Helm, 2000, 110-112

¹⁰ Kendrick, 2003, 65; Helm, 1981, 293

¹¹ Helm, 1981, 293

¹² Legat, 2012, 103

¹³ Legat, 2012, 53

¹⁴ Helm, 2000, 127



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Map 2 – Communities in the NWT

Explorers Samuel Hearne and John Rae are remembered as capable individuals who gave back to their host communities, while famed explorer John Franklin was considered selfish and disrespectful. In the mid-1820s he was permitted to camp and fish on Great Bear Lake and harvested several hundred fish per day. His lack of reciprocation in sharing his harvests with the Tłı̨chǫ demonstrated the difference between Tłı̨chǫ and European

¹⁵ Northwest Territories Bureau of Statistics, 2010

understanding of land use and reciprocity. Sahtu Dene George Blondin claimed that had his ancestors understood the European concept of property, they would have been more cautious in helping explorers such as Franklin.¹⁶

In 1763 King George III signed the Royal Proclamation claiming colonized lands in North America for Britain, laying the legal groundwork for further European settlement in North America. The Proclamation stated that aboriginal rights and land ownership would continue to exist until ceded to the Crown through a treaty. For settlers to obtain land, they would have to purchase ceded land from the Crown. In spite of this Proclamation, both the British colonial government and, after 1867, the Canadian government continuously challenged, ignored, and transgressed aboriginal sovereignty and rights, defined as the recognition of aboriginal peoples' right to land, self-determination, self-government, and the ability to live one's culture, religion and language.¹⁷

Over two hundred years later in 1973, the Calder case "defined [in] Canadian law the fundamental principle of aboriginal rights."¹⁸ Frank Calder, a spokesperson for the Nisga'a nation in British Columbia, sought recognition of Nisga'a aboriginal rights through the Supreme Court of Canada. As no treaties had been signed on their territories, they had never given up their right to their ancestral land.¹⁹ This case was an important development in Canadian law, as it reaffirmed what the 1763 Royal Proclamation first set out to do: allow aboriginal peoples in Canada such as the Tłıchǫ, self-government over their own lands. On June 26, 2014 the Supreme Court of Canada announced an important

¹⁶ Legat, 106-107

¹⁷ Asch, 2014, 19

¹⁸ Asch, 1984, 54

¹⁹ Asch, 2014, 12

development in aboriginal rights and land title, which followed the 1973 Calder decision that required the federal government to satisfy its obligations towards aboriginal peoples. The 2014 Williams decision by the Supreme Court based on the claim of Roger Williams of the Tsilhqot'in Nation of British Columbia, affirmed that British Columbia violated its duty to consult when making land use planning decisions on lands claimed by the Tsilhqot'in. This case brought clarity to aboriginal title and will echo across Canada with respect to how to proceed where aboriginal rights and title are concerned. It may change how treaties are interpreted based on traditional land use. How this decision will impact wildlife management and land management is yet unknown.

The relationship between the Canadian state and aboriginal people stems from and is defined by signed treaties. However, conflict has arisen regarding the treaties' meaning and intention. To the federal government, Treaty 8 and Treaty 11 were signed to "permit the unchallenged extraction"²⁰ of natural resources. In contrast, aboriginal leaders understood the treaties to be a sign of good will between equal nations. In fact, the wording of the treaties and explanations given by the treaty commissioners were ambiguous and misleading. In the case of Treaties 8 and 11 (and most of the other treaties), few aboriginal people were able to read the text, and thus relied on interpreters and explanations by government officials. Treaty 11 wording forced the Dene to "cede, release, surrender and yield up"²¹ all land claims and abide by Canadian and provincial hunting and fishing regulations.²² The Tłıchǵ were to give the federal government right to the land and allow

²⁰ Brody, 1981, 63

²¹ Abel, 1993, 185

²² Kendrick, 2003, 76

gas and mineral exploration on this land. The treaty gave the Tłıchq five dollars annually, schools, medical care and gifts such as fishnets, ammunition and food. Michael Asch argues that the way in which the treaty was worded, it is doubtful that the aboriginal people would have been able to understand its conditions, even if they had thoroughly read it.²³

Following the signing of Treaty 8 in 1899 by the Danezaa, Wapsewsipi, Denesóliné and Akaitcho,²⁴ the federal government did not initially see the need for more treaties further north. To the federal government, these lands were not profitable as they were not suitable for agriculture or grazing. However, the establishment of oil claims west of Great Bear Lake in 1914 motivated the government to re-engage in treaty discussions with the Tłıchq.²⁵ The terms of what was to become Treaty 11 were discussed among the Dene nations as they did not want to lose their land, their autonomy or their hunting and fishing rights. The Tłıchq who had listened to oral narratives from Treaty 8 signatories were aware of the reserve system in the prairies, and understood that treaty commissioners made promises that they feared would not be kept. They were concerned that their rights would not be respected by the Canadian Government.²⁶

For six days leading up to the signing of Treaty 11, Tłıchq gathered knowledge and devised a strategy to handle the treaty commissioner. They chose Mqwhì as their representative for the Treaty 11 discussions. He was chosen because he was skilled in the bush, knowledgeable about trails and was a successful trader.²⁷ He was also chosen

²³ Asch, 2013, 453

²⁴ Brody, 1981, 64

²⁵ Legat, 2012, 110

²⁶ Kendrick, 2003, 76; Legat, 2012, 58

²⁷ Legat, 2012, 111

because he had a strong character and would protect the Tł̥ch̥q and their land. According to Alphonse Quitte, M̥wh̥'s uncle warned M̥wh̥ that he must ensure he understood and agreed with the terms of the treaty or else the federal government would twist his words and take their land as they had done elsewhere.²⁸

The Treaty 11 signing took place on August 22, 1921 at Fort Rae. Treaty Commissioner Henry Anthony Conroy had been given strict instructions to adhere to the terms of the treaty as it had been drafted in Ottawa.²⁹ The Commissioner's report indicated that Fort Rae had a population of approximately 800 Tł̥ch̥q, many living as far as 200 miles from the fort.³⁰ In fact, only half of the Tł̥ch̥q population were present at Fort Rae for the signing and those there were unable to read the text, and thus had to rely on the interpretation by the commissioners.

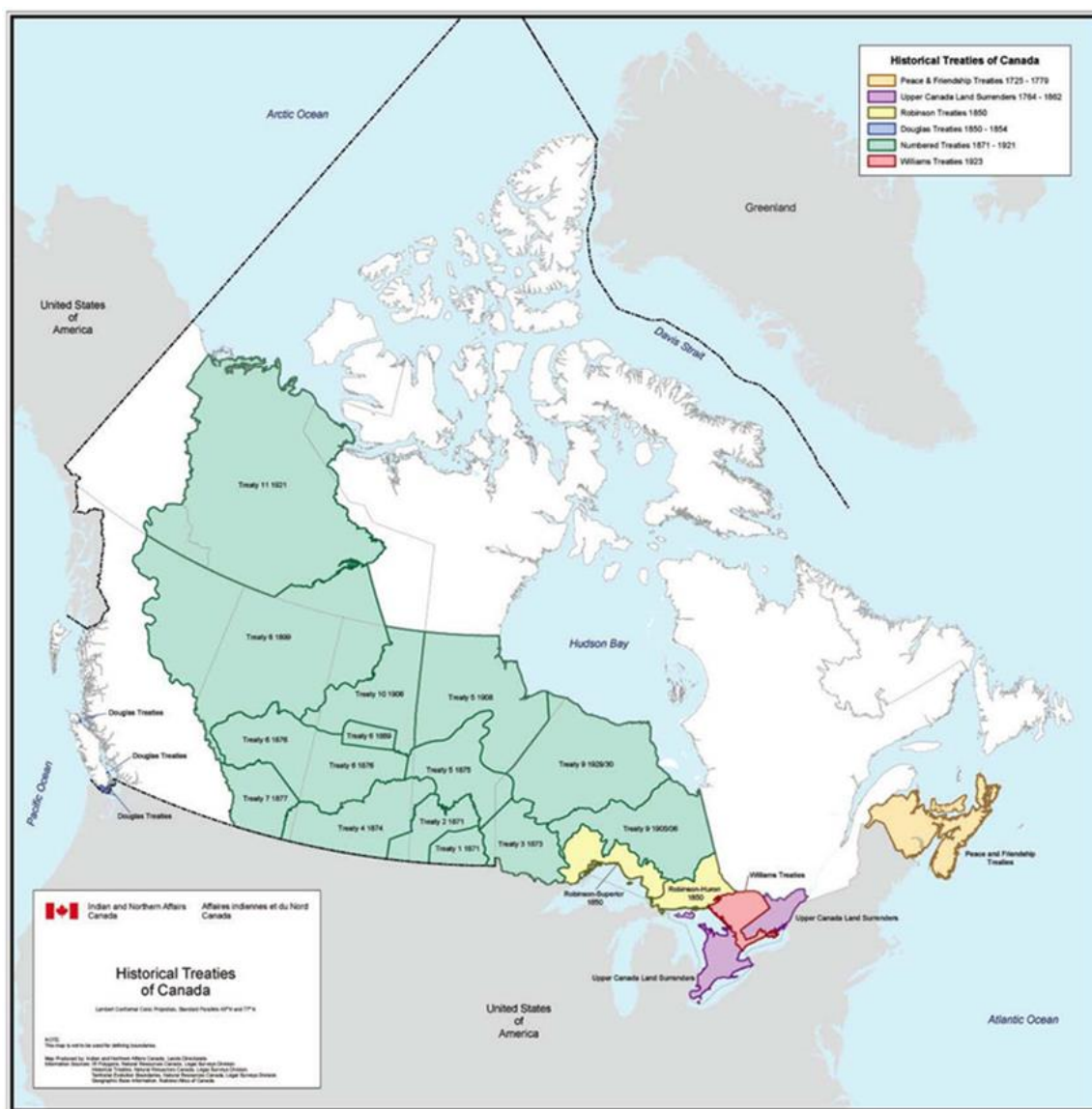
In 1921 M̥wh̥ signed Treaty 11 on behalf of the Tł̥ch̥q, with the understanding that they were signing a peace treaty where they "would live with the White man peacefully side by side as brothers"³¹ (see Map 3). For the Tł̥ch̥q, the specifics of what was said and not said by the Treaty Commissioner was and is recorded in oral narratives. The obvious difference between these narratives and what was written down has fuelled a legacy of mistrust that continues to impact the relationship between federal and territorial

²⁸ Legat, 2012, 59

²⁹ Fumoleau, 2004, 165

³⁰ Fumoleau, 2004, 197-199

³¹ Fumoleau, 2004, 192



Map 3: Canadian Treaties

governments on the one hand, and aboriginal people on the other. The differences between the written text of Treaty 11 and the Tłıchǫ oral narratives led to the negotiation of comprehensive land claims, and ultimately the signing of the 2005 Tłıchǫ Land Claims and Self-Government Agreement.

³² http://www.dair.gov.nt.ca/_live/pages/wpPages/Maps.aspx

As with many other numbered treaties, Treaty 11 has always been a problematic document. It was signed without the consensus of all Tłıchǫ.³³ The Tłıchǫ remember Bishop Breynat, who traveled with the treaty commissioner to ensure that the aboriginal people were heard, as a caring man. Adele Lafferty tells how Breynant encouraged Mǫwhì to sign the treaty as the “Indian Agent is telling the truth. He is not lying. [...] They don’t mean to cause you any problem or troubles.”³⁴ It is said that the treaty commissioner urged the Tłıchǫ to sign the treaty before other European Canadians could obtain land, eroding Tłıchǫ rights and the size of their land and hunting grounds. In keeping with terms of the Indian Act, the federal government appointed Mǫwhì as the Tłıchǫ Grand Chief. In 1936 when Mǫwhì died, he was replaced by Jimmy Bruneau. Jimmy Bruneau said that “if we are to remain a strong people, we must educate our children and grandchildren in both our ways and those of the Kweèt’ı̨, so they can say, ‘We are strong like two people.’”³⁵ In doing so, the commissioner misunderstood Tłıchǫ respect for Mǫwhì as an indication of his authority over the Tłıchǫ.³⁶ Mǫwhì was really only interested in “securing land where his people’s freedom would be insured”³⁷ and guaranteeing access to education and medical services.³⁸ He believed he was ensuring the land would remain as it was and safeguarding the Tłıchǫ way of life “as long as the sun rises and the river flows.”³⁹ He only signed the treaty after

³³ Kulchyski, 2005, 81

³⁴ Fumoleau, 2004, 194

³⁵ Legat, 2012, 60-61

³⁶ Legat, 2012, 111

³⁷ Fumoleau, 2004, 194

³⁸ Blondin, 1997, 224

³⁹ Scott, 2007, 14

ensuring Tłıchǫ terms were met and hunting and trapping rights were guaranteed. White people were to be permitted on their land but not as hunters, trappers or fishermen.⁴⁰

In the late 19th and early 20th centuries, hunters, naturalists, scientists and geologists began exploring northern Canada. Concern for wildlife was high at this time as many species in North America were suffering from overharvesting by European settlers. Large game was of particular concern. The Canadian government funded many of these expeditions with the expectation that they would name and catalogue potential resources such as minerals, oil, timber and wildlife. These outsiders saw the large culls that were part of the Dene winter caribou harvesting practices, and felt these violated their Eurocentric sense of sportsmanship and code of “one bullet, one animal.”⁴¹ Their accounts were often dramatized and exaggerated, creating a stereotype of aboriginal people as indiscriminate hunters who “killed all the caribou they could until none remained, leaving their children hungry and without warm clothing.” The Canadian government felt the only way to save the caribou and the aboriginal people from overhunting was the implementation of game laws.⁴²

However, the Tłıchǫ have their own laws intended to maintain their relationship with caribou. Fundamentally, they take only what they needed. Despite the outsiders’ perceptions, Dene caribou harvests have maintained a careful balance and relationship with the land. I return to this discussion in Chapter 3.

⁴⁰ Fumoleau, 2004, 192-193

⁴¹ Sandlos, 2003, 396

⁴² Sandlos, 2008, 7,8

Beginning in 1894 the federal government created legislation to protect and manage wildlife. But it was not until the 1917, when the Northwest Game Act was passed, that the lives of the Dene people were really affected.⁴³ This 1917 Act imposed hunting restrictions on game animals, fur bearers and waterfowl.⁴⁴ Caribou could no longer be hunted in October, November, April and July, though harvesters could get an exemption from this legislation if they could prove that hunting caribou was necessary to prevent starvation.⁴⁵ The Migratory Birds Convention Act, also passed in 1917, further constrained the Dene diet as it prevented them from legally harvesting game birds, another important food source. This regulation came into force without input by aboriginal people. These new game laws restricted harvesting of the Tłıchǵ's primary food sources and subjected them to arrest and legal sanction if they didn't comply.⁴⁶ In 1919 the federal government explored but ultimately did not enact a project to domesticate caribou by introducing reindeer and teaching Inuit and aboriginals to become reindeer herders.⁴⁷ The federal government continued to control wildlife management in the Northwest Territories until 1970, when the territorial government assumed responsibility.⁴⁸

In 1920 aboriginal groups protested these stringent restrictions to their food sources. The Dene recognized that these hunting regulations were contrary to the treaty's promises. The impact of these games laws differed across the NWT but were particularly problematic near Great Slave Lake. Many charges were laid against caribou harvesters in

⁴³ Sandlos, 2008, 7

⁴⁴ Sandlos, 2003, 405

⁴⁵ Legat, 2012, 109

⁴⁶ Sandlos, 2003, 405

⁴⁷ Kendrick, 2003, 78

⁴⁸ Sandlos, 2003, 405-407

this area, indicating that they largely ignored these game laws.⁴⁹ An iconic moment of these protests was when the Denesóliné, Yellowknives and Tłıchǫ refused treaty payments. This protest ended when Chief Suzie Drygeese, Bishop Gabriel Breynant and the local Indian Agentⁱⁱⁱ agreed to establish a reserve north of Great Slave Lake for all aboriginal people to hunt year round. This promise was never fulfilled; rather, the federal government continued to exert control over game regulations and the lives of Dene and Inuit people.⁵⁰

In 1962 the federal government again enforced game regulations on the Tłıchǫ without consultation, as caribou populations were declining. Helm describes an exchange between the game warden and Tłıchǫ harvester Johnny Simpson. The game warden instructed the Tłıchǫ not to harvest caribou fawns or cows and to report all caribou kills. Simpson replied that he would continue harvesting caribou, and was supported by the other Tłıchǫ. The Tłıchǫ discussed their reliance on caribou and stated that they would continue following the Tłıchǫ laws, which defined how and when it was right to harvest caribou.⁵¹ The game warden's rigid regulations were incongruous with Tłıchǫ practice. Simpson said "I am my own boss"⁵² because it is important for Tłıchǫ to think for themselves, determine the best harvesting strategy, and only harvest what is necessary.

In 1970 the Indian Brotherhood of the NWT was established to negotiate treaty settlements based on the premise that treaties were peace agreements, and aboriginal nations never surrendered their land or received the full benefits outlined in their

⁴⁹ Abel, 1993, 200

⁵⁰ Fumoleau, 2004, 128

⁵¹ Helm, 2000, 67

⁵² Helm, 2000, 67

treaties.⁵³ In 1971 the Canadian government announced it intended to build an overland pipeline to transport oil discovered off the coast of Alaska to southern markets, thus encouraging economic development in the north. This pipeline was to pass through lands covered in Treaty 8 and Treaty 11. To build this pipeline, the federal government needed to eliminate any possibility for aboriginal nations to negotiate land claims. In 1972 the federal government proposed establishing reserves and financial compensation if in return, aboriginal peoples would release the Crown from its treaty responsibilities. This offer was rejected. Dene chiefs decided to go to court to prevent the pipeline and other development projects on their lands. In 1973 François Paulette, Chief of the Fort Smith Chipewyan, filed a “caveat” with the land registrar of the territory, claiming the Dene had interest in more than one million square kilometers of land that had not been ceded by the treaties. Elders Louis Norwegian from Jean Marie River, who had been present at treaty negotiations, testified that his grandfather was the representative of Fort Simpson and just like M̃qwhì, he refused to accept the treaty until he was confident that he understood the treaty’s conditions. It had been promised that “whatever the Commissioner told the Indians, the word would never be broken.”⁵⁴ In 1973 Mr. Justice William G. Morrow of the Supreme Court of the NWT decided, in part due to testimonials such as those from Louis Norwegian, that the Dene potentially had a case and should be heard. Ultimately, the Supreme Court of Canada ruled against the Dene; yet, due to Morrow’s initial ruling, this case demonstrated to the federal government that aboriginal concerns could not be overlooked.⁵⁵

⁵³ Bateyko, 2003, 27

⁵⁴ Kulchyski, 2005, 126

⁵⁵ Abel, 1993, 251; Legat, 2012, 120-121; Kulchyski, 2005, 125

In 1975 the Declaration of Dene Nationhood was passed. In this Declaration, the Dene asserted that their aboriginal rights included self-determination and demanded the Canadian Government recognize “their political right to determine their own destiny.” The Declaration proposed that the Crown grant Dene sovereignty, including final legislative authority in their traditional territories. The Dene National Assembly contended that while the Dene were in Canada, neither the Government of Canada nor the GNWT were their government.⁵⁶ The Canadian Government rejected this proposal in 1977.⁵⁷

In 1977 the Mackenzie Valley Pipeline Inquiry report, commonly known as the Berger Report, was released. Conducted by Justice Thomas Berger, this inquiry set out to investigate the potential impacts of plans for the construction of a pipeline running down the Mackenzie River valley. Berger held hearings with pipeline companies, environmental groups, aboriginal groups and other organizations. However, he also allowed the Dene, Inuvialuit and Métis, among others, to register their perspectives on the project.⁵⁸ He travelled across the NWT to the communities that would be affected by the pipeline to hear what the people had to say. He provided an opportunity for the Tłıchǫ (and other Dene) to speak without interruption. Berger’s willingness to listen garnered the Dene’s trust and respect, filling his meetings with people wishing to be heard. The Dene praised his ability to listen because he enabled the Dene to speak but also heard what they said.⁵⁹ They spoke of their relationships to the land, their anxiety based on past development projects, and their fears of potential damage from the pipeline. George Blondin, who was originally from

⁵⁶ Asch, 2014, 19

⁵⁷ Asch, 2014, 20

⁵⁸ Asch, 2014, 18

⁵⁹ Scott, 2007, 8-9

Deline but had worked with many Tłıchǵ and lived in Behchokǵ said: “For the last 100 years development has bypassed the Indian people. You don’t see any Indian got rich by development. If you don’t profit from development, it is not a development, it is only a disaster of the land.”⁶⁰

The Dene wanted their land to remain clean and safe so they could continue to live off the land and maintain their culture.⁶¹ In his report Berger stated that “the social impact I foresee in the Mackenzie Valley and the Western Arctic, if we build the pipeline now, will be devastating – I use the word advisedly – and quite beyond our capacity to ameliorate in any significant way.”⁶² The Berger Report ultimately recommended that no pipeline be built for at least ten years to allow aboriginal land claims to be settled.⁶³

Berger came to understand that the Dene wanted “a settlement that will entrench their rights to the land and that will lay the foundations of native self-determination under the Constitution of Canada.”⁶⁴ In 1988 the Dene-Métis secretariat signed the Land Claim Agreement in Principal, and subsequently 24 500m² of land was protected from development. In 1990 the federal government refused to continue discussions. As a result this land was no longer protected and a diamond rush began. Once this claim fell apart, federal policy on how to settle land claim agreements changed, allowing multiple land claim agreements to be settled at once, undermining the unity of the Dene nation.⁶⁵ In 1992

⁶⁰ Scott, 2007, 35-36

⁶¹ Scott, 2003, 20

⁶² Berger, 1977, 143

⁶³ Legat, 2012, 122-123

⁶⁴ Asch, 2014, 19

⁶⁵ Scott, 2007, 36-37

the Dogrib Treaty 11 Council was formed and mandated by the Tłıchǵ to settle a land claim and self-government agreement with the Canadian Government.⁶⁶

In 2005, the Tłıchǵ, the government of the Northwest Territories, and the government of Canada ratified the Tłıchǵ Land Claims and Self Government Agreement, the first combined self-government and land claims agreement in Canada. An example of a modern treaty, the Tłıchǵ Agreement sought to clarify land ownership, use and management. It was entered into based on the conflicting interpretations of Treaty 11. It enabled the Tłıchǵ to establish their own government (with limited powers and jurisdiction), manage their own affairs, and thus govern themselves. They gained additional resources and tools to protect and promote Tłıchǵ culture, language and lands. The Agreement provides the Tłıchǵ Government with the right to govern both its citizens and the land, both at the surface and sub-surface levels within Tłıchǵ Lands. The Tłıchǵ Agreement is more comprehensive than the pre-existing agreements with other aboriginal groups in the NWT, such as the Inuvialuit settlement, Gwich'in and Sahtu settlement.

The Tłıchǵ Agreement has twenty-seven chapters. It outlines the Tłıchǵ Government's powers and structure, community government, land ownership and access, wildlife management, resource regulation, and taxation. The Tłıchǵ Government has the power to enter into contracts and agreements, own property, and create laws (7.2.1)⁶⁷ relating to governmental operation, management of rights, and the use and protection of Tłıchǵ Lands and resources.⁶⁸ Of the twenty-seven chapters in the agreement, chapters 12,

⁶⁶ Legat, 2012, 123-126

⁶⁷ Tłıchǵ Agreement, 2005, 60

⁶⁸ Tłıchǵ Agreement, 2005, 61

13, 14 and 16 are significant to my thesis because they provide an understanding of the WRRB and its responsibilities regarding wildlife management, commercial activities relating to wildlife management, forest management, plant management and protected areas.

Affiliations	Board Members
Appointed by members of the board	Chairperson
Tłıchǫ Government	2-4 board members
Canada Aboriginal Affairs and Northern Development (previously known as the Department of Indian Affairs and Northern Development)	2 board members
GNWT Department of Environment and Natural Resources (ENR) (previously known as the Department of Resources, Wildlife and Economic Development)	2 board members

Table 2: WRRB Board Members and their Affiliations

Chapter 12 outlines the formation and function of the Wek'èezhì Renewable Resource Board (WRRB). The WRRB is responsible for overseeing the management of wildlife and their habitat in the region of Wek'èezhì, including commercial activities (12.4.1).^{iv} The Board regulates harvest levels, commercial ventures and other activities affecting wildlife in addition to carrying out studies on wildlife and harvesting practices. (12.4.2). Fifty percent of the Board's members are Tłıchǫ, and fifty percent are split between federal and territorial government representatives. Table 2 outlines the Board's composition. The members appoint a Chairperson from their membership, weighing

leadership capacity and knowledge of wildlife, habitat, aboriginal ways of life and relationships between people and the environment in their choice (12.2.2). The WRRB represents a co-management approach to wildlife management, using a combination of traditional knowledge, science and expert opinion (12.1.5). The WRRB has the power to set harvesting limits on total allowable harvests if necessary for conservation (12.5.5), and the priority should always be given to non-commercial, aboriginal harvesters (12.6.5-12.6.7). The Board reviews wildlife management plans proposed by the Tłıchǵ Government, the federal government, and the GNWT, conducting consultations with all relevant stakeholders, including other aboriginal peoples, Tłıchǵ community representatives and the public (Sheet # 12-3).^v The WRRB responds to these proposals with a series of recommendations. The final decisions are made by the government that submitted the initial proposal “with any other Party or body of powers to manage any aspect of the proposal.”⁶⁹

The Tłıchǵ Agreement required that by 2006 the WRRB would meet with the Tłıchǵ Government, the federal government and the GNWT and invite any aboriginal people who traditionally harvest the Bathurst caribou herd to participate and prepare a comprehensive proposal, and by 2008 to create a management plan for the Bathurst caribou herd (12.11.2-12.11.3). The GNWT’s Department of Resources, Wildlife, Economic Development (RWED – now ENR), and the Tłıchǵ Government were to prepare joint management actions for the Bathurst caribou herd. The WRRB would then review the proposals and make recommendations and ENR and the Tłıchǵ Government would implement the management

⁶⁹ The Government of Canada, ENR and Tłıchǵ Government, 2005, 180

plan.⁷⁰ In the case of the Bathurst Caribou herd, the WRRB accepted the 2011 final management actions by ENR and the Tłıchǵ Government. The WRRB also requested that the implementation plan be completed and initiated as soon as possible; ENR and the Tłıchǵ Government initiate discussions with the federal government regarding land use planning for Wek'èezhì; clarify the reasoning behind their recommendations.

The Tłıchǵ Government owns all plants, trees and forests on Tłıchǵ Lands and is responsible for their management; however, the federal government and the GNWT are responsible for fighting forest fires (13.1.1). Tłıchǵ citizens have the right to harvest plants and trees throughout Mǫwhì Gogha Dè Nıłłèè (13.2.1); however, any commercial harvesting on these lands must be approved by the WRRB. Tłıchǵ citizens may harvest plants at any time of year to make handicrafts, to be consumed and to trade or gift plants to other aboriginal people in the NWT, Nunavut or Alberta for their own consumption (14.2.1). The WRRB has the power to make recommendations about forests (excepting national parks) regarding tree harvesting, forest management such as commercial harvesting, and forest fire prevention (13.3). After consulting with other parties, the WRRB can also make recommendations on plant management regarding plant harvesting and management (14.4.1). The Tłıchǵ Government may negotiate an agreement with the federal government and/or the GNWT about managing protected areas, including the continued use of cabins, camps and traditional travel routes, and restrictions on harvesting wildlife, plants and trees by Tłıchǵ citizens (16.4.1).

⁷⁰ The Government of Canada, ENR and Tłıchǵ Government, 2005, 201, Sheet #12-16

The introduction of wildlife management in M̄qwhì Gogha Dè N̄itlèè and the signing of Treaty 11 damaged the relationship between the Tłıchq and the federal government. Tłıchq fought for their right to their land and way of life, a battle greatly aided by the decisions of the Calder case, the Berger Inquiry, and finally the Tłıchq Agreement. As an extension of these victories, the WRRB which was established through the Tłıchq Agreement, requires the territorial government to consult with the Tłıchq Government on issues related to wildlife management and harvesting. My case study here examines how the Tłıchq positioned their voices to be heard on important issues that affect their very way of being in the world, drawing on these important decisions and accomplishments.

Co-Management

In the last twenty years co-management, characterized by shared power and responsibility between two or more governing bodies, has become increasingly popular as a wildlife management model.⁷¹ Most commonly, these governing bodies include a local community and a territorial – as in the case of the NWT – or federal government department. Although characterized by a power sharing relationship, in co-management arrangements the degree of power held by each party may be unequal or vary depending upon circumstances and context. While co-management as a model is a recent development, aboriginal peoples have always wanted to be a part of the conversation. For example their keen participation in the Berger Inquiry demonstrated their desire to be heard and be part of any decisions that affect their relationship with their lands and those with whom they share those lands.

⁷¹ Nadasdy, 2005, 215

Successful co-management strategies depend upon cooperation, trust, and respect, and involve ongoing discussions among all stakeholders. Current literature heralds co-management as a means of empowering aboriginal peoples through increased participation in wildlife management, promoting aboriginal knowledge and culture, encouraging community participation in management, and democratizing policy decisions. Despite these strengths, implementing co-management is complex because it necessitates the integration of differing interests, worldviews, and knowledge systems. Addressing these issues, as well as language barriers, power disparities, and differing management styles is, however, necessary if co-management is to work well. I will return to this discussion in Chapter 2.

Definitions and Terminology

Throughout this thesis, I use the term aboriginal to describe people who have their history and culture connected to the land on which they have lived since time immemorial with inherent rights due to their continued and innate connection with the land. Prior to the arrival of Europeans, aboriginal people lived on the land, abided by their own laws and harvested responsibly. The federal government classifies three categories of aboriginal peoples in Canada based on distinct histories, language, cultural practices and spiritual beliefs: First Nations, Inuit and Métis. First Nations people are status or non-status “Indians” in Canada and are members of over fifty distinct nations. Inuit are the culturally and linguistically distinct aboriginal people living in Canada’s Arctic.⁷² Métis are defined by their mixed heritage of First Nation and European descent. When possible, I use the self-

⁷² <http://www.aadnc-aandc.gc.ca/eng/1100100013785/1304467449155>

identified name of the aboriginal people in question. When speaking generally about the Tłıchǫ people I simply use the name Tłıchǫ, but if I am discussing their government specifically I use the term Tłıchǫ Government. Because this type of governmental structure has been imposed by the federal government on the Tłıchǫ people, I find it necessary to distinguish the Tłıchǫ Government from its people. When I name specific people they can be assumed to be Tłıchǫ because I otherwise indicate all non-Tłıchǫ speakers. I use the term Indian when discussing documents that use this term, such as the Indian Act.

Traditional knowledge is a holistic way of understanding the world and includes knowledge of the land, relationships, spirituality and a way of being. In the meaning of traditional knowledge, humans are not separated from the land nor from the spirits that inhabit it. Traditional knowledge refers to the knowledge generated by a group of people dwelling on the same land since time immemorial.⁷³

Many authors discuss traditional knowledge broadly, without referring to a specific people or region. When referring to the Tłıchǫ specifically, I follow Legat in using the term Tłıchǫ knowledge.⁷⁴ This usage highlights the Tłıchǫ's in-depth understanding of their environment and their relationships with the land. I use the word "land" in its usual definition as the ground but also as all the animals and plants that dwell on the ground, their ecosystems and the relationships that exist between these living and non-living entities and Tłıchǫ. Tłıchǫ words are not easily translated to English and so "land" is the usual term used to encompass this broader concept.⁷⁵

⁷³ McGregor, Deborah, in *In The Way of Development*, 2004, 78

⁷⁴ Legat, 2012

⁷⁵ Legat, 2012, 199;

their calving grounds; thus, biologists define herds by where cows choose to have their calves.⁷⁸ Tłıchǫ similarly consider the caribou's birthing grounds as the caribou's home.⁷⁹ Elders and hunters identify caribou herds based "to some extent on where the caribou have overwintered."⁸⁰ The Bathurst caribou herd have their calving grounds near Bathurst Inlet, and spend their winters northeast of Great Slave Lake. Map 4 shows a map of the Bathurst caribou herd distribution between 2000 and 2007, highlighting their ranges during the spring calving season, as well as their summer and winter ranges. Both the Tłıchǫ and wildlife biologists know that barren-ground caribou populations fluctuate over time.⁸¹ Biologists are the primary scientists involved in managing caribou populations, although research on global warming, forest fires and pollution may require other scientific specialists. Although these fluctuations are normal, concern is rising as the population of the Bathurst herd is dramatically declining.⁸²

While the Bathurst caribou herd is the primary herd harvested by the Tłıchǫ and the focus of the co-management decisions I examine here, the health of the Ahiak and Bluenose East herds are also relevant. The Bluenose-East and the Ahiak herds are subspecies of the barren-ground caribou. The Ahiak herd ranges from Nunavut to the Northwest Territories and northern Saskatchewan. While information on them is limited, ENR suspects their population has declined by 60% between 2006 and 2009.⁸³ This herd's range is within the

⁷⁸ Revised Joint Proposal on Caribou Management Action in Wek'èezhì, 2010, 36-37

⁷⁹ Whàehdǫ̀ Nàowō Kǫ Dogrib Treaty 11 Council, Caribou Migration and The State of Their Habitat, 2001, 32

⁸⁰ Kendrick, 2005, 180 Wek'èezhì

⁸¹ Revised Joint Proposal on Caribou Management Actions in Wek'èezhì, 2010, 38

⁸² Revised Joint Proposal on Caribou Management Action in Wek'èezhì, 2010, ii

⁸³ Revised Joint Proposal on Caribou Management Action in Wek'èezhì, 2010, iii

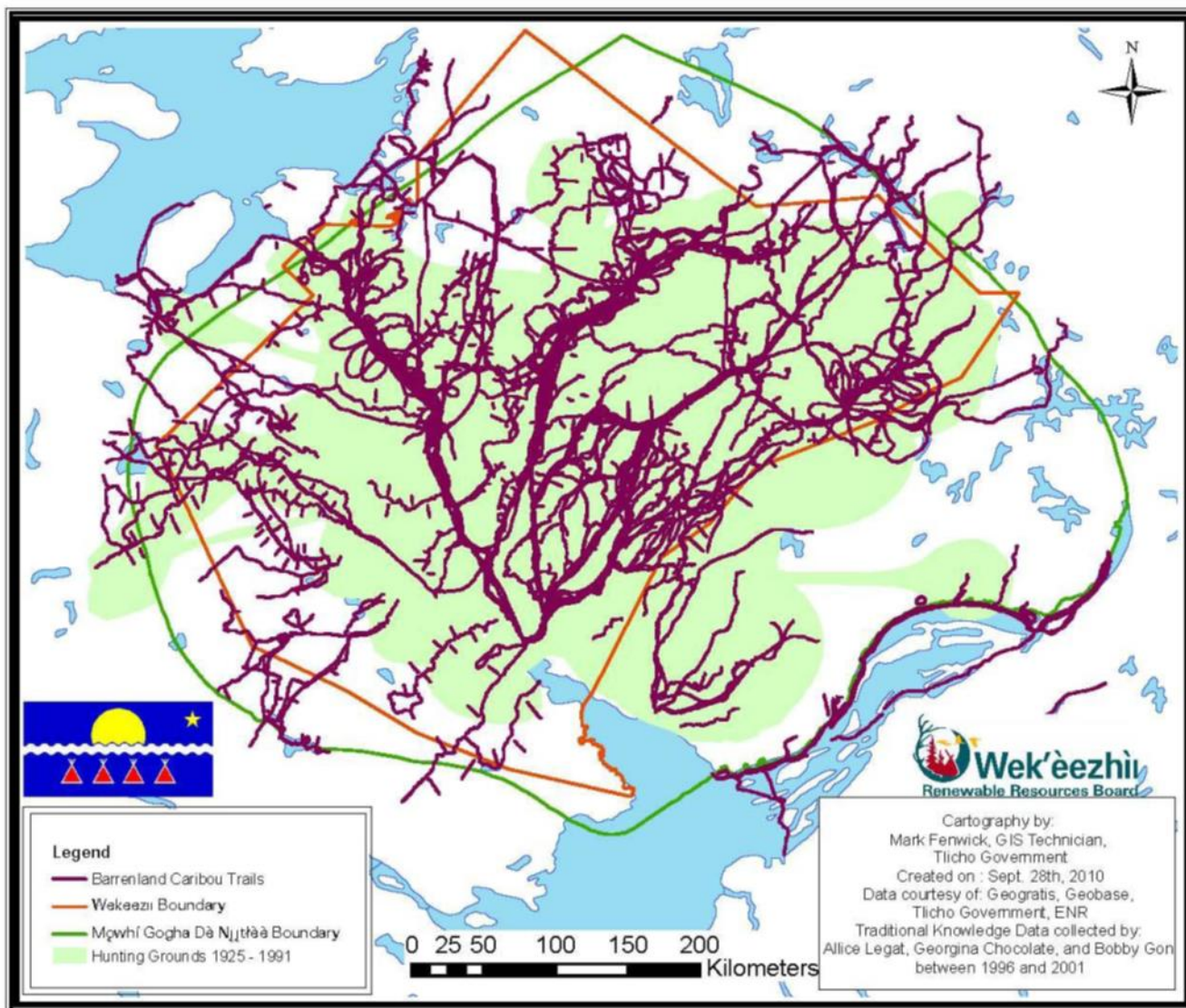
jurisdictions of the WRRB, the Nunavut Wildlife Management Board, the government of Nunavut, and the GNWT.⁸⁴

While the Ahiak herd rarely passes through Wek'èezhì, ENR and Tłıchǫ Government's concern over its declining population and intermingling herds brought consideration of it into the co-management decisions. The Bluenose-East herd range from northwestern Nunavut to the eastern and southern shores of Great Bear Lake. The Sahtu Renewable Resource Board, the WRRB, the Nunavut Government, and the GNWT are responsible for the management of this herd. Population studies of this herd are limited, but ENR estimated the herd's population at 120 000 in 2000 and 66 700 in 2006,⁸⁵ based on the numbers available during the writing of the *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì* in 2010. ENR gathered these estimates by tracking radio collars on caribou and taking aerial photography of calving grounds.

These caribou herds have been identified by biologists and are used by ENR, however, these delineations are not universally accepted. ENR defines herds based on the location of their calving grounds as caribou congregate during calving season, choosing sites that have a reliable food source. However, as Map 4 demonstrates, many herds have overlapping ranges. In addition, scientists acknowledge that herds are dynamic and can grow, split and mix in myriad ways, depending upon food supply, population, predators, and environmental changes such as forest fire. Map 5 demonstrates the extent of caribou movement within Wek'èezhì.

⁸⁴ <http://www.enr.gov.nt.ca/programs/barren-ground-caribou/ahiak-beverly-and-qamanirjuaq-herds>

⁸⁵ Revised Joint Proposal on caribou Management Actions in Wek'èezhì, 2010, 2



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Map 5 – Distribution of Barren-ground Caribou Over Time, 1925-1991 & Traditional Harvesting Trails

The scientific delineation of caribou herds also differs from how the Tłı̨chǫ know caribou, as they distinguish these animals based on season, behaviour, age and location.⁸⁷

Tłı̨chǫ recognize two types of caribou: boreal and barren-ground. Barren-ground caribou

⁸⁶ Whaèhdòò Nàowòò Kò Dogrib Treaty 11 Council. 2001. *Caribou Migration and The State of Their Habitat Final Report*.

⁸⁷ Caribou Migration and the State of their Habitat, 2001, 24

are identified by their lighter fur while boreal caribou are larger, darker, have a white throat, and prefer living on plateaus west of Whatì.⁸⁸ The Tłıchǫ also know that not all barren-ground caribou migrate to the boreal forest, as caribou move in response to such things as nearby human activity, environmental changes and their own needs. Tłıchǫ elders know that caribou frequently return to the same calving grounds, but their migratory rates change due to food distribution, predation and other environmental changes. Nevertheless, elders and harvesters are able to use their vast knowledge of caribou patterns to identify where caribou will likely be.⁸⁹

Stakeholders

In 2010 the WRRB public hearing on the *Joint Proposal on Caribou Management Actions in Wek'èezhìi* took place in Behchokò, NWT. Twenty-two parties registered to attend the WRRB public hearing, including ENR and the Tłıchǫ Government, nineteen intervenors and Dr. Anne Gunn, who was contracted by the WRRB as an independent caribou expert. The intervenors were participants who attended the hearing and gave presentations on their observations and concerns about caribou management and how it might impact their businesses. These nineteen intervenors included mining companies, other aboriginal groups, the city of Yellowknife, NWT Wildlife Federation, and outfitters such as Arctic Safaris, Camp Ekwo/Rabesca's Resources, Qaivvik Ltd., Peterson Point Lake Lodge, and True North Safaris Ltd who take tourists out on the land to hunt caribou, bison, wolf, bear, wolverine and fish made presentations. Bathurst Inlet Developments, Yellowknife Chamber of Commerce, and Northwest Territories Tourism, which promotes

⁸⁸ Caribou Migration and the State of their Habitat, 2001, 24

⁸⁹ Kendrick, 2005, 176-180

economic development without hunting also made presentations.^{vi} The General Public Session of the hearing was a designated time for individuals to speak who had not pre-registered as an intervenor. The majority of these speakers were Tłıchq however, these sessions also included other Dene. I further discuss the structure of the hearings in Chapter 2.

The WRRB is responsible for managing wildlife and wildlife habitat including forest, plants and protected areas throughout Wek'èezhì. In order to effectively develop a harvesting management plan for the Bathurst caribou, the WRRB conducted public hearings in 2010. On a larger scale, ENR is responsible for ensuring the sustainable use and development of the territory's natural resources. ENR is responsible for reduction of the environmental impact of human activities, water stewardship, forest management, and protection of wildlife in the NWT. If the federal government, in this case Canada's Department of Canadian Wildlife Service and Canada's Department of Fisheries and Oceans, the ENR or the Tłıchq Government identifies a wildlife emergency, they have the right to implement temporary management actions without consulting other government bodies or agencies. If management actions are needed in a non-emergency situation to manage a species' population, the federal government, ENR and Tłıchq Government must work together with the WRRB to come to a suitable strategy to increase the health of that population. In 2006, ENR submitted their first management proposal to the WRRB to limit the Bathurst caribou harvest to 5 120 animals. ENR prioritized Tłıchq and NWT residents by eliminating all commercial harvesting tags and reducing the number of harvesting tags for non-residents and non-resident aliens. However, the WRRB required the ENR to work with the Tłıchq Government to jointly write and submit a co-management proposal, review

the recommendations with the WRRB, and create an implementation plan for the final decisions as to how the caribou harvest would be managed.

The Tłıchq Agreement established the Tłıchq Government's right to govern the Tłıchq Lands (See Map 1). The Chief's Executive Counsel oversees the implementation of Tłıchq Laws and is composed of a Grand Chief plus one Chief from each of the four Tłıchq communities. The Government can pass and enforce laws, manage fish and wildlife harvests, and administer the rights outlined in the Tłıchq Agreement. Paralleling the ENR, if an emergency arises, the Tłıchq Government has authority to implement management actions without consulting other governments or agencies. If the situation is not of an urgent nature, the Tłıchq Government must work with ENR and the WRRB to come to decision regarding the management of Bathurst caribou. The Tłıchq Government and ENR submitted the 2009 initial *Joint Proposal on Caribou Management in Wek'èezhì*, the document that began the Bathurst caribou case study. Both ENR and the Tłıchq have a responsibility to submit management proposals if necessary, review the recommendations by the WRRB, and create an implementation plan for these final decisions.

The Tłıchq live primarily in the four communities on Tłıchq Lands. Behchokò has the largest population of 1950 inhabitants, and is easily accessible from the highway. Gamètì, Wekweètì, and Whatì all have populations of less than 500 and are primarily accessed by air in the summer and ice road in the winter. Country food obtained by hunting, trapping and fishing is still essential to the subsistence of many of those who live in these communities. The Tłıchq traditionally followed the migratory path of the caribou but settle near lakes in the summer to fish. This lifestyle remains important for Tłıchq's physical,

emotional, spiritual, and cultural health. Having cabins outside of the communities allow Tłıchǫ individuals and families to live on the land and maintain their relationship to the land. The Dene's perspective of land is summed up by an elder who said: "If I can see the land, I know I'll be okay. Everything comes from the land."⁹⁰

To Tłıchǫ their relationships with those in their communities, other beings and the land are vital. Respect is the foundation of these relationships. Tłıchǫ laws provide guidelines to direct human behaviour and maintain these relationships. There are laws regarding all types of relationships, including how to interact with caribou. Maintaining a good relationship with caribou is not only necessary for subsistence, but also contributes to the spiritual and emotional health of the Tłıchǫ. For the Tłıchǫ, caribou are "what defines our language, culture and way of life."⁹¹ Caribou help define where communities are situated and what they are named. Trails and portages are defined by caribou's migration patterns. The Tłıchǫ see caribou as having their own lives and giving themselves to the Tłıchǫ out of respect. The Tłıchǫ perceive discussions of intensively managing caribou as a foreign idea and an attack on their way of life.⁹² I will return to a discussion of the relationship between caribou and Tłıchǫ in Chapter 3.

Methodology

I use the case study of the Bathurst caribou herd in the NWT and the resulting final decisions regarding monitoring and management actions to promote their stabilization and recovery in order to examine and evaluate the co-management process. I focus my analysis

⁹⁰ Blondin, 1997, vi

⁹¹ Zoe, 2012, 69

⁹² Zoe, 2012, 70

on whether or not the Tłıchq perspective was heard during the co-management process relating to the Bathurst caribou herd. I examined the series of documents leading up to the final management decisions including: the initial 2009 *Joint Proposal on Caribou Management Actions in Wek'èezhì*, the transcripts of the WRRB public hearings (2010), the 2010 *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì*, the WRRB 2010 *Recommendation Report*, the Tłıchq Government and ENR response to the WRRB *Recommendation Report* and final management decisions submitted to the WRRB in 2011 and the 2011 *Implementation Plan for the Revised Joint Proposal on Caribou Management Actions in Wek'èezhì*. The transcripts of the seven days of the public hearings were central to my research but I also utilized a variety of other documents, all of which are available in the public registry on the WRRB website. I focus on the Tłıchq, ENR and WRRB in the 2010 hearings as the primary stakeholders. As my research focuses on how the Tłıchq are represented in the 2011 management actions in order to highlight their agency and knowledge, particularly in light of Canada's history of omitting aboriginal voices from wildlife management decisions, I focus on their perspectives and their input in the public hearings. Analysing these parties enables me to build upon the history of relationships between aboriginal people and the state in northern Canada.

The WRRB website provided all the documents relating to this case study including proposals, proceedings, correspondences between parties, written submissions from organizations unable to attend the hearings, supporting documents on Tłıchq knowledge and science in addition to the WRRB recommendations and the final decisions. Literature on Tłıchq knowledge was submitted to the WRRB website and used in my thesis as a means of understanding Tłıchq views and knowledge including documents relating to caribou,

caribou migration and behaviour, hunters' observations, Tłıchǫ laws for proper behaviour and elders' oral narratives. When discussing the public hearings, I use ENR and Tłıchǫ to indicate the speakers at the hearing belonging to these groups. Hearing transcripts provided perspectives from chiefs, legal counsel, elders, Tłıchǫ community members and other aboriginal members interested in participating. Tłıchǫ perspectives were provided at the hearings by both representatives of the Tłıchǫ Government, which included primarily Chiefs, many of whom were on the Tłıchǫ legislative Assembly at the time, legal counsel and elders and Tłıchǫ elders and community members who spoke during the general public session.

I read carefully through the transcripts once to gain a full understanding of what took place. I then read through the transcripts and thematically coded the presentations. As I read through each presentation I noted general topics in the margins of the transcripts. From these topics I identified common themes discussed by the presenters. Some of these themes shared similar concepts and had their meanings entwined together and I combined themes that were most similar and were often talked about together. For example Tłıchǫ spoke of the need for cooperation between governments, using both Tłıchǫ knowledge and scientific knowledge to make decisions, as well as the issue of elders being left out of discussions. These are all distinct ideas but have a common thread of communication and cooperation between Tłıchǫ, ENR, different levels of government and their knowledge systems. I combined these themes into the broader theme of cooperation. The final combined themes I used in my analysis included: cooperation between ENR, Tłıchǫ and their knowledge systems, Tłıchǫ responsibilities for the land and each other, the importance of elders' knowledge and experience, the need to secure a better future for both

Tłıchq and caribou, and issues important for the Tłıchq that had not been addressed in the co-management process. As Tłıchq speakers discussed a large variety of issues, I selected themes that I believed were most important due to the frequency they reoccurred and the length of time they were discussed over the course of the hearings.

One key limitation to this analysis is that I have not grown up listening to oral narrative as a means to convey knowledge and so the point of each speaker's story was not always readily clear to me. Another limitation is language. The transcripts of the WRRB 2010 public hearing were interpreted and recorded, a process that often encountered technical difficulties and recorded the speaker's pauses and mistakes as they were recorded verbatim.

I took the same approach when identifying ENR themes which were distinctly different from those of the Tłıchq. I read the ENR presentations and identified themes that were reoccurring. ENR focused extensively on scientific and technical aspects of caribou management, but also emphasised cooperation between governments, communities, researchers and aboriginal people. Because the ENR presentation was given as the collective perspective of the territorial government and did not include individual perspectives, there was less diversity than in the Tłıchq presentations.

The historical context in which this case study came about was necessary to understand the relationships between stakeholders and Tłıchq's knowledge of caribou. I needed to understand Tłıchq, their relationship with caribou, the history of wildlife management in the NWT, the Tłıchq relationship with the state, and co-management. I drew on secondary sources, books, articles and the documents available on the WRRB

website. I participated in a month long field course by Professor Allice Legat during the summer of 2013. Dr. Legat was the Roberta Bondar Fellow in Polar and Northern Studies at Trent University, 2012-2014 and has worked extensively in the NWT, gaining the respect and trust of many of the Dene people, in particular Tłıchǫ. The purpose of this field course was to provide an introduction to northern issues. I did not conduct any field research during this course but was afforded the opportunity to conduct preliminary participant observation by observing, participating and listening to a variety of people including elders, chiefs and other community members. The course allowed me to gain more of an understanding of northern issues, which has helped me when reading about the Tłıchǫ and examining the transcripts from the WRRB 2010 public hearing.

In the next chapter I explore co-management as a wildlife management strategy and investigate the process of co-managing the Bathurst caribou herd. I review the history, strengths and weakness, and best practices of co-management with specific reference to Canada and particularly the NWT. I provide an overview of the process of implementing wildlife co-management in Wek'èezhì looking specifically at the Tłıchǫ Agreement and its Implementation Plan.

Chapter 2 – Co-Management

Cooperative management, also called co-management, is a widely used approach to wildlife management in Canada's north. It is defined as "the sharing of power and responsibility between the government and local resource users"⁹³ in the hope that together they can best manage wildlife. Canadian federal and territorial governments have established a variety of co-management boards with local aboriginal peoples—some established through land claims agreements, and others created to manage specific wildlife issues.⁹⁴ A cornerstone of this approach is the building and maintaining of open communication and working relationships grounded in trust and understanding between all stakeholders, with the intention of bringing together and overcoming disparate worldviews, linguistic differences and differing knowledge systems. Acknowledging that relationships between aboriginal communities and federal and territorial governments have always been and continue to be complicated and often contested, co-management is intended to mitigate such tensions and conflicts.⁹⁵ However, co-management principles, I would argue, are fundamentally embedded within Euro-Canadian perspectives and structures thus preventing aboriginal partners from being able to fully engage in these undertakings.

Experts on co-management in North America broadly attribute its popularity to the increasing power and political engagement of aboriginal people.⁹⁶ Co-management is thus tightly linked with the changing landscape of international development, the

⁹³ Berkes, 2009, 1692

⁹⁴ Nadasdy, 2005, 215

⁹⁵ Parlee, et al. 2014, 49

⁹⁶ Nadasdy, 2005, 216; Blaser, 1

environmental movement and aboriginal peoples' struggles across the globe. Aboriginal people in Canada have been subjected to legislation regulating their land and harvesting rights, but in the last fifty years they have successfully argued their court cases to reclaim their aboriginal rights. In the 1960s the international human rights movement emerged, empowering aboriginal peoples globally to demand public and political recognition. At the same time, expansion of resource development projects in North America garnered further attention for aboriginal peoples in remote areas such as Canada's north. The 1970s and 1980s also brought legal recognition of aboriginal rights,⁹⁷ through events such as the Calder case, the Berger report and the 1975 signing of the first modern treaty, the James Bay Agreement.

Co-management empowers aboriginal people because it involves them in decisions about wildlife management, using traditional knowledge and giving agency to their communities in the process.⁹⁸ The literature on co-management predominantly consists of case studies and government reports, which are largely written as success stories, although the authors do acknowledge some problems and limitations. Nadasdy questions the resounding success of all of these stories as "cross cultural negotiations involved in co-management and knowledge integration are difficult and complex,"⁹⁹ in part because of the differing perceptions of success between scientists, aboriginal people and governments.¹⁰⁰ Additionally these case studies are primarily written by government officials and academics, thus they generally offer their perspective but lack the aboriginal perspective.

⁹⁷ Blaser, Feit and McRae, 2004, 11

⁹⁸ Nadasdy, 2005, 216

⁹⁹ Nadasdy, 2003, 368

¹⁰⁰ Nadasdy, 2003, 368

He argues that if scientists and aboriginal people were given an equal voice in the literature, co-management would not be depicted as positively.

In this chapter I briefly review the history and development of co-management and how it emerged in northern Canada. I examine the strengths and weakness of using co-management as a wildlife management model and how it can be most effectively implemented. I conclude by reviewing the process as outlined by the Tłıchǝ Agreement and its Implementation Plan for developing wildlife management.

History of Co-Management

The basic concepts of co-management have long been in place across the globe.¹⁰¹ Although the term had yet to be established, the earliest recorded incident of legislated co-management occurred in the Lofoten Islands cod fishery in Norway in the 1890s. Authorities there utilized it as a last resort to resolve a fisheries conflict. In 1901 Japan mapped and registered fishing villages so that the local communities could manage resources collectively through cooperative associations.¹⁰² Pickerton explains that Japan created co-management policies that could be interpreted and implemented according to local conditions and traditions after the government realized it could no longer afford to manage fisheries centrally. This policy shift did indeed give local governments more power, because without a willingness to take on the cost of management, Japan could not implement national fishery policies in local communities.¹⁰³ In this example, co-management was beneficial for both the communities and the government. In the 1920s

¹⁰¹ Berkes, 2009, 1693

¹⁰² Berkes, 2009, 1693

¹⁰³ Pickerton, 1989, 23

and 1930s in the Kumaon Himalayas, the Indian government implemented forest management practices that were to be managed by local communities.¹⁰⁴

Co-management in northern Canada first emerged from a perceived caribou crisis. In the 1940s biologists using erroneous data believed caribou populations were in serious decline and immediate action had to be taken.¹⁰⁵ In 1947 the federal government, Manitoba and Saskatchewan began a three year cooperative study of barren-ground caribou under the supervision of A.W.F. Banfield.¹⁰⁶ An aerial survey conducted in 1950 resulted in an estimate of 680 000 barren-ground caribou. Previously the estimate was near 30 million animals, based on personal reports of travellers, missionaries and RCMP. Banfield's recommendations to the Advisory Board on Wildlife Protection (ABWLP) were largely implemented. Established in 1916 by the federal government, the ABWLP was an interdepartmental committee that provided advice on wildlife matters in Canada, especially in the territories. It united representatives from the Northern Administration Branch, Indian Affairs, the RCMP and the Canadian Wildlife Service (CWS) and made assessments on a wide range of concerns including technical, economic and social issues.¹⁰⁷ The measures the ABWLP implemented included conservation education, aboriginal involvement in wildlife management, wolf control, harvesting, and restrictions on exports, sales, non-native harvests and hunting seasons.¹⁰⁸

¹⁰⁴ Berkes, 2009, 1693

¹⁰⁵ Ruttan, 2012, 86

¹⁰⁶ Usher, 2004, 174

¹⁰⁷ Foster, 1978, 161

¹⁰⁸ Usher, 2004, 174-175; Sandlos, 2007, 197

A caribou crisis was declared until 1955 after another survey concluded that the population had declined to 278 900 animals. However, this latter survey was conducted during spring migration when many caribou were not visible by air. Additionally, the survey was not conducted over a large area.¹⁰⁹ Based on estimates of a harvest of up to 100 000 caribou per year, these diminished numbers persuaded the CWS to implement swift conservation actions to prevent the collapse of the herd. It was believed that the key reason for the declining caribou population was aboriginal harvesting with predation, low conception rates and poor calf survival also being significant contributors. Federal and provincial wildlife officials met and agreed that while aboriginal harvesters had a right to hunt large game for food, all forms of wastage including improperly caching meat and feeding caribou to dogs should be eliminated. They established a joint federal-provincial committee with two branches: a Technical Committee on Caribou Protection (TCCP) composed of CWS scientists and provincial game officers to conduct biological caribou studies and an Administrative Committee on Caribou Protection (ACCP) which would provide policy recommendations to senior government officials.¹¹⁰ By 1960 the federal government declared barren-ground caribou in danger of extinction and applied quotas and seasonal restrictions to aboriginal people in the NWT.¹¹¹ In 1962 the Tłıchǫ were notified by the game warden that cows and fawns should not be harvested and all harvested kills must be reported. These harvest restrictions were in response to the federal government's lack of understanding of Tłıchǫ practice to harvest a large number of caribou to ensure that their primary source of food would last many months. The Dene and Inuit

¹⁰⁹ Ruttan, 2012, 88

¹¹⁰ Sandlos, 2007, 206; Cranston-Smith, 1995, 116

¹¹¹ Kendrick, 2003, 91

were accused of wasting large quantities of meat because meat caches were mistaken for refuse and food for their dogs. Conservation measures used to mitigate this perceived crisis coupled with milder winters in fact resulted in an overpopulation of caribou and a subsequent relaxation of hunting regulations.¹¹² Clearly, wildlife conservation efforts at this time were largely indifferent to the needs of aboriginal people.¹¹³

In 1967 the NWT received the right to manage their natural resources and enforce wildlife policies.^{vii} With this change in responsibility, the federal and territorial governments slowly moved towards a more co-operative wildlife management structure.¹¹⁴ The ACCP recommended a cooperative arrangement between NWT and the Prairie Provinces to manage caribou herds. However, this cooperative initiative did not include aboriginal communities despite the fact that their cooperation was vital as they would be the ones limiting their caribou harvest.¹¹⁵ Since they were excluded from their management initiative, Chipewyan, Dene, Inuit and Métis in the NWT, Manitoba and Saskatchewan decided to establish an aboriginal caribou management board where aboriginal harvesters, both from those nations who had signed a treaty and those that did not, would all be identified as aboriginal hunters. They feared that if they partnered with federal and provincial governments to create a caribou management board, their aboriginal rights would be compromised. In 1981 communities agreed to a management partnership with the government and formed the Beverly and Qamanirijuaq Caribou Management

¹¹² Ruttan, 2012, 96

¹¹³ Sandlos, 2007, 20

¹¹⁴ Sandlos, 2007, 243

¹¹⁵ Sandlos, 2007, 206

Board. This Board has continued to maintain its role as an advisory group to governments with the majority of its members representatives of aboriginal communities.¹¹⁶

In a 1974 ruling, Judge George Boldt affirmed fishing rights for fourteen Washington State aboriginal nations who, since the 1950s, had been protesting state law by continuing their traditional fishing practices, in accordance with their interpretation of the treaties. As a result of their protests and arrests, three cases reached the Washington Supreme Court. Boldt ruled that these Washington tribes could regulate their own fisheries but they only had the right to fifty percent of the harvestable fish. The Northwest Indian Fisheries Commission was created as a coordinating agency between tribes and provided technical assistance and public information between tribes. While his decision was not entirely popular with either state officials or the aboriginal groups, Boldt continued to advocate for a management model that legally required a power sharing relationship between Washington State treaty tribes and commercial salmon fisheries.¹¹⁷ The Boldt decision, while it did not use the term co-management, captured the spirit and fostered the term in subsequent rulings.¹¹⁸

In Canada, the 1975 James Bay and Northern Quebec Agreement (JBNQA), the first modern land claims agreement in Canada established a co-management system to coordinate resource management. The Cree of northern Quebec had a history of fur trading with the Hudson's Bay Company (HBC) since the early seventeenth century. In 1869 the HBC sold their rights to the lands draining into James Bay to the federal government.

¹¹⁶ Kendrick, 2003, 107-108

¹¹⁷ Cohen, 1989, 40-43

¹¹⁸ Cohen, 1989, 47; Berkes, 2007, 21

However, the Cree had not signed a treaty giving up their aboriginal rights to the land. The Canadian Government transferred this land to the province of Quebec in two parts, the first in 1898 and the second in 1912, with the stipulation that Quebec would sign a treaty with the Cree.

Beaver had always been an important food and trade item for the Cree in the James Bay region. However, in the mid-1930s Quebec made the trapping of beaver illegal in an attempt to address the overharvesting by white trappers.¹¹⁹ It continued to be an important resource to the Cree leading in the 1940s to the establishment of the first beaver reserves. Reserve managers worked with the Cree and used their knowledge to determine the number of beavers in the reserve and how many could be harvested sustainably. This arrangement was effectively a co-management effort.¹²⁰ In 1971 Quebec Premier Robert Bourassa announced the James Bay hydroelectric dam project without regard the Cree and their rights to this land. Cree and Inuit leaders won an injunction to stop the project as Justice Albert Malouf ruled that the Cree's rights were unextinguished, and due to their continued traditional lifestyle, the project posed a risk to their livelihoods and culture. In 1973 Malouf suggested a negotiated solution between the Cree and Quebec resulting in the JBNQA in 1975.¹²¹ The Cree people were reluctant to sign the agreement but ultimately felt it was the best way to protect their rights, their land and their culture. In 1978 the James Bay Advisory Committee on the Environment and the Kativik Environmental Advisory Committee were set up under this agreement allowing the Cree to evaluate projects

¹¹⁹ Feit,

¹²⁰ Feit, 2005, 278

¹²¹ Rynard, 2001, 10-12

affecting their lands. These committees includes representatives from aboriginal communities, and the federal and territorial governments.¹²² These committees were one of the first environmental and social protection regimes in Canada.

In 1981 the Canadian Inuit participated in a video project, funded by the federal government to encourage communication between biologists and Inuit harvesters, where they questioned the scientists' survey methods and contested the biologists' claims that caribou were declining.^{viii} In 1982, in part due to the success of this film and cooperation between Inuit and scientists, the Beverly and Qamanirjuaq Caribou Management Boards (BQCMB) was formed by the South Slave, Chipewyan, Cree, Inuit and Métis in the NWT, Manitoba and Saskatchewan. The BQCMB was created in response to the biologists' concerns aimed to promote greater communication between harvesters and biologists and to gain greater Inuit influence in wildlife management decision-making. It was the first formal caribou co-management institution in Canada. BQCMB set the standard for joint management projects in Canada's north¹²³ and is often described as "one of the most successful and long-standing co-management institutions in northern Canada."¹²⁴ Unlike the BQCMB which was created in response to a specific problem, more recent co-management arrangements in Canada are primarily driven by land-claim agreements, and a need to manage protected areas and migratory wildlife that pass through more than one jurisdiction.¹²⁵

¹²² Indian and Northern Affairs Canada, 1998

¹²³ Kendrick, 2003, 93

¹²⁴ Kendrick, 2000, 2

¹²⁵ Kendrick, 2003, 99

Land claims signify a government-to-government relationship, such as an aboriginal nation and a federal or territorial government, and they are a formal recognition of aboriginal land and rights, at least to the aboriginal groups who sign them.¹²⁶ Some academics argue that these management boards have the best chance of success in implementing co-management models.¹²⁷ Co-management agreements established under the auspices of land claim agreements ensure aboriginal participation and imply a recognition and respect for both aboriginal knowledges and with Western science. As the WRRB is mandated by the Tłıchǫ Agreement, it carries considerable weight in wildlife management decisions. Its recommendations are generally accepted and put into effect. However, a government—the federal, the territorial or the Tłıchǫ—may reject a recommendation if they provide their reasoning to the WRRB, the other parties and the public (12.5.11).

In 2002 the Mackenzie Valley Environmental Impact Review Board^{ix} (MVEIRB) established the position of traditional knowledge coordinator. This coordinator organized a workshop on how to practically implement traditional knowledge in MVEIRB's environmental impact assessment. While few issues were resolved, the workshop generated a wide interest across the NWT, and afforded an opportunity for leaders and elders to express their views on the value of Tłıchǫ knowledge when making decisions regarding the land and environment. From these meetings, the *Traditional Knowledge Guidelines* were drafted. MVEIRB requested feedback, and after several revisions, its final

¹²⁶ <http://www.landclaimcoalition.ca/modern-treaties/>

¹²⁷ Nadasdy, 2005; Spaeder, 2005; Kendrick, 2003

draft was published in 2005. These guidelines are intended to help incorporate traditional knowledge into environmental impact assessments in Canada.¹²⁸

The development of co-management agreements suggests that they were created for two primary reasons: a crisis around a decline in a specific resource, or a local community campaigning for a voice in governmental decision-making. In Canada, a driving force behind implementing co-management arrangements was the caribou crisis beginning in the 1940s. Although co-management initiatives initially included only the NWT and the Prairie Provinces, aboriginal nations refused to be left out of the decision making process. Today co-management is considered the norm in northern Canada and initiatives are underway to improve communication between stakeholders and the inclusion of traditional knowledge in management processes.¹²⁹

Implementing Co-management

Wildlife management is a complex process that must satisfy a variety of stakeholders, including governments, communities, and local businesses, while also ensuring the well-being of the species being managed. Co-management has the capacity to restore authority and control to aboriginal communities, mitigating a trenchant atmosphere of mistrust.¹³⁰ It can also provide a platform to resolve conflict and build partnerships between federal and territorial governments on the one hand and local

¹²⁸ White, 2006, 406

¹²⁹ Pickerton, 1989, 4

¹³⁰ Parlee, et al., 2014, 49

aboriginal communities on the other, as they work together to develop mutually beneficial wildlife management strategies.¹³¹

However, wildlife co-management efforts can only be successful if those involved are committed not to “fail to foster human dignity – equitable access to all-important human values through the civil pursuit of common interest outcomes.”¹³² Clark et al. discuss the need for wildlife managers to reconcile the competing perspectives of scientific thought, aboriginal peoples and other stakeholders in order to create wildlife management policies that are effective at increasing wildlife populations while resolving conflicts among stakeholders. Co-management provides an avenue for such interests to be expressed and implemented into the decision making process.¹³³ It offers a forum for aboriginal people to share their traditional knowledge, allowing elders and harvesters to demonstrate the depth and detail of their knowledge about animals such as caribou. In their discussion of wildlife management among the Łutsël K’é Dene First Nation, Parlee, Goddard and Smith argue that harvesters’ vast knowledge based on generations of observation and experience is becoming increasingly necessary in management discussions, particularly as government resources that support scientific monitoring programs have declined.¹³⁴ Thus Tłıchǵ knowledge should not only be an integral component of wildlife management discussions, but should form the basis of wildlife management policy. Shared through oral traditions and stories told by elders and hunters, traditional knowledge is holistic, based on the accumulation of observations and stories resulting in an understanding of patterns and

¹³¹ Spaeder, 2005, 165

¹³² Clark et al., 2008, 348

¹³³ Clark et al., 2008, 348

¹³⁴ Parlee, et. al 2014, 50

behaviours over multiple generations. Traditional knowledge is able to provide insight into the changing environment, health and population dynamics of caribou over generations.¹³⁵ Stories hold knowledge, but that knowledge must be understood through personal experience. These stories contain information about the past but can also help predict the future and help people make decisions based on past events.¹³⁶ Scientific research, while lacking such longitudinal depth, can access the “bigger picture” through regional, national and global research and data gathered through collaring, surveying, tissue sampling, and computer modeling. Integrating the richness of local and aboriginal knowledge with well documented and globally applicable scientific knowledge establishes a thorough understanding of the resource management issue, something central to co-management.¹³⁷

Co-management, however, has significant challenges. These include governments not sharing power equally, differences in worldviews, language barriers, and difficulties integrating aboriginal traditional knowledge and science into the same management plan. Complex bureaucratic processes can be difficult for anyone to manoeuvre, but are less of a challenge for state officials than for aboriginal peoples whose world is not embedded in such systems. In co-management projects, the lack of equal power-sharing relationships among stakeholders jeopardizes the capacity of the state and aboriginal communities to establish good working relationships. Although the intent is that these relationships are balanced partnerships, problems often arise as “resource management institutions are still inherently colonial in structure.”¹³⁸ Such structures assume the hierarchical authority of

¹³⁵ Parlee, et al. 2014, 49

¹³⁶ Legat, 2012, 14-16

¹³⁷ Berkes, 2009, 1964

¹³⁸ Kendrick, 2003, 215

the federal/territorial governments and the Euro-Canadian bureaucratic structure of wildlife management practices.¹³⁹ One example of these constraints is that discussions only happen in ‘formal’ meetings where majority rules, rather than in informal gatherings where decisions are reached through consensus. Such scenarios skew power in favour of the state. Joseph Spaeder argues, in fact, that decentralized institutions, such as co-management boards, are consistently manipulated to fit the state’s agenda of control over the resources and the land “while maintaining a ‘rhetoric of participation.’ ”¹⁴⁰

The worldviews of aboriginal groups such as the Tłıchǫ and the federal and territorial governments often diverge, causing misunderstandings, conflict and confusion in the co-management process. For example, the Tłıchǫ “have laws of respect and appreciation defining their relationship”¹⁴¹ with caribou. Euro-Canadians, in contrast, see caribou as a resource to be managed. This difference was evident in the transcripts of the 2010 WRRB public hearings I discuss in Chapter 3.

Language can be a major barrier to even the most basic discussions between government officials, scientists and an aboriginal community. Among the Tłıchǫ for example, the primary knowledge holders are elders who may not understand English or are simply more comfortable in their own language. In contrast, the federal and territorial governments primarily employ English speakers, thus translators are required for meetings with aboriginal groups. Many professional translators prefer to only interpret one way, yet in such meetings Dene translators are frequently asked to translate from an

¹³⁹ White, 2006, 407

¹⁴⁰ Spaeder, 2005, 175

¹⁴¹ Zoe, 2012, 69

aboriginal language to English and back again. Translators must also explain complex concepts that are not easily translatable. They are often given material ahead of time to prepare however, throughout the course of a meeting they may still be required to make decisions about how to accurately interpret unanticipated content.

Tłıchq knowledge is embedded in oral narratives and stories.¹⁴² Like science, this knowledge must be understood in its cultural context, which establishes its processes of verification and application.¹⁴³ Tłıchq knowledge cannot be removed from its context because for Tłıchq, experience, knowledge and skill are not separate. Information contained in stories is understood and verified by personal experience and converted into knowledge and skills.¹⁴⁴ In contrast, Western scientific knowledge is understood to be a fundamentally abstract entity that is applied to concrete situations.¹⁴⁵ Many scientific methods of gathering information are ineffective because the Tłıchq's method of learning by "listening to the Elders through stories and legends and surviving on the land" cannot be summarized or reduced to spaces on a survey form.¹⁴⁶ It is not factual data that can be extracted and integrated into scientific models. Many Euro-Canadian scientists are not accustomed to the role that stories play in Tłıchq knowledge exchange yet need to understand and utilize the information embedded in these oral narratives in the co-management process. These methods strip Tłıchq knowledge of its context and cannot capture the depth of knowledge the Tłıchq possess about caribou.¹⁴⁷ They often do not

¹⁴² Legat, 2012; Ryan, 1995; Berkes, 2009

¹⁴³ White, 2006, 402

¹⁴⁴ Legat, 2012, 30

¹⁴⁵ Legat, 2012, 30

¹⁴⁶ WRRB, 2010, Day 2, Edward Chocolate, 54

¹⁴⁷ Tłıchq Research and Monitoring Program, 2013, 11

trust Tłıchǫ knowledge unless it can be verified scientifically, frequently treating it largely as anecdotal information.¹⁴⁸ In practice, efforts to integrate these two knowledge systems, scientific knowledge becomes the default.¹⁴⁹ A good example of this is a story recorded in 2001, which detailed how aboriginal hunters in the NWT noticed increasing numbers of Bathurst caribou limping.¹⁵⁰ Hunters collected affected caribou legs for scientific analysis by GNWT biologists. Scientists concluded that a wet summer caused the caribou foot rot. Elders, however, attributed the limping to injuries the caribou sustained when crossing mine roads bordered by jagged rocks. The scientists dismissed the elders' observations without investigation.¹⁵¹ Without being verified by science, the elders' conclusions of how and why the caribou were injured were rejected as anecdotal evidence and not explored further. In order to make informed decisions, decision-makers must understand and value traditional knowledge. I discuss how the environment and development affects caribou further in Chapter 3.

Aboriginal people similarly need to understand biology and other scientific knowledge to contribute meaningfully in discussions. Aboriginal governments often hire non-aboriginal scientific experts to engage in these technical discussions.¹⁵² These scientists, ironically, often lack the expertise to discuss traditional knowledge which results in their reduced capacity to effectively discuss and implement traditional knowledge in these forums.¹⁵³ In this process aboriginal people often lose some capacity to convey their

¹⁴⁸ Berkes, 2009, 1695

¹⁴⁹ Kendrick, 2008, 415

¹⁵⁰ Ellis, 2005, 73

¹⁵¹ Ellis, 2005, 73

¹⁵² Ellis, 2005, 70

¹⁵³ Ellis, 2005, 70-71

knowledge and perspective. Additionally, efforts to integrate both of these knowledge systems can cause misunderstandings and slow the decision-making process. Aboriginal people, either as individuals or through their official representative bodies are thus often limited in their ability to engage fully in any deliberations and decisions on resource management.

Still, regardless of its failings, co-management currently seems like the best option available for wildlife management in regions such as Canada's north. Co-management does provide aboriginal people with some control over management decisions. It remains however, a wildlife management style that can be greatly improved upon as I demonstrate in later chapters.

Relationships built on trust, mutual respect, good communication, patience, and dedication can facilitate the understanding of differing worldviews, management interests, and power dynamics. Kendrick and Manseau advocate for "innovative participatory methodologies,"¹⁵⁴ including a culturally appropriate peer review process for traditional knowledge, contextualization of the means of data collection, working with community-based organizations to collect data, and a commitment to understanding diverse linguistic and cultural concepts. Research with Tłıchǫ members was conducted using participatory action research, where Tłıchǫ citizens use academics to help document their knowledge "the right way,"¹⁵⁵ in accordance with their worldview. In this way, the Tłıchǫ directed the

¹⁵⁴ Kendrick, 2008, 415

¹⁵⁵ Legat, 2012, 6

research and ensured that what was written was an accurate representation of their knowledge, experiences and stories.¹⁵⁶

Good relationships between governments are essential in maintaining good communication and information-sharing in order to prevent misunderstandings. Some argue that the caribou crisis in the 1950s was based on partial and erroneous data and some might say that this was the same for the 2009 Bathurst caribou herd crisis.¹⁵⁷ Implementing management projects without adequate and comprehensive data drawn from extensive scientific research and aboriginal knowledge from Tłıchǫ, Inuit and other Dene people could result in further decreasing caribou populations or alternatively limited access to caribou for the Tłıchǫ.

Community organizations or boards such as the WRRB can facilitate the building of trust and collaboration, making sense of differing knowledge systems, and resolve conflicts. Such boards can act as a means to build social capital, address conflict, assess resources and foster a common vision with shared goals.¹⁵⁸ They offer platforms for regular communication between stakeholders through workshops and community participation initiatives which allow the stakeholders to discuss issues frequently, fostering relationships between board members and members of the community. Regular communication is necessary to exchange knowledge, to build rapport and to establish trust between board members and local communities.¹⁵⁹ Aboriginal groups such as the Tłıchǫ want co-management projects to not only fully include their worldviews and knowledge, they want

¹⁵⁶ Legat, 2012, 5-7

¹⁵⁷ Kendrick, 2003, 74

¹⁵⁸ Berkes, 2009, 1965-1966

¹⁵⁹ Kendrick, 2008, 415

recognition that these co-management agreements are something that they have been instrumental in creating and developing.¹⁶⁰

Managing Wildlife: The Tłıchǵ Agreement and Implementation Plan

Understanding the co-management process of the Bathurst caribou herd must begin with an overview of the Tłıchǵ Agreement and its implementation plan. The WRRB is mandated by the Tłıchǵ Agreement and detailed in Chapter 12 – Wildlife Harvesting Management of the Tłıchǵ Agreement outlining the establishment and responsibilities of the Wek'èezhì Renewable Resource Board (WRRB), as described in Chapter 1. According to the Tłıchǵ Agreement, the Tłıchǵ Government, ENR and the federal government are all responsible for the functioning of the WRRB and appointing members to the board.¹⁶¹ The primary players in the WRRB are the Tłıchǵ Government, ENR and the federal Department of Wildlife Service (CWS) and Fisheries and Oceans Canada (DFO). Chapter 12 of the Tłıchǵ Agreement describes the functions of WRRB and wildlife harvesting management. It defines the rights and responsibilities of the Tłıchǵ people regarding their lands and resources. Table 3 outlines the co-management process and the parties responsible for carrying out each of its tasks.

The WRRB is an institution of public government acting in the public's interest regarding the management of wildlife (12.1.2). As such, it is neither a part of the Tłıchǵ Government, nor the federal or territorial government. It is rather “a new and unique

¹⁶⁰ Kendrick, 2003, 103

¹⁶¹ The Government of Canada, ENR and Tłıchǵ Government, 2005, 166, Sheet #12-1 action 5

[institution] existing at the intersection of the three orders of government (aboriginal, territorial and federal).”¹⁶²

Action	Responsibility
Conservation Emergency (Sheet # 12-5)	• Tłıchǫ Government • GNWT (Resources, Wildlife and Economic Development) • Canada (Canadian Wildlife Service) • Canada (Department of Fisheries and Oceans)
Wildlife Harvesting Management Proposal (Sheet # 12-5)	• Tłıchǫ Government • GNWT (Resources, Wildlife and Economic Development) • Government of Canada
Public Hearings (Sheet # 12-3)	• WRRB
Recommendations (Sheet # 12-6)	• WRRB
Final Decision on Management Plan (Sheet # 12-9)	• Tłıchǫ Government • GNWT (Resources, Wildlife and Economic Development) • Government of Canada

Table 3 – Responsibilities of the Co-management Process

The WRRB must work in partnership with any other authority whose responsibility includes managing wildlife, habitat, forests, plants and land in Wek’èezhìı. According to the Tłıchǫ Agreement, the WRRB must make decisions on an ecosystem basis, applying the practices of conservation and using the best information available. It must monitor and review its management decisions considering public health and safety issues (12.1.5). The WRRB membership is shared, fostering close working relationships between the Board’s members and thus between ENR, the relevant federal departments and the Tłıchǫ Government. The membership is equally divided between appointees from the Tłıchǫ

¹⁶² White, 2008, 73

Government and from the federal and territorial governments. These board members appoint a chairperson who may be a representative of the Tłıchǫ Government, GNWT or the federal government. Members appointed to the WRRB should be knowledgeable about, and respectful of northern wildlife, wildlife habitats, wildlife harvesting, aboriginal cultural traditions and practices of Wek'èezhì and the sacredness of the relationships that exist between humans and the land (12.2.5). Relationships are cultivated when governments, such as the federal government, GNWT and the Tłıchǫ Government work together on co-management projects and draw on both science and Tłıchǫ knowledge.

The WRRB powers include: determining a total allowable harvest for wildlife; managing wildlife; approving commercial activities related to wildlife, forest and plant management and protected areas; consultations with the Tłıchǫ Government, ENR, relevant federal department and any other interested parties; carrying out wildlife monitoring initiatives; and developing public education programs about sustainable and appropriate wildlife harvesting. The WRRB is required to inform the Tłıchǫ Government and Tłıchǫ citizens of any plans to conduct wildlife research and harvesting studies in Mqwhì Gogha Dè Nıttèè (see Map 1) and to involve them as much as possible in the research (12.4.3). It is also responsible for reviewing any wildlife management actions in Wek'èezhì proposed by the federal government, GNWT and/or the Tłıchǫ Government. Its jurisdiction includes reviewing proposals regarding the protection of habitat, research, monitoring of wildlife, limits on total allowable harvests, allocation of harvests and the methods of harvesting. In an emergency the Tłıchǫ Government, GNWT, CWS or DFO may make decisions and take emergency action without warning or waiting for the WRRB to

make a determination (12.5.14). These emergency actions stay in effect until the parties can develop a management and harvesting plan for the WRRB to review.

In their review process, the WRRB may conduct public hearings regarding total allowable harvest levels for wildlife (12.3.9).¹⁶³ These public hearings may include consultations with ENR, the Tłıchǵ Government, the federal government, other aboriginal peoples and other relevant parties such as mining companies or the tourism industry. This process enabled the Tłıchǵ to participate in both the initial 2009 joint proposal and the public hearings and to submit to the WRRB relevant documents concerning Tłıchǵ knowledge, elders' knowledge, and caribou and caribou behaviour. However, this process was fundamentally embedded within a Euro-Canadian structure, as demonstrated by the use of formal written document and highly-structured meetings and proceedings all things that are not consistent with Tłıchǵ practices. From information gathered through the consultation process, the WRRB makes recommendations and determinations on wildlife harvest levels which are submitted to the Tłıchǵ Government, ENR and the federal government. These parties are then able to accept, reject or vary the WRRB recommendations and submit their responses to the WRRB for the Board's consideration.

In the terms of the Tłıchǵ Agreement, the WRRB has the responsibility to ensure Tłıchǵ citizens and other aboriginal peoples are given priority harvesting rights and quotas in Wek'èezhì.¹⁶⁴ Once the aboriginal harvest is ensured, consideration is given to non-aboriginal harvesters and then finally to commercial harvesting projects. The Tłıchǵ Government has the right to reject any application by commercial harvesters before the

¹⁶³ The Government of Canada, ENR and Tłıchǵ Government, 2005, 174, Sheet #12-3

¹⁶⁴ The Government of Canada, ENR and Tłıchǵ Government, 2005, 189, Sheet #12-10

territorial government can approve a commercial harvesting licence.¹⁶⁵ Such harvest allocation decisions will depend on current and past usage patterns, harvest levels, alternate sources of wildlife to satisfy aboriginal harvest, demand by residents, non-residents, commercial harvesting and outfitters.

The Tłıchǵ Agreement makes special note of migratory species and management for the Bathurst caribou herd. With regards to migratory species that simply pass through Wek'èezhì, the WRRB, Tłıchǵ Government, GNWT and the federal government must work jointly with other organizations and governments to manage these resources, and does not prevent these parties from implementing essential management actions to protect these animals (12.11.11).

The Tłıchǵ Agreement also makes special mention of the Bathurst caribou herd because it passes through Wek'èezhì (12.11.1) and is a primary source of caribou for the Tłıchǵ. In accordance with the Tłıchǵ Agreement, the Tłıchǵ Government and GNWT had to submit a joint management plan for the Bathurst caribou herd within three years of the Agreement's implementation in 2008 (12.11.12). In 2006 ENR submitted a management proposal recommending management actions to reduce harvest of Bathurst Caribou, but failed to consult with the Tłıchǵ Government. In 2007 WRRB requested a public hearing to discuss these proposals and subsequently required ENR and Tłıchǵ Government to write a joint management proposal. In 2007 ENR implemented an emergency measure restricting the harvest for outfitters.¹⁶⁶ ENR and Tłıchǵ Government requested extensions to submit their joint management proposal in order to continue consultations and finally submitted

¹⁶⁵ The Government of Canada, ENR and Tłıchǵ Government, 2005, 198, Sheet #12-14

¹⁶⁶ WRRB, 2010, Report on a Public Hearing, 12

their joint proposal in 2009. This initial proposal led to the WRRB 2010 public hearings, which lead to the 2010 revised joint proposal by ENR and the Tłıchǫ Government, the WRRB 2010 recommendations, and in 2011, the final management plan by ENR and the Tłıchǫ Government.

The Tłıchǫ have lost much of their autonomy in signing treaties and wildlife policies with Euro-Canadians, as discussed in Chapter 1. The Tłıchǫ Agreement and subsequently the WRRB are intended to be vehicles to restore to the Tłıchǫ a prominent voice in wildlife harvesting and management practices. In the next chapter I discuss the specifics of my case study of the co-management of the Bathurst Caribou.

Chapter 3 – Wek’èezhì Renewable Resources Board, Caribou and the Tłıchǫ voice.

In order to understand the Tłıchǫ perspective on co-managing the Bathurst caribou herd, it is important first to understand their worldview and their relationship with caribou. In this chapter I first provide a brief overview of both Tłıchǫ history and culture and the history and behaviour of caribou in the region, then I explore the role of caribou in Tłıchǫ culture and their laws governing their interactions with the caribou. I subsequently review how ENR and the Tłıchǫ discussed caribou populations and their management during the WRRB public hearing on the *Joint Proposal on Caribou Management Actions in Wek’èezhì*.

Tłıchǫ

Up until the mid-20th century most Tłıchǫ lived on the land as their ancestors had since time immemorial, even though they had been trading with, and labouring for, European traders and settlers since Alexander Mackenzie’s expedition to the region in 1789. This stability in their way of life led anthropologist June Helm to argue that Tłıchǫ contact with Europeans was a slow and untraumatic process.¹⁶⁷ But by the 1950s the federal government began to impose change throughout the north. In the 1960s the first schools were built, prompting Tłıchǫ to settle in communities, further fostering the growth of waged labour.¹⁶⁸ Thus it has only been within one lifetime that Tłıchǫ have spent most of their time on the land.

¹⁶⁷ Helm, 2000, 9

¹⁶⁸ Helm, 2000, 8

This increasingly sedentary lifestyle reduced access to country foods such as caribou, moose, small game, birds, fish and some plants. Diets have been supplemented with store-bought foods such as flour, and more recently butter, fruits, vegetables and processed food.¹⁶⁹ Country foods are still preferred thus many Tłıchǫ still seasonally go on the land to harvest caribou and other fish and game, securing as much as they are capable of processing within the laws govern both fishing and harvesting. In recent years they have found that they are often travelling longer distances to find caribou.

Regardless of these changes, there remains a strong land-based economy among the Tłıchǫ, as hunted and trapped meat taken from their land is the healthiest sustenance for them, both physically and spiritually. Knowing how to hunt, trap, fish and gather in accordance with Tłıchǫ traditions fosters a strong and vital relationship to the land as the land is a part of Tłıchǫ identity. It is not a commodity to be used or possessed. Patrick Scott has noted that for the Tłıchǫ “home, it [is] mother and father. It [is] interwoven into their souls.”¹⁷⁰

History for the Dene is “written on the land,”¹⁷¹ on the trails and at other important places. Stories are linked to place and place-names serve as reminders of important stories about how the land was used, the important resources found there or significant historical events that happened there.¹⁷² Trails connect people, events and places, linking past events with current circumstances.¹⁷³ One important trail to the Tłıchǫ is the Idaà, a trail of lakes

¹⁶⁹ Andrews & Zoe, 1997, 160

¹⁷⁰ Scott, 2007, 10

¹⁷¹ Bayha, 2012, 26

¹⁷² Legat, 2012; Bayha, 2012; Andrews et al. 2012; Andrews and Zoe, 1997; Blondin, 1997; Whaèhdqò Nàowòdò Kò Dogrib Treaty 11 Council, 2001. *Habitat of Dogrib Traditional Territory: Placenames as Indicators of Biogeographical Knowledge*

¹⁷³ Legat, 2012, 146

and rivers that connects Great Bear Lake and Great Slave Lake across M̄owhì Gogha Dè N̄it̄lèè. Knowledge of such traditional trails has been, in fact, used in land claims negotiations to prove occupancy and land use.¹⁷⁴ On the land, “culture and topography are symbolically fused.”¹⁷⁵ Knowing these stories and the knowledge they carry is vital to the survival and protection of the T̄hch̄ people, their culture and their land.¹⁷⁶ Scott notes how stories are “the roots of their culture and their identity – planted and nurtured so, as long as the sun rises and the river flows, their people could continue inhabiting the land covenanted by them to the Creator from time immemorial.”¹⁷⁷

Stories teach one how to behave properly on the land.¹⁷⁸ They demonstrate roles, responsibilities and proper behaviour towards other people, one’s community, animals, plants and other non-human entities.¹⁷⁹ Respect is fundamental to good relationships, including relationships between people, the land, animals, spirits and all other beings and is considered necessary for successful hunting as well as peace within the community. T̄hch̄ take pride in their self-reliance and the security of knowing they have the skills to survive in the bush and although everyone is expected to pull their weight in the community, sharing and caring for each other is just as important as self-reliance. Elders pass down their knowledge through the stories they tell to ensure all in the community follow and understand T̄hch̄ rules and respect “the environment, the leaders and themselves.”¹⁸⁰

¹⁷⁴ Andrews et al., 29

¹⁷⁵ Andrews & Zoe, 1997, 172

¹⁷⁶ Legat, 2012, 11

¹⁷⁷ Scott, 2007, 2

¹⁷⁸ Legat, 2012; Ryan, 1995; Blondin, 1997

¹⁷⁹ Ryan, 1995, 2-3; Legat, 2012, 18

¹⁸⁰ Ryan, 70

Tłıchq learn who they are by observing, experiencing, and listening to stories written on the land.¹⁸¹ They have also traditionally valued all forms of knowledge leading them in the 1960s to fight for schools to be built in their communities. Sadly, they now fear this new knowledge and a different style of learning is replacing more traditional modes of learning steeped in experience on the land.¹⁸² Community elders are concerned that the knowledge necessary to live off of the land is not being adequately preserved and passed on to younger generations.¹⁸³ In the 1960s, the fly-in communities of Whatì, Wekweètì and Gamètì were built away from Behchokò so Tłıchq could remove themselves from western influence. Over the past sixty years, schools, band offices and new technologies such as cell phones and internet have made their ways to these once-remote communities challenging efforts to minimize outside influences. Regardless, these communities remain tightly knit, linked by family and marriage with strong Tłıchq leadership and values.¹⁸⁴

Caribou

Caribou are essential to Tłıchq, not only for physical resources such as food but because they are the “basis of their lifestyle, traditions and practices and the foundation of their value system.”¹⁸⁵ Thus any understanding of the relationship between Tłıchq and caribou must fully consider the behaviour of the caribou themselves.

There are two types of caribou in the Northwest Territories: woodland and barren-ground. There are approximately two million barren-ground caribou in North America in

¹⁸¹ Ryan, 1995, xxvii; Tłıchq Government, 2008, 2; Legat, 2012, 174

¹⁸² Legat, 2012, 29

¹⁸³ Andrews & Zoe, 173

¹⁸⁴ Legat, 2012 116-120

¹⁸⁵ Caribou Migration and The State of Their Habitat: Final Report, 2001, 19

seven herds: the Western Arctic, Porcupine, Bluenose-East, Bluenose-West, Bathurst, Beverly, Qamanirjuaq and George River herds. Barren-ground caribou migrate seasonally, going south in the winter and returning to their calving grounds in the summer. Because caribou have high fidelity to their calving grounds, scientists name and define the herds according to the places where they calve.¹⁸⁶ Some Dene harvesters, however, are able to identify to which herd a single caribou belongs by examining the particularities of its morphology and condition.¹⁸⁷ Barren-ground caribou are shorter and lighter-coloured than woodland caribou, but their fur changes colour throughout the year. They are dark grey with a white throat, but get lighter in colour in the winter and are almost a reddish-brown in summer.¹⁸⁸

The Bathurst caribou herd have a range of 350 000km² and pass through Tłıchǫ Lands. Both Dene and scientists recognize that caribou go through cyclical variations in their populations approximately every 30 years.¹⁸⁹ The length of these cycles make scientific monitoring difficult however, through oral narratives Tłıchǫ have generations of knowledge on caribou and their cycles. When caribou populations decline they are more difficult to find and harvest, causing hardship for the Tłıchǫ. Currently, caribou populations are in decline across the north with an approximate population of 32 000 in the Bathurst herd, reduced from 100 000 in 2006.¹⁹⁰ Some Tłıchǫ however, assert that the caribou have not declined but instead migrated elsewhere and simply have not been found by the

¹⁸⁶ Kendrick, 2005, 176

¹⁸⁷ Kendrick, 2005, 180

¹⁸⁸ Whàehdǫǫ Nàowo Kǫ Dogrib Treaty 11 Council, Caribou Migration and The State of Their Habitat, 2001, 25

¹⁸⁹ Beaulieu, 2010, 60; Kendrick, 2005, 177; WRRB, 2010, Day 4, Grand Chief Joe Rabesca, 161

¹⁹⁰ Revised Joint Proposal on Caribou Management Actions in Wek'èezhì, ii; Nesbitt & Adamczewski, iii

scientists.¹⁹¹ Denésq̓liné Elder Madeleine Drybone from Łutsël K'é noted that mining and other development projects keep the caribou away but “the caribou will come looking for the people.”¹⁹² Her assertion is supported by recent news that the Beverly herd, with a population of 276 000 caribou, which had been “lost” in a 2009 survey, had recently been found. The lead author of this study, John Nagy, claims the herd had shifted its calving grounds north and that thus herds should not be defined by calving grounds but instead by which animals group together.¹⁹³

The Bathurst caribou's calving grounds are southwest of Bathurst Inlet in Nunavut with their migratory range extending to Great Slave Lake and beyond. While caribou's general migration route is well documented, caribou change their routes from year to year depending upon a variety of factors including weather, ice formation, snow, and wind.¹⁹⁴ Caribou summer on their calving grounds and then move south to Great Slave Lake. When caribou numbers are low, they move slowly along their migration route because they are more cautious as they lack the protection of larger numbers. Throughout these long migrations, caribou must navigate diverse environments, disturbances and dangers. Roads and mines in addition to natural disturbances such as forest fires devastate the land and vegetation can disrupt the migration. Dene wildlife officer and harvester Danny Beaulieu noted the cumulative impacts of other disturbances such as the ten outfitter lodges that concentrate their hunting on the Bathurst herd; the construction and operation of three

¹⁹¹ Tłıchq̓ Government, Tłıchq̓ Knowledge of Environmental Changes: Implications for Caribou Hunting, 13

¹⁹² Kendrick, 2005, 180

¹⁹³ Weber, 2011, Aboriginal Elders Right All Along, “Lost” Caribou Herd Had Just Moved

¹⁹⁴ Legat, 2012, 79

diamond mines on the migration routes; and the large trucks that frequently use the one thousand kilometers of ice road between January and mid-March.¹⁹⁵

Caribou are sensitive to changes in their environment and will change their path of migration to avoid loud noises, strange smells or other disruptions. Map 6 shows wildfires in Wek'èezhì between 1940 and 2014, demonstrating the extent to which caribou could have been affected by changes in their environment. Wildfires affect a large portion of Wek'èezhì and not only affect migration routes but also food availability. These disturbances in the environment can disorient the caribou, making it difficult for them to find vegetation.

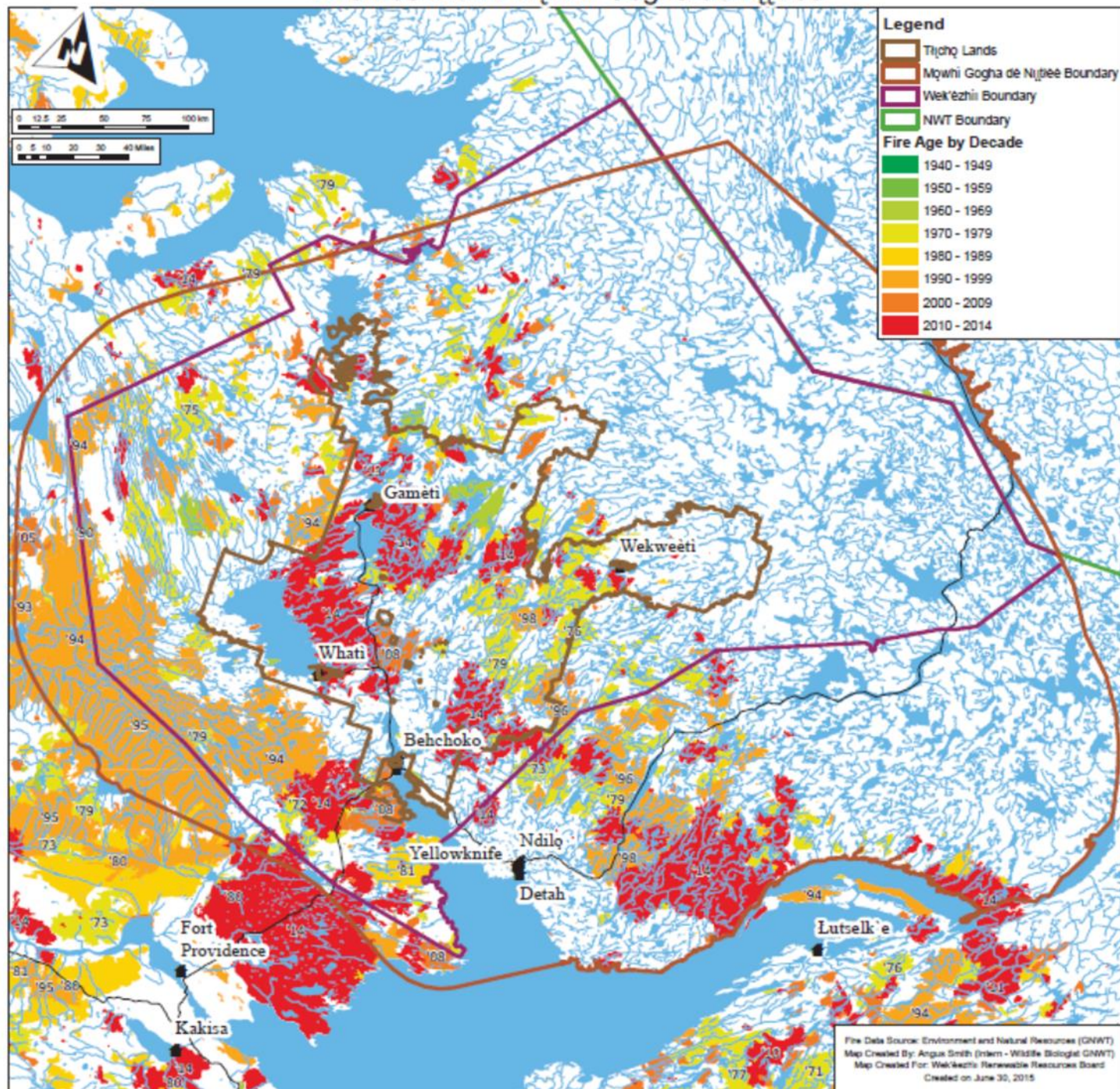
Mining has been of particular concern due to the dust, noise, helicopters, roads and traffic. Surveys confirm caribou will avoid mines by a distance of 15-23 km. Although the effects of mining on the caribou are recognized to be significant, scientists do not believe mining is directly responsible for the herd's decline.¹⁹⁶ Like forest fires, mine construction can have dramatic impacts on the local environment impacting the movement and health of caribou. On an ongoing basis, the strong smells from the mining equipment masks the scent of vegetation, making it difficult for caribou to find food.¹⁹⁷ The frequency of rainfall has decreased since the 1970s resulting in drier land, which causes an increase in forest fires, thus damaging the growth of lichen. Lichen is the caribou's preferred food and primary

¹⁹⁵ Beaulieu, 2010, 64

¹⁹⁶ Nesbitt & Adamczewski, 2013, 20

¹⁹⁷ Caribou Migration and The State of their Habitat: Final Report, 2001, 47; Monitoring the Relationship between People and Caribou, 4

Wildfires within M̃qwhì Gogha dè Ñt̃l̃èè



Map 6: Wildfires in M̃qwhì Gogha Dè Ñt̃l̃èè 1940-2014

source of food in the summer allowing them to put on fat to survive the winter months when they eat primarily grasses and sedges.¹⁹⁸ Caribou must not only circumvent active fires and their smoke but must find alternate food sources. To Tłıchq elders, such development is inappropriate human behaviour because it demonstrates a lack of respect for caribou and disrupts the caribou's environment. The developers' lack of respect has the greatest impact on migration because caribou "migrate to people who live well and behave properly."¹⁹⁹ Behaving properly towards caribou means being knowledgeable about them, harvesting only what is needed, using all parts of the caribou and disposing of caribou waste appropriately.

Tłıchq elders noticed that in the last forty-five years, caribou migratory patterns have changed due to warmer weather. The herds travel south later in the fall and north sooner in the spring. Wind patterns that used to "blow the snow away" have shifted, leading to a greater snow cover which is problematic as deep snow is more difficult to walk through for both caribou and people.²⁰⁰ In deeper snow caribou tend to travel less and become easier targets for harvesters and predators. Similarly, ice on lakes and rivers freezes later in the fall and has thinned from a thickness of from 6-7 feet to 2-3 feet. Slush on top of the ice resulting from melted snow makes travel difficult and elders including Francis Simpson, noticed caribou are careful not to damage on their legs and hooves on the

¹⁹⁸ Kendrick, 2005, 181-182; Tłıchq Government, 2013, Tłıchq Knowledge of Environmental Changes: Implications for Caribou Hunting, 12; Whaèhdqò Nàowoòq Kò Dogrib Treaty 11 Council. 2001. *Caribou Migration and The State of Their Habitat Final Report*, 42-45

¹⁹⁹ Whaèhdqò Nàowoòq Kò Dogrib Treaty 11 Council, Caribou Migration and The State of Their Habitat, 23

²⁰⁰ Tłıchq Government, 2013, Tłıchq Knowledge of Environmental Changes: Implications for Caribou Hunting, Elder Charlie Zoe-Chocolate, 13

ice.²⁰¹ These environmental changes have resulted in thinner caribou, increased injury, decreased pregnancy rates, and other behavioural changes impacting Tłıchq hunting patterns. Documenting Tłıchq knowledge about caribou habits and movements is even more vital in light of these changes, as it provides an unprecedented long-term perspective.²⁰² It can offer baseline data about caribou health, distribution, migration routes and behaviour, information that is vital in understanding the effects of mining, development and climate change on caribou herds.

Tłıchq and Caribou

Tłıchq do not control the land; rather the land controls people and their actions.²⁰³ In order to live well on the land, the Tłıchq must maintain mutual and reciprocal relationships with everything within the land. Thus, their laws and practices regulate these relationships, including their interactions with and harvest of caribou. Tłıchq leaders, who teach and promote Tłıchq ways of acting by living and demonstrating them are responsible for ensuring these traditional laws are followed.

Tłıchq and caribou have a mutual and reciprocal relationship. Tłıchq harvest caribou and the caribou allow themselves to be hunted. Animals thus have their own life force and desires; they do not exist simply to be used by humans. Tłıchq elders describe the caribou as wanting to assist the Tłıchq and thus offering themselves to be harvested. However if the caribou feel they are not needed or respected, they will stop offering

²⁰¹ Tłıchq Government, 2013, Tłıchq Knowledge of Environmental Changes: Implications for Caribou Hunting, Francis Simpson, 15

²⁰² Whaèhdqò Nàowòò Kò Dogrib Treaty 11 Council. Caribou Migration and the State of their Habitat, 2001, 5

²⁰³ Zoe, 2012, 72

themselves and leave the area.²⁰⁴ Elder Adele Wedawin of Behchokò explained that caribou gives itself to the Tłıchq by not struggling when they die and will never attack or bite.²⁰⁵

One of the principal ways to demonstrate respect to caribou is to take only as many as are needed. Furthermore, animals should be killed as quickly and efficiently as possible, with minimal suffering.²⁰⁶ Once harvested, an animal must be handled properly, all parts of the animal should be used, and any remaining scraps should be discarded appropriately. Blood must be handled with particular care. The proper way to dispose of unused parts of caribou such as bones and hair, as Elder Margaret Lafferty of Wekweètì described it is to put them where they cannot be walked on or spread by the wind.²⁰⁷ Elder Jimmy Martin of Behchokò recalled how his parents taught him how to dispose of caribou: “Our parents used to tell us to take them by dog team out farther away to spill these bones of caribou. That’s how much the old people used to respect the caribou because the caribou was really important to them.”²⁰⁸ The hunter who kills the animal is responsible for distributing the meat to the community with priority to widows and his relatives.²⁰⁹

Another means of demonstrating respect to the caribou is becoming knowledgeable about them and their relationships with other animals. Elders Adele Wedawin and Jimmy Martin of Behchokò explained that some animals indicate the presence of caribou. Ptarmigan, for example, are often found near caribou and seeing a raven suddenly flip to

²⁰⁴ Legat, 2012, 83

²⁰⁵ Tłıchq Government, 2008, 18

²⁰⁶ Ryan, 1995, 28

²⁰⁷ Tłıchq Government, 2008, 25

²⁰⁸ Whàehdòq Nàowo Kò Dogrib Treaty 11 Council, Caribou Migration and The State of Their Habitat, 2001, 28

²⁰⁹ Ryan, 1995, 28-29

one side in flight is another indication that caribou are near. Thus, being knowledgeable about bird behaviour allows Tł̥chq̓ to more easily locate caribou.²¹⁰

Tł̥chq̓ men and women each have their own responsibilities and knowledge sets regarding the caribou, although it is important that each gender understand the knowledge and responsibilities of the other in order to ensure survival. Men are the primary caribou hunters while women are responsible for ensuring the men are properly clothed and fed for their hunting expedition. Women are also responsible for ensuring that that they do not affect or interfere with the trails or hunters. It is important that children do not disturb the hunt and that they learn the skills and behaviour necessary for a successful hunt.²¹¹

Caribou are harvested throughout the year however, late summer, late fall after the freeze-up and spring are when most harvests take place. In August and September large gatherings and community hunts occur. The animals taken during this time are highly desired as their skins are at their best for clothing. After the freeze-up in November, caribou move into the boreal forest and caribou fur is in prime condition. In spring when the snow melts, caribou again are harvested as they migrate back to their calving grounds.

Dene hunting groups can range from small groups to large parties. A simple but effective hunting technique includes a pair of men mimicking caribou movements to approach the caribou, selecting a desired animal and shooting it. When the herd runs off, they follow and begin mimicking their movements again. With this technique the harvesters can kill many in the herd because the caribou cannot identify where the threat

²¹⁰ Tł̥chq̓ Government, 2008, 18

²¹¹ Ryan, 1995, 27-28

comes from.²¹² Up until the 1930s, another means of harvesting was the use of caribou fences. Constructed from spruce trees placed in the ice, the fence mimicked the shore line and directed the caribou to snares set between the trees and at the end of the fence. The harvesters would chase and direct the caribou by mimicking the sounds of wolves. Caribou fences allowed Dene to harvest a large number of caribou at one time.²¹³ New forms of transportation, including snowmobiles, planes and cars, allowing hunters to travel distances quickly, have changed how caribou are hunted. The expansion of the wage economy expanded the capacity for the Dene to utilize these new technologies.²¹⁴ But such changes have not diminished the Tłıchǫ desire to maintain strong relationships with caribou and to have their knowledge of caribou be central to all decisions regarding how caribou should be managed.²¹⁵

Co-managing Caribou

Prior to 2009 when ENR and Tłıchǫ Government's *Joint Proposal on Caribou Management Actions in Wek'èezhì* was submitted to the WRRB, ENR had attempted to address the decline in the Bathurst herd without the involvement of the Tłıchǫ Government. Three years earlier ENR submitted a management proposal to the WRRB suggesting that it limit the caribou harvest for the Bathurst herd to 5 120 animals, eliminate all commercial hunting tags, and reduce the number of tags for non-residents and non-resident alien hunters.^{216x} The WRRB rejected this management proposal as ENR had not consulted with the Tłıchǫ Government as per the Tłıchǫ Agreement. In response, ENR

²¹² Helm, 2000, 69-70

²¹³ Andrews & Zoe, 1997, 168; Gordon, 2005, 161

²¹⁴ Madjaric, 2011, 28

²¹⁵ Whaèhdqò Nàowoòq Kò Dogrib Treaty 11 Council, 2001, 3

²¹⁶ <http://www.enr.gov.nt.ca/programs/hunting/licences>

enacted emergency conservation measures on April 17, 2007 in order to address the dramatically declining populations of barren-ground caribou in accordance with the terms of the Agreement.²¹⁷ ENR emergency measures included amending the big game hunting regulations to reduce the number of outfitter tags for barren-ground caribou in the 2007 harvest season. The WRRB conducted public hearings in 2007 due to the significance of the ENR proposed actions and the importance of caribou for Tłıchq harvesters. The WRRB required a new joint management proposal from the ENR and the Tłıchq Government, including a report on the outcome of their consultations by April 23, 2007. ENR and the Tłıchq Government extended the consultation process and finally submitted *Joint Caribou Management Action in Wek'èezhì* to the WRRB in November 2009. The 2009 proposal led to the WRRB public hearing and subsequent 2009 revised management proposal by ENR and Tłıchq Government, leading to the *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì* in 2011 and its implementation plan, approved by the WRRB on June 30, 2011.

Wildlife Harvesting Management Proposal for the Bathurst Caribou Herd

The 2009 *Joint Caribou Management Action in Wek'èezhì* outlined the caribou herd's decline and began a discussion about how to address it. This initial proposal focused on the declining Bathurst caribou herd, but also included the Bluenose East and Ahiak herd. The goal of the proposal was to “develop actions that will allow for the most rapid recovery of the herd” and monitor its welfare and recovery.²¹⁸ It proposed eleven management actions

²¹⁷ Tłıchq Agreement, 2005, 123

²¹⁸ Joint Proposal on Caribou Management Actions, 2009, 3

focused on reducing harvest pressure, increasing education for harvesters, enforcing regulations and improving harvest reporting (see Appendix 1).

In this initial proposal, the Tłıchǵ Government and ENR jointly recommended a list of actions to monitor the caribou herds, their health and their obstacles to recovery. Both ENR and the Tłıchǵ Government agreed that in order to reduce harvest pressure, commercial, outfitting, and resident tags should be eliminated, a move to be reconsidered in 2012 depending upon the status and health of the herds. These restrictions are currently still in place and research on herd health and behaviour is still closely monitored.

Herd health was to be assessed by examining harvested animals for parasites, diseases and their overall condition as well as examining caribou killed by wolves and insects. However, the two parties disagreed on several other key actions. The Tłıchǵ Government proposed no restrictions for the harvest of female or male caribou, while ENR proposed a complete moratorium on the harvesting of females in the Bathurst caribou herd and limited harvest for the Bluenose East and Ahiak herds. ENR also proposed a limited bull harvest for aboriginal hunters, subject to future surveys and monitored by a tag allocation system with the aim of avoiding overharvesting. ENR further proposed an increase in the total number of caribou collars in order to monitor their movements, distribution, and survival. Overall, the Tłıchǵ Government wanted no limit on caribou harvests for indigenous harvesters, while ENR advocated for strict monitoring and management of the herd through selective harvest.

The Public Hearings

In accordance with the Tłıchǫ Agreement, the WRRB conducted public hearings on the *Joint Proposal on Caribou Management Actions in Wek'èezhì* in Behchokò, NWT, on March 22nd to 26th, 2010 and August 5th and 6th, 2010. The hearings were intended to allow time for those who wanted input into the decision-making process with the goal of making “a decision that is fair to everyone and yet allows the herd to sustain itself.”²¹⁹ Thus the purpose of the hearings was threefold: to inform the public, industry and other interested parties about the state of the Bathurst, Bluenose East, and Ahiak caribou herds; to allow those present to share their perspectives, knowledge and observations about the herd; and to discuss how best to manage the decline of the herds. Additionally, part of the proposal review was to determine total allowable harvests for each of the three caribou herds and decide how their harvests should be allocated. Unlike the formal documents of the proposed caribou management actions and the final caribou management actions, these hearing transcripts provide verbatim remarks from a variety of stakeholders including outfitters, developers, other aboriginal organizations, the City of Yellowknife, NWT Tourism, NWT Wildlife Federation and individuals. The information presented at these hearings (all of which was recorded and transcribed) provides insight into the process of wildlife management and the importance of caribou for all people in the NWT - most critically for the Tłıchǫ.

The days of the hearings were often long, beginning in the morning and lasting until late in the evening. ENR, the Tłıchǫ Government, an independent scientific consultant

²¹⁹ WRRB, 2010, Day 6, Grant Pryznyk, 13

contracted by the WRRB, and intervenors (including outfitters, developers, other aboriginal organizations, the City of Yellowknife, NWT Tourism, NWT Wildlife Federation and other individuals) were required to register and thus received a time slot during which they could give their presentation. Presentations varied in length but were approximately thirty minutes each. Appendix 6 highlights the different time allotments provided to each of the presenters. The co-chairs of the hearings—one a Tłıchǫ representative and the other a federal government official—organized and facilitated the hearings, keeping them on a tight schedule. The hearings also included three general public sessions on March 23, 24 and 25, 2010. The average length of each person’s presentation in these sessions was approximately eight minutes, with the majority of speakers being Tłıchǫ citizens. Thus hearings were highly structured, timed and monitored in a format that favoured translation and transcription between English and Tłıchǫ.

ENR Perspective of Caribou and Caribou Management

The representatives speaking on behalf of the ENR spoke of a variety of issues, but focused their attention on the scientific and technical aspects of caribou management. They described at length their use of caribou radio collars^{xi} and aerial surveys, discussing their limitations, their expense, and the fact that they are considered necessary for establishing a comprehensive picture of the caribou’s movements and special distribution. They presented an array of statistical data about caribou herd size, factors affecting herd size, reasons for the caribou’s declining population, and comparisons between the Bathurst caribou and other herds. According to their research, the Bathurst herd was estimated at 32 000 in 2009, a figure based on the number of breeding cows in the calving area. Calf survival had increased from the early 2000s but fewer cows meant not as many calves

were being born. The Bathurst herd also had the lowest bull-to-cow ratio in the NWT, with less than 40 bulls per 100 cows, whereas a healthy ratio is 50-60 bulls per 100 cows. They noted caribou populations fluctuate in cycles in coherence with similar variations found from Quebec to Alaska. ENR ungulate biologist asserted that ENR methodologies had been independently reviewed by the Alberta Research Council (ARC), and that the ARC felt that ENR research methods were appropriate, and agreed with the ENR position that herds are defined by calving grounds and that there was no evidence of caribou moving elsewhere or being integrated into other herds.

ENR representatives also discussed how historical changes in herd size were measured using Tłıchǫ knowledge, spruce-root scars and population surveys from the last forty years. This information, which included aerial surveys over the territory during calving season, demonstrated that caribou were in decline and had not simply moved or joined other herds. These surveys found that the few caribou who did change herds were negligible when compared to the total herd population. Thus, ENR concluded that the Bathurst herd had been declining faster than any other herd in the NWT between 2006 and 2009.

To ENR the most significant threat to caribou populations was human and wolf predation. Other important threats included snow conditions, weather, fire, parasites, and industrial development such as road construction, resource exploration and mining operations. However, ENR did not believe ameliorating factors related to this development would provide a significantly rapid recovery for caribou populations. To ENR, these environmental threats to caribou need to be addressed in long-term planning initiatives.

ENR representatives made repeated reference to the need for cooperation between governments, communities, university researchers and aboriginal peoples. They emphasized their role in consulting and partnering with other research organizations, and creating a larger network of caribou researchers, such as ARC and the NWT Caribou Management Strategy, the latter a project implemented by ENR in 2006 to provide guidance for public education about the management of caribou herds in the NWT for the benefit of all NWT residents. They further indicated support for Tłıchǫ knowledge caribou projects, although they did not elaborate on their commitment to such research.

Tłıchǫ Perspective of Caribou and Caribou Management

Themes repeated throughout Tłıchǫ presentations by both the Tłıchǫ Government and during the general public session included: cooperation between governments and Tłıchǫ; Tłıchǫ responsibilities for the land and each other; the importance of elders' knowledge and experience; the need to secure a better future for both Tłıchǫ and caribou; and other issues that had not been addressed in the co-management process, such as the impact of pollution, climate change and forest fires on both caribou and people.

The Tłıchǫ Government expressed a desire to work closely with ENR and the WRRB in the monitoring and decision-making processes concerning caribou.²²⁰ They expressed concern about the ability of the federal, territorial and Tłıchǫ Governments to cooperate, drawing on the history of wildlife management in the NWT. Several speakers mentioned that information was not adequately disseminated from the territorial government to Tłıchǫ citizens, and elders in particular. Not only were elders not informed of management

²²⁰ WRRB, 2010, Day 2, Grand Chief Joe Rabesca, 22-23

decisions, but when they tried to convey their knowledge of caribou and caribou management, they often went unheard. Walter Bayha, a Sahtu Dene, summarized this succinctly: “we have so much TK information that we have out there that we haven’t really paid much attention to, or even interpreted.”²²¹ As others had done, Elder Sophie Williah from Whatì identified the lack of communication between stakeholders as “our main concern.”²²² Peter Beaverho, and Elders Harry Apples, Peter Huskey, Eddie Camille all from Behchokò and many more raised their strong desire for the Tłıchǫ, the federal and the territorial governments to “work in a good manner and work in faith together”²²³ when it came to caring for their land.

Several Tłıchǫ speakers including Chief Alfonz Nitsiza of Whatì, Chief Edward Chocolate of Gamètì, Fred Sangris of Yellowknives Dene, Elder Pierre Tyokka from Behchokò and Leon Lafferty from Behchokò discussed the importance of Tłıchǫ knowledge being used in conjunction with scientific knowledge in caribou management decisions. To them scientific and Tłıchǫ knowledge gave different perspectives and understanding of caribou, and using both would provide decision makers with the best information available.²²⁴ Bringing these traditions together is not an easy task, as I suggested earlier.

Tłıchǫ pointed to the responsibility they have to the land, their communities and all wildlife. To Grand Chief Joe Rabesca from Behchokò, the declining caribou population was happening “on our land and we are responsible.”²²⁵ Chief Alfonz Nitsiza of Whatì attributed

²²¹ WRRB, 2010, Day 3, Walter Bayha, 225

²²² WRRB, 2010, Day 2, Elder Sophie Williah, 235

²²³ WRRB, 2010, Day 2, Peter Beaverho 183

²²⁴ WRRB, 2010, Day 3, Fred Sangris, 240

²²⁵ WRRB, 2010, Day 2, Grand Chief Joe Rabesca, 28

the decline in caribou population, in part, to a lack of respect for caribou. He cited examples of this, including harvesting more animals than were necessary, killing animals for profit, and wasting parts of the caribou. Scientific monitoring practices including radio collars, aerial surveys and tissue sample collection were also identified as detrimental to caribou herds. According to Sahtu Elder Leon Modeste, the mere act of counting and monitoring wildlife demonstrates disrespect because the creator put caribou on the land to be free and undisturbed.²²⁶

These presentations also emphasized that responsibility towards one's community, the protection of aboriginal rights, cooperation, and the need to educate youth and to work together are vital to their future.²²⁷ They argued that young people needed to be educated to enhance their knowledge and respect for caribou and secure their future.²²⁸ Sahtu Dene, Walter Bayha argued that if wildlife management strategies involved education derived from traditional stories, the Dene could preserve their relationship with caribou and bring back knowledge and decision-making to their communities.²²⁹

The Tłı̨chǫ were also concerned that a number of environmental issues including declining water quality, higher levels of air, water, soil and noise pollution, and increased numbers of development projects such as road construction and mining operations were not noted by ENR nor discussed in the joint proposal. However, as I noted above Tłı̨chǫ have observed that these phenomena can have significant and lasting effects on caribou,

²²⁶ WRRB, 2010, Day 2, Elder Leon Modeste, 213

²²⁷ WRRB, 2010, Day 2, Elder Jimmy B. Rabesca, 76-77; WRRB, 2010, Day 2, Elder Francis Williah, 102; WRRB, 2010, Day 2, Chief Alfonz Nitsiza, 45

²²⁸ WRRB, 2010, Day 2, Chief Alfonz Nitsiza, 43

²²⁹ Bayha, 2012, 29

particularly because of their long annual migrations. Tłıchq noted as further evidence of the detrimental impacts of these development projects, the increased rates of both deformed and dead fish being caught each year. They stated that this was not only an issue of animal welfare but also one of human welfare, as the Tłıchq drink the same water, eat the caribou, and suffer the same air and noise pollution.

In chapter 4 I discuss how ENR and Tłıchq themes relate to each other. I examine their similarities, differences and what these themes say about their perspectives.

[Revised Wildlife Harvesting Management Proposal for the Bathurst Caribou Herd](#)

On May 31, 2010 ENR and the Tłıchq Government submitted a *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì* to the WRRB (see Appendix 2). Based on the information presented during the public hearing, ENR and the Tłıchq Government were able to resolve the conflicts present in the 2009 management proposal. The 2010 revised management proposal was more detailed and extensive than the initial management proposal. It provided information about, and rationale for, the relationship between Tłıchq and caribou; the proposed management actions; the implementation plan for the Bathurst, Bluenose East and Ahiak herds; and guidelines for wolf management. Both parties advocated incentives for trappers to increase their wolf harvest in early winter to an annual harvest from 40 to 80-100 individuals, an increase in outfitter and resident wolf harvest, the removal of problem wolves near communities, and initiating a wolf cull if annual targets were not met.²³⁰ In making these proposals, ENR and the Tłıchq Government

²³⁰ ENR & Tłıchq Government, 2010, 16

recognized that wolves hunt caribou and that reducing the wolf population would significantly reduce their impact on caribou numbers.²³¹

In the initial 2009 management proposal, ENR and the Tłıchǫ Government disagreed on whether to restrict the harvest of caribou bulls and cows. In the 2010 revised management proposal, such an action was not mentioned, but both proposed that the harvest be limited to about 300 Bathurst caribou, with a maximum of 60 cows. ENR also proposed reducing the harvest rates of the Bluenose-East herd by about 45% of the harvest in 2010, with a definite target to be developed following a population survey to be conducted in the summer of 2010. ENR and the Tłıchǫ Government proposed no increase in the harvest of the Ahiak herd, and stated that they would advise harvesters to select bulls rather than cows.²³² Based on what was listed under the “Recommended Management Actions” in the 2010 revised management proposal, it appeared that ENR and the Tłıchǫ Government were in agreement.²³³ Yet no explanation was offered as to why the Tłıchǫ Government changed its position on how best to manage the Bathurst caribou herd.

On August 5th and 6th, 2010, the public hearings reconvened for ENR and the Tłıchǫ Government to address the 2010 revised management proposal and for intervenors to present their closing comments. ENR gave the first presentation describing the content of the 2010 revised management proposal and how they came to the proposed management actions. The Tłıchǫ Government spoke next, explaining the Tłıchǫ relationship with caribou, its importance in their culture, and what they thought would help recover caribou

²³¹ ENR & Tłıchǫ Government, 2010, 14

²³² ENR & Tłıchǫ Government, 2010, 23

²³³ ENR & Tłıchǫ Government, 2010, 14-18

populations and improve the mutual futures of caribou and Tłıchǫ. A question period followed these presentations. The remainder of day six and day seven was devoted to the closing comments of the intervenors, a group that included resource companies and outfitters.

WRRB Recommendations

On October 8, 2010 the WRRB submitted their recommendations to ENR and the Tłıchǫ Government in the *Report on a Public Hearing Held by the Wek'èezhì Renewable Resources Board & Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst Caribou Herd* (Appendix 3), based on the *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì* (Appendix 2), to ENR and the Tłıchǫ Government. ENR and the Tłıchǫ Government reviewed these recommendations, and they subsequently became the basis of the 2011 final management actions for the Bathurst, Bluenose-East and Ahiak caribou herds.

The WRRB report contains sixty recommendations intended to improve the health and numbers of the Bathurst, Bluenose-East and Ahiak caribou herds. These recommendations spanned a variety of issues including harvest restrictions and requirements, monitoring initiatives, reporting mechanisms, wildlife management, education, the implementation of research initiatives, and timelines for these actions.²³⁴ The fourteen recommendations related to harvesting restrictions include the elimination of commercial, outfit and resident harvests, and the enforcement of an annual harvest target of 300 Bathurst caribou, 225 of this total were to be harvested by the Tłıchǫ, leaving 75

²³⁴ WRRB, 2010, Report on a Public Hearing Held

animals for other indigenous peoples.^{xii} The Board also recommended that bulls comprise 85% of this annual harvest. These targets were to be reduced if the population of Bathurst caribou continued to decline. These recommendations were similar to those offered in the 2010 *Revised Joint Proposal for Caribou Management Actions in Wek'èezhì* with the exception that the bull harvest was increased from 80% to 85%.

Another fourteen recommendations addressed the scientific and Tłıchǫ knowledge monitoring methods to be used on the three caribou herds and wolf populations. The report recommended monitoring wolf populations and health, using surveys and carcass collection. In terms of caribou monitoring, the recommended scientific methods included surveys, radio collars and tissue samples taken from harvested individuals. Recommended Tłıchǫ knowledge methods included using the information in oral narratives and observations of caribou by Tłıchǫ harvesters, and having Tłıchǫ knowledge researchers document caribou harvests and habitat. Tłıchǫ knowledge researchers were to be Tłıchǫ citizens who could utilize Tłıchǫ protocols and values in their research. As part of their recommendations, the WRRB established the *Tłıchǫ Research and Monitoring Program: Using Tłıchǫ Knowledge to Monitor Barren-ground Caribou* to support and assist the Tłıchǫ in providing caribou monitoring using Tłıchǫ knowledge. Tłıchǫ knowledge researchers will document observations during harvests and listen to stories from both elders and harvesters, noting particularly harvest locations and environment, caribou behaviour, caribou condition and wolf numbers. A database will be continuously updated, shared and reviewed with communities; ongoing training for Tłıchǫ knowledge researchers regarding terminology, laws and the caribou management plan will be implemented.

The WRRB also recommended that ENR and Indian and Northern Affairs Canada (INAC) monitor changes in the landscape and its impacts on the caribou habitat, including changes resulting from fire, industrial development, and exploration. Finally, fifteen recommendations were concerned with implementing programs to increase community participation in management initiatives, public education and the health of caribou.

Final Decision on Management Plan

On January 13, 2011, ENR and the Tłıchǵ Government responded to the WRRB sixty recommendations with their final management actions for the Bathurst, Bluenose-East, and Ahaik caribou herds. They reviewed the WRRB recommendations, rejecting, accepting, or accepting with modification (identified in their text as “varied”) each one. They delivered their final proposed management actions to the WRRB in the form of a table with little explanation of the reasoning behind their decisions (see Appendix 4).

Of the sixty recommendations provided by the WRRB, thirty-five were accepted, twenty-two were varied and three were rejected. The three rejected recommendations included not providing incentives for harvesters to access the Bluenose-East herd or the Ahiak herd. Another rejected recommendation suggested the Tłıchǵ Government work towards a land use plan for Wek’èezhì. This was rejected as in accordance with the Tłıchǵ Agreement, such a project would fall within the jurisdiction of the federal government or the GNWT. The ENR and Tłıchǵ Government varied the 2010 WRRB recommendations relating to how long term management and implementation plans would be would be addressed, recommendations altering previous commitments, and the need for further research.

The preamble to recommendations 29-39 regarding caribou monitoring and wolf harvest is particularly notable. Both scientific and Tłıchǫ knowledge monitoring initiatives were recommended in the WRRB document. However, ENR and Tłıchǫ Government response discussed only the scientific methods, as the logistics of implementing programs based on Tłıchǫ knowledge still needed to be negotiated before any initiatives could be undertaken. The *Tłıchǫ Knowledge Research and Monitoring Program* would be implemented to provide necessary Tłıchǫ knowledge input into the co-management process and “ensure that both monitoring and realistic harvesting numbers can be recorded in a culturally appropriate manner.”²³⁵ The goals of this program are to ensure Tłıchǫ knowledge and perspectives are used in decision making, that the Tłıchǫ Government and WRRB is properly informed on Tłıchǫ knowledge so they can make informed decisions, and that Tłıchǫ knowledge is strengthened through oral narratives and land-based activities and passed on to younger generations.²³⁶ The ENR and Tłıchǫ Government’s response suggested that they needed eight months before implementing any such program, provided that a realistic budget could be created in that timeframe, which would include resources for the training of Tłıchǫ researchers as well as the purchase of offices and equipment.

Listening To These Voices

I would argue, based on the input given at the 2010 hearings by both ENR and the Tłıchǫ, that all are who presented there were genuinely committed to ensuring the future

²³⁵ WRRB, 2010, Report on a Public Hearing, Appendix F, 5

²³⁶ WRRB, 2010, Report on a Public Hearing, Appendix F, 6

of the Bathurst caribou herd and to using a process of co-management. Clearly, however, there are tensions in understanding how best to accomplish this goal.

While all the voices present at the public hearings are important, in my next chapter I focus on the Tłıchq perspective. I choose this focus because co-management is too often discussed from the state's perspective. This case study gives insight into how the co-management structure benefits the Tłıchq. Ensuring the health of caribou herds is fundamental for Tłıchq and wildlife co-management is built into the Tłıchq Agreement. I explore how the interests of the Tłıchq are captured throughout the management process from the conservation emergency, the management proposals, the public hearings, the WRRB recommendations, and lastly the approved management actions. I ask the question to what degree the approved management actions on the Bathurst caribou aligned with the Tłıchq's interests.

Chapter 4 – Co-management Decision Making

To what extent was the Tłıchǵ voice captured in the process of co-managing the Bathurst caribou herd and, more importantly, in the 2011 Joint Response to *Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst Caribou Herd*, approved by the WRRB? This is the question that lies at the heart of my thesis. I examine the voices of ENR and Tłıchǵ in the process of creating this 2011 final caribou management decisions, based on what was expressed in the 2009 *Proposal to Wek'èezhì Renewable Resource Board Joint Proposal on Caribou Management Actions in Wek'èezhì* and the WRRB 2010 public hearings. I reflect on how these voices are expressed in the 2010 *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì*, the WRRB 2010 recommendations, and the Tłıchǵ Government and January 13, 2011 final management actions based on the WRRB 2010 recommendations submitted to the WRRB (see Table 1). While each of these documents discuss the Bathurst, the Ahiak and Bluenose-East caribou herds, I focus exclusively on the Bathurst caribou herd as it is the focus of this joint caribou management proposal. Tłıchǵ harvest caribou predominantly from the Bathurst caribou herd, and the Tłıchǵ Agreement required the parties to create a management plan for the Bathurst herd within three years of the agreement's implementation (12.11.2 – 12.11.3).

The 2009 Joint Proposal on Caribou Management Actions in Wek'èezhì

The 2009 *Joint Proposal on Caribou Management Actions in Wek'èezhì*, submitted to the WRRB by ENR and the Tłıchǵ Government, proposed management actions intended to increase and monitor the Bathurst caribou's population. This document was the first step towards the approved management actions on the management and harvest of Bathurst

caribou. It clearly delineates the Tłıchǫ position from that of ENR. The Tłıchǫ and ENR proposed different actions for harvesting caribou (see Appendix 1 where the Tłıchǫ Government's proposed actions are highlighted). The first three proposed actions in the 2009 *Joint Proposal on Caribou Management Actions in Wek'èezhì* were agreed upon by both ENR and the Tłıchǫ Government but were not discussed at the WRRB 2010 public hearing. The proposed actions in the 2009 joint caribou management proposal included the elimination of commercial meat tags, outfitting meat tags and resident harvester tags.^{xiii} This strategy is in line with the Tłıchǫ Agreement, which gives priority to Tłıchǫ citizens and other aboriginal peoples over other groups (12.6.5, 12.6.6, 12.7.1).

All Tłıchǫ share a desire for a stable and healthy caribou population.²³⁷ Some Tłıchǫ think caribou populations are actually declining, while others believe the caribou are simply moving to other areas, due in part to an increased lack of respect towards caribou by Tłıchǫ and non-Tłıchǫ people.²³⁸ Two key points of disagreement in the 2009 joint caribou management proposal between ENR and the Tłıchǫ Government were the establishment of harvest limits and the use of collars to monitor caribou movements.²³⁹ The Tłıchǫ Government proposed that no harvest limit should be implemented for Tłıchǫ citizens, which was in accordance with what was stated at the public hearings.²⁴⁰ The proposed harvest limits aim was to harvest predominantly bulls and fewer cows. The use of aerial surveys and radio collars to monitor caribou was also contrary to the Tłıchǫ position.

²³⁷ WRRB, 2010, Day 2, Grand Chief Joe Rabesca, 17-18; WRRB, 2010, Day 2, Elizabeth Mitchel, 88; WRRB, 2010, Day 3, Mary Adele Tatchia, 24; WRRB, 2010, Day 2, Elder Peter Beaverho, 182; WRRB, 2010, Day 4, Elder Dora Migwi, 209-2010

²³⁸ WRRB, 2010, Day 3, Peter Taktagon, 206; WRRB, 2010, Day 3, Chief Alfonz Nitsiza, 42-44

²³⁹ ENR and Tłıchǫ Government, 2009, 5-6

²⁴⁰ WRRB, 2010, Day 3, Leon Lafferty, 25; WRRB, 2010, Day 4, Celine Mackenzie-Uukson, 224-225; WRRB, 2010, Day 4, George Mackenzie, 249; WRRB, 2010, Day 4, Charlie Jim Nitsiza, 261

Research on the Bathurst caribou herd is ongoing, these proposed actions by ENR and the Tłıchǵ Government will be updated periodically when new information warrants a change in management actions, which will be discussed in Chapter 5.

Public Hearings

The WRRB 2010 public hearings offered all parties with the opportunity to provide information for consideration on important issues regarding caribou harvesting and management. Tłıchǵ elders, legal counsel, advisors, community members and chiefs, some of whom were members of the Tłıchǵ Assembly at the time, all made presentations.^{xiv} The Tłıchǵ perspective was also documented in the supplemental materials submitted to the WRRB regarding Tłıchǵ worldview, Tłıchǵ knowledge and caribou. Both the presentations and these supplemental documents discussed a wide variety of topics which I distilled to the five themes: cooperation between governments and Tłıchǵ; Tłıchǵ responsibilities for the land and each other; the importance of elders' knowledge and experience; the need to secure a better future for both Tłıchǵ and caribou; and issues that had not been addressed in the co-management process, such as the impact of pollution, climate change and forest fires on both caribou and people.

ENR presentations came from the Assistant Deputy Minister of Operations, scientists, wildlife managers, legal counsel and an independent Alberta Research Counsel (ARC) contractor. It is important to note that there was little overlap between the themes discussed by ENR and the Tłıchǵ Government. ENR focused on scientific and technical aspects of caribou management but also touched on cooperation, emphasizing cooperation between governments, communities, university researchers and aboriginal peoples.

Although ENR and Tłıchǵ both mentioned the importance of cooperation, they each took a different approach. ENR emphasized cooperation between government agencies, researchers and other scientific organizations. The Tłıchǵ emphasized cooperation between the Tłıchǵ Government, ENR, Tłıchǵ elders and their communities. Grand Chief Joe Rabesca said “We need to support the Board. The ENR, Tlıcho Government, and all the Intervenors, all need to work together.”²⁴¹ Tłıchǵ said that working together was an integral part of the Tłıchǵ Agreement and that the “Tłıchǵ Agreement has to be respected.”²⁴² They also emphasized the use of both scientific and Tłıchǵ knowledge as a means of understanding caribou and making appropriate management decisions. ENR did briefly mention that they supported Tłıchǵ knowledge projects on caribou, yet their focus clearly privileged scientific knowledge.²⁴³ ENR positioned Tłıchǵ knowledge as a secondary means of understanding relative to scientific data. For example, it suggested that historical changes in herd size could be measured utilizing Tłıchǵ stories of hunting success, in conjunction with the spruce-root scars and population surveys available from the last forty years.²⁴⁴ ENR may not have discussed Tłıchǵ knowledge because they did not understand it with enough depth to use it in their presentations. However, they could have discussed how ENR can come to understand and implement Tłıchǵ knowledge in wildlife management.

The Tłıchǵ, were clear that the standard scientific practices of tracking caribou through aerial surveys and radio collars were detrimental to the caribou’s physical and

²⁴¹ WRRB, 2010, Day 2, Grand Chief Joe Rabesca, 22

²⁴² WRRB, 2010, Day 4, Eddie Erasmus, 142

²⁴³ WRRB, 2010, Day 1, Jan Adamczewski, 29; WRRB, 2010, Day 1, Bruno Croft, 165

²⁴⁴ WRRB, 2010, Day 1, Jan Adamczewski, 29

mental health.²⁴⁵ Many Tłıchq were emotional about the harm such practices have on caribou, including Elder Joe Champagne who warned that “if they have the collars on, they do die.”²⁴⁶ The Tłıchq argued that these practices stress caribou as scientists do not approach caribou properly and physically harm them by gathering tissue samples, outfitting them with the radio collars, and using needles to administer tranquilizers.²⁴⁷ Radio collars have been known to cause hair loss on the caribou’s neck due to friction, increase the risk of frostbite, interfere with feeding and can cause ice to build up on the collar itself, further hindering caribou movement. Tłıchq pointed out that the impacts of such practices was evident not only in declining herd size but also in the animals’ changing physical composition.

Limiting the Tłıchq caribou harvest was also a topic of concern at the public hearing. Elder Margaret Sachia from Wekweetì summarized Tłıchq reaction to the harvest ban: “We survive by the animals. And because when we heard that there was restriction on hunting caribou we were all saddened.”²⁴⁸ Tłıchq presenters expressed throughout the hearings a desire to be responsible for wildlife management on Tłıchq Lands, to be respectful of caribou and to secure the future of subsequent Tłıchq generations. These sentiments reinforced the Tłıchq Government’s proposed actions in the 2009 management proposal.

The differences in the presentation format and time allocation of the Tłıchq Government and ENR during the 2010 WRRB public hearings are an indicator of which

²⁴⁵ WRRB, 2010, Day 3, Leon Lafferty, 252; WRRB, 2010, Day 4, Elder Phillip Whane, 230

²⁴⁶ WRRB, 2010, Day 4, Elder Joe Champagne, 207

²⁴⁷ WRRB, 2010, Day 3, Leon Lafferty, 252; WRRB, 2010, Day 4, Elder Phillip Whane, 230; WRRB, 2010, Day 4, Joe Nedin, 256

²⁴⁸ WRRB, 2010, Day 2, Elder Margaret Sachia, 198

group was privileged. ENR was allotted three presentation slots totalling two hours with an additional three hour question period. Presentations by the Tłıchǵ Government totalled four hours with a one hour question period. Speakers at the general public session, which were primarily Tłıchǵ, were allocated no more than eight minutes each. As Tłıchǵ knowledge is passed down through stories, eight minutes was not sufficient for each speaker to fully convey their knowledge of caribou and his or her perspective on caribou management. Elder Louie Wedawin acknowledged this disparity saying “Yes, you have given us some limited time to speak to you. We’re very pleased with this. But there are so many things they were talking about.”²⁴⁹ ENR and the Tłıchǵ Government had a joint question period after the completion of the 2010 Revised Joint Proposal on Caribou Management Actions in Wek’èezhì (see Appendix 6 for the breakdown of speakers’ time allocations). Ironically, more time was allocated for Tłıchǵ speakers, as the number of Tłıchǵ speakers was significantly greater than ENR speakers. However, the speakers at the general public session were not given a question period to further explain their stories or to discuss how to apply their knowledge in a management plan. This omission was significant because many of the Euro-Canadians involved did not understand how to interpret or apply the knowledge contained in the stories.²⁵⁰

2010 Revised Joint Proposal

The *Revised Joint Proposal on Caribou Management Actions in Wek’èezhì* was submitted to the WRRB on May 31, 2010, during the adjournment in the public hearings (see Appendix 2). The proposed caribou monitoring and harvesting actions were presented

²⁴⁹ WRRB, 2010, Day 4, Elder Louie Wedawin, 131

²⁵⁰ White, 2006; Berkes, 2009; Ellis, 2005; Zoe 2012.

jointly by ENR and the Tłıchǵ Government, unlike the initial 2009 joint proposal.

Regardless, I argue that the 2010 *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì* continued to be more representative of the ENR interests than those of the Tłıchǵ, particularly with respect to the restricted caribou harvest, caribou monitoring and the intentional increase in wolf harvesting as a means of strengthening caribou herds.

The 2010 *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì* differed somewhat from what had been proposed actions by both ENR and Tłıchǵ's in the 2009 caribou management actions.²⁵¹ In the 2010 document the Tłıchǵ had conceded significantly more than ENR, as there was to be a significant limit to their harvests. ENR conceded only that some cows could be also harvested. The proposed monitoring actions for the Bathurst caribou herd more closely resembled ENR position as it included caribou surveys to determine population dynamics and monitoring wolf harvests, harvesting locations and caribou condition.²⁵² There is no mention of the importance of Tłıchǵ knowledge or Tłıchǵ stories, which were central to the Tłıchǵ presentations. The 2010 proposal did mention cooperation with harvesters regarding their kill sites, caribou condition and wolf monitoring, but only as they would be locations and mechanisms for data gathering for scientists.²⁵³

Tłıchǵ speakers did not mention harvesting wolves to reduce the impact of predation on caribou during the proceedings. However, extrapolating from what the Tłıchǵ said at the WRRB 2010 public hearings and in the supporting documents about Tłıchǵ

²⁵¹ ENR and Tłıchǵ Government, 2009, 6-7

²⁵² ENR and Tłıchǵ Government, 2010, 19-21

²⁵³ ENR and Tłıchǵ Government, 2010, 19

worldview, respecting relationships and not harvesting more caribou than what is necessary, it is evident that such management practices are contrary to Tłıchq views.²⁵⁴ ENR position was to increase Bathurst caribou populations primarily by reducing mortality rates from predation and harvesting.²⁵⁵ Therefore, eliminating wolves, a known predator to caribou would not be in line with Tłıchq views.

The 2010 revised management proposal by ENR and the Tłıchq Government contains many proposed management actions similar to those in the initial 2009 joint management proposal. The ENR position remained dominant in the 2010 revised joint management proposal. The Tłıchq voice, I would argue, was not heard nor fully represented in the 2010 revised joint management proposal.

WRRB Recommendations and Management Actions by ENR and Tłıchq Government Approved by the WRRB

On October 8, 2010 the WRRB's 2010 *Report on a Public Hearing Held by the Wek'èezhì Renewable Resources Board & Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst Caribou Herd* (Appendix 3) was submitted to ENR and Tłıchq Government for review. ENR and Tłıchq Government response to these recommendations was returned to the WRRB in October 8, 2011 (Appendix 4). I would suggest that many the issues of primary concern to the Tłıchq were not given much consideration in the 2011 documents.

²⁵⁴ Tłıchq Government, 2008, Jimmy Nitsiza, 24; WRRB, 2010, Day 2, Peter Beaverho, 182; WRRB, 2010, Day 3, Walter Bayha, 222

²⁵⁵ WRRB, 2010, Day 1, Bruno Croft, 43-45; WRRB, 2010, Day 1, Susan Fleck, 58

Harvesting rights for the Bathurst caribou herd are a vital issue for Tłıchǵ, as they predominantly harvest from this herd. The Tłıchǵ Agreement ensures Tłıchǵ citizens' access to caribou and states: "the Tłıchǵ First Nation has the right to harvest all species of wildlife [...] throughout Mǵwhì Gogha Dè Nǵtlèè all times of the year."²⁵⁶ Tłıchǵ require access to caribou for cultural, physical and spiritual reasons, and desire to make their own decisions about caribou management.²⁵⁷ The WRRB can set harvest limits on total allowable harvest if necessary for conservation. Tłıchǵ recognize the need to ensure caribou survival; Chief Alfonz Nitsiza of Whatì made the point that having the right to harvest is irrelevant if the caribou population becomes extinct. He cautioned that as caribou are vital to the future of many Dene, including Tłıchǵ, it may be necessary to temporarily forgo these rights until caribou populations increase.²⁵⁸ In coherence with his comments and ENR recommendations in both the initial 2009 joint management proposal and the revised 2010 joint management proposal, the WRRB recommended harvest limits for the Bathurst caribou, restricting aboriginal harvests. However, the Tłıchǵ's recommendation to not restrict either the bull or cow harvest from the Bathurst caribou herd in the initial 2009 joint management proposal was not mentioned in the revised 2010 joint management proposal.²⁵⁹ The final 2011 management actions restrict Tłıchǵ citizens to a harvest of only 150 Bathurst animals, thereby restricting an important food source and vital relationship, something which will dramatically impact Tłıchǵ wellbeing.²⁶⁰

²⁵⁶ Tłıchǵ Agreement, 2005, 105

²⁵⁷ WRRB, 2010, Day 2, John B. Zoe, 68; WRRB, 2010, Day 2, James Lafferty, 215-216; WRRB, 2010, Day 2, Sam Simpson, 240-241

²⁵⁸ WRRB, 2010, Day 2, Chief Alfonz Nitsiza, 42-43

²⁵⁹ ENR and Tłıchǵ Government, 2009, 6-7

²⁶⁰ ENR and Tłıchǵ Government, 2011, 2

The WRRB recommendations and the 2011 final management actions taken by ENR and the Tłıchǵ Government require an extensive list of scientific monitoring practices to be used to monitor the demographics and health of the Bathurst caribou herd. The WRRB recommendations include only limited detail about a proposed Tłıchǵ knowledge research program to monitor the health of the Bathurst caribou herd using methods based on Tłıchǵ knowledge while always being respectful of caribou. Using both scientific and Tłıchǵ knowledge would not be problematic to Tłıchǵ, as they expressed a strong desire to use and understand their traditional knowledge with what is learned from the scientific monitoring practices to strengthen the caribou herd. However, in the 2010 WRRB public hearings Tłıchǵ speakers indicated that they would object to elements that were ultimately present in the 2011 final management actions as they were opposed to proposed scientific monitoring practices and felt their knowledge was overlooked. The WRRB recommended the *Tłıchǵ Knowledge Research and Monitoring Program* as a special project to be undertaken by the Tłıchǵ Government. This project was to be guided by Tłıchǵ philosophy and based on the knowledge of Tłıchǵ elders and harvesters as it sought to record Tłıchǵ knowledge to contribute to future decisions on caribou harvesting and management.²⁶¹ It is important that the Tłıchǵ lead their own harvesting and monitoring initiatives because of the increasing impacts of development on Tłıchǵ Lands, the environment and caribou. This project ensured that caribou monitoring and harvesting was done in a culturally appropriate manner, recognizing the importance of Tłıchǵ knowledge and their relationship to caribou and was detailed as one of the WRRB's 2010 recommendations outlined in the 2010 *Report on a Public Hearing Held by the Wek'èezhì Renewable Resources*

²⁶¹ WRRB, 2010, Report on a Public Hearing, Appendix F, 15-20

Board. However, ENR and Tłıchǫ Government's response to these 2010 recommendations was overshadowed by the detailed development of ENR scientific monitoring plan, privileging scientific knowledge over Tłıchǫ knowledge. Such privileging of scientific knowledge was noted by various Tłıchǫ speakers throughout the public hearing including Cree Jonus Sangris who stated that it "seems that they have taken upon themselves [to] make decisions based on information from biologists, doctors. What about the Elders?"²⁶²

The WRRB 2010 recommendations and the subsequent 2011 final management actions by ENR and the Tłıchǫ Government primarily discussed harvest limits and management practices. These 2011 final management actions, while officially made jointly by ENR and the Tłıchǫ Government, consistently favored ENR perspectives and understanding of caribou over the Tłıchǫ interests as described in the 2009 initial joint management proposal and the WRRB 2010 public hearings.

Conclusion

The Tłıchǫ's voice was captured when they expressed their interests and perspective in the initial 2009 joint management proposal and the WRRB public hearing, including the supplemental documents relating to Tłıchǫ knowledge, their worldview and relationship with caribou. Although their voice was well established throughout the process of managing the Bathurst caribou herd, it was not adequately heard and represented in the 2011 final management actions. This silencing indicates that the Tłıchǫ perspective was not being adequately considered during the decision making process. In chapter 5 I discuss how this co-management process fits into a wider context of the

²⁶² WRRB, 2010, Day 4, Jonus Sangris, 150; WRRB, 2010, Day 3, Leon Lafferty, 249-252; WRRB, 2010, Day 4, Jonas Sangris, 150; WRRB, 2010, Day 4, Celine Mackenzie-Vukson, 221

treatment and silencing of aboriginal people in Canada, who are attempting to reclaim their identity.

Chapter 5 – Reclaiming Aboriginal Identity and Autonomy

Co-management is a widely used management model in northern Canada. My case study examined the development of management actions for the Bathurst caribou herd using a co-management process as an example of how wildlife management projects are carried out in the Northwest Territories. It was overseen and approved by the WRRB which is responsible for managing wildlife, forests, plants, protected areas, and commercial activities relating to wildlife as well as determining total allowable harvests of wildlife, forests and plants in Wek'èezhì (12.4.1).²⁶³ Intended to increase the size of the Bathurst Caribou herd the joint response to *Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst Caribou Herd* was reviewed and approved at a WRRB Board meeting in 2011. In this thesis, I discussed the history of resource management and state relations explained co-management as a concept and discussed Tłıchǫ and their relationship to caribou. I concluded that while the Tłıchǫ perspective on caribou and caribou management was established throughout the process of managing the Bathurst caribou herd, it was not adequately heard and represented in the 2011 final management actions. In conclusion, I reflect on how this case study fits into the broader context of how aboriginal people, their culture and knowledge, are treated in Canada.

Concern about the Bathurst caribou continues and research on caribou populations is ongoing. This co-management plan is used as the foundation to decision-makers and as new information surfaces, the harvest regulations and management plan is adjusted. Building on the 2011 final management actions, ENR and Tłıchǫ Government submitted

²⁶³ Tłıchǫ Agreement, 2005, 119

updated management actions to the WRRB in July 2014. In January 2015 the WRRB approved ENR request to add fifty radio collars to the Bathurst caribou herd to monitor migration patterns. The WRRB also approved an ENR application to conduct spring and fall surveys for calf survival and sex ratios. A working group is working on Bathurst caribou range planning to understand the changing environment caribou live in and propose recommendations to the WRRB by the spring of 2016. Although Tłıchǫ knowledge projects are also ongoing, it is evident from these actions that Tłıchǫ concern regarding radio collars and aerial surveys are still not being addressed. ENR, Tłıchǫ Government and the WRRB continue to work together towards the common goal of ensuring the continuation of the Bathurst caribou herd.

For Tłıchǫ, maintaining relationships between each other, the land and the environment is necessary for survival. Their relationship with caribou is particularly significant here. Reciprocal relationships are vital as these animals are the basis of their lifestyle, cultural traditions and values. Tłıchǫ have been harvesting caribou respectfully and responsibly since time immemorial. Elders and harvesters tell stories to the community to share Tłıchǫ knowledge and laws. These stories communicate harvesting techniques and proper behaviours concerning caribou. They also demonstrate the roles and the responsibilities the Tłıchǫ have towards the land, their communities and all other beings. Following these practices, it is obvious that Tłıchǫ, and other Dene peoples, have been and remain capable of sustainably harvesting caribou. However, since the late 1700s, non-Tłıchǫ have been influencing how Tłıchǫ harvest caribou as I have discussed in previous chapters.

Sadly, deception and coercion has been a common theme in Canada's history of aboriginal relations. Recently, the Truth and Reconciliation Commission of Canada (TRC) brought this legacy into the public consciousness. The work of the TRC exposed the truth and acknowledged the injustices experienced by aboriginal peoples as a result of the residential school experience. The final report of the TRC argued strongly that a new relationship between aboriginal peoples, the federal government and all Canadians is needed. Aboriginal history and the history of their relationship with the Canadian Government is essential to the Canadian story. The consequences of residential schools permeate all aspects of aboriginal life. Mabel Brown from the Northwest Territories fondly remembered living on the land and the satisfaction of eating country foods.²⁶⁴ Residential schools removed aboriginal children from their communities and the land, disconnecting them from their culture. Ellen Smith of Fort McPhearson, NWT told the commission how residential school "made it impossible for her to fit back into her come community" because she was not able to learn the skills and language necessarily to live on the land. Without these skills, she wasn't able to participate in many activities that reinforce the relationship between Dene and caribou such as cutting up caribou.²⁶⁵ This disconnect created a legacy that aboriginal people are still trying to remedy, including creating traditional knowledge projects to reconnect to their own knowledges and communities. Too few Canadians know the history of aboriginal treatment by not only the federal government but Canada's dominant society as a whole, and recognize the rights of aboriginal people, reinforcing racist attitudes towards aboriginal peoples.²⁶⁶ The work of

²⁶⁴ Truth and Reconciliation Commission of Canada, *Survivors Speak*, 2015, 6

²⁶⁵ Truth and Reconciliation Commission of Canada, *Survivors Speak*, 2015, 107

²⁶⁶ 114

TRC and the consciousness that it raised has the capacity to begin the process of repairing the damaged relationship between aboriginal and non-aboriginal Canadians. It opened lines of communication and began the process of re-shaping how Canadian history is taught, steps that have the capacity to dramatically and positively change the future of aboriginal people in Canada.

Such changes however not only began with the work of the TRC. Through legal, judicial and negotiated struggles and victories Canadian aboriginal people today have been reclaiming their identities and regaining autonomy over their lives. Tłıchq regained some control over their lives and land when they signed the Tłıchq Agreement which ensured their roles in the development of such things as co-management agreements on their lands. Although not perfect, the process of co-management allows aboriginal people to participate in a process from which they had previously been excluded. Tłıchq approach co-management with a respect of all forms of knowledge including western scientific knowledge. They merely desire for such a respect to flow both ways.

Co-management clearly has many benefits including empowering aboriginal people by giving them a platform to share their knowledge and participate in forming wildlife management actions usually handled by the federal and territorial governments. As Sahtu Dene, Walter Bayha argued in the 2010 WRRB public hearings, increasing the use of traditional knowledge and stories in wildlife management strategies would help preserve the Dene relationship to caribou and ideally ultimately shift decision-making for such management to their communities.²⁶⁷ However, I would argue that co-management

²⁶⁷ WRRB, 2010, Day 3, Bayha, 228

principles are fundamentally embedded within Euro-Canadian perspectives and structures, thus limiting aboriginal partners to be able to fully engage in these undertakings.

At the 2010 WRRB public hearings, Grand Chief Joe Rabesca from Behchokò stated that “on our land and we are responsible.”²⁶⁸ Thus the ideal management strategy would be, for the Tłıchǫ to manage wildlife on Mǫwhì Gogha Dè Nı̀tlèè, in a manner they have since time immemorial. At this point in time however, I do not predict that the federal government will voluntarily return complete authority over wildlife management to aboriginal nations in Canada. What would it take for the Tłıchǫ and other aboriginal people to be allowed to regain full authority over wildlife management on their lands? If such a thing were to happen it would demonstrate an acceptance of the central and ongoing role of aboriginal people in the Canadian story, the true value of their traditional knowledge and a full recognition of aboriginal rights. To achieve this, a dramatic shift of all levels of government and the Canadian public at large would have to happen. One can only hope that the recent revelations and the powerful clarion call in the Truth and Reconciliation Commission of Canada final report might create an environment where such a change might finally begin.

²⁶⁸ WRRB, 2010, Day 2, Grand Chief Joe Rabesca, 28

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ⁱ This document was not given a formal title in the document itself but was referred to as the “joint response to the Board’s Reasons for Decisions Related to a Joint Proposal for the Management of the Bathurst Caribou Herd” in the WRRB’s acknowledgement of ENR and Tłıchǵ Government’s submission on January 13, 2011. In this paper I will refer to this document as the 2011 final management actions.

ⁱⁱ Fort Rae was located 8km from the current community of Rae. In 2005 Rae and its sister community Edzo was formally renamed Behchokǵ, as it had been known in the Tłıchǵ language.

ⁱⁱⁱ Indian Agent is a position mandated by the Indian Act and represented the federal government when implementing federal policies. Each Agent acted in a distinct district and held authority over their jurisdictions. Treaties would be discussed between these Indian Agents and the aboriginal peoples within their jurisdiction.

^{iv} I cite the Tłıchǵ Agreement in brackets indicating the section.

^v I cite the Tłıchǵ Agreement Implementation Plan in brackets indicating the section.

^{vi} These intervenors are important not only because they spoke during the hearing but many are significant contributors to the economy, such as mining and tourism companies. This latter role means their views carry power in many governmental decisions. Each of these intervenors was given time to speak during the hearing including the majority of Day 3, Day 4 and Day 5 excluding the general public session. While I choose to focus on the Tłıchǵ citizens as opposed to these intervenors, they still have significant voices within the co-management of the Bathurst caribou herd.

^{vii} The provinces had already gained this responsibility in 1930 through the Natural Resources Transfer Agreement.

^{viii} Dene communities asked for a similar project to be created for them but it was never fulfilled.

^{ix} The Mackenzie Valley Environmental Impact Review Board conducts environmental assessments on proposed development projects. The Board makes recommendations to the federal Minister of Aboriginal Affairs and Northern Development and other responsible ministers on how best to protect the environment and the people in the Mackenzie Valley.

^x Both residents and non-residents are Canadian citizens or landed immigrants, but residents must live in the NWT for at least two years and non-residents live outside of the NWT. Non-resident aliens are people who live outside of Canada

^{xi} Radio collars are placed around a caribou’s neck and are used to study caribou migration patterns. A helicopter is used to locate a herd and a net is fired from the helicopter to catch one caribou, usually a cow. The collaring process takes seven minutes and no drugs are used on the caribou so once it is released it can quickly rejoin the herd. The collars are programmed to fall off the animal at a specific time and emit a satellite signal so researchers can collect the collar and its data.

^{xii} Harvest targets are suggested limits to the caribou harvest. This is contrasted to Total Allowable Harvest, which is a strict limit to the caribou harvest, and which may be implemented by the WRRB if the harvest target approach is not successful.

^{xiii} In the NWT, hunting licences and wildlife tags are required to hunt big game such as caribou. There are different types of harvest tags depending upon the residence of the harvester and the species of animal harvested. These tags allow the GNWT to manage the number of big game animals harvested each year.

^{xiv} Tłchq Chiefs present at the WRRB 2010 public hearing and on the Tłchq Assembly include Alphonz Apples, Chief Charlie Football, Chief Clifford Daniels, Eddie Erasmus, Chief Alphonz Nitsiza and Chief Edward Chocolate.

Proposal to Wek'èezhìi Renewable Resource Board

Joint Proposal on Caribou Management Actions in Wek'èezhìi

Submitted by:

Tłıchǫ Government
Environment and Natural Resources, GNWT

Issue

The Bathurst caribou herd has declined rapidly in the last 3 years. As a result, the Tłıchǫ Government and the Government of the Northwest Territories (GNWT) Department of Environment and Natural Resources (ENR) are submitting this joint proposal on caribou management actions to the Wek'èezhìi Renewable Resources Board. Actions are proposed for the Bathurst herd and its western and eastern neighbours, the Bluenose East and Ahiak herds.

Background

The status of the barren-ground caribou herds within Wek'èezhìi (Tâîchô Land Claim area) is briefly reviewed below.

Bathurst Herd

In June of 2009, ENR staff conducted a Bathurst calving ground photo census and final results indicate that the Bathurst herd is still declining in numbers and that recovery options need to be considered immediately. The final number of breeding females on the calving ground is now $16,600 \pm 4,450$, down from $55,600 \pm 8,800$ in 2006. Overall herd size is estimated at $31,900 \pm 10,900$ in 2009, compared to $128,047 \pm 27,343$ in 2006.

Bluenose East Herd

A photo census was attempted in July of 2009 on the post-calving range of the Bluenose East caribou in order to obtain a new population estimate. The survey was not successful due to unfavorable weather and will have to be conducted again in July of 2010.

The herd was properly photo censused in 2005 and 2006 and results revealed that this herd had declined substantially since 2000. The 2000 estimate was 119,600, compared to 66,700 in 2006.

Despite the lack of success in conducting the photo census in 2009, biologists reported seeing fewer animals on the post calving ground than observed in 2006. This is a concern and suggests caution in evaluating management options.

Ahiak Herd.

This herd was never properly photo censused although the population was estimated at approximately 200,000 animals in 1996 based on an extrapolation of a systematic reconnaissance survey.

From 2006 to 2009, ENR staff flew more reconnaissance surveys (transect lines spaced at 10 km intervals) on the calving range of the Ahiak herd. Preliminary trend analysis conducted by a statistician (John Boulanger) suggests that this herd is also declining. Numbers of cows on the Ahiak calving ground in 2009 were reduced 60% from cow numbers in 2006,

A calving ground photo census is planned for June of 2010 as a shared effort between GNWT and the Nunavut government.

On July 31, 2009, the Wek'èezhì Renewable Resource Board (WRRB) sent a letter to the Tłıchǵ Government and ENR encouraging both governments to engage in a new round of discussions to generate a comprehensive management proposal for barren-ground caribou.

Following this request, the Tłıchǵ Government formed a caribou working group to meet with ENR staff to develop a document on recovery options for the Bathurst herd and neighboring herds. One of the requirements of the Tłıchǵ process was to hold a regional workshop in Gamètì to get input from elders on the draft joint proposal prior to the Tłıchǵ assembly to make a final decision.

Monitoring and recovery options suggested in this document reflect the new status of the Bathurst and other adjacent herds and are the results of consultation between the two governments.

PROPOSAL

The overall approach in the Tłıchǵ Government and ENR's joint proposal on the Bathurst caribou herd is to develop a recovery plan for the next three years, followed by a new Bathurst population survey and a revised management plan.

The goals are:

- (1) to develop actions that will allow for the most rapid recovery of the herd,
- (2) to identify monitoring of the herd's welfare and the effectiveness of recovery actions.

The Tłıchǵ Government and ENR propose management and monitoring actions for the Bluenose East, Bathurst and Ahiak herds, to assess trend and other biological factors, and to help the Bathurst herd to recover (Appendices A and B).

The proposed actions to monitor trends of the three herds are: estimate of number of breeding females; calf survival in the spring and the fall; sex ratio in the fall; spring and fall condition; pregnancy rates; and birth rates; mandatory harvest reporting; monitoring of insect abundance; and wolf condition and productivity; and finally, how winter range status affects movement, distribution and condition of caribou. These monitoring actions are identified in the Bathurst Caribou Management Plan when herd numbers are low.

The proposal recommends that initiatives to help caribou numbers to recover should also include education and compliance, hunter education and best hunting practices, and proper monitoring and assessment of cumulative effects of natural and non-natural stressors such as mining and exploration and road access. Protection for all calving grounds will have to be maintained to ensure that no exploration or mining activities take place during the calving and post-calving periods. The Inuvik caribou summit in 2007 culminated in a resolution passed by all participants to protect all caribou calving grounds in NWT and Nunavut. Consultation and collaboration with the Nunavut Government and co-management groups will be needed to ensure that proper protection is maintained for each calving ground, as the Bluenose East, Bathurst and Ahiak calving grounds are all in Nunavut.

Low numbers of breeding females in the Bathurst herd warrant immediate management action (no more hunting of Bathurst caribou females) starting as soon as possible until 2012 when the next calving ground census is scheduled to take place. Management actions will then be reassessed following the new population estimate.

To minimize hardship on Aboriginal hunters and assist the Bathurst herd to recover, ENR's preferred option is to allow a bull harvest only on adjacent herds and a limited bull harvest on the Bathurst herd regulated by a tag allocation. If results of future fall composition surveys of the Bathurst herd or adjacent herds do not reveal a healthy sex ratio in the herds, then further restrictions may be put in place.

A careful and limited harvest of caribou females may also be considered on adjacent herds (Bluenose East and Ahiak) until a photo census and new population estimates are obtained for those 2 herds which are scheduled for the summer of 2010.

A limited low number of breeding females may be allowed to be harvested from the Bathurst herd in the winter months for scientific purposes (health and condition and assessment of pregnancy rate). Meat will be distributed to Aboriginal elders. The numbers to be collected are to be discussed further with Tłjchq Aboriginal hunters, members of the WRRB and ENR biologists.

No harvest of females is to take place when caribou of different herds are mixed together in the winter time to avoid accidental hunt of Bathurst cows. When this situation occurs, it is recommended that males only be hunted (ENR's position). Consultation between ITI and ENR will take place to explore avenues to provide financial support to hunters to access new hunting areas.

Given the uncertain status of the Bluenose East herd, and in order to be consistent with management actions implemented by other Boards for the Cape Bathurst and Bluenose West herds, it is recommended that no harvest for non-resident and resident hunters be allowed on that herd.

Consultations and collaboration between GNWT and Nunavut Government will continue to take place to ensure that complete protection of all the calving grounds is maintained and exploration and mining activities are restricted at the time of calving and post-calving.

Preliminary results suggest that cumulative effects of non-natural stressors on caribou such as mining activities in the range of the Bathurst herd (beyond calving grounds) have not had a significant negative influence on overall mortality of caribou. This type of monitoring, however, will continue on a permanent basis to ensure that no unexpected effect goes undetected.

The Diamond Mines' Wildlife and Environment Monitoring programs (WEMP) will be redesigned to adjust for results and findings acquired through several years of data collection and new proposed monitoring will be presented to the Tłjchq government and communities for their inputs.

Appendix A: Proposed Management Actions to help the Bathurst, Bluenose East and Ahiak herds to recover.

No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
1.	Reduce harvest Pressure	Eliminate all commercial meat tags held by Tłıchǫ and all other aboriginal communities. Status of allowing meat tags to be reconsidered after the 2012 calving ground photo census. <i>/Joint by both governments</i>	Tłıchǫ communities have not used commercial meat tags for many years and there has been no interest expressed by Tłıchǫ citizens to use caribou for this purpose. No public interest implications in Wek'èezhìi. This will require regulation changes.
2.	Reduce harvest Pressure	Eliminate all tags for outfitting for the hunting season starting in the summer of 2010 until 2012 included. Status of outfitting to be reconsidered after the 2012 calving ground photo census. <i>/Joint by both governments</i>	Conservation measure and under Tłıchǫ Agreement, this type of harvest must be addressed first. Regulation changes required.
3.	Reduce harvest Pressure	Eliminate all resident hunter harvest. Allocation of tags to resident hunters to be reconsidered after the results of the 2012 calving ground photo census. <i>/Joint by both governments</i>	Conservation measure and under Tłıchǫ Agreement, this type of harvest must be addressed first. Regulation changes required.
4.	Reduce harvest Pressure (females)	<u>ENR RECOMMENDATION</u> Eliminate all harvest of Bathurst caribou (Tłıchǫ herd) females Limited female harvest may be possible for experienced hunters on the Bluenose East (Sahtu herd) and the Ahiak (Inuit herd) herds and assisted through a joint partnership with ENR/ITI. Numbers harvested to be discussed further and	Conservation measure and under Tłıchǫ Agreement. Regulation changes required. Subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'èezhìi.

No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
		biologists would be part of the hunt to assess health and condition of caribou harvested. No harvest of cows would be allowed when herds are mixed together on the winter range. Instead a careful harvest of males is suggested. Location of caribou of various herds (Sahtu, Tłıchq, Inuit) to be monitored by tracking satellite collared females and a no hunting zone could be established for the area where Bathurst collared animals are situated every season. <u>TŁİCHQ GOVERNMENT</u> No restriction on female harvest.	
5.	Reduce harvest Pressure (males)	<u>ENR RECOMMENDATION</u> A) Bull harvest only on all herds for Aboriginal harvesters (caribou with no antlers only in the winter). B) Only a limited number of bulls mixed with the Bathurst (Tłıchq herd) caribou cows will be available for harvest and the number will be regulated through a tag allocation system to avoid over-harvesting of the Bathurst herd bulls. Subject to changes if results of fall composition surveys reveal a low number of bulls in the herd. A low ratio of bulls to cows can be a concern for the health of the herd. Recommendation is to harvest Bluenose East (Sahtu herd) and Ahiak caribou (Inuit herd) males	Conservation measure and under Tłıchq Agreement A tag allocation system for aboriginal harvest may also be considered to ensure that no over harvesting of bulls take place on any herds. Regulation will be required Subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'eezhii.

No.	Issue	Actions to help herds recover/Lead Government	Rationale
		in the fall. Again, mobile harvesting zones to be determined based on the seasonal distribution of collared caribou. <u>Tłıchq GOVERNMENT</u> No restriction on male harvest.	
6.	Public and Hunters Education	Multi-party initiative which includes TG, ENR, WRRB and other co-management boards and communities. <i>/Joint by both governments</i> Funding might be made available from ENR to the TG and/or WRRB to develop a DVD production on traditional and ethical hunting practices.	The Bathurst caribou herd is important to the lives of northern people and their environment. Having respect for the caribou is essential if people are to live in harmony with their surroundings. Knowledge on respect of animals and best hunting practices should be passed on from the elders and experienced hunters to younger generations.
7.	Compliance <i>(Information only. No direction is required from the Board on this action.)</i>	Continue winter road check station on Tłıchq winter roads. <i>/Joint by both governments</i> ENR to conduct weekly patrols during fall and winter in Wek'èezhìi with more wildlife officers. <i>/ENR</i> Impose a 200 meter-wide no-hunting zone on either side of the winter road <i>/Joint by both governments</i> Creation of 1 seasonal (fall and winter) wildlife guardian position for each Tłıchq community to assist with the proposed mandatory caribou reporting system and Hunters Education/ Joint	Ensure harvesters are not wasting meat and all harvesters are hunting legally and in suggested prescribed zone. No public interest implications in Wek'èezhìi. Respect for animals and no carcasses/gut piles on the winter road. Some of the new proposed recovery and monitoring actions will require ongoing community participation and a person dedicated to facilitate their implementations.

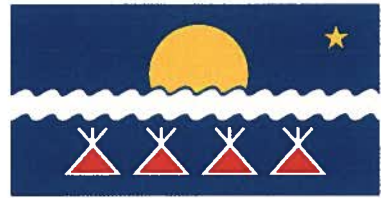
No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
8.	Protection of Calving Ground	Consultation and collaboration between GNWT and Nunavut to ensure current level of protection is maintained. <i>Joint by both governments</i>	Calving and post-calving area for all herds is critical to ensure early survival of cows and calves after birth.
9.	Mandatory Harvest Reporting System	Mandatory reporting of harvest for Aboriginal hunters - visit Tłıchǫ hunters once per month to determine number and location of caribou harvested. ENR will provide calendar for hunters to record harvest/ <i>Joint by both governments</i> .	Harvest can have a direct impact on the size of a herd and when numbers are low it will affect potential for recovery. It is important for wildlife managers to understand the source and the magnitude of mortality in order to make better management actions and to better partition the harvest by herd.

Appendix B: Proposed Actions to monitor the Bathurst, Bluenose East and Ahiak herds for trends and the Bathurst Herd to recover.

	Issue	Monitoring action	Rationale
1.	Spring calf survival	Conduct composition counts in late March or early April for the Bluenose East, Bathurst and Ahiak herds. Classify caribou as calves (less than 1 year old), cows and bulls. / <i>Joint by both governments</i>	The number of calves surviving past their first winter is a measure of recruitment of the herd and should be conducted annually regardless of the status of the herd.
2.	Health and condition	Assess fall and spring condition of caribou by looking at animals harvested in September and in late March. Collect samples for parasites, diseases and condition of caribou. Harvest to be done during community hunts and revolve among Tłıchǫ, Akaitcho and Metis organizations. / <i>Joint by both governments</i>	Health and condition of caribou influences adult survival. This information helps to assess trend of herd.
3.	Pregnancy rate	Tłıchǫ hunters to assess presence/absence of fetuses in 20 cows hunted during winter and also measure back fat for condition. / <i>Joint by both governments</i>	Assessment of pregnancy rate is an indicator of productivity and helps to assess trend of herd. Will also provide an avenue for elders to get some meet and fetuses without taking the risk of overharvesting the female population.
4.	Birth rate	Conduct composition counts at peak of calving for the Bathurst herd. Classify caribou as breeding cows and calves. / <i>Joint by both governments</i>	Number of calves per 100 females is an indicator of productivity and helps to assess trend of herd
5.	Adult sex ratio and fall calf survival	Conduct composition counts between Oct 15-30 (rut). Classify caribou as calves, cows and bulls on the Bluenose East, Bathurst and Ahiak herds in the fall. / <i>Joint by both governments</i>	Sex ratio in the herd is used to assess trend of herd. It is also required to determine overall population estimate when a photographic census of the calving ground is conducted. Number of calves returning from the summer migration provide a measure of summer survival. If a bull only harvest is implemented, then a fall composition survey is essential to assess number of bulls in the herds.
6.	Wolf den occupancy	Wolf pup survival should be monitored using summer surveys of den sites determined to be	Provide a cost effective method to assess trend in wolf population

	Issue	Monitoring action	Rationale
		active during spring surveys. / <i>Joint by both governments</i>	
7.	Wolf condition and reproduction	Collect wolf carcasses from trappers and hunters and determine pregnancy rates and condition. Determine if wolves are hunting caribou or hunting other species. / <i>Joint by both governments</i> Provide incentives and training to hunters and trappers to promote further wolf hunting and trapping .	Provide a direct measure of health and condition of wolves, age structure and productivity in order to assess trend in wolf population.
8.	Estimate of herd size	Conduct photographic census of breeding females on calving ground in June 2012. / <i>Joint by both governments</i>	This information is combined with other monitoring information to estimate size and trend of herd in order to develop appropriate management actions.
9.	Insect abundance	Set out portable weather stations during key period in the summer across the range of migrating caribou to assess and monitor insect numbers and potential impact on caribou feeding behavior. / <i>Joint by both governments</i>	Insect abundance will affect ability of caribou to feed adequately during the summer. This project is expected to be a cost effective permanent monitoring action to assess impact of insect harassment on caribou.
10.	Historical summer range condition	Compare NDVI index from remote sensing imagery to track green-up patterns on summer range and productivity of vegetation/ <i>Joint by both governments</i>	Look at whether summer range condition has changed over time and whether this is related to herd declines.
11.	Increase the total number of female caribou collars from 20 to 50 for the Bathurst herd.	New collars will be deployed in March of 2010. /ENR's recommendation only.	One of the main recommendations of the ARC report. Needed to monitor movement and distribution of caribou on a seasonal basis and to avoid accidental harvesting on Bathurst caribou. Provide a better assessment of cow survival which is not adequately done at this time given the low sample size of collars on Bathurst cows. A few collars deployed on bulls is also proposed in order to understand better their movement,

	Issue	Monitoring action	Rationale
			distribution and survival.



MAY 31 2010

Mr. Grant Pryznyk
Interim Chair
Wek'èezhii Renewable Resources Board
Yellowknife Office
102A - 4504 49TH Ave.
Yellowknife, NT X1A 1A7

Dear Mr. Pryznyk:

**WRRB Public Hearings Adjournment - Revised
Joint Proposal on Caribou Management Actions in the Wek'èezhii**

The Tłıchǵ Government and the Department of Environment and Natural Resources (ENR) would like to thank the Wek'èezhii Renewable Resources Board (WRRB) for the opportunity provided at the March 22-26, 2010 public hearing to revise the Bathurst caribou management joint proposal.

Please find attached the:

- *Revised Joint Proposal on Caribou Management Actions in the Wek'èezhii;* Tłıchǵ Government, Department of Environment and Natural Resources, May 31, 2010.

If you have any additional questions regarding this information please contact Mr. Jason McNeill, Senior Policy Advisor, Aboriginal Relations, ENR at (867) 920-3298 or Mr. Eddie Erasmus, Lands Protection Director, Tłıchǵ Government at (867) 392-6381 (ext. 300).

Sincerely,



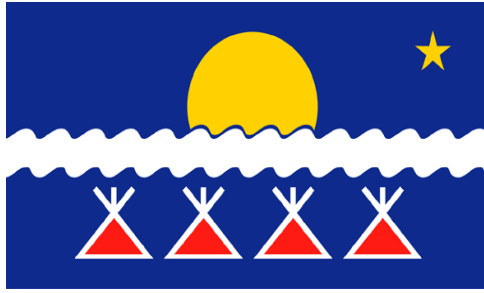
Gary A. Bohnet
Deputy Minister



Grand Chief Joe Rabesca
Tłıchǵ Government

Attachment





REVISED JOINT PROPOSAL ON CARIBOU MANAGEMENT ACTIONS IN WEK'ÈEZHÌ

Submitted to:

Wek'èezhì Renewable Resource Board

Submitted by:

Tłchọ Government

Behchokò, NT.

And

Department of Environment and Natural Resources,

Government of the Northwest Territories

Yellowknife, NT.

31 May 2010

EXECUTIVE SUMMARY

1. A population survey in 2009 of the Bathurst caribou herd provided an estimate of $31,900 \pm 5,300$ caribou, and showed that the herd's decline had accelerated after 2006 when it still numbered over 100,000. This accelerated decline has been the reason for developing co-management actions to halt the decline and give the herd an opportunity to recover.
2. In July 2009 the Wek'èezhii Renewable Resources Board (WRRB) asked the Tłıchǫ Government (TG) and the Department of Environment and Natural Resources, Government of the Northwest Territories (ENR-GNWT) to develop a joint management proposal for the Bathurst caribou herd and the neighbouring Bluenose-East herd. A joint proposal was submitted to the WRRB in early November 2009. TG and ENR-GNWT agreed on a number of management and monitoring actions, but provided separate recommendations on Aboriginal harvest of Bathurst caribou.
3. In March 2010, the WRRB held a 5-day hearing on the joint management proposal, with presentations from TG, ENR-GNWT, intervenors with an interest in the Bathurst herd, and members of the public. On the last day of the hearing the WRRB granted an adjournment of the hearing requested by the TG (with ENR-GNWT support), to enable the two parties to resume collaborative work on the management proposal, and specifically to seek agreement on the key issue of Aboriginal harvest of Bathurst and Bluenose-East caribou, and to consider other related issues. A revised proposal was requested by May 31, 2010. This document is the revised joint management proposal.
4. Although the main focus of the original and revised proposals remains on actions to stabilize declining caribou herds, TG and ENR-GNWT through their joint meetings reviewed and recognized the importance of the long-standing cultural and social relationship between caribou and Tłıchǫ and other northern Aboriginal peoples. Management of the Aboriginal harvest must happen in ways that re-build traditional respect for caribou, other wildlife, and the land itself, and in a manner that empowers Tłıchǫ communities to implement the Tłıchǫ Agreement through self-regulating and monitoring their collective hunting behaviour.
5. Overall, the approach in the revised proposal is to focus in the short-term (next two years) on reducing death rates (mortality) of Bathurst caribou by reducing the two factors that most directly affect caribou death rates: hunter harvest and wolf predation. TG and ENR-GNWT recognize that caribou numbers are also affected by several other factors (weather during all seasons, fire on the winter range, industrial development) and these are to be monitored generally in the short term and will need to be more fully considered in a longer-term planning context.
6. TG and ENR-GNWT have agreed that the annual harvest of Bathurst caribou inside and outside of Wek'èezhii should be $300 \text{ caribou} \pm 10\%$ in total from this herd, with at least 80% of this harvest being bulls. Allocation of this harvest will require further discussion between TG, ENR-GNWT, and other Aboriginal groups. This proposal does not preclude the right to harvest for other Aboriginal groups, and it does not diminish the GNWT's requirement to consult with other Aboriginal groups. The herd should be able to stabilize with this harvest if calf productivity stays high. The proposal is for a harvesting target rather than a Total Allowable Harvest, as this seems most appropriate in light of confidence levels for current herd population and harvest data, and as the means considered most supportive of innovative and effective implementation of proposed hunting targets. These proposed hunting targets are in the range of Aboriginal harvesting of the Bathurst herd during fall and winter hunting seasons in 2009-2010, although TG and ENR-GNWT recognize that this is a very substantial

reduction in harvest levels from previous years. Reducing harvest to this level will require temporary elimination of resident, non-resident, and commercial caribou harvest from the Bathurst herd.

7. For the Bluenose-East herd, an interim harvest management is recommended, with the expectation that ENR-GNWT will carry out caribou surveys in 2010 to provide an updated population estimate. Harvest management for this herd must involve Nunavut, Sahtu and Inuvialuit governments, boards and communities, and consideration of an on-going management planning process for the Bluenose-West, Cape Bathurst and Bluenose-East herds. As an interim recommendation, TG and ENR-GNWT propose that total harvest of this herd should target $\leq 4\%$ (1920 caribou) of an estimated herd size of ca. 48,000, which would be the herd's size if its annual rate of decline from 2000 to 2006 (7.5%) had continued to 2010. The harvest should also consist of at least 80% bulls. This would amount to about a 45% reduction from the estimated 2009-2010 harvest of this herd (ca. 3500, with about 2/3 of the harvest being cows).

8. Although the Ahiak herd occurs rarely in Wek'èezhii, ENR-GNWT's reconnaissance surveys on the Ahiak calving ground show a decline of 60% in numbers of cows 2006-2009. There is limited evidence that some cows from the Beverly herd now share ranges with Ahiak caribou, and numbers of caribou calving on the Beverly calving ground have dropped to very low levels. TG and ENR-GNWT propose that NWT communities respect recommendations from the Beverly and Qamanirjuaq Caribou Management Board aimed at reducing Ahiak/Beverly caribou harvest and shifting that harvest to at least 80% bulls. NWT communities should not replace harvest of Bathurst caribou by increased harvest of Ahiak and/or Beverly caribou.

9. In addition to these recommendations on caribou harvest, TG and ENR-GNWT are proposing one additional management action designed to reduce caribou mortality: increased harvest of wolves by hunters and trappers in the Bathurst range. This action is proposed in recognition of the herd's very rapid decline from 2006 to 2009, as a further way to reduce caribou death rates and increase the likelihood for the herd to stabilize and recover.

10. TG and ENR-GNWT took the opportunity in developing a revised proposal to review and revise other management aspects that would be needed to effectively implement caribou management. In particular, managing the caribou harvest has to be done in ways that will be acceptable to Tłıchǫ and other Aboriginal elders, hunters, and communities. Resumption of past practices of shifting to other country foods like fish, moose and muskrats would be consistent with past times of caribou scarcity. The revised proposal contains recommendations to maintain or increase access to wood bison as an alternative meat source, and to increase support for fish camps.

11. Effective implementation of the management proposed will require an increased capacity on the part of TG to fully participate in monitoring and management of caribou. Implementation should be built around methods that will promote community ownership of the programs; one example would be Community Caribou Committees in each Tłıchǫ community that would meet regularly to review the most recent caribou information and be part of decision-making in their communities. TG and ENR-GNWT suggest a number of ways that could be used to implement these management proposals, while recognizing that a detailed implementation plan will require further discussion and may need to incorporate WRRB's recommendations.

12. Monitoring actions listed in the original joint management proposal were reviewed and incorporated into an adaptive management cycle that would include periodic review through the year of the most recent information, with the opportunity to re-consider management actions. Monitoring

caribou harvest would be part of this cycle, which would also include results of caribou surveys, wolf harvest efforts, and information gathered by community monitors on caribou condition and environmental trends. As a result, this proposal is designed to begin a much more collaborative and adaptive co-management system than existed previously, which the parties believe will be more effective for assessing herd population and health, gathering reliable harvesting data, and enlisting Aboriginal harvesters and communities in effective implementation.

13. Although the primary focus in this proposal is on the short-term future and stabilization of the Bathurst herd, TG and ENR-GNWT recognize the need for long-term management plans for each of the three herds (Bathurst, Bluenose-East and Ahiak/Beverly) where harvest, habitat, and other factors affecting barren-ground caribou herds are considered carefully.

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1.0 THE CARIBOU ISSUE, PREVIOUS PROPOSAL AND REVISED APPROACH

The Bathurst caribou herd declined rapidly between 2006 and 2009 from over 100,000 to about 32,000. The TG and Environment and Natural Resources, Government of the Northwest Territories (ENR-GNWT) submitted a joint proposal on caribou management to the Wek'èezhii Renewable Resources Board (WRRB) in early November 2009. Management actions were proposed primarily for the Bathurst herd, but consideration was also given to its western and eastern neighbours, the Bluenose-East and Ahiak herds. TG and ENR-GNWT agreed on several management actions but were not able to agree on management of the Aboriginal harvest in Wek'èezhii.

The WRRB held a public hearing in late March 2010 to review the proposal, and related reports and materials. Presentations were given by TG, ENR-GNWT, intervenors with an interest in Bathurst caribou, and the general public. On the last day of the hearing, TG with the support of ENR-GNWT requested an adjournment of the hearing to allow the two governments to complete work on the joint proposal, and specifically to seek agreement on management of the Aboriginal harvest of caribou in Wek'èezhii. WRRB granted an adjournment, with a requirement for the revised proposal to be submitted by May 31, 2010. WRRB also requested a progress report on April 30, 2010, which was submitted by TG and ENR-GNWT and accepted by WRRB as sufficient evidence of progress.

Management actions 1, 2 and 3 in the original proposal were confirmed – cease all hunting by residents, guide/outfitter hunts for non-residents and commercial harvesters. On the key issue of management of the Aboriginal harvest of Bathurst caribou, TG and ENR-GNWT came to agreement, and the shared recommendations on harvest of the Bathurst, Bluenose-East and Ahiak herds are in section 5 (Recommended Management Actions). These recommendations refer to actions 4 and 5 in the original proposal. Submissions made at the March 2010 WRRB hearing were considered by TG and ENR-GNWT in developing the revised recommendations. There were also several monitoring actions in the original proposal. These were reviewed and rearranged as section 6, and are now presented as part of an annual cycle of monitoring, information review, and adaptive management.

In addition to these updates on key sections of the original proposal, TG and ENR-GNWT considered other management aspects that will be needed to effectively implement the management proposed. Section 4 provides a brief overview of how TG and ENR-GNWT worked together on the revised proposal. Section 7 includes a number of approaches that were discussed as methods of implementing harvest regulation; the two parties recognize that further discussion of these methods will be needed and that implementation will depend in part on WRRB recommendations. Section 8 suggests ways to improve community engagement in caribou management, and to increase TG capacity for full participation. Section 9 identifies the need for longer-term planning for the three caribou herds, and the need to protect habitat and manage development in caribou ranges. Section 10 describes actions to increase access to bison as an alternative country food, with some comments on monitoring and management of other potential country food alternatives.

Above all, TG and ENR-GNWT recognize the long-standing cultural and social relationship between caribou and Tłı̨ch̓ and other northern Aboriginal peoples. Throughout the proposal we have sought to emphasize the need for a respectful relationship between people and caribou.

Technical details on population modeling, surveys and other research were kept to a minimum in this proposal. Readers seeking greater detail should refer to the Bathurst technical report, reports on population modeling, and other reports and submissions on the WRRB public registry.

2.0 BACKGROUND AND RATIONALE

The status of barren-ground caribou herds with seasonal ranges that occur within Wek'èezhìi (Tłı̨chǫ Land Claim area) is briefly reviewed below (Figure 1). Barren-ground caribou herds are known to vary widely in numbers over time; all herds monitored by ENR-GNWT declined in the early 2000s, and most caribou and reindeer populations globally were in decline in 2009.

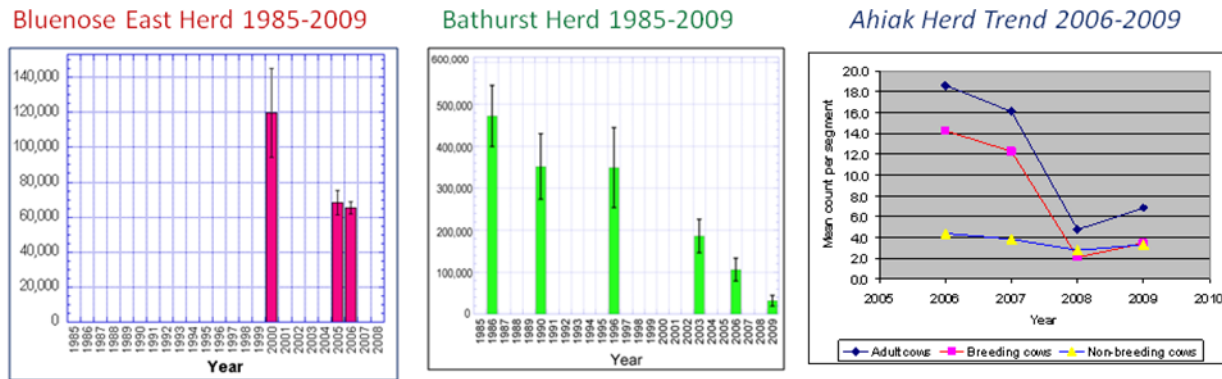


Figure 1. Population trend in the Bluenose-East, Bathurst and Ahiak caribou herds.

Bathurst Herd

In June 2009, ENR-GNWT staff conducted a calving ground photographic survey of cows on the Bathurst herd's calving ground, using the same methods that have been used since the 1980s. In 2009, the overall herd size was estimated at $31,900 \pm 5,300$, compared to more than 100,000 in 2006. The accelerated decline established by the survey results clearly showed that management actions would have to be taken immediately to stabilize the rapidly declining herd and work towards its recovery. The next Bathurst calving ground photographic survey is scheduled for June 2012.

Bluenose-East Herd

Reliable population estimates for the Bluenose-East herd are not available prior to 2000, when this herd was estimated at 120,000. Post-calving photographic surveys were conducted in 2005 and 2006 and results revealed that this herd had declined substantially since 2000. In 2006, the herd estimate was estimated at 66,700.

A photo census was attempted in July of 2009 on the post-calving range of the Bluenose-East herd in order to obtain a new population estimate. The survey was unsuccessful due to cool wet weather, which meant that the caribou did not aggregate tightly enough for photos. Despite the failure to conduct the photo census in 2009, biologists reported seeing fewer animals during post-calving than observed in 2006. This is a concern and suggests caution in evaluating management options. ENR-GNWT will be conducting a June 2010 calving photographic survey and a July 2010 post-calving photographic survey for the Bluenose-East herd, with support and participation of the GN (Government of Nunavut). This should ensure that a new population estimate is available this summer. If both surveys are successful, a comparison of the two methods will also be possible.

Ahiak Herd

For the Ahiak herd, longer-term information such as population size and trend and seasonal range use and movements has been limited. Neither a calving ground nor post-calving photographic survey has been completed for the Ahiak herd, although the population was estimated at approximately

200,000 animals in 1996 based on a crude extrapolation of a systematic reconnaissance survey on the calving grounds. Much of the detailed radio-collar information and surveys of the calving grounds in the Queen Maud Gulf region is from 2006 to present.

From 2006 to 2009, ENR-GNWT completed systematic reconnaissance surveys of the annual calving ground of the Ahiak herd. Preliminary trend analysis of the average number of cows seen per survey transect segment suggests that the numbers of caribou cows on the Ahiak calving ground in 2009 had declined by ca. 60% compared to data from 2006. Although knowledge of these caribou is improving over time, the observed decline is a real issue for management and conservation of this herd. In addition, limited radio-collar information from 2006 to 2010 indicates that some cows that formerly calved on the Beverly calving ground switched to the Ahiak calving ground during these years. Outside of the calving period, these radio-collared Beverly cows appeared to share ranges entirely with cows calving on the Ahiak calving ground. Numbers of cows calving on the traditional Beverly calving ground in 2007, 2008 and 2009 were extremely low. Exactly what happened to the Beverly herd may never be fully known, and interpretations of the limited data vary. Nevertheless, conservation of the few cows still using the Beverly calving ground is now linked to conservation of the Ahiak herd, thus harvest and management of the Ahiak herd must be mindful of the exceptionally low numbers of Beverly caribou.

ENR-GNWT will be conducting a systematic reconnaissance survey of the Ahiak and Beverly calving grounds in June 2010, in collaboration with the Government of Nunavut (GN). The GN is planning a calving ground photographic survey of the Ahiak herd and systematic survey of the Beverly herd calving ground for June of 2011 with collaboration of ENR-GNWT.

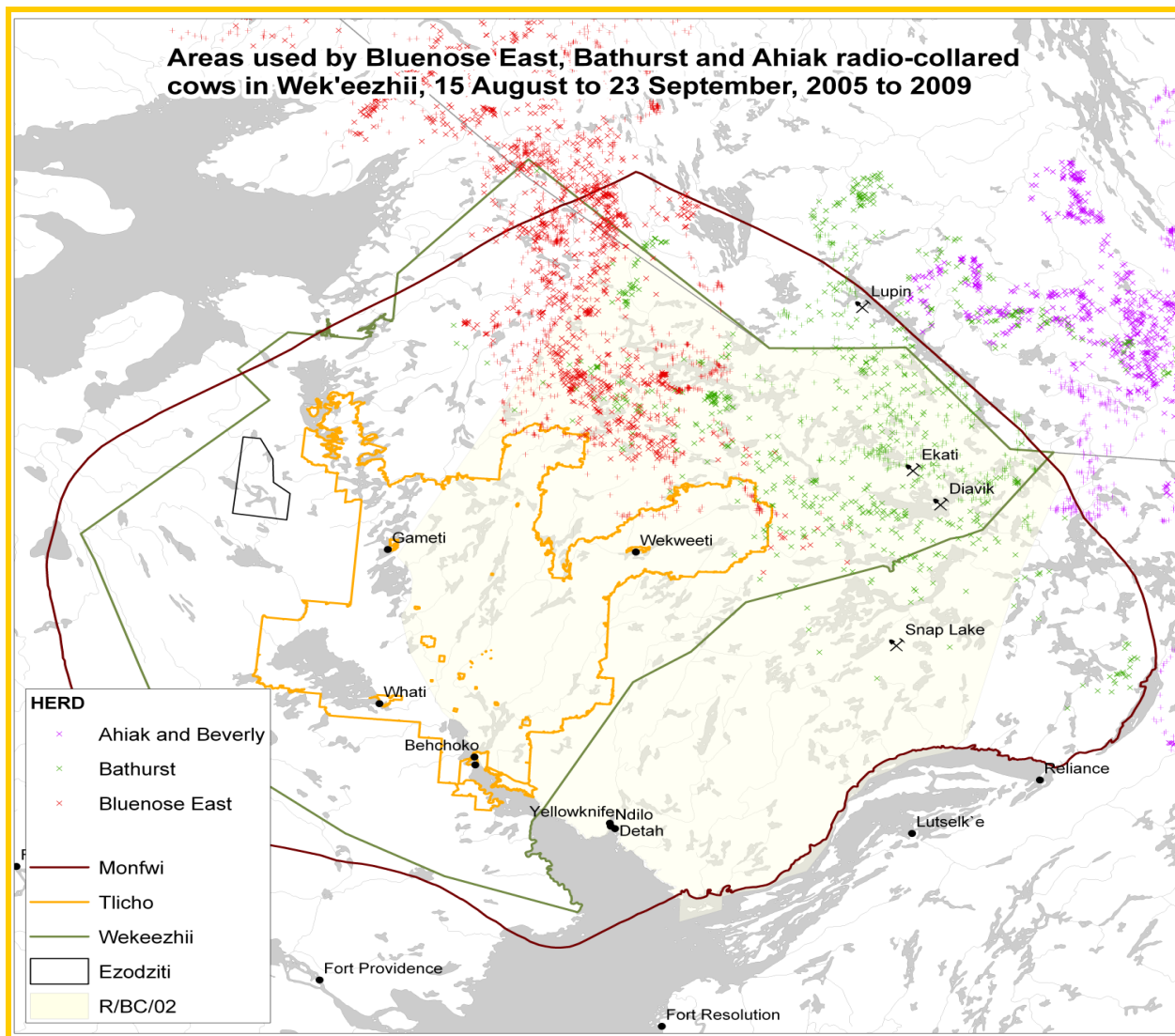


Figure 2. Areas used in the fall (Aug. 15 to Sept. 23) by radio-collared Bluenose-East (red), Bathurst (green) and Ahiak (purple) caribou cows from 2005 to 2009. Mapped by A. D'Hont, ENR-GNWT. The numbers of locations do not reflect herd size, rather they reflect numbers of radio-collars on the 3 herds (most on Bluenose-East caribou, least on Bathurst caribou).

Figure 2 shows the areas used in recent years by caribou from the three neighbouring herds during the fall hunting season (August to September), based on radio-collar locations of cows over the last 5 years (2005-2009). Ahiak caribou have rarely occurred in Wek'eezhii during this period, but there has been extensive use of northern Wek'eezhii by Bluenose-East and Bathurst caribou in the fall, with some overlap between the two herds.

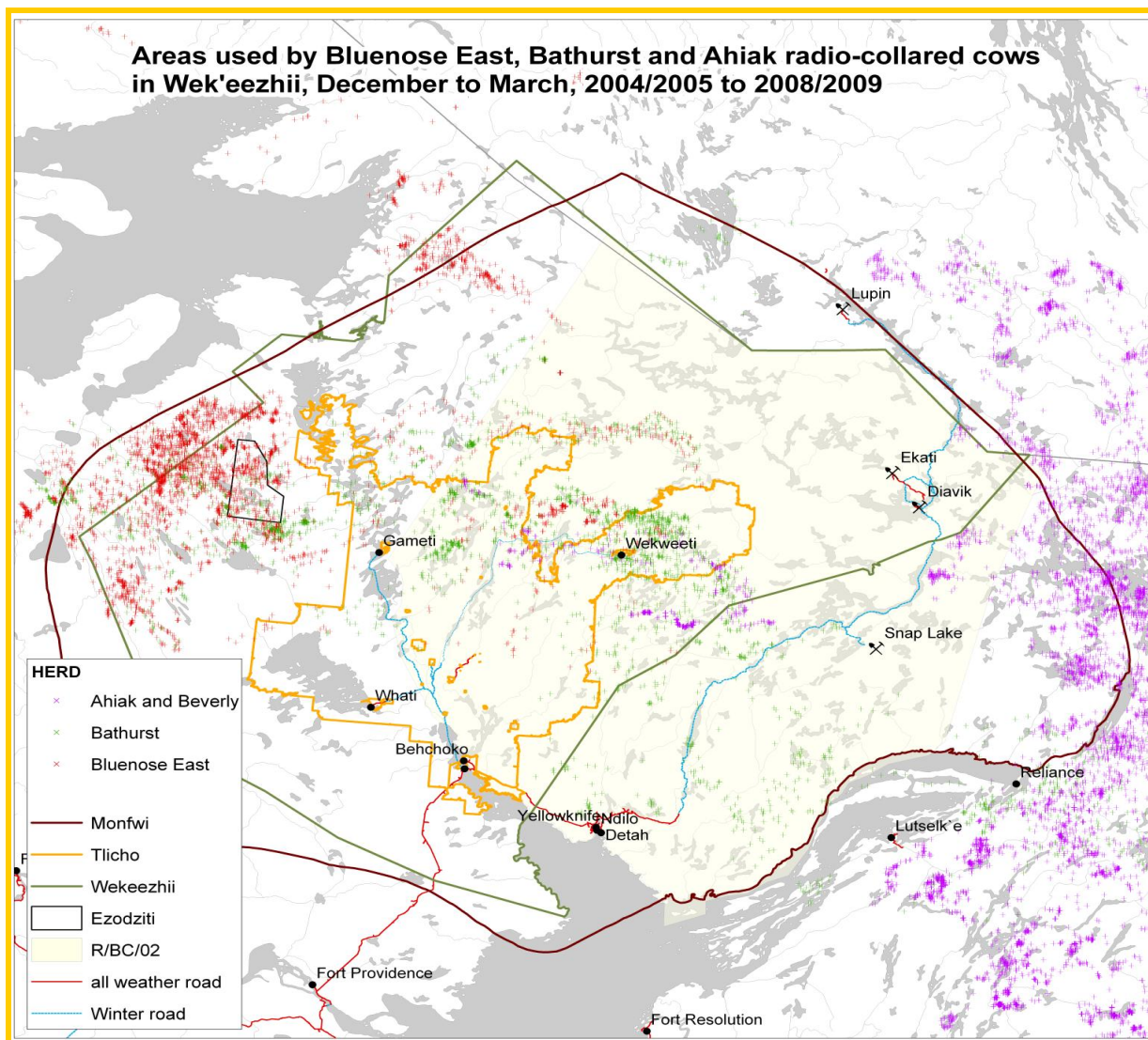


Figure 3. Areas used in the winter (December to March) by radio-collared Bluenose-East (red), Bathurst (green) and Ahiaik (purple) caribou cows from 2004/2005 to 2008/2009. Mapped by A. D'Hont, ENR-GNWT. The numbers of locations do not reflect herd size, rather they reflect numbers of radio-collars on the 3 herds (most on Bluenose-East caribou, least on Bathurst caribou).

Figure 3 shows the areas used in recent years by caribou from the three neighbouring herds during the winter hunting season (December to March), based on radio-collar locations of cows over the last 5 winters (2004/2005 to 2008/2009). Ahiaik caribou have rarely occurred in Wek'èezhii during this period. There has been extensive use of northeastern Wek'èezhii by Bluenose-East caribou. Central Wek'èezhii has had primarily Bathurst caribou, with some overlap between the two herds. This spatial information indicates that most of the winter harvest in Wek'èezhii in recent winters was from the Bathurst herd. Hunting Bluenose-East caribou would have required lengthier snowmachine travel (e.g. to Hottah Lake) due to the lack of winter roads north of Gameti and Wekweeti.

2.1 Recent Management Issues and Actions

- *Joint management proposal to WRRB (November 2009)*

In 2009, the WRRB requested that TG and ENR-GNWT work together and develop a joint management proposal to address the rapid decline of the Bathurst caribou herd, and submit a proposal by October 31, 2009. Following this request, the Tłıchǵ Government formed a caribou working group to meet with ENR-GNWT to develop a document on recovery options for the Bathurst herd and neighboring herds. One of the requirements of the Tłıchǵ process was to hold a regional workshop in Gamètì to get input from elders on the draft joint proposal prior to the Tłıchǵ assembly to make a final decision.

Representatives of the two governments met periodically through the fall to draft the proposal. On November 5, 2009, TG and ENR-GNWT submitted a joint proposal on caribou management and monitoring actions within Wek'èezhìi to the WRRB. Five main management actions were proposed for the Bathurst herd with further recommendations for limiting harvest of caribou from its western and eastern neighbours, the Bluenose-East and Ahiak herds (Table 1).

The two governments agreed on a number of management actions, including elimination of all commercial harvesting, non-resident (outfitted hunts) and resident hunting, and mandatory harvest reporting. However, there was no agreement between TG and ENR-GNWT on proposed management of Aboriginal harvest. ENR-GNWT recommended that all hunting of female caribou in the Bathurst herd be eliminated, and a limited bull-only hunt (Table 1). TG recommended no restriction on Aboriginal cow or bull harvest. The proposal thus had separate recommendations from the two governments, for cow and bull harvest by Aboriginal hunters.

Table 1. Summary of main management actions from November 2009 proposal

Proposed Management Action	Recommended Action for Bathurst Herd in Wek'èezhìi	Recommended Actions for Adjacent Herds (Bluenose-East and Ahiak)
1	Eliminate all commercial meat tags	
2	Eliminate all tags for outfitting	
3	Eliminate all resident hunter harvest	
4	<u>ENR-GNWT Recommendation</u> Eliminate all harvest (including Aboriginal hunting) of Bathurst caribou females <u>Tłıchǵ Government Recommendation</u> No restriction on female harvest	Limited female harvest may be possible for experienced hunters on the Bluenose East and Ahiak herds and assisted through a joint partnership with ENR/ITI. Numbers harvested to be discussed further and subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'èezhìi.
5	<u>ENR-GNWT Recommendation</u> Allow a limited bull-only harvest for Aboriginal hunters <u>Tłıchǵ Government Recommendation</u> No restriction on male harvest	Bull harvest only on all herds for Aboriginal harvesters. Recommendation is to harvest Bluenose East and Ahiak caribou males in the fall and subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'èezhìi.

- *No hunting ban in Bathurst winter range (January 2010)*

On December 17, 2009, the GNWT ENR-GNWT Minister announced interim emergency measures to protect the Bathurst herd. This included elimination of resident and commercial harvesting and establishment of a no-hunting zone based on the main Bathurst caribou winter range. On January 1, 2010 the new measures were implemented unilaterally by ENR-GNWT, to provide an interim period of protection from hunter harvest while a co-management solution to harvest management was developed. The ban affected all caribou hunters, including the Tłı̨chǫ, Yellowknives Dene, NWT Metis Nation, residents and outfitters. This action was outside the scope of the joint management proposal to the WRRB and is not considered further in this proposal. The ban is expected to remain in place temporarily, until the WRRB makes recommendations on harvest management for the Bathurst herd, with a view to replacing the interim emergency measures by jointly agreed measures that would be implemented through the proposed management plan.

- *WRRB hearing (22-26 March 2010) and adjournment request*

In March 2010 the WRRB held a public hearing in Behchokö to review the joint management proposal from TG and ENR-GNWT, and to consider all available technical information and Traditional Knowledge. Interveners and the general public had opportunities to comment on the available information and joint management proposal. On the last day of the 5-day hearing, the Tłı̨chǫ Government (with ENR-GNWT support) requested an adjournment in order to resume working together to resolve differences that existed in the original proposal, and to specifically address proposed management actions 4 and 5 from the November 2009 proposal. The request for adjournment was granted by the WRRB under the condition that the two governments would provide an interim progress report by April 30, 2010 and a completed proposal by May 31, 2010. An interim progress report was provided to the WRRB by TG and ENR-GNWT, and accepted as adequate proof of progress.

2.2 Ekwo (caribou) and Tłıchǫ culture, language and way of life

The inter-dependence of the Tłıchǫ people with Ekwo could be considered the fundamental pillar of Tłıchǫ culture (see Appendix 1). The Tłıchǫ and other Aboriginal people in the North have depended upon caribou for their physical, mental and spiritual needs since time immemorial. Since the time of Yamozah, the Tłıchǫ have lived in co-existence with the caribou, with laws of respect and appreciation defining the relationship between the Tłıchǫ and the caribou. The Tłıchǫ culture and way of life is based on the caribou and its migration paths. The caribou provided shelter, clothing, bedding and food and are the basis of Tłıchǫ traditional knowledge and legends, traditions and practices. Tłıchǫ traditional trails follow the paths of the caribou towards the barren-lands with camp-sites, grave-sites and places of spiritual significance all described by place-names along the way. These place-names are dependent upon the soil and landscape, determining the harvest methods and telling the story about the place.

The relationship between the Tłıchǫ and caribou has changed over time, with the outside influences of the global economy and trade leading to altered ways of valuing this sacred animal. This has led to a change in Tłıchǫ and outsider dependence on the animal. As early as 1700 the European desire for beaver pelt hats and other furs brought trappers and traders to the North, increasing the need for caribou as a trade item. This was the beginning of the change from hunting for subsistence to hunting for commercial trade, thereby altering the relationship between man and animal.

Following the introduction of the snowmobile in the 1970's, access to the seasonal range of Bathurst caribou began to expand. In 1972, the modern airplane was introduced to the community hunt as was the community freezer. Caribou were no longer only available for certain periods in the season, but it became available almost all year round whether the caribou were close to communities or not. The need to depend on other species at periods of time throughout the year now became a choice, not a necessity.

The last major change in this relationship has occurred in the last 15 years, where we have seen diamond mines, ice roads, all season roads, big game outfitting, resident and commercial hunting, high powered rifles, snowmachines and four-wheel drive trucks and trailers come onto the scene. This has altered the relationship between man and caribou and increased the pressures and stress on the animals, potentially more than in the last 150 years together.

The relationship between Tłıchǫ and caribou is maintained by traditional laws governing human behaviour towards caribou. When these laws are not respected, it is believed that caribou populations will become smaller and their migration patterns will change. There have been times of scarcity and times of abundance, which have been influenced by both natural cycles of wildlife abundance and human influence. The Elders have always believed that when the caribou became scarce they would go away to be left alone - to recover and replenish themselves. They would then come back to offer themselves to the Tłıchǫ - there was a mutual respect between man and animal.

There have been previous times of caribou scarcity. The most recent Tłıchǫ memory of low caribou numbers was in the 1960s. At this time, the community of Wekweètì had to be evacuated to

Behchokö and Gamètì, because of a scarcity of caribou and other game. This move led to significant changes in the political and social fabric of Tłıchǫ society.

A recovery and management plan for the Bathurst caribou cannot focus only on the numbers (i.e., estimates of population parameters and vital rates) and wildlife ecology from a scientific perspective. The relationship between humans and caribou is complex and dynamic. In order to address the decline in the Bathurst herd, this broader dynamic system must be taken into account, with an appreciation that restrictions of harvest are only a small part of the long term sustainable approach to this issue. By looking at the system as a whole and its interconnectedness (Figure 4), the solutions will be found in many different places, places that science alone cannot define or resolve.

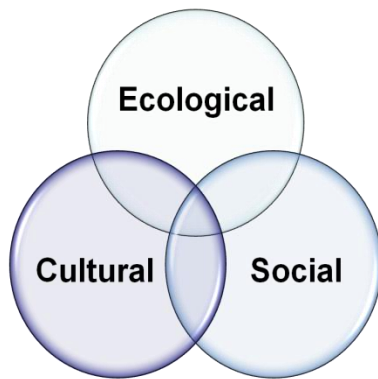


Figure 4: Tłıchǫ Perspective on Ekwo Management

Tłıchǫ elders have always taught that becoming and being knowledgeable is the way that respect is shown to caribou. They believe that a person becomes knowledgeable by listening, watching and experiencing, and that there is a relationship between one's personal knowledge and ability to respect the land. As this knowledge is lost, the laws are no longer abided by and respect for the caribou is diminished. With modernization, changing lifestyles and expectations, this knowledge gap has increased, causing both the Tłıchǫ and other northerners to lose knowledge and respect for caribou.

To re-establish the connection between people and the caribou, the Tłıchǫ must revitalize the traditional ways in which they relate to the caribou - through cultural hunts and relearning of Tłıchǫ laws that guide their behaviour towards this animal. Through cultural hunts following their *whaèhdôö æetô* (ancestral trails) they will have an opportunity to listen, observe and monitor the land; to learn the *nàowo* (laws) and stories, and they will have an opportunity to learn the place-names and ways of their ancestors. They will begin hunting by canoe and returning again to the sacred area of Mesa Lake, where peace was made between Edzo and Akaitcho. They will reemphasize and support the hunting and trapping of alternate species when caribou are scarce.

This proposal is not only about recovering the Bathurst caribou herd. It is equally about the recovery of Tłıchǫ language, culture and way of life that are dependent upon the Bathurst caribou.

3.0 DEVELOPING A SHARED PERSPECTIVE

The Tłıchǵ Government and the Government of the Northwest Territories worked together in April and May 2010 to revise and complete this Joint Caribou Management Proposal.

Through their collaborative work, the TG and ENR-GNWT have come to a shared consensus that Bathurst caribou are in real and serious decline and that decisive management actions are imperative to conserve and recover the herd. It was understood that Tłıchǵ elders recognize that caribou cycle naturally and that the current decline was not caused solely by hunting, but when caribou numbers become this low, hunting and predation affect the ability of caribou to recover. If the status quo levels of hunting were allowed to continue, the Bathurst caribou herd might not be able to recover. All data analyses and modeling completed to date indicate that a harvest of the size estimated for 2008-2009 for the Bathurst herd (3000-5000 cows and 1000-2000 bulls) can only lead to further rapid decline, regardless of calf productivity. TG and ENR-GNWT recognize that the Bathurst herd is shared with communities, governments and hunters outside Wek'èezhìi, whose interests must also be considered and respected.

Although the focus of the two governments has been on management actions within Wek'èezhìi that are required for recovery of the Bathurst herd, there is also a shared understanding that management actions are also required for the Bluenose-East and Ahikak herds, which are both in decline. Both governments recognize that harvest pressure should not be transferred from the Bathurst herd to neighbouring herds, because that would potentially contribute to further declines in those herds.

Although the WRRB specifically requested that the revised joint proposal focus on the harvest management actions within Wek'èezhìi that had not been agreed on in the original proposal, TG and ENR-GNWT took the opportunity to review all aspects of the proposal. In particular, there was a need to recognize the longstanding relationship of Tłıchǵ people with caribou and the fundamental importance of this relationship for developing and implementing meaningful management changes in the future. Based on their collaborative work over the past two months, the two governments agreed to the following three core themes and associated principles, which provide the foundation for developing the revised proposal and a shared commitment to working together to recover and conserve healthy caribou populations, and ensure that the relationship between caribou and people is resilient and continues to thrive in the future.

- 1) **Tłıchǵ language, culture and way of life:** Tłıchǵ culture is based upon a deep and respectful relationship with barren-ground caribou; therefore the population health, sustainability, and resilience of Bathurst caribou is profoundly important to Tłıchǵ (Appendix 1). A key principle that arises from this is that effective management and monitoring of caribou requires engagement, education, participation, and feedback from Tłıchǵ people, along with acknowledgement and use of Tłıchǵ knowledge and practices. In short, implementation of management actions for recovering caribou in Wek'èezhìi needs to be done in the broader context of strengthening Tłıchǵ culture, language and way of life. In addition, because of the fundamental importance of the relationship between people and caribou, the precautionary principle must guide management recommendations and decisions, as required by the Tłıchǵ Agreement, to prevent and avoid irreversible harm to caribou populations or habitats, especially in circumstances where there is uncertainty in knowledge. TG and ENR-GNWT recognize that other Aboriginal groups likewise have longstanding cultural and social linkages to caribou over countless generations.

- 2) **Adaptive co-management:** Adaptive co-management is an approach to resource and wildlife management that combines two key aspects – adaptive management and co-management. Adaptive management refers to the capability to learn and adapt to changing circumstances and uncertain conditions. Co-management refers to sharing of power and responsibility between governments, resource users and resource-based communities. Adaptive co-management requires commitment to the principles of “shared decision-making” and “learning by doing”. In the context of this joint caribou management proposal, adaptive co-management also reflects a commitment to a) implement the spirit and intent of the Tłıchǫ Agreement, and b) develop efficient and sustainable models of governance to ensure collaboration and decision making that involves the TG and ENR-GNWT, as well as Tłıchǫ community governments and Tłıchǫ citizens (i.e., youth, hunters, and elders). In this context, implementation of management recommendations will require development of increased capacity for the TG, in order for Tłıchǫ people to participate fully in monitoring and co-management of caribou.
- 3) **Managing barren-ground caribou as populations or herds:** Within North America, migratory barren-ground caribou herds are defined and managed as distinct herds or populations, because studies have shown that this is how they have adapted to the large landscapes they live in. Migratory herds are defined based on the strong instinct of caribou cows to return every spring to a traditional calving ground. Research shows that usually about 95% or more of pregnant cows return annually to the same traditional calving ground. Based upon this body of knowledge as well as comprehensive archaeological studies, the main factors that likely drive abundance of barren-ground caribou within defined populations are rates of birth and death. Research with many herds has shown that rates of immigration and emigration are relatively minor, and usually occur at low rates between neighbouring herds. Appendix 2 contains a brief summary on basic population ecology of barren-ground caribou. Since birth rates are not amenable to active management, the emphasis of wildlife managers is to evaluate and manage death rates of caribou, which are tied to hunting and natural predation. In simplest terms, most caribou that have died recently in the Bathurst herd were either killed by predators or by hunters, so reducing these death rates is most likely to have direct and positive effects on the herd’s population trend.

4.0 GOALS AND OBJECTIVES

4.1 Scope and Time-frame

The management actions in this proposal are primarily directed at the next 2 years of caribou monitoring and management.

For the Bathurst herd, a population survey is planned for June 2012, just over 2 years from the date of this revised proposal (end of May 2010), and once the results are known, management actions will likely be re-visited and amended. Actions proposed here are aimed primarily at the next two years (June 2010-June 2012) in Wek'èezhìi.

For the Bluenose-East herd, recommendations in this proposal are on an interim basis for Wek'èezhìi and will need to be re-visited in late summer 2010 once an estimate of population size has been determined from calving-ground or post-calving photographic surveys - this will provide both population size and trend since 2006. As an interim recommendation, a precautionary conservative approach to harvest management is proposed. TG and ENR-GNWT support the ongoing management planning for this herd and its western neighbours, the Bluenose West and Cape Bathurst herds. TG and ENR-GNWT recognize that this herd is shared with Nunavut, Sahtu and Inuvialuit governments, boards and communities.

The Ahiak herd scarcely occurs in Wek'èezhìi and harvest by Tł̨ch̨ hunters from this herd has likely been very limited. Recommendations in this proposal are precautionary and stem largely from the strong downward trend in numbers of caribou on the Ahiak annual calving ground. The focus is on supporting the Beverly and Qamanirjuaq Caribou Management Board's (BQCMB) efforts to limit harvest of Ahiak/Beverly caribou and to promote bull harvest, and to ensuring that reduced harvest of Bathurst caribou does not translate into increased harvest of Ahiak/Beverly caribou by NWT communities.

For all three herds, TG and ENR-GNWT recognize the need for longer-term management planning that includes harvest management as well as management of habitat and industrial development, as described in section 9. An overall management planning process is in place for the Bluenose-East herd. TG and ENR-GNWT support longer-term co-management planning processes for the Bathurst and Ahiak/Beverly herds.

4.2 Goals

For the Bathurst herd, the short-term goal is to shift from a declining trend (2006-2009) to a stable trend from 2010 to 2012, by maximizing survival of cows and calves. TG and ENR-GNWT recognize that some factors affecting caribou numbers are not readily subject to management control. In the longer-term, the goal is to promote the herd's recovery to a size and trend where sustainable harvesting sufficient to meet all interests is again possible.

For the Bluenose-East herd, the goal in the short-term is to reduce harvest to a level that is unlikely to contribute to further decline in this herd. Once population size and trend are known, the goal could be revised to stabilizing the herd and promoting recovery in the longer-term.

For the Ahiak/Beverly herd, the goal short-term goal is to support the BQCMB's efforts to monitor and manage harvest (including a shift to at least 80% bulls) so as to minimize the contribution of harvest to a declining trend.

4.3 Objectives

For the Bathurst herd:

1. A stable trend in numbers of breeding cows on the calving grounds 2010-2012, based on annual reconnaissance surveys in 2010, 2011 and 2012, and a population photo-survey in 2012.
2. An average late winter (March-April) calf:cow ratio between 2010 and 2012 of at least 40 calves: 100 cows¹.
3. A total hunter harvest target of $300 \pm 10\%$ in any year, with at least 80% bulls, for the entire herd.²
4. A total wolf kill of 80-100/year in the Bathurst range.

For the Bluenose-East herd:

1. A stable trend in numbers of cows on the calving grounds, based on annual reconnaissance surveys in 2010, 2011, and 2012, and a population photo-survey in 2010 (and 2012).
2. An average late winter (March-April) calf:cow ratio between 2010 and 2012 of at least 30-40 calves: 100 cows, consistent with a stable herd.
3. A total hunter harvest of ca. 1900 caribou in any year, with at least 80% bulls (interim recommendation only; to be reviewed later in 2010).

Specific objectives are not detailed for the Ahiak herd as it scarcely occurs in Wek'èezhii, but TG and ENR-GNWT support the BQCMB's efforts to reduce total harvest and promote at least 80% bull harvest.

¹ Late winter calf:cow ratios often show a saw-tooth pattern (higher one year, lower the next, then higher again), thus the objective is for an average calf:cow ratio over 3 years (2010, 2011, 2012).

² A target of $300 \pm 10\%$ is used here to indicate that a harvest slightly lower or higher than 300 is acceptable. Some emphasis in this proposal is placed on harvest monitoring and management that has widespread acceptance in the communities, which may result in a total harvest not meeting the target exactly.

5.0 RECOMMENDED MANAGEMENT ACTIONS

The revised joint proposal has maintained the original recommendations (November 2009) on proposed management actions 1 – 3, which include suspension of commercial, outfitter, and resident harvest (Table 2). These actions were reviewed. However, the new proposed harvest levels are well below past usage patterns for the Tłıchǫ and other Aboriginal hunters, who have priority for allocation under the Tłıchǫ Agreement. TG and ENR-GNWT also recognized that predator management (primarily wolves) should also be considered to increase survival of caribou cows, calves and bulls. As noted earlier, most Bathurst caribou in recent years were killed wither by hunters or by wolves, thus reducing those death rates is likely to have the most immediate and substantive effects on caribou population trend.

Refinements to management actions 4 and 5 in the Nov. 2009 proposal are described below. At this point, methods for implementing hunting management actions such as the use of hunting zones and seasons, use of tags, a no-hunting corridor on winter roads, use of check-stations, community-based monitoring and other mechanisms for implementing harvest targets, are still under discussion (see Section 7.0). It is anticipated that the Community Caribou Committees (described further on in this document) may also have a role in determining and implementing the most effective means for tracking and managing the caribou hunting from their communities. TG and ENR-GNWT also recognize that the WRRB may have recommendations for achieving targets for hunting. Additional work between TG and ENR-GNWT is recommended to develop the specific implementation plan for the WRRB's final recommendations on harvest management. Management actions in this proposal do not preclude the right to harvest for other Aboriginal groups, and it does not diminish the GNWT's requirement to consult with other Aboriginal groups. The interests of other interests, including Aboriginal governments, Nunavut and affected communities outside Wek'èezhìi, continue to be recognized.

5.1 Bathurst Herd

With respect to the Bathurst herd, this revised proposal specifically expands on the following recommended management actions from the joint proposal submitted in early November 2009 to the WRRB:

- confirm acceptance of management actions 1, 2, and 3 (Appendix A of Nov 2009 proposal), which includes suspension of commercial, outfitter, and resident harvest; and
- revise management actions 4 and 5 (Appendix A of November 2009 proposal) to a recommendation for a total hunter harvest of $300 \pm 10\%$ caribou for the herd, with a minimum of 80% bulls.

Modeling summarized in Appendix 3 provides a rationale for the proposed hunter harvest. Even if all harvest is stopped, there is no guarantee that the Bathurst herd will stabilize and begin to grow. The overall picture for the world's caribou and reindeer is not promising; most populations are in decline. Modeling for the Bathurst herd suggests that harvest of more than about 500 caribou (all bulls or 80% bulls) is associated with a substantial risk of further slow decline under most levels of calf productivity. A harvest at this level would be sustainable if there is continued high calf productivity. In view of the herd's rapid decline from 2006 to 2009, the uncertainties around survey information and modeling results, and the overall trend for the world's caribou and reindeer, a limited harvest of $300 \text{ caribou} \pm 10\%$, 80% or all bulls, was considered an appropriate management option to help stabilize the herd.

With respect to the Bathurst herd, this revised proposal recommends one additional population management action:

- A targeted increase of wolf mortality using a phased approach that combines increased hunting and trapping effort and wolf removal programs. This recommendation expands on the actions identified in ENR-GNWT's presentation and the WRRB technical expert's review at the March 2010 public hearing. It is consistent with reducing total mortality of Bathurst caribou. The target is to increase wolf harvest in the Bathurst range twofold from about 40 to 80-100/year (Table 1).

TG and ENR-GNWT have refined proposed actions 4 and 5 from the November proposal, to recommend an annual harvest level within the range of $300 \pm 10\%$ caribou from the entire Bathurst herd with at least 80% bulls. It was recognized that the target of $300 \pm 10\%$ Bathurst caribou would need to be shared between the Tłıchǫ and other Aboriginal groups and that the broader issues of allocation inside and outside Wek'èezhìi would be subject to further consultations. The harvest level of $300 \pm 10\%$ Bathurst caribou was established as a balance between a) allowing for a limited subsistence hunt for Tłıchǫ communities, in particular for Wekweetì, which has very limited access to other caribou herds, and b) a need to seriously reduce the level of hunting of Bathurst caribou to increase adult survival (especially in cows), to halt the declining trend, and to allow for long-term recovery.

Among the Tłıchǫ communities, continued yet reduced hunting of Bathurst caribou by Wekweetì was considered an important priority both for basic needs of the community, to support the Tłıchǫ way of life, and to maintain and enhance a respectful relationship between people and caribou. Subject to discussion and confirmation from Tłıchǫ communities, it is suggested that the entire allocation of available Bathurst caribou to the Tłıchǫ be provided to Wekweetì, because the other Tłıchǫ communities are better able to access the Bluenose-East herd.

The addition of options to increase wolf harvest expands on ENR-GNWT's presentation at the WRRB hearing in March 2010, and on suggestions from intervenors. It is known from previous studies that wolves have the capacity to increase rapidly. Increasing the harvest of wolves for a few years will allow more calves, cows and bulls to survive and will not jeopardize the long term survival of wolves in the North Slave region. The joint proposal recommends that actions be taken over the next 2 years to substantially increase, i.e., double, the number of wolves taken and to maximize economic benefits to hunters and trappers, as summarized in Table 1.

There was discussion at joint Tłıchǫ and ENR-GNWT meetings on the role of grizzly bears and whether to reduce their numbers as part of increasing Bathurst caribou survival rates. Grizzly bears are known to kill some caribou calves on calving grounds, and to take calf and adult caribou opportunistically in the summer and fall. However, in view of the low reproductive rate and low density of grizzly bears, and their status as Special Concern by COSEWIC (Committee on the Status of Endangered Wildlife in Canada), no management actions for grizzly bears are recommended at this time.

Table 2. Summary of wolf management actions for May 2010 revised joint proposal

Wolf Management Action – in order of priority	Mechanism and Authority	Assess effectiveness
a) Provide incentives to trappers to increase harvest of wolf in early winter when pelts are prime. This group of harvesters traditionally hunt the majority of wolves.	In fall 2010, provide training to hunters in Gamètì and Wekweètì to set snares and handle wolf pelts (ENR-GNWT/ITI). Increase value of pelt under Genuine Mackenzie Valley Fur Program to \$400 per pelt (ITI) if pelt brought in by end of January Increase price per carcass to \$200 (ENR-GNWT) Support hunters to get to where wintering caribou and wolves are.	Reduce wolves near communities – Gamètì, Wekweètì Increase harvest to pre 2008 levels. Increase total wolf kill by trappers and hunters from 40 to 80-100. ³
b) Increase outfitters and resident harvest of wolves	Increase price per carcass to \$200 (ENR-GNWT)	Increase harvest to over 40 wolves
c) Remove problem wolves around communities	ENR-GNWT to hire trappers to snare wolves around communities in early winter	Assessment by Gamètì, Wekweètì hunters and monitors
d) Wolf cull - focus wolf removals and associated monitoring in areas of winter range occupied by collared Bathurst cows - removals at den sites ⁴	Use a phased approach, and implement this action if wolf hunting and trapping efforts have not met annual targets and Bathurst herd declining further. Coordinated removal of wolves on Bathurst winter range should be a feasible option by January 2011. Option for removal at den sites should be evaluated and considered in spring/summer 2011.	Develop survey and monitoring methodology, and experimental design for removals of wolves on winter range and at den sites by fall 2010.

5.2 Bluenose-East Herd

TG and ENR-GNWT recognize that most of the recent hunting by Behchokö, Whatì and Gamètì has occurred on the Bluenose-East herd and recommend an interim strategy for managing the hunt of Bluenose-East caribou by Tłı̨chǫ communities, to help stabilize this herd. The recommendation is to reduce the overall Bluenose-East caribou harvest by Tłı̨chǫ communities, to emphasize selection of bulls, and to reduce the number of cows being hunted (i.e. at least 80% males). The recommendation to reduce the Bluenose-East harvest is based on the precautionary principle. The rationale for reducing the overall hunt is based upon the most recent trend data on the Bluenose-East herd between 2000 and 2006, whereby population surveys indicated that the herd had declined by ca. 7.5% per year. Although population surveys for the Bluenose-East herd are scheduled for June and July 2010, until those surveys are completed and the population data

³ ENR-GNWT information from den surveys and recent aerial surveys suggests that wolf numbers have declined rapidly in the last 5 years. As part of adaptive co-management, the target of 80-100 will need to be re-evaluated annually based on wolf harvest, as well as ongoing and additional information on trends in wolf abundance.

⁴ TG and ENR-GNWT are aware that more intensive wolf removal programs are likely to be very controversial. The two parties emphasize that these measures would be considered only if other efforts to recover the Bathurst herd are not working, and the herd continues to decline.

evaluated, the interim recommendation of TG and ENR-GNWT is to reduce the Tł̥ch̥q harvest of Bluenose-East caribou by up to 45% of the estimated 2009/2010 (Appendix 4) harvest in Wek'èezhìi⁵. This approximate harvest target is meant to provide an interim qualitative benchmark to emphasise the need for a substantial potential reduction in future hunting of Bluenose-East caribou by Tł̥ch̥q and other hunters compared to the 2009/2010 hunting season. It is recognized that consideration of the 2010 Bluenose-East surveys and their implications to hunting management are subject to further discussion with Nunavut, Sahtu Renewable Resources Board (SRRB), and the Wildlife Management Advisory Council (WMAC-NWTR) and affected communities.

5.3 Ahiak Herd

TG and ENR-GNWT recognize that there has been no formal population estimate for the Ahiak caribou herd and that knowledge of these caribou is still evolving. However, systematic reconnaissance surveys of the Ahiak calving ground from 2006 to 2009 indicate a 60% decline of the average number of cows seen over the three-year period. This is a real issue for management and conservation of the Ahiak herd and suggests that harvest should be reduced. Similarly, based on available information, TG and ENR-GNWT recognize that the numbers of caribou cows calving on the traditional Beverly calving ground have declined dramatically and that this herd's seasonal ranges and distribution at calving may now overlap in whole or in part with the Ahiak herd's. Any additional increase in hunting the Ahiak herd may have unintended yet serious implications to the recovery of the Beverly herd, as noted by the BQCMB's submission to WRRB. Consequently, TG and ENR-GNWT recommend that harvest pressure that was focused on the Bathurst herd not be transferred to either of the neighbouring herds that are declining. Furthermore, TG and ENR-GNWT suggest that any current hunting of Ahiak caribou within Wek'èezhìi should emphasize selection of males over females, and that these harvest suggestions would be subject to further consultation and implementation through other partners including the BQCMB, Nunavut Wildlife Management Board (NWMB), Saskatchewan, Nunavut, and other communities in the Ahiak and Beverly ranges.

⁵ Between the 2000 and 2006 population estimates of Bluenose-East caribou, the herd had declined by ca. 7.5% per year. By assuming this rate of decline has continued to the 2006 estimate of ca. 66,000 caribou, we extrapolated that the herd would be ca. 48,000 caribou in 2010. In 2006, the Sahtu Renewable Resources Board recommended a voluntary Total Allowable Harvest of no more than 4% of the Bluenose-East herd. Thus, based on this approach 4% percent of 48,000 is 1920, compared to an estimated 3466 caribou hunted from the Bluenose-East caribou herd in 2009/2010. Reducing the harvest estimate of 3466 by 45% results in a harvest of 1906 caribou.

Table 3. Summary of management actions for May 2010 revised joint proposal

Proposed Management Action	Recommended Action for Bathurst Herd in Wek'eezhii	Recommended Actions for Adjacent Herds (Bluenose-East and Ahiak)
1	Eliminate all commercial meat tags	Eliminate all commercial meat tags
2	Eliminate all tags for outfitting	Eliminate all tags for outfitting
3	Eliminate all resident hunter harvest	Eliminate all resident hunter harvest
4	<u>TG and ENR-GNWT Recommendation</u> Bull Harvest: Use management tools (see implementation section) to limit to 300 ± 10% Bathurst caribou of which a maximum of 20% (i.e., 60 animals) would be female. Allocation of Bathurst caribou among Tłı̨chʼı̨ communities to be discussed by communities, but preference to Wekweètì is recommended. Allocation within and outside Wek'eezhii to be discussed further with other Aboriginal groups.	Interim recommendation to reduce 2010/2011 harvest of Bluenose-East herd by up to 45% of estimated 2009/2010 harvest within Wek'eezhii; (see implementation section for possible tools). The actual target will need to be developed collaboratively following June and July 2010 survey results, analysis of data and discussions with SRRB, WRRB, Nunavut and other user communities. Recommendation not to increase access of Ahiak (and Beverly) caribou by Tłı̨chʼı̨ communities. Harvesters should be encouraged to select bulls and reduce the proportion of cows in the harvest. Further consultation with BQMB, Saskatchewan and Nunavut is required.
5	<u>TG and ENR-GNWT Recommendation</u> Cow Harvest: Cows should comprise ≤ 20% of the targeted caribou hunt as described above.	Interim recommendation to reduce 2010/2011 harvest of Bluenose-East herd to be updated and developed collaboratively following June and July 2010 survey results. Recommendation not to increase hunting of Ahiak (and Beverly) caribou by Tłı̨chʼı̨ communities. Harvesters should be encouraged to hunt primarily (80%) bulls, and to be consistent with BQCMB objectives and recommendations . Further consultation with BQCMB, Saskatchewan and Nunavut is required.
6	<u>TG and ENR-GNWT Recommendation</u> Predator management - Increase removal of wolves through hunter and trapper incentives, and focus on Bathurst winter range in early winter. - Develop and implement coordinated wolf removal programs on winter range to ensure that wolf hunting targets are achieved.	There may be a benefit to Bluenose-East caribou from increased wolf harvest in Bathurst winter range, due to extensive overlap in some years on winter range of Bathurst and Bluenose-East caribou.

6.0 RECOMMENDED MONITORING ACTIONS WITHIN AN ADAPTIVE CO-MANAGEMENT CYCLE

Recommended monitoring actions 1-8 in Appendix B of the November 2009 proposal will be incorporated into an adaptive co-management framework. Figure 5 shows an example of how an annual cycle of monitoring caribou, reviewing information, and possible changes to management action might work. The Bathurst herd is the most immediate focus of this monitoring, but a similar approach could be taken for other herds.

Shown in the middle of Figure 5 are some of the key periods in the year for caribou. Calves are born on the calving ground in June, caribou grow and gain weight in the summer, they begin to move south in the fall (September-October), the rut or breeding season is in late October, and from December to April the caribou are on their wintering grounds. In late April and May the cows migrate northward to their calving grounds again.

Information review and consideration of changes to management (red letters) could occur in August, December and April. In this way, the most up-to-date information on the herd's status can allow reconsideration of management actions without lengthy delays. Key management actions (fall and winter hunts, wolf trapping) are shown in purple.

Monitoring would include caribou surveys in June, October, and late March. The highest priority would be given to annual reconnaissance surveys on the calving grounds and spring composition surveys. For the herd to recover, numbers of breeding cows must increase, and the reconnaissance surveys would provide a measure of trend in breeding cow numbers. Herd stabilization and recovery will also require good calf productivity and survival, which can be monitored by the late winter recruitment surveys. The October survey would provide information on adult sex ratio (bulls:100 cows).

Results of the fall and winter hunts, and wolf trapping would also be closely tracked as integral elements of the monitoring/adaptive management cycle. Wolf harvest and caribou harvest could be tracked on a weekly basis or as community hunts are completed. Details of tracking harvest (e.g. use of tags) remain to be developed, but the two governments recognize that accurate tracking of harvest as it happens would be critical to the success of the program.

Table 4 contains details on the management actions, monitoring and some possible approaches to adaptive management, for the Bathurst herd. A similar table could be developed for the Bluenose-East herd.

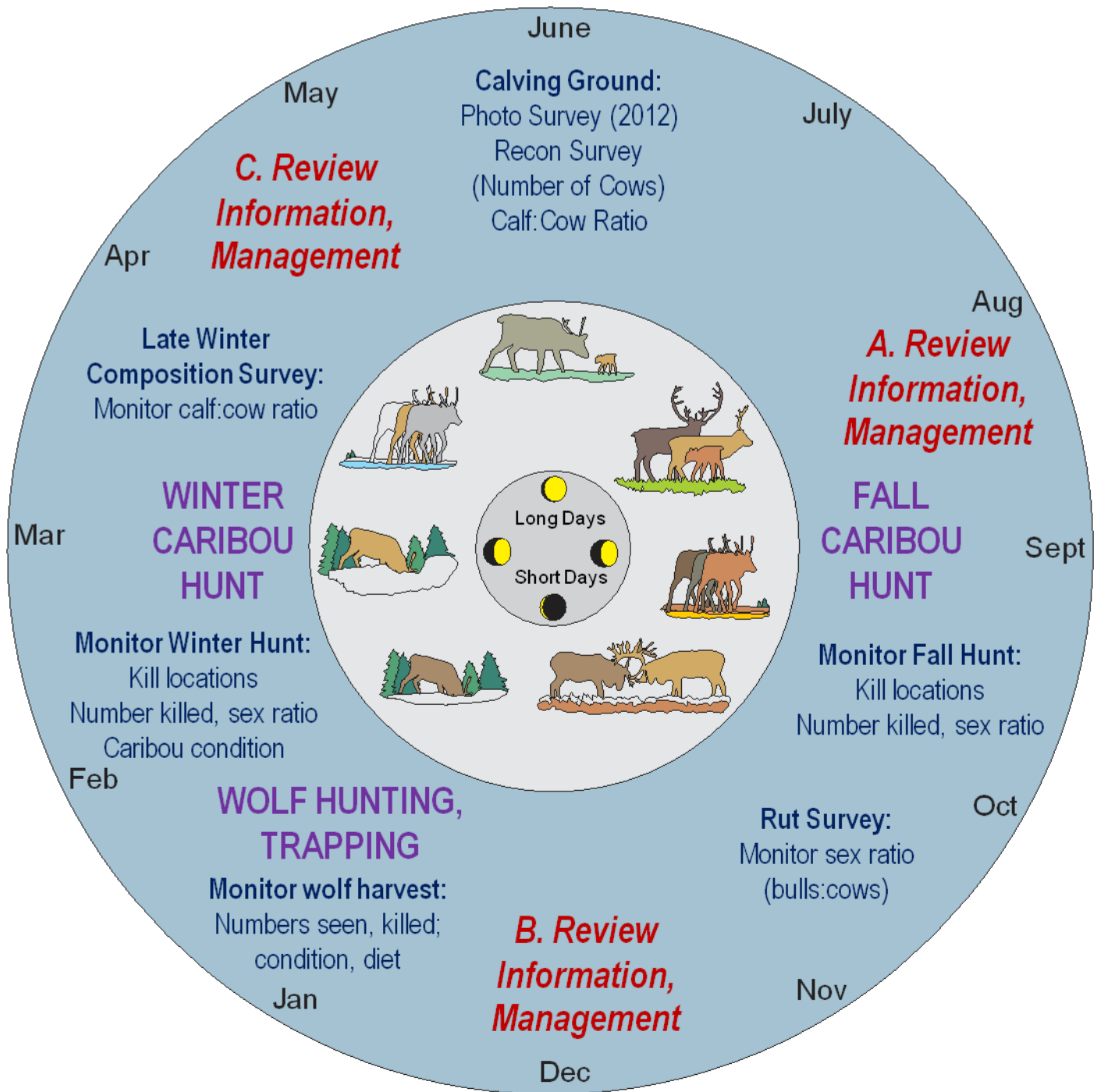


Figure 5. Annual cycle of monitoring Bathurst caribou and hunting, combined with information review and development of adaptive co-management actions.

Table 4. Summary of monitoring actions and adaptive management options for Bathurst caribou herd.

Action	Indicator(s)	Priority	Rationale	Desired Response	Adaptive Management Options	How Often	Notes
1. Reduce cow harvest to <60	1. Numbers (density) of 1+ year old caribou on annual calving grounds reconnaissance surveys	1	Cow survival in Bathurst herd 67-68% in 2009; need at least 85-88% for herd to stabilize/recover. Trend in breeding females correlated to abundance of 1+ year-olds on annual calving ground.	Stable/Increasing trend in numbers of 1+ year old caribou on annual calving ground	If trend in 1+ year old caribou is stable/increasing, continue as before; if trend negative, consider closing harvest and intensifying wolf kill effort	Annual	Further review of best approach to analysing trend from calving reconnaissance surveys to occur with statistician; could use modeling to integrate other data.
	2. Estimate of breeding cows from calving ground photo survey	1	Most reliable estimate for abundance of breeding cows & can be extrapolated to herd size based on pregnancy rate and sex ratio.	Stable/Increasing trend in numbers of breeding cows	If trend in breeding cows stable/increasing, continue as before; if trend negative, consider closing harvest, intensifying wolf kill effort	Every 3 years	Last survey 2009, next 2012. Trend in breeding females is most important; total herd size is best understood by public.
	3. Calf:cow ratio in late winter (March-April); composition survey	1	Herd can only grow if enough calves are born and survive to one year	>40 calves:100 cows on average	If average calf:cow ratio $\geq$ 40:100, continue as before; if average ratio $\leq$ 20:100, herd likely declining; re-evaluate management	Annual	Calf productivity & survival vary widely year-to-year, affected by several other variables, including weather.
	4. Fall sex ratio; composition survey	2	Tracks bull:cow ratio; Bathurst ratio has been relatively low (31-38 bulls/100 cows); prime bulls key for genetic health, migration	Maintain bull:cow ratio above 30:100	If bull:cow ratio below target, reduce/eliminate bull harvest	Every second year?	Needed for June calving photo survey – extrapolation to herd size
	5. Cow productivity; composition survey on calving ground in spring (June)	2	Relatively low calf:cow ratio in June 2009 – many very young cows not yet breeding; affects recruitment	High calf:cow ratio (80-90 calves:100 cows)	Low ratio may indicate nutritional problems and possibly low recruitment following March; spring recruitment survey integrates initial productivity and calf survival	Every 3 years?	Essential component of June calving ground photographic survey. Could also be done during systematic survey years if required.
	6. Caribou condition assessment/pregnancy rate	1	Condition assessment provides overall index of nutrition/environmental conditions, estimate of pregnancy rate	High hunter condition scores (average 2.5-3.5 out of 4)	Poor condition or low pregnancy rate may indicate poor environmental conditions, possible decline	Annual	Annual participation of hunters required. Sex & age of animals important to confirm. Key component of cultural hunts.
2. Track caribou harvest accurately	7. Numbers of cows and bulls taken by all hunters	1	Cannot assess effectiveness of management if harvest is poorly tracked; harvest well over target could lead to further decline	Accurate harvest reporting & numbers within target limits	If harvest reports accurate and within target limits, continue as before; if harvest not tracked well or well over limit, review/revise harvest reporting and management immediately	Annual	Location of hunter's kill sites used to assign caribou to herds. ENR-GNWT grid-based hunter survey method to be developed in collaboration with hunters.
3. Reduce wolf predation on adult and calf caribou	8. Numbers of wolves killed/year	1	Wolves are main non-human predator on caribou; natural cow and calf survival rates should increase	Stable/increasing no. of breeding caribou cows. Annual wolf harvest increased from 40 to 80-100.	If cow numbers stable/increasing, continue as before; if trend negative, consider closing harvest, intensifying wolf kill effort	Annual	Difficult to assess effectiveness on caribou survival. Monitoring will also depend on methods used to increase wolf mortality.
	9. Numbers of wolves seen on den surveys	2	Index of relative wolf numbers and productivity, tracked since 1996	Declining trend in wolf numbers & productivity		Annual	Develop standardized aerial survey methods for estimating wolf numbers
	10. Wolf numbers from hunter reports	2	Hunters may report areas of higher wolf numbers; additional measure of trend in wolf numbers	Declining trend in wolf numbers	Areas with more wolves could be targeted for wolf trapping/hunting efforts	Annual	Need to develop hunter interview methodology to collect data.

7.0 IMPLEMENTATION PLAN

A collaborative implementation plan between TG and ENR-GNWT, and consistent with WRRB recommendations, is an integral and complementary component to the recommended co-management actions and monitoring program. Some aspects of monitoring would require prior consideration and agreement on specific implementation options. From a practical point of view, feasibility of implementing management actions in partnership with Tłıchǫ communities may also have some bearing on the likelihood of successfully achieving broader management objectives such as support and participation in hunt monitoring. For example, a hunting management target may be successfully achieved through implementation of community-based monitoring within a self-regulatory process consistent with the Tłıchǫ Agreement, versus a top-down imposition of a hunting quota that is reliant on enforcement officers to achieve compliance. A community-based approach would promote stewardship and respect by all citizens for caribou.

Therefore, in addition to developing the recommendations for hunting and predator management actions in Section 5.0, and associated monitoring in Section 6.0, TG and ENR-GNWT have initiated discussion on developing a coordinated implementation plan that is based on meaningful participation of Tłıchǫ communities and would align the establishment of any new Territorial regulations and Tłıchǫ laws. The two governments have been discussing and developing implementation protocols pursuant to their joint recommendations for management actions and monitoring, but more work is required to develop specific implementation options for the proposed plan. Furthermore, the implementation plan may also change according to the final recommendations made by the WRRB, but it is anticipated that development of a detailed implementation plan will be required by TG and ENR-GNWT following the reconvening of the WRRB's hearing and its final decision(s).

Although specific details have yet to be finalized, components of an implementation plan for the recommendation to establish a hunting target of $300 \pm 10\%$ for the Bathurst herd are outlined below. This is provided as additional context for the recommended actions, and to indicate that progress has been made on implementing actions to stabilize the Bathurst herd. Additional work is required, and in particular the recommendations from WRRB will be central to implementation.

7.1 Development and implementation of a rules-based approach to achieve numerical hunting targets

Hunting practices today are based upon extensive access to caribou throughout much of the herd's annual range due to the use of motorized vehicles – including aircraft, snowmachines, and four-wheel drive trucks. Increased access combined with acceptance of ongoing technological advances in transportation (vehicles), navigation (Global Positioning Systems) and animal tracking (satellite collars) have increased hunters' collective efficiency to the point where hunting may accelerate declines when caribou herds become small. Management of hunting requires more than establishing numerical targets or thresholds. It also requires development and implementation of rules (i.e., regulations, laws, or best practices) that will strengthen Tłıchǫ traditions, define acceptable hunting methods and behaviour of hunters, and access to the wildlife resource over time and space. Within this context, the two governments have developed some initial objectives and considerations for implementing a numerical hunting target for the Bathurst herd in Wekeezhii. These are listed in Table 5.

Table 5. Approaches to rules-based hunting of Bathurst caribou discussed by TG and ENR-GNWT.

	General Rule	Considerations
Fall Hunt	Designate a fall hunt which would establish a priority for the community of Wekweètì	A hunting zone and season could be defined to reflect the distribution of Bathurst caribou during fall when they are most accessible to Wekweètì
	Organize and conduct a traditional cultural fall hunt of caribou in the Mesa Lake area (see Appendix 1)	Traditional fall hunts were done by boat. Reduce and re-allocate CHAP money that had been used in the past to provide aircraft support to fall hunts, and develop hunting related educational programs for Tłıchʼo.
	Reduce harvest of female caribou	Emphasize hunting of young bulls because of their good condition and quality of meat in fall.
	Encourage harvesting of other animals and fish that were relied on in the past when caribou were scarce	Support fish camps, encourage harvesting of bison, moose and small game.
Winter Hunt	Designate a winter hunt which would reflect the distribution of the Bathurst herd	Define a winter hunting zone based upon recent satellite telemetry data from Bathurst cows. Define a relatively large area as a conservative way of allowing for some shifts in distribution within winter range.
	Monitor hunting of Bathurst caribou	Develop community-based monitoring program in collaboration with Community Caribou Committees. Establish designated check stations at key points along traditional transportation routes. Confirm herd identity for hunted caribou by comparing kill locations to locations of satellite collared Bathurst caribou. Develop a project to test whether new genetic markers could establish herd identity of shot caribou based on tissue samples.
	Manage access to caribou	Define a winter road conservation zone on Tłıchʼo lands to encourage people to hunt caribou away from the roads.
	Reduce harvest of female caribou	Emphasize bulls only, but accept up to 20% cows in the harvest.
Community-based Monitoring	Establish Community Caribou Committees to administer and monitor hunting	Use tags to allocate, administer, and monitor hunting effort by community
		Designate monitors within each community as point of contact for hunters and to interview hunters.
		Develop strategy and distribute meat to elders and other community members
	Develop education programs within Tłıchʼo communities on “relearning knowledge and respect for caribou” (see Appendix 1).	Solicit feedback and direction from Community Caribou Committees on most appropriate ways of implementing education program, and coordinate with Traditional Knowledge Monitoring Study (proposal developed by A. Legat, WRRB).

7.2 Assessment of Tłıchǫ community country food needs, and impacts of caribou scarcity on Tłıchǫ communities

During the joint meetings between TG and ENR-GNWT in April and May 2010, it became apparent that population size, needs for caribou meat and access to alternative country foods (moose, fish, bison, muskrat, etc) varied among the four Tłıchǫ communities. As noted elsewhere (see Section 5), Wekweètì has more limited access to Bluenose-East caribou during winter, hence allocation of the limited Bathurst caribou harvest was suggested to favour Wekweètì. Although there was insufficient time to carry out a detailed assessment of each community's needs and alternative options, these assessments could be carried out as part of implementing the overall program, once the WRRB has made its recommendations.

In addition, discussions primarily among TG staff suggested that there might be ways in which the effects of scarce caribou meat and loss of hunting opportunities on Tłıchǫ communities could be monitored. Studies elsewhere have shown that loss of hunting opportunities can have cultural, economic, health-related and social impacts on cultures and communities for whom hunting is a way of life. Tłıchǫ communities have experienced the effects of caribou scarcity most recently in the 1960s; Wekweètì was evacuated at that time to the community now called Behchokò, with considerable impacts on the families affected by this evacuation. Some initial suggestions on monitoring the effects of low caribou meat availability and reduced hunting on Tłıchǫ communities are provided in Appendix 5. These kinds of assessments would be developed further as part of implementing the overall caribou management plan.



Phillip Zoe (Photograph by A. Legat, 2000)



Jimmy Martin (Photograph by A. Legat, 2000)

8.0 ENGAGING COMMUNITIES, DEVELOPING CAPACITY, AND WORKING RELATIONSHIPS

The role of Tłıchǫ communities as meaningful partners with TG and ENR-GNWT in the refinement and implementation of management recommendations is fundamental to successful adaptive co-management of caribou in Wek'èezhii. This section outlines a preliminary working model that starts to address many of the practical challenges for engaging communities, building capacity and developing strong working relationships for governance.

8.1 Engaging communities, capacity and governance

In the context of true collaboration, and in the spirit and intent of implementing the Tłıchǫ Agreement, the Tłıchǫ Government and the Tłıchǫ people must play a significant role in the recovery and long term management of the Bathurst Caribou herd. Thus, in addition to development of management actions focused on management of hunting and predators, an important aspect of this revised management proposal was to consider new ways of implementing and improving the decision-making process. The following section develops and describes a means of developing capacity within communities and the Tłıchǫ Government, as well as defining potentially effective working relationships between Tłıchǫ communities, TG, ENR-GNWT, and the WRRB. It is provided as an initial exploration of an important aspect of co-management and is not meant to preclude or constrain involvement of any other Aboriginal groups or stakeholders.

Community Caribou Committees and Tłıchǫ Ekwò Working Group

Community-based monitoring will play a key role in the future management of the Bathurst Caribou herd. In order to ensure community acceptance and implementation of hunting management changes recommended in this proposal, the Tłıchǫ people must be key players in monitoring and local decision making. Within each Tłıchǫ community, creation of a Community Caribou Committee (CCC) would involve representatives from elders, active hunters and youth. This committee would work with the coordination and facilitation of the community lands department officer(s) and the Lands Protection Department to determine the needs of each community in relation to caribou, alternative food sources and also education and information needs (Figure 6).

At this early stage of considering community-based monitoring, it is proposed that the CCC will monitor the land and the relationship between the Tłıchǫ and the caribou. They will also be provided with opportunities to further develop their understanding of the biological information needs of the ENR-GNWT biologists and to also participate in a traditional knowledge monitoring program⁶. This integrated approach will develop the communities' capacity to define and address community concerns and information needs regarding the land, resources and caribou. The CCC will meet every 4 months in accordance with the seasonal monitoring and adaptive management cycle (see Figure 5) to discuss:

- Recent issues/successes/challenges in each community
- Education and planning for individual community needs
- Monitoring results and how to implement into decision making process
- Mutual sharing and learning.

⁶ The WRRB is currently developing a Traditional Knowledge (TK) Monitoring Program that will be implemented in Tłıchǫ communities (A. Legat pers. comm.). There are likely strong opportunities for synergy and collaboration between the communities and Tłıchǫ Government as the TK Monitoring Program proceeds to implementation.

It is anticipated that these community-based committees would work with and report to the Lands Protection Department which would form a Tłıchǫ Ekwò Working Group, which would in turn communicate with the Chiefs and Executive Council (CEC) and Tłıchǫ assembly. Representatives from the CCC's will also play a key role in the proposed Tłıchǫ /ENR-GNWT Technical Working Group (see Figure 6) and contribute to development and implementation of management options.

Tłıchǫ /ENR-GNWT Technical Working Group

This technical working group will continue the joint working group which has collaborated to develop this joint proposal. It will compile and review any new monitoring information that has been collected, and develop management options. These options will be consensus-based proposals whenever possible, for consideration of the Tłıchǫ Government and ENR-GNWT, which would determine final collaborative management decisions, after review by WRRB. This technical working group would likely meet according to the time frame suggested by the annual monitoring and adaptive management cycle (Figure 5). The technical working group would consist of representatives from a) the Tłıchǫ Ekwo working group to ensure the community perspective, concerns and monitoring is brought into the decision making process; b) ENR-GNWT to ensure that the scientific indicators are brought into the decision making process; and c) observers from WRRB as the overall instrument of wildlife management in Wek'èezhìi. WRRB would also be invited to periodically attend meetings of the community groups and other groups suggested in this proposal, and to advise, as appropriate, on objectives, methods and decision-making (Figure 7).

Once these decisions have been made, they would be incorporated into the adaptive co-management cycle, with the Tłıchǫ Government, the CCC's and ENR-GNWT working together to inform the public and implement management decisions.

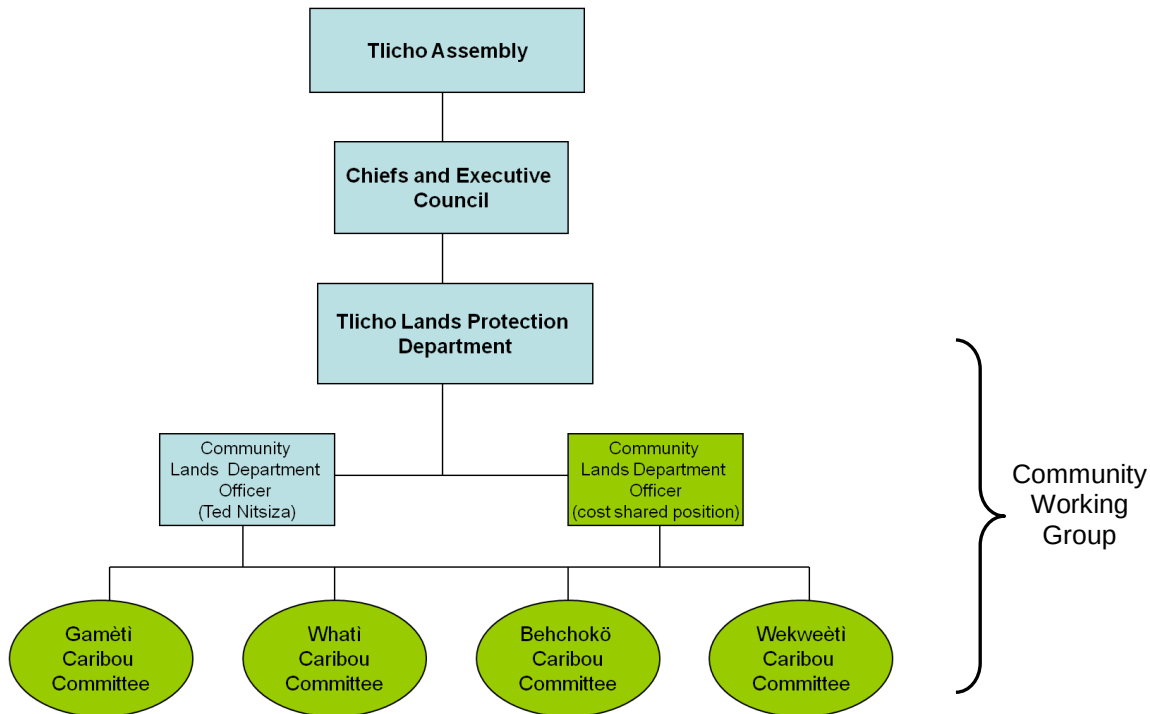


Figure 6: Tlicho Government governance and capacity considerations for Bathurst Caribou co-management (note: the blue shaded boxes represent positions currently in place, the green shaded polygons represent positions yet to be defined and filled).

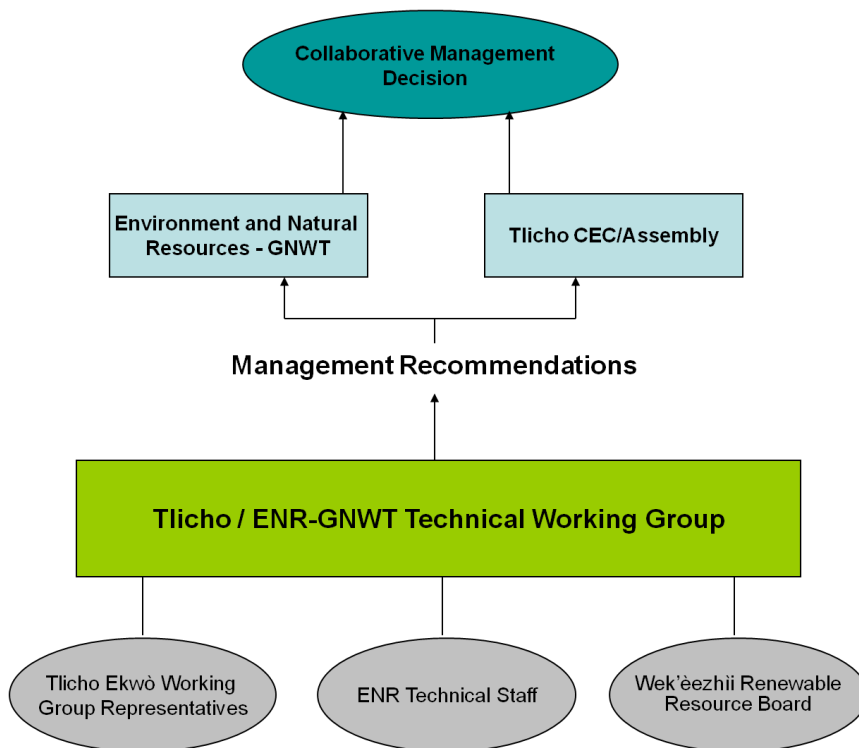


Figure 7: Adaptive Co-Management Decision-Making Process

9.0 MANAGEMENT PLANNING FOR CARIBOU HERDS (SHORT AND LONG TERM)

The main focus of this proposal is on the next 2 years, particularly for the Bathurst herd, as the next population survey (*i.e.*, calving-ground photographic survey) will be in June 2012. Recommendations for the Bluenose-East herd are interim until a new population estimate is established (likely later in 2010), and recommendations for the Ahiak herd will also need to be revised when a population survey is completed in 2011. TG and ENR-GNWT both recognize there is a need to establish longer-term planning processes for all three herds, which may include harvest management plans similar to the co-management plan developed by the Porcupine Caribou Management Board. These processes will likely involve multiple co-management boards, territorial, provincial and Aboriginal governments, and communities, and will take time to develop. The current management proposal includes recommendations for these longer-term planning processes.

9.1 Caribou herd management plans

Of the three caribou herds that have habitat within Wek'èezhii, none has a formally adopted and current management plan in place as of May 2010.

A multi-jurisdictional co-management planning committee worked to develop a management plan for the Bathurst herd, which was finalized in 2004. However, the plan was not formally ratified by the participating governments and other groups, but it has formed the basis of monitoring of the Bathurst herd has been carried out by the GNWT-ENR.

A planning process for the Cape Bathurst, Bluenose West and Bluenose-East herds was initiated in 2008, and is in progress in mid-May 2010. This process is led by wildlife co-management boards established under the Inuvialuit, Gwich'in, Sahtu and Wek'èezhii land claim agreements along with a number of additional partners such as the Nunavut Wildlife Management Board. Recommendations for Bluenose-East harvest or other recommendations for this herd would need to be reviewed by these boards.

Currently, there is no management plan or planning initiative in place for the Ahiak and Beverly herds. The Beverly and Qamanirjuaq Caribou Management Board has a management plan for the Beverly herd, but action plans need to be developed to implement the plan. The BQCMB held a stakeholder community workshop in Saskatoon in February 2010, and participants recognized that there was a need to monitor and manage the Ahiak herd due to its rapidly declining trend. There is also serious concern about the status of the Beverly herd, and recognition that there is a high degree of overlap in seasonal range use between the Ahiak and Beverly herds. These declines and shared seasonal ranges have major implications for recovery of the remnant Beverly herd.

The primary focus of this joint proposal is on the management and recovery of the Bathurst herd. The TG and ENR-GNWT clearly recognize that an overall reduction in hunting of the Bathurst herd should not result in an unintended shift in hunting effort to adjacent caribou herds. Monitoring and recovery options suggested in this revised proposals are the results of direct consultation between the two governments and reflect a precautionary approach for management and recovery of the Bathurst and adjacent herds. As outlined in this proposal, there is a need for longer-term management plans for each barren-ground caribou herd, with precautionary provisions for harvest management in the interim.

- *Parallel process with other Aboriginal groups*

Because the Bathurst caribou range covers lands within and outside Wek'èezhii, GNWT has been communicating with the Yellowknives Dene First Nation and other Aboriginal groups outside of Wek'èezhii, to establish processes to discuss co-management of the Bathurst herd. No agreements have been reached at this time (May 31, 2010). This proposal to the WRRB does not preclude the right to harvest for other Aboriginal groups, and it does not diminish the GNWT's requirement to consult with other Aboriginal groups.

9.2 Cumulative effects and landscape management strategies for caribou herds

Although the main focus of this proposal is on reducing mortality rates of Bathurst caribou in the next 2 years, TG and ENR-GNWT recognize that other factors like fire on the winter range and industrial development, including new roads and increased access, can have significant cumulative effects on caribou and compromise the herd's resilience to environmental changes. Habitat conservation is an essential and complementary aspect to population management objectives to enhance recovery of Bathurst caribou over the short and long term. Indeed, recovery of Bathurst caribou, even over the short term, could be compromised in the absence of long-term management plans that ensure long-term habitat conservation and management of cumulative effects.

Consequently, work should be initiated over the short term to ensure consistent development of landscape management strategies across the annual range of the Bathurst caribou and evaluate the potential tradeoffs between industrial development, resource extraction and improved access, relative to goals for sustainable hunting and persistence of healthy caribou populations. Within Wek'èezhii, the draft Tłıchʔ Land Use Plan (April 2010) provides important and relevant context. Similarly, the draft West Kitikmeot Land Use Plan also provides the relevant perspective for land use strategies in Nunavut. A review of these respective draft land use plans would be a useful short term step to develop coordinated strategies for industrial land use and habitat conservation across the Bathurst range.

During the next two years, as concerns or new information develop about habitat-related issues, those will be discussed by the *Tłıchʔ /ENR-GNWT Technical Working Group*, in order to develop short-term actions for review by WRRB that may become necessary to support the objectives of this proposal, relating to stabilization and recovery of the caribou herds whose habitat includes Wek'èezhii. At a strategic level, the *Technical Working Group* should develop recommendations on longer-term planning for each of the three herds, and these plans should include guidelines on protection of key caribou winter ranges, coordination among land management agencies as well as limits to development on caribou ranges, with highest priority to protection of calving grounds for all three herds, recognizing that these are located in Nunavut.

10.0 USE OF ALTERNATIVE COUNTRY FOODS AND ACCESS TO OTHER WILDLIFE SPECIES

Tł̥chq̓ have experienced previous times of scarcity and abundance in caribou. Elders have always believed that when caribou became scarce they would go away to be left alone and recover. During previous times of caribou scarcity, the Tł̥chq̓ and other Aboriginal peoples relied more heavily on other sources of country food including moose, beaver, muskrat and fish. The elders knew to always leave 'seed on the land' in order to ensure that the species they were hunting or trapping would be able to recover. Thus, out of necessity and respect for the wildlife, Tł̥chq̓ had a strategy to adapt their use of wildlife according to prevailing seasonal and natural long term cycles in abundance of caribou.

Given the decline and low abundance of the Bathurst herd, the Tł̥chq̓ recognize the need to both reduce their consumption and hunting of caribou and to expand their harvesting to other species. Large ungulates such as wood bison and moose may be able to provide additional meat for consumption but added harvest pressure also places an onus on additional monitoring to ensure that the hunting is sustainable.

10.1 Increased access to wood bison in Wek'èezhìi to reduce hunting pressure on barren-ground caribou

Wood bison have expanded into the North Slave region in the last 15 years from the herd established at Fort Providence in 1964. With the re-alignment of Highway 3 between Behchok̓ and Yellowknife, wood bison expand to within 30 kilometers west of Yellowknife using the road right-of-way as a movement corridor. This section of the highway is on Canadian Shield, which has limited prime wood bison habitat. In the Slave River Lowlands, the wood bison population is bounded by the Canadian Shield to the east. The Mackenzie bison herd was estimated at 1600 animals in 2008. Less than 400 bison are resident in the North Slave region, with less than 100 between Behchok̓ and Yellowknife.

Wood bison are listed as a "threatened species" under the federal *Species at Risk Act*. A national recovery strategy is being drafted. Targets for size of recovery herds vary between 500 and 1,000.

Wood bison damage property in Behchok̓ and Edzo and approximately 20-30 are killed on the highway annually in the North Slave Region. To date, no human lives have been lost due to vehicle accidents in the North Slave Region. Most collisions occur in the fall when days become shorter. Semi-trucks have killed as many as 7 buffalo in one collision.

The draft NWT Wood Bison Management Strategy identified a number of immediate actions to maximize benefits and reducing bison/human conflicts in communities and along highways. Wood bison in the North Slave region may provide an alternative country food source to barren-ground caribou. The Interim Emergency Measures implemented by ENR-GNWT in January 2010 included establishing two wood bison management zones in the North Slave Region (as in Table 6).

Table 6. Changes to bison management in Tłıchǵ land claim area

Management Zone	Regulations	Management Objectives
R/WB/01 – west of Behchokǵ to Dehcho boundary (Birch Creek)	45 tags issued (25 to Tłıchǵ Government, 10 to YKDFN, 10 to Metis groups) Any sex Season Jan 1 to Mar 15 May be issued to GHLs, resident or outfitted hunter	Maintain Mackenzie herd at over 1,000 wood bison. Reduce wood bison conflicts in communities and along highway. Maintain wood bison in this area. Provide alternative country food source to barren-ground caribou. Provide opportunities to outfit for wood bison in North Slave region Provide opportunity for Tłıchǵ to learn about hunting and eating wood bison.
R/WB/02 – east of Edzo	GHL only, no limit Must report kill within 72 hours Season Jan 1 to Apr 15	Eliminate wood bison from this area, which is not prime wood bison habitat

ENR-GNWT recommends that the wood bison management zones be continued as noted in the table above. However, the season in both zones should be expanded to be consistent with subsistence harvest in Dehcho for this herd. The season would begin September 1 and continue to April 15.

10.2 Monitoring actions for other harvested species

As part of their commitment to responsible wildlife management, TG and ENR-GNWT recognize the importance of conducting additional monitoring of species that may incur increased hunting pressure. However, specific discussion and agreement on additional surveys and monitoring programs has not occurred for species such as moose or boreal caribou. Baseline surveys to document abundance and distribution of moose and woodland caribou have been conducted in the last 5 years.

APPENDIX 1. The relationship between Ekwo (caribou) and Tłıchǫ culture, language and way of life

The inter-dependence of the Tłıchǫ people with Ekwo could be considered the fundamental pillar or essence of Tłıchǫ culture. The Tłıchǫ and other Aboriginal people in the North have depended upon caribou for their physical, mental and spiritual needs since time immemorial. Since the time of Yamoza, the Tłıchǫ have lived in co-existence with the caribou, with rules and laws of respect and appreciation defining the relationship between the Tłıchǫ and the caribou. The caribou provide the Tłıchǫ with their life, their spirit and their inspiration. The connection they have is not only about the physical contribution the caribou makes to Tłıchǫ food, clothing, bedding and shelter. The caribou are the source of their legends and beliefs; the basis of their lifestyle, traditions and practices and the foundation of their value system. Tłıchǫ traditional trails follow the paths of the caribou towards the barrenlands with campsites, gravesites and places of spiritual significance all being described by placenames along the way. These placenames are dependent upon the soil substance and landscape, determining the harvest methods and telling the story about the place it describes.

Tłıchǫ history with Bathurst Herd

The relationship between the Tłıchǫ and caribou has changed over time, with the outside influences of the global market economy and trade leading to altered ways of valuing this sacred animal. This has led to a change in Tłıchǫ and outsider dependence on the animal. As early as 1700 the European desire for beaver pelt hats and other furs brought trappers and traders to the North, increasing the need for caribou as a trade item. This was the beginning of the change from hunting for subsistence to hunting for trade, thereby altering the relationship between man and animal.

The establishment of Old Fort Rae in 1852 further increased the market value of caribou. The Fort was set up not for trade but as a provisional post. It would buy caribou from the locals to trade and distribute to posts along the river. The Tłıchǫ would sell their caribou to the post, only to end up purchasing it back later at times. Caribou had now truly become a product to be bought and sold.

The last major change in this relationship has occurred in the last 15 years, where we have seen diamond mines, ice roads, all season roads, big game outfitting, resident and commercial hunting, high powered rifles, skidoos and trucks and trailers come onto the scene. This has altered the relationship between man and caribou and increased the pressures and stress on the animals, potentially more than in the last 150 years together.

Times of Scarcity

The relationship between Tłıchǫ and caribou is maintained by laws governing human behaviour towards the caribou. When these laws are not respected, it is believed that caribou populations will become smaller and their migration patterns will change. There have been times of scarcity and times of abundance, which have been influenced by both natural cycles of wildlife abundance and human influence. Elders have always believed that when the caribou became scarce they would go away to be left alone - to recover and replenish themselves. They would then come back to offer themselves to the Tłıchǫ; thus, the relationship between Tłıchǫ and Ekwo was one of mutual respect between man and animal.

During those times, the caribou were not as easily accessible as they are today. There was no mechanised transport such as skidoos, airplanes and 4x4 trucks. During previous times of scarcity,

the Tłıchǵ and other Aboriginal peoples turned to other sources of food – moose, beaver, muskrat, ducks, geese, or fish. The elders knew to always leave ‘seed on the land’ in order to ensure that the species they were hunting or trapping would be able to recover.

The most recent Tłıchǵ memory of a time of caribou scarcity was in the 1960s. At this time, the community of Wekweètì had to be evacuated to Behchokö and Gamètì, because of a scarcity of caribou and other game. This move led to significant changes in the political and social fabric of Tłıchǵ society. Due to an influx of people and lack of infrastructure in Rae, the community of Edzo was developed by the GNWT. During this period, Tłıchǵ children were encouraged to go into the residential school system, in exchange for relief from the government. The caribou decline indirectly led to changes in Tłıchǵ culture and lifestyle as the school system and amenities such as a hospital further influenced the Tłıchǵ to live in communities and to begin to leave their bush life behind.

From scarcity to abundance – so it seems

The last major periods of scarcity of the caribou that impacted the Tłıchǵ significantly preceded the advent and introduction of skidoos, trucks and airplanes to the hunt for caribou. Prior to the 1970s, both Aboriginal and non-Aboriginal hunters used dog sled teams and went only as far as they could carry food and supplies to survive on the barren lands when they went hunting. The Tłıchǵ did not control the land, but the land controlled the people and their actions.

Following the introduction of the snowmobile in the 1970’s, access by hunters across the seasonal range of Bathurst caribou began to expand. In 1972, the modern airplane was introduced to the community hunt. The GNWT began at this time to contribute airplanes for greater access to caribou and programs to assist communities with money for fuel. Community freezers were introduced. Caribou was no longer only available for certain periods in the season, but it became available all year round whether the caribou were readily available and close to communities or not. The need to depend on other species at periods of time throughout the year now became a choice, not a necessity.

The changing role of caribou in the Tłıchǵ way of life and the gradually altered expectations over time has brought us to the present. The North is increasingly accessible by airplanes, skidoos, winter roads with trucks and trailers and high powered rifles. Tłıchǵ and other peoples in the North have developed expectations and have been conditioned over time to believe that they have a right to access and have caribou available at all times, without question or consequence. The steep decline in the Bathurst herd tells us all that this is no longer the case and we must change our ways. With declining caribou numbers and maintaining or increasing the same level of harvest, the caribou face a significant challenge in recovering that needs to be addressed. The future children of the North have a right to enjoy the caribou as others previously have, and it is the responsibility of the Tłıchǵ, other Aboriginal groups, ENR-GNWT and all other stakeholders to begin to change our collective thinking and expectations, and to give the herd an opportunity to recover.

A way forward

A recovery and management plan for the Bathurst caribou cannot focus only on the ecological issues at hand. The relationship between humans and caribou is complex and dynamic, and is of fundamental importance. In order to address the decline in the Bathurst herd, this complex system must be taken into account, with an appreciation that restrictions of harvest are only a small part of the long term sustainable approach to this issue. By looking at the system as a whole and its

interconnectedness, the solutions will be found in many different places, places that science alone can not define.

As this management proposal will show, the Tłıchǫ Government and ENR-GNWT have worked together to develop a holistic, realistic and adaptive co-management plan. Through adaptive co-management, capacity building, education and cooperation, we believe that the Bathurst caribou herd's future may in fact not be so dire and that this species will be here to teach and share with our children and their children thereafter.

Education – Relearning knowledge and respect – Nǫowo governing Caribou

Tłıchǫ elders have always taught that becoming and being knowledgeable is the way that respect is shown to the caribou. They believe that a person becomes knowledgeable by listening, watching and experiencing, and that there is a relationship between one's personal knowledge and their ability to respect the land. Being knowledgeable is necessary for a person's success and in order to survive, individuals must have different types of knowledge (men's, women's and non Aboriginal) accumulated over time. Tłıchǫ elders believe that if the young people were unable to become knowledgeable in the past, they were unable to survive and the same applies today.

The Tłıchǫ have many laws governing their behaviour towards the caribou

- Laws governing treatment of caribou
- Laws governing Use and Need
- Laws Governing 'what is not used'
- Laws Governing the Responsibility of Leaders and Elders
- Laws Governing Parents' and other family Members' behaviour
- Laws Governing Female Behaviour
- Laws Governing Hunters
- Rules Governing Following and Meeting Caribou
- Rules Governing the Respectful 'Cutting Up' of Caribou

If these laws are not abided by, this is a sign that the person lacks knowledge and is emotionally unwell. It is a sign that they are disrespecting the land and the caribou.

This lack of knowledge which guides human behaviour: "demonstrates disrespect of oneself, the de, and the caribou. This can lead to a decline in caribou population, changes to caribou distribution, and a dysfunctional society" (Legat, Chocolate and Chocolate: 40)."

As this knowledge is lost, the laws are no longer followed and respect for the caribou is further diminished. With modernization and changing lifestyles, this knowledge gap has increased over time causing both the Tłıchǫ and others to lose knowledge and respect for the caribou.

This knowledge must be relearned, if the Bathurst caribou are to recover. Through education and reconnection with the traditional practices and understanding that the Tłıchǫ once had, this knowledge and respect can be regained by:

- Education on Tłıchǫ Geography and Placenames
- Knowledge sharing from the elders
- Laws governing behaviour towards caribou
- Legends and Stories

- Hide tanning workshops
- Workshops on meat cutting and butchering
- Drum making and traditional craft making workshops

Tłıchǫ re-initiated some of these traditional practices this past winter (2009-2010) by bringing back and using caribou hides from community hunts carried out by Whatì and Behchokǫ̀.

Cultural Hunts

In order to renew and strengthen the connection between people and the caribou, the Tłıchǫ must revitalize the traditional ways in which they related to the caribou - through cultural hunts. By reestablishing the concept of cultural hunts - following the *whaèhdǫ́ǫ̀ ǰetǫ̀* (ancestor trails) - the Tłıchǫ will have an opportunity to travel the way their ancestors did in days passed. By following their ancestral trails they will have an opportunity to listen, observe and monitor the land; to learn the *nàowo* (laws) and stories, and they will have an opportunity to learn the placenames and ways of their ancestors. They will begin hunting by canoe and returning again to the sacred area of Mesa Lake, where peace was made between Edzo and Akaitcho. They will reemphasize and support the hunting and trapping of alternate species when caribou are simply not accessible.

Cooperation and working together is a Tłıchǫ *Nàowo* that has traditionally been highly valued. The community hunt and the communal nature that surrounds it will contribute to bringing back this valuable law of the Tłıchǫ.

This management proposal is not only about recovering the Bathurst caribou herd. It is equally about the recovery of Tłıchǫ language, culture and way of life that is dependent upon the Bathurst caribou.

APPENDIX 2. Barren-ground caribou herd management

Changes in animal populations over time are driven by four factors: births, deaths, immigration, and emigration. Births and immigration increase the numbers of animals in a population, whereas deaths and emigration decrease animal abundance. Thus, population trend is a result of the balance between these four factors.

Within North America, migratory barren-ground caribou herds are defined and managed as distinct herds or populations, because studies have shown that this is how they have adapted to the large landscapes they live in. Herds are defined based on the strong instinct of caribou cows to return every spring to a traditional calving ground. Studies show that usually about 95% or more of pregnant cows return annually to the same traditional calving ground.

Figure 2-1 shows the calving grounds of the Bathurst herd since 1996 in orange, with the summer range in green and the winter range in blue. Radio-collared cows from other herds have their own calving grounds east and west of the Bathurst calving ground. Although there is often overlap between herds on the winter range, at calving the cows move out to their separate traditional calving grounds. Over many years of study with various herds, immigration and emigration between neighboring caribou herds have generally been shown to be low and to occur in both directions about equally (2-5% in cows).

Once a caribou herd is defined, trend in herd size depends almost entirely on the balance between births and survival of calves to one year (additions), and deaths of bulls, cows and calves (losses). Radio-collar studies of many herds show that rates of caribou switching between neighbouring herds are generally low and occur in both directions. If there are many more deaths than calves added to the herd, the herd will decrease. If the number of calves added to the herd is greater than the numbers that die, the herd will increase. If births are matched by death rates in the population, the herd will be stable.

The rates at which animals die over one year are mortality rates, whereas survival is the opposite of mortality. For example, if 15 cows in a herd with 100 cows die in one year, then the cow mortality rate is 15%, and the cow survival rate is 85%.

Studies of various barren-ground caribou herds have shown that the highest mortality rates usually occur in calves less than a year old, from predation and other causes. Often 2/3 to 3/4 of the calves born in any year will die before they are one year old. After that, mortality rates of year-old caribou are quite similar to those of adults. The number of calves born depends on the pregnancy rate of the cows. If the cows are in poor condition in the fall, they may not become pregnant. Barren-ground caribou herds usually have pregnancy rates of 70-90%.

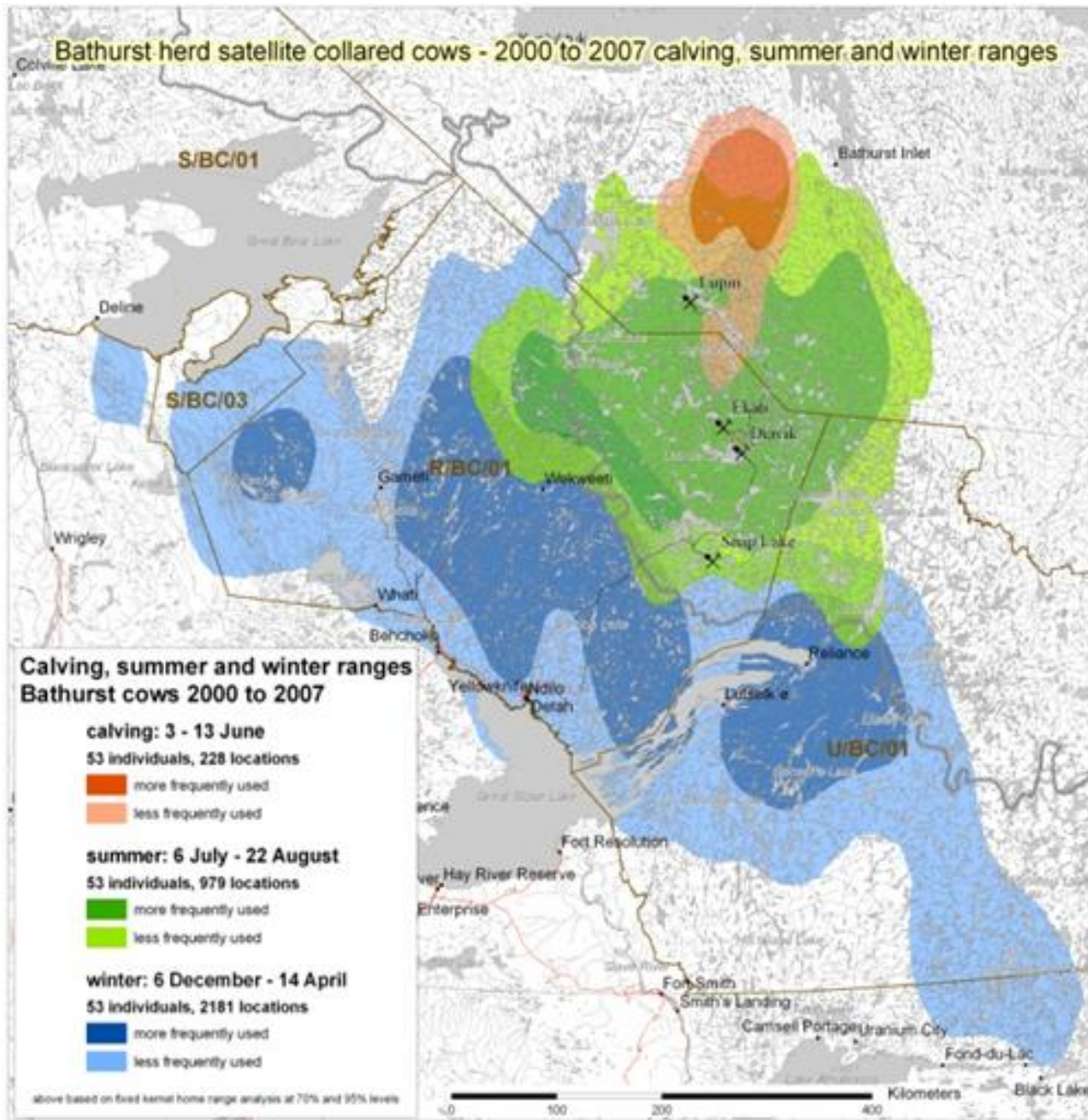


Figure 2-1. Seasonal ranges of Bathurst caribou based upon locations of satellite collared cows from 2000 to 2007.

Bulls almost always die at higher rates than cows, and annual mortality rates of 30-32% are common (with survival rates being 68-70%). As a result, the ratio of bulls to cows in a herd is often 50 bulls:100 cows or less. Since one bull can mate with several cows, variation in bull survival rates has limited effects on pregnancy rates.

Cows usually die at lower rates than bulls or calves, and annual mortality rates are usually 10-20% (thus survival rates are 80-90%). Studies of several caribou herds have shown that small changes in the survival rate of cows have a strong effect on population trend, in part because this is the largest

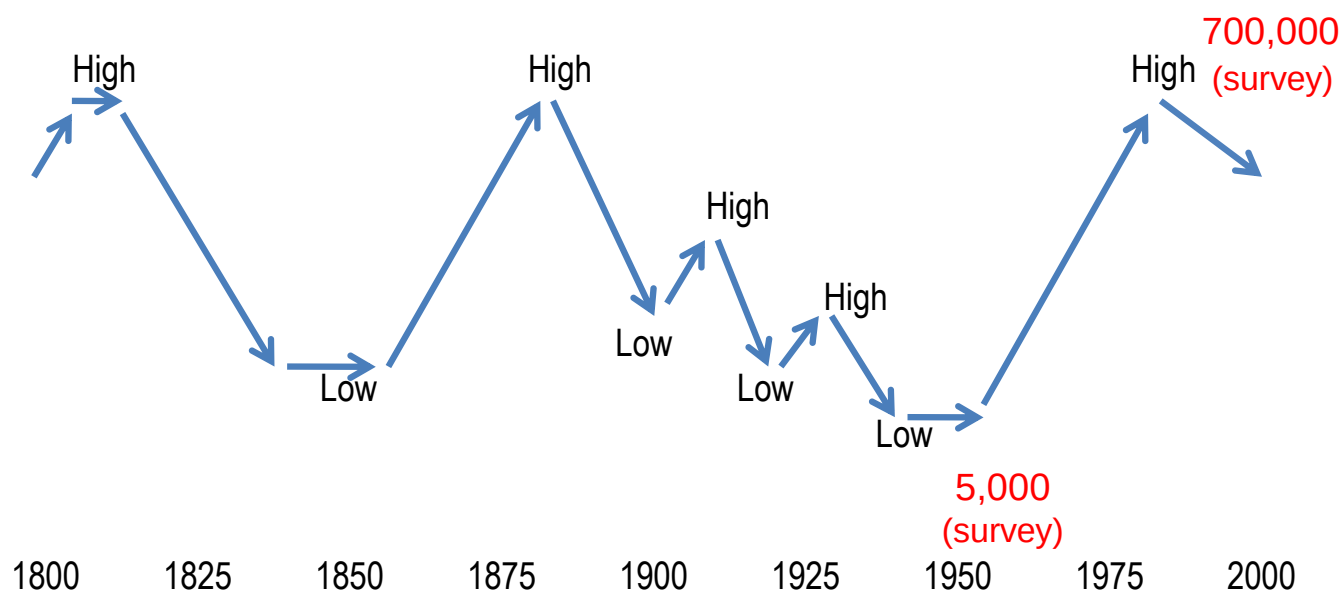
part of the herd and also because the loss of a pregnant cow means the loss of the cow, the calf she is carrying, and all the calves she may produce in later years.

Population trend in caribou also depends on the rate at which calves are born and the rate at which they die in their first year. Calf:cow ratios in late winter provide an index of the herd's productivity (pregnancy rate and first-year survival). These ratios often change quite a bit from year to year. In the Bathurst herd these ratios have varied from less than 10 calves:100 cows to over 50 calves: 100 cows. Ratios below 30 calves:100 cows are generally indicative of declining herds.

Barren-ground caribou herds go through large changes in numbers over time; this knowledge has come from elders in several aboriginal cultures. For example, knowledge of Tłıchǫ elders has confirmed that large fluctuations in numbers of Bathurst caribou have occurred in the past, and likely many times over thousands of years. Figure 2-2 shows estimated changes in numbers of the George River herd in Quebec/Labrador over a 200-year period. Surveys were done from the 1950s on, and the earlier estimates of numbers were based on a variety of sources, including knowledge of Innu and Inuit people.

George River Herd, Quebec/Labrador – Changes in Numbers

(based on spruce root scars & other information)



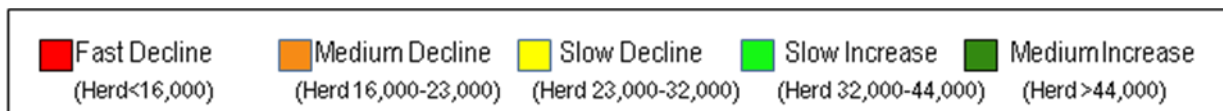
(adapted from Bergerud et al. 2008, The return of caribou to Ungava)

Figure 2-2. Historical trend in George River caribou herd based upon spruce root scars and other information, adapted from Bergerud et al. 2008.

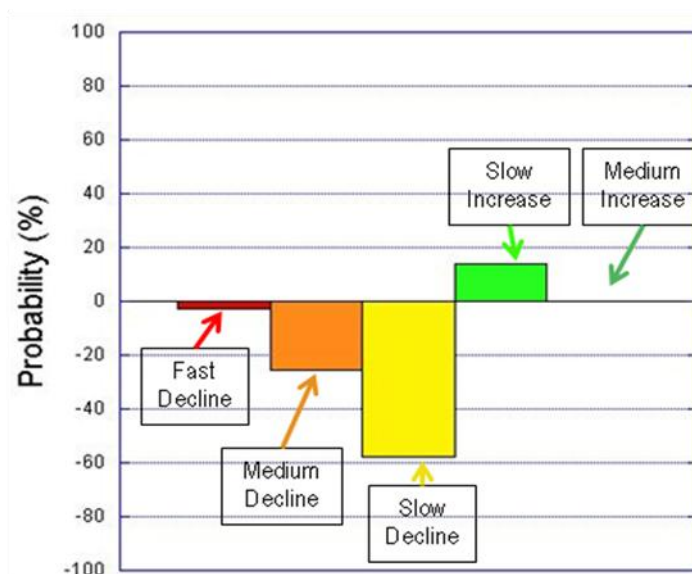
APPENDIX 3. Population demography and summary of modeling for determining hunting objectives for Bathurst herd.

Defining a sustainable harvest from a caribou herd or other wildlife population depends on the herd's trend and size, and on the sex ratio of the harvest. There is, by definition, no sustainable harvest from a declining herd, as hunting mortality can only add to the natural mortality that is already exceeding replacement by young of the year. A harvest from a declining population may still be allowed for social or economic reasons, but there is a risk of increasing the extent and rate of decline. The model outcomes summarized here are based on reports submitted to the WRRB prior to the March hearing in Behchokò.

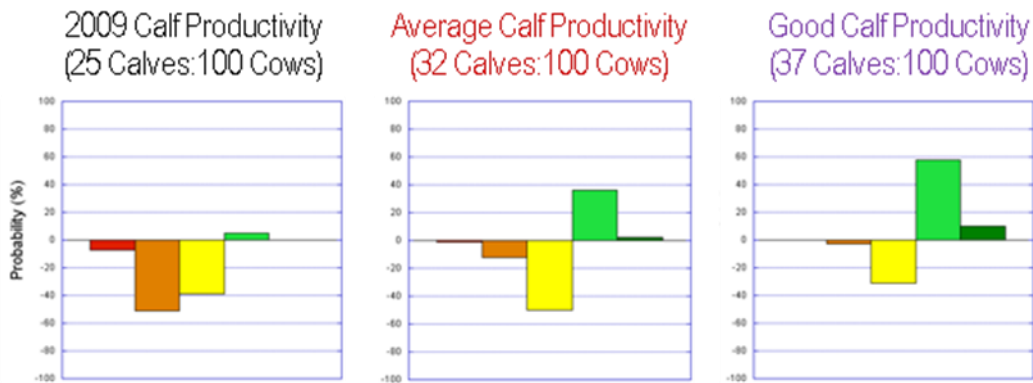
Population models can be used to understand how birth and death rates affect a caribou herd, and how harvest is likely to affect a herd's future trend. ENR-GNWT has used two population modeling approaches to assess the herd's likely future trend with harvest rates varying from 0 to 5000 cows and 2000 bulls/year. Supporting documents from J. Boulanger or by J. Adamczewski (based on Boulanger's modeling) describe how one of these modeling approaches was developed. A few examples are presented here to illustrate the range of likely outcomes, depending on calf productivity and harvest. The modeling was set up to allow calf survival, cow survival and pregnancy rate to vary from year to year, within the range of values known for the Bathurst herd. The model was then run hundreds of times for each set of conditions. Because of the many model runs with varying birth and death rates, there were also hundreds of outcomes for each set of conditions. The outcomes were grouped in 5 classes of likely trend as follows (6-year projections), assuming a starting population of 32,000:



For each set of conditions, the range of results was graphed as a bar graph where the size of the bar represented the most likely outcome. In the example below, of the hundreds of model runs, almost 60% resulted in a slow decline where the herd was likely to be between 23,000 and 32,000 after 6 years. The second most likely outcome was a medium decline resulting in a herd between 16,000 and 23,000 after 6 years.

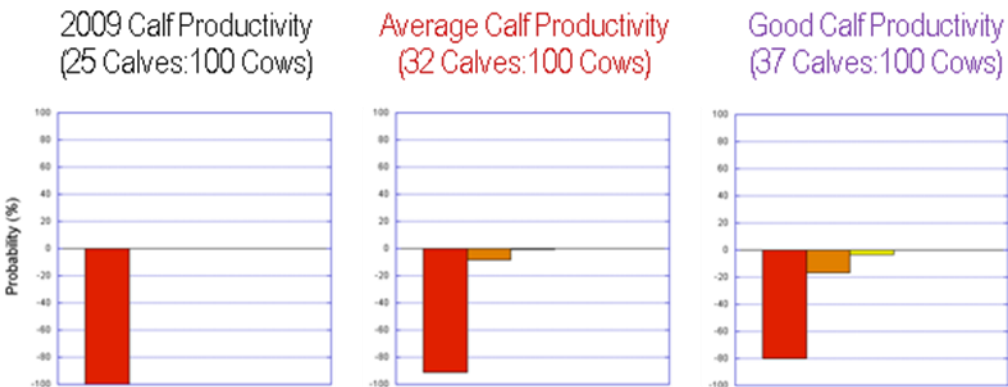


No Harvest



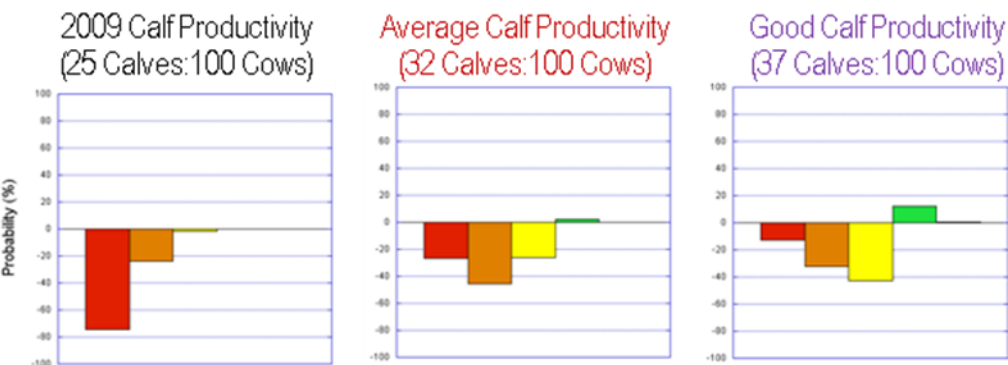
The three graphs above (all 6-year projections) show likely outcomes for the Bathurst herd with no harvest after 2008-2009, and with calf productivity varying from relatively low (2009 or the average for 2000-2009) to average for the herd (1985-2009) to good (Bathurst herd before 1995). Calf productivity is shown as expected late-winter calf:cow ratio. With no harvest, the herd could decline further, stabilize, or begin to increase, depending on calf productivity.

Harvest 3000 Cows + 2000 Bulls (5000 Total)



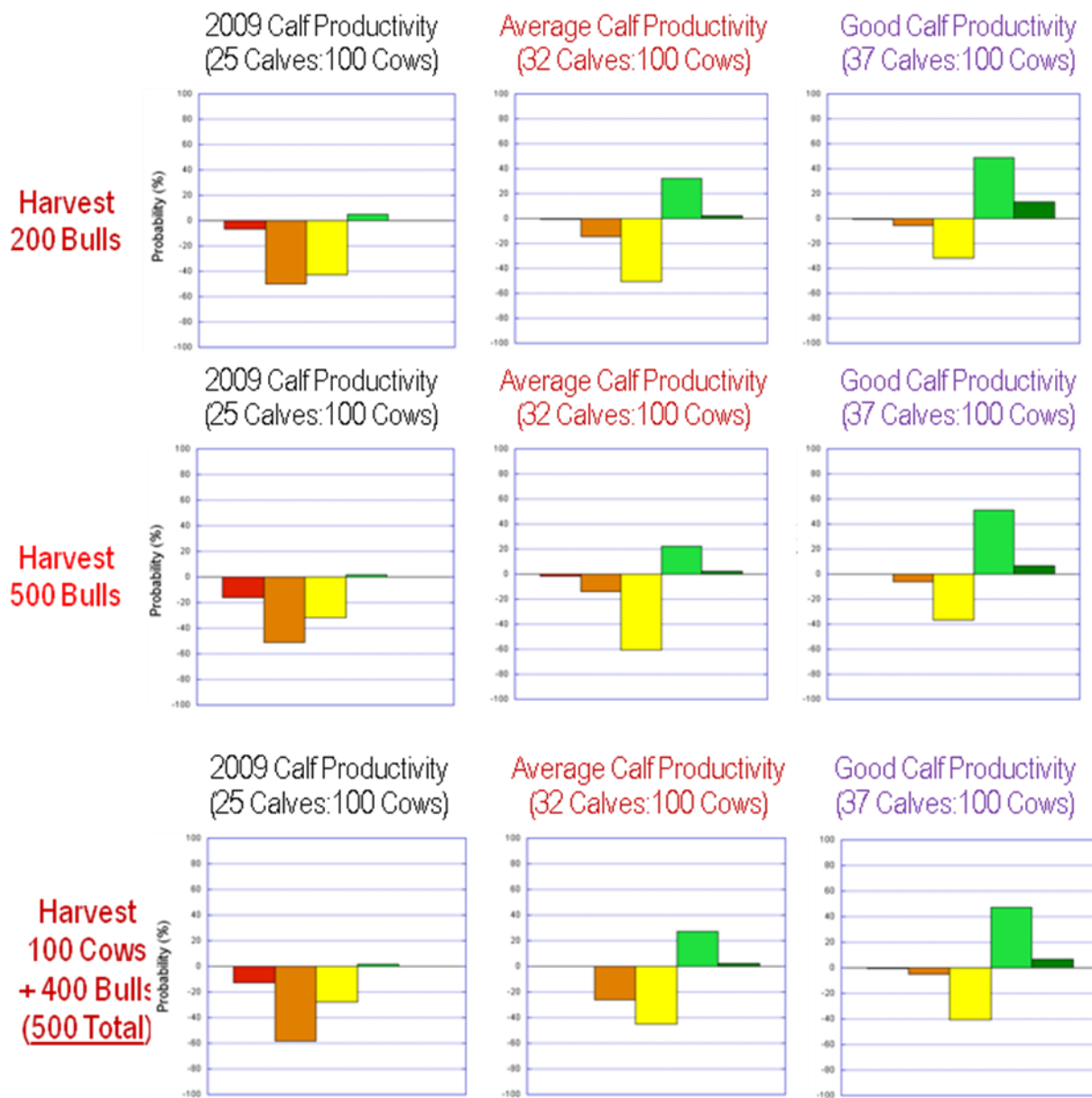
The series of graphs above (again 6-year projections) illustrate likely population trend if harvest had continued at a level of 3000 cows and 2000 bulls/year, numbers within the harvest range estimated for the Bathurst herd in 2008-2009. Under these conditions, the herd could only decline rapidly, as there is no level of calf productivity that can offset this level of cow mortality. If this harvest is cut in half to 1250 cows and 1250 bulls/year (graphs below), continued decline is still the only possible outcome, although at good calf productivity the decline would be somewhat slower.

Harvest 1250 Cows + 1250 Bulls (2500 Total)



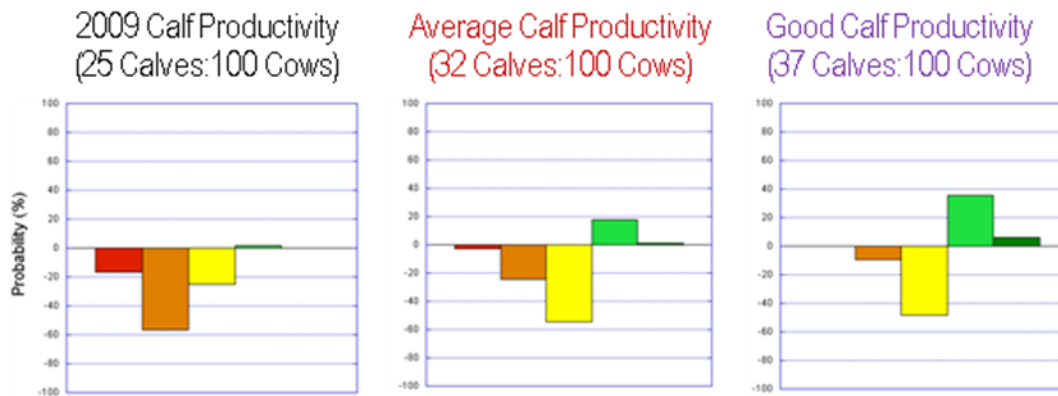
The next three series of graphs below shows the herd's probable trend with a harvest of 200 bulls, 500 bulls, and 400 bulls and 100 cows/year. The outcomes for a harvest of 200 bulls were similar to the outcomes for no harvest, suggesting that this level of bull harvest would have relatively little impact on the herd's future trend,

and herd trend would depend primarily on calf productivity. The outcomes for a harvest of 400 bulls and 100 cows were similar to a bull harvest of 500. At average calf productivity, 2/3 of the model runs still resulted in further decline.



Larger harvest levels of 1000 or more caribou (next series of graphs) were associated with a high risk of continued decline. Overall, this modeling suggested that a harvest of 200-500 caribou, mostly or all bulls, might be associated with further decline at a slow rate, or could become sustainable if calf productivity stayed at a consistently high level. Bull harvest had less effect on overall herd trend than cow harvest. The Bathurst herd has had lower fall bull:cow ratios (31-38 bulls:100 cows) than other barren-ground caribou herds monitored by GNWT.

Harvest 1000 Bulls



It is important to recognize that the results from this modeling and other population models like the Caribou Calculator depend on the numbers and assumptions used. The model outcomes can be used as a guide to likely consequences of particular harvest management and to provide a sense of the likely range of outcomes possible. Management should be flexible as further monitoring results are acquired.

APPENDIX 4. Summary of estimated caribou harvest from the Bathurst, Bluenose-East and Ahiak herds in 2009/2010.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	Community		Bluenose East Herd		Bathurst Herd		Ahiak & Beverly Herds		Estimated sex ratio in the harvest (Females/Males)		Comments			
3														
4	Behchoko		565		0		0		65/35		All winter harvest for the Tli Cho communities and the YKDFN			
5											were conducted jointly with ENR and numbers of caribou were monitored			
6	Wha Ti		360		0		0		65/35		either by biologists, wildlife officers and/or community wildlife monitors.			
7														
8	Gameti		250		0		0		65/35					
9														
10	Wekweeti		0		100		0		65/35					
11														
12	YKDFN		0		100		130		65/35					
13														
14	Lutsel Ke		0		0		700		10/90		Reported by the Lutsel Ke wildlife officer			
15														
16	Fort Smith and Fort Resolution		0		0		140		?					
17														
18	Sahtu		900		0		0		95/5		500 caribou taken between November 2009 and February 2010 by Deline residents. Locations of harvest unknown.			
19											In addition 150 caribou harvested east of the Johnny Hoe River Area plus 50 from Hottah Lake and 100 more for a hand game event			
20	Deh Cho		100		0		0		?					
21														
22	Tli Cho individual hunt		235		0		0		?					
23														
24	Total winter harvest		2410		200		970							
25														
26	Nunavut (summer)		500		0		0		?		Estimate from Nunavut government			
27														
28	Non-Resident		123		100		0		0/100		Non-resident harvest reporting is mandatory and results and compiled at the end of the season.			
29														
30	Aboriginal fall harvest		433		0		60		0/100		Aboriginal harvest in 2010 was not monitored but estimate came from the 2007 fall reported harvest by			
31											the Tli Cho Government and the assumption that fall harvest number is consistent from year to year.			
32	Total Fall Harvest		1056		100		60							
33														
34	Total estimated harvest by herd in 2009/2010 Season		3466		300		1030							

APPENDIX 5. Assessment of Tłıchǫ communities' country food needs, and assessment of effects of caribou scarcity on community well-being

Discussions during the joint TG and ENR-GNWT meetings in April and May 2010 indicated that each of the four Tłıchǫ communities would have different needs for caribou meat and that access to alternate country foods (moose, bison, muskox, woodland caribou, fish, muskrat, etc.) would also vary for each community. As part of an implementation plan, TG and ENR-GNWT suggest that an assessment of needs for caribou and access to alternate meat sources be carried out for each community, most likely by TG, with potential assistance from the community-specific caribou committees. Preliminary discussion by Tlıcho Lands Protection Department staff, has identified strong potential for collaboration with the Tlıcho Community Services Agency as well as the Tlıcho Department of Language, Culture and Communications.

Due to the strong connections between the population health of caribou and the traditional food system of Tłıchǫ people, it is important to consider the potential effects of reduced caribou on a variety of social, cultural, and health/nutritional indicators in the communities (see Figure 5-1 below as an example). Table 5-1 below summarizes initial concepts for information needs that could be addressed as part of an assessment of each community's situation (section A) and also lists potential impacts of caribou scarcity on Tlıcho (section B). There are established methods for assessing these kinds of impacts, and this could be a useful way of assessing how Tłıchǫ communities respond to a period of reduced caribou availability.

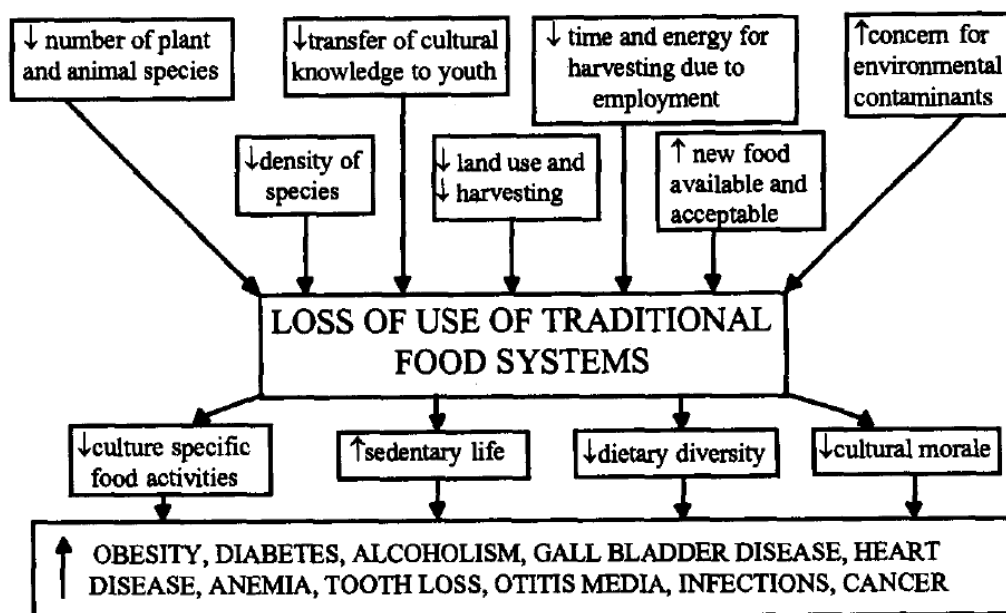


Figure 5-1. Factors influence dietary change and consequences of change for indigenous peoples (Kuhnlein, H.V., and O. Receveur. 1996. Annual Review of Nutrition. 16: 417-442)

Table 5-1. Assessment of community needs for caribou or alternate foods, and assessment of the effects of caribou scarcity on Tłıchǫ communities.

A. Assessment of each community's needs and access to alternate foods	Conduct a needs assessment for caribou and other country foods for each community: Wekweètì , Gamètì, Whatì and Behchokǫ̀ • For caribou harvest in 2010, determine the overall number of people who received fuel for the winter hunt. • Assessment of traditional uses of alternate food • Assessment of current access and use of alternate food source • Assessment of what community members need in order to access alternate species – knowledge, gas money, materials • Baseline data on alternate species
B. Assessment of effects of low caribou numbers on Tłıchǫ communities	Identify and evaluate the potential effects of reduced caribou hunting on a variety of social, cultural, and health/nutritional indicators in the communities
Cultural	• Limited hides for craft production – limited availability of traditional items for sale and personal use; impacts on self identity and loss of knowledge of how to produce crafts • Loss of cultural identity - ritual and spiritual practices restricted and lost over time.
Economic	• Increased pressure on household budgets; increased purchase of store-bought foods • Loss of income from sale of traditional crafts
Health	• Change in diet leading to increased store-bought food and increased diabetes, obesity and heart disease • Health related issues due to not getting out on the land • Impacts on elders
Social	Reduced hunting and on-the-land activities could lead to • Increased drinking and gambling • Increased domestic abuse and violence • Children getting into more trouble at school and with authorities



October 8, 2010

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Re: Recommendation Report – Revised Joint Proposal

The Wek'èezhì Renewable Resources Board (WRRB) is please to submit its Recommendation Report related to the *Revised Joint Proposal on Caribou Management Actions in Wek'èezhì*.

The Board has not, in its recommendations, taken into account the recently announced agreement between the Yellowknives Dene First Nation (YKDFN) and the Department of Environment and Natural Resources (ENR). The Board recognizes and appreciates the efforts that YKDFN, ENR and Tłıchō Government have made to come up with an equitable allocation of the harvest of Bathurst caribou. The Board reiterates, however, the importance of ensuring that any and all such agreements need to reflect the harvest target of 300 Bathurst caribou as set out in its recommendations.

Please note that the report will be posted to the WRRB's public registry. If you have any questions, please contact our office at (867) 873-5740 or jsnortland@wrrb.ca.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Grant Pryznyk".

J. Grant Pryznyk
Interim Chair

Cc Ernie Campbell, Assistant Deputy Minister, Environment & Natural Resources, GNWT
Susan Fleck, Director of Wildlife, Environment & Natural Resources, GNWT
Eddie Erasmus, Director, Lands Protections Department, TG
Bertha Rabesca-Zoe, Legal Counsel, TG

**Report on a Public Hearing
Held by the
Wek'èezhì Renewable Resources Board
22-26 March 2010
5-6 August 2010
Behchokò, NT**

**&
Reasons for Decisions
Related to a Joint Proposal for the Management of
the Bathurst Caribou Herd**



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LIST OF ACRONYMS

ENR	Environment & Natural Resources
GNWT	Government of the Northwest Territories
INAC	Indian and Northern Affairs Canada
IR	Information Request
NWT	Northwest Territories
TAH	Total Allowable Harvest
TG	Tłıchǫ Government
TK	Tłıchǫ Knowledge
WRRB	Wek'èezhì Renewable Resources Board

1. PLAIN LANGUAGE SUMMARY OF REPORT

The Wek'èezhì Renewable Resources Board (WRRB) is responsible for wildlife management in Wek'èezhì and shares responsibility for monitoring and managing the Bathurst caribou herd. In 2009, the Government of the Northwest Territories (GNWT), Department of Environment and Natural Resources (ENR), reported that, in their view, the Bathurst herd had declined significantly and that urgent management actions were required.

In November 2009, the Tłıchǫ Government and ENR submitted the *Joint Proposal on Management of Caribou in Wek'èezhì* to the Board, which proposed harvest limitations. The WRRB considered any restriction of harvest or component of harvest as the establishment of a total allowable harvest (TAH). The WRRB complied with Section 12.3.10 of the Tłıchǫ Agreement and held a public hearing in Behchokò, NT in two parts on March 22-26, 2010 and August 5-6, 2010.

The WRRB has concluded, based on all available information that a conservation concern exists for the Bathurst caribou herd and management actions are vital for herd recovery. However, rather than implementing a TAH, the WRRB has been persuaded by ENR's and Tłıchǫ Government's argument to implement a harvest target instead. The WRRB recommends that the Minister of ENR and Grand Chief of the Tłıchǫ Government establish a harvest target of 300 Bathurst caribou per year for 2010/11, 2011/12, and 2012/13. Harvest should be selective towards bulls in order to achieve an 85:15 ratio of bulls harvested to cows. Further, the Board recommends that all commercial, outfitted and resident harvesting of the Bathurst herd in Wek'èezhì will be set to zero for 2010/11, 2011/12, and 2012/13.

The WRRB was requested to make recommendations regarding the Bluenose-East caribou herd. Therefore, the Board proposes that ENR and the Tłıchǫ Government establish a harvest target of 2800 Bluenose-East caribou per year for 2010/11, 2011/12, and 2012/13. The annual harvest target and its allocation should be finalized in discussions between the existing wildlife co-management boards and Aboriginal governments in the Sahtu, Dehcho and Tłıchǫ. Harvest should be selective towards bulls in order to achieve an 85:15 ratio of bulls harvested to cows. The Board further recommends that all commercial, outfitted and resident harvesting of the Bluenose-East herd in Wek'èezhì will be set to zero for 2010/11, 2011/12, and 2012/13.

The WRRB was also requested to make recommendations to ENR and the Tłıchǫ Government regarding the Ahiak caribou herd; however, the existing information related to the Ahiak caribou herd is not sufficient for the Board to recommend a target for Aboriginal harvesting. The Board recommends that all commercial, outfitted and resident harvesting of the Ahiak in Wek'èezhì will be set to zero for 2010/11, 2011/12, and 2012/13.

The WRRB has made additional caribou management and monitoring recommendations to ENR and the Tłıchǵo Government, including the implementation of the *Special Project, Using Tłıchǵo Knowledge to Monitor Barren Ground Caribou* Program, implementation of detailed scientific and Tłıchǵo Knowledge (TK) monitoring actions, development and implementation of both TK and scientific conservation-education programs, implementation of the Board's suggested approach to information flow for an adaptive co-management framework and development and implementation of a Bathurst caribou management plan.

The WRRB also recommends to the Minister of Indian and Northern Affairs Canada (INAC) and ENR to collaboratively develop best practices for mitigating effects on caribou during calving and post-calving, including the consideration of implementing mobile caribou protection measures and to monitor landscape changes, including fires and industrial exploration and development, to assess potential impacts to caribou habitat.

The WRRB was requested to make recommendations to ENR and the Tłıchǵo Government regarding wolves and bison. The Board recommends that the harvest of wolves should be increased through the suggested incentives, except for assisting harvesters to access wolves on wintering grounds and that focused wolf control not be implemented. If Tłıchǵo Government and ENR believe that focused wolf control is required, a management proposal shall be provided to the WRRB for its consideration. As well, the Board recommends that a joint management proposal for wood bison in Wek'èezhìı be submitted by the fall of 2011 to substantiate the establishment of zones and quotas made through the Interim Emergency Measure.

The WRRB recommends that ENR, Tłıchǵo Government and INAC implement its recommendations no later than January 1, 2011. ENR's Emergency Interim Measures, put into effect on January 1, 2010, should remain in place until then. The Board further recommends that Tłıchǵo Government and ENR conduct consultations regarding the Recommendations Report prior to January 1, 2011.

The WRRB believes that limiting the harvest of the Bathurst, Bluenose-East and Ahiak caribou can have a great impact on recovery. The decisions have been structured to have the least impact on caribou users and the greatest benefit to caribou that we can provide at this time.

2. INTRODUCTION

2.1 The WRRB and Management of the Bathurst Caribou Herd

The WRRB was established to perform the wildlife management functions set out in the Tłıchq Agreement in Wek'èezhì¹ and shares responsibility for the monitoring and management of the Bathurst caribou herd. In 2009, ENR notified the WRRB and caribou users in Wek'èezhì that, in its view, significant declines had occurred in the Bathurst caribou herd and that management actions were required immediately.

As a part of its ongoing management responsibilities and in light of evidence of a continuing decline in the Bathurst herd, the WRRB considered the need to implement a TAH for this herd through a public hearing process. That hearing was held in Behchokò, NT in two parts on March 22-26, 2010 and August 5-6, 2010.

2.2 WRRB Mandate & Authorities

The WRRB was established to perform the functions of wildlife management in Wek'èezhì (Figure 1) by the Tłıchq Agreement. The Board's legal authorities came in to effect at the time the Agreement was ratified by Parliament.² The WRRB's major authorities and responsibilities in relation to wildlife are set out in Chapter 12 of the Tłıchq Agreement.

As required by sections 12.5.1 and 12.5.4 of the Tłıchq Agreement, any Party³ proposing a wildlife management action in Wek'èezhì must submit a management proposal to the WRRB for review. This includes the establishment of total allowable harvest levels. Prior to making a determination or recommendation, the WRRB must consult with any body with authority over that wildlife species both inside and outside of Wek'èezhì. Under the section 12.5.5 of the Agreement, only the WRRB may impose a total allowable harvest for Tłıchq citizens, and such action may only be taken for the purposes of conservation.

¹ Section 12.1.2 of the *Land Claims and Self-Government Agreement Among the Tłıchq and the Government of the Northwest Territories and the Government of Canada*, Indian Affairs and Northern Development, Ottawa, 2003 (hereinafter the "Tłıchq Agreement").

² *Tłıchq Land Claims and Self-Government Act*, S.C. 2005, c.1. Royal assent February 15, 2005. See s.12.1.2 of the Tłıchq Agreement.

³ As defined in the Tłıchq Agreement, "Parties" means the Parties to the Agreement, namely the Tłıchq, as represented by the Tłıchq Government, the Government of the Northwest Territories and the Government of Canada.

WEK'ÈEZHÌI

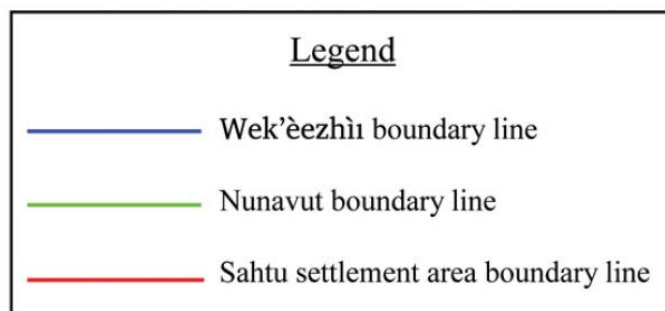
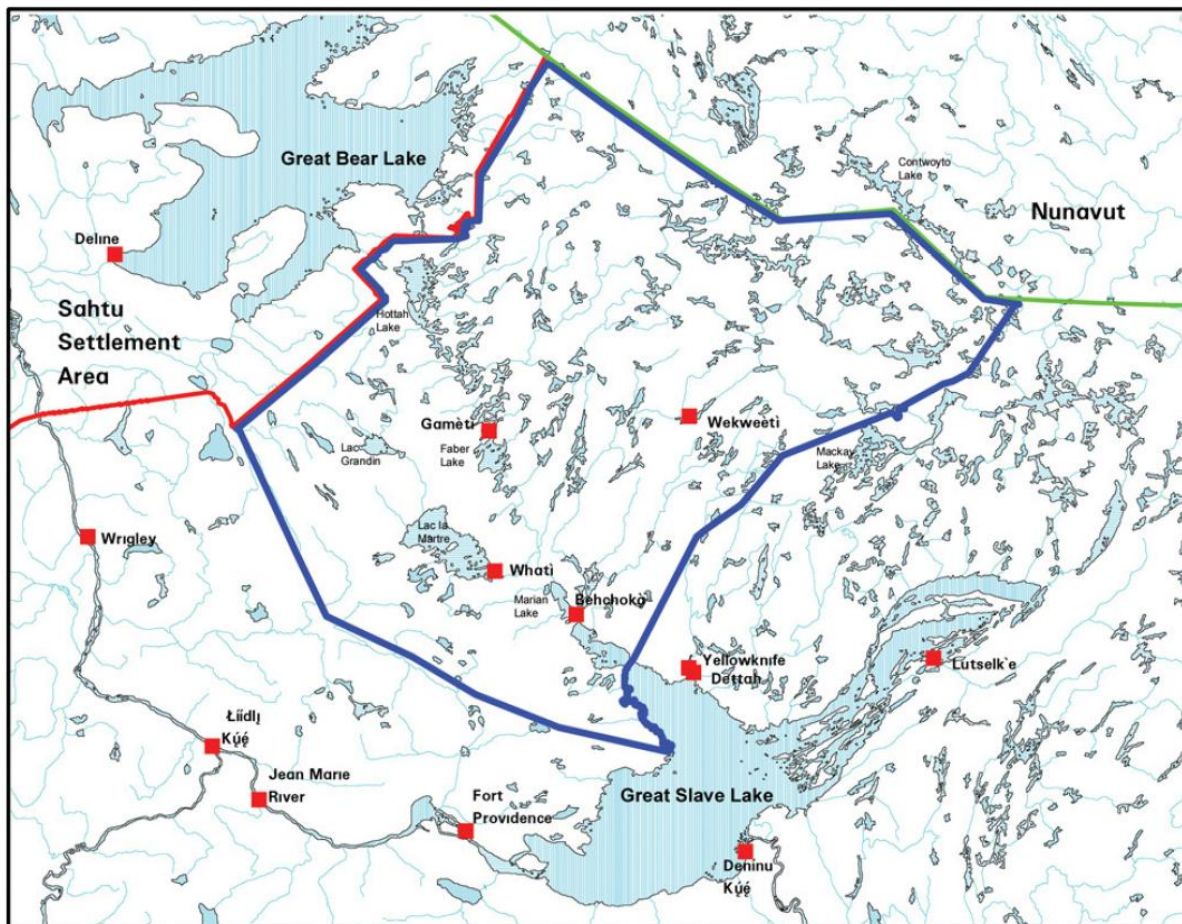


Figure 1: Wek'èezhìi Management Area

12.5.5 The Wek'èezhì Renewable Resources Board shall

- (a) make a final determination, in accordance with 12.6 or 12.7, in relation to a proposal
 - (i) regarding a total allowable harvest level for Wek'èezhì, except for fish,
 - (ii) regarding the allocation of portions of any total allowable harvest levels for Wek'èezhì to groups of persons or for specified purposes, or
 - (iii) submitted under 12.11.2 for the management of the Bathurst caribou herd with respect to its application in Wek'èezhì; and
- (b) in relation to any other proposal, including a proposal for a total allowable harvest level for a population or stock of fish, with respect to its application in Wek'èezhì recommend implementation of the proposal as submitted or recommend revisions to it, or recommend it not be implemented.

The WRRB acts in the public interest. It is an institution of public government, a co-management board which makes its decisions on the basis of consensus. The WRRB works closely with Tłıchǫ communities, Tłıchǫ citizens and the Tłıchǫ Government.

Wildlife management is a central and vital component of the Tłıchǫ Agreement.⁴ The use of wildlife by Tłıchǫ citizens for sustenance, cultural and spiritual purposes is protected by law and may only be affected in the manner set out in Chapter 12. The most important provisions in relation to the WRRB's role in the limitation of Tłıchǫ citizens harvesting are set out in the Tłıchǫ Agreement as follows:

12.6.1 Subject to chapters 15 and 16, a total allowable harvest level for Wek'èezhì or Mq̄whì Gogha Dè Nı̄tłèè (NWT) shall be determined for conservation purposes only and only to the extent required for such purposes.

12.6.2 Subject to 12.6.1 and chapters 15 and 16, limits may not be prescribed under legislation

- (a) on the exercise of rights under 10.1.1 or 10.2.1 except for the purposes of conservation, public health or public safety; or
- (b) on the right of access under 10.5.1 except for the purposes of safety.

12.6.3 Any limits referred to in 12.6.2 shall be no greater than necessary to achieve the objective for which they are prescribed, and may not be prescribed where there is any other measure by which that objective could reasonably be

⁴ See s.12.1.1 of the Tłıchǫ Agreement.

achieved if that other measure would involve a lesser limitation on the exercise of the rights.

12.6.5 In exercising its powers in relation to limits on harvesting, the Wek'èezhì Renewable Resources Board shall give priority to

- (a) non-commercial harvesting over commercial harvesting; and
- (b) with respect to non-commercial harvesting,
 - (i) Tłıchǫ Citizens and members of an Aboriginal people, with rights to harvest wildlife in Wek'èezhì, over other persons, and
 - (ii) residents of the Northwest Territories over non-residents of the Northwest Territories other than persons described in (i).

The WRRB must comply with the Tłıchǫ Agreement if it is contemplating any limitation to Tłıchǫ citizens harvesting, including any limitation to the harvesting of Bathurst caribou. More specifically, section 12.6.1 (see above) specifies that a total allowable harvest level shall be determined for conservation purposes only and only to the extent required for such purposes. The Tłıchǫ Agreement defines conservation as follows:

“conservation” means

- (a) the maintenance of the integrity of ecosystems by measures such as the protection and reclamation of wildlife habitat and, where necessary, restoration of wildlife habitat; and
- (b) the maintenance of vital, healthy wildlife populations capable of sustaining harvesting under the Agreement.

In addition to the substantive legal protection for Tłıchǫ citizen's harvesting rights set out in the Tłıchǫ Agreement, the WRRB is also bound by procedural requirements because paragraph 12.3.10 makes it mandatory for the WRRB to hold a public hearing when it intends to consider establishing a TAH in respect of a species or a population such as the Bathurst caribou herd.

3. PREVIOUS WRRB RECOMMENDATIONS RELATED TO BATHURST CARIBOU MANAGEMENT

3.1 March 2007 Public Hearing

In December 2006, ENR submitted a management proposal recommending management actions to reduce harvest levels in a manner consistent with the Tłıchǫ Agreement and the Bathurst Caribou Management Plan for the WRRB's consideration. The proposed management actions were intended to limit the harvest to 4% of the 2006 herd size for a total of 5120 caribou, including eliminate all commercial meat tags held by Tłıchǫ communities, reduce number of tags for non-resident hunters and non-resident alien

hunters from 2 to 1, and reduce tags for all non-Hunter & Trapper Association (HTA) and HTA outfitters from 1559 to a total of 350.

Due to the significance of the management actions proposed, and the fact that the WRRB, as a new organization, had not yet heard from other Parties affected by the ENR proposal, the Board decided to conduct a public hearing before making any decisions on the proposal. The WRRB held the public hearing on March 13-14, 2007 in Behchokò, NT.

During the course of the hearing, ENR officials admitted that the Minister and Department had not consulted the Tłıchq Government about their proposal, as required in the Tłıchq Agreement, before it was submitted to the Board. Once the evidentiary phase of the proceeding was completed, the Board decided to adjourn the proceeding in order to give ENR and the Tłıchq Government time to initiate a consultation process. Specifically, ENR and the Tłıchq Government were directed to report to the WRRB on the outcome of their consultations by April 23, 2007.

On April 20, 2007 and April 23, 2007 respectively, the Tłıchq Government and ENR filed letters with the WRRB indicating that the consultation process had not been concluded, thereby requiring an additional 90 days to finish the consultations. The WRRB advised ENR and the Tłıchq Government, in early May 2007, that it had decided to extend the period of adjournment in the proceeding by 30 days to permit the Parties to conclude the consultations by June 1, 2007. The Board indicated that if the consultation efforts were not producing substantial progress, it would bring the proceeding to a close and prepare its Recommendations Report for submission to the Minister of ENR and the Tłıchq Government.

3.1.1 Emergency Measure

On April 17, 2007, the Minister of ENR advised the Tłıchq Government and the WRRB that the Big Game Hunting Regulations had been amended to reduce the number of tags available for outfitted hunts for barren-ground caribou in Unit “R” to 750 for the 2007 season. The letter noted that this decision was made under the authority of Section 12.5.14 of the Tłıchq Agreement as ENR considered its action necessary due to an emergency situation regarding declining populations of the barren-ground caribou.

3.1.2 Board Decision

On May 30, 2007 and June 4, 2007 respectively, the Tłıchq Government and ENR submitted letters to the Board indicating that they were making substantial progress but required an extension to September 28, 2007 in order to develop a new joint caribou management proposal. The WRRB was concerned that any further adjournments could adversely affect the interests of other Parties affected by the proposal. ENR had already

taken steps to implement portions of its proposal on the grounds that an emergency situation existed. Further extension of the proceeding to accommodate consultation which, in the Board's view should have taken place before the proposal was advanced, seemed inconsistent with the urgency asserted by ENR. For these reasons, the WRRB decided not to grant a further adjournment of its proceeding.

Based on the WRRB's review of the evidence presented during the proceedings, the Board recommended that ENR's proposal to undertake management actions to reduce the harvest of the Bathurst caribou herd not be implemented as submitted. The WRRB strongly encouraged ENR and the Tłıchq Government to continue their consultations towards the development of a joint proposal for the management of the Bathurst caribou herd. Additionally, the WRRB indicated that any future management actions that propose to limit any component of the harvest to a particular number, including zero, would be treated as a proposal for the establishment of a total allowable harvest.

3.2 Barren-ground Outfitter's Association Tag Request

In October 2007, the Barren-ground Caribou Outfitter's Association requested that the tag quota for caribou outfitters be restored to 1260 for the non-HTA outfitters and 396 for the HTA outfitters due to financial hardships experienced by the outfitters and supporting businesses. The Board did not recommend the tag increase to the GWNT as the WRRB is not mandated to address issues of economic viability. Further, the WRRB considered any requests for changes to tag quotas to be premature prior to the submission of a joint proposal regarding the management of caribou in Wek'èezhìı by ENR and Tłıchq Government.

3.3 Wildlife Research Permit Applications

3.3.1 2008 Application

In February 2008, ENR requested approval from the WRRB to deploy fourteen additional satellite/GPS collars on Bathurst caribou to bring the total deployed to 30. The Board agreed to support ENR's request with two conditions: 1) ENR conduct meetings with the Tłıchq Government and the Tłıchq communities to discuss the need for the extra collars and 2) ENR provide the WRRB with a written summary of the views expressed during the meetings by Tłıchq representatives or residents.

ENR approached the Tłıchq Assembly and Elder's Advisory Committee to discuss the need for the extra collars. The proposal was rejected. No written summary of the meeting was provided.

3.3.2 2009 Application

In February 2009, ENR submitted an application for monitoring health, condition and contaminants in the Bathurst caribou herd, including the harvest of up to 60 animals (20 each of bulls, cows, and calves) to assess nutritional status, pregnancy rate, detection and tracking of disease, parasites and contaminants. The Board supported the monitoring actions with the following conditions: 1) the Chief of Gamètì choose the hunters to harvest the animals for collection, 2) an elder provide guidance as required during the collection, 3) a WRRB Tł̨ch̨ -appointee help facilitate between harvesters and ENR staff during the collection, and 4) a meeting prior to the collection to ensure that all involved understood the procedures required and the rationale for collection.

The health and condition monitoring occurred in April 2009. None of the WRRB recommendations were implemented.

3.3.3 2010 Application

In February 2010, ENR submitted an application for research and monitoring activities including spring and fall composition surveys, deployment of thirteen satellite collars, impromptu aerial surveys, and body condition sampling. The Board supported the proposed work with the condition that the spring harvest for body condition sampling only take place outside of the no hunting zone, established in January 2010. Fall body condition sampling would require ENR to apply for a new wildlife research permit.

ENR conducted the spring composition survey and deployed the collars. Body condition sampling was conducted in March 2010 by granting YKDFN and Wekweètì the authority to harvest within the established no hunting zone but outside of Wek'èezhì. ENR provided their decision with reasons for varying the WRRB's recommendation only after receiving a written request from the Board.

3.4 Interim Rule for Management Proposals

Section 12.5.1 of the Tł̨ch̨ Agreement requires a Party before taking “*any action for management of wildlife in Wek'èezhì to submit its proposals to the WRRB for review*”. Under section 12.3.6, the WRRB has the authority to make rules respecting the procedure for making applications to the Board. Based on past experience and in anticipation of receiving a management proposal on Bathurst caribou, the WRRB drafted an Interim Rule for Management Proposals.

On August 26, 2009, a draft Interim Rule for Management Proposals was submitted as a guide for the Parties to the Agreement in making management proposal submissions, including actions taken in the issuance of licences, permits and other authorizations.

The Rule has three components:

1. An outline of the types of actions that must be brought before the WRRB for recommendation, including actions related to the NWT Wildlife Act and regulations, NWT Species at Risk Act and regulations, NWT Forest Fire Management Policy, Fisheries Act and regulations, and Migratory Birds Convention Act and regulations;
2. A description of the required contents of a proposal; and
3. A timeline and process for review of a proposal.

The Board anticipates further work with Parties to the Agreement before the draft Interim Rule is fully completed and implemented.

4. SUMMARY OF PROCEEDING

4.1 Request for Joint Proposal

On July 31, 2009, the WRRB requested a joint wildlife management proposal, by the end of October 2009, addressing the continuing steep decline of the Bathurst Caribou Herd from ENR and the Tłıchǵ Government. The Tłıchǵ Government responded at the end of August 2009 notifying the Board that discussions with ENR officials had commenced in an effort to have a joint proposal filed on time. As part of the process, Tłıchǵ Government intended to involve Tłıchǵ communities and traditional knowledge experts in the development of the joint proposal.

Anticipating the need for a public hearing before the end of December 2009, the Board requested reports detailing monitoring activities conducted by ENR on the Bathurst caribou herd from 2006 to present. On October 21, 2009, the Board provided guidance on the suggested content of the joint management proposal, including the need for immediate actions and solutions to alleviate the current decline in the Bathurst caribou herd. The Board further advised that it was prepared to consider a management proposal for Wood Bison concurrently with the Bathurst caribou proposal as a means to consider the increased opportunities for harvest of wood bison to partially replace caribou.

4.2 Receipt of Joint Proposal

On November 5, 2009, the Tłıchǵ Government and ENR submitted the *Joint Proposal on Caribou Management Actions in Wek'èezhìi*, which proposed nine management actions and eleven monitoring actions (Appendix A). While there was agreement on the majority of actions proposed, there was no agreement reached on Aboriginal harvesting. The WRRB considered any restriction of harvest or component of harvest as the establishment of a TAH and, therefore, was required to hold a public hearing.

Public notice of the WRRB decision to conduct a public hearing concerning the possible setting of a TAH for the Bathurst caribou herd was published on November 11, 2009.

The notice was also faxed to Tłıchq communities and other potentially interested organizations in and out of Wek'èezhìı. Interested Parties were invited to contact the WRRB for inclusion on the distribution list and to formally apply for Intervenor status by November 18, 2010. There were two proponents, ENR and Tłıchq Government, one expert witness, and nineteen registered Intervenor (Appendix B). In addition, the WRRB heard from 50 members of the registered general public during the hearing.

Registered Parties were notified on November 30, 2009 of the Board's decision to limit the scope of the public hearing to Actions 1 through 5 of the joint proposal (see Table 1 below).

The actions in Table 1 prescribed limitations on harvest. All other proposed actions would be addressed through written submissions to the Board in accordance with the schedule of the Proceeding. The proceeding and hearing were conducted on the basis of the WRRB's *Rules of Procedures, November 6, 2009*.

Originally scheduled for January 11-13, 2010, the public hearing eventually took place March 22-26, 2010. Notification of the revised proceeding schedules were posted publicly on December 3, 2009, January 20, 2010 and February 11, 2010.

An online public registry was established on November 11, 2009. On February 2, 2010, the Board's new and improved website went live, with a more navigable public registry (<http://www.wrrb.ca/public-information/public-registry>). WRRB staff made ongoing efforts to ensure that all Registered Parties were aware of all the information available on the public record.

4.3 Information Requests

In order to obtain the information necessary for the WRRB to consider as part of the record of this proceeding, a series of Information Requests (IRs) were issued to the registered Parties. The IRs and responses are all available on the online public registry.

IR No. 1 was issued November 16, 2009, requesting supporting documentation and additional rationale on the proposed management and monitoring actions. ENR provided responses on November 30, 2009, December 11, 2009 and January 15, 2010; Tłıchq Government provided responses on December 21, 2009.

IR No. 2 was issued December 3, 2009, requesting additional information related to Intervenor requests. ENR provided responses on December 18, 2009 and January 5, 2010; Tłıchq Government provided responses on December 21, 2009 and January 15, 2010.

Table 1: Actions 1 through 5 of the Joint Proposal on Caribou Management Actions in Wek'èezhìì

No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
1.	Reduce harvest pressure	Eliminate all commercial meat tags held by Tłıchǫ and all other Aboriginal communities. Status of allowing meat tags to be reconsidered after the 2012 calving ground photo census. <i>/Joint by both governments</i>	Tłıchǫ communities have not used commercial meat tags for many years and there has been no interest expressed by Tłıchǫ citizens to use caribou for this purpose. No public interest implications in Wek'èezhìì. This will require regulation changes.
2.	Reduce harvest pressure	Eliminate all tags for outfitting for the hunting season starting in the summer of 2010 until 2012 included. Status of outfitting to be reconsidered after the 2012 calving ground photo census. <i>/Joint by both governments</i>	Conservation measure and under Tłıchǫ Agreement, this type of harvest must be addressed first. Regulation changes required.
3.	Reduce harvest pressure	Eliminate all resident hunter harvest. Allocation of tags to resident hunters to be reconsidered after the results of the 2012 calving ground photo census. <i>/Joint by both governments</i>	Conservation measure and under Tłıchǫ Agreement, this type of harvest must be addressed first. Regulation changes required.
4.	Reduce harvest pressure (females)	<u>ENR RECOMMENDATION</u> Eliminate all harvest of Bathurst caribou females Limited female harvest may be possible for experienced hunters on the Bluenose-East and the Ahiak herds and assisted through a joint partnership with ENR/ITI. Numbers	Conservation measure and under Tłıchǫ Agreement. Regulation changes required. Subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside

No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
		harvested to be discussed further and biologists would be part of the hunt to assess health and condition of caribou harvested. No harvest of cows would be allowed when herds are mixed together on the winter range. Instead a careful harvest of males is suggested. Location of caribou of various herds to be monitored by tracking satellite collared females and a no hunting zone could be established for the area where Bathurst collared animals are situated every season. <u>TŁJCHQ GOVERNMENT</u> No restriction on female harvest.	Wek'èezhì.
5.	Reduce harvest Pressure (males)	<u>ENR RECOMMENDATION</u> A) Bull harvest only on all herds for Aboriginal harvesters (caribou with no antlers only in the winter). B) Only a limited number of bulls mixed with the Bathurst caribou cows will be available for harvest and the number will be	Conservation measure and under Tłjchq Agreement A tag allocation system for Aboriginal harvest may also be considered to ensure that no over

No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
		regulated through a tag allocation system to avoid over-harvesting of the Bathurst herd bulls. Subject to changes if results of fall composition surveys reveal a low number of bulls in the herd. A low ratio of bulls to cows can be a concern for the health of the herd. Recommendation is to harvest Bluenose-East and Ahiak caribou males in the fall. Again, mobile harvesting zones to be determined based on the seasonal distribution of collared caribou. <u>TLJCHQ GOVERNMENT</u> No restriction on male harvest.	harvesting of bulls take place on any herds. Regulation will be required Subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'èezhìl.

IR No. 3 was issued February 4, 2010, requesting clarification on information provided during IRs No. 1 and 2 as well as additional supporting documentation. ENR provided a response on February 23, 2010; Tłıchǵ Government did not provide a response.

IR. No 4 was issued June 23, 2010, requesting additional documents and information related to Intervenor requests. ENR provided a response on July 2, 2010.

5.4 Interim Emergency Measures

On January 1, 2010, ENR implemented interim emergency measures, which included the closure of barren-ground caribou commercial, non-resident and resident harvesting in the North and South Slave regions and the closure of all harvesting in a newly established no-hunting conservation zone (Figure 2). Further regulations were implemented to provide access to wood bison by establishing two new bison zones in the North Slave region. This decision was made under the authority of Section 12.5.14 of the Tłıchǵ Agreement as ENR considered its action necessary due to an emergency situation regarding declining populations of the Bathurst caribou herd. The interim measures will remain in effect until the WRRB's recommendations on barren-ground caribou management in Wek'èezhì are implemented.



Figure 2: No-Hunting Conservation Zone, R/BC/02⁵

⁵ ENR-GNWT 2010. http://www.enr.gov.nt.ca/live/documents/content/No-Hunting_Conservation_Zone_Map.pdf

5.5 Legal and Procedural Issues in the 2010 Proceeding

On November 24, 2009, the Board advised all registered Parties that any legal or procedural issues related to the proceeding must be identified by December 11, 2009. Four Parties, Bathurst Inlet Developments, Shoshone Wilderness Adventures, the North Slave Métis Alliance and Ms. Karen McMaster identified issues of concern. A compilation of the issues was circulated to all Parties to the proceeding on February 1, 2010. The Parties were offered the opportunity to respond or comment on any of these legal issues. Only one party, ENR responded to any of the issues. The Board considered the matters raised by the Parties, the response and the information available on the record for the proceeding in making its ruling on the issues (Appendix C).

5.6 Public Hearing, March 22-26, 2010

All registered Parties were required to provide written submissions detailing their argument related to the scope of the hearing by no later than March 3, 2010. Hearing presentations were requested for March 12, 2010. All written submissions and hearing presentations were posted to the public registry.

To ensure that procedural, legal and administrative items were addressed prior to the public hearing, the Board held a pre-hearing conference on March 5, 2010 in Yellowknife. The WRRB issued public hearing instructions to the registered Parties as required and, further to recommendations made by Parties during the pre-hearing conference, a revised set of instructions were issued on March 8, 2010.

During the March 22-26, 2010 hearing in Behchokò, NT, the registered Parties gave oral presentations and asked question of the other Parties. Registered public were also given the opportunity to address the WRRB in the hearing. A full written transcript of each day and evening session of the hearing was produced and is available on the public registry. Recommendations provided by Intervenors and registered public were summarized by Board staff (Appendix D).

Once the evidentiary phase of the proceeding was completed, the Tłıchǵ Government requested the WRRB adjourn the hearing in order to give ENR and the Tłıchǵ Government time to collaboratively complete the joint management proposal as originally requested. The Board agreed to grant the application for adjournment until May 31, 2010, with the following conditions:

- Tłıchǵ Government and ENR must provide an interim report on progress by April 30, 2010, including a summary of consultations conducted with other Parties. If substantial progress is not made by April 30, the Board reserved the right to reconvene for final argument and proceed with its decision;
- Board staff and independent expert participate in the process as observers; and
- Revised proposal filed by May 31, 2010 must address harvest numbers and allocation of harvest for both Bathurst and Bluenose-East caribou.

The Tłıchǵ Government and ENR met throughout April and May 2010 and provided the requested progress report on April 30, 2010. WRRB staff and independent expert were present at negotiations as observers.

5.7 Receipt of Revised Joint Proposal

On May 31, 2010, the Tłıchǵ Government and ENR submitted the *Revised Joint Proposal on Caribou Management Actions in Wek'èezhìıı*, which revised the original management and monitoring actions as well as incorporating an adaptive co-management framework and rules-based approach to harvesting (Appendix E). The Tłıchǵ Government and ENR were able to reach an agreement on Aboriginal harvesting.

Following review of the information and comments from registered Parties, the WRRB accepted the proposal as submitted and considered it a revision only. Therefore, on July 12, 2010, the Board was able to notify the public of the final schedule to reconvene its public hearing to hear closing arguments from registered Parties. The public record was reopened on July 12, 2010.

5.8 Public Hearing, 5-6 August 2010

On July 16, 2010, the WRRB issued instructions regarding the requirements for closing arguments to the registered Parties. Closing argument speaking notes and/or presentations were requested for July 30, 2010. All speaking notes and presentations were posted to the public registry.

During the August 5-6, 2010 hearing in Behchokǵ, NT, the Tłıchǵ Government and ENR gave an oral presentation on the revised proposal and registered Parties were able to ask questions. All registered Parties provided closing arguments. A full written transcript of each day of the hearing was produced and is available on the public registry. The WRRB adjourned the hearing on August 6, 2010. The public record was closed and the WRRB's deliberations followed.

6. IS THERE A CONSERVATION CONCERN FOR THE BATHURST CARIBOU HERD?

6.1 Evidence Presented

Based on the WRRB's review of Section 12.6.1 of the Tłıchǵ Agreement, the first question which must be answered is whether there is a conservation concern with respect to the Bathurst caribou herd. If the WRRB is not convinced that there is a Bathurst caribou management problem, it does not have the authority to recommend harvest limitations on Tłıchǵ citizens.

There was evidence presented during this proceeding that while, caribou herds are cyclical in nature with periods of abundance and scarcity occurring over many decades, there has been a progressive decline in barren-ground caribou numbers across the NWT since 2000. Specifically, the Bathurst herd has declined from nearly 472,000 animals to approximately 32,000 animals in the period between 1985 and 2009 (Figure 3). ENR indicated that this trend is based on several calving ground surveys and on other information available to the department, including adult and calf caribou survival, pregnancy rates, body condition, herd sex ratios and harvest estimates.

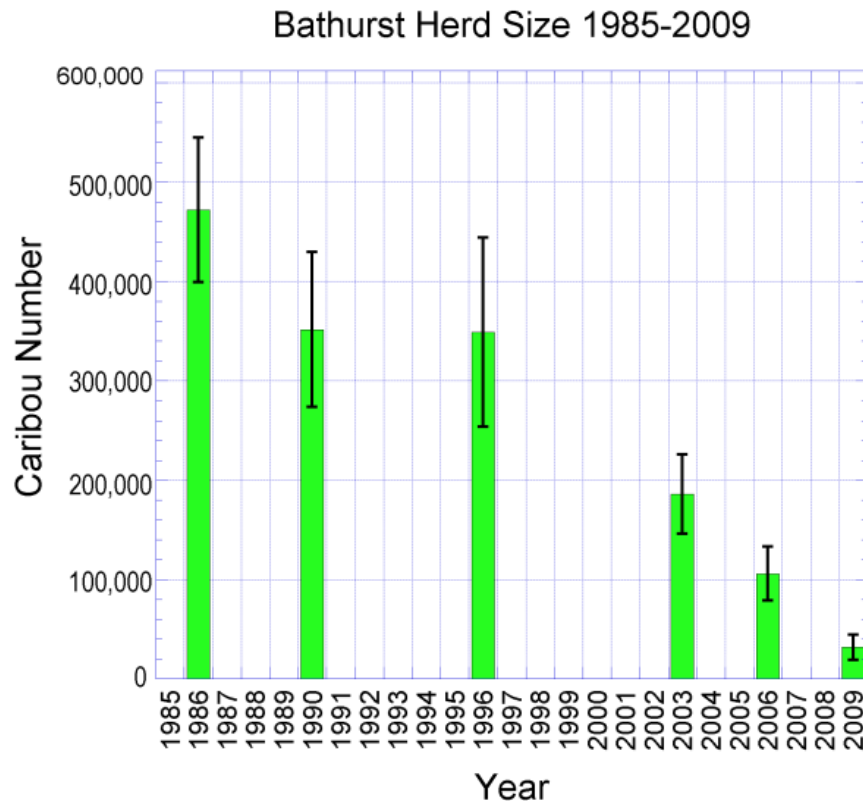


Figure 3: Population Trends, 1985 – 2009⁶

Testimony indicated that ENR uses the most recent scientific techniques to estimate herd size, including satellite and GPS collars and specialized photo planes to conduct the surveys. Evidence showed that cow mortality seemed to have recently increased substantially which likely played an important factor in the decline in the herd. Computer modeling also indicated calf survival has declined drastically in recent years. Body condition and pregnancy appear to be good in recent years suggesting that health is not affecting mortality and that predation and harvest may be the cause of recent declines in cows and calves. The number of bulls in the herd is also low compared to other herds in the NWT suggesting caution.

⁶ ENR-GNWT 2010. *Caribou Forever – Our Heritage, Our Responsibility*. PowerPoint Presentation.

A review of the testimony from the hearing as well as the written submissions showed varied opinions on the significance of the decline and potential for recovery. For some, personal observations demonstrated that there were fewer and fewer caribou around. Others acknowledged the severity of decline by supporting harvest restriction as both the appropriate first step towards conservation and necessary to effectively conserve the Bathurst caribou herd into the future. The Expert Witness stated that the decline of the Bathurst, Bluenose-East and Ahiak caribou herds are consistent with trends across the circumpolar north for migratory tundra caribou as 14 out of 19 major herds in Russia, Canada, Alaska and Greenland are in decline.

Other testimony and written evidence supported the opposite view; that the decline in the Bathurst herd is not real and a result of changing definitions of herds. Testimony suggested that there was significant doubt regarding the science and its interpretation. An abundance of healthy caribou are being observed, not diseased or sick caribou that might indicate a severe decline; perhaps indicating the caribou have just moved and/or changed their migration routes. Much of the evidence presented on this side of the argument related to the issue of herd splitting, i.e. that the Bathurst and Ahiak caribou herds should be considered one herd and, if so, there would be no conservation concern.

6.2 “Splitting the Herd”

6.2.1 Tł̨ch̨ Evidence

Caribou that migrate between the barrens and the boreal forest are referred to as *hozįekw̨*, as opposed to *t̨dz̨* – woodland caribou. *Hozįekw̨* return to the barrens to give birth to calves. They usually return to the same place each year. Periodically, *hozįekw̨* shift migration patterns and may follow other caribou to their calving grounds.

6.2.2 Scientific Evidence

A calving ground is defined based on a continuous distribution of calving caribou. There are often areas of high density, some medium and some low but these areas are adjacent and considered one herd. If there were two distinct groups of calving caribou separated by areas of no calving caribou and non –breeders, these would be considered two separate calving grounds and two herds.

The Ahiak calving ground, on the east side of Bathurst Inlet, overlaps with areas the Bathurst herd used to use for calving. Calving of the Bathurst herd occurred on the east side of Bathurst Inlet from 1965-1984, on both sides of the Inlet in 1986, and on the west side from 1990 onward. As the Bathurst calving ground shifted westward across Bathurst Inlet, it appears the Ahiak calving ground expanded westward to occupy that recently abandoned area (Figure 4). Surveys of the calving grounds of the Bathurst and Ahiak

herds in 1986, 1996, 2002 and 2006-2009 have shown their calving grounds to be discrete in any given year.

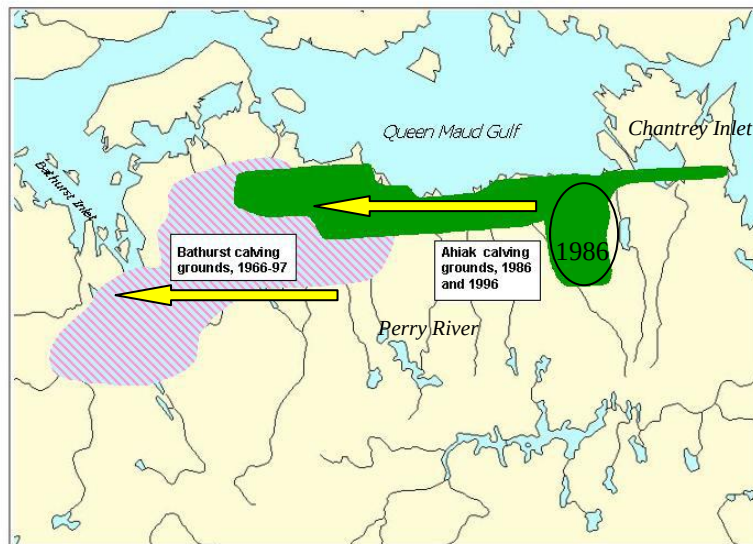


Figure 4: Traditional calving grounds of Bathurst caribou herd (1966 – 1997) and Ahiak calving grounds for 1986 and 1996⁷

6.3 Conclusion

Overall, the WRRB concluded that the balance of evidence submitted points to the conclusion that the Bathurst herd is distinct from the Ahiak herd, it has decreased in number drastically in recent years and demonstrates that there is an issue of conservation concern.

7. OTHER ABORIGINALS HARVESTING IN WEK'ÈEZHÌI

The annual range of the Bathurst caribou herd includes communities in the Nunavut settlement area and the Akaitcho Territory, which harvest from it at different times of the year (Figure 5). As well, members of the NWT Métis Nation and North Slave Metis Alliance harvest from the Bathurst herd. The WRRB and the Nunavut Wildlife Management Board are the two co-management tribunals with management authority over the Bathurst caribou herd. As the Akaitcho Territory Government and NWT Metis Nation have not finalized their land claim agreement processes, the GNWT is responsible for caribou management following consultations.

⁷ Gunn, A. and A. M. D'hont (2002). Extent of Calving for the Bathurst and Ahiak Caribou Herds June 2002. Manuscript Report No. 149. Yellowknife, Department of Resources, Wildlife and Economic Development, Government of the Northwest Territories: 42pp.

The WRRB must recognize the management initiatives undertaken by these Aboriginal Governments. While the WRRB is responsible for managing wildlife in Wek'èezhì on the basis of information from the Tłıchǫ citizens, it must not lose sight of this overall management context. A failure to act when the evidence indicates a wildlife management need could have effects on harvesters outside of Wek'èezhì.

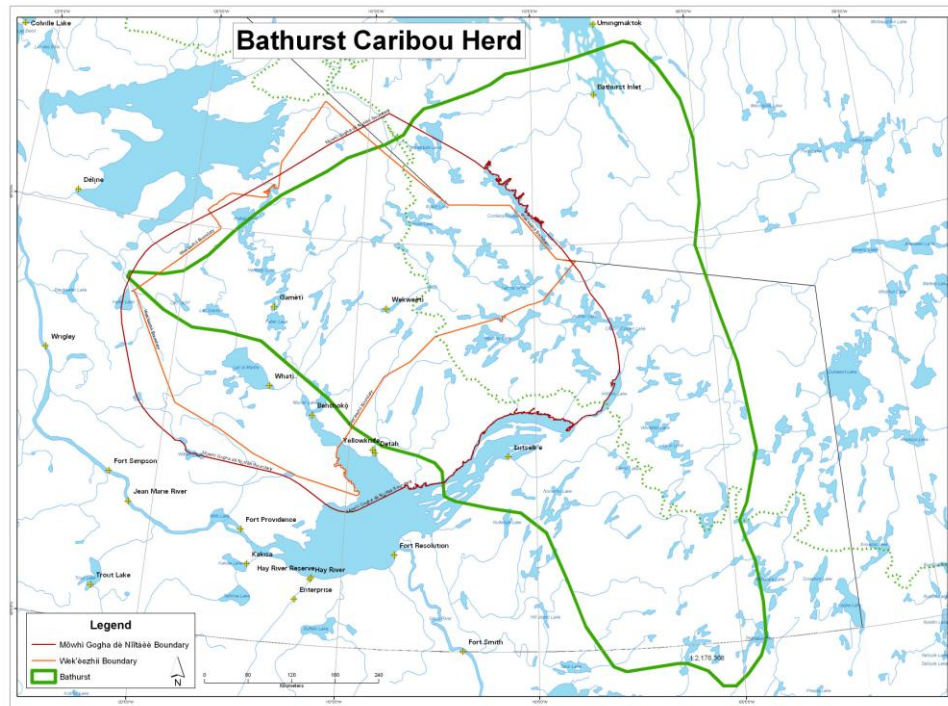


Figure 5: Annual range of the Bathurst barren-ground caribou herd

8. TŁİCHǫ CULTURAL PERSPECTIVE ON CARIBOU MANAGEMENT

Management actions associated with caribou are a sensitive topic within the NWT with all citizens – including the Tłıchǫ – having varying opinions on population levels and rights and responsibilities to harvest. There is, however, consistency in Tłıchǫ comments regarding the importance of respect for and knowledge of caribou, and having the will to govern one's own actions in relation to caribou and other wildlife. These cultural perspectives are relevant to the idea of target levels, monitoring caribou, and conservation education.

Personal autonomy for the Tłıchǫ is about taking responsibility and is closely tied to self-government. Personal autonomy is also tied to having self respect, understanding situations based on one's experience and knowledge, and having the ability to share one's thoughts with other Tłıchǫ, particularly their elders and Chiefs. Personal autonomy is about self restraint, respect for others, finding positive solutions and taking actions as Tłıchǫ citizens. In the case of harvesting caribou, family and community members – both

men and women – discuss their needs, which include their meat requirements as well as such things as their need for bones and hides for clothing, drums, caribou rugs, tools, etc. This traditional process is the basis on which Tłıchq make known their harvest requirements each year, and an important part of the informal structure on which the Chiefs’ decisions are made, respected and followed at the family, community and regional levels.

Tłıchq management actions are tied to the expectation that citizens will take personal responsibility to be respectful and knowledgeable. Both are intertwined components to protecting the environment of which the caribou are an integral part. Traditional practices and laws associated with caribou can be categorized as:

- i. Acquiring knowledge of caribou by closely observing them and sharing those observations with elders and other harvesters, including:
 - a. The ability to consider long term distribution patterns, population numbers and migration routes when determining trend;
 - b. Understanding that one should never harvest lead cows or the bulls that lead younger bull; and
 - c. Understanding that both bulls and cows can be harvested, with respect, as both are key to the success of the herd – cows as they have calves and teach the calves; bulls as they protect cows and calves from predators.
- ii. Harvesting only what is needed, including having the knowledge to know the type of caribou you need.
- iii. Using everything the caribou provides.
- iv. Storing what is not used immediately in appropriate ways.
- v. Disposing of caribou by-products in appropriate ways.

People should be constantly educated in a respectful manner about these rules.

Harvesting decisions are not the responsibility of a limited number of people – all people are responsible. It is done through discussions with family members, who know their requirements, and with elders, who carry the accumulated knowledge critical to making good decisions. Chiefs sit and listen to all family elders and give direction to younger harvesters. The elders are considered the best educators as they understand the holistic and social aspects to their responsibilities of having a stewardship relationship with the environment. A relationship that is learned and enhanced by travelling trails where people learn to monitor the landscape from a Tłıchq perspective. The elders also know past trends associated with caribou distribution over time, population levels and their relationship with predators, humans, vegetation communities, and fitness of habitat. This is demonstrated in Figure 6, which shows Tłıchq trails and the distribution of barren-ground caribou herd from 1925 to 1991.

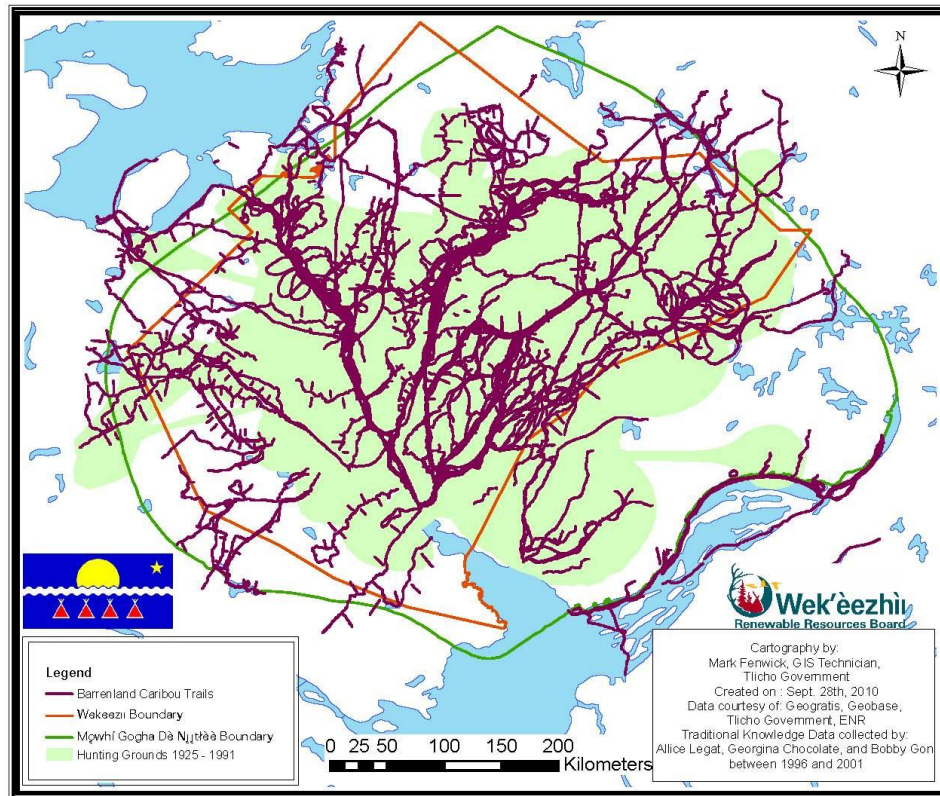


Figure 6: Distribution of Barren-ground Caribou over Time, 1925-1991, & Traditional Harvesting Trails (Legat, Chocolate & Gon, 2001)⁸

Key to respecting caribou is having sufficient experience to know caribou as well as the rules governing human interaction with caribou. Experience comes through ‘watching’ caribou behaviour, monitoring their behaviour, including the relationship between calves, cows and bulls, foraging habits and their distribution from year to year.

Experience also comes from monitoring their habitat, what vegetation they forage on and listening to oral narratives to understand past behaviour, migration routes within certain areas, trends in population levels especially in relation to predator population levels and richness of habitat. Although Tł̥ch̥q̥ pay attention to short term trends, they know that to understand the cycle of any part of the ecosystem, one must understand the long term trends. Elders play a critical role in bringing forward this historic information.

Based on this long term knowledge of caribou, the elders were able to predict both the current population drop and changes to distribution as early as the mid to late 1990s. Their predictions were based on human decisions to destroy habitat for the development of mines⁹ in key caribou habitat areas – both grasses and sedges and the destruction of autumn water crossings; and the human decision to let forest fires burn destroying winter

⁸ Legat, Chocolate & Gon 2001. *Caribou Migration and the State of their Habitat*. Yellowknife, NT: West Kitikmeot Slave Study.

⁹ ibed

habitat of caribou within Wek'èezhìi. Furthermore, their prediction was based on the amount of meat and hides they saw that people were wasting and the manner in which by-products were being disposed of.

9. WRRB RECOMMENDATIONS ON LIMITATIONS TO BATHURST CARIBOU HARVEST

9.1 Total Allowable Harvest vs. Harvest Targets

A TAH is an absolute number of caribou that can be harvested from a particular herd. If a TAH is put in place, harvest must be tracked accurately so that it does not go over the allowable amount. Tracking is usually done through distribution of tags.

The Tłıchǵ Government and ENR have agreed the Bathurst caribou herd is in real and serious decline and decisive management actions are imperative to conserve and recover the herd. However, they have recommended a harvest target rather than a TAH, for the following reasons. First, both Governments proposed that because the herd size is an estimate and not an exact number, it is not beneficial to have an exact number set for harvest. Secondly, the two governments feel implementation will be more easily achieved if the WRRB does not impose a TAH. The Tłıchǵ Government's legal counsel explains: *"There are two reasons why the concept of total allowable harvest is not recommended or requested. And one is that the concept of total allowable harvest and the apparent concept that one could set absolute numbers would be a bit out of line with the reality that caribou population numbers cannot be known with the kind of precision ... The other reason ... is more about the nature of the complex set of issues and factors that are actually going to have to play out if this management plan is to be implemented effectively."*¹⁰

The Governments argue that there will be more community support and ownership of management actions if a target is used rather than a TAH. The Tłıchǵ Government's legal counsel asserts that *"... the view of the people who developed this plan is that this plan only has a chance to succeed if those who depend most on the caribou and who harvest it the most are engaged in a real way in making the plan work"*¹¹ He further states that *"It's not meant to be a way to avoid effective actions to stabilize the herd. It's meant, in fact, to facilitate and promote effective management."*¹²

In making management decisions, the WRRB is required to *"apply the principles and practices of conservation"* and *"in the absence of complete information, where there are threats of serious or irreparable damage, the lack of complete certainty shall not be a*

¹⁰ Art Pape, Legal Counsel, Tłıchǵ Government. Wek'èezhìi Renewable Resources Board Public Hearing on Joint Proposal on Caribou Management Actions in Wek'èezhìi Transcript Day 6 of 7, August 5, 2010. pp 50-51

¹¹ ibid: pp 52

¹² ibid: pp 55

*reason for postponing reasonable conservation measures”.*¹³ The Board concluded that the balance of evidence submitted demonstrates that there is an issue of conservation concern. Despite a sense of discomfort in recommending a harvest target in lieu of a TAH, the WRRB recognizes the importance of the collaborative process and have been persuaded by the Tłıchǵ Government’s and ENR’s argument. There is a real responsibility for reporting requirements by both Governments to determine if the collaborative management decision for long-term recovery is indeed working.

Recommendation #1: The Board recommends that the Tłıchǵ Government and ENR report annually on the overall success of the harvest target approach in meeting the objectives of effective collaborative management and the long-term recovery of the Bathurst caribou herd.

9.2 Commercial Harvest of Bathurst Caribou

The Tłıchǵ Government and ENR proposed to eliminate all commercial meat harvest and justified this restriction as the recommended harvest target is well below past usage patterns for the Tłıchǵ and other Aboriginal harvesters who have priority for allocation under the Tłıchǵ Agreement.

The current size of herd and recent trend in herd size requires limitation of all harvest of Bathurst caribou. Section 12.6.5(a) of the Tłıchǵ Agreement recognizes that the WRRB “*shall give priority to non-commercial harvesting over commercial harvesting*”.

Recommendation #2: The Board recommends that all commercial harvesting of Bathurst caribou within Wek’èezhì be set to zero for the 2010/11, 2011/12 and 2012/13 harvesting seasons.

9.3 Outfitted Harvest of Bathurst Caribou

The Tłıchǵ Government and ENR proposed to eliminate all outfitted harvest and justified a restriction on outfitter harvest as the recommended harvest target is well below past usage patterns for the Tłıchǵ and other Aboriginal harvesters who have priority for allocation under the Tłıchǵ Agreement. During the hearing it was not clear what the views of the ENR and Tłıchǵ Governments were with regard to the future of the outfitting industry within Wek’èezhì.

Much of the Intervenor argument focused on the economic contribution of the outfitting industry to the NWT. Recommendations for a socio-economic assessment of the management actions were made. Testimony spoke of the significant investment

¹³ See s.12.1.5 of the Tłıchǵ Agreement.

outfitting businesses have made in infrastructure and marketing over the past few decades and how the loss of harvesting opportunities will essentially shut down these businesses. Argument was made to continue sport hunts at some reduced level or financial support from government be provided to diversify outfitting operations for viability into the future. Other Intervenors and participants stated that, consistent with the Tłıchǵ Agreement, eliminating outfitter harvest is the first step in limiting harvest for conservation purposes.

The current size of herd and recent trend in herd size requires limitation of all harvest of Bathurst caribou. Section 12.6.5(a) of the Tłıchǵ Agreement recognizes that the WRRB “*shall give priority to non-commercial harvesting over commercial harvesting*”. The Board recognizes the hardship experienced by outfitters resulting from reductions in their access to caribou; however, the Board is responsible for ensuring a balance that maintains Tłıchǵ and Yellowknives Dene First Nation traditions and ensuring conservation.

Recommendation #3: The Board recommends that all outfitted harvesting of Bathurst caribou within Wek’èezhìı be set to zero for the 2010/11, 2011/12 and 2012/13 harvesting seasons.

Recommendation #4: The Board recommends that ENR and Tłıchǵ Government, prior to the next survey of the Bathurst caribou herd, provide the Board and make public their positions with regard to the reinstatement of outfitting within Wek’èezhìı.

9.4 Resident Harvest of Bathurst Caribou

The Tłıchǵ Government and ENR proposed to eliminate resident hunter harvest and justified a restriction of resident harvest as the recommended harvest target is well below past usage patterns for the Tłıchǵ and other Aboriginal harvesters who have priority for allocation under the Tłıchǵ Agreement. During the hearing it was not clear what the views of the ENR and Tłıchǵ Governments were with regard to the future of resident harvesting in Wek’èezhìı.

The current size of herd and recent trend in herd size requires limitation of all harvest of Bathurst caribou. Resident harvesters still have other opportunities to hunt, including moose, woodland caribou, bison, sheep, and muskox. Sections 12.5.6 (c) and 12.7.5 of the Tłıchǵ Agreement acknowledge that the WRRB “*shall give priority to non-commercial harvesting over commercial harvesting; and, with respect to non-commercial harvesting, residents of the NWT over non-residents of the NWT*”.

Recommendation #5: The Board recommends that all resident harvesting of Bathurst caribou within Wek’èezhìı be set to zero for the 2010/11, 2011/12 and 2012/13 harvesting seasons.

Recommendation #6: The Board recommends that ENR and Tłıchǵ Government, prior to the next survey of the Bathurst caribou herd, provide the Board and make public their positions with regard to the reinstatement of resident harvesting within Wek'èezhì. In developing this position, the Governments will review, assess, and implement, where conservation permits, a limited-entry draw system to facilitate the reinstatement of resident harvesting at the earliest opportunity.

9.5 Aboriginal Harvest of Bathurst Caribou

In the original proposal, the Tłıchǵ Government and ENR did not reach an agreement on Aboriginal harvesting. ENR recommended eliminating all harvest of Bathurst caribou cows and having a limited bulls-only harvest, regulated through a tag allocation system. The Tłıchǵ Government recommended no harvest restrictions on cow or bull harvest.

In the revised proposal, the Tłıchǵ Government and ENR proposed a target harvest of 300 caribou plus or minus 10% for the entire Bathurst caribou herd, both inside and outside of Wek'èezhì. They suggested that even if all harvest is stopped there is no guarantee that the Bathurst herd will stabilize and begin to grow. The uncertainties around survey information and analysis suggest that a limited harvest of 270 -330 caribou with 60 or fewer cows is an appropriate management option to help stabilize the herd. The current size of herd and recent trend in herd size requires limitation of all harvests. The strongest measures to maximize the potential for the recovery of the herd would be to curtail all harvest, including Aboriginal harvest. The Board recognizes the linkage between Aboriginal peoples, caribou and culture; therefore, the WRRB has sought a balance between maintenance of these important linkages and minimizing impact of the harvest on the Bathurst herd.

Recommendation #7: The Board recommends the establishment of a harvest target of 300 Bathurst caribou per year for the 2010/11, 2011/12 and 2012/13 harvesting seasons.

Recommendation #8: The Board recommends allocating the annual harvest target of Bathurst caribou between Tłıchǵ Citizens and members of an Aboriginal people with rights to hunt in Mǫwhì Gogha Dè Nǵtłèè as follows:

- Tłıchǵ Citizens – 225
- Members of an Aboriginal people with rights to hunt in Mǫwhì Gogha Dè Nǵtłèè - 75

The Tłıchǵ Government should determine distribution of the allocation within Tłıchǵ communities and ENR should determine distribution of the allocation to members of an Aboriginal people with rights to hunt in Mǫwhì Gogha Dè Nǵtłèè in consultation with those groups.

Recommendation #9: The Board recommends the harvest of Bathurst caribou should target an 85:15 bull/cow harvest ratio, i.e. the annual harvest of Bathurst caribou cows should be less than 45.

Recommendation #10: The Board recommends that if the Tłıchǵ Government and/or ENR have information to suggest that the harvest of Bathurst caribou has or will in the near future exceed the harvest target of 300 by 10% or more, then regulations should be put in place to close all harvesting in areas occupied by the Bathurst herd. If the harvest of Bathurst caribou exceeds the targets of 300 caribou by greater than 10%, the Board reserves the right to reconsider its recommendations and implement a TAH¹⁴.

Recommendation #11: The Board recommends that if the Tłıchǵ Government and/or ENR have information to suggest that the harvest of Bathurst caribou has or will or in the near future materially exceed 45 cows, then regulations should be put in place to close all harvesting in areas occupied by the Bathurst herd. If the harvest of Bathurst caribou materially exceeds the targets of 45 cows, the Board reserves the right to reconsider its recommendations and implement a TAH¹⁵.

Recommendation #12: The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Bathurst caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.

Recommendation #13: The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the harvest will be attributed to the Bathurst caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.

10. WRRB RECOMMENDATIONS ON BLUENOSE-EAST MANAGEMENT

Tłıchǵ Government and ENR proposed the following restrictions on harvest of the Bluenose-East caribou herd in the revised proposal:

- Eliminate all commercial meat tags, outfitting tags, and resident tags
- Reduce 2010/2011 harvest of Bluenose-East herd by up to 45% of estimated 2009-2010 harvest within Wek'èezhìl (1920 caribou); and
- Voluntary selection of bulls (80%).

¹⁴ See s.12.5.6 of the Tłıchǵ Agreement.

¹⁵ See s.12.1.1 of the Tłıchǵ Agreement.

Several Intervenor recommended that harvest not be diverted from Bathurst to adjacent herds. The Sahtu Renewable Resources Board (SRRB) recommended Bluenose-East harvest be set based on a conservative herd estimate that assumes a continued decline. In 2006, SRRB recommended the elimination of commercial meat tags, outfitting and resident harvest of the Bluenose-East. Subsistence harvest was put under a voluntary restriction with an emphasis on bulls.

Following the July 2010 photo survey, preliminary counts indicate the Bluenose-East herd size is around 80 000 caribou¹⁶, with a formal estimate to be released in October 2010. The previous 2006 estimate of herd size was 66 700 (Figure 7).

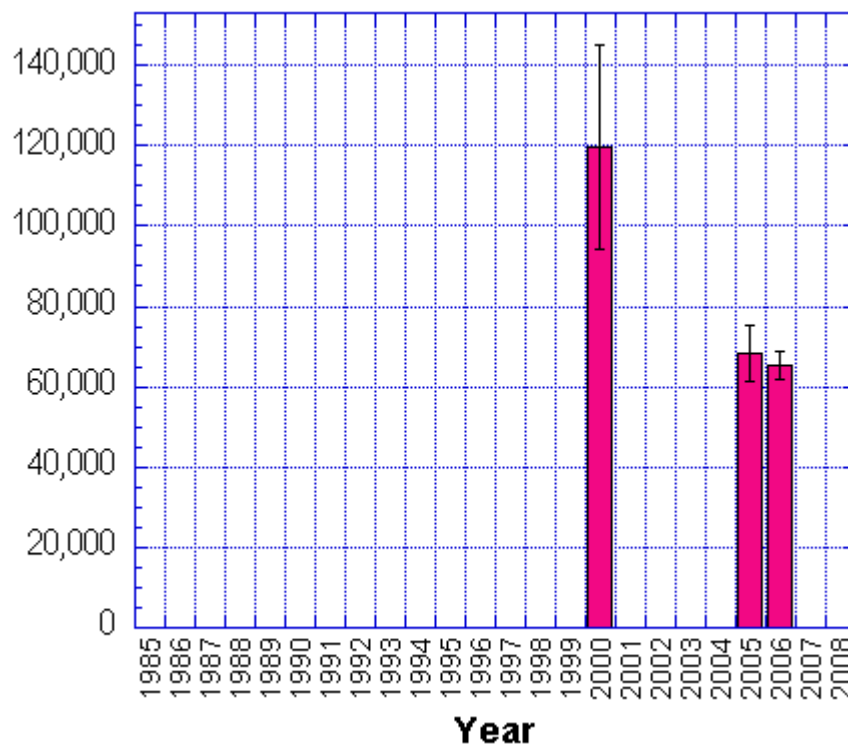


Figure 7: Bluenose-East Caribou Population Trends, 1985 – 2009¹⁷

10.1 Commercial, Outfitting & Resident Harvest of Bluenose-East Caribou

The current size of herd and recent trend in herd size requires limitation of all harvest of Bluenose-East caribou herd. Resident harvesters still have other opportunities to hunt, including moose, woodland caribou, bison, sheep, and muskox. Sections 12.5.6 (c) and 12.7.5 of the Tłıchǵ Agreement acknowledge that the WRRB “*shall give priority to non-commercial harvesting over commercial harvesting; and, with respect to non-commercial harvesting, residents of the NWT over non-residents of the NWT*”.

¹⁶ Pers. Comm. Jan Adamczewski, Ungulate Biologist, ENR-GNWT. September 2010.

¹⁷ ENR-GNWT 2010. *Caribou Forever – Our Heritage, Our Responsibility*, PowerPoint Presentation.

Recommendation #14: The Board recommends that all commercial, outfitted and resident harvesting from the Bluenose-East caribou herd within We'èezhì be set to zero for the 2010/11, 2011/12 and 2012/13 harvesting seasons.

10.2 Aboriginal Harvest of Bluenose-East Caribou

Although there is evidence to suggest that a continuing decline has not happened with the Bluenose-East caribou herd, the WRRB believes that a cautious approach should be taken when setting a harvest target. The current size of herd and recent trend in herd size still requires limitation of all harvests. The Board recognizes the linkage between Aboriginal peoples, caribou and culture; therefore, the WRRB has sought a balance between maintenance of these important linkages and minimizing impact of the harvest on the Bluenose-East herd.

Recommendation #15: The Board proposes the establishment of a harvest target of 2800 Bluenose-East caribou per year for the 2010/11, 2011/12 and 2012/13 harvesting seasons. The annual harvest target and its allocation should be finalized in discussions between the existing wildlife co-management boards and Aboriginal governments in the Sahtu, Dehcho and Tłıchǫ. The Tłıchǫ Government should determine distribution of the allocation within Tłıchǫ communities.

Recommendation #16: The Board recommends the harvest of Bluenose-East caribou should target an 85:15 bull/cow harvest ratio, i.e. the annual harvest of Bluenose-East caribou cows should be less than 420.

Recommendation #17: The Board recommends that if the Tłıchǫ Government and/or ENR have information to suggest that the harvest of Bluenose-East caribou has or will in the near future exceed the target by 10% or more, then regulations should be put in place to close all harvesting in areas occupied by the Bluenose-East herd.

Recommendation #18: The Board recommends that if the Tłıchǫ Government and/or ENR have information to suggest that the harvest of Bluenose-East caribou has or will or in the near future materially exceed 420 cows, then regulations should be put in place to close all harvesting in areas occupied by the Bluenose-East herd.

Recommendation #19: The Board recommends that ENR should, in discussion with the Tłıchǫ Government and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Bluenose-East caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.

Recommendation #20: The Board recommends that ENR should, in discussion with the Tłıchǫ Government and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the harvest will be attributed to the Bluenose-

East caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.

Recommendation #21: The Board recommends that the Tłıchǵ Government and ENR do not provide harvester assistance and/or incentives to access the Bluenose-East herd.

Recommendation #22: The Board recommends that the Tłıchǵ Government consider negotiating caribou harvesting overlap agreements with Nunavut and the Sahtu region to make certain that existing relationships endure.

11. WRRB RECOMMENDATIONS ON AHIK MANAGEMENT

Tłıchǵ Government and ENR proposed the following restrictions on harvest of the Ahiak caribou herd in the revised proposal:

- Do not increase access of Ahiak caribou by Tłıchǵ communities; and,
- Voluntary selection of bulls (80%).

Population estimates do not exist for the Ahiak herd as they have never been surveyed photographically. Visual counts have been conducted during peak of calving every year since 2006, resulting in an estimate of average counts of cows per survey segment. These counts show a 60% decline from 2006 to 2009. Another visual survey was conducted in June 2010 but a new count for the Ahiak herd is not available at this time. ENR and Government of Nunavut are planning a calving ground photographic survey of the Ahiak herd and systematic survey of the Beverly caribou calving ground in June 2011.

Several Intervenors recommended that harvest not be diverted from Bathurst to adjacent herds. The Ahiak herd is rarely in We'èezhì but intermingles with the Bathurst herd during the winter primarily around Wekweètì and eastward. It is thought some of the Beverly caribou herd is being "swept" up by the Ahiak and is now showing movement patterns typical of this herd.

11.1 Commercial, Outfitting & Resident Harvest of Ahiak Caribou

The existing information related to the Ahiak caribou herd suggests the herd is in decline.

Recommendation #23: The Board recommends that all commercial, outfitted and resident harvesting from the Ahiak caribou herd within We'èezhì be set to zero in order to prevent incidental harvest of Bathurst caribou for the 2010/11, 2011/12 and 2012/13 harvesting seasons.

11.2 Aboriginal Harvest of Ahiak Caribou

The existing information related to the Ahiak caribou herd is not sufficient for the Board to recommend a target for Aboriginal harvesting; however, available information does suggest the herd is also in decline.

Recommendation #24: The Board recommends that the Tłıchǵ Government and ENR do not provide harvester assistance and/or incentives to access the Ahiak herd.

Recommendation #25: The Board recommends that the Tłıchǵ Government consider negotiating caribou harvesting overlap agreements with Nunavut and the Akaitcho region to make certain that existing relationships endure.

Recommendation #26: The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Ahiak caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.

Recommendation #27: The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the harvest will be attributed to the Ahiak caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.

12. WRRB RECOMMENDATIONS ON CARIBOU MONITORING

The Board received much comment on monitoring during its proceeding. It was varied but some underlying themes were evident. The most important of which is that the monitoring program needs to respect and make use of Tłıchǵ knowledge. Evidence presented also suggested the need for monitoring results to be publicly available in a timely manner, that consistent monitoring be done across herds, that environmental conditions be monitored as well as aspects of caribou biology, that methods ensure scientific defensibility of results, and that monitoring include utilizing information from all stakeholders including outfitters, residents and industry. Intervenors and public participants supported requirements for harvest reporting and suggested efforts are put into developing appropriate programs for documenting harvest.

12.1 Scientific Monitoring

Tłıchǵ Government and ENR proposed to incorporate the following monitoring actions into an adaptive co-management framework. These actions are:

- Density of Cows on Calving Ground
- Spring Calf Survival
- Health and Condition
- Pregnancy Rate
- Birth Rate
- Adult Sex Ratio and Fall Calf Survival
- Estimate of Herd Size
- Caribou Harvest
- Wolf Den Occupancy
- Wolf Condition and Reproduction
- Wolf Harvest

Any approach to management must have ways of measuring success so that adjustments can be made if results are not achieved or if conditions change such that a different approach is warranted.

12.2 Tłıchǵ Knowledge Research and Monitoring Program

The Tłıchǵ Knowledge (TK) Research and Monitoring Program was first conceived in 1999 by the Tłıchǵ Regional Elders Committee. These elders were concerned that caribou and their habitat were in danger due to the location of the diamond mines and the increased number of forest fires. In 2009, the WRRB and the Tłıchǵ Government collaborated to develop a program, with several steps being undertaken. The first was household visits in all the communities, followed by several meetings of the Tłıchǵ Elders and Harvesters Regional Working Group. The program was then designed, with the contents being verified by the Regional Working Group.

The TK Research and Monitoring Program: Special Project, Using Tłıchǵ Knowledge to Monitor Barren-ground Caribou is designed to capture the observations of harvesters and elder's knowledge in a manner that is compatible with the Tłıchǵ cultural perspective. Current observations and knowledge of past occurrences provides realistic information to better understand caribou trends over time. This process also demonstrates respect for the holistic approach Aboriginal people take in monitoring and managing themselves and the environment.

The establishment of a fully developed, effective TK Research and Monitoring Program is a necessary but ambitious undertaking. It will require substantial resources and careful planning. It will also require investment in training and in information technology. Using Tłıchǵ Knowledge to monitor barren-ground caribou and document harvest is a constructive first step towards the development of the overall program.

The WRRB is recommending caribou harvesting targets rather than a TAH. The success of this approach is dependent on having the information necessary for sustainable management. It is, therefore, imperative that the Tłıchǵ undertake their own monitoring by documenting their observations and harvesting information to ensure they contribute to the process. If the Chiefs use the TK Research and Monitoring Program to oversee the documentation of caribou harvesting among their citizens during this time of low caribou populations, it will be easier for the Lands Protection Department, Tłıchǵ Government to:

- Maintain the target within a reasonable range;
- Allocate caribou resources to those in need;
- Provide reliable up-to-date information; and
- Evaluate the success of the target approach.

Furthermore, when caribou population numbers are higher, and allocations of this resource are more widespread, it will be necessary to determine basic needs levels of the Tłıchǵ citizens.

A full description of the *TK Research and Monitoring Program: Special Project, Using Tłıchǵ Knowledge to Monitor Barren-ground Caribou* is found in Appendix F.

Recommendation #28: The Board recommends the Tłıchǵ Government implement the *Special Project, Using Tłıchǵ Knowledge to Monitor Barren Ground Caribou* of the overall TK Research and Monitoring Program.

12.3 Monitoring Recommendations

Monitoring is important for two reasons related to the process of management: 1) to assess the status and trend of caribou herds; and 2) to assess whether management objectives are being met. The Tłıchǵ Government and ENR presented possible linkages between monitoring actions and management in the proposal. The Board's approach and responsibilities are based on co-management, and as such, support the Tłıchǵ philosophy of "*Strong Like Two People*", allowing a more realistic way of linking monitoring to adaptive co-management.

Recommendation #29: The Board recommends that ENR and the Tłıchǵ Government implement the *spring calf survival* monitoring action as identified below:

- **Scientific** – Spring composition surveys to determine calf survival should continue. In addition, ENR should explore methods to improve estimation of cow mortality that do not involve large numbers of collars to better inform the interpretation of cow/calf ratios
- **TK** – In listening to the oral narratives of Tłıchǵ harvesters, the TK researchers should document the harvesters' observations of the number of calves, cows and bulls along migration routes where caribou fences were once located.

Recommendation #30: The Board recommends that ENR and the Tłıchǵ Government implement the *health and condition* monitoring action as identified below:

- Scientific – Cows should NOT be harvested specifically for health and condition monitoring. If appropriate per collection methodology, suitable samples from harvested caribou should be collected by Aboriginal harvesters in the community.
- TK – In listening to the oral narratives of Tłıchǵ harvesters, the TK researchers should document the harvesters' visual appraisals of fitness on hoof and sensory appraisals during skinning, butchering, preparing of meat and hides.

Recommendation #31: The Board recommends that ENR and the Tłıchǵ Government implement the *birth rate* monitoring action as identified below:

- Scientific – Birth rate estimates determined from composition surveys on the calving ground should continue.
- TK – In listening to the oral narratives of Tłıchǵ harvesters, the TK researchers should document the harvesters' observations of calves, cows and bulls on the barrens in the summer (post-birthing rate).

Recommendation #32: The Board recommends that ENR and the Tłıchǵ Government implement the *adult sex ratio and fall calf survival* monitoring action as identified below:

- Scientific – Fall composition surveys to determine adult sex ratio and calf survival should continue. As above, this should be augmented with better estimates of cow mortality to better inform the interpretation of bull/cow ratios.
- TK – In listening to Tłıchǵ harvesters, the TK researchers should document the harvesters' observations of numbers and behaviour of bulls, cows and calves.

Recommendation #33: The Board recommends that ENR and the Tłıchǵ Government implement the *estimate of herd size* monitoring action as identified below:

- Scientific – A calving ground photo-survey should be conducted in June 2012.
- TK – In listening to Tłıchǵ harvesters, the TK researchers should document the harvesters' observations and their assessment of caribou abundance at key locations.

Recommendation #34: The Board recommends that ENR and the Tłıchǵ Government implement the *wolf abundance (den occupancy)* monitoring action as identified below:

- Scientific – To enhance the ability of managers to assess management actions in the future, appropriate indices of wolf abundance, wolf predation rates and population responses to changing caribou abundance should be developed and implemented.

- TK – In listening to the Tłıchǵ harvesters, the TK researchers should document the harvesters’ observations and their assessment of wolf abundance associated with caribou.

Recommendation #35: The Board recommends that ENR and the Tłıchǵ Government implement the *wolf condition and reproduction* monitoring action as identified below:

- Scientific – A carcass collection program and assessment of carcasses collected for physical condition and reproductive status should continue.
- TK – In listening to the Tłıchǵ harvesters, the TK researchers should document the harvesters’ observations of the condition of wolves associated with caribou.

Recommendation #36: The Board recommends that ENR and the Tłıchǵ Government implement the *wolf harvest* monitoring action as identified below:

- Scientific – Harvest data from a combination of carcass collection, fur sales, resident harvest questionnaires, and mandatory reporting of non-resident harvests should be collected.
- TK – Tłıchǵ researchers will manage the collection of Tłıchǵ harvest data.

Recommendation #37: The Board recommends that ENR and the Tłıchǵ Government implement the *state of habitat* monitoring action as identified below:

- Scientific – Landscape changes, including fires and industrial exploration and development, should be monitored to assess potential impacts to caribou habitat.
- TK – In listening to the Tłıchǵ harvesters, the TK researchers should document the harvesters’ detailed observations of caribou habitat.

Recommendation #38: The Board recommends that ENR and the Tłıchǵ Government implement the *pregnancy rate* monitoring action as identified below:

- Scientific – Cows should NOT be harvested specifically for determining pregnancy.
- TK – In listening to the oral narratives of Tłıchǵ harvesters, the TK researchers should document the harvesters’ visual appraisals of pregnancy and pregnancy of any cows harvested.

Recommendation #39: The Board recommends that ENR implement the *density of cows on calving ground* monitoring action as identified below:

- Scientific – Annual calving ground reconnaissance surveys should continue.
- TK – As Tłıchǵ harvesters have not gone to the calving grounds in the past, there is no suggested action.

Recommendation #40: The Board recommends Tłıchǵ Government implement the *caribou harvest* monitoring action as identified below:

- TK –Tłıchǫ harvesters should report their caribou harvest to the TK researchers who will manage the harvest data
- Scientific – Harvest data should not be collected through a scientific process as Tłıchǫ should collect and manage their own harvest data.

Recommendation #41: The Board recommends that ENR and Tłıchǫ Government reporting on monitoring results to the WRRB and the general public a minimum of three times per year in April, September and December.

13. WRRB RECOMMENDATIONS ON RULES-BASED APPROACH

The revised proposal submitted by Tłıchǫ Government and ENR acknowledges that the management of hunting requires more than establishing numerical targets or thresholds. It also requires development of rules that will strengthen Tłıchǫ traditions, define acceptable hunting methods and behaviour of hunters and access to wildlife over time and space. This “rules-based” approach to implementation involves the following aspects:

- Organize a traditional cultural fall hunt done by boat rather than aircraft
- Develop hunting related educational programs for Tłıchǫ
- Support fish camps and encourage harvest of alternate species such as bison, moose and small game
- Develop education programs within Tłıchǫ communities on “relearning knowledge and respect for caribou”
- Designate monitors within each community as point of contact for hunters
- Distribute meat to elders and other community members
- Establish Community Caribou Committees to administer and monitor hunting & use tags to allocate, administer, and monitor hunting effort by community

Several Intervenors and hearing participants supported more effort be put into hunter education including the development of tools such as DVDs on traditional and ethical hunting practices for use by public and Aboriginal hunters.

For the Board to be consistent with its approach to use the parallel process, it advocates the use of Tłıchǫ rules as well as existing management regulations. The Tłıchǫ rules are not limited to but could include:

- Take only what caribou is needed;
- Take only what caribou can be carried;
- If there is extra, share with others;
- Use all, of what, the caribou has to offer;
- Treat caribou hair, bones and blood appropriately; and
- Know as much as you can about caribou.

Given that a management rule among the Tłıchǫ is to harvest only what is needed, and that it is the responsibility of all citizens to adhere to that, with the leaders (Chiefs) given direction, there may be problems with Community Caribou Committees unless they adhere to the traditional structure rather than to a Western committee structure.

To respect the personal autonomy of all Tłıchǫ citizens and to respect the role of elders and other family members (as teachers and as harvesters) and community leaders, it is important to remember that harvesting decisions are done through discussions with family members who know their requirements and with elders who carry the accumulated knowledge critical to making good decisions. The role of the Chiefs is to sit with and listen to all family elders and give direction to younger harvesters.

Recommendation #42: The Board recommends that the Tłıchǫ Government develop and implement a TK conservation education program to support the relationship and respect Tłıchǫ have for caribou. The program should be taught by elders and include:

- Tłıchǫ rules and their holistic approach to monitoring and managing their relationship with caribou;
- The idea of learning by travelling traditional trails so the ‘land’ can be observed and monitored; and
- Information on alternate resources to be harvested when caribou is scarce.

Recommendation #43: The Board recommends that ENR develop and implement a scientific conservation education program to foster an increased appreciation of the resource. The program should be aimed at better harvesting and handling practices, increased knowledge of caribou and their role in the ecosystem, and an enhanced understanding of scientific management practices.

14. WRRB RECOMMENDATIONS ON ADAPTIVE CO-MANAGEMENT FRAMEWORK

ENR and Tłıchǫ Government presented an approach to monitoring and management that is rooted in the community, regularly reviews and assesses monitoring information and adapts management action as necessary on an ongoing basis. This adaptive co-management cycle involves the establishment of Community Caribou Committees, a Tłıchǫ ʔekwǝ Working Group that reports to Tłıchǫ Government executive and a Tłıchǫ – ENR Technical Working Group that will make management recommendations for review by the Board.

Evidence presented by some Intervenors advocated the need for annual review of monitoring information and requirements for determining how well management actions are working. The Expert Witness emphasized the importance of measuring effectiveness of management actions through monitoring and establishing criteria for measuring success or failure.

The Board recognizes collaborative management approaches and the importance of Tłıchǵ and scientific ways of monitoring. The regular review of monitoring information is central to appropriate and timely management actions being developed.

Figure 8 presents an approach to information flow for an adaptive co-management framework that respects both Tłıchǵ and scientific ways of monitoring and managing caribou. The information flow takes into account the recommended TK Research and Monitoring program in lieu of the Community Caribou Committees. Tłıchǵ observations recorded through the TK Research & Monitoring Program are brought to the community for verification before being shared with the Tłıchǵ Government, GNWT and the WRRB. Scientific monitoring is conducted and shared with communities prior to it being distributed to Tłıchǵ Government, GNWT and WRRB. Tłıchǵ Government, GNWT and WRRB use the two knowledge systems to make good, balanced decisions.

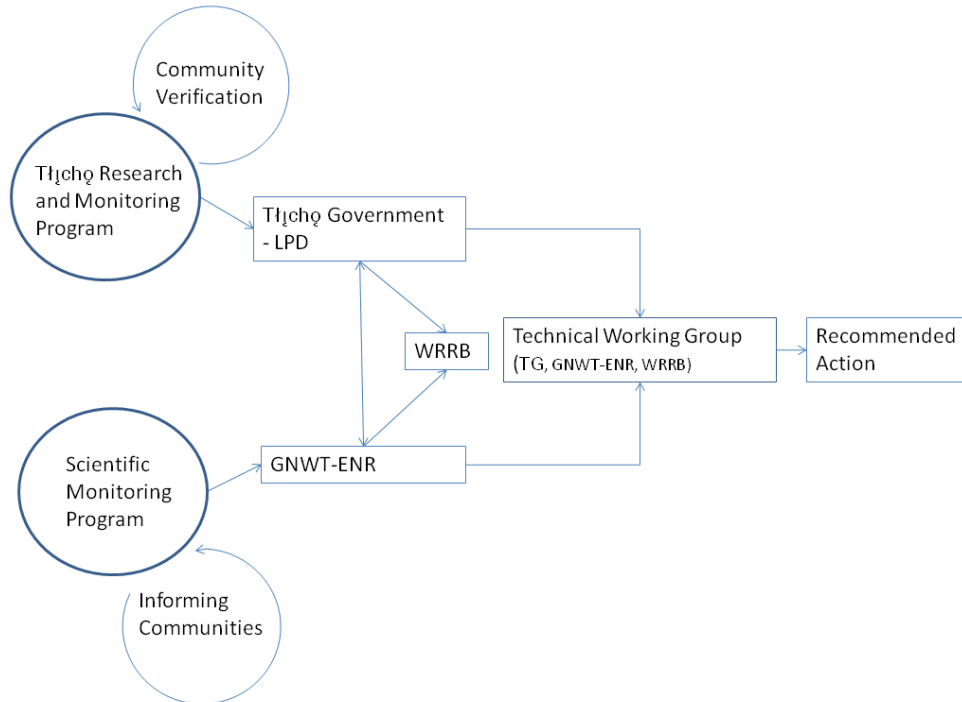


Figure 8: Monitoring Information Flow

Recommendation #44: The Board recommends that ENR and Tłıchǵ Government implement a process of information flow, review and assessment as described above.

Recommendation #45: The Board recommends that the WRRB staff be a full participant in the Tłıchǵ – ENR Technical Working group without prejudice to the Board.

Recommendation #46: The Board recommends that criteria be developed by ENR and Tłıchǵo Government for assessing success or failure that would indicate when management actions are to be revised, including reinstatement of harvest for residents, outfitters and commercial tags. These criteria should be approved and implemented by the Technical Working Group.

15. WRRB RECOMMENDATIONS ON DEVELOPMENT, HABITAT AND WILDLIFE MANAGEMENT

The revised proposal discusses the importance of landscape management strategies that include habitat conservation, limits to development and protection of calving grounds. ENR and Tłıchǵo Government propose that these longer term initiatives be considered by the Tłıchǵo – ENR Technical Working Group.

Evidence on the record demonstrates that landscape change may be affecting the Bathurst caribou herd. Studies at the Ekati and Diavik mine sites, show caribou use areas within 14 km of the mines less frequently than areas farther away. An environmental trend analysis has shown the amount of boreal forest stands preferred by caribou (i.e. older than 50 years) on the Bathurst winter range has decreased by approximately 30%, from 1990 - 2000. Trends on the Bathurst range are not commonly tracked nor reported by any agency in the NWT.

Intervenor submissions presented the need to monitor and manage cumulative effects across the range, protect the calving grounds of the Bathurst herd and to provide protection for caribou as they pass through areas of development during calving and post-calving.

Recommendation #47: The Board recommends ENR continue discussions with the Government of Nunavut for identifying opportunities for calving ground protection.

Recommendation #48: The Board recommends ENR and INAC collaboratively develop best practices for mitigating effects on caribou during calving and post-calving, including the consideration of implementing mobile caribou protection measures.

Recommendation #49: The Board recommends Tłıchǵo Government work towards development and implementation of a land use plan for Wek'èezhii, including the consideration of thresholds for industrial land use.

Recommendation #50: The Board recommends that ENR and INAC monitor landscape changes, including fires and industrial exploration and development, to assess potential impacts to caribou habitat.

Recommendation #51: The Board recommends that ENR and Tłıchǵo Government assess the need for forest fire control in areas of important caribou habitat.

16. WRRB RECOMMENDATIONS ON WOLF MANAGEMENT

Tłıchǵ Government and ENR proposed to increase wolf harvest to allow for increased caribou survival. The target is to increase wolf harvest in the Bathurst range twofold from about 40 to 80-100 per year. Implementation of this will be through:

- Providing training to hunters in Gamètì and Wekweètì to set snares and handle wolf pelts;
- Increasing value of pelt under Genuine Mackenzie Valley Fur Program to \$400/pelt;
- Increasing price per carcass to \$200;
- Supporting hunters to get to where wintering caribou and wolves are;
- Removing problem wolves around communities by hiring trappers; and,
- Implementing focused removals on the winter range and at the den site if efforts have not met the annual wolf harvest targets and is the Bathurst herd continues to decline.

Several Intervenors supported increased harvest of wolves, the development of improved indices for monitoring wolf abundance and additional research examining wolf and grizzly bear predation on caribou. Tłıchǵ and Inuit public recommended monitoring of wolves, grizzly bears and wolverine and the development of management plans.

Recommendation #52: The Board recommends the harvest of wolves should be increased through the suggested incentives, except for assisting harvesters to access wolves on wintering grounds.

Recommendation #53: The Board recommends that focused wolf control not be implemented. If Tłıchǵ Government and ENR believe that focused wolf control is required, a management proposal shall be provided to the WRRB for its consideration.

17. WRRB RECOMMENDATIONS ON BISON MANAGEMENT

Tłıchǵ Government and ENR recommended continuation of the new zones and quotas created under the Interim Emergency Measures imposed January 2010 as follows:

ZONE	QUOTA	SEASON	WHO
R/WB/01 - west of Behchokǵ to Birch Creek	45 tags any sex (25 Tłıchǵ Government, 10 to YKDFN, 10 to Metis)	January 1 to March 15	GHL, resident or outfitters
R/WB/02 - east of Edzo	no limit but must report kill within 72 hours	January 1 to April 15	GHL only

Tłıchǫ Government and ENR also proposed to change both seasons to be consistent with the subsistence harvest in Dehcho for this herd, beginning September 1 and closing April 15.

The rationale for the proposed management actions are multiple and include:

- Provide alternative country food sources to barren ground caribou;
- To reduce wood bison conflicts in communities and along highway;
- Provide opportunities to outfit for wood bison in the North Slave region;
- Provide opportunity for Tłıchǫ to learn about hunting and eating wood bison; and,
- Eliminate wood bison east of Edzo which is not prime wood bison habitat.

There were no Intervenor or Tłıchǫ Public recommendations related to bison.

17.1 Status of the Mackenzie Wood Bison Herd

Wood Bison are classified as *Threatened* under the *Species at Risk Act*. The Mackenzie bison herd is one of the largest disease-free herds of free roaming wood bison in Canada. The Mackenzie wood bison herd began with an introduction of 18 animals in 1963. From the initial introduction, the population increased to an estimated size of 2026 bison by 1993. The most recent survey of the Mackenzie wood bison herd estimates the population to be just below 1600 (Figure 9).

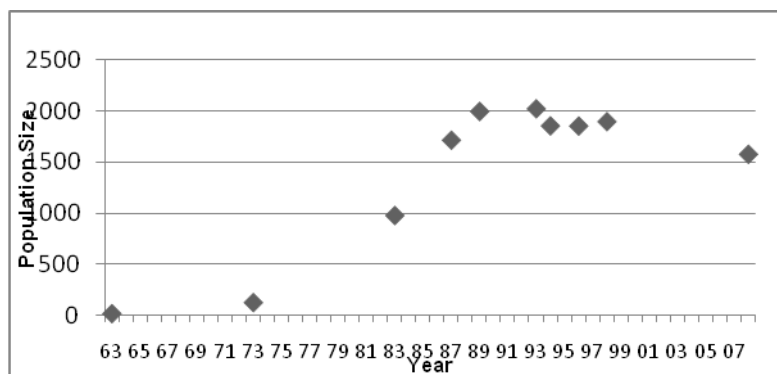


Figure 9: Trend in population estimate of the Mackenzie Bison herd 1963-2008

ENR circulated a Draft Wood Bison Management Strategy for the NWT for comment in January 2009. The WRRB commented on the Draft Strategy emphasising the need to develop a management plan and that implementation of any immediate actions should come to the Board for review.

The Board recognizes that the proposal to increase bison harvesting opportunities is an attempt on behalf of the Governments to accommodate the impact of the proposed caribou management measures on Aboriginal harvesting rights. Based on information available in the Draft Wood Bison Management Strategy, the Board does not believe that

implementation of these proposals will result in irreparable harm to the wood bison population over the next two years.

Recommendation #54: The Board recommends that ENR and Tłıchǵ Government submit a joint management proposal for wood bison in Wek'èezhìı by the fall of 2011 to substantiate the establishment of zones and quotas made through the Interim Emergency Measure.

18. WRRB RECOMMENDATIONS ON LONG-TERM CARIBOU MANAGEMENT

The Tłıchǵ Government and ENR acknowledged that longer term management planning needs to take place for all three herds in Wek'èezhìı. A Bathurst Caribou Management Plan was developed in the early 2000's and finalized in 2004. It was never formally ratified by participating governments and other parties. There is a plan currently under development for the Bluenose-East caribou herd guided by the Advisory Committee for Cooperation on Wildlife Management, which is comprised of all chairs and executive directors of the wildlife co-management boards in NWT and Nunavut. There is no process underway for the Ahiak.

It is a requirement under Sections 12.11.1 and 12.11.2 of the Tłıchǵ Agreement that *"management plans, respecting wildlife that migrates between Wek'èezhìı and another area, be prepared jointly with any body with authority over that wildlife in that other area within three years after the effective date"* and *"Within three years of the effective date, the Parties shall prepare a comprehensive proposal for the management of the Bathurst caribou herd."*

Recommendation #55: The Board recommends that ENR and Tłıchǵ Government work collaboratively to meet the obligations of Section 12.11 of the Tłıchǵ Agreement with support from WRRB staff as needed and a meeting be convened by January 2011.

19. IMPLEMENTATION

The Tłıchǵ Government and ENR have initiated discussion on developing a coordinated implementation plan that is based on meaningful participation of Tłıchǵ communities and would align the establishment of any new Territorial regulations and Tłıchǵ laws. The two governments have been discussing and developing implementation protocols pursuant to their joint recommendations for management actions and monitoring, but more work is required to develop specific implementation options for the proposed plan. The revised proposal did not comment on enforcement and compliance. Under certain circumstances, enforcement is a necessary part of any management strategy.

Recommendation #56: The Board recommends that the Tłıchǵ Government increase their capacity to ensure full participation in monitoring and management of caribou.

Recommendation #57: The Board recommends that ENR, Tłıchǵ Government and INAC implement its recommendations no later than January 1, 2011. ENR's Emergency Interim Measures, put into effect on January 1, 2010, should remain in place until then.

Recommendation #58: The Board recommends that Tłıchǵ Government and ENR conduct consultations regarding the Recommendations Report prior to January 1, 2011.

Recommendation #59: The Board recommends that ENR and Tłıchǵ Government develop a detailed implementation and consultation plan incorporating the WRRB's recommendations as soon as possible.

Recommendation #60: The Board recommends that ENR develop and implement an effective and continuing enforcement and compliance program.

20. CONCLUDING COMMENTS

All peoples who harvest in Wek'eezhii must do their part to ensure the recovery of the barren-ground caribou herds. Unless management and monitoring actions are implemented to protect the caribou, future recovery of the herd may not be possible.

The WRRB believes that limiting the harvest of the Bathurst, Bluenose-East and Ahiak caribou can have a great impact on recovery. The decisions have been structured to have the least impact on caribou users and the greatest benefit to caribou that we can provide at this time.

APPENDIX A

Joint Proposal on Caribou Management Actions in Wek'èezhìi, November 5, 2009

Proposal to Wek'èezhìi Renewable Resource Board

Joint Proposal on Caribou Management Actions in Wek'èezhìi

Submitted by:

Tłjchq Government
Environment and Natural Resources, GNWT

Issue

The Bathurst caribou herd has declined rapidly in the last 3 years. As a result, the Tłjchq Government and the Government of the Northwest Territories (GNWT) Department of Environment and Natural Resources (ENR) are submitting this joint proposal on caribou management actions to the Wek'èezhìi Renewable Resources Board. Actions are proposed for the Bathurst herd and its western and eastern neighbours, the Bluenose East and Ahiak herds.

Background

The status of the barren-ground caribou herds within Wek'èezhìi (Tâîchô Land Claim area) is briefly reviewed below.

Bathurst Herd

In June of 2009, ENR staff conducted a Bathurst calving ground photo census and final results indicate that the Bathurst herd is still declining in numbers and that recovery options need to be considered immediately. The final number of breeding females on the calving ground is now $16,600 \pm 4,450$, down from $55,600 \pm 8,800$ in 2006. Overall herd size is estimated at $31,900 \pm 10,900$ in 2009, compared to $128,047 \pm 27,343$ in 2006.

Bluenose East Herd

A photo census was attempted in July of 2009 on the post-calving range of the Bluenose East caribou in order to obtain a new population estimate. The survey was not successful due to unfavorable weather and will have to be conducted again in July of 2010.

The herd was properly photo censused in 2005 and 2006 and results revealed that this herd had declined substantially since 2000. The 2000 estimate was 119,600, compared to 66,700 in 2006.

Despite the lack of success in conducting the photo census in 2009, biologists reported seeing fewer animals on the post calving ground than observed in 2006. This is a concern and suggests caution in evaluating management options.

Ahiak Herd.

This herd was never properly photo censused although the population was estimated at approximately 200,000 animals in 1996 based on an extrapolation of a systematic reconnaissance survey.

From 2006 to 2009, ENR staff flew more reconnaissance surveys (transect lines spaced at 10 km intervals) on the calving range of the Ahiak herd. Preliminary trend analysis conducted by a statistician (John Boulanger) suggests that this herd is also declining. Numbers of cows on the Ahiak calving ground in 2009 were reduced 60% from cow numbers in 2006,

A calving ground photo census is planned for June of 2010 as a shared effort between GNWT and the Nunavut government.

On July 31, 2009, the Wek'èezhì Renewable Resource Board (WRRB) sent a letter to the Tłıchǵ Government and ENR encouraging both governments to engage in a new round of discussions to generate a comprehensive management proposal for barren-ground caribou.

Following this request, the Tłıchǵ Government formed a caribou working group to meet with ENR staff to develop a document on recovery options for the Bathurst herd and neighboring herds. One of the requirements of the Tłıchǵ process was to hold a regional workshop in Gamètì to get input from elders on the draft joint proposal prior to the Tłıchǵ assembly to make a final decision.

Monitoring and recovery options suggested in this document reflect the new status of the Bathurst and other adjacent herds and are the results of consultation between the two governments.

PROPOSAL

The overall approach in the Tłıchǵ Government and ENR's joint proposal on the Bathurst caribou herd is to develop a recovery plan for the next three years, followed by a new Bathurst population survey and a revised management plan.

The goals are:

- (1) to develop actions that will allow for the most rapid recovery of the herd,
- (2) to identify monitoring of the herd's welfare and the effectiveness of recovery actions.

The Tłıchǵ Government and ENR propose management and monitoring actions for the Bluenose East, Bathurst and Ahiak herds, to assess trend and other biological factors, and to help the Bathurst herd to recover (Appendices A and B).

The proposed actions to monitor trends of the three herds are: estimate of number of breeding females; calf survival in the spring and the fall; sex ratio in the fall; spring and fall condition; pregnancy rates; and birth rates; mandatory harvest reporting; monitoring of insect abundance; and wolf condition and productivity; and finally, how winter range status affects movement, distribution and condition of caribou. These monitoring actions are identified in the Bathurst Caribou Management Plan when herd numbers are low.

The proposal recommends that initiatives to help caribou numbers to recover should also include education and compliance, hunter education and best hunting practices, and proper monitoring and assessment of cumulative effects of natural and non-natural stressors such as mining and exploration and road access. Protection for all calving grounds will have to be maintained to ensure that no exploration or mining activities take place during the calving and post-calving periods. The Inuvik caribou summit in 2007 culminated in a resolution passed by all participants to protect all caribou calving grounds in NWT and Nunavut. Consultation and collaboration with the Nunavut Government and co-management groups will be needed to ensure that proper protection is maintained for each calving ground, as the Bluenose East, Bathurst and Ahiak calving grounds are all in Nunavut.

Low numbers of breeding females in the Bathurst herd warrant immediate management action (no more hunting of Bathurst caribou females) starting as soon as possible until 2012 when the next calving ground census is scheduled to take place. Management actions will then be reassessed following the new population estimate.

To minimize hardship on Aboriginal hunters and assist the Bathurst herd to recover, ENR's preferred option is to allow a bull harvest only on adjacent herds and a limited bull harvest on the Bathurst herd regulated by a tag allocation. If results of future fall composition surveys of the Bathurst herd or adjacent herds do not reveal a healthy sex ratio in the herds, then further restrictions may be put in place.

A careful and limited harvest of caribou females may also be considered on adjacent herds (Bluenose East and Ahiak) until a photo census and new population estimates are obtained for those 2 herds which are scheduled for the summer of 2010.

A limited low number of breeding females may be allowed to be harvested from the Bathurst herd in the winter months for scientific purposes (health and condition and assessment of pregnancy rate). Meat will be distributed to Aboriginal elders. The numbers to be collected are to be discussed further with Tłjchq Aboriginal hunters, members of the WRRB and ENR biologists.

No harvest of females is to take place when caribou of different herds are mixed together in the winter time to avoid accidental hunt of Bathurst cows. When this situation occurs, it is recommended that males only be hunted (ENR's position). Consultation between ITI and ENR will take place to explore avenues to provide financial support to hunters to access new hunting areas.

Given the uncertain status of the Bluenose East herd, and in order to be consistent with management actions implemented by other Boards for the Cape Bathurst and Bluenose West herds, it is recommended that no harvest for non-resident and resident hunters be allowed on that herd.

Consultations and collaboration between GNWT and Nunavut Government will continue to take place to ensure that complete protection of all the calving grounds is maintained and exploration and mining activities are restricted at the time of calving and post-calving.

Preliminary results suggest that cumulative effects of non-natural stressors on caribou such as mining activities in the range of the Bathurst herd (beyond calving grounds) have not had a significant negative influence on overall mortality of caribou. This type of monitoring, however, will continue on a permanent basis to ensure that no unexpected effect goes undetected.

The Diamond Mines' Wildlife and Environment Monitoring programs (WEMP) will be redesigned to adjust for results and findings acquired through several years of data collection and new proposed monitoring will be presented to the Tłjchq government and communities for their inputs.

Appendix A: Proposed Management Actions to help the Bathurst, Bluenose East and Ahiak herds to recover.

No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
1.	Reduce harvest Pressure	Eliminate all commercial meat tags held by Tłıchǫ and all other aboriginal communities. Status of allowing meat tags to be reconsidered after the 2012 calving ground photo census. <i>/Joint by both governments</i>	Tłıchǫ communities have not used commercial meat tags for many years and there has been no interest expressed by Tłıchǫ citizens to use caribou for this purpose. No public interest implications in Wek'èezhìi. This will require regulation changes.
2.	Reduce harvest Pressure	Eliminate all tags for outfitting for the hunting season starting in the summer of 2010 until 2012 included. Status of outfitting to be reconsidered after the 2012 calving ground photo census. <i>/Joint by both governments</i>	Conservation measure and under Tłıchǫ Agreement, this type of harvest must be addressed first. Regulation changes required.
3.	Reduce harvest Pressure	Eliminate all resident hunter harvest. Allocation of tags to resident hunters to be reconsidered after the results of the 2012 calving ground photo census. <i>/Joint by both governments</i>	Conservation measure and under Tłıchǫ Agreement, this type of harvest must be addressed first. Regulation changes required.
4.	Reduce harvest Pressure (females)	<u>ENR RECOMMENDATION</u> Eliminate all harvest of Bathurst caribou (Tłıchǫ herd) females Limited female harvest may be possible for experienced hunters on the Bluenose East (Sahtu herd) and the Ahiak (Inuit herd) herds and assisted through a joint partnership with ENR/ITI. Numbers harvested to be discussed further and	Conservation measure and under Tłıchǫ Agreement. Regulation changes required. Subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'èezhìi.

No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
		biologists would be part of the hunt to assess health and condition of caribou harvested. No harvest of cows would be allowed when herds are mixed together on the winter range. Instead a careful harvest of males is suggested. Location of caribou of various herds (Sahtu, Tłıchq, Inuit) to be monitored by tracking satellite collared females and a no hunting zone could be established for the area where Bathurst collared animals are situated every season. <u>TŁİCHQ GOVERNMENT</u> No restriction on female harvest.	
5.	Reduce harvest Pressure (males)	<u>ENR RECOMMENDATION</u> A) Bull harvest only on all herds for Aboriginal harvesters (caribou with no antlers only in the winter). B) Only a limited number of bulls mixed with the Bathurst (Tłıchq herd) caribou cows will be available for harvest and the number will be regulated through a tag allocation system to avoid over-harvesting of the Bathurst herd bulls. Subject to changes if results of fall composition surveys reveal a low number of bulls in the herd. A low ratio of bulls to cows can be a concern for the health of the herd. Recommendation is to harvest Bluenose East (Sahtu herd) and Ahiak caribou (Inuit herd) males	Conservation measure and under Tłıchq Agreement A tag allocation system for aboriginal harvest may also be considered to ensure that no over harvesting of bulls take place on any herds. Regulation will be required Subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'eezhii.

No.	Issue	Actions to help herds recover/Lead Government	Rationale
		in the fall. Again, mobile harvesting zones to be determined based on the seasonal distribution of collared caribou. <u>Tłıchǫ GOVERNMENT</u> No restriction on male harvest.	
6.	Public and Hunters Education	Multi-party initiative which includes TG, ENR, WRRB and other co-management boards and communities. <i>/Joint by both governments</i> Funding might be made available from ENR to the TG and/or WRRB to develop a DVD production on traditional and ethical hunting practices.	The Bathurst caribou herd is important to the lives of northern people and their environment. Having respect for the caribou is essential if people are to live in harmony with their surroundings. Knowledge on respect of animals and best hunting practices should be passed on from the elders and experienced hunters to younger generations.
7.	Compliance <i>(Information only. No direction is required from the Board on this action.)</i>	Continue winter road check station on Tłıchǫ winter roads. <i>/Joint by both governments</i> ENR to conduct weekly patrols during fall and winter in Wek'èezhìi with more wildlife officers. <i>/ENR</i> Impose a 200 meter-wide no-hunting zone on either side of the winter road <i>/Joint by both governments</i> Creation of 1 seasonal (fall and winter) wildlife guardian position for each Tłıchǫ community to assist with the proposed mandatory caribou reporting system and Hunters Education/ Joint	Ensure harvesters are not wasting meat and all harvesters are hunting legally and in suggested prescribed zone. No public interest implications in Wek'èezhìi. Respect for animals and no carcasses/gut piles on the winter road. Some of the new proposed recovery and monitoring actions will require ongoing community participation and a person dedicated to facilitate their implementations.

No.	Issue	Actions to help herds recover/ <i>Lead Government</i>	Rationale
8.	Protection of Calving Ground	Consultation and collaboration between GNWT and Nunavut to ensure current level of protection is maintained. <i>Joint by both governments</i>	Calving and post-calving area for all herds is critical to ensure early survival of cows and calves after birth.
9.	Mandatory Harvest Reporting System	Mandatory reporting of harvest for Aboriginal hunters - visit Tłıchǫ hunters once per month to determine number and location of caribou harvested. ENR will provide calendar for hunters to record harvest/ <i>Joint by both governments</i> .	Harvest can have a direct impact on the size of a herd and when numbers are low it will affect potential for recovery. It is important for wildlife managers to understand the source and the magnitude of mortality in order to make better management actions and to better partition the harvest by herd.

Appendix B: Proposed Actions to monitor the Bathurst, Bluenose East and Ahiak herds for trends and the Bathurst Herd to recover.

	Issue	Monitoring action	Rationale
1.	Spring calf survival	Conduct composition counts in late March or early April for the Bluenose East, Bathurst and Ahiak herds. Classify caribou as calves (less than 1 year old), cows and bulls. / <i>Joint by both governments</i>	The number of calves surviving past their first winter is a measure of recruitment of the herd and should be conducted annually regardless of the status of the herd.
2.	Health and condition	Assess fall and spring condition of caribou by looking at animals harvested in September and in late March. Collect samples for parasites, diseases and condition of caribou. Harvest to be done during community hunts and revolve among Tłıchǫ, Akaitcho and Metis organizations. / <i>Joint by both governments</i>	Health and condition of caribou influences adult survival. This information helps to assess trend of herd.
3.	Pregnancy rate	Tłıchǫ hunters to assess presence/absence of fetuses in 20 cows hunted during winter and also measure back fat for condition. / <i>Joint by both governments</i>	Assessment of pregnancy rate is an indicator of productivity and helps to assess trend of herd. Will also provide an avenue for elders to get some meet and fetuses without taking the risk of overharvesting the female population.
4.	Birth rate	Conduct composition counts at peak of calving for the Bathurst herd. Classify caribou as breeding cows and calves. / <i>Joint by both governments</i>	Number of calves per 100 females is an indicator of productivity and helps to assess trend of herd
5.	Adult sex ratio and fall calf survival	Conduct composition counts between Oct 15-30 (rut). Classify caribou as calves, cows and bulls on the Bluenose East, Bathurst and Ahiak herds in the fall. / <i>Joint by both governments</i>	Sex ratio in the herd is used to assess trend of herd. It is also required to determine overall population estimate when a photographic census of the calving ground is conducted. Number of calves returning from the summer migration provide a measure of summer survival. If a bull only harvest is implemented, then a fall composition survey is essential to assess number of bulls in the herds.
6.	Wolf den occupancy	Wolf pup survival should be monitored using summer surveys of den sites determined to be	Provide a cost effective method to assess trend in wolf population

	Issue	Monitoring action	Rationale
		active during spring surveys. / <i>Joint by both governments</i>	
7.	Wolf condition and reproduction	Collect wolf carcasses from trappers and hunters and determine pregnancy rates and condition. Determine if wolves are hunting caribou or hunting other species. / <i>Joint by both governments</i> Provide incentives and training to hunters and trappers to promote further wolf hunting and trapping .	Provide a direct measure of health and condition of wolves, age structure and productivity in order to assess trend in wolf population.
8.	Estimate of herd size	Conduct photographic census of breeding females on calving ground in June 2012. / <i>Joint by both governments</i>	This information is combined with other monitoring information to estimate size and trend of herd in order to develop appropriate management actions.
9.	Insect abundance	Set out portable weather stations during key period in the summer across the range of migrating caribou to assess and monitor insect numbers and potential impact on caribou feeding behavior. / <i>Joint by both governments</i>	Insect abundance will affect ability of caribou to feed adequately during the summer. This project is expected to be a cost effective permanent monitoring action to assess impact of insect harassment on caribou.
10.	Historical summer range condition	Compare NDVI index from remote sensing imagery to track green-up patterns on summer range and productivity of vegetation/ <i>Joint by both governments</i>	Look at whether summer range condition has changed over time and whether this is related to herd declines.
11.	Increase the total number of female caribou collars from 20 to 50 for the Bathurst herd.	New collars will be deployed in March of 2010. /ENR's recommendation only.	One of the main recommendations of the ARC report. Needed to monitor movement and distribution of caribou on a seasonal basis and to avoid accidental harvesting on Bathurst caribou. Provide a better assessment of cow survival which is not adequately done at this time given the low sample size of collars on Bathurst cows. A few collars deployed on bulls is also proposed in order to understand better their movement,

	Issue	Monitoring action	Rationale
			distribution and survival.

APPENDIX B List of Registered Parties

Proponents

- Environment and Natural Resources, Government of the Northwest Territories
- Tłıchǫ Government

Expert Witness

- Dr. Anne Gunn

Registered Intervenors

- Arctic Safaris
- Bathurst Inlet Developments (1984) Ltd
- Camp Ekwo/Rabesca's Resources
- City of Yellowknife
- Karen McMaster
- National Rifle Association
- Northwest Territories Tourism
- North Slave Métis Alliance
- NWT Métis Nation
- NWT Wildlife Federation
- Peterson's Point Lake Lodge
- Qaivvik Ltd
- Shoshone Wilderness Adventures
- Caribou Pass Outfitters
- Robert Turner
- True North Safaris Ltd
- Yellowknife Chamber of Commerce
- Yellowknives Dene First Nation

Registered General Public

- Pierre Beaverho
- Harry Apples
- Jimmy Martin
- Margaret Tatsia
- Bernadette Naskin
- Louis Zoe
- Jimmy Kodzin
- Peter Huskey
- Leon Modeste
- James Lafferty
- Phillip Dryneck
- Eddie Camille
- Joseph Mantla

- Sophie Williah
- John Bekale
- Attima Hadlari
- Peter Taktagon
- Lucassie Nakoolak
- Larry Roy
- Pierre Tãokka
- Walter Bayha
- Francis Simpson
- Fred Sangris
- Robert Ruttan
- Mary Adele Tatsia
- Leon Lafferty
- Louie Wedawin
- Eddie Erasmus
- Charlie Jim Nitsiza
- Jonas Sangris
- Philip Dryneck
- Alfonz Apple
- Madeline Chocolate-Pasquayak
- John Mantla
- Joe Champagne
- Dora Migwi
- Cecilia Wetrade-Boyd
- Celine Mackenzie-Vukson
- Melanie Lafferty
- Phillip Whane
- Johnny Simpson
- Charlie Simpson
- William Weyallon
- Charlie Football
- George Mackenzie
- Isador Charlo
- Joe Nelin
- Joe Black
- Georgina Simpson
- Robyn Mantla

APPENDIX C

WRRB's Rulings on Legal Questions Raised by Parties to this Proceeding

WEK'ÈEZHÌ RENEWABLE RESOURCES BOARD

IN THE MATTER OF: A Wildlife Management Proposal Submitted by The Government of the Northwest Territories Department of Environment and Natural Resources and the Tłıchǵ Government to Address the Management and Protection of Bathurst Caribou;

AND IN THE MATTER OF: Legal Questions Raised by Parties to this Proceeding and requesting Rulings from the Board:

REASONS FOR DECISION

1. INTRODUCTION AND BACKGROUND:

The Wek'èezhì Renewable Resources Board (WRRB) is conducting a legal proceeding, including a hearing, which will result in recommendations to the Minister of Environment and Natural Resources (ENR) and the Tłıchǫ Government about a wildlife management proposal which addresses the need to protect the Bathurst Caribou Herd. This proceeding was initiated by the filing of a Wildlife Management Proposal (the Proposal) on November 5, 2009. Over the course of this proceeding, several parties have raised legal issues or questions for the Board's attention. The Board has treated these issues as Requests for a Ruling in accordance with its draft Rules of Procedure.

The Board set December 11, 2009 as the deadline for the identification of such issues and then compiled the list of concerns raised by those parties to the proceeding which indicated that they had concerns. Four parties (Mr. Boyd Warner; Mr. John Andre; North Slave Métis Alliance and Ms. Karen McMaster) identified issues.

The list of issues was circulated to all parties to the proceeding on February 1, 2010. The parties were offered the opportunity to respond or comment on any of these legal issues. Only one party (ENR) responded to any of the issues.

The Board has considered the matters raised by the parties, the response and the information available on the record for the proceeding in making its ruling on the issues.

Below, each of the issues is listed and explained. The Board's analysis for each issue is then set out. The Board's decision with respect to the disposition of the issue is then rendered.

2. THE ISSUES AND THE BOARD'S DECISION:

Issue # 1 Raised by Mr. Boyd Warner (17/12/09)

The Bathurst Caribou Management Plan is not endorsed by any of the representative organizations and therefore is invalid.

ENR Response:

The Bathurst Caribou Bathurst Caribou Management Plan was released in December 2004. It was prepared by a committee consisting of representatives from federal, territorial and Aboriginal Governments, First Nations, Inuit organizations, institutions of public government and communities on or adjacent to the herd's range. The committee was established in 2000 and operated by consensus. Extensive consultations were held in 2004. Although not formally endorsed by others, ENR considers the plan to be a valid guidance document when considering monitoring and management actions.

Analysis:

The status of the Bathurst Caribou Management Plan is not in issue in relation to the Proposal before the Board. The Tłıchǵ Agreement requires a Board response and recommendations related to the Proposal. This issue is not relevant to the Proposal.

Decision:

This issue is dismissed. It is not relevant to the Proposal or the proceeding.

Issue # 2 Raised by Mr. Boyd Warner (17/12/09)

No valid information available on which herd the bulls harvested by outfitters come from.

ENR Response:

The joint proposal submitted by the Tłıchǵ Government and ENR proposes actions for all three caribou herds located in the North Slave region. Bulls have been collared in the Bluenose-East herd but not the Bathurst and Ahiak herds. The bulls are considered to be Bluenose-East as they are consistently associated with Bluenose-East cows. There is no evidence to suggest that bulls in other caribou herds act differently. Thus, it is reasonable to assume that the location of the cows can be used to identify the herds that outfitters are harvesting.

Analysis:

Mr. Warner's issue is one of fact or evidence and not law. It is a matter which can be explored in questioning at the hearing. The Board is not in a position to address this question until it considers all the evidence and not all information is available yet. A ruling would be premature at this time.

Decision:

Defer issue for consideration at the hearing. Mr. Warner would be advised to address it at the hearing when he questions ENR.

Issue # 3 Raised by Mr. Boyd Warner (17/12/09)

No formal consultations were held with outfitters prior to the reduction or elimination of tags.

ENR Response:

A Meeting was held with outfitters and Deputy Minister in July 23, 2009 to discuss the decline of the Bathurst Caribou herd and possible management actions including the elimination of tags. Outfitters participated in the Bathurst Decline Workshop in October 23, 2009 to discuss recovery options. A letter was sent by the Deputy Minister to all outfitters in October indicating the potential elimination of all outfitting tags for barren ground caribou, including a caution about accepting reservations for outfitted hunts for 2010 season.

Analysis:

Consultation with affected parties is a matter of good wildlife management but in the case of outfitters' businesses it is not required by law in the same way as consultation with the holders of aboriginal rights. The evidence filed by ENR conflicts with Mr. Warner's assertion. In any event, the Board is not responsible for nor could it enforce a requirement for ENR to consult outfitters before this proceeding was initiated.

Decision:

This issue is dismissed.

Issue # 4 Raised by Mr. Boyd Warner (17/12/09)

If the WRRB makes a ruling, is it then that body that would be held accountable in the future for losses/claims by groups or individuals if any of those groups were successful in proving that the caribou are not in the crisis we are told they are in?

Analysis:

This is not a request for a ruling. It is a question about the potential for WRRB liability for its decisions.

In most cases the Board merely makes recommendations and the final decisions are made by government. Any party aggrieved by the Board's decision or proceeding has recourse to the Courts. The Board is not in a position nor should it speak to liability issues in an ongoing proceeding.

Decision:

This matter is dismissed. It is not a relevant issue in relation to the Proposal.

Issue # 5 Raised by Mr. Boyd Warner (17/12/09)

ENR is not following the recommendations of the ARC report re: transparency and treating caribou as a meta-population.

ENR Response:

ENR interprets the reference to “transparency” as sharing information in an open manner. ENR has provided presentations on all survey results and analyses and held workshops where information was openly shared. ENR has limited sharing of draft reports as there is a duty to provide the best information to the public.

With respect to meta-populations, the ARC report validates the approach of managing by herds (as defined by calving grounds) as standard practice across North America. ARC suggested that ENR should increase collar numbers to confirm the degree of closure (i.e. rate of exchange) of herds. The ARC report states, *“In contrast, no data support the competing hypotheses that all caribou should be treated as one herd, nor that mass movements between herds have demonstrably occurred.”* However, for management purposes, the ARC report suggests the analysis of data for each herd should be integrated within a larger population framework.

Analysis:

This is not a legal issue. It questions the ENR management approach and science and is a matter best left for cross examination at the hearing. The Board is not in a position to rule on this issue at this time. It is premature.

Decision:

Defer issue. Mr. Warner would be advised to address it at the hearing when he questions ENR.

Issue # 6 Raised by Mr. Boyd Warner (17/12/09)

ENR has not adequately informed stakeholders of which caribou live and use the North Slave (Management Unit R) and has failed to propose a management plan.

ENR Response:

In the last 3 years, ENR has done annual presentations to boards, user groups (e.g. outfitters) and communities on an animation of caribou movements and which caribou herds are seasonally found in Management Unit R.

With respect to a management plan, ENR has undertaken the following actions:

- In 2004, ENR released a draft Bathurst Caribou Management Plan which ENR uses as a guidance document. The plan was developed collaboratively with all management authorities and communities that share the herd.

- In late 2006, ENR submitted a proposal to the Wek'èezhì Renewable Resources Board on management actions for barren-ground caribou in the North Slave region.
- ENR has been working with the Tłıchǫ Government and the Wek'èezhì Renewable Resources Board to develop a management process for the Bathurst herd as directed by the *Tłıchǫ Agreement*.
- A management plan exists for the Bluenose-East herd which is now being revised by an inter-jurisdictional committee lead by the wildlife co-management boards in the NWT and Nunavut.
- Maps of radio-collar locations from the Ahiak, Bluenose East and Bathurst herds during fall and winter were presented at workshops in October 2009 and are contained in ENR's Bathurst workshop report and the longer Bathurst technical report. Other ENR reports have used maps based on radio-collar data for all herds monitored by ENR.

Analysis:

This is not a legal issue. It questions the ENR management approach and information sharing and is a matter best left for cross examination at the hearing. The Board is not in a position to rule on this issue at this time. It is premature.

Decision:

Defer issue. Mr. Warner would be advised to address it at the hearing when he questions ENR.

Issue # 7 Raised by Mr. John Andre (21/12/09)

Assuming there is no new data to support the use of the emergency clause, will the WRRB go to court to maintain its right to manage wildlife in Wek'èezhì, or does it intend to permanently cede that right to the GNWT?

Analysis:

This appears to be a rhetorical question. The matter raised is not in issue in the current proceeding. Further it is based on an assumption for which there is no evidence on the record that being that the WRRB has "ceded jurisdiction" to the Minister of ENR. The ENR exercise of emergency power is authorized by Tłıchǫ Agreement. Procedures for emergency actions are set out in the Tłıchǫ Agreement, Section 12.5.14. Emergency Interim Measures are not a matter before the Board at the upcoming hearing.

Decision:

This issue is dismissed.

Issue # 8 Raised by Mr. John Andre (21/12/09)

Will the WRRB go to court to explain to ENR exactly where the Bathurst wintering ground is, so that the entire wintering area is protected? (It appears that the area closed deliberately avoids the Akaitcho region, currently involved in land claims negotiations. Certainly, ENR and the WRRB do not intend to manage migratory species based on land claim settlements).

Analysis:

This appears to be a rhetorical question. The matter raised is not in issue in the current proceeding. There is no basis for seeking to involve the Courts in the kind of factual issue set out by Mr. Andre. The current proceeding is not the place to be debating the scope of the closure imposed by ENR. Emergency Interim Measures are not a matter before the Board at the upcoming hearing.

Decision:

This issue is dismissed.

Issue # 9 Raised by Mr. John Andre (21/12/09)

Apparently, some area of the NWT is being opened up to unlimited Woods Bison hunting. If this area is in Wek'èezhìi, will the WRRB go to court to prevent this hunt?

ENR Response:

As part of the interim emergency measures to offset reduced access to caribou, ENR has established two new wood bison management areas in Unit R. R/WB/01 is located west of Behchoko and has a quota of 45 tags. These are to be allocated by Tłıchǫ Government, Yellowknives Dene First Nation and Metis groups. The second zone R/WB/02 is located east of Behchoko to Yellowknife and is open to all General Hunting Licence holders.

Analysis:

The answer to Mr. Andre's question in respect of legal action by the WRRB to challenge the ENR creation of new Wood Bison hunting areas and the allocation of 45 tags should be the same as for previous questions. The Board is not in a position to challenge this decision in the Courts.

Decision:

This issue is dismissed.

Issue # 10 Raised by North Slave Metis Alliance (NSMA) (18/12/09)

Has a proper, legal declaration been made about barren-ground caribou to be game in danger of becoming extinct? Has the Crown acted illegally in announcing restriction on Aboriginal harvesting?

ENR Response:**For NSMA Questions 10, 11, 12 and 13**

Barren-ground caribou have been listed as being in danger of becoming extinct since 1960, when the Government of Canada implemented Regulation 1236 under the *Northwest Territories Act*, a piece of federal legislation.

The *Northwest Territories Act* (and its attendant *Regulations*) is the law that grants the Government of the Northwest Territories its legal authorities and powers, including the authority to regulate game. These laws apply to everyone, including Aboriginal persons.

Aboriginal rights are extremely important, but they are not absolute. Canadian courts have consistently allowed governments to infringe Aboriginal rights where it was necessary and justified, provided that the government has taken steps to minimize the infringement.

Any infringement of an Aboriginal right must be justified, and the government must be able to satisfy a court of law that it has met a three-part legal test:

1. That there is a valid legislative objective
2. That there has been as little infringement as possible to achieve the desired result, and
3. That there has been consultation regarding the measures being implemented.

In the case of the joint proposal currently before the WRRB, the Government of the Northwest Territories and the Tli Cho Government have worked together to develop this joint proposal in order to ensure the long-term recovery of the Bathurst caribou herd, a herd on the verge of extinction.

In drafting the joint proposal survey results were shared with affected groups beginning in July, 2009. A number of affected groups participated in the Bathurst Caribou Decline workshops held in October to discuss recovery options. Letters sent in October 2009 to potentially affected Aboriginal governments and organizations to discuss recovery options. Consultation meetings on the joint proposal we held in November and December 2009. GNWT will be submitting results of the consultations to the WRRB.

Once recommendations are received from the WRRB, the GNWT and Tłıchǫ government will consult with each other, and GNWT will undertake further consultation if required.

At current harvest levels the long-term survival of the Bathurst herd is in serious doubt, given model projections of extinction in 3-5 years. In our view, the joint proposal is aimed at the best interests of Aboriginal people, as the recovery of the herd will ensure future generations of Aboriginal hunters will have Bathurst caribou to hunt in order to feed their families and protect their culture.

Analysis:

There is a regulation declaring barren ground caribou to be game in danger of becoming extinct. In any event, this question has now been moved to the Courts by the GNWT. The Board does not have to make such a ruling on questions about the GNWT's authority to regulate aboriginal harvesting in this proceeding. The upcoming hearing is to address the Bathurst Caribou Joint Management Proposal, not the Emergency Interim Measures. The WRRB has no authority to question legality of Emergency Interim Measures.

Decision:

This issue is dismissed.

Issue # 11 Raised by the NSMA (18/12/09)

Constitutional rights cannot be infringed without justification. Justification, in the case of Aboriginal Peoples involves adequate Crown Consultation and Accommodation. Has the Crown justified infringement to harvest wildlife for traditional purposes? Is there a valid conservation concern? Had the existing policy of priority allocation been taken seriously? Have all other conservation options been considered? Has there been adequate Crown Consultation? Is this proposal the least infringement possible to affect the desired result? Is fair and adequate compensation made available?

ENR Response: (see above)

Analysis:

There are a series of questions for ENR imbedded in this NSMA "issue". Most of them could or should be pursued in questions of ENR in the hearing. These questions are not for the Board to answer. The Board is only reviewing a specific wildlife management Proposal. The question of consultation and the adequacy of consultation must be explored between NSMA and the GNWT and it is not relevant to the questions posed by the Proposal. WRRB has no authority to make a ruling on questions like this.

Decision:

This issue is dismissed.

Issue # 12 Raised by the NSMA (18/12/09)

Has the Crown provided adequate information? Has the Crown provided adequate time and opportunity to formulate views? Has the Crown made an honorable effort to accommodate rights?

ENR Response: (see above)

Analysis:

This issue or question is subject to the same analysis as question 11 above. The first two questions can be pursued in the hearing. The last question is outside the scope of the Board's authority.

Decision:

Dismissed.

Issue # 13 Raised by NSMA (18/12/09)

Has the Crown fulfilled its fiduciary duty to manage caribou in the best interests of the Aboriginal people? Has the Crown breached the terms of Treaty 11 with regard to the protection of the right of the Aboriginal people to live their traditional lifestyle without interference or completion from "white people"?

ENR Response: (see above)

Analysis:

The matters raised in these questions are not within the jurisdiction of the Board. They involve complex issues which should be addressed by the NSMA directly with the GNWT.

Decision:

Dismissed.

Issue # 14 Raised by the NSMA (18/12/09)

Have the Tłıchǵ Government, Crown and WRRB taken steps to acquire and use Métis TK?

Analysis:

These questions should be addressed to those parties in the hearing. This information is not in the Board's hands.

Decision:

Dismissed. This question can be raised at the hearing by the NSMA.

Issue # 15 Raised by the NSMA (18/12/09)

Why has the WRRB left the Métis organizations out of their definition of First Nation and how does this affect the rights of the Métis to just and equitable treatment by the WRRB?

Analysis:

This issue relates to the definition of First Nation used in the Board's draft Rules of Procedure. Exclusion of the Metis from this definition is not intended to prevent members of that organization from fully participating in the Board's proceeding. NSMA members like any participant will be treated fairly and equitably throughout the process.

Decision:

The draft Rules of Procedure will be reviewed after the hearing in this proceeding. The NSMA has the same right to a fair process as all other parties. This right is not affected by the wording of the draft Rules.

Issue # 16 Raised by the NSMA (18/12/09)

Section 12.7.1 of Tłıchǵ Agreement "must allocate a sufficient portion of a total allowable harvest level for any other Aboriginal people to exercise its rights to harvest wildlife in Wek'èezhìı ... how does the WRRB or the Crown intend to do this with (sic) consulting the Métis?

Analysis:

The question presupposes that the WRRB will make a Total Allowable Harvest (TAH) decision. If the Board does that it must also allocate the TAH as set out in s.12.7.1 of the Tłıchǵ

Agreement. It is premature to attempt to answer this question. The Board will seek input from affected parties if it decides to impose a TAH.

Decision:

The question is premature and is deferred. If it must be addressed, it will, depending on the Board's decision on the proposal.

Issue # 17 Raised by Ms. Karen McMaster (23/11/09)

Do the Environment Minister of the GNWT and Tłıchǫ believe that Canada has a constitutional duty to ensure the caribou are around for aboriginals? I believe the Minister of the Environment said the reason for the actions is we need to ensure a supply to the aboriginal community. This goes directly against the Tłıchǫ land claim agreement which specifically does not guarantee the supply of wildlife. What is the basis of this? Please refer to court decisions.

ENR Response:

The mandate of the Minister and the Department of Environment and Natural Resources is to promote and support the sustainable use and development of natural resources and to protect, conserve and enhance the Northwest Territories environment for the social and economic benefit of all Northwest Territories residents.

Analysis:

The Board cannot answer this question. It would require speculation. The question includes argument as well. There is no legal issue in the question which the Board has authority in this proceeding to address.

Decision:

This issue is dismissed.

Issue # 18 Raised by Ms. Karen McMaster (23/11/09)

Why has the government (GNWT/Federal) not appointed another representative to balance the board for such an important issue?

ENR Response:

The GNWT may nominate 2 members and both are on the Board.

Analysis:

The Board is not in a position to answer this question. In any event this is not a legal issue over which the Board has any authority in the context of this proceeding.

Decision:

This issue is dismissed.

Issue # 19 Raised by Ms. Karen McMaster (23/11/09)

Have you obtained a legal opinion that the proposed action plans do not infringe re the Charter of Rights?

Analysis:

The WRRB has not sought such a legal opinion.

Issue # 20 Raised by Ms. Karen McMaster (23/11/09)

Is there a Supreme Court of Canada decision which indicates TŁıCHQ have the right to harvest at any cost, without regard to conservation, the cost to NWT citizens and infringement of human rights?

Analysis:

The Board is not in the business of conducting legal research to advise participants in our proceedings of the law and of their rights. The process works the other way. If a party wants to raise a legal issue they must identify it, support their position and convince the Board to do something about the issue.

Decision:

This question is dismissed.

Issue # 21 Raised by Ms Karen McMaster (23/11/09)

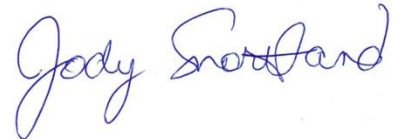
Other legal issues that will be raised during the hearing, including but not limited to, jurisdictional issues, interpretation of land claims, constitutional issues and human rights issues, conflict of interest, due process/natural justice, and consultation.

Analysis:

The Board requested that the parties identify any legal issues so that they could be addressed in advance of a hearing in order to make the process efficient. The parties should be aware that waiting to the last minute to raise an issue is not helpful to the Board or this process overall. If it is clear that an issue could have been raised earlier the Board will deal with the matter accordingly.

**Signed this 26th day of February, 2010 on for the
Wek'èezhì Renewable Resources Board:**



Grant Pryznyk, Interim Chair

Witness

APPENDIX D

Summary Table of Intervenor's and Registered Public's Recommendations

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
Adaptive Management			
1	support a viable outfitter industry	based on personal observations over 40 years, caribou numbers are not down	Sec. 9
2	Grandfather current licenses	barren ground hunting provides \$4 million to NWT economy	Sec.9.3
3	consider the social and economic viability of the NWT; do socio-economic assessment of measures	sport hunting contributes significantly to attracting and retaining workers; outfitter industry has significant contribution to economy (Outfitting brings in 24 million dollar a year industry in the north), businesses and to First Nations through supply of meat and employment.	Outside WRRB mandate
4	detailed analysis of product diversification options for existing caribou outfitters and available financial assistance to develop/market products	outfitters have spent decades developing their product and building their client base - neither of which can be easily replaced; demise of outfitter business will have financial implications for YK and NWT business and loss of expertise in tourism	Outside WRRB mandate
5	GNWT should develop a report outlining immediate and future impacts caribou management will have on herds, hunters, residents, outfitters, business/mining industry	sport hunting contributes significantly to attracting and retaining workers	Government responsibility
6	consider limited commercial, outfitter hunt after very thorough consultation with aboriginal residents	steps need to be taken, urgently and firmly to enable the herd to recover; priority of harvest in Tlicho Agreement does not mean exclusivity	Sec.9.3
7	keep outfitter tags at the current level	provides a traditional way of life for a number of aboriginal guides, contributes meat to communities and guides the development of ethical hunting practices; suspending caribou tags to outfitters is not biologically justified; the number of outfitter tags has not impact on the herd	Sec. 9.3

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
8	compensation for the 2010 season	we were led to believe in 2008 that there would be no further restrictions to outfitter tags; without compensation cannot afford to go through the years needed to build another business	Government responsibility
9	until more data are available encourage outfitter to sell single tag hunts until population has stabilized	successfully switched to single tag hunts a few years ago	Sec. 9.3
10	eliminate outfitted harvest	represent the appropriate first measures towards conservation; there have been many changes on the Bathurst range and caribou have been declining; government has continued to allow non-aboriginal harvesting - in conflict with the obligation to give priority allocation to aboriginal rights	Sec. 9.3

Consultation

	Recommendation	Rationale	WRRB response
1	consultation needed with impacted stakeholder groups	substantial revenue generated from outfitting business	Government responsibility
2	direct ENR to initiate consultation efforts that show why and what effect the proposed infringements will have towards the herd recovery	need to include scenario modelling, examining things such as aboriginal harvest restrictions, male only harvest, 4% total annual harvest via tags/lottery	Government responsibility
3	thorough consultation with communities and co-management boards outside Wek'eezhii that may be directly affected by recommendations.	recommendations may result in competition for harvest from adjacent declining herds	Government responsibility

Community Involvement

	Recommendation	Rationale	WRRB response
1	use collaborative, community based management approaches	has been successful elsewhere; may lessen dependency on compliance and enforcement	Sec. 12.2, 14
2	involve a wide variety of stakeholders in data collection, research and management of caribou	unilateral decision on data interpretation problematic as is lack of data sharing; biases of ENR; outfitters are a source of knowledge, observing caribou over decades	Sec. 12, 14

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
3	include First Nations people and traditional knowledge and values into decision-making, actions and monitoring	First Nations will once more stewards of the caribou; management is more successful when approaches are collaborative; consistent with recommendations from Caribou Summit	Sec. 12.2, 14
4	support multi-party initiatives that include co-management boards and communities in discussion of proposed management actions that may affect caribou harvesters and people that depend on caribou outside Wek'eezhii	will encourage good hunting practices from all caribou herds	Sec. 10,11 14
5	engage the mineral industry in the development of caribou management plans	particularly where such plans might impact on or affect the mineral industry and the long term economic viability of the NWT and Nunavut.	Sec. 18

Enforcement

	Recommendation	Rationale	WRRB response
1	add more staff in enforcement	there may have been excessive hunting/poaching	Government responsibility
2	continue winter road check stations and conduct frequent patrols during fall and winter	there may have been excessive hunting/poaching	Government responsibility
3	control access to winter road	represents the single easiest step to limiting harvesting opportunities while respecting aboriginal access rights	Government responsibility
4	reduce wastage of meat	wastage of meat is a problem recognized by communities across the Beverly and Qamaniujuaq caribou ranges	Sec. 13
5	consistent and transparent enforcement across herds	given overlap of two herds in winter and potential for restrictions on one herd to result in overharvest of the other	Government responsibility
6	identify consequences if 300 is not met	enforcement must be as per others in the NWT including infractions by resident hunters and outfitters regarding quotas	Sec. 9.5

Education

	Recommendation	Rationale	WRRB response
1	add more staff in hunter education areas	there may have been excessive hunting/poaching	Sec. 13

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
2	develop and implement public and hunter education	courses based on safety, best practices and reducing wounding loss combining TK and other methods powerful tool for improving harvesting techniques; to encourage good hunting practices for all caribou herds	Sec. 13
Harvest			
	Recommendation	Rationale	WRRB response
1	aboriginal subsistence hunting be considered for outlying communities based on quotas	community members should be selected (based on trustworthiness and wisdom) for community committees to advise on quotas for those families dependent on caribou as their primary food source	Sec. 9.5
2	if a small amount of harvest is allowed set it below the sustainable level if the herd is to recover and give priority to aboriginal people most in need for subsistence	must give opportunity for herd to recover; people have gone without caribou before and harvested other species, can do it again; over short term culture won't die but loss of the entire herd could mean loss of our culture	Sec. 9.5
3	an allowable harvest should be introduced in stages and only through consultation with aboriginal residents	steps need to be taken, urgently and firmly to enable the herd to recover	Sec. 9.5
4	maintain current harvesting situation; do not set a TAH at this time	ENR's assessment of the situation is inappropriate and inaccurate and the proposed actions are unreasonable; not in the public interest; resident and outfitter bull harvest has minimal impact on future herd populations	Sec. 9
5	eliminate entire harvest of Bathurst herd for one or two years	the herd has declined drastically, ENR may be out by a few thousand caribou but it has declined; actions are needed to halt the decline and enable the herd to recover	Sec. 9
6	do not harvest other adjacent herds	adjacent herds are in decline and there is no desire to hasten the decline of neighbouring caribou herds	Sec. 10 and 11
7	reduce harvest pressure on male caribou of declining herds	will increase bull survival	Sec. 9, 10 and 11
8	TAH for Bluenose East herd be based on a very conservative estimate of the population size	diverting harvest to Bluenose East herd must be done conservatively and respect the harvest levels of Sahtu and other communities that harvest this herd	Sec. 10

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
9	manage expectations on the resumption of hunting; reinstatement targets need to be decided now before one takes away any aboriginal, resident and outfitter hunt	experience elsewhere shows recover can take time (decades) and resumption of hunting can be slow; there needs to be a target not just stopping a decline, otherwise the management plans are all in a vacuum and cannot be evaluated	Sec. 14
10	No outfitter or business harvesting	low caribou numbers; caribou must go to elders	Sec. 9, 10 & 11
11	Never kill lead caribou	they are important for future migration	Sec. 13
12	harvest caribou for elders only	caribou is medicine for the elders; it is life sustaining	TG responsibility

Commercial harvest

	Recommendation	Rationale	WRRB response
1	do not support elimination of commercial tags	consultation not adequate and no justification for infringing on constitutional rights	Sec. 9.2
2	eliminate all commercial meat tags	there have been many changes on the Bathurst range and caribou have been declining; increased sale of meat may have contributed to excessive hunting; represent the appropriate first measures towards conservation	Sec. 9.2

Cow harvest

	Recommendation	Rationale	WRRB response
1	Allow a small cow harvest	some cows may be harvested by accident by inexperienced harvesters unable to distinguish young bulls from cows; if it is illegal then these accidental harvests may be wasted for fear of prosecution	Sec. 10
2	limit or eliminate the number of cows that can be taken by anyone each season from the Bathurst, Bluenose or Ahiak herds	one cow and her offspring can increase a herd size by about 25 animals during that cows lifetime; increasing survival of female will have the greatest effect; need for rapid recovery to provide herd ability to cope with other changing conditions (weather, insects, fire, etc.); relying on harvest alone is risky; consultation not adequate and no justification for infringing on constitutional rights	Sec. 10, 11 and 12
3	eliminate harvest of females for scientific research purposes	one cow and her offspring can increase a herd size by about 25 animals during that cows lifetime	Sec. 12
4	don't support diverting female harvest from Bathurst to Ahiak	encouraging even limited harvest of females from herds to the east of Wek'eezhii could have serious impacts on the Beverly herd as hunters can't distinguish them from other herds	Sec. 11

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
Harvest reporting			
	Recommendation	Rationale	WRRB response
1	voluntary harvest reporting	may increase likelihood of compliance; tag system with sampling kit is used successfully in Inuvik region; current ENR approach yielded unreliable results	Sec. 12
2	require mandatory harvest and harvester identification;	considerable amount of information lacking about the nature of the harvest in the NWT and the number of caribou harvested especially by herd ; educate harvesters about the importance of this information in management and its role in herd recovery efforts	Sec. 12
3	implement harvest study directed by YKDFN	data should respect hunter privacy and remain the Intellectual property of the YKDFN	YKDFN responsibility
4	harvest data surveys should be a cooperative endeavour between all the relevant management agencies and Boards.	It is crucial that for any present and future harvest regime for both the Bluenose East and Bathurst herds that reliable community caribou harvest data be obtained.	Sec. 12
5	self-monitoring of harvest is not in the land claim agreement and will not work	we need accountability; may put undue responsibility and duties on community members	Sec. 12
Harvest regulation			
	Recommendation	Rationale	WRRB response
1	use seasons, zones and community allocation to regulate harvest	provides flexibility and a sharing of responsibility for recovery	Sec. 9.5
2	designate a male-only harvest based on quotas	has been shown elsewhere that a male-only harvest has minimal effect on a population; would allow for traditional, resident and outfitting hunt to continue	Sec. 9.5
3	consider a TAH of 5 caribou per aboriginal with a possession limit of 2 at any one time	steps need to be taken, urgently and firmly to enable the herd to recover	Sec. 9.5
4	create distinct hunting seasons that apply to all users	just as there are seasons for fish species at risk or for other mammals such as muskox or polar bear	Sec. 9.5
5	establish and enforce a 2km wide no-hunting zone on all roads with no hunting allowed from winter/ice roads	road access to this herd has made it extremely accessible to all hunters from across the NWT	Sec. 19
6	enforce a mandatory 12 hour wait after flying into an area for caribou	there may have been excessive hunting/poaching	Sec. 19

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
7	regulate the harvest of bulls through a limited tag draw system for resident hunters	this approach is similar to the issuance of bison tags	Sec. 9.4
8	if 300 is acceptable the harvest should be carried out in a controlled community hunt similar to those organized by ENR this past winter	none given	Sec. 9.5
9	the allocation of any number harvested should be delegated at a per capita ratio between the Tlicho and the Yellowknives Dene and the distribution of the harvested animals should be left to their discretion	none given	Sec. 9.5

Industrial development

	Recommendation	Rationale	WRRB response
1	need for permanent protection of calving ground of Bathurst herd	Bathurst caribou herd is the only herd whose calving grounds are not protected; the calving grounds are threatened by several all season road proposals, the Bathurst Inlet Port and Road, High Lake Road; there is no West Kitikmeot Land Use Plan therefore no development controls; govt of Canada opposes development in the Porcupine Herd calving grounds but does nothing to protect Bathurst herd	Sec. 15
2	implement caribou protection measures	may afford much needed protection on calving, post-calving ranges	Sec. 15
3	monitor cumulative effects, setting threshold for large scale development in the caribou range	will lead to a much better understanding of the landscape level effects of development on caribou; current ENR Cumulative Effects demonstration project to look at cumulative effects is limited to summer range; it should be expanded to entire range where development is more of a factor (need to look at habitat fragmentation, linear barriers such as the road and transmission line); role of roads in harvest ;	Sec. 12, 15
4	develop flight restrictions to limit the number of over flights of caribou	raised as significant concern at the Diamond Mine Monitoring Workshop	Sec. 15

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
5	current monitoring programs need to be made more compatible and help contribute useful data to the cumulative effects monitoring and management efforts	This is a shared responsibility and GNWT should take on a stronger coordination role as the regulator for the wildlife research activities carried out by the mines.	Government responsibility
6	develop best management practices with respect to appropriate mitigative measures to protect caribou during calving and post-calving	any land protection measures that prohibit mineral activity across large land areas would have a major negative impact on the minerals exploration industry; there needs to be careful consideration and input from minerals industry	Sec. 15
Management			
	Recommendation	Rationale	WRRB response
1	base harvest levels on total number of caribou in region not by herd (meta-population)	2009 Bathurst calving ground survey not reliable (late spring); all ENRs monitoring information from 06-09 has shown good condition and survival; personal observations of thousands of caribou; recommendation from ARC report; herds are not genetically, behaviourally or spatially distinct	Sec. 6, 9
2	consider Ahiak and Bathurst a single herd for management purposes	these two "herds" have historically been considered one; Ahiak calves on what was Bathurst traditional calving ground; Bathurst has traditionally moved from west to east of the inlet to calve	Sec. 6, 9
3	develop a suitable harvest management plan	we must work together to collect and manage caribou information and create a path forward; NWT is the only jurisdiction in Canada that does not have a harvest management plan	Sec. 18
4	encourage aboriginal people to harvest alternate foods by providing funds for transportation and shipping	NSMA has voluntarily restricted harvest for at least 5 years while asking government for better information and to take precautionary measures	Sec. 10,11, 17
5	reestablish the Bathurst Caribou Management Planning Committee with support for all affected First Nations (including Government of Nunavut)	all partners would then be committed to implementation of recommendations	Sec. 15
6	reinstate Special Aboriginal Harvesters Assistance Program	will encourage traditional land-base lifestyles	Government responsibility

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
7	consider the need for an independent co-management body to allow for more widespread oversight	a good example of this is the Porcupine Caribou Management board with multi-party transboundary membership	Sec. 18
8	work with partners to implement incomplete recommendations from previous management plans, workshops and sessions	ENR's continued inaction on fronts other than harvest restrictions; ENR must listen and engage in good faith	Government responsibility
9	evaluate this herd as a species at risk under the NWT Species at Risk legislation and work with COSEWIC to continue assessment under federal Species at Risk Act	another means of implementing broader protection of caribou	NWT Species at Risk Committee is currently prioritizing species including barren ground caribou for consideration
10	actions should not shift problems to neighboring herds and communities that depend on them; harvest should not be diverted	conservation measures for Bathurst should not be at expense of Beverly herd on which caribou-harvesting communities in the NWT, northern Saskatchewan and Nunavut have traditionally depended	Sec. 10, 11
11	start thoughtful studies of the herd by government and First Nations in 2010 and through 2012	so that the first stage of a realistic management plan might be made and	Sec. 12
12	stop all forms of habitat destruction and harvest caribou without waste; maintain caribou herd at smaller size	has been severe loss of winter habitat from wildfire, mineral development and winter roads	Sec. 15
13	do not create hunting zones.	"scared with the no-hunting zone - like being given the death penalty".	Sec 9, 10 and 11
14	Tłıchǵ should manage their own people's relationship to caribou and other wildlife	self-government and personal autonomy.	Sec 12
15	limit non-Tłıchǵ hunting on Tłıchǵ land.	protect caribou for Aboriginal use.	Sec. 9
16	put forest fire out when they start	forest fires destroy caribou food	Government responsibility
17	biologist should not use drugs on caribou	drugs cause sickness	Government responsibility
18	do not ban hunt	feels like the caribou are stolen from us	sec. 9

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
20	all parties should work together	better decisions will be made	Sec. 14
Monitoring			
	Recommendation	Rationale	WRRB response
1	monitor cause of mortality of collared animals	need to be able to partition causes of death into predation, accident, disease	Sec. 12
2	monitor density of breeding cows on calving ground through aerial surveys	annual aerial surveys will act as a early warning to give us more frequent information on trend of herd	Sec. 12
3	monitor winter snow depth and ice events as well as extent of forest fires	these environmental conditions can be linked to demographic indicators	Sec. 12
4	use birth rate as a measure of pregnancy rate instead of relying on a small sample of harvest females	pregnancy of small sample will lack statistical power to detect to detect annual changes and trends especially if age of cows is skewed to older females	Sec. 12
5	need regular surveys and more collared caribou	current monitoring by ENR do not support conclusion of drastic decline	Sec. 12
6	do calving ground surveys all at one time	biologists could be missing animals; caribou that are not genetically distinct should be managed as metapopulation; don't know where all the caribou have gone - resident and outfitted harvest took 6-7000; aboriginal harvest 45 000-72 000 over six years	Sec. 12
7	resume forest fire control in caribou ranges	encourages precautionary management actions be taken which would not infringe on Aboriginal rights	Sec. 15
8	monitoring take place immediately by independent sources	question ENR motivation for management actions restricting resident and outfitter harvest; current population and reported decline of Bathurst herd is not substantiated by sound scientific data	outside WRRB mandate
9	annual monitoring of Bathurst and adjacent herds to generate accurate and relevant data; science should be peer-reviewed and all monitoring data made available to the public	ensure actions are achieving desired results; don't understand the decline as caribou are fat and healthy and we are still seeing large numbers in Point lake area; ENR data currently available is questionable	Sec. 12

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
10	do not support additional 30 collars	further discussion with leadership and elders is required; should consider why collars are required and what alternatives or different methods are available; consider pilot program to collar caribou at water crossings	Sec. 12
11	undertake studies that look at the impacts collars have on feeding and movement rates and general impacts to body condition and reproductive success	need this information prior to agreeing to more collars	Sec. 12
12	use monitoring data from mine wildlife monitoring programs	the mining industry can make valuable contributions to the decision-making process through the extensive monitoring done by mining companies	Sec. 14
13	an assessment of the present status of the whole herd, not just the "calving" herd and its habitat should be conducted before management decisions are made	a re-survey of the "calving" herd at any time would not provide an accurate evaluation of any three year management program as every year there are a different number of cows having calves (some not bred, some lose their calves, some hunted and others taken by predators)	Sec. 12
14	obtain key demographic data on the Bluenose East herd including early and late calf survival, recruitment and adult sex ratio	to support interpretation of population survey results and aid in development of appropriate management actions	Sec. 12
15	setting levels for cow/calf ratios is not an appropriate monitoring objective	these ratios are more dependent on environmental variables than management actions	Sec. 12, 14
16	listen to the harvesters and elders who understand the relationship between wolves and caribou, and how wolverines and bears harvest caribou.	Aboriginal harvesters watch these relationships.	see Appendix F
17	Listen to Aboriginal hunters and elders who have observed and used caribou.	Aboriginal Peoples have traditionally used the caribou for everything: clothing, food, shelter, tools and continue to observe the fitness and behaviour of caribou. Watch the caribou as they travel through snow and across ice. Observe how many fall through ice.	see Appendix F
18	Remove caribou collars	Collars create problems for caribou. If caribou are scared or in pain, they become stressed and can starve.	

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
19	Listen to Aboriginal harvesters when they say caribou are diseased.	Aboriginal Peoples are accustomed to judging caribou health	see Appendix F
20	Long-term monitoring	provide more reliable data	Sec. 18
20	increase # of collars	better monitoring data	Sec. 12
21	increase # of areal surveys	better monitoring data on influence of adjacent herds	Sec. 12
22	increased demographic monitoring	will provide better information on cow-calf ratio and calf survival	Sec. 12
23	use population models	strategies and adaptive management	Sec. 12
Other			
	Recommendation	Rationale	WRRB response
1	join with the NWT caribou outfitters on a high profile caribou conservation program - Caribou Forever -	this program raises awareness of our great herds of caribou, sets a higher value for the herds and ensures they are sustainable	outside WRRB mandate
2	request support for community health and social programs	replacement programs with positive community values will minimize social impacts of harvest restrictions	Government responsibility
3	request INAC submit comments that outline how they have protected the rights of the signatories of Treaty 8 with a submission date prior to the Board's decision	INAC is supposed to protect Treaty Rights; fiduciary responsibility with First Nations, should be ensuring that all other management options have been tried prior to limiting Dene harvest	outside WRRB mandate
4	support the development of a "Barren Ground caribou Database" which will combine all relevant sources of caribou information and be operated independently of government	all sources of information are not acknowledged and used nor is there consensus on interpretation	not addressed
5	establish a safety net such as inter-jurisdictional agreements to ensure the adequacy of people's time and funding commitments over the short and longer-term	this will support a detailed implementation plan	Sec. 19
6	there should be a national review of the issues concerning the creation of the Ahiak herd by the Auditor General or other significant authority who is accountable to the Canadian public	this issue was not dealt with in the ARC review of ENR caribou management	not addressed

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
Outfitter Industry			
	Recommendation	Rationale	WRRB response
1	support a viable outfitter industry	based on personal observations over 40 years, caribou numbers are not down	Sec. 9
2	Grandfather current licenses	barren ground hunting provides \$4 million to NWT economy	Sec.9.3
3	consider the social and economic viability of the NWT; do socio-economic assessment of measures	sport hunting contributes significantly to attracting and retaining workers; outfitter industry has significant contribution to economy (Outfitting brings in 24 million dollar a year industry in the north), businesses and to First Nations through supply of meat and employment.	Outside WRRB mandate
4	detailed analysis of product diversification options for existing caribou outfitters and available financial assistance to develop/market products	outfitters have spent decades developing their product and building their client base - neither of which can be easily replaced; demise of outfitter business will have financial implications for YK and NWT business and loss of expertise in tourism	Outside WRRB mandate
5	GNWT should develop a report outlining immediate and future impacts caribou management will have on herds, hunters, residents, outfitters, business/mining industry	sport hunting contributes significantly to attracting and retaining workers	Government responsibility
6	consider limited commercial, outfitter hunt after very thorough consultation with aboriginal residents	steps need to be taken, urgently and firmly to enable the herd to recover; priority of harvest in Tlicho Agreement does not mean exclusivity	Sec.9.3
7	keep outfitter tags at the current level	provides a traditional way of life for a number of aboriginal guides, contributes meat to communities and guides the development of ethical hunting practices; suspending caribou tags to outfitters is not biologically justified; the number of outfitter tags has not impact on the herd	Sec. 9.3
8	compensation for the 2010 season	we were led to believe in 2008 that there would be no further restrictions to outfitter tags; without compensation cannot afford to go through the years needed to build another business	Government responsibility
9	until more data are available encourage outfitter to sell single tag hunts until population has stabilized	successfully switched to single tag hunts a few years ago	Sec. 9.3

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
10	eliminate outfitted harvest	represent the appropriate first measures towards conservation; there have been many changes on the Bathurst range and caribou have been declining; government has continued to allow non-aboriginal harvesting - in conflict with the obligation to give priority allocation to aboriginal rights	Sec. 9.3

Predators

	Recommendation	Rationale	WRRB response
1	need a better index for monitoring wolf abundance	there was no trend apparent in early pup survival in ENRs current dataset; it is unclear how den occupancy, number of adults and pup survival index wolf abundance	Sec. 16
2	manage predators (wolf and bears)	predators take the largest share of caribou; experience elsewhere shows success of predator management in concert with harvest restrictions	Sec. 16
3	complete research examining wolf and grizzly bear predation on caribou herd	this is mentioned in the 2004 Bathurst Caribou Management Plan and in ENR's 2006 proposal to the WRRB	Sec. 16

Research

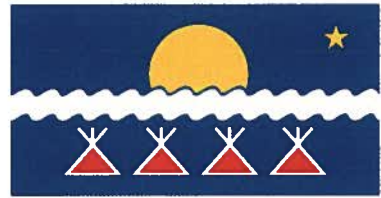
	Recommendation	Rationale	WRRB response
1	data should be reviewed with independent biologists looking at the entire traditional Bathurst calving ground	we need to work together with outside assistance to help interpret and understand the data ; there is incredible amount of doubt that the Bathurst herd has dropped to 30, 000; some members believe that the decline stated by ENR is not accurate	Government responsibility
3	consider expanding and properly funding research through joint ventures with independent, academic, research organizations	shouldn't be cutting government expenditures on caribou research at this time; researchers should focus on causes of the decline; needed to gather accurate data to help gauge the current health and numbers of the herd;	Government responsibility
4	set out requirements to remedy the data deficient nature facing the Ahiak herd.	This will help ENR begin to target the research required to ensure that the herd will have an appropriate level of data available when future management planning commences	Sec. 12
5	stakeholders have timely and equitable access to data	sharing of information including data management are issues yet to be resolved or even acknowledged	Sec. 12

Summary of Intervenor and Public Recommendations

	Recommendation	Rationale	WRRB response
6	harvest should include maximum scientific sampling	none given	Sec. 12
7	more TK research is required	documenting the past with elders	Appendix F
8	peer review of all data analysis		Sec. 14
9	immediate reporting of results		Sec. 12
Resident harvest			
	Recommendation	Rationale	WRRB response
1	eliminate resident harvest	have seen the herd decline based on personal experience; resident harvest is a privilege; represent the appropriate first measures towards conservation	Sec. 9.4
2	If a TAH is set allocate a portion of the harvest to residents	priority of harvest in Tlicho Agreement does not mean exclusivity	Sec. 9.4
3	when the herd can sustain an increased harvest a TAH of 1 caribou per resident could be reintroduced	steps need to be taken, urgently and firmly to enable the herd to recover	Sec. 9.4
4	reinstate resident harvest	there is reasonable doubt in the science and conclusions presented by ENR; the number of bulls taken has no impact on future herd size	Sec. 9.4

APPENDIX E

***Revised Joint Proposal on Caribou Management Actions in
Wek'èezhì, May 31, 2010***



MAY 31 2010

Mr. Grant Pryznyk
Interim Chair
Wek'èezhii Renewable Resources Board
Yellowknife Office
102A - 4504 49TH Ave.
Yellowknife, NT X1A 1A7

Dear Mr. Pryznyk:

**WRRB Public Hearings Adjournment - Revised
Joint Proposal on Caribou Management Actions in the Wek'èezhii**

The Tłıchǵ Government and the Department of Environment and Natural Resources (ENR) would like to thank the Wek'èezhii Renewable Resources Board (WRRB) for the opportunity provided at the March 22-26, 2010 public hearing to revise the Bathurst caribou management joint proposal.

Please find attached the:

- *Revised Joint Proposal on Caribou Management Actions in the Wek'èezhii;*
Tłıchǵ Government, Department of Environment and Natural Resources,
May 31, 2010.

If you have any additional questions regarding this information please contact Mr. Jason McNeill, Senior Policy Advisor, Aboriginal Relations, ENR at (867) 920-3298 or Mr. Eddie Erasmus, Lands Protection Director, Tłıchǵ Government at (867) 392-6381 (ext. 300).

Sincerely,



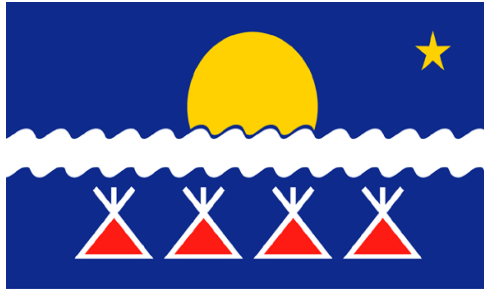
Gary A. Bohnet
Deputy Minister



Grand Chief Joe Rabesca
Tłıchǵ Government

Attachment





REVISED JOINT PROPOSAL ON CARIBOU MANAGEMENT ACTIONS IN WEK'ÈEZHÌ

Submitted to:

Wek'èezhìi Renewable Resource Board

Submitted by:

Tłchq Government

Behchokò, NT.

And

Department of Environment and Natural Resources,

Government of the Northwest Territories

Yellowknife, NT.

31 May 2010

EXECUTIVE SUMMARY

1. A population survey in 2009 of the Bathurst caribou herd provided an estimate of $31,900 \pm 5,300$ caribou, and showed that the herd's decline had accelerated after 2006 when it still numbered over 100,000. This accelerated decline has been the reason for developing co-management actions to halt the decline and give the herd an opportunity to recover.
2. In July 2009 the Wek'èezhii Renewable Resources Board (WRRB) asked the Tłıchǫ Government (TG) and the Department of Environment and Natural Resources, Government of the Northwest Territories (ENR-GNWT) to develop a joint management proposal for the Bathurst caribou herd and the neighbouring Bluenose-East herd. A joint proposal was submitted to the WRRB in early November 2009. TG and ENR-GNWT agreed on a number of management and monitoring actions, but provided separate recommendations on Aboriginal harvest of Bathurst caribou.
3. In March 2010, the WRRB held a 5-day hearing on the joint management proposal, with presentations from TG, ENR-GNWT, intervenors with an interest in the Bathurst herd, and members of the public. On the last day of the hearing the WRRB granted an adjournment of the hearing requested by the TG (with ENR-GNWT support), to enable the two parties to resume collaborative work on the management proposal, and specifically to seek agreement on the key issue of Aboriginal harvest of Bathurst and Bluenose-East caribou, and to consider other related issues. A revised proposal was requested by May 31, 2010. This document is the revised joint management proposal.
4. Although the main focus of the original and revised proposals remains on actions to stabilize declining caribou herds, TG and ENR-GNWT through their joint meetings reviewed and recognized the importance of the long-standing cultural and social relationship between caribou and Tłıchǫ and other northern Aboriginal peoples. Management of the Aboriginal harvest must happen in ways that re-build traditional respect for caribou, other wildlife, and the land itself, and in a manner that empowers Tłıchǫ communities to implement the Tłıchǫ Agreement through self-regulating and monitoring their collective hunting behaviour.
5. Overall, the approach in the revised proposal is to focus in the short-term (next two years) on reducing death rates (mortality) of Bathurst caribou by reducing the two factors that most directly affect caribou death rates: hunter harvest and wolf predation. TG and ENR-GNWT recognize that caribou numbers are also affected by several other factors (weather during all seasons, fire on the winter range, industrial development) and these are to be monitored generally in the short term and will need to be more fully considered in a longer-term planning context.
6. TG and ENR-GNWT have agreed that the annual harvest of Bathurst caribou inside and outside of Wek'èezhii should be $300 \text{ caribou} \pm 10\%$ in total from this herd, with at least 80% of this harvest being bulls. Allocation of this harvest will require further discussion between TG, ENR-GNWT, and other Aboriginal groups. This proposal does not preclude the right to harvest for other Aboriginal groups, and it does not diminish the GNWT's requirement to consult with other Aboriginal groups. The herd should be able to stabilize with this harvest if calf productivity stays high. The proposal is for a harvesting target rather than a Total Allowable Harvest, as this seems most appropriate in light of confidence levels for current herd population and harvest data, and as the means considered most supportive of innovative and effective implementation of proposed hunting targets. These proposed hunting targets are in the range of Aboriginal harvesting of the Bathurst herd during fall and winter hunting seasons in 2009-2010, although TG and ENR-GNWT recognize that this is a very substantial

reduction in harvest levels from previous years. Reducing harvest to this level will require temporary elimination of resident, non-resident, and commercial caribou harvest from the Bathurst herd.

7. For the Bluenose-East herd, an interim harvest management is recommended, with the expectation that ENR-GNWT will carry out caribou surveys in 2010 to provide an updated population estimate. Harvest management for this herd must involve Nunavut, Sahtu and Inuvialuit governments, boards and communities, and consideration of an on-going management planning process for the Bluenose-West, Cape Bathurst and Bluenose-East herds. As an interim recommendation, TG and ENR-GNWT propose that total harvest of this herd should target $\leq 4\%$ (1920 caribou) of an estimated herd size of ca. 48,000, which would be the herd's size if its annual rate of decline from 2000 to 2006 (7.5%) had continued to 2010. The harvest should also consist of at least 80% bulls. This would amount to about a 45% reduction from the estimated 2009-2010 harvest of this herd (ca. 3500, with about 2/3 of the harvest being cows).

8. Although the Ahiak herd occurs rarely in Wek'èezhìi, ENR-GNWT's reconnaissance surveys on the Ahiak calving ground show a decline of 60% in numbers of cows 2006-2009. There is limited evidence that some cows from the Beverly herd now share ranges with Ahiak caribou, and numbers of caribou calving on the Beverly calving ground have dropped to very low levels. TG and ENR-GNWT propose that NWT communities respect recommendations from the Beverly and Qamanirjuaq Caribou Management Board aimed at reducing Ahiak/Beverly caribou harvest and shifting that harvest to at least 80% bulls. NWT communities should not replace harvest of Bathurst caribou by increased harvest of Ahiak and/or Beverly caribou.

9. In addition to these recommendations on caribou harvest, TG and ENR-GNWT are proposing one additional management action designed to reduce caribou mortality: increased harvest of wolves by hunters and trappers in the Bathurst range. This action is proposed in recognition of the herd's very rapid decline from 2006 to 2009, as a further way to reduce caribou death rates and increase the likelihood for the herd to stabilize and recover.

10. TG and ENR-GNWT took the opportunity in developing a revised proposal to review and revise other management aspects that would be needed to effectively implement caribou management. In particular, managing the caribou harvest has to be done in ways that will be acceptable to Tłıchǫ and other Aboriginal elders, hunters, and communities. Resumption of past practices of shifting to other country foods like fish, moose and muskrats would be consistent with past times of caribou scarcity. The revised proposal contains recommendations to maintain or increase access to wood bison as an alternative meat source, and to increase support for fish camps.

11. Effective implementation of the management proposed will require an increased capacity on the part of TG to fully participate in monitoring and management of caribou. Implementation should be built around methods that will promote community ownership of the programs; one example would be Community Caribou Committees in each Tłıchǫ community that would meet regularly to review the most recent caribou information and be part of decision-making in their communities. TG and ENR-GNWT suggest a number of ways that could be used to implement these management proposals, while recognizing that a detailed implementation plan will require further discussion and may need to incorporate WRRB's recommendations.

12. Monitoring actions listed in the original joint management proposal were reviewed and incorporated into an adaptive management cycle that would include periodic review through the year of the most recent information, with the opportunity to re-consider management actions. Monitoring

caribou harvest would be part of this cycle, which would also include results of caribou surveys, wolf harvest efforts, and information gathered by community monitors on caribou condition and environmental trends. As a result, this proposal is designed to begin a much more collaborative and adaptive co-management system than existed previously, which the parties believe will be more effective for assessing herd population and health, gathering reliable harvesting data, and enlisting Aboriginal harvesters and communities in effective implementation.

13. Although the primary focus in this proposal is on the short-term future and stabilization of the Bathurst herd, TG and ENR-GNWT recognize the need for long-term management plans for each of the three herds (Bathurst, Bluenose-East and Ahiak/Beverly) where harvest, habitat, and other factors affecting barren-ground caribou herds are considered carefully.

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1.0 THE CARIBOU ISSUE, PREVIOUS PROPOSAL AND REVISED APPROACH

The Bathurst caribou herd declined rapidly between 2006 and 2009 from over 100,000 to about 32,000. The TG and Environment and Natural Resources, Government of the Northwest Territories (ENR-GNWT) submitted a joint proposal on caribou management to the Wek'èezhii Renewable Resources Board (WRRB) in early November 2009. Management actions were proposed primarily for the Bathurst herd, but consideration was also given to its western and eastern neighbours, the Bluenose-East and Ahiak herds. TG and ENR-GNWT agreed on several management actions but were not able to agree on management of the Aboriginal harvest in Wek'èezhii.

The WRRB held a public hearing in late March 2010 to review the proposal, and related reports and materials. Presentations were given by TG, ENR-GNWT, intervenors with an interest in Bathurst caribou, and the general public. On the last day of the hearing, TG with the support of ENR-GNWT requested an adjournment of the hearing to allow the two governments to complete work on the joint proposal, and specifically to seek agreement on management of the Aboriginal harvest of caribou in Wek'èezhii. WRRB granted an adjournment, with a requirement for the revised proposal to be submitted by May 31, 2010. WRRB also requested a progress report on April 30, 2010, which was submitted by TG and ENR-GNWT and accepted by WRRB as sufficient evidence of progress.

Management actions 1, 2 and 3 in the original proposal were confirmed – cease all hunting by residents, guide/outfitter hunts for non-residents and commercial harvesters. On the key issue of management of the Aboriginal harvest of Bathurst caribou, TG and ENR-GNWT came to agreement, and the shared recommendations on harvest of the Bathurst, Bluenose-East and Ahiak herds are in section 5 (Recommended Management Actions). These recommendations refer to actions 4 and 5 in the original proposal. Submissions made at the March 2010 WRRB hearing were considered by TG and ENR-GNWT in developing the revised recommendations. There were also several monitoring actions in the original proposal. These were reviewed and rearranged as section 6, and are now presented as part of an annual cycle of monitoring, information review, and adaptive management.

In addition to these updates on key sections of the original proposal, TG and ENR-GNWT considered other management aspects that will be needed to effectively implement the management proposed. Section 4 provides a brief overview of how TG and ENR-GNWT worked together on the revised proposal. Section 7 includes a number of approaches that were discussed as methods of implementing harvest regulation; the two parties recognize that further discussion of these methods will be needed and that implementation will depend in part on WRRB recommendations. Section 8 suggests ways to improve community engagement in caribou management, and to increase TG capacity for full participation. Section 9 identifies the need for longer-term planning for the three caribou herds, and the need to protect habitat and manage development in caribou ranges. Section 10 describes actions to increase access to bison as an alternative country food, with some comments on monitoring and management of other potential country food alternatives.

Above all, TG and ENR-GNWT recognize the long-standing cultural and social relationship between caribou and Tłı̨ch̓ and other northern Aboriginal peoples. Throughout the proposal we have sought to emphasize the need for a respectful relationship between people and caribou.

Technical details on population modeling, surveys and other research were kept to a minimum in this proposal. Readers seeking greater detail should refer to the Bathurst technical report, reports on population modeling, and other reports and submissions on the WRRB public registry.

2.0 BACKGROUND AND RATIONALE

The status of barren-ground caribou herds with seasonal ranges that occur within Wek'èezhìi (Tłı̨chǫ Land Claim area) is briefly reviewed below (Figure 1). Barren-ground caribou herds are known to vary widely in numbers over time; all herds monitored by ENR-GNWT declined in the early 2000s, and most caribou and reindeer populations globally were in decline in 2009.

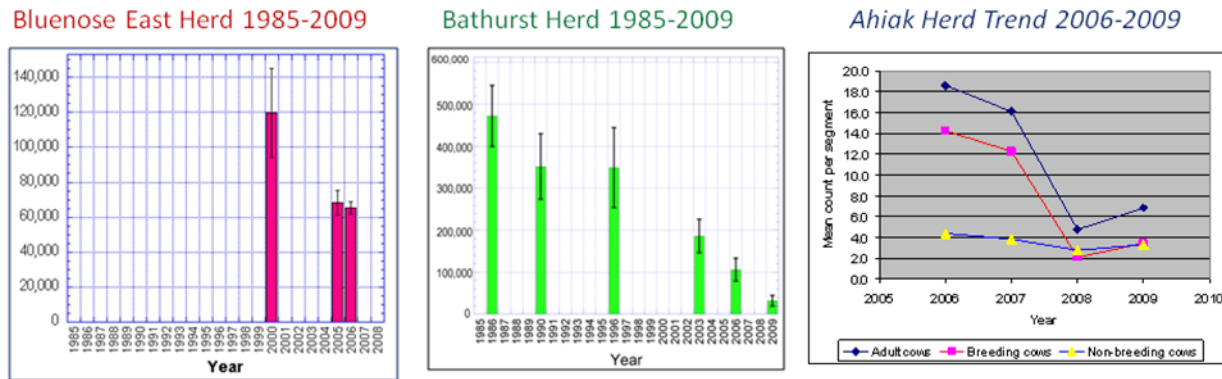


Figure 1. Population trend in the Bluenose-East, Bathurst and Ahiak caribou herds.

Bathurst Herd

In June 2009, ENR-GNWT staff conducted a calving ground photographic survey of cows on the Bathurst herd's calving ground, using the same methods that have been used since the 1980s. In 2009, the overall herd size was estimated at $31,900 \pm 5,300$, compared to more than 100,000 in 2006. The accelerated decline established by the survey results clearly showed that management actions would have to be taken immediately to stabilize the rapidly declining herd and work towards its recovery. The next Bathurst calving ground photographic survey is scheduled for June 2012.

Bluenose-East Herd

Reliable population estimates for the Bluenose-East herd are not available prior to 2000, when this herd was estimated at 120,000. Post-calving photographic surveys were conducted in 2005 and 2006 and results revealed that this herd had declined substantially since 2000. In 2006, the herd estimate was estimated at 66,700.

A photo census was attempted in July of 2009 on the post-calving range of the Bluenose-East herd in order to obtain a new population estimate. The survey was unsuccessful due to cool wet weather, which meant that the caribou did not aggregate tightly enough for photos. Despite the failure to conduct the photo census in 2009, biologists reported seeing fewer animals during post-calving than observed in 2006. This is a concern and suggests caution in evaluating management options. ENR-GNWT will be conducting a June 2010 calving photographic survey and a July 2010 post-calving photographic survey for the Bluenose-East herd, with support and participation of the GN (Government of Nunavut). This should ensure that a new population estimate is available this summer. If both surveys are successful, a comparison of the two methods will also be possible.

Ahiak Herd

For the Ahiak herd, longer-term information such as population size and trend and seasonal range use and movements has been limited. Neither a calving ground nor post-calving photographic survey has been completed for the Ahiak herd, although the population was estimated at approximately

200,000 animals in 1996 based on a crude extrapolation of a systematic reconnaissance survey on the calving grounds. Much of the detailed radio-collar information and surveys of the calving grounds in the Queen Maud Gulf region is from 2006 to present.

From 2006 to 2009, ENR-GNWT completed systematic reconnaissance surveys of the annual calving ground of the Ahiak herd. Preliminary trend analysis of the average number of cows seen per survey transect segment suggests that the numbers of caribou cows on the Ahiak calving ground in 2009 had declined by ca. 60% compared to data from 2006. Although knowledge of these caribou is improving over time, the observed decline is a real issue for management and conservation of this herd. In addition, limited radio-collar information from 2006 to 2010 indicates that some cows that formerly calved on the Beverly calving ground switched to the Ahiak calving ground during these years. Outside of the calving period, these radio-collared Beverly cows appeared to share ranges entirely with cows calving on the Ahiak calving ground. Numbers of cows calving on the traditional Beverly calving ground in 2007, 2008 and 2009 were extremely low. Exactly what happened to the Beverly herd may never be fully known, and interpretations of the limited data vary. Nevertheless, conservation of the few cows still using the Beverly calving ground is now linked to conservation of the Ahiak herd, thus harvest and management of the Ahiak herd must be mindful of the exceptionally low numbers of Beverly caribou.

ENR-GNWT will be conducting a systematic reconnaissance survey of the Ahiak and Beverly calving grounds in June 2010, in collaboration with the Government of Nunavut (GN). The GN is planning a calving ground photographic survey of the Ahiak herd and systematic survey of the Beverly herd calving ground for June of 2011 with collaboration of ENR-GNWT.

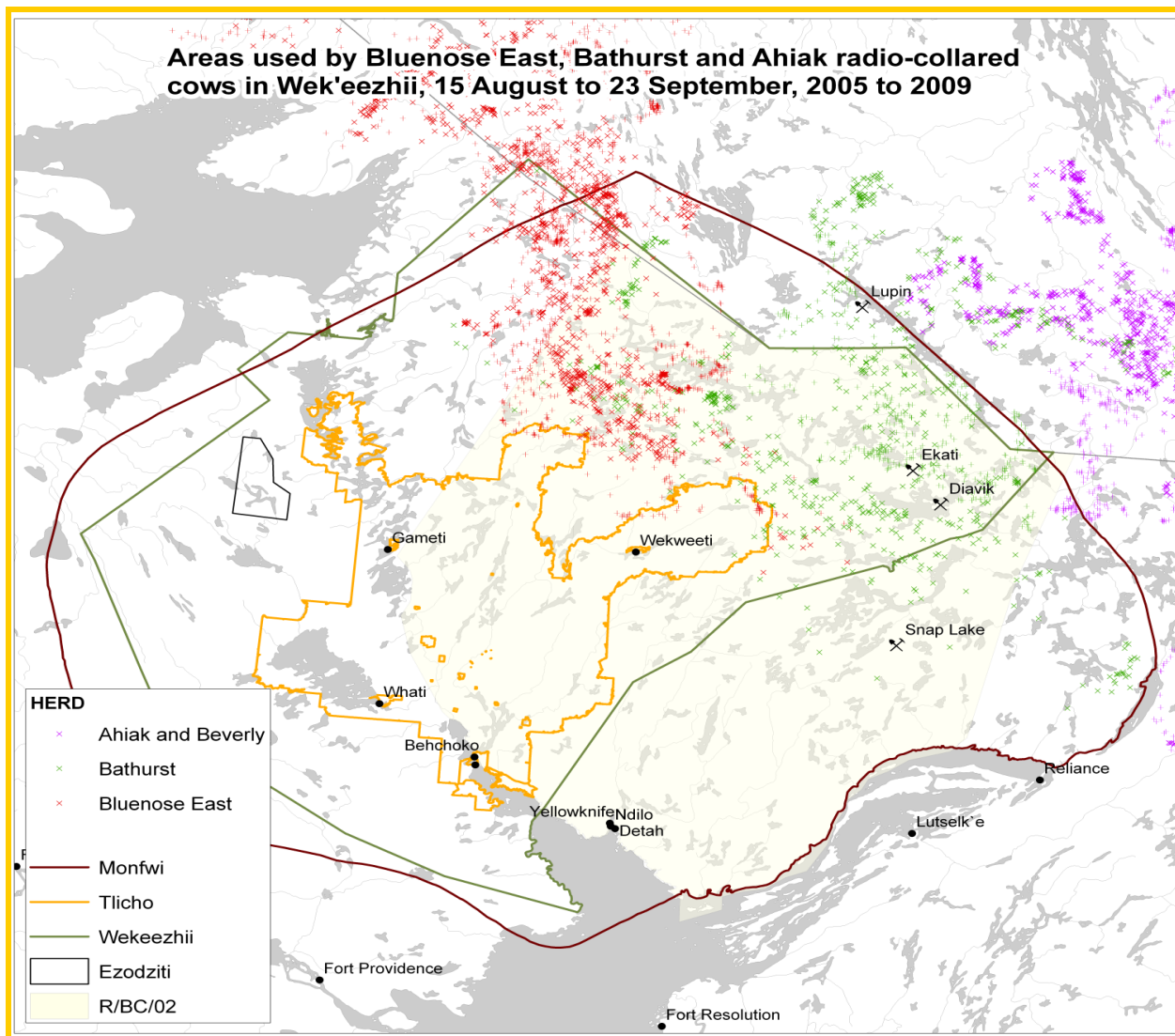


Figure 2. Areas used in the fall (Aug. 15 to Sept. 23) by radio-collared Bluenose-East (red), Bathurst (green) and Ahiak (purple) caribou cows from 2005 to 2009. Mapped by A. D'Hont, ENR-GNWT. The numbers of locations do not reflect herd size, rather they reflect numbers of radio-collars on the 3 herds (most on Bluenose-East caribou, least on Bathurst caribou).

Figure 2 shows the areas used in recent years by caribou from the three neighbouring herds during the fall hunting season (August to September), based on radio-collar locations of cows over the last 5 years (2005-2009). Ahiak caribou have rarely occurred in Wek'eezhii during this period, but there has been extensive use of northern Wek'eezhii by Bluenose-East and Bathurst caribou in the fall, with some overlap between the two herds.

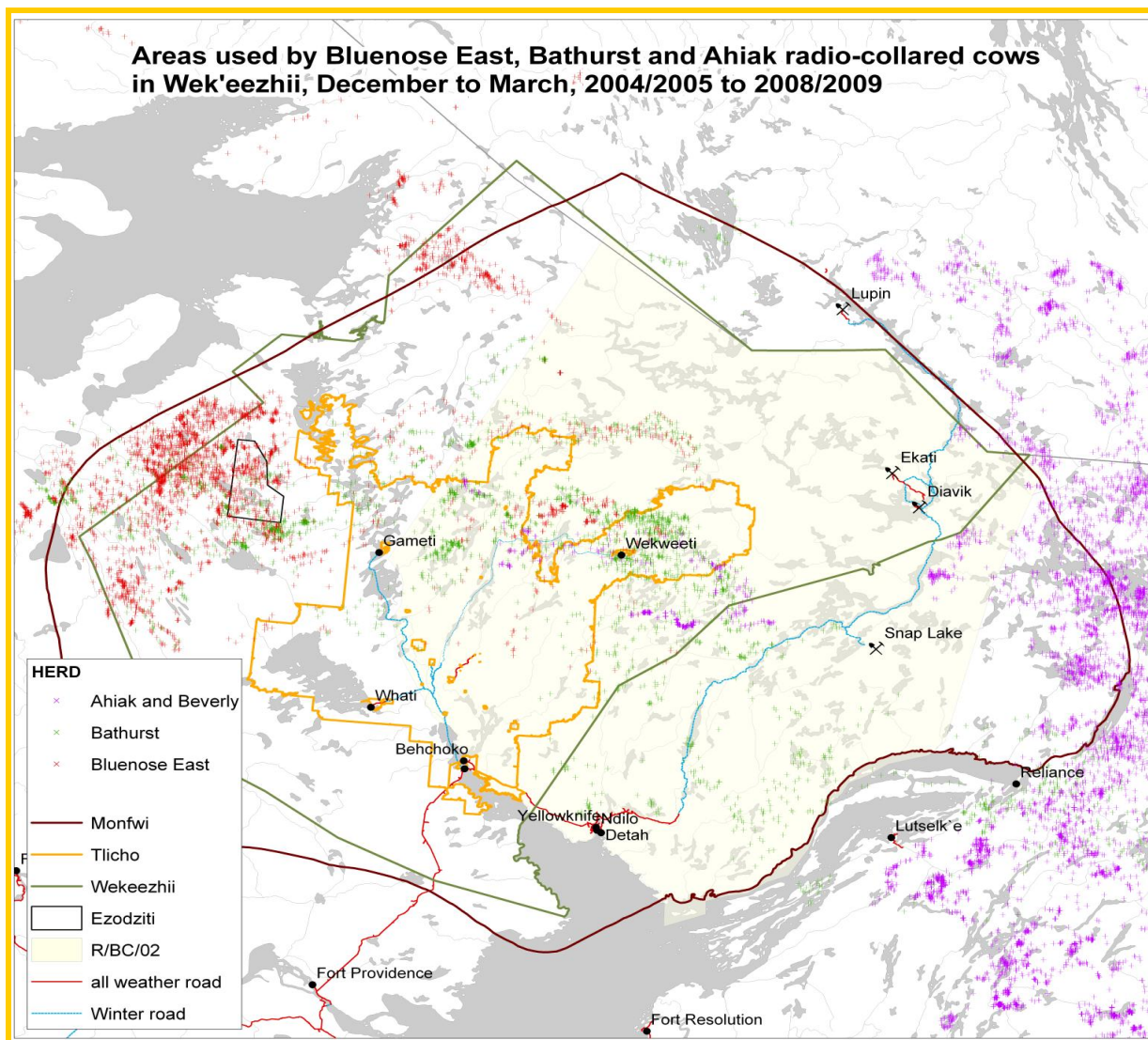


Figure 3. Areas used in the winter (December to March) by radio-collared Bluenose-East (red), Bathurst (green) and Ahlak (purple) caribou cows from 2004/2005 to 2008/2009. Mapped by A. D'Hont, ENR-GNWT. The numbers of locations do not reflect herd size, rather they reflect numbers of radio-collars on the 3 herds (most on Bluenose-East caribou, least on Bathurst caribou).

Figure 3 shows the areas used in recent years by caribou from the three neighbouring herds during the winter hunting season (December to March), based on radio-collar locations of cows over the last 5 winters (2004/2005 to 2008/2009). Ahlak caribou have rarely occurred in Wek'èezhii during this period. There has been extensive use of northeastern Wek'èezhii by Bluenose-East caribou. Central Wek'èezhii has had primarily Bathurst caribou, with some overlap between the two herds. This spatial information indicates that most of the winter harvest in Wek'èezhii in recent winters was from the Bathurst herd. Hunting Bluenose-East caribou would have required lengthier snowmachine travel (e.g. to Hottah Lake) due to the lack of winter roads north of Gameti and Wekweeti.

2.1 Recent Management Issues and Actions

- *Joint management proposal to WRRB (November 2009)*

In 2009, the WRRB requested that TG and ENR-GNWT work together and develop a joint management proposal to address the rapid decline of the Bathurst caribou herd, and submit a proposal by October 31, 2009. Following this request, the Tłıchǵ Government formed a caribou working group to meet with ENR-GNWT to develop a document on recovery options for the Bathurst herd and neighboring herds. One of the requirements of the Tłıchǵ process was to hold a regional workshop in Gamètì to get input from elders on the draft joint proposal prior to the Tłıchǵ assembly to make a final decision.

Representatives of the two governments met periodically through the fall to draft the proposal. On November 5, 2009, TG and ENR-GNWT submitted a joint proposal on caribou management and monitoring actions within Wek'èezhìi to the WRRB. Five main management actions were proposed for the Bathurst herd with further recommendations for limiting harvest of caribou from its western and eastern neighbours, the Bluenose-East and Ahiak herds (Table 1).

The two governments agreed on a number of management actions, including elimination of all commercial harvesting, non-resident (outfitted hunts) and resident hunting, and mandatory harvest reporting. However, there was no agreement between TG and ENR-GNWT on proposed management of Aboriginal harvest. ENR-GNWT recommended that all hunting of female caribou in the Bathurst herd be eliminated, and a limited bull-only hunt (Table 1). TG recommended no restriction on Aboriginal cow or bull harvest. The proposal thus had separate recommendations from the two governments, for cow and bull harvest by Aboriginal hunters.

Table 1. Summary of main management actions from November 2009 proposal

Proposed Management Action	Recommended Action for Bathurst Herd in Wek'èezhìi	Recommended Actions for Adjacent Herds (Bluenose-East and Ahiak)
1	Eliminate all commercial meat tags	
2	Eliminate all tags for outfitting	
3	Eliminate all resident hunter harvest	
4	<u>ENR-GNWT Recommendation</u> Eliminate all harvest (including Aboriginal hunting) of Bathurst caribou females <u>Tłıchǵ Government Recommendation</u> No restriction on female harvest	Limited female harvest may be possible for experienced hunters on the Bluenose East and Ahiak herds and assisted through a joint partnership with ENR/ITI. Numbers harvested to be discussed further and subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'èezhìi.
5	<u>ENR-GNWT Recommendation</u> Allow a limited bull-only harvest for Aboriginal hunters <u>Tłıchǵ Government Recommendation</u> No restriction on male harvest	Bull harvest only on all herds for Aboriginal harvesters. Recommendation is to harvest Bluenose East and Ahiak caribou males in the fall and subject to approval by SRRB, BQCMB and Nunavut for recovery actions outside Wek'èezhìi.

- *No hunting ban in Bathurst winter range (January 2010)*

On December 17, 2009, the GNWT ENR-GNWT Minister announced interim emergency measures to protect the Bathurst herd. This included elimination of resident and commercial harvesting and establishment of a no-hunting zone based on the main Bathurst caribou winter range. On January 1, 2010 the new measures were implemented unilaterally by ENR-GNWT, to provide an interim period of protection from hunter harvest while a co-management solution to harvest management was developed. The ban affected all caribou hunters, including the Tłıchǫ, Yellowknives Dene, NWT Metis Nation, residents and outfitters. This action was outside the scope of the joint management proposal to the WRRB and is not considered further in this proposal. The ban is expected to remain in place temporarily, until the WRRB makes recommendations on harvest management for the Bathurst herd, with a view to replacing the interim emergency measures by jointly agreed measures that would be implemented through the proposed management plan.

- *WRRB hearing (22-26 March 2010) and adjournment request*

In March 2010 the WRRB held a public hearing in Behchokö to review the joint management proposal from TG and ENR-GNWT, and to consider all available technical information and Traditional Knowledge. Interveners and the general public had opportunities to comment on the available information and joint management proposal. On the last day of the 5-day hearing, the Tłıchǫ Government (with ENR-GNWT support) requested an adjournment in order to resume working together to resolve differences that existed in the original proposal, and to specifically address proposed management actions 4 and 5 from the November 2009 proposal. The request for adjournment was granted by the WRRB under the condition that the two governments would provide an interim progress report by April 30, 2010 and a completed proposal by May 31, 2010. An interim progress report was provided to the WRRB by TG and ENR-GNWT, and accepted as adequate proof of progress.

2.2 Ekwo (caribou) and Tłıchǫ culture, language and way of life

The inter-dependence of the Tłıchǫ people with Ekwo could be considered the fundamental pillar of Tłıchǫ culture (see Appendix 1). The Tłıchǫ and other Aboriginal people in the North have depended upon caribou for their physical, mental and spiritual needs since time immemorial. Since the time of Yamozah, the Tłıchǫ have lived in co-existence with the caribou, with laws of respect and appreciation defining the relationship between the Tłıchǫ and the caribou. The Tłıchǫ culture and way of life is based on the caribou and its migration paths. The caribou provided shelter, clothing, bedding and food and are the basis of Tłıchǫ traditional knowledge and legends, traditions and practices. Tłıchǫ traditional trails follow the paths of the caribou towards the barren-lands with camp-sites, grave-sites and places of spiritual significance all described by place-names along the way. These place-names are dependent upon the soil and landscape, determining the harvest methods and telling the story about the place.

The relationship between the Tłıchǫ and caribou has changed over time, with the outside influences of the global economy and trade leading to altered ways of valuing this sacred animal. This has led to a change in Tłıchǫ and outsider dependence on the animal. As early as 1700 the European desire for beaver pelt hats and other furs brought trappers and traders to the North, increasing the need for caribou as a trade item. This was the beginning of the change from hunting for subsistence to hunting for commercial trade, thereby altering the relationship between man and animal.

Following the introduction of the snowmobile in the 1970's, access to the seasonal range of Bathurst caribou began to expand. In 1972, the modern airplane was introduced to the community hunt as was the community freezer. Caribou were no longer only available for certain periods in the season, but it became available almost all year round whether the caribou were close to communities or not. The need to depend on other species at periods of time throughout the year now became a choice, not a necessity.

The last major change in this relationship has occurred in the last 15 years, where we have seen diamond mines, ice roads, all season roads, big game outfitting, resident and commercial hunting, high powered rifles, snowmachines and four-wheel drive trucks and trailers come onto the scene. This has altered the relationship between man and caribou and increased the pressures and stress on the animals, potentially more than in the last 150 years together.

The relationship between Tłıchǫ and caribou is maintained by traditional laws governing human behaviour towards caribou. When these laws are not respected, it is believed that caribou populations will become smaller and their migration patterns will change. There have been times of scarcity and times of abundance, which have been influenced by both natural cycles of wildlife abundance and human influence. The Elders have always believed that when the caribou became scarce they would go away to be left alone - to recover and replenish themselves. They would then come back to offer themselves to the Tłıchǫ - there was a mutual respect between man and animal.

There have been previous times of caribou scarcity. The most recent Tłıchǫ memory of low caribou numbers was in the 1960s. At this time, the community of Wekweètì had to be evacuated to

Behchokö and Gamètì, because of a scarcity of caribou and other game. This move led to significant changes in the political and social fabric of Tłıchǫ society.

A recovery and management plan for the Bathurst caribou cannot focus only on the numbers (i.e., estimates of population parameters and vital rates) and wildlife ecology from a scientific perspective. The relationship between humans and caribou is complex and dynamic. In order to address the decline in the Bathurst herd, this broader dynamic system must be taken into account, with an appreciation that restrictions of harvest are only a small part of the long term sustainable approach to this issue. By looking at the system as a whole and its interconnectedness (Figure 4), the solutions will be found in many different places, places that science alone cannot define or resolve.

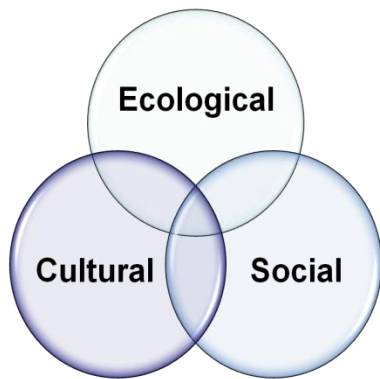


Figure 4: Tłıchǫ Perspective on Ekwo Management

Tłıchǫ elders have always taught that becoming and being knowledgeable is the way that respect is shown to caribou. They believe that a person becomes knowledgeable by listening, watching and experiencing, and that there is a relationship between one's personal knowledge and ability to respect the land. As this knowledge is lost, the laws are no longer abided by and respect for the caribou is diminished. With modernization, changing lifestyles and expectations, this knowledge gap has increased, causing both the Tłıchǫ and other northerners to lose knowledge and respect for caribou.

To re-establish the connection between people and the caribou, the Tłıchǫ must revitalize the traditional ways in which they relate to the caribou - through cultural hunts and relearning of Tłıchǫ laws that guide their behaviour towards this animal. Through cultural hunts following their whaèhdôö æetô (ancestral trails) they will have an opportunity to listen, observe and monitor the land; to learn the nàowo (laws) and stories, and they will have an opportunity to learn the place-names and ways of their ancestors. They will begin hunting by canoe and returning again to the sacred area of Mesa Lake, where peace was made between Edzo and Akaitcho. They will reemphasize and support the hunting and trapping of alternate species when caribou are scarce.

This proposal is not only about recovering the Bathurst caribou herd. It is equally about the recovery of Tłıchǫ language, culture and way of life that are dependent upon the Bathurst caribou.

3.0 DEVELOPING A SHARED PERSPECTIVE

The Tłıchǵ Government and the Government of the Northwest Territories worked together in April and May 2010 to revise and complete this Joint Caribou Management Proposal.

Through their collaborative work, the TG and ENR-GNWT have come to a shared consensus that Bathurst caribou are in real and serious decline and that decisive management actions are imperative to conserve and recover the herd. It was understood that Tłıchǵ elders recognize that caribou cycle naturally and that the current decline was not caused solely by hunting, but when caribou numbers become this low, hunting and predation affect the ability of caribou to recover. If the status quo levels of hunting were allowed to continue, the Bathurst caribou herd might not be able to recover. All data analyses and modeling completed to date indicate that a harvest of the size estimated for 2008-2009 for the Bathurst herd (3000-5000 cows and 1000-2000 bulls) can only lead to further rapid decline, regardless of calf productivity. TG and ENR-GNWT recognize that the Bathurst herd is shared with communities, governments and hunters outside Wek'èezhìi, whose interests must also be considered and respected.

Although the focus of the two governments has been on management actions within Wek'èezhìi that are required for recovery of the Bathurst herd, there is also a shared understanding that management actions are also required for the Bluenose-East and Ahikak herds, which are both in decline. Both governments recognize that harvest pressure should not be transferred from the Bathurst herd to neighbouring herds, because that would potentially contribute to further declines in those herds.

Although the WRRB specifically requested that the revised joint proposal focus on the harvest management actions within Wek'èezhìi that had not been agreed on in the original proposal, TG and ENR-GNWT took the opportunity to review all aspects of the proposal. In particular, there was a need to recognize the longstanding relationship of Tłıchǵ people with caribou and the fundamental importance of this relationship for developing and implementing meaningful management changes in the future. Based on their collaborative work over the past two months, the two governments agreed to the following three core themes and associated principles, which provide the foundation for developing the revised proposal and a shared commitment to working together to recover and conserve healthy caribou populations, and ensure that the relationship between caribou and people is resilient and continues to thrive in the future.

- 1) **Tłıchǵ language, culture and way of life:** Tłıchǵ culture is based upon a deep and respectful relationship with barren-ground caribou; therefore the population health, sustainability, and resilience of Bathurst caribou is profoundly important to Tłıchǵ (Appendix 1). A key principle that arises from this is that effective management and monitoring of caribou requires engagement, education, participation, and feedback from Tłıchǵ people, along with acknowledgement and use of Tłıchǵ knowledge and practices. In short, implementation of management actions for recovering caribou in Wek'èezhìi needs to be done in the broader context of strengthening Tłıchǵ culture, language and way of life. In addition, because of the fundamental importance of the relationship between people and caribou, the precautionary principle must guide management recommendations and decisions, as required by the Tłıchǵ Agreement, to prevent and avoid irreversible harm to caribou populations or habitats, especially in circumstances where there is uncertainty in knowledge. TG and ENR-GNWT recognize that other Aboriginal groups likewise have longstanding cultural and social linkages to caribou over countless generations.

- 2) **Adaptive co-management:** Adaptive co-management is an approach to resource and wildlife management that combines two key aspects – adaptive management and co-management. Adaptive management refers to the capability to learn and adapt to changing circumstances and uncertain conditions. Co-management refers to sharing of power and responsibility between governments, resource users and resource-based communities. Adaptive co-management requires commitment to the principles of “shared decision-making” and “learning by doing”. In the context of this joint caribou management proposal, adaptive co-management also reflects a commitment to a) implement the spirit and intent of the Tłıchǫ Agreement, and b) develop efficient and sustainable models of governance to ensure collaboration and decision making that involves the TG and ENR-GNWT, as well as Tłıchǫ community governments and Tłıchǫ citizens (i.e., youth, hunters, and elders). In this context, implementation of management recommendations will require development of increased capacity for the TG, in order for Tłıchǫ people to participate fully in monitoring and co-management of caribou.
- 3) **Managing barren-ground caribou as populations or herds:** Within North America, migratory barren-ground caribou herds are defined and managed as distinct herds or populations, because studies have shown that this is how they have adapted to the large landscapes they live in. Migratory herds are defined based on the strong instinct of caribou cows to return every spring to a traditional calving ground. Research shows that usually about 95% or more of pregnant cows return annually to the same traditional calving ground. Based upon this body of knowledge as well as comprehensive archaeological studies, the main factors that likely drive abundance of barren-ground caribou within defined populations are rates of birth and death. Research with many herds has shown that rates of immigration and emigration are relatively minor, and usually occur at low rates between neighbouring herds. Appendix 2 contains a brief summary on basic population ecology of barren-ground caribou. Since birth rates are not amenable to active management, the emphasis of wildlife managers is to evaluate and manage death rates of caribou, which are tied to hunting and natural predation. In simplest terms, most caribou that have died recently in the Bathurst herd were either killed by predators or by hunters, so reducing these death rates is most likely to have direct and positive effects on the herd’s population trend.

4.0 GOALS AND OBJECTIVES

4.1 Scope and Time-frame

The management actions in this proposal are primarily directed at the next 2 years of caribou monitoring and management.

For the Bathurst herd, a population survey is planned for June 2012, just over 2 years from the date of this revised proposal (end of May 2010), and once the results are known, management actions will likely be re-visited and amended. Actions proposed here are aimed primarily at the next two years (June 2010-June 2012) in Wek'èezhìi.

For the Bluenose-East herd, recommendations in this proposal are on an interim basis for Wek'èezhìi and will need to be re-visited in late summer 2010 once an estimate of population size has been determined from calving-ground or post-calving photographic surveys - this will provide both population size and trend since 2006. As an interim recommendation, a precautionary conservative approach to harvest management is proposed. TG and ENR-GNWT support the ongoing management planning for this herd and its western neighbours, the Bluenose West and Cape Bathurst herds. TG and ENR-GNWT recognize that this herd is shared with Nunavut, Sahtu and Inuvialuit governments, boards and communities.

The Ahiak herd scarcely occurs in Wek'èezhìi and harvest by Tł̨ch̨ hunters from this herd has likely been very limited. Recommendations in this proposal are precautionary and stem largely from the strong downward trend in numbers of caribou on the Ahiak annual calving ground. The focus is on supporting the Beverly and Qamanirjuaq Caribou Management Board's (BQCMB) efforts to limit harvest of Ahiak/Beverly caribou and to promote bull harvest, and to ensuring that reduced harvest of Bathurst caribou does not translate into increased harvest of Ahiak/Beverly caribou by NWT communities.

For all three herds, TG and ENR-GNWT recognize the need for longer-term management planning that includes harvest management as well as management of habitat and industrial development, as described in section 9. An overall management planning process is in place for the Bluenose-East herd. TG and ENR-GNWT support longer-term co-management planning processes for the Bathurst and Ahiak/Beverly herds.

4.2 Goals

For the Bathurst herd, the short-term goal is to shift from a declining trend (2006-2009) to a stable trend from 2010 to 2012, by maximizing survival of cows and calves. TG and ENR-GNWT recognize that some factors affecting caribou numbers are not readily subject to management control. In the longer-term, the goal is to promote the herd's recovery to a size and trend where sustainable harvesting sufficient to meet all interests is again possible.

For the Bluenose-East herd, the goal in the short-term is to reduce harvest to a level that is unlikely to contribute to further decline in this herd. Once population size and trend are known, the goal could be revised to stabilizing the herd and promoting recovery in the longer-term.

For the Ahiak/Beverly herd, the goal short-term goal is to support the BQCMB's efforts to monitor and manage harvest (including a shift to at least 80% bulls) so as to minimize the contribution of harvest to a declining trend.

4.3 Objectives

For the Bathurst herd:

1. A stable trend in numbers of breeding cows on the calving grounds 2010-2012, based on annual reconnaissance surveys in 2010, 2011 and 2012, and a population photo-survey in 2012.
2. An average late winter (March-April) calf:cow ratio between 2010 and 2012 of at least 40 calves: 100 cows¹.
3. A total hunter harvest target of $300 \pm 10\%$ in any year, with at least 80% bulls, for the entire herd.²
4. A total wolf kill of 80-100/year in the Bathurst range.

For the Bluenose-East herd:

1. A stable trend in numbers of cows on the calving grounds, based on annual reconnaissance surveys in 2010, 2011, and 2012, and a population photo-survey in 2010 (and 2012).
2. An average late winter (March-April) calf:cow ratio between 2010 and 2012 of at least 30-40 calves: 100 cows, consistent with a stable herd.
3. A total hunter harvest of ca. 1900 caribou in any year, with at least 80% bulls (interim recommendation only; to be reviewed later in 2010).

Specific objectives are not detailed for the Ahiak herd as it scarcely occurs in Wek'èezhii, but TG and ENR-GNWT support the BQCMB's efforts to reduce total harvest and promote at least 80% bull harvest.

¹ Late winter calf:cow ratios often show a saw-tooth pattern (higher one year, lower the next, then higher again), thus the objective is for an average calf:cow ratio over 3 years (2010, 2011, 2012).

² A target of $300 \pm 10\%$ is used here to indicate that a harvest slightly lower or higher than 300 is acceptable. Some emphasis in this proposal is placed on harvest monitoring and management that has widespread acceptance in the communities, which may result in a total harvest not meeting the target exactly.

5.0 RECOMMENDED MANAGEMENT ACTIONS

The revised joint proposal has maintained the original recommendations (November 2009) on proposed management actions 1 – 3, which include suspension of commercial, outfitter, and resident harvest (Table 2). These actions were reviewed. However, the new proposed harvest levels are well below past usage patterns for the Tłıchǫ and other Aboriginal hunters, who have priority for allocation under the Tłıchǫ Agreement. TG and ENR-GNWT also recognized that predator management (primarily wolves) should also be considered to increase survival of caribou cows, calves and bulls. As noted earlier, most Bathurst caribou in recent years were killed wither by hunters or by wolves, thus reducing those death rates is likely to have the most immediate and substantive effects on caribou population trend.

Refinements to management actions 4 and 5 in the Nov. 2009 proposal are described below. At this point, methods for implementing hunting management actions such as the use of hunting zones and seasons, use of tags, a no-hunting corridor on winter roads, use of check-stations, community-based monitoring and other mechanisms for implementing harvest targets, are still under discussion (see Section 7.0). It is anticipated that the Community Caribou Committees (described further on in this document) may also have a role in determining and implementing the most effective means for tracking and managing the caribou hunting from their communities. TG and ENR-GNWT also recognize that the WRRB may have recommendations for achieving targets for hunting. Additional work between TG and ENR-GNWT is recommended to develop the specific implementation plan for the WRRB's final recommendations on harvest management. Management actions in this proposal do not preclude the right to harvest for other Aboriginal groups, and it does not diminish the GNWT's requirement to consult with other Aboriginal groups. The interests of other interests, including Aboriginal governments, Nunavut and affected communities outside Wek'èezhìi, continue to be recognized.

5.1 Bathurst Herd

With respect to the Bathurst herd, this revised proposal specifically expands on the following recommended management actions from the joint proposal submitted in early November 2009 to the WRRB:

- confirm acceptance of management actions 1, 2, and 3 (Appendix A of Nov 2009 proposal), which includes suspension of commercial, outfitter, and resident harvest; and
- revise management actions 4 and 5 (Appendix A of November 2009 proposal) to a recommendation for a total hunter harvest of $300 \pm 10\%$ caribou for the herd, with a minimum of 80% bulls.

Modeling summarized in Appendix 3 provides a rationale for the proposed hunter harvest. Even if all harvest is stopped, there is no guarantee that the Bathurst herd will stabilize and begin to grow. The overall picture for the world's caribou and reindeer is not promising; most populations are in decline. Modeling for the Bathurst herd suggests that harvest of more than about 500 caribou (all bulls or 80% bulls) is associated with a substantial risk of further slow decline under most levels of calf productivity. A harvest at this level would be sustainable if there is continued high calf productivity. In view of the herd's rapid decline from 2006 to 2009, the uncertainties around survey information and modeling results, and the overall trend for the world's caribou and reindeer, a limited harvest of $300 \text{ caribou} \pm 10\%$, 80% or all bulls, was considered an appropriate management option to help stabilize the herd.

With respect to the Bathurst herd, this revised proposal recommends one additional population management action:

- A targeted increase of wolf mortality using a phased approach that combines increased hunting and trapping effort and wolf removal programs. This recommendation expands on the actions identified in ENR-GNWT's presentation and the WRRB technical expert's review at the March 2010 public hearing. It is consistent with reducing total mortality of Bathurst caribou. The target is to increase wolf harvest in the Bathurst range twofold from about 40 to 80-100/year (Table 1).

TG and ENR-GNWT have refined proposed actions 4 and 5 from the November proposal, to recommend an annual harvest level within the range of $300 \pm 10\%$ caribou from the entire Bathurst herd with at least 80% bulls. It was recognized that the target of $300 \pm 10\%$ Bathurst caribou would need to be shared between the Tłıchǫ and other Aboriginal groups and that the broader issues of allocation inside and outside Wek'èezhìi would be subject to further consultations. The harvest level of $300 \pm 10\%$ Bathurst caribou was established as a balance between a) allowing for a limited subsistence hunt for Tłıchǫ communities, in particular for Wekweetì, which has very limited access to other caribou herds, and b) a need to seriously reduce the level of hunting of Bathurst caribou to increase adult survival (especially in cows), to halt the declining trend, and to allow for long-term recovery.

Among the Tłıchǫ communities, continued yet reduced hunting of Bathurst caribou by Wekweetì was considered an important priority both for basic needs of the community, to support the Tłıchǫ way of life, and to maintain and enhance a respectful relationship between people and caribou. Subject to discussion and confirmation from Tłıchǫ communities, it is suggested that the entire allocation of available Bathurst caribou to the Tłıchǫ be provided to Wekweetì, because the other Tłıchǫ communities are better able to access the Bluenose-East herd.

The addition of options to increase wolf harvest expands on ENR-GNWT's presentation at the WRRB hearing in March 2010, and on suggestions from intervenors. It is known from previous studies that wolves have the capacity to increase rapidly. Increasing the harvest of wolves for a few years will allow more calves, cows and bulls to survive and will not jeopardize the long term survival of wolves in the North Slave region. The joint proposal recommends that actions be taken over the next 2 years to substantially increase, i.e., double, the number of wolves taken and to maximize economic benefits to hunters and trappers, as summarized in Table 1.

There was discussion at joint Tłıchǫ and ENR-GNWT meetings on the role of grizzly bears and whether to reduce their numbers as part of increasing Bathurst caribou survival rates. Grizzly bears are known to kill some caribou calves on calving grounds, and to take calf and adult caribou opportunistically in the summer and fall. However, in view of the low reproductive rate and low density of grizzly bears, and their status as Special Concern by COSEWIC (Committee on the Status of Endangered Wildlife in Canada), no management actions for grizzly bears are recommended at this time.

Table 2. Summary of wolf management actions for May 2010 revised joint proposal

Wolf Management Action – in order of priority	Mechanism and Authority	Assess effectiveness
a) Provide incentives to trappers to increase harvest of wolf in early winter when pelts are prime. This group of harvesters traditionally hunt the majority of wolves.	In fall 2010, provide training to hunters in Gamètì and Wekweètì to set snares and handle wolf pelts (ENR-GNWT/ITI). Increase value of pelt under Genuine Mackenzie Valley Fur Program to \$400 per pelt (ITI) if pelt brought in by end of January Increase price per carcass to \$200 (ENR-GNWT) Support hunters to get to where wintering caribou and wolves are.	Reduce wolves near communities – Gamètì, Wekweètì Increase harvest to pre 2008 levels. Increase total wolf kill by trappers and hunters from 40 to 80-100. ³
b) Increase outfitters and resident harvest of wolves	Increase price per carcass to \$200 (ENR-GNWT)	Increase harvest to over 40 wolves
c) Remove problem wolves around communities	ENR-GNWT to hire trappers to snare wolves around communities in early winter	Assessment by Gamètì, Wekweètì hunters and monitors
d) Wolf cull - focus wolf removals and associated monitoring in areas of winter range occupied by collared Bathurst cows - removals at den sites ⁴	Use a phased approach, and implement this action if wolf hunting and trapping efforts have not met annual targets and Bathurst herd declining further. Coordinated removal of wolves on Bathurst winter range should be a feasible option by January 2011. Option for removal at den sites should be evaluated and considered in spring/summer 2011.	Develop survey and monitoring methodology, and experimental design for removals of wolves on winter range and at den sites by fall 2010.

5.2 Bluenose-East Herd

TG and ENR-GNWT recognize that most of the recent hunting by Behchokö, Whatì and Gamètì has occurred on the Bluenose-East herd and recommend an interim strategy for managing the hunt of Bluenose-East caribou by Tłı̨chʼo communities, to help stabilize this herd. The recommendation is to reduce the overall Bluenose-East caribou harvest by Tłı̨chʼo communities, to emphasize selection of bulls, and to reduce the number of cows being hunted (i.e. at least 80% males). The recommendation to reduce the Bluenose-East harvest is based on the precautionary principle. The rationale for reducing the overall hunt is based upon the most recent trend data on the Bluenose-East herd between 2000 and 2006, whereby population surveys indicated that the herd had declined by ca. 7.5% per year. Although population surveys for the Bluenose-East herd are scheduled for June and July 2010, until those surveys are completed and the population data

³ ENR-GNWT information from den surveys and recent aerial surveys suggests that wolf numbers have declined rapidly in the last 5 years. As part of adaptive co-management, the target of 80-100 will need to be re-evaluated annually based on wolf harvest, as well as ongoing and additional information on trends in wolf abundance.

⁴ TG and ENR-GNWT are aware that more intensive wolf removal programs are likely to be very controversial. The two parties emphasize that these measures would be considered only if other efforts to recover the Bathurst herd are not working, and the herd continues to decline.

evaluated, the interim recommendation of TG and ENR-GNWT is to reduce the Tł̥chq̃ harvest of Bluenose-East caribou by up to 45% of the estimated 2009/2010 (Appendix 4) harvest in Wek'èezhìi⁵. This approximate harvest target is meant to provide an interim qualitative benchmark to emphasise the need for a substantial potential reduction in future hunting of Bluenose-East caribou by Tł̥chq̃ and other hunters compared to the 2009/2010 hunting season. It is recognized that consideration of the 2010 Bluenose-East surveys and their implications to hunting management are subject to further discussion with Nunavut, Sahtu Renewable Resources Board (SRRB), and the Wildlife Management Advisory Council (WMAC-NWTR) and affected communities.

5.3 Ahiak Herd

TG and ENR-GNWT recognize that there has been no formal population estimate for the Ahiak caribou herd and that knowledge of these caribou is still evolving. However, systematic reconnaissance surveys of the Ahiak calving ground from 2006 to 2009 indicate a 60% decline of the average number of cows seen over the three-year period. This is a real issue for management and conservation of the Ahiak herd and suggests that harvest should be reduced. Similarly, based on available information, TG and ENR-GNWT recognize that the numbers of caribou cows calving on the traditional Beverly calving ground have declined dramatically and that this herd's seasonal ranges and distribution at calving may now overlap in whole or in part with the Ahiak herd's. Any additional increase in hunting the Ahiak herd may have unintended yet serious implications to the recovery of the Beverly herd, as noted by the BQCMB's submission to WRRB. Consequently, TG and ENR-GNWT recommend that harvest pressure that was focused on the Bathurst herd not be transferred to either of the neighbouring herds that are declining. Furthermore, TG and ENR-GNWT suggest that any current hunting of Ahiak caribou within Wek'èezhìi should emphasize selection of males over females, and that these harvest suggestions would be subject to further consultation and implementation through other partners including the BQCMB, Nunavut Wildlife Management Board (NWMB), Saskatchewan, Nunavut, and other communities in the Ahiak and Beverly ranges.

⁵ Between the 2000 and 2006 population estimates of Bluenose-East caribou, the herd had declined by ca. 7.5% per year. By assuming this rate of decline has continued to the 2006 estimate of ca. 66,000 caribou, we extrapolated that the herd would be ca. 48,000 caribou in 2010. In 2006, the Sahtu Renewable Resources Board recommended a voluntary Total Allowable Harvest of no more than 4% of the Bluenose-East herd. Thus, based on this approach 4% percent of 48,000 is 1920, compared to an estimated 3466 caribou hunted from the Bluenose-East caribou herd in 2009/2010. Reducing the harvest estimate of 3466 by 45% results in a harvest of 1906 caribou.

Table 3. Summary of management actions for May 2010 revised joint proposal

Proposed Management Action	Recommended Action for Bathurst Herd in Wek'eezhii	Recommended Actions for Adjacent Herds (Bluenose-East and Ahiak)
1	Eliminate all commercial meat tags	Eliminate all commercial meat tags
2	Eliminate all tags for outfitting	Eliminate all tags for outfitting
3	Eliminate all resident hunter harvest	Eliminate all resident hunter harvest
4	<u>TG and ENR-GNWT Recommendation</u> Bull Harvest: Use management tools (see implementation section) to limit to 300 ± 10% Bathurst caribou of which a maximum of 20% (i.e., 60 animals) would be female. Allocation of Bathurst caribou among Tłıchʼo communities to be discussed by communities, but preference to Wekweètì is recommended. Allocation within and outside Wek'eezhii to be discussed further with other Aboriginal groups.	Interim recommendation to reduce 2010/2011 harvest of Bluenose-East herd by up to 45% of estimated 2009/2010 harvest within Wek'eezhii; (see implementation section for possible tools). The actual target will need to be developed collaboratively following June and July 2010 survey results, analysis of data and discussions with SRRB, WRRB, Nunavut and other user communities. Recommendation not to increase access of Ahiak (and Beverly) caribou by Tłıchʼo communities. Harvesters should be encouraged to select bulls and reduce the proportion of cows in the harvest. Further consultation with BQMB, Saskatchewan and Nunavut is required.
5	<u>TG and ENR-GNWT Recommendation</u> Cow Harvest: Cows should comprise ≤ 20% of the targeted caribou hunt as described above.	Interim recommendation to reduce 2010/2011 harvest of Bluenose-East herd to be updated and developed collaboratively following June and July 2010 survey results. Recommendation not to increase hunting of Ahiak (and Beverly) caribou by Tłıchʼo communities. Harvesters should be encouraged to hunt primarily (80%) bulls, and to be consistent with BQCMB objectives and recommendations . Further consultation with BQCMB, Saskatchewan and Nunavut is required.
6	<u>TG and ENR-GNWT Recommendation</u> Predator management - Increase removal of wolves through hunter and trapper incentives, and focus on Bathurst winter range in early winter. - Develop and implement coordinated wolf removal programs on winter range to ensure that wolf hunting targets are achieved.	There may be a benefit to Bluenose-East caribou from increased wolf harvest in Bathurst winter range, due to extensive overlap in some years on winter range of Bathurst and Bluenose-East caribou.

6.0 RECOMMENDED MONITORING ACTIONS WITHIN AN ADAPTIVE CO-MANAGEMENT CYCLE

Recommended monitoring actions 1-8 in Appendix B of the November 2009 proposal will be incorporated into an adaptive co-management framework. Figure 5 shows an example of how an annual cycle of monitoring caribou, reviewing information, and possible changes to management action might work. The Bathurst herd is the most immediate focus of this monitoring, but a similar approach could be taken for other herds.

Shown in the middle of Figure 5 are some of the key periods in the year for caribou. Calves are born on the calving ground in June, caribou grow and gain weight in the summer, they begin to move south in the fall (September-October), the rut or breeding season is in late October, and from December to April the caribou are on their wintering grounds. In late April and May the cows migrate northward to their calving grounds again.

Information review and consideration of changes to management (red letters) could occur in August, December and April. In this way, the most up-to-date information on the herd's status can allow re-consideration of management actions without lengthy delays. Key management actions (fall and winter hunts, wolf trapping) are shown in purple.

Monitoring would include caribou surveys in June, October, and late March. The highest priority would be given to annual reconnaissance surveys on the calving grounds and spring composition surveys. For the herd to recover, numbers of breeding cows must increase, and the reconnaissance surveys would provide a measure of trend in breeding cow numbers. Herd stabilization and recovery will also require good calf productivity and survival, which can be monitored by the late winter recruitment surveys. The October survey would provide information on adult sex ratio (bulls:100 cows).

Results of the fall and winter hunts, and wolf trapping would also be closely tracked as integral elements of the monitoring/adaptive management cycle. Wolf harvest and caribou harvest could be tracked on a weekly basis or as community hunts are completed. Details of tracking harvest (e.g. use of tags) remain to be developed, but the two governments recognize that accurate tracking of harvest as it happens would be critical to the success of the program.

Table 4 contains details on the management actions, monitoring and some possible approaches to adaptive management, for the Bathurst herd. A similar table could be developed for the Bluenose-East herd.

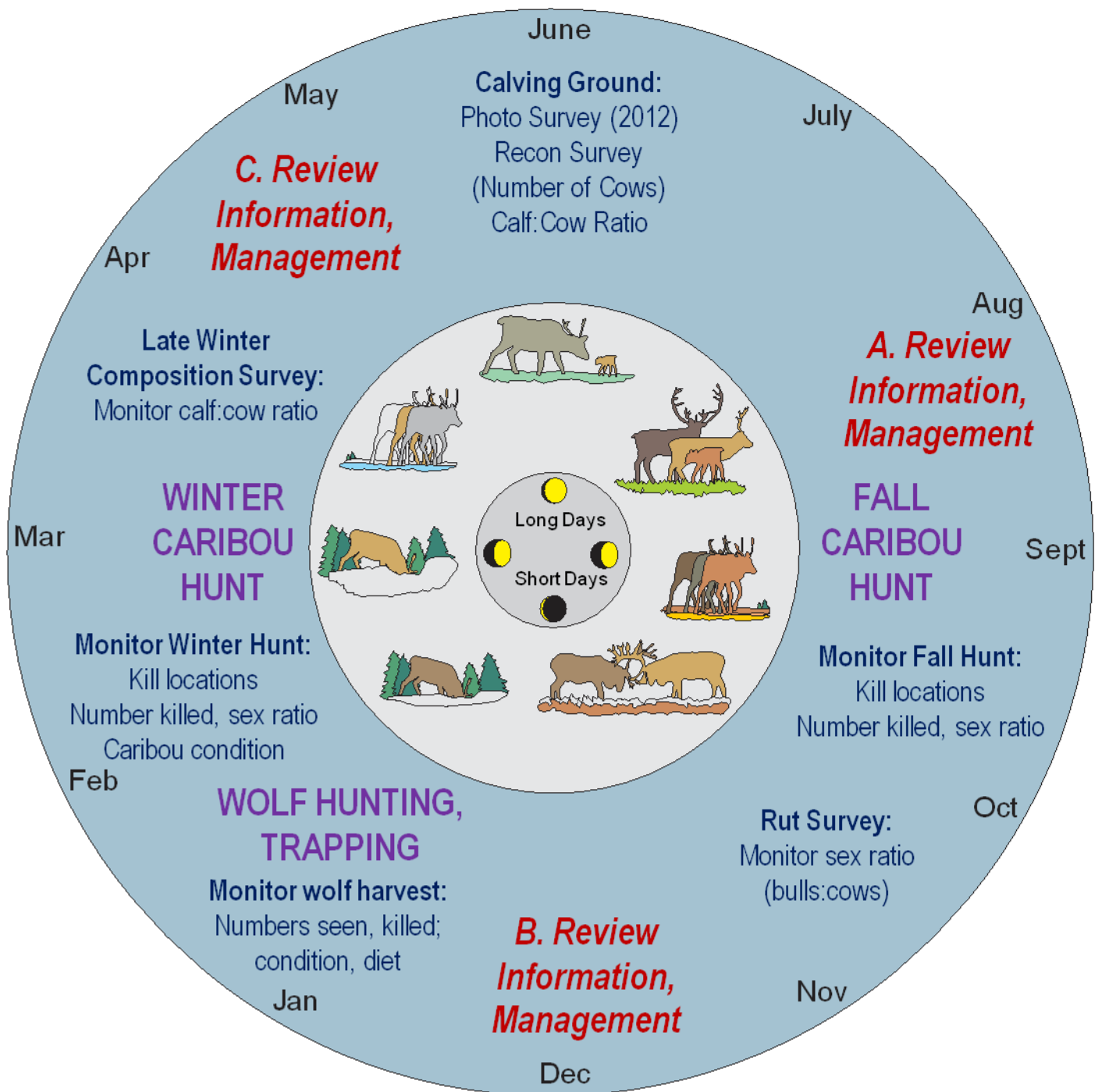


Figure 5. Annual cycle of monitoring Bathurst caribou and hunting, combined with information review and development of adaptive co-management actions.

Table 4. Summary of monitoring actions and adaptive management options for Bathurst caribou herd.

Action	Indicator(s)	Priority	Rationale	Desired Response	Adaptive Management Options	How Often	Notes
1. Reduce cow harvest to <60	1. Numbers (density) of 1+ year old caribou on annual calving grounds reconnaissance surveys	1	Cow survival in Bathurst herd 67-68% in 2009; need at least 85-88% for herd to stabilize/recover. Trend in breeding females correlated to abundance of 1+ year-olds on annual calving ground.	Stable/Increasing trend in numbers of 1+ year old caribou on annual calving ground	If trend in 1+ year old caribou is stable/increasing, continue as before; if trend negative, consider closing harvest and intensifying wolf kill effort	Annual	Further review of best approach to analysing trend from calving reconnaissance surveys to occur with statistician; could use modeling to integrate other data.
	2. Estimate of breeding cows from calving ground photo survey	1	Most reliable estimate for abundance of breeding cows & can be extrapolated to herd size based on pregnancy rate and sex ratio.	Stable/Increasing trend in numbers of breeding cows	If trend in breeding cows stable/increasing, continue as before; if trend negative, consider closing harvest, intensifying wolf kill effort	Every 3 years	Last survey 2009, next 2012. Trend in breeding females is most important; total herd size is best understood by public.
	3. Calf:cow ratio in late winter (March-April); composition survey	1	Herd can only grow if enough calves are born and survive to one year	>40 calves:100 cows on average	If average calf:cow ratio $\geq 40:100$, continue as before; if average ratio $\leq 20:100$, herd likely declining; re-evaluate management	Annual	Calf productivity & survival vary widely year-to-year, affected by several other variables, including weather.
	4. Fall sex ratio; composition survey	2	Tracks bull:cow ratio; Bathurst ratio has been relatively low (31-38 bulls/100 cows); prime bulls key for genetic health, migration	Maintain bull:cow ratio above 30:100	If bull:cow ratio below target, reduce/eliminate bull harvest	Every second year?	Needed for June calving photo survey – extrapolation to herd size
	5. Cow productivity; composition survey on calving ground in spring (June)	2	Relatively low calf:cow ratio in June 2009 – many very young cows not yet breeding; affects recruitment	High calf:cow ratio (80-90 calves:100 cows)	Low ratio may indicate nutritional problems and possibly low recruitment following March; spring recruitment survey integrates initial productivity and calf survival	Every 3 years?	Essential component of June calving ground photographic survey. Could also be done during systematic survey years if required.
	6. Caribou condition assessment/pregnancy rate	1	Condition assessment provides overall index of nutrition/environmental conditions, estimate of pregnancy rate	High hunter condition scores (average 2.5-3.5 out of 4)	Poor condition or low pregnancy rate may indicate poor environmental conditions, possible decline	Annual	Annual participation of hunters required. Sex & age of animals important to confirm. Key component of cultural hunts.
2. Track caribou harvest accurately	7. Numbers of cows and bulls taken by all hunters	1	Cannot assess effectiveness of management if harvest is poorly tracked; harvest well over target could lead to further decline	Accurate harvest reporting & numbers within target limits	If harvest reports accurate and within target limits, continue as before; if harvest not tracked well or well over limit, review/revise harvest reporting and management immediately	Annual	Location of hunter's kill sites used to assign caribou to herds. ENR-GNWT grid-based hunter survey method to be developed in collaboration with hunters.
3. Reduce wolf predation on adult and calf caribou	8. Numbers of wolves killed/year	1	Wolves are main non-human predator on caribou; natural cow and calf survival rates should increase	Stable/increasing no. of breeding caribou cows. Annual wolf harvest increased from 40 to 80-100.	If cow numbers stable/increasing, continue as before; if trend negative, consider closing harvest, intensifying wolf kill effort	Annual	Difficult to assess effectiveness on caribou survival. Monitoring will also depend on methods used to increase wolf mortality.
	9. Numbers of wolves seen on den surveys	2	Index of relative wolf numbers and productivity, tracked since 1996	Declining trend in wolf numbers & productivity		Annual	Develop standardized aerial survey methods for estimating wolf numbers
	10. Wolf numbers from hunter reports	2	Hunters may report areas of higher wolf numbers; additional measure of trend in wolf numbers	Declining trend in wolf numbers	Areas with more wolves could be targeted for wolf trapping/hunting efforts	Annual	Need to develop hunter interview methodology to collect data.

7.0 IMPLEMENTATION PLAN

A collaborative implementation plan between TG and ENR-GNWT, and consistent with WRRB recommendations, is an integral and complementary component to the recommended co-management actions and monitoring program. Some aspects of monitoring would require prior consideration and agreement on specific implementation options. From a practical point of view, feasibility of implementing management actions in partnership with Tłıchǫ communities may also have some bearing on the likelihood of successfully achieving broader management objectives such as support and participation in hunt monitoring. For example, a hunting management target may be successfully achieved through implementation of community-based monitoring within a self-regulatory process consistent with the Tłıchǫ Agreement, versus a top-down imposition of a hunting quota that is reliant on enforcement officers to achieve compliance. A community-based approach would promote stewardship and respect by all citizens for caribou.

Therefore, in addition to developing the recommendations for hunting and predator management actions in Section 5.0, and associated monitoring in Section 6.0, TG and ENR-GNWT have initiated discussion on developing a coordinated implementation plan that is based on meaningful participation of Tłıchǫ communities and would align the establishment of any new Territorial regulations and Tłıchǫ laws. The two governments have been discussing and developing implementation protocols pursuant to their joint recommendations for management actions and monitoring, but more work is required to develop specific implementation options for the proposed plan. Furthermore, the implementation plan may also change according to the final recommendations made by the WRRB, but it is anticipated that development of a detailed implementation plan will be required by TG and ENR-GNWT following the reconvening of the WRRB's hearing and its final decision(s).

Although specific details have yet to be finalized, components of an implementation plan for the recommendation to establish a hunting target of $300 \pm 10\%$ for the Bathurst herd are outlined below. This is provided as additional context for the recommended actions, and to indicate that progress has been made on implementing actions to stabilize the Bathurst herd. Additional work is required, and in particular the recommendations from WRRB will be central to implementation.

7.1 Development and implementation of a rules-based approach to achieve numerical hunting targets

Hunting practices today are based upon extensive access to caribou throughout much of the herd's annual range due to the use of motorized vehicles – including aircraft, snowmachines, and four-wheel drive trucks. Increased access combined with acceptance of ongoing technological advances in transportation (vehicles), navigation (Global Positioning Systems) and animal tracking (satellite collars) have increased hunters' collective efficiency to the point where hunting may accelerate declines when caribou herds become small. Management of hunting requires more than establishing numerical targets or thresholds. It also requires development and implementation of rules (i.e., regulations, laws, or best practices) that will strengthen Tłıchǫ traditions, define acceptable hunting methods and behaviour of hunters, and access to the wildlife resource over time and space. Within this context, the two governments have developed some initial objectives and considerations for implementing a numerical hunting target for the Bathurst herd in Wekeezhii. These are listed in Table 5.

Table 5. Approaches to rules-based hunting of Bathurst caribou discussed by TG and ENR-GNWT.

	General Rule	Considerations
Fall Hunt	Designate a fall hunt which would establish a priority for the community of Wekweètì	A hunting zone and season could be defined to reflect the distribution of Bathurst caribou during fall when they are most accessible to Wekweètì
	Organize and conduct a traditional cultural fall hunt of caribou in the Mesa Lake area (see Appendix 1)	Traditional fall hunts were done by boat. Reduce and re-allocate CHAP money that had been used in the past to provide aircraft support to fall hunts, and develop hunting related educational programs for Tłıchǫ.
	Reduce harvest of female caribou	Emphasize hunting of young bulls because of their good condition and quality of meat in fall.
	Encourage harvesting of other animals and fish that were relied on in the past when caribou were scarce	Support fish camps, encourage harvesting of bison, moose and small game.
Winter Hunt	Designate a winter hunt which would reflect the distribution of the Bathurst herd	Define a winter hunting zone based upon recent satellite telemetry data from Bathurst cows. Define a relatively large area as a conservative way of allowing for some shifts in distribution within winter range.
	Monitor hunting of Bathurst caribou	Develop community-based monitoring program in collaboration with Community Caribou Committees. Establish designated check stations at key points along traditional transportation routes. Confirm herd identity for hunted caribou by comparing kill locations to locations of satellite collared Bathurst caribou. Develop a project to test whether new genetic markers could establish herd identity of shot caribou based on tissue samples.
	Manage access to caribou	Define a winter road conservation zone on Tłıchǫ lands to encourage people to hunt caribou away from the roads.
	Reduce harvest of female caribou	Emphasize bulls only, but accept up to 20% cows in the harvest.
Community-based Monitoring	Establish Community Caribou Committees to administer and monitor hunting	Use tags to allocate, administer, and monitor hunting effort by community
		Designate monitors within each community as point of contact for hunters and to interview hunters.
		Develop strategy and distribute meat to elders and other community members
	Develop education programs within Tłıchǫ communities on “relearning knowledge and respect for caribou” (see Appendix 1).	Solicit feedback and direction from Community Caribou Committees on most appropriate ways of implementing education program, and coordinate with Traditional Knowledge Monitoring Study (proposal developed by A. Legat, WRRB).

7.2 Assessment of Tłıchǫ community country food needs, and impacts of caribou scarcity on Tłıchǫ communities

During the joint meetings between TG and ENR-GNWT in April and May 2010, it became apparent that population size, needs for caribou meat and access to alternative country foods (moose, fish, bison, muskrat, etc) varied among the four Tłıchǫ communities. As noted elsewhere (see Section 5), Wekweètì has more limited access to Bluenose-East caribou during winter, hence allocation of the limited Bathurst caribou harvest was suggested to favour Wekweètì. Although there was insufficient time to carry out a detailed assessment of each community's needs and alternative options, these assessments could be carried out as part of implementing the overall program, once the WRRB has made its recommendations.

In addition, discussions primarily among TG staff suggested that there might be ways in which the effects of scarce caribou meat and loss of hunting opportunities on Tłıchǫ communities could be monitored. Studies elsewhere have shown that loss of hunting opportunities can have cultural, economic, health-related and social impacts on cultures and communities for whom hunting is a way of life. Tłıchǫ communities have experienced the effects of caribou scarcity most recently in the 1960s; Wekweètì was evacuated at that time to the community now called Behchokò, with considerable impacts on the families affected by this evacuation. Some initial suggestions on monitoring the effects of low caribou meat availability and reduced hunting on Tłıchǫ communities are provided in Appendix 5. These kinds of assessments would be developed further as part of implementing the overall caribou management plan.



Phillip Zoe (Photograph by A. Legat, 2000)



Jimmy Martin (Photograph by A. Legat, 2000)

8.0 ENGAGING COMMUNITIES, DEVELOPING CAPACITY, AND WORKING RELATIONSHIPS

The role of Tłıchǫ communities as meaningful partners with TG and ENR-GNWT in the refinement and implementation of management recommendations is fundamental to successful adaptive co-management of caribou in Wek'èezhii. This section outlines a preliminary working model that starts to address many of the practical challenges for engaging communities, building capacity and developing strong working relationships for governance.

8.1 Engaging communities, capacity and governance

In the context of true collaboration, and in the spirit and intent of implementing the Tłıchǫ Agreement, the Tłıchǫ Government and the Tłıchǫ people must play a significant role in the recovery and long term management of the Bathurst Caribou herd. Thus, in addition to development of management actions focused on management of hunting and predators, an important aspect of this revised management proposal was to consider new ways of implementing and improving the decision-making process. The following section develops and describes a means of developing capacity within communities and the Tłıchǫ Government, as well as defining potentially effective working relationships between Tłıchǫ communities, TG, ENR-GNWT, and the WRRB. It is provided as an initial exploration of an important aspect of co-management and is not meant to preclude or constrain involvement of any other Aboriginal groups or stakeholders.

Community Caribou Committees and Tłıchǫ Ekwò Working Group

Community-based monitoring will play a key role in the future management of the Bathurst Caribou herd. In order to ensure community acceptance and implementation of hunting management changes recommended in this proposal, the Tłıchǫ people must be key players in monitoring and local decision making. Within each Tłıchǫ community, creation of a Community Caribou Committee (CCC) would involve representatives from elders, active hunters and youth. This committee would work with the coordination and facilitation of the community lands department officer(s) and the Lands Protection Department to determine the needs of each community in relation to caribou, alternative food sources and also education and information needs (Figure 6).

At this early stage of considering community-based monitoring, it is proposed that the CCC will monitor the land and the relationship between the Tłıchǫ and the caribou. They will also be provided with opportunities to further develop their understanding of the biological information needs of the ENR-GNWT biologists and to also participate in a traditional knowledge monitoring program⁶. This integrated approach will develop the communities' capacity to define and address community concerns and information needs regarding the land, resources and caribou. The CCC will meet every 4 months in accordance with the seasonal monitoring and adaptive management cycle (see Figure 5) to discuss:

- Recent issues/successes/challenges in each community
- Education and planning for individual community needs
- Monitoring results and how to implement into decision making process
- Mutual sharing and learning.

⁶ The WRRB is currently developing a Traditional Knowledge (TK) Monitoring Program that will be implemented in Tłıchǫ communities (A. Legat pers. comm.). There are likely strong opportunities for synergy and collaboration between the communities and Tłıchǫ Government as the TK Monitoring Program proceeds to implementation.

It is anticipated that these community-based committees would work with and report to the Lands Protection Department which would form a Tłıchǵ Ekwò Working Group, which would in turn communicate with the Chiefs and Executive Council (CEC) and Tłıchǵ assembly. Representatives from the CCC's will also play a key role in the proposed Tłıchǵ /ENR-GNWT Technical Working Group (see Figure 6) and contribute to development and implementation of management options.

Tłıchǵ /ENR-GNWT Technical Working Group

This technical working group will continue the joint working group which has collaborated to develop this joint proposal. It will compile and review any new monitoring information that has been collected, and develop management options. These options will be consensus-based proposals whenever possible, for consideration of the Tłıchǵ Government and ENR-GNWT, which would determine final collaborative management decisions, after review by WRRB. This technical working group would likely meet according to the time frame suggested by the annual monitoring and adaptive management cycle (Figure 5). The technical working group would consist of representatives from a) the Tłıchǵ Ekwo working group to ensure the community perspective, concerns and monitoring is brought into the decision making process; b) ENR-GNWT to ensure that the scientific indicators are brought into the decision making process; and c) observers from WRRB as the overall instrument of wildlife management in Wek'èezhìi. WRRB would also be invited to periodically attend meetings of the community groups and other groups suggested in this proposal, and to advise, as appropriate, on objectives, methods and decision-making (Figure 7).

Once these decisions have been made, they would be incorporated into the adaptive co-management cycle, with the Tłıchǵ Government, the CCC's and ENR-GNWT working together to inform the public and implement management decisions.

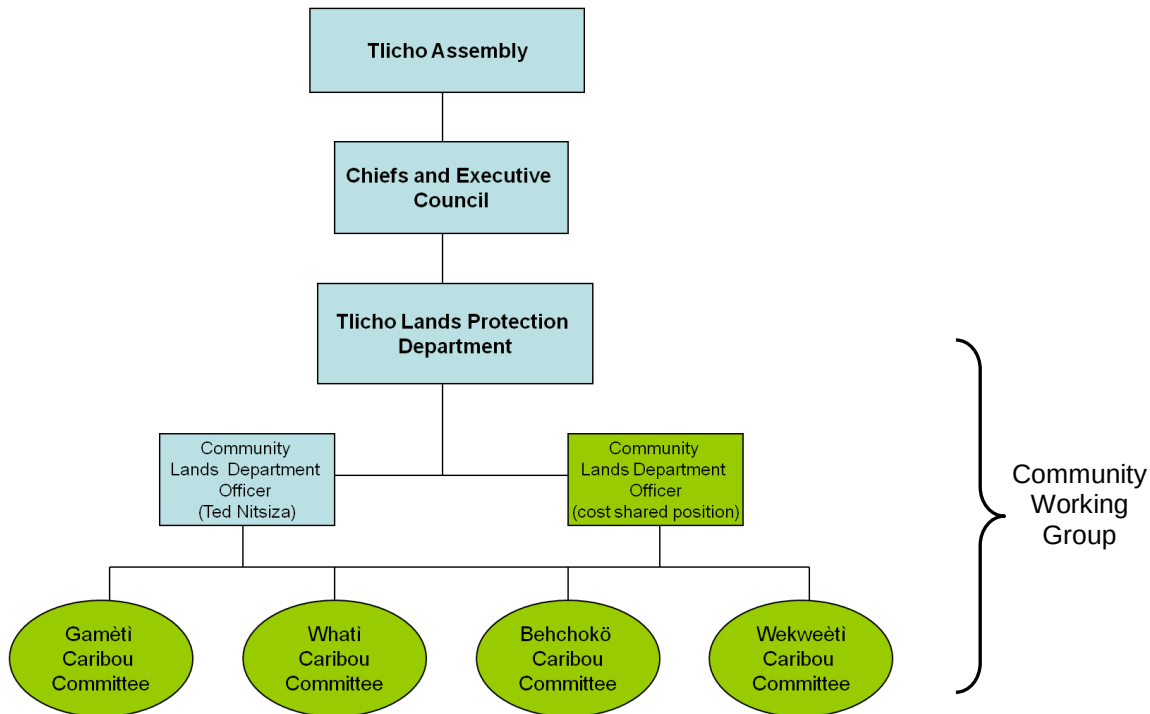


Figure 6: Tlicho Government governance and capacity considerations for Bathurst Caribou co-management (note: the blue shaded boxes represent positions currently in place, the green shaded polygons represent positions yet to be defined and filled).

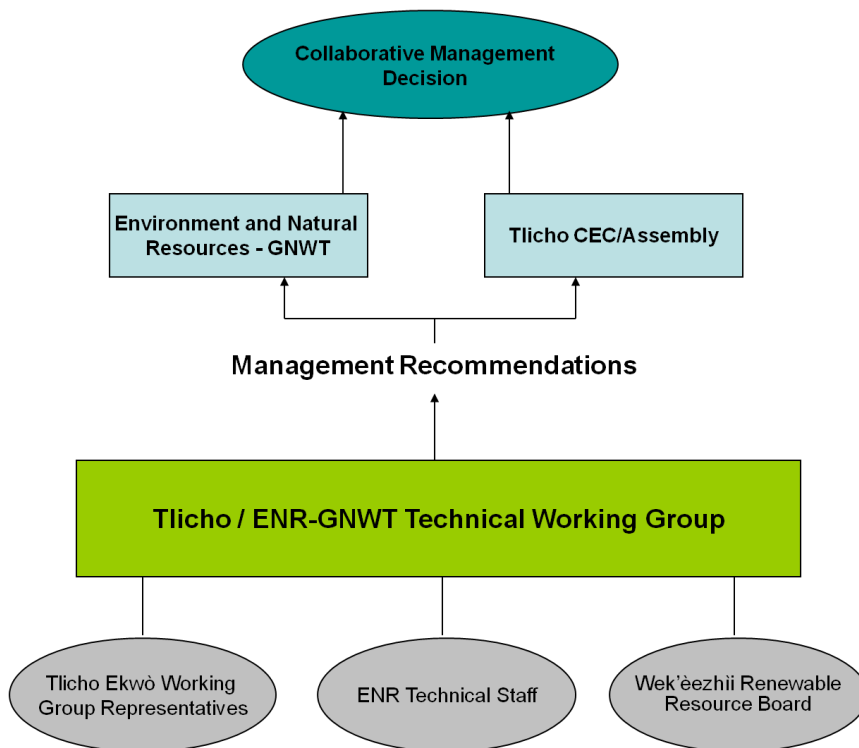


Figure 7: Adaptive Co-Management Decision-Making Process

9.0 MANAGEMENT PLANNING FOR CARIBOU HERDS (SHORT AND LONG TERM)

The main focus of this proposal is on the next 2 years, particularly for the Bathurst herd, as the next population survey (*i.e.*, calving-ground photographic survey) will be in June 2012. Recommendations for the Bluenose-East herd are interim until a new population estimate is established (likely later in 2010), and recommendations for the Ahiak herd will also need to be revised when a population survey is completed in 2011. TG and ENR-GNWT both recognize there is a need to establish longer-term planning processes for all three herds, which may include harvest management plans similar to the co-management plan developed by the Porcupine Caribou Management Board. These processes will likely involve multiple co-management boards, territorial, provincial and Aboriginal governments, and communities, and will take time to develop. The current management proposal includes recommendations for these longer-term planning processes.

9.1 Caribou herd management plans

Of the three caribou herds that have habitat within Wek'èezhii, none has a formally adopted and current management plan in place as of May 2010.

A multi-jurisdictional co-management planning committee worked to develop a management plan for the Bathurst herd, which was finalized in 2004. However, the plan was not formally ratified by the participating governments and other groups, but it has formed the basis of monitoring of the Bathurst herd has been carried out by the GNWT-ENR.

A planning process for the Cape Bathurst, Bluenose West and Bluenose-East herds was initiated in 2008, and is in progress in mid-May 2010. This process is led by wildlife co-management boards established under the Inuvialuit, Gwich'in, Sahtu and Wek'èezhii land claim agreements along with a number of additional partners such as the Nunavut Wildlife Management Board. Recommendations for Bluenose-East harvest or other recommendations for this herd would need to be reviewed by these boards.

Currently, there is no management plan or planning initiative in place for the Ahiak and Beverly herds. The Beverly and Qamanirjuaq Caribou Management Board has a management plan for the Beverly herd, but action plans need to be developed to implement the plan. The BQCMB held a stakeholder community workshop in Saskatoon in February 2010, and participants recognized that there was a need to monitor and manage the Ahiak herd due to its rapidly declining trend. There is also serious concern about the status of the Beverly herd, and recognition that there is a high degree of overlap in seasonal range use between the Ahiak and Beverly herds. These declines and shared seasonal ranges have major implications for recovery of the remnant Beverly herd.

The primary focus of this joint proposal is on the management and recovery of the Bathurst herd. The TG and ENR-GNWT clearly recognize that an overall reduction in hunting of the Bathurst herd should not result in an unintended shift in hunting effort to adjacent caribou herds. Monitoring and recovery options suggested in this revised proposals are the results of direct consultation between the two governments and reflect a precautionary approach for management and recovery of the Bathurst and adjacent herds. As outlined in this proposal, there is a need for longer-term management plans for each barren-ground caribou herd, with precautionary provisions for harvest management in the interim.

- *Parallel process with other Aboriginal groups*

Because the Bathurst caribou range covers lands within and outside Wek'èezhìi, GNWT has been communicating with the Yellowknives Dene First Nation and other Aboriginal groups outside of Wek'èezhìi, to establish processes to discuss co-management of the Bathurst herd. No agreements have been reached at this time (May 31, 2010). This proposal to the WRRB does not preclude the right to harvest for other Aboriginal groups, and it does not diminish the GNWT's requirement to consult with other Aboriginal groups.

9.2 Cumulative effects and landscape management strategies for caribou herds

Although the main focus of this proposal is on reducing mortality rates of Bathurst caribou in the next 2 years, TG and ENR-GNWT recognize that other factors like fire on the winter range and industrial development, including new roads and increased access, can have significant cumulative effects on caribou and compromise the herd's resilience to environmental changes. Habitat conservation is an essential and complementary aspect to population management objectives to enhance recovery of Bathurst caribou over the short and long term. Indeed, recovery of Bathurst caribou, even over the short term, could be compromised in the absence of long-term management plans that ensure long-term habitat conservation and management of cumulative effects.

Consequently, work should be initiated over the short term to ensure consistent development of landscape management strategies across the annual range of the Bathurst caribou and evaluate the potential tradeoffs between industrial development, resource extraction and improved access, relative to goals for sustainable hunting and persistence of healthy caribou populations. Within Wek'èezhìi, the draft Tłı̄chǫ Land Use Plan (April 2010) provides important and relevant context. Similarly, the draft West Kitikmeot Land Use Plan also provides the relevant perspective for land use strategies in Nunavut. A review of these respective draft land use plans would be a useful short term step to develop coordinated strategies for industrial land use and habitat conservation across the Bathurst range.

During the next two years, as concerns or new information develop about habitat-related issues, those will be discussed by the *Tłı̄chǫ /ENR-GNWT Technical Working Group*, in order to develop short-term actions for review by WRRB that may become necessary to support the objectives of this proposal, relating to stabilization and recovery of the caribou herds whose habitat includes Wek'èezhìi. At a strategic level, the *Technical Working Group* should develop recommendations on longer-term planning for each of the three herds, and these plans should include guidelines on protection of key caribou winter ranges, coordination among land management agencies as well as limits to development on caribou ranges, with highest priority to protection of calving grounds for all three herds, recognizing that these are located in Nunavut.

10.0 USE OF ALTERNATIVE COUNTRY FOODS AND ACCESS TO OTHER WILDLIFE SPECIES

Tł̥chq̓ have experienced previous times of scarcity and abundance in caribou. Elders have always believed that when caribou became scarce they would go away to be left alone and recover. During previous times of caribou scarcity, the Tł̥chq̓ and other Aboriginal peoples relied more heavily on other sources of country food including moose, beaver, muskrat and fish. The elders knew to always leave 'seed on the land' in order to ensure that the species they were hunting or trapping would be able to recover. Thus, out of necessity and respect for the wildlife, Tł̥chq̓ had a strategy to adapt their use of wildlife according to prevailing seasonal and natural long term cycles in abundance of caribou.

Given the decline and low abundance of the Bathurst herd, the Tł̥chq̓ recognize the need to both reduce their consumption and hunting of caribou and to expand their harvesting to other species. Large ungulates such as wood bison and moose may be able to provide additional meat for consumption but added harvest pressure also places an onus on additional monitoring to ensure that the hunting is sustainable.

10.1 Increased access to wood bison in Wek'èezhìi to reduce hunting pressure on barren-ground caribou

Wood bison have expanded into the North Slave region in the last 15 years from the herd established at Fort Providence in 1964. With the re-alignment of Highway 3 between Behchok̓ and Yellowknife, wood bison expand to within 30 kilometers west of Yellowknife using the road right-of-way as a movement corridor. This section of the highway is on Canadian Shield, which has limited prime wood bison habitat. In the Slave River Lowlands, the wood bison population is bounded by the Canadian Shield to the east. The Mackenzie bison herd was estimated at 1600 animals in 2008. Less than 400 bison are resident in the North Slave region, with less than 100 between Behchok̓ and Yellowknife.

Wood bison are listed as a "threatened species" under the federal *Species at Risk Act*. A national recovery strategy is being drafted. Targets for size of recovery herds vary between 500 and 1,000.

Wood bison damage property in Behchok̓ and Edzo and approximately 20-30 are killed on the highway annually in the North Slave Region. To date, no human lives have been lost due to vehicle accidents in the North Slave Region. Most collisions occur in the fall when days become shorter. Semi-trucks have killed as many as 7 buffalo in one collision.

The draft NWT Wood Bison Management Strategy identified a number of immediate actions to maximize benefits and reducing bison/human conflicts in communities and along highways. Wood bison in the North Slave region may provide an alternative country food source to barren-ground caribou. The Interim Emergency Measures implemented by ENR-GNWT in January 2010 included establishing two wood bison management zones in the North Slave Region (as in Table 6).

Table 6. Changes to bison management in Tłıchǵ land claim area

Management Zone	Regulations	Management Objectives
R/WB/01 – west of Behchokǵ to Dehcho boundary (Birch Creek)	45 tags issued (25 to Tłıchǵ Government, 10 to YKDFN, 10 to Metis groups) Any sex Season Jan 1 to Mar 15 May be issued to GHLs, resident or outfitted hunter	Maintain Mackenzie herd at over 1,000 wood bison. Reduce wood bison conflicts in communities and along highway. Maintain wood bison in this area. Provide alternative country food source to barren-ground caribou. Provide opportunities to outfit for wood bison in North Slave region Provide opportunity for Tłıchǵ to learn about hunting and eating wood bison.
R/WB/02 – east of Edzo	GHL only, no limit Must report kill within 72 hours Season Jan 1 to Apr 15	Eliminate wood bison from this area, which is not prime wood bison habitat

ENR-GNWT recommends that the wood bison management zones be continued as noted in the table above. However, the season in both zones should be expanded to be consistent with subsistence harvest in Dehcho for this herd. The season would begin September 1 and continue to April 15.

10.2 Monitoring actions for other harvested species

As part of their commitment to responsible wildlife management, TG and ENR-GNWT recognize the importance of conducting additional monitoring of species that may incur increased hunting pressure. However, specific discussion and agreement on additional surveys and monitoring programs has not occurred for species such as moose or boreal caribou. Baseline surveys to document abundance and distribution of moose and woodland caribou have been conducted in the last 5 years.

APPENDIX 1. The relationship between Ekwo (caribou) and Tłıchǫ culture, language and way of life

The inter-dependence of the Tłıchǫ people with Ekwo could be considered the fundamental pillar or essence of Tłıchǫ culture. The Tłıchǫ and other Aboriginal people in the North have depended upon caribou for their physical, mental and spiritual needs since time immemorial. Since the time of Yamoza, the Tłıchǫ have lived in co-existence with the caribou, with rules and laws of respect and appreciation defining the relationship between the Tłıchǫ and the caribou. The caribou provide the Tłıchǫ with their life, their spirit and their inspiration. The connection they have is not only about the physical contribution the caribou makes to Tłıchǫ food, clothing, bedding and shelter. The caribou are the source of their legends and beliefs; the basis of their lifestyle, traditions and practices and the foundation of their value system. Tłıchǫ traditional trails follow the paths of the caribou towards the barrenlands with campsites, gravesites and places of spiritual significance all being described by placenames along the way. These placenames are dependent upon the soil substance and landscape, determining the harvest methods and telling the story about the place it describes.

Tłıchǫ history with Bathurst Herd

The relationship between the Tłıchǫ and caribou has changed over time, with the outside influences of the global market economy and trade leading to altered ways of valuing this sacred animal. This has led to a change in Tłıchǫ and outsider dependence on the animal. As early as 1700 the European desire for beaver pelt hats and other furs brought trappers and traders to the North, increasing the need for caribou as a trade item. This was the beginning of the change from hunting for subsistence to hunting for trade, thereby altering the relationship between man and animal.

The establishment of Old Fort Rae in 1852 further increased the market value of caribou. The Fort was set up not for trade but as a provisional post. It would buy caribou from the locals to trade and distribute to posts along the river. The Tłıchǫ would sell their caribou to the post, only to end up purchasing it back later at times. Caribou had now truly become a product to be bought and sold.

The last major change in this relationship has occurred in the last 15 years, where we have seen diamond mines, ice roads, all season roads, big game outfitting, resident and commercial hunting, high powered rifles, skidoos and trucks and trailers come onto the scene. This has altered the relationship between man and caribou and increased the pressures and stress on the animals, potentially more than in the last 150 years together.

Times of Scarcity

The relationship between Tłıchǫ and caribou is maintained by laws governing human behaviour towards the caribou. When these laws are not respected, it is believed that caribou populations will become smaller and their migration patterns will change. There have been times of scarcity and times of abundance, which have been influenced by both natural cycles of wildlife abundance and human influence. Elders have always believed that when the caribou became scarce they would go away to be left alone - to recover and replenish themselves. They would then come back to offer themselves to the Tłıchǫ; thus, the relationship between Tłıchǫ and Ekwo was one of mutual respect between man and animal.

During those times, the caribou were not as easily accessible as they are today. There was no mechanised transport such as skidoos, airplanes and 4x4 trucks. During previous times of scarcity,

the Tłıchǵ and other Aboriginal peoples turned to other sources of food – moose, beaver, muskrat, ducks, geese, or fish. The elders knew to always leave ‘seed on the land’ in order to ensure that the species they were hunting or trapping would be able to recover.

The most recent Tłıchǵ memory of a time of caribou scarcity was in the 1960s. At this time, the community of Wekweètì had to be evacuated to Behchokö and Gamètì, because of a scarcity of caribou and other game. This move led to significant changes in the political and social fabric of Tłıchǵ society. Due to an influx of people and lack of infrastructure in Rae, the community of Edzo was developed by the GNWT. During this period, Tłıchǵ children were encouraged to go into the residential school system, in exchange for relief from the government. The caribou decline indirectly led to changes in Tłıchǵ culture and lifestyle as the school system and amenities such as a hospital further influenced the Tłıchǵ to live in communities and to begin to leave their bush life behind.

From scarcity to abundance – so it seems

The last major periods of scarcity of the caribou that impacted the Tłıchǵ significantly preceded the advent and introduction of skidoos, trucks and airplanes to the hunt for caribou. Prior to the 1970s, both Aboriginal and non-Aboriginal hunters used dog sled teams and went only as far as they could carry food and supplies to survive on the barren lands when they went hunting. The Tłıchǵ did not control the land, but the land controlled the people and their actions.

Following the introduction of the snowmobile in the 1970’s, access by hunters across the seasonal range of Bathurst caribou began to expand. In 1972, the modern airplane was introduced to the community hunt. The GNWT began at this time to contribute airplanes for greater access to caribou and programs to assist communities with money for fuel. Community freezers were introduced. Caribou was no longer only available for certain periods in the season, but it became available all year round whether the caribou were readily available and close to communities or not. The need to depend on other species at periods of time throughout the year now became a choice, not a necessity.

The changing role of caribou in the Tłıchǵ way of life and the gradually altered expectations over time has brought us to the present. The North is increasingly accessible by airplanes, skidoos, winter roads with trucks and trailers and high powered rifles. Tłıchǵ and other peoples in the North have developed expectations and have been conditioned over time to believe that they have a right to access and have caribou available at all times, without question or consequence. The steep decline in the Bathurst herd tells us all that this is no longer the case and we must change our ways. With declining caribou numbers and maintaining or increasing the same level of harvest, the caribou face a significant challenge in recovering that needs to be addressed. The future children of the North have a right to enjoy the caribou as others previously have, and it is the responsibility of the Tłıchǵ, other Aboriginal groups, ENR-GNWT and all other stakeholders to begin to change our collective thinking and expectations, and to give the herd an opportunity to recover.

A way forward

A recovery and management plan for the Bathurst caribou cannot focus only on the ecological issues at hand. The relationship between humans and caribou is complex and dynamic, and is of fundamental importance. In order to address the decline in the Bathurst herd, this complex system must be taken into account, with an appreciation that restrictions of harvest are only a small part of the long term sustainable approach to this issue. By looking at the system as a whole and its

interconnectedness, the solutions will be found in many different places, places that science alone can not define.

As this management proposal will show, the Tłıchǫ Government and ENR-GNWT have worked together to develop a holistic, realistic and adaptive co-management plan. Through adaptive co-management, capacity building, education and cooperation, we believe that the Bathurst caribou herd's future may in fact not be so dire and that this species will be here to teach and share with our children and their children thereafter.

Education – Relearning knowledge and respect – Nǫ́owo governing Caribou

Tłıchǫ elders have always taught that becoming and being knowledgeable is the way that respect is shown to the caribou. They believe that a person becomes knowledgeable by listening, watching and experiencing, and that there is a relationship between one's personal knowledge and their ability to respect the land. Being knowledgeable is necessary for a person's success and in order to survive, individuals must have different types of knowledge (men's, women's and non Aboriginal) accumulated over time. Tłıchǫ elders believe that if the young people were unable to become knowledgeable in the past, they were unable to survive and the same applies today.

The Tłıchǫ have many laws governing their behaviour towards the caribou

- Laws governing treatment of caribou
- Laws governing Use and Need
- Laws Governing 'what is not used'
- Laws Governing the Responsibility of Leaders and Elders
- Laws Governing Parents' and other family Members' behaviour
- Laws Governing Female Behaviour
- Laws Governing Hunters
- Rules Governing Following and Meeting Caribou
- Rules Governing the Respectful 'Cutting Up' of Caribou

If these laws are not abided by, this is a sign that the person lacks knowledge and is emotionally unwell. It is a sign that they are disrespecting the land and the caribou.

This lack of knowledge which guides human behaviour: "demonstrates disrespect of oneself, the de, and the caribou. This can lead to a decline in caribou population, changes to caribou distribution, and a dysfunctional society" (Legat, Chocolate and Chocolate: 40)."

As this knowledge is lost, the laws are no longer followed and respect for the caribou is further diminished. With modernization and changing lifestyles, this knowledge gap has increased over time causing both the Tłıchǫ and others to lose knowledge and respect for the caribou.

This knowledge must be relearned, if the Bathurst caribou are to recover. Through education and reconnection with the traditional practices and understanding that the Tłıchǫ once had, this knowledge and respect can be regained by:

- Education on Tłıchǫ Geography and Placenames
- Knowledge sharing from the elders
- Laws governing behaviour towards caribou
- Legends and Stories

- Hide tanning workshops
- Workshops on meat cutting and butchering
- Drum making and traditional craft making workshops

Tłıchǫ re-initiated some of these traditional practices this past winter (2009-2010) by bringing back and using caribou hides from community hunts carried out by Whatì and Behchokǫ̀.

Cultural Hunts

In order to renew and strengthen the connection between people and the caribou, the Tłıchǫ must revitalize the traditional ways in which they related to the caribou - through cultural hunts. By reestablishing the concept of cultural hunts - following the *whaèhdǫ́ǫ̀ ǰetǫ̀* (ancestor trails) - the Tłıchǫ will have an opportunity to travel the way their ancestors did in days passed. By following their ancestral trails they will have an opportunity to listen, observe and monitor the land; to learn the *nàowo* (laws) and stories, and they will have an opportunity to learn the placenames and ways of their ancestors. They will begin hunting by canoe and returning again to the sacred area of Mesa Lake, where peace was made between Edzo and Akaitcho. They will reemphasize and support the hunting and trapping of alternate species when caribou are simply not accessible.

Cooperation and working together is a Tłıchǫ *Nàowo* that has traditionally been highly valued. The community hunt and the communal nature that surrounds it will contribute to bringing back this valuable law of the Tłıchǫ.

This management proposal is not only about recovering the Bathurst caribou herd. It is equally about the recovery of Tłıchǫ language, culture and way of life that is dependent upon the Bathurst caribou.

APPENDIX 2. Barren-ground caribou herd management

Changes in animal populations over time are driven by four factors: births, deaths, immigration, and emigration. Births and immigration increase the numbers of animals in a population, whereas deaths and emigration decrease animal abundance. Thus, population trend is a result of the balance between these four factors.

Within North America, migratory barren-ground caribou herds are defined and managed as distinct herds or populations, because studies have shown that this is how they have adapted to the large landscapes they live in. Herds are defined based on the strong instinct of caribou cows to return every spring to a traditional calving ground. Studies show that usually about 95% or more of pregnant cows return annually to the same traditional calving ground.

Figure 2-1 shows the calving grounds of the Bathurst herd since 1996 in orange, with the summer range in green and the winter range in blue. Radio-collared cows from other herds have their own calving grounds east and west of the Bathurst calving ground. Although there is often overlap between herds on the winter range, at calving the cows move out to their separate traditional calving grounds. Over many years of study with various herds, immigration and emigration between neighboring caribou herds have generally been shown to be low and to occur in both directions about equally (2-5% in cows).

Once a caribou herd is defined, trend in herd size depends almost entirely on the balance between births and survival of calves to one year (additions), and deaths of bulls, cows and calves (losses). Radio-collar studies of many herds show that rates of caribou switching between neighbouring herds are generally low and occur in both directions. If there are many more deaths than calves added to the herd, the herd will decrease. If the number of calves added to the herd is greater than the numbers that die, the herd will increase. If births are matched by death rates in the population, the herd will be stable.

The rates at which animals die over one year are mortality rates, whereas survival is the opposite of mortality. For example, if 15 cows in a herd with 100 cows die in one year, then the cow mortality rate is 15%, and the cow survival rate is 85%.

Studies of various barren-ground caribou herds have shown that the highest mortality rates usually occur in calves less than a year old, from predation and other causes. Often 2/3 to 3/4 of the calves born in any year will die before they are one year old. After that, mortality rates of year-old caribou are quite similar to those of adults. The number of calves born depends on the pregnancy rate of the cows. If the cows are in poor condition in the fall, they may not become pregnant. Barren-ground caribou herds usually have pregnancy rates of 70-90%.

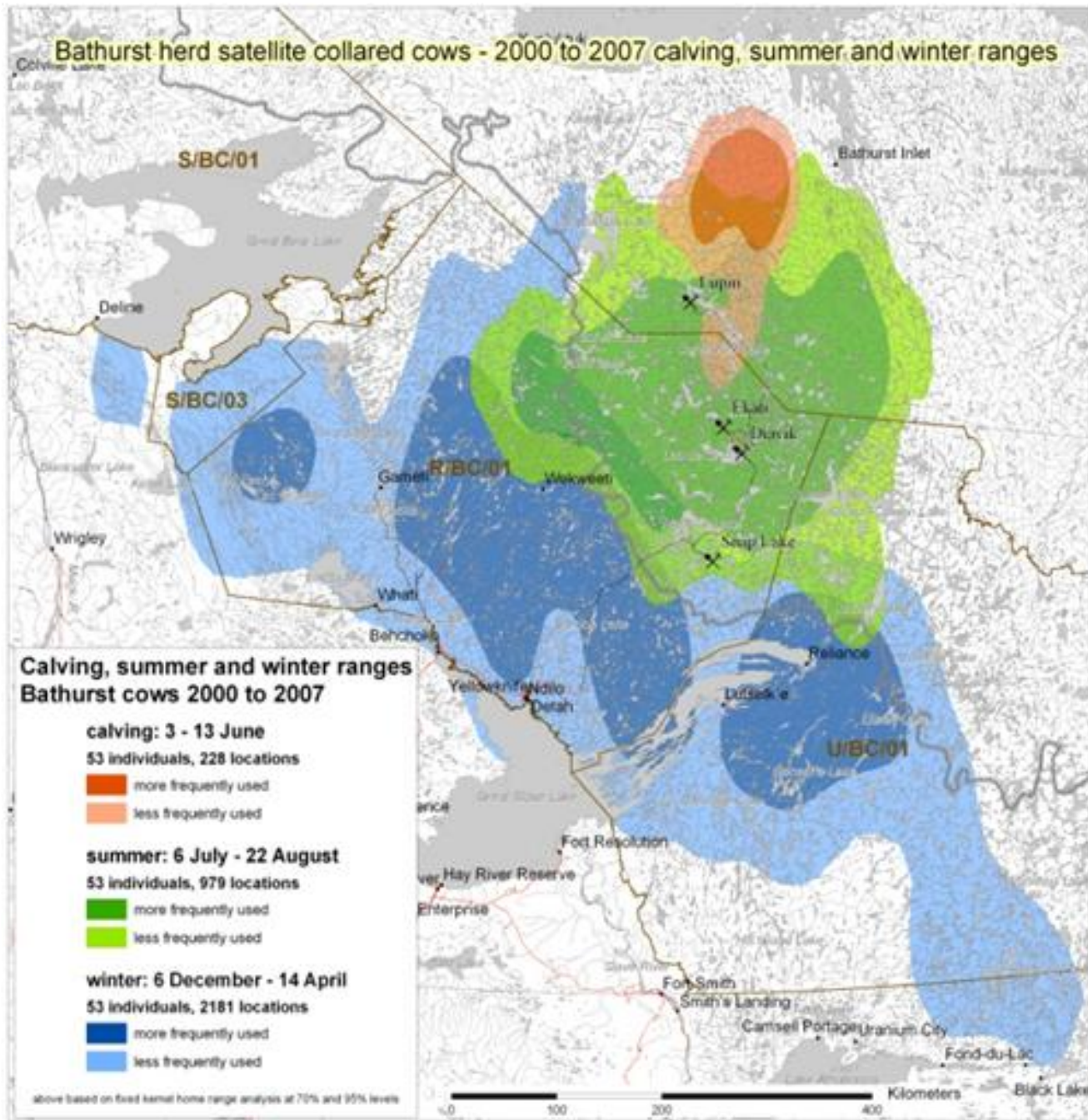


Figure 2-1. Seasonal ranges of Bathurst caribou based upon locations of satellite collared cows from 2000 to 2007.

Bulls almost always die at higher rates than cows, and annual mortality rates of 30-32% are common (with survival rates being 68-70%). As a result, the ratio of bulls to cows in a herd is often 50 bulls:100 cows or less. Since one bull can mate with several cows, variation in bull survival rates has limited effects on pregnancy rates.

Cows usually die at lower rates than bulls or calves, and annual mortality rates are usually 10-20% (thus survival rates are 80-90%). Studies of several caribou herds have shown that small changes in the survival rate of cows have a strong effect on population trend, in part because this is the largest

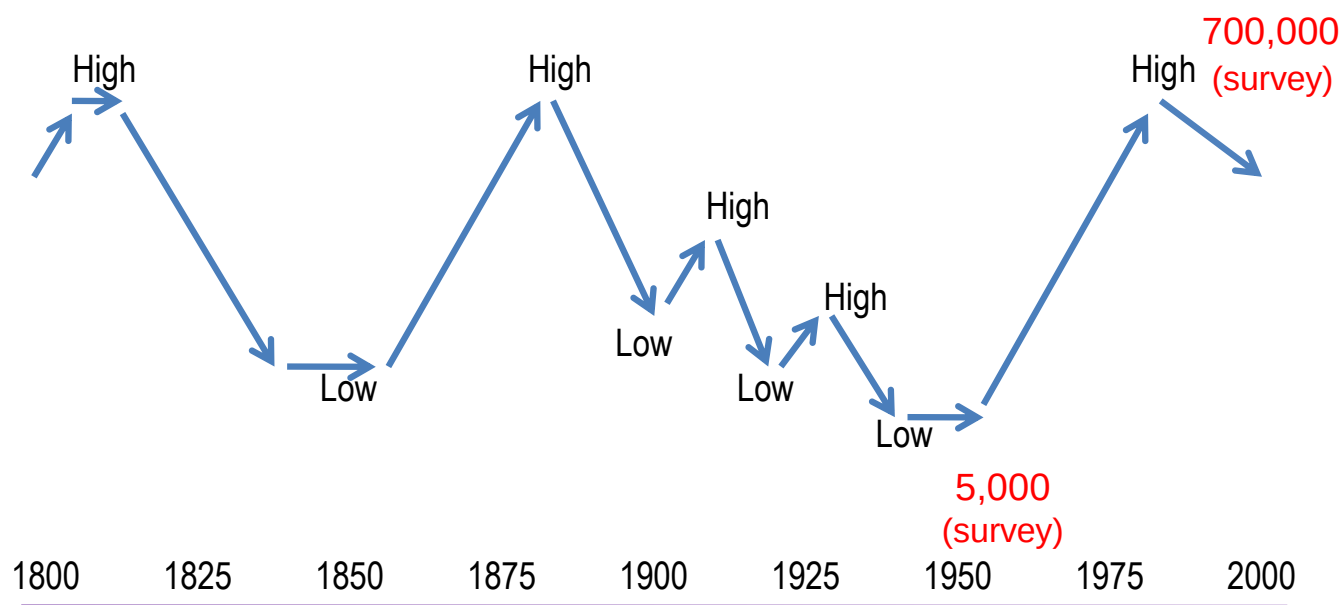
part of the herd and also because the loss of a pregnant cow means the loss of the cow, the calf she is carrying, and all the calves she may produce in later years.

Population trend in caribou also depends on the rate at which calves are born and the rate at which they die in their first year. Calf:cow ratios in late winter provide an index of the herd's productivity (pregnancy rate and first-year survival). These ratios often change quite a bit from year to year. In the Bathurst herd these ratios have varied from less than 10 calves:100 cows to over 50 calves: 100 cows. Ratios below 30 calves:100 cows are generally indicative of declining herds.

Barren-ground caribou herds go through large changes in numbers over time; this knowledge has come from elders in several aboriginal cultures. For example, knowledge of Tłıchǫ elders has confirmed that large fluctuations in numbers of Bathurst caribou have occurred in the past, and likely many times over thousands of years. Figure 2-2 shows estimated changes in numbers of the George River herd in Quebec/Labrador over a 200-year period. Surveys were done from the 1950s on, and the earlier estimates of numbers were based on a variety of sources, including knowledge of Innu and Inuit people.

George River Herd, Quebec/Labrador – Changes in Numbers

(based on spruce root scars & other information)



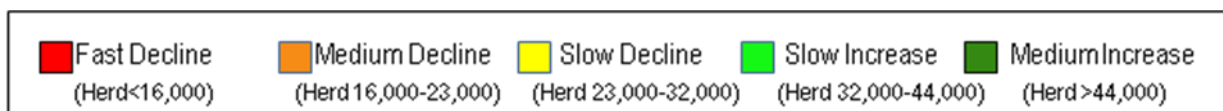
(adapted from Bergerud et al. 2008, The return of caribou to Ungava)

Figure 2-2. Historical trend in George River caribou herd based upon spruce root scars and other information, adapted from Bergerud et al. 2008.

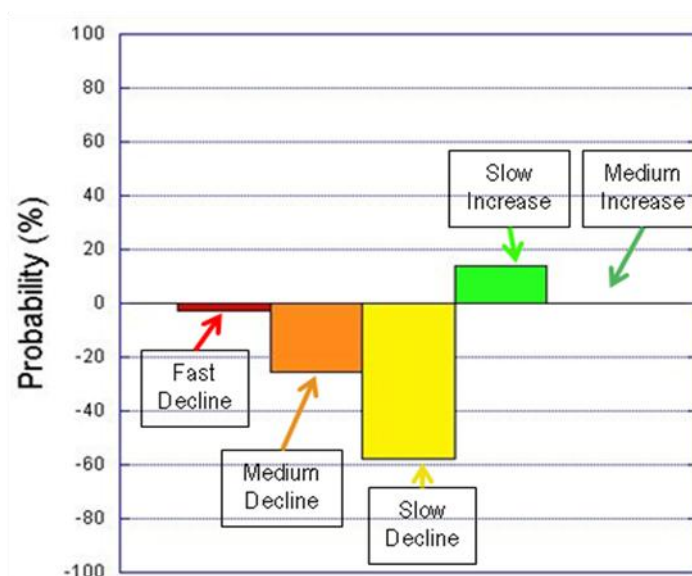
APPENDIX 3. Population demography and summary of modeling for determining hunting objectives for Bathurst herd.

Defining a sustainable harvest from a caribou herd or other wildlife population depends on the herd's trend and size, and on the sex ratio of the harvest. There is, by definition, no sustainable harvest from a declining herd, as hunting mortality can only add to the natural mortality that is already exceeding replacement by young of the year. A harvest from a declining population may still be allowed for social or economic reasons, but there is a risk of increasing the extent and rate of decline. The model outcomes summarized here are based on reports submitted to the WRRB prior to the March hearing in Behchokō.

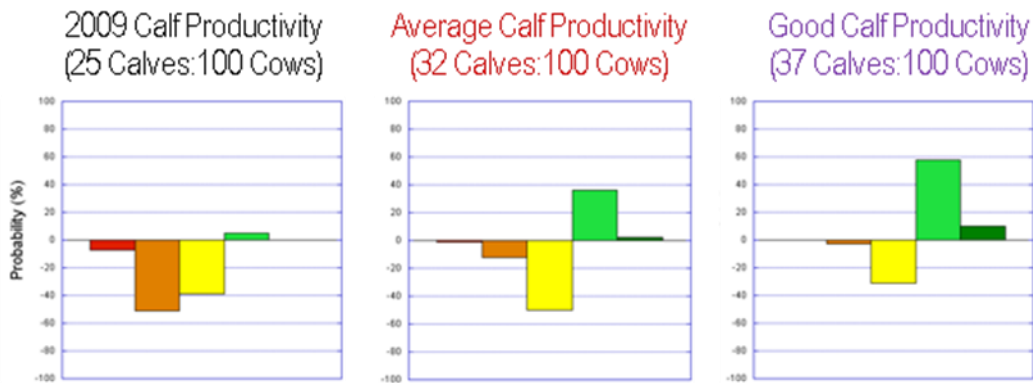
Population models can be used to understand how birth and death rates affect a caribou herd, and how harvest is likely to affect a herd's future trend. ENR-GNWT has used two population modeling approaches to assess the herd's likely future trend with harvest rates varying from 0 to 5000 cows and 2000 bulls/year. Supporting documents from J. Boulanger or by J. Adamczewski (based on Boulanger's modeling) describe how one of these modeling approaches was developed. A few examples are presented here to illustrate the range of likely outcomes, depending on calf productivity and harvest. The modeling was set up to allow calf survival, cow survival and pregnancy rate to vary from year to year, within the range of values known for the Bathurst herd. The model was then run hundreds of times for each set of conditions. Because of the many model runs with varying birth and death rates, there were also hundreds of outcomes for each set of conditions. The outcomes were grouped in 5 classes of likely trend as follows (6-year projections), assuming a starting population of 32,000:



For each set of conditions, the range of results was graphed as a bar graph where the size of the bar represented the most likely outcome. In the example below, of the hundreds of model runs, almost 60% resulted in a slow decline where the herd was likely to be between 23,000 and 32,000 after 6 years. The second most likely outcome was a medium decline resulting in a herd between 16,000 and 23,000 after 6 years.

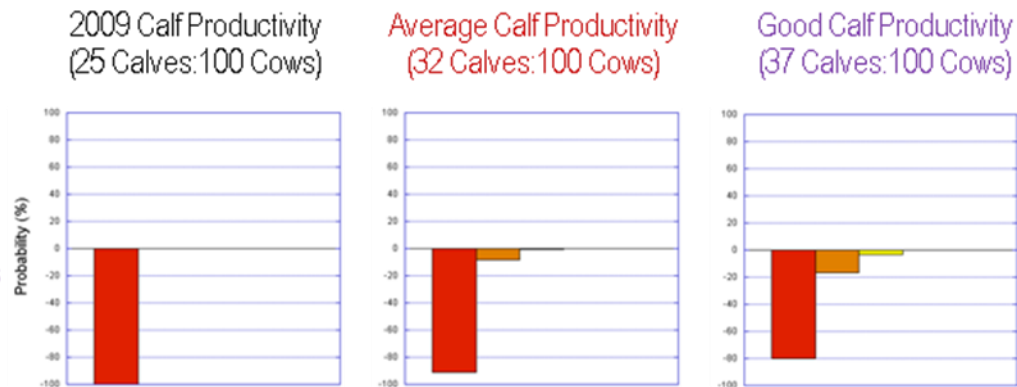


No Harvest



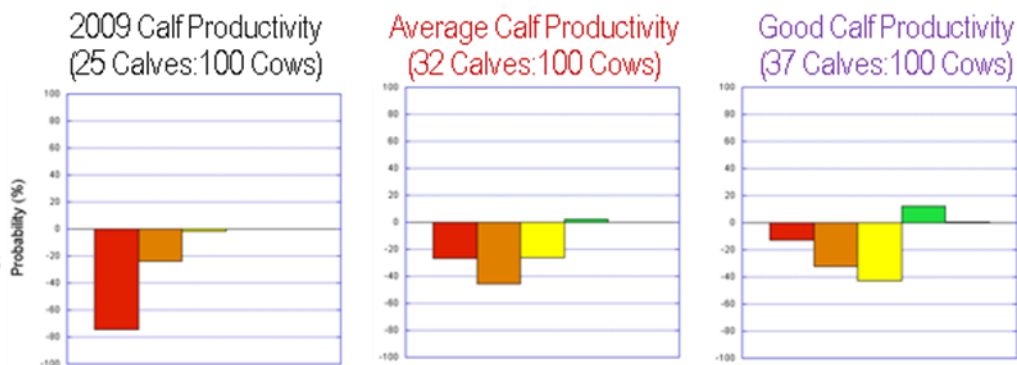
The three graphs above (all 6-year projections) show likely outcomes for the Bathurst herd with no harvest after 2008-2009, and with calf productivity varying from relatively low (2009 or the average for 2000-2009) to average for the herd (1985-2009) to good (Bathurst herd before 1995). Calf productivity is shown as expected late-winter calf:cow ratio. With no harvest, the herd could decline further, stabilize, or begin to increase, depending on calf productivity.

Harvest 3000 Cows + 2000 Bulls (5000 Total)



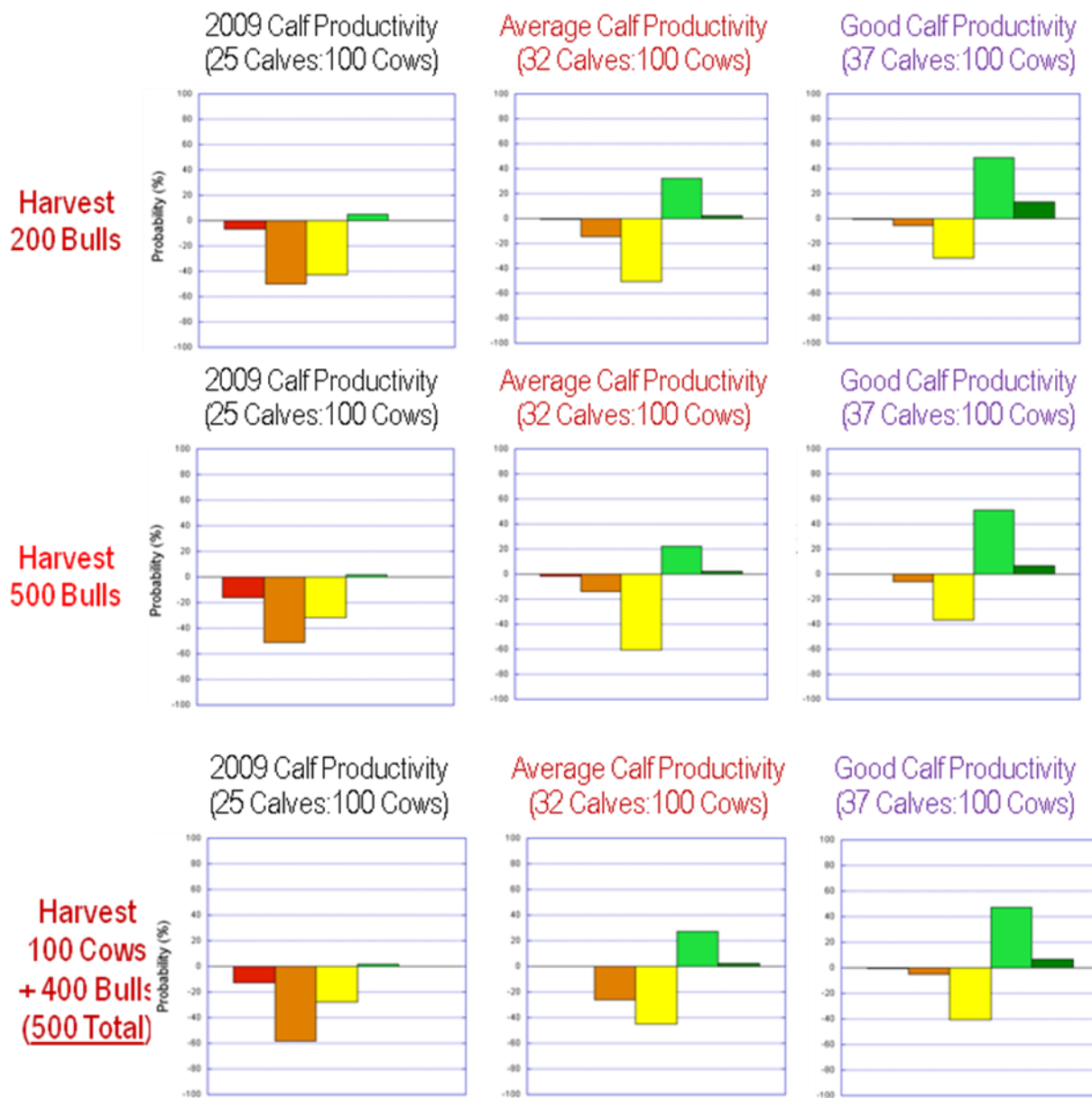
The series of graphs above (again 6-year projections) illustrate likely population trend if harvest had continued at a level of 3000 cows and 2000 bulls/year, numbers within the harvest range estimated for the Bathurst herd in 2008-2009. Under these conditions, the herd could only decline rapidly, as there is no level of calf productivity that can offset this level of cow mortality. If this harvest is cut in half to 1250 cows and 1250 bulls/year (graphs below), continued decline is still the only possible outcome, although at good calf productivity the decline would be somewhat slower.

Harvest 1250 Cows + 1250 Bulls (2500 Total)



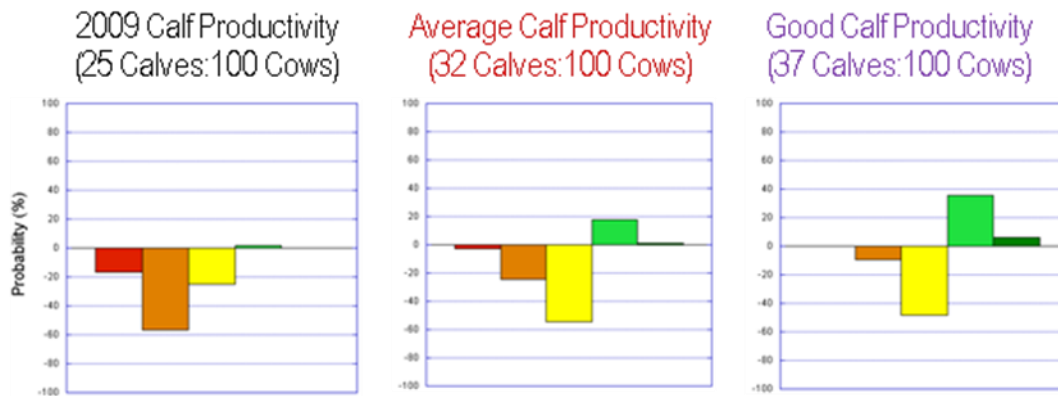
The next three series of graphs below shows the herd's probable trend with a harvest of 200 bulls, 500 bulls, and 400 bulls and 100 cows/year. The outcomes for a harvest of 200 bulls were similar to the outcomes for no harvest, suggesting that this level of bull harvest would have relatively little impact on the herd's future trend,

and herd trend would depend primarily on calf productivity. The outcomes for a harvest of 400 bulls and 100 cows were similar to a bull harvest of 500. At average calf productivity, 2/3 of the model runs still resulted in further decline.



Larger harvest levels of 1000 or more caribou (next series of graphs) were associated with a high risk of continued decline. Overall, this modeling suggested that a harvest of 200-500 caribou, mostly or all bulls, might be associated with further decline at a slow rate, or could become sustainable if calf productivity stayed at a consistently high level. Bull harvest had less effect on overall herd trend than cow harvest. The Bathurst herd has had lower fall bull:cow ratios (31-38 bulls:100 cows) than other barren-ground caribou herds monitored by GNWT.

Harvest 1000 Bulls



It is important to recognize that the results from this modeling and other population models like the Caribou Calculator depend on the numbers and assumptions used. The model outcomes can be used as a guide to likely consequences of particular harvest management and to provide a sense of the likely range of outcomes possible. Management should be flexible as further monitoring results are acquired.

APPENDIX 4. Summary of estimated caribou harvest from the Bathurst, Bluenose-East and Ahiak herds in 2009/2010.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	Community		Bluenose East Herd		Bathurst Herd		Ahiak & Beverly Herds		Estimated sex ratio in the harvest (Females/Males)		Comments			
3														
4	Behchoko		565		0		0		65/35		All winter harvest for the Tli Cho communities and the YKDFN			
5											were conducted jointly with ENR and numbers of caribou were monitored			
6	Wha Ti		360		0		0		65/35		either by biologists, wildlife officers and/or community wildlife monitors.			
7														
8	Gameti		250		0		0		65/35					
9														
10	Wekweeti		0		100		0		65/35					
11														
12	YKDFN		0		100		130		65/35					
13														
14	Lutsel Ke		0		0		700		10/90		Reported by the Lutsel Ke wildlife officer			
15														
16	Fort Smith and Fort Resolution		0		0		140		?					
17														
18	Sahtu		900		0		0		95/5		500 caribou taken between November 2009 and February 2010 by Deline residents. Locations of harvest unknown.			
19											In addition 150 caribou harvested east of the Johnny Hoe River Area plus 50 from Hottah Lake and 100 more for a hand game event			
20	Deh Cho		100		0		0		?					
21														
22	Tli Cho individual hunt		235		0		0		?					
23														
24	Total winter harvest		2410		200		970							
25														
26	Nunavut (summer)		500		0		0		?		Estimate from Nunavut government			
27														
28	Non-Resident		123		100		0		0/100		Non-resident harvest reporting is mandatory and results and compiled at the end of the season.			
29														
30	Aboriginal fall harvest		433		0		60		0/100		Aboriginal harvest in 2010 was not monitored but estimate came from the 2007 fall reported harvest by			
31											the Tli Cho Government and the assumption that fall harvest number is consistent from year to year.			
32	Total Fall Harvest		1056		100		60							
33														
34	Total estimated harvest by herd in 2009/2010 Season		3466		300		1030							

APPENDIX 5. Assessment of Tłıchǫ communities' country food needs, and assessment of effects of caribou scarcity on community well-being

Discussions during the joint TG and ENR-GNWT meetings in April and May 2010 indicated that each of the four Tłıchǫ communities would have different needs for caribou meat and that access to alternate country foods (moose, bison, muskox, woodland caribou, fish, muskrat, etc.) would also vary for each community. As part of an implementation plan, TG and ENR-GNWT suggest that an assessment of needs for caribou and access to alternate meat sources be carried out for each community, most likely by TG, with potential assistance from the community-specific caribou committees. Preliminary discussion by Tlıcho Lands Protection Department staff, has identified strong potential for collaboration with the Tlıcho Community Services Agency as well as the Tlıcho Department of Language, Culture and Communications.

Due to the strong connections between the population health of caribou and the traditional food system of Tłıchǫ people, it is important to consider the potential effects of reduced caribou on a variety of social, cultural, and health/nutritional indicators in the communities (see Figure 5-1 below as an example). Table 5-1 below summarizes initial concepts for information needs that could be addressed as part of an assessment of each community's situation (section A) and also lists potential impacts of caribou scarcity on Tlıcho (section B). There are established methods for assessing these kinds of impacts, and this could be a useful way of assessing how Tłıchǫ communities respond to a period of reduced caribou availability.

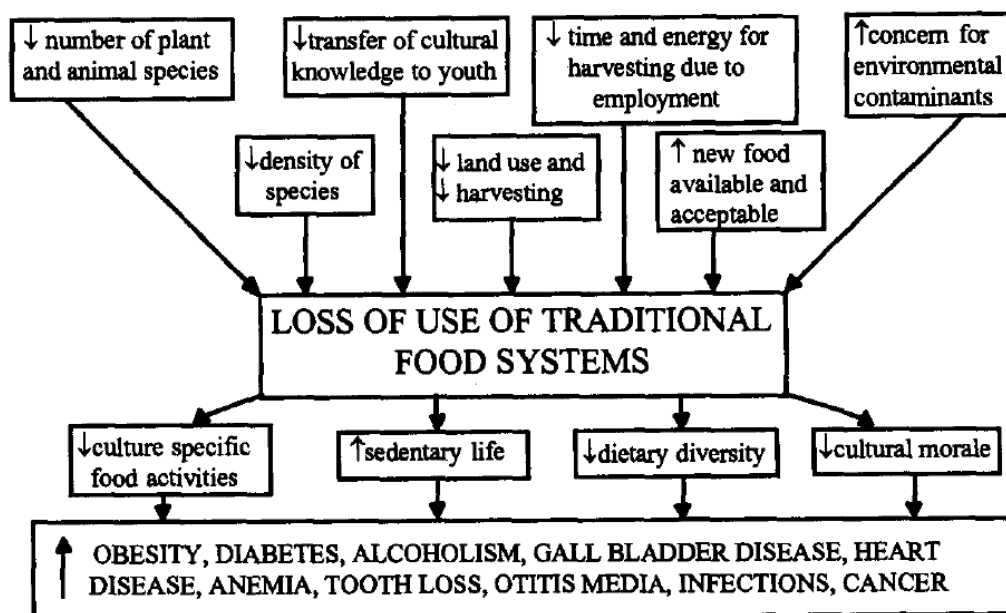


Figure 5-1. Factors influence dietary change and consequences of change for indigenous peoples (Kuhnlein, H.V., and O. Receveur. 1996. Annual Review of Nutrition. 16: 417-442)

Table 5-1. Assessment of community needs for caribou or alternate foods, and assessment of the effects of caribou scarcity on Tłıchǫ communities.

A. Assessment of each community's needs and access to alternate foods	Conduct a needs assessment for caribou and other country foods for each community: Wekweètì , Gamètì, Whatì and Behchokò • For caribou harvest in 2010, determine the overall number of people who received fuel for the winter hunt. • Assessment of traditional uses of alternate food • Assessment of current access and use of alternate food source • Assessment of what community members need in order to access alternate species – knowledge, gas money, materials • Baseline data on alternate species
B. Assessment of effects of low caribou numbers on Tłıchǫ communities	Identify and evaluate the potential effects of reduced caribou hunting on a variety of social, cultural, and health/nutritional indicators in the communities
Cultural	• Limited hides for craft production – limited availability of traditional items for sale and personal use; impacts on self identity and loss of knowledge of how to produce crafts • Loss of cultural identity - ritual and spiritual practices restricted and lost over time.
Economic	• Increased pressure on household budgets; increased purchase of store-bought foods • Loss of income from sale of traditional crafts
Health	• Change in diet leading to increased store-bought food and increased diabetes, obesity and heart disease • Health related issues due to not getting out on the land • Impacts on elders
Social	Reduced hunting and on-the-land activities could lead to • Increased drinking and gambling • Increased domestic abuse and violence • Children getting into more trouble at school and with authorities

APPENDIX F

TK Research & Monitoring Program: *Special Project, Using Tłchq Knowledge to Monitor Barren Ground Caribou*

Tłıchǵ Research and Monitoring Program

Using Tłıchǵ Knowledge to Monitor Barren-ground Caribou

Consultation, Verification and Program Design

Alice Legat

Camilla Nitsiza

Madeline Chocolate-Pasquayak

August 30, 2010

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Tłıchǫ Philosophy

Grand Chief Jimmy Bruneau directed the Tłıchǫ people to know both Western and Tłıchǫ knowledge so each Tłıchǫ citizen would be strong like two people. Bruneau's philosophy and direction was not new to the Tłıchǫ people, who have always been interested in the ways and knowledge of others. This philosophy has been noted in both their oral narratives and the journals of the trading post factors. Each tells of Tłıchǫ leaders learning the knowledge and negotiating techniques of trading post factors to ensure the best return for their people's furs. This philosophy is also evident - in oral narratives telling of activities leading up to discussions with the Federal Commissioner in 1921 when Möwhì signed Treaty 11. The stories explain that Tłıchǫ were aware of the European perspective based on information they acquired from the Slavey and Chipewyan further south. Upon learning from the experience of their southern neighbours they were better prepared to deal with the Treaty Party.

Tłıchǫ oral narratives stress the importance of understanding a problem, finding a solution and taking action. This approach to learning, knowing and taking action is evident in most Tłıchǫ oral narratives, as well as the manner in which past research projects were approached. The Tłıchǫ have rarely allowed others to do research to address a problem they wish to know about themselves. They insist that they take an active part in research and monitoring. Specifically the Tłıchǫ:

- Explained to the managers of Rayrock Mine (1950s) that their observations were indicators of serious problems in the environment. They identified problems that they observed with plants and wildlife –such as beaver, marten and fish. These problems were particularly evident to those Tłıchǫ who either used the area frequently or worked at the mine.
- Insist research focus on their needs and priorities – take for example the priorities set by the Dogrib Renewable Resources Committee during the early 1990s: where caribou, habitat, water and heritage were of greatest concern.
- Insist on adequate funding to ensure Tłıchǫ researchers were employed as permanent, full time employees for the life of research projects – take for example the Traditional Justice and Traditional Medicine project in Whatì (1987-92); the Traditional Governance project in Gametì (1993-1996); and the caribou and place names projects in all the Tłıchǫ communities (1996-2001).
- Use the participatory action research (PAR) method that includes researcher training; an elders – both male and female elders – committees; rigorous research methods carried out by Tłıchǫ researchers and overseen by the elders' committee; and verification of shared information. The PAR process ensures accurate understanding of the traditional knowledge that is documented and ensures it leads to positive actions based on the recommendations.

Today, it is vital that the Tłıchǫ lead by undertaking their own harvesting and monitoring studies as the impacts of development on Tłıchǫ lands and the environment are becoming ever more evident. The Tłıchǫ Government and co-management boards have been given the authority to

manage the land in the Tłıchǵ Agreement, but to do this effectively requires a system of Tłıchǵ knowledge (TK) research and monitoring that will feed into management decisions.

The *Special Project: Using Tłıchǵ Knowledge to Monitor Barren Ground Caribou* described below is based on Tłıchǵ philosophy and is part of the Tłıchǵ Knowledge Research and Monitoring Program. The description of this project follows the following format: first, the current issues, for which the TK program was designed to solve, are discussed. Second, the program structure, on which the caribou monitoring and collection of harvest information is a part, is described. These sections are followed by a summary of discussions with Tłıchǵ citizens that formulated the program outline. The Program Outline and Evaluation Framework for Monitoring Caribou from a TK Perspective can be found in the Appendix.

It should be noted that evaluation is done to ensure the best possible TK is being documented for future monitoring, education and understanding of the Tłıchǵ perspective. The purpose is not to pass judgement but to provide tools to fine tune the program to ensure TK is documented and used.

Current Issue

The Tłıchǵ Agreement directs co-management boards, government agencies and the Tłıchǵ Government to i) use traditional knowledge, ii) promote cultural perspectives, and iii) select Board members that have knowledge of Tłıchǵ way of life. Yet the current systems – most of which are based on Western perspectives and the British legal system – make it difficult for Tłıchǵ knowledge (TK) to be used in a manner that is consistent within the Tłıchǵ cultural perspective and way of life.

The Wek'èezhìi Renewable Resources Board in collaboration with the Tłıchǵ Government decided to develop and implement a program that would be a positive step towards using Tłıchǵ knowledge in manner that considers Tłıchǵ perspectives.

The Agreement states that:

Section 12.1.6

In exercising their powers under this chapter, the Parties and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.

Section 13.1.5

In exercising their powers in relation to forest management, the Government of the Northwest Territories, the Tłıchǵ Government and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.

Section 14.1.4

In exercising their powers in relation to the management of plants, the Government of the Northwest Territories, the Tłıchǵ Government and the Wek'èezhìi Renewable Resources Board shall take steps to acquire and use traditional knowledge as well as other types of scientific information and expert opinion.

Section 22.1.7

In exercising their powers, the Mackenzie Valley Environmental Impact Review Board and the Wek'èezhìi Land and Water Board shall consider traditional knowledge as well as other scientific information where such knowledge or information is made available to the Boards.

Furthermore, Section 12.5.5 of the Tłıchǵ Land Claim and Self-government Agreement (the Agreement) states that the Wek'èezhìi Renewable Resources Board (WRRB) shall:

(a) Make a final determination, in accordance with 12.6 or 12.7, in relation to a proposal

i. Regarding a total allowable harvest level for Wek'èezhìi, except for fish,

- ii. Regarding the allocation of portions of any total allowable harvest levels for Wek'èezhìi to groups of persons or for specified purposes, or*
- iii. Submitted under 12.11.1 for the management of the Bathurst caribou herd with respect to its application in Wek'èezhìi;*

The Tłıchq Agreement authorizes the WRRB the responsibility for total allowable harvest (TAH) for wildlife, forests and plants and authorizes the Minister of Fisheries and Oceans (DFO) responsibility for fish conservation and the establishment of TAH for fish stocks. Both WRRB and DFO have an obligation under terms of the Agreement to determine TAH through assessment studies and other research.

For WRRB and DFO to have information necessary for sustainable management it is imperative that the Tłıchq undertaken their own monitoring by documenting their observations and harvesting information to ensure they contribute to the process. If allocations are to be made among users of the resource it will be necessary to determine basic needs levels of the beneficiaries of the claim. Allocations of fisheries and wildlife resources will be difficult without this basic harvest information from the harvesters themselves.

For the Agreement to be honoured three activities need to occur:

1. Baseline information must be gathered from elders on known trends as harvest, wildlife and vegetation distribution.
2. Information gathered through Tłıchq traditional methods of monitoring needs to be documented on an on-going basis.
3. Realistic harvest studies need to be ongoing.
4. All collected information must be stored in such a way as to respect the provider of the knowledge.
5. Reports to co-management boards will be sent several times per year to insure it will inform their management decisions.

Although scientific information is readily available, most TK is in the minds of the elders and harvesters. For this reason, a program is needed so Tłıchq researchers can work with elders and harvesters to document their knowledge in a manner that does not lose the Tłıchq perspective. This is usually detailed knowledge of past conditions that they share with their descendants while sharing their current observations of wildlife and wildlife habitat. And, as is the traditional mode of sharing, numbers of species observed and harvested, are shared with others in the community along with other information such as behaviour of wildlife and the people harvesting. All information available is used to make management decisions.

One of the important features of Tłıchq knowledge is that it is acquired, enhanced and communicated on the land while people are engaged in land-based activities. It is also communicated after harvesters return to the community through oral narratives.

Modern harvest studies often ask harvesters to fill out survey forms in English, or to provide limited information that can be taken out of context. These studies may fail because they are not compatible with how Tłıchq knowledge, including information about harvest, is transmitted through oral narratives.

This project was designed to ensure that both monitoring and realistic harvesting numbers can be recorded in a culturally appropriate manner. This will help alleviate the problem that many respondents choose not to answer correctly the harvest study questions posed by non-community members.

Program Structure

The Tłıchǵ Knowledge Research and Monitoring Program is designed to capture knowledge in a manner that is compatible with the Tłıchǵ cultural perspective. It is also designed to acknowledge the continued importance of oral narratives as the medium with which to share information and the importance of Tłıchǵ land based activities in learning and being able to apply and promote Tłıchǵ knowledge.

Program Goals

A Tłıchǵ Knowledge Research and Monitoring Program will support goals that assist the Tłıchǵ Government, and the boards and agencies under the Tłıchǵ Agreement, to fulfill their mandate within the co-management regimes. It will also provide direction to industry and non- Tłıchǵ researchers on expectations and costs. The caribou monitoring and harvest study portion of this program will support the following program outcomes:

1. Tłıchǵ knowledge and perspectives are utilized in management and decision-making.
2. The Tłıchǵ Government and co-management boards have the information they need to play a strong role in co-managing the environment, and to support programs such as education.
3. The Tłıchǵ Government has its own information and reports to provide boards and government and information it needs to play a strong role in managing caribou and other wildlife, plants and forests.
4. Harvesting maintains its role as a respected and important economic and social endeavour.
5. Tłıchǵ knowledge, perspective and language are strengthened through oral narratives and land-based activities.
6. Integrated knowledge transfer is occurring across generations.
7. Tłıchǵ place names are documented accurately to express bio-geographical information, some of which are associated with caribou harvesting.

Social Impacts

If the program successfully achieving the above goals, it will help to support broader social impacts such as the following:

- Tłıchǵ citizens will fulfil their traditional responsibilities to care for the land.
- TK is transmitted in a manner that is compatible with Tłıchǵ culture and social structure.
- Tłıchǵ language is strong and used in daily conversations.
- Tłıchǵ citizens are emotionally and spiritually healthy.
- There is a structured process for Tłıchǵ youth to learn land-based skills and knowledge.
- Tłıchǵ place names become official.

Program Design and Implementation

The establishment of a fully developed, effective Tłıchǫ Knowledge Research and Monitoring Program is a necessary but ambitious undertaking. It will require substantial resources, careful planning and a long term commitment to allow it to be successful. It will also require investment in training and in information technology.

Using Tłıchǫ Knowledge to Monitor Barren Ground Caribou and document caribou harvest is a constructive first step towards the development of the program.

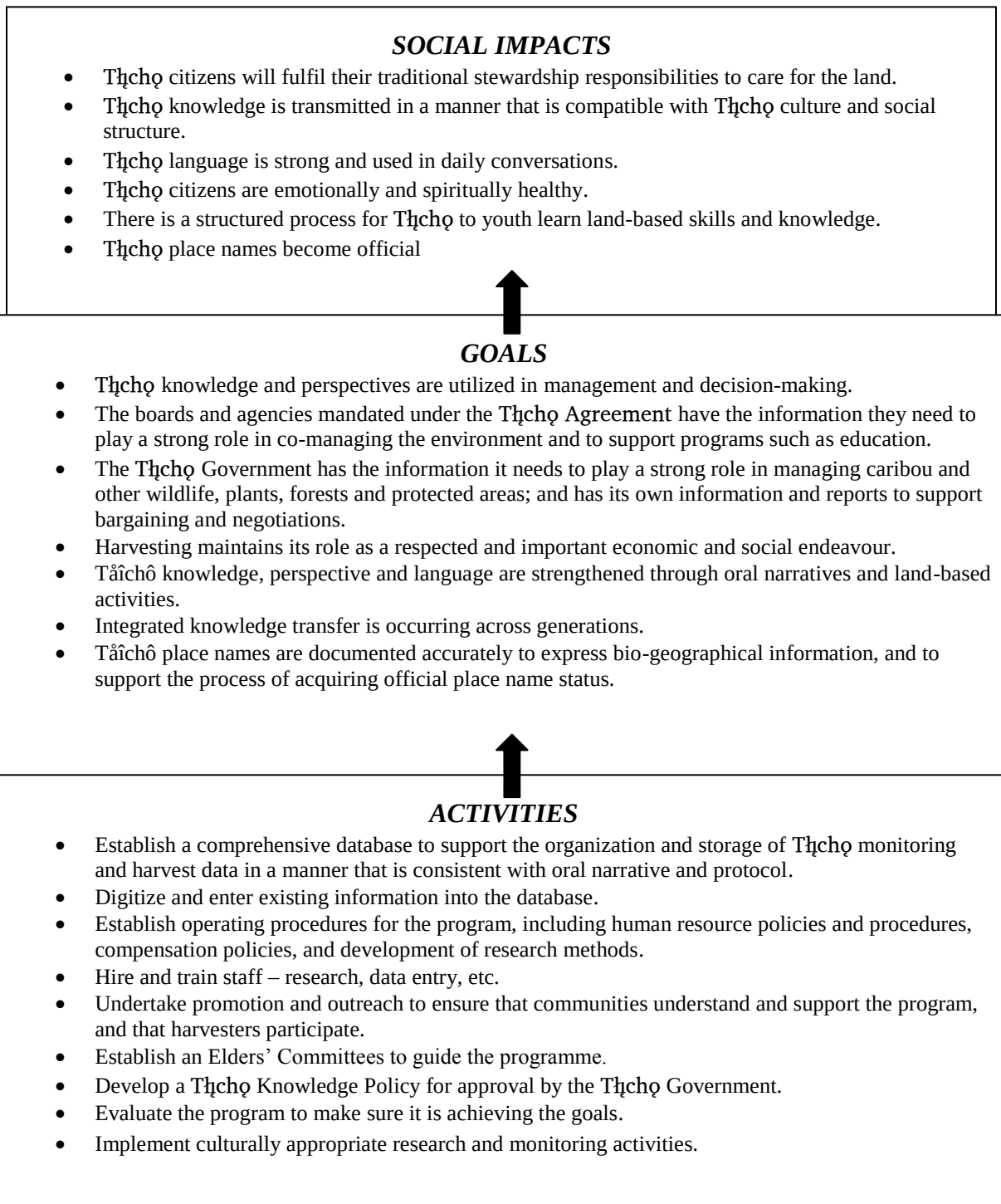
There are several activities that need immediate attention if the program is going to provide on-going information for caribou monitoring and management.

To ensure harvesters' and elders' observations, knowledge and harvest are documented and used, the following activities will be undertaken immediately when initiated in November 2010:

1. Establish a comprehensive database to support the organization and storage of Tłıchǫ monitoring and harvest data in a manner that is consistent with oral narrative and protocol;
2. Digitize and enter existing information into the database;
3. Establish operating procedures for the program, including human resource policies and procedures, compensation policies, and development of research methods;
4. Establish training programs for researchers and data entry clerks;
5. Hire and train staff;
6. Undertake promotion and outreach to ensure that communities understand and support the program, and that harvesters participate;
7. Establish community TK Elders' Committees;
8. Finalize the Tłıchǫ Knowledge Policy initiated through the Wek'eezhii forum for approval by the Tłıchǫ Government.

Tłı̨chǫ Knowledge Research and Monitoring Program

Summary Table of Proposed Structure



Caribou Monitoring and Harvest Study¹

Section 12.5.5 of the Tłıchq Land Claim and Self-government Agreement (the Agreement) states that the Wek'èezhìi Renewable Resources Board (WRRB) shall:

- (a) *Make a final determination, in accordance with 12.6 or 12.7, in relation to a proposal*
 - i. *Regarding a total allowable harvest level for Wek'èezhìi, except for fish,*
 - ii. *Regarding the allocation of portions of any total allowable harvest levels for Wek'èezhìi to groups of persons or for specified purposes, or*
 - iii. *Submitted under 12.11.1 for the management of the Bathurst caribou herd with respect to its application in Wek'èezhìi;*

Tłıchq oral narratives tell of the annual cycles in which caribou and fish are key resources. For example, spring camp sites were and continue to be located along known caribou migration routes, good fishing locations and places known to have birch trees. Tłıchq waited for the caribou during spring migration back to the barrens but if caribou choose a different route, the people had fish while building canoes that were used to travel trails that led to the barrens making them ready to harvest caribou when they once again crossed paths. Even on the barren grounds Tłıchq camps continue to be located near good fishing locations that are known to be on caribou migration paths. Like traditional harvesting camps, current communities are located on or near fisheries and areas caribou are known to travel if they are in the area. Both resources continue to be important to the well-being of Tłıchq – psychologically as well as physically.

Tłıchq elders and harvesters who participated in the West Kitikmeot Slave Study (WKSS) research entitled, '*Caribou Migration and the State of their Habitat*', (2001) and who originally participated in the design of the TK Monitoring Program in 1999-2000, think it is long past time to monitor barren ground caribou. The oldest Tłıchq elders know the WKSS researchers – Georgina Chocolate and Bobby Gon - focused on oral narratives from the past that provided baseline information.

They emphasize the importance of continuing to collect the most senior elders' knowledge (baseline) given the hiatus of 10 years (2001-2010). In addition they want the caribou monitoring program to:

1. Document current observations of the harvesters.
2. Research and data input and report writing to be done by adults that use both Tłıchq and English, and
3. Participation of young people through their school, during the summer and during other school or university breaks.

Elders, harvesters and other members of households – whether young or old – continue to want the Tłıchq people and their government to maintain their responsibility to watch and care for (monitor and manage) the land, water and resources they use, observe and enjoy. They want

¹ The Caribou Monitoring and Harvest Study Project is a special project within the TK Research and Monitoring Program.

Tłıchq citizens to use traditional values and rule associated with caribou to manage their resources.

The Tłıchq Agreement authorizes the WRRB's the responsibility for total allowable harvest (TAH) for wildlife, forests and plants. WRRB has an obligation under terms of the Agreement to determine TAH through assessment studies and other research for caribou. WRRB is recommending caribou harvesting targets rather than a TAH. The success of this approach is dependent on having the information necessary for sustainable management. It is, therefore, imperative that the Tłıchq undertake their own monitoring by documenting their observations and harvesting information to ensure they contribute to the process. If the Chiefs use the TK Research and Monitoring Program to oversee the documentation of caribou harvesting among their citizens during this time of low caribou populations it will be easier for the Land Protection Department, Tłıchq Government to maintain the target within a reasonable range and to allocate caribou resources to those in need, and for WRRB to receive reliable up to date information and to evaluate the success of the target approach. Furthermore, when caribou population numbers are higher, and allocations of this resource are more widespread, it will be necessary to determine basic needs levels of the beneficiaries of the claim.

For the Agreement to be honoured five activities need to occur:

1. Baseline information must be gathered from elders on known trends as harvest, wildlife and vegetation distribution. This information should be documented so it can be used to determine trends as well as indicators of change.
2. Information gathered through Tłıchq traditional methods of monitoring needs to be documented on an on-going basis.
3. Realistic harvest studies need to be ongoing.
4. All collected information must be stored in such a way as to respect the provider of the knowledge.
5. Reports must be provided to co-management boards to insure informed decisions can be made.

Most Tłıchq knowledge is in the minds of the elders and harvesters. For this reason, a program is needed so Tłıchq researchers can work with elders and harvesters to document their knowledge in a manner that does not lose the Tłıchq perspective. The process would include a detailed knowledge of past conditions that are compared to current observations of caribou behaviour, fitness and interactions with predators and pests as well as landscape and vegetation use. And, as is the traditional mode of sharing information, numbers of species observed and harvested, are incorporated into oral narratives that are told in the community. All information available is used to make management decisions and determine the number of caribou to be harvested in the near future.

One of the important features of Tłıchq knowledge is that it is acquired, enhanced and communicated on the land while people are engaged in land-based activities. It is also communicated after harvesters return to the community through oral narratives.

Modern harvest studies often ask harvesters to fill out survey forms in English, or to provide limited information that can be taken out of context. These studies may fail because they are not compatible with how Tłıchǵ knowledge, including information about harvest, is transmitted through oral narratives.

This project was designed to ensure that both monitoring and realistic harvesting numbers can be recorded in a culturally appropriate manner. This will help alleviate the problem that many respondents choose not to answer harvest study questions posed by non-community members.

Finding a Solution

In 1999-2000, the Tłıchǵ Regional Elders' Committee – under the direction of *K'áowó*² Jimmy Martin – requested Dogrib Treaty 11 staff who were working with the elders to bring male and female harvesters from each community to discuss a Tłıchǵ monitoring program. Funding for this meeting was secured from Cumulative Impacts and Monitoring Program, Environment Canada. The elders and harvesters directed staff to initiate monitoring around the diamond mines – with research/hunting camps located in strategic locations around the mines that would enable harvesters to observe the behaviour of caribou in relation to the mines. They also suggested a camp be located at Gots'ókàti and Deèzhàati so caribou behaviour could be compared with non-mining areas.

In September 2008, the Wek'èezhii Renewable Resources Board (WRRB) and the Tłıchǵ Government initiated work towards implementing a Tłıchǵ knowledge monitoring program that the Land Protection Department of the Tłıchǵ Government and co-management boards mandated under the Tłıchǵ Agreement could use in their decision making.

The TK program design with associated policy guidelines were developed based on discussions held during the household visits made by the Project Team between April 2009 and December 31, 2009. All households in the three fly-in communities of Gametì, Wekweetì and Whatì were contacted. Behchokö has a significant population therefore only those households with active harvesters and elders were contacted. During these visits Tłıchǵ researchers, under the direction of Aliche Legat, explained the importance of Tłıchǵ knowledge in the Tłıchǵ Agreement and the possibility of establishing a monitoring program as originally laid out by the elders and harvesters in 1999. Two Tłıchǵ researchers – Camilla Nitsiza and Madelaine Chocolate - did conducted the household visits, although Mary Adele Wetrade did assist Madelaine Chocolate in Gametì. Household visits took longer than anticipated because i) individuals wished to express their views after hearing the role of the WRRB as it is mandated in the Tłıchǵ Agreement; and ii) individuals were delighted to expound on the potential for harvesters and elders working together with Tłıchǵ researchers to monitor the land as first set out by the elders in 1999-2000. Their excitement at building on their traditional management practices was clear.

After completing household visits and analyzing Tłıchǵ responses, it became clear that it would be culturally appropriate to develop interview guidelines that allowed harvesters to share information in a manner similar to how they normally explain their harvest and observations to

² Translated as 'boss'. The role is significantly different than the Western concept for 'chair'.

one another and to their elders. The Tłıchq researchers found harvesters would prefer to discuss their activities – both observations (monitoring) and harvesting – in either a home or office setting, but at their own convenience. Finally, they found that harvesters thought if Tłıchq were doing the documenting and report writing they could then be assured: i) individual harvest numbers would remain confidential; ii) their information would be documented realistically; and iii) their observations would remain in the context within which their observations were made.

Following the household visits a Regional TK Elders/Harvesters Working Group (TK Regional Working Group) was established to complete the work.³ Gametì Committee members thought that it would be better if Tłıchq from all four communities worked together from the start so they could address all issues together. Six (6) members on the TK Regional Working Group had been active on the TK Regional Elders Committee from 1996-2002 while the remaining ten (10) harvesters and elders were named by the Tłıchq WRRB members or Chiefs in consultation with elders. The Working Group meetings were held between January and March 31, 2010: three in Gametì,⁴ one in Wek'weeti, and one in Behchokö.

The following is a summary of how discussions at the household level and at the TK Regional Working Group meetings have informed key components of the TK caribou monitoring and harvest study approach.

Species Important to Local Harvesters

Caribou and fish are always cited as key species. Nevertheless, all Tłıchq elders and harvesters explain – as is consistent with members of hunting and gathering societies – that all species are important, including human. They also explained that if one is to understand trends and impacts within Wek'èezhii, human behaviour should be monitored noting what is being harvested by both male and female harvesters and whether or not all is used.⁵

Tłıchq Harvesting information to be Documented

During conversations at the household level, it became apparent that many younger people felt they did not know enough about the environment to speak with their local researchers, but did think that they could report what they had harvested and observed as long as older, more experienced elders and harvesters were present to help them to understand their observations. Specifically younger people thought that if elders and harvesters were present they would gain a

³ Members of the Regional Working Group are Romie Wetrade, Laiza Mantla, Louis Zoe and Mary Adele Wetrade (with Fred Mantla attending in place of Mary Adele Wetrade) from Gametì; Pierre Beaverhoe, Dora Nitsiza, Robert MacKenzie Sophia Williah, and Francis Simpson from Whatì; and Elizabeth Michel, Robert MacKenzie, Harry Mantla and Eddy Weyellan from Behchokö; and Jimmy Kodzin, Elizabeth Whane, Rosa P'ea, Elizabeth Arrowmaker. The Working Group members decided that since the working group was short term if someone missed a meeting – for any reason – they would not continue.

⁴ Under the direction of John B. Zoe, TEO, a TK Office has been established in Gametì. However office furniture and computers have yet to be purchased and staff has yet to be hired.

⁵ Although not discussed during the household visits or during the meetings, most elders and active harvesters suggest that human activities associated with industrial development and exploration should be monitored by stewards of the land.

better understanding of how their observations were similar or different than the past and how their own knowledge and behaviour impacts wildlife, particularly caribou.

Most of the elders and harvesters participating in the TK Regional Working Group thought leaders should tell harvesters to report their observations of caribou (and other wildlife) behaviour, fitness, number of young, etc as well as the number they harvested.

Discussion outside the formal structure of the TK Regional Working Group, the researchers discussed the importance of continuous ‘watching caribou’, and teaching the young about caribou behaviour and rules governing their behaviour around caribou; and, that caribou should be observed whether hunting is taking place or not.

Sharing Information

Throughout all discussions it became clear that community members would be more open about sharing their harvesting information as well as their observations if they understood that their oral narratives and their observations - ‘raw data’ - would remain with and be safeguarded by the Tłıchǫ Government, and kept in the Tłıchǫ communities.

Several individuals expressed that they feel they are being “checked-up on” when non- Tłıchǫ ask questions and are worried that it can be used against them.

Schedule of Interviews

Based on the manner in which Dene pass information, it was made abundantly clear during household visits and during the TK Regional Working Group meetings, that oral narratives are the process for sharing detailed information. (see also Basso, Cruikshank, Goulet, and Sharp on the importance of oral narratives among all Dene). For this reason the researchers will be trained to use an interview guide while documenting information shared by harvesters.

Researchers thought the oral narratives of the harvest and associated observations should be documented within two days of the harvester returning to the community.

Expectations of Harvesters and Elders

All Tłıchǫ citizens with whom the researchers spoke liked the idea that monitoring skills and harvesting information would be given back to the community every few months – by the Tłıchǫ researchers. They thought the communities could benefit from hearing this information and verifying the researchers’ interpretations so misunderstandings could be clarified.

The TK Regional Working Group thinks that reporting back to the community at public meetings is extremely important. If the researchers share a summary of what they have heard with the community, then harvesters will be more likely to provide their observations and harvest numbers. They reasoned that the harvesters would know they were being heard and that their knowledge and information was being documented accurately. For example,

1. Their observations of the environment – health of caribou, state of the landscape and vegetation caribou use – are being heard and understood.
2. Harvesters will feel secure that harvesting data is correct, and their elders and leaders can use the information for management discussions with WRRB and the GNWT.

Compensation for Harvesters

This has not been discussed with harvesters during the household visits or at the elders and harvesters meetings. During past discussions with elders, it was thought that harvesters should report on a volunteer basis, but should be compensated when attending the verification and sharing meetings when more information on their observations can be noted. Only those harvesters who participated on a volunteer basis would be compensated at the verification and working group meetings.

It is proposed that this is a decision for the Tłıchǫ leadership after being discussed at a Tłıchǫ Assembly, recognizing that availability of resources may be a constraint.

Reporting

Since using Tłıchǫ knowledge in caribou management is important to Tłıchǫ, it is recommended that after the researchers hold verification meetings with elders and harvesters, reports be written for the WRRB as well as for the Chief Executive Council and the Territorial governments.

Reports will be sent to Boards, Governments and Land Protection Department at least three times per year.

Duration of Harvest Study within Monitoring Program

During the household visits and the TK Regional Working Group meetings, the vast majority (young people did not speak to this topic) of Tłıchǫ citizens thought the caribou harvest study within the TK monitoring program should be on-going. They also thought reporting on harvest should be on-going.

Activities Specific to Caribou Monitoring and Caribou Harvest Study

Basically the steps to traditional monitoring and documenting information on caribou are as follows:

- Harvesters have been taught since the time they were young to observe all that is around them and to consider their observations in relation to what they are harvesting, and in relation to all other aspects of their environment. It is these observations as well as information about their harvest that the researchers will document through digital recording and by entering key information into the data base.
- As researchers listen to harvesting accounts of the harvester, they will have an interview guide that they will use to mentally check off information, and as they enter key information into the data base. If necessary the researcher will ask the harvester for additional information, but only after they have shared their observations through a narration of their experience.
- Through hunting and through use of the caribou harvested both male and female harvesters will note the behaviour of caribou in various situations and note texture, smell and taste of meat and characteristics of hides, bones, etc. Researchers are responsible for acquiring and documenting all information of caribou.
- Researchers will mark the location of the harvester's observations and their harvest.
- Researchers will note number of caribou harvested, locations, age, sex, fitness, etc.
- Researchers will note information on wolf numbers associated with caribou as well as numbers harvested and fitness levels.
- Researchers will listen to the digital recording of the account and enter relevant information into the data base. They will also note additional questions for future reference, and, if necessary, they will visit the harvester for clarification.
- Researchers will search the data base for additional caribou information from that location, and begin developing a compilation of the information contained in the oral narratives.
- Harvesters will note and share through their oral narrative the condition of the environment, including landscape, vegetation, moist, snow depth, etc.
- If appropriate will compare their observations with reports available from the YK Dene, Kugluktuk and Lutselk'è who traditionally hunted in the region. Comparisons will be done by academic researcher in conjunction with community researchers.
- Since very few harvesters will be hunting caribou over the next several years the following activities are examples of information documented by researchers:

Autumn Migration

- . Active male and female harvesters will travel to known water crossings
 - monitor caribou as they cross,
 - note number of calves, cows and bulls,
 - note direction of migration,
 - note number of wolves and other predators.
- . Tłıchǫ citizens – elders, harvesters, researchers and youth – travel to Gotsak’atı to observe caribou
- . Active male and female harvesters will travel to Æek’atı (Lac de Gras) area and observe caribou after leaving the Diavik and BHP claim blocks, around Æots’ik’è, Æek’atitata

Wintering Areas

- . Elders will select places to observe caribou behaviour in those areas, and to note additional aspects of fitness if harvesting caribou.
- . Harvesters will also observe the state of the winter habitat

Spring Migration

- . Active male and female harvesters will travel to places where caribou fences were located to observe the number of caribou (and gender and age) that travel through the area. In addition the harvesters will note fitness level. If caribou are taken, contents of their stomach and vegetation in mouths and in stools will be noted, as well as texture and smell of meat and state of hides, bones, and hair.
- . Harvesters will do a visual appraisal for pregnancy and report pregnancy from the cow harvest.
- . Harvesters will note number of wolves associated with the herds.
- . Harvesters will note behaviour associated with pests.
- . Active male and female harvesters should also travel to Gostak’atı, Dezaahti to observe caribou at that stage of their migration.

Summer: Post Calving Area

- . Elders will advise on where active male and female harvesters should travel to observe bull, cows and calf behaviour in their summer habitat assessing abundance at key locations.
- . Harvesters also observe predators, insect levels, and other factors impacting caribou distribution, fitness and migration.

Project Structure: Activities and Products

	<i>SPECIAL PROJECT ACTIVITIES</i> <i>(What needs to be done)</i>	<i>PRODUCTS</i> <i>(What we hope to achieve)</i>
<u>Data Base</u>	Researchers enter harvest information into database the same day they hear and document it Maintain and update database regularly after each interview Produce reports regularly and review at community meetings and with Elders' Committee Produce reports in response to requests	• Database is up to date and capable of creating reports upon demand • Baseline information is available for environmental assessments, and environmental management • The collections of Tłıchq knowledge is expanded as new information is entered into the database • Realistic and current Tłıchq information on caribou and their habitat • Understand annual resource use -when low numbers of caribou • Ability to compare current caribou information with past: -is there a trend? -are caribou being impacted – if so what from what?
<u>Training</u>	On-going training for program staff to ensure they are effective researchers and cultural interpreters	• Trained TK community researchers are available to work with harvester and elders. • Database administrator is trained to maintain the database. • Staff have the skills to: ○ Efficiently document interviews. ○ Use interview guidelines. ○ Maintain archives. ○ Produce reports. ○ Identify similarities and differences between the Tłıchq and western management concepts and terms.

	<i>SPECIAL PROJECT ACTIVITIES</i> <i>(What needs to be done)</i>	<i>PRODUCTS</i> <i>(What we hope to achieve)</i>
<u>TK Elders' Committee/s</u>	Tłıchǫ elders provide on-going guidance to the program	- Elders' Committee is functioning effectively - Elders play a meaningful role in all phases of program operations - Elders work with Tłıchǫ citizens to reinstate their traditional roles and responsibilities
<u>Culturally Appropriate Research and Monitoring Methodology</u>	Interview and community meeting guidelines -specific to caribou monitoring , caribou harvest and caribou habitat and loss of habitat due to fires and development Monitoring by harvesters - While harvesting - Specific to water crossings, caribou fence area, visit fire areas - If not harvesting caribou, then a form of compensation. Training specific to project - Caribou terminology - Laws and rules - Caribou management plan Hold caribou meeting once every two months	- Realistic and current Tłıchǫ information on caribou and their habitat. - Ensure trends are well documented, not hearsay - Detailed current Tłıchǫ information on caribou and their habitat that can be discussed – in Tłıchǫ – between elders and harvesters with researchers documenting. - Ability to work efficiently - Realistic and current Tłıchǫ information on caribou and their habitat - Information available to write report on caribou observations

	<i>SPECIAL PROJECT ACTIVITIES</i> <i>(What needs to be done)</i>	<i>PRODUCTS</i> <i>(What we hope to achieve)</i>
<u>Promotion and Outreach</u>	Elders visit households and explain what can be used in lieu of caribou Chiefs sit with Tłıchǫ Knowledge Research and Monitoring Elders' Committees to go over restriction on and allocations of caribou harvest Project Directors explains monitoring process to chiefs and council with elders present Academic paper for journal and presented at appropriate conference	• Traditional use of resources due to ebb and flow of environment • Traditional sharing of information • More likely harvesters will visit and report harvest and observations • Elders Committee supports Chiefs' allocation on caribou harvest and their decision to monitor using elders and harvesters • Unique methodology and process is shared • Researchers experience discussions on what they are doing outside their communities

	<i>SPECIAL PROJECT ACTIVITIES</i> <i>(What needs to be done)</i>	<i>PRODUCTS</i> <i>(What we hope to achieve)</i>
<u>Program Administration</u>	Budget for this project Fundraising Protocol for sharing reports with WRRB etc, Guidelines for verifying information in reports Hire researchers	• Ability to carry out realistic fundraising • Sufficient money to monitor caribou and harvesting • Ensure research is rigorous • Ensure results are not hearsay but based on Tłıchǫ knowledge and perspective • Special project will enhance long term goals of TK programme • Ensure use of information from Caribou migration and state of habitat project • Ensure data is collected and available to be used

January 13, 2011

Grant Pryznyk, Interim Chair
Wek'èezhii Renewable Resources Board
Suite 102A, 4504 49th Ave.
Yellowknife, NT
X1A 1A7

Dear Mr. Pryznyk:

RE: Recommendation Report – Revised Joint Proposal

The Department of Environment & Natural Resources (ENR) and the Tłıchǵ Government (TG) have reviewed the Wek'èezhii Renewable Resources Board (WRRB) Recommendation Report released October 9, 2010 as per section 12.5.11 of the Tłıchǵ Land Claims and Self Government Agreement. Attached is a table with ENR and the TG's decision to accept, vary or reject the WRRB's recommendations. As required by section 12.5.11 rational for the varying or rejection of recommendations is included in the chart.

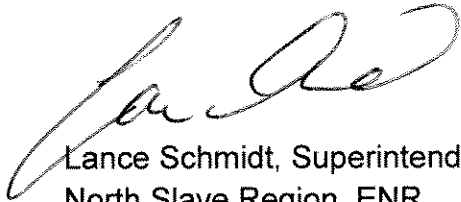
ENR and TG have carefully reviewed and considered each of the WRRB's recommendations in a high level of detail. This extensive review has allowed ENR and the TG to create a draft implementation plan for the WRRB's recommendations at the same time. This draft plan will be discussed at the Technical Working Group meeting scheduled for later this month.

Both parties have been active in ensuring proper monitoring measures are in place for the harvest season. ENR and TG are in the process of hiring a community coordinator who will be the link in the partnership. Community monitors from Wekweeti, Whati and Gameti have been hired and trained and will be working closely with local ENR officers on monitoring activities.

If you have additional questions or concerns please contact Lance Schmidt, Superintendent, North Slave Region, ENR at (867) 920-6114 or email:

lance_schmidt@gov.nt.ca, or Eddie Erasmus, Director, Lands Protection Department,
Tłıchǫ Government at (867) 392-6381 or by email: eddieerasmus@tlicheo.com .

Sincerely,



Lance Schmidt, Superintendent,
North Slave Region, ENR



Eddie Erasmus, Director
Lands Protection
Tłıchǫ Government

#	Section	Recommendation	ENR/ Tłıchǫ Response
1	9.1 Total Allowable Harvest vs. Harvest Targets	The Board recommends that the Tłıchǫ Government and ENR report annually on the overall success of the harvest target approach in meeting the objectives of effective collaborative management and the long-term recovery of the Bathurst caribou herd.	Accept ENR and Tłıchǫ Government will provide a report on the overall success of the harvest target approach in June 2011.
2	9.2 Commercial Harvest of Bathurst Caribou	The Board recommends that all commercial harvesting of Bathurst caribou within Wek'èezhìi be set to zero for the 2010/11, 2011/12 and 2012/13 harvesting seasons.	Accept As per changes to the Big Game Hunting Regulations made on January 1, 2010.
3	9.3 Outfitted Harvest of Bathurst Caribou	The Board recommends that all outfitted harvesting of Bathurst caribou within Wek'èezhìi be set to zero for the 2010/11, 2011/12 and 2012/13 harvesting seasons.	Accept As per changes to the Big Game Hunting Regulations made on January 1, 2010.
4		The Board recommends that ENR and Tłıchǫ Government, prior to the next survey of the Bathurst caribou herd, provide the Board and make public their positions with regard to the reinstatement of outfitting within Wek'èezhìi.	Vary This will be addressed in the development of a long term management plan for the Bathurst herd. The next survey for the Bathurst caribou herd is planned for June 2012 and the results of the survey will be available by the fall of 2012. The target date for the long-term management plan is the end of 2012. TK monitoring program - determine the basic needs of the Tłıchǫ people.
5	9.4 Resident Harvest of Bathurst Caribou	The Board recommends that all resident harvesting of Bathurst caribou within Wek'èezhìi be set to zero for the 2010/11, 2011/12 and 2012/13 harvesting seasons.	Accept As per changes to the Big Game Hunting Regulations made on January 1, 2010.
6		The Board recommends that ENR and Tłıchǫ Government, prior to the next survey of the Bathurst caribou herd, provide the Board and make public their positions with regard to the reinstatement of	Vary This will be addressed in the development of a long term management plan for

		resident harvesting within Wek'èezhìi. In developing this position, the Governments will review, assess, and implement, where conservation permits, a limited-entry draw system to facilitate the reinstatement of resident harvesting at the earliest opportunity.	the Bathurst herd.
7	9.5 Aboriginal Harvest of Bathurst Caribou	The Board recommends the establishment of a harvest target of 300 Bathurst caribou per year for the 2010/11, 2011/12 and 2012/13 harvesting seasons.	Accept This was implemented on December 8, 2010 through a regulation change that established limited harvest zones inside and outside of Wek'èezhìi to reflect the current wintering area for the Bathurst caribou herd. More details will be included in the implementation plan. Note: The YKDFN Interim Agreement dated October 7, 2010 states that the harvest of 150 Bathurst caribou outside of Wek'èezhìi is to be administered by the YKDFN and joint monitoring with ENR.. TG and ENR can provide periodic updates on caribou harvest as the information is collected.
8		The Board recommends allocating the annual harvest target of Bathurst caribou between Tłıchǵ Citizens and members of an Aboriginal people with rights to hunt in Mòwhì Gogha Dè Nìtǵàèè as follows: • Tłıchǵ Citizens – 225 • Members of an Aboriginal people with rights to hunt in Mòwhì Gogha Dè Nìtǵàèè - 75 The Tłıchǵ Government should determine distribution of the allocation within Tłıchǵ communities and ENR should determine distribution of the allocation to members of an Aboriginal people with rights to hunt in Mòwhì Gogha Dè Nìtǵàèè in consultation with those groups.	Vary As per prior agreement with Tłıchǵ Government to share a limited harvest of Bathurst caribou equally (150 animals for Tłıchǵ citizens and 150 caribou outside of Wek'èezhìi)
9		The Board recommends the harvest of Bathurst caribou should target an 85:15 bull/cow harvest ratio, i.e. the annual harvest of Bathurst caribou cows should be less than 45.	Vary ENR and Tłıchǵ Government both agree that the harvest should focus on bulls but would prefer to use a target ratio of 80:20 males: females as agreed in revised joint proposal.

			The modeling projections suggest that small changes in the harvest sex ratio would have negligible impacts on the Bathurst herd's likely trend. All parties will make the best efforts to not exceed these targets and will report harvest results to the communities and the WRRB. Based on a ratio of 80:20, the cow harvest should be targeted at 60 ± 6 cows.
10		The Board recommends that if the Tłıchǵ Government and/or ENR have information to suggest that the harvest of Bathurst caribou has or will in the near future exceed the harvest target of 300 by 10% or more, then regulations should be put in place to close all harvesting in areas occupied by the Bathurst herd. If the harvest of Bathurst caribou exceeds the targets of 300 caribou by greater than 10%, the Board reserves the right to reconsider its recommendations and implement a TAH.	Accept ENR and Tłıchǵ Government will be closely monitoring harvest levels throughout the fall and winter hunting seasons and will keep communities and the WRRB informed.
11		The Board recommends that if the Tłıchǵ Government and/or ENR have information to suggest that the harvest of Bathurst caribou has or will or in the near future materially exceed 45 cows, then regulations should be put in place to close all harvesting in areas occupied by the Bathurst herd. If the harvest of Bathurst caribou materially exceeds the targets of 45 cows, the Board reserves the right to reconsider its recommendations and implement a TAH	Vary (as per response #9) ENR and the Tłıchǵ Government will monitor the sex ratio of the harvest and work with hunters to target male caribou, wherever possible. Under the Tłıchǵ Agreement, the Board may make recommendations at any time. However, ENR and the Tłıchǵ Government would ask to be consulted prior to the Board implementing a TAH. ENR and Tłıchǵ Government agree the harvest should focus on bulls but would prefer a target of 80:20 males: females as agreed in the revised joint proposal which translates into 60 ± 6 cows.
12		The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Bathurst caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.	Accept There will be ads in the local newspaper to inform the public about the new management zones within which Bathurst caribou harvest is limited. Detailed information on recent locations of radio-collared caribou will not be publicized.
13		The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the	Accept There will be ads in local newspaper to inform the public about the new management zones where Bathurst caribou harvest is limited.

		harvest will be attributed to the Bathurst caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.	
14	10.1 Commercial, Outfitting & Resident Harvest of Bluenose-East Caribou	The Board recommends that all commercial, outfitted and resident harvesting from the Bluenose-East caribou herd within Wek'èezhii be set to zero for the 2010/11, 2011/12 and 2012/13 harvesting seasons.	Accept As per changes to the Big Game Hunting Regulations made on January 1, 2010.
15	10.2 Aboriginal Harvest of Bluenose-East Caribou	The Board proposes the establishment of a harvest target of 2800 Bluenose-East caribou per year for the 2010/11, 2011/12 and 2012/13 harvesting seasons. The annual harvest target and its allocation should be finalized in discussions between the existing wildlife co-management boards and Aboriginal governments in the Sahtu, Dehcho and Tłıchǵ. The Tłıchǵ Government should determine distribution of the allocation within Tłıchǵ communities.	Vary Based on new 2010 estimate of the Bluenose-East herd's size, wildlife co-management boards are reviewing information and the proposed harvest target's recommended by the WRRB. ENR and Tłıchǵ Government will be working together to promote harvest of bulls, monitor the harvest closely throughout the winter and keep the communities, as well as WRRB, SRRB and Nunavut informed. Management of the Bluenose East herd should coordinate with the existing planning for the three Bluenose herds led by co-management boards.
16		The Board recommends the harvest of Bluenose-East caribou should target an 85:15 bull/cow harvest ratio, i.e. the annual harvest of Bluenose-East caribou cows should be less than 420.	Vary (as per response #9 and #15) ENR and Tłıchǵ Government agree the harvest should focus on bulls but would prefer a target of 80:20 males: females as agreed to in the revised joint proposal. All parties will make their best efforts to remain below these targets and will report the harvest results to the communities that hunt this herd, as well as WRRB, SRRB and Nunavut,
17		The Board recommends that if the Tłıchǵ Government and/or ENR have information to suggest that the harvest of Bluenose-East caribou has or will in the near future exceed the target by 10% or more, then regulations should be put in place to close all harvesting in areas occupied by the Bluenose-East herd.	Vary. Based on new 2010 estimate of the Bluenose-East herd, wildlife co-management boards and Aboriginal governments are reviewing information and the proposed target recommended by the WRRB and plan to develop a strategy which will be shared with affected wildlife co-management boards.
18		The Board recommends that if the Tłıchǵ Government and/or ENR	Vary (as per response #15)

		have information to suggest that the harvest of Bluenose-East caribou has or will or in the near future materially exceed 420 cows, then regulations should be put in place to close all harvesting in areas occupied by the Bluenose-East herd.	Based on new 2010 estimate of the Bluenose-East herd, wildlife co-management boards are reviewing information and proposed harvest targets recommended by WRRB. Note: the parties will discuss the concept of a male only hunt with the co-management boards as they review the new herd estimate and other information on the herd.
19		The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Bluenose- East caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.	Accept (as per response # 12)
20		The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the harvest will be attributed to the Bluenose East caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.	Accept (as per response #13)
21		The Board recommends that the Tłıchǵ Government and ENR do not provide harvester assistance and/or incentives to access the Bluenose-East herd.	Reject ENR and Tłıchǵ Government agree that conservation measures for the Bluenose-East herd are required. However, ENR had previously agreed to provide support to construct a winter road to Hottah Lake so that people from Wekweeti could access the Bluenose-East herd as a measure to reduce pressure on Bathurst caribou herd, whose numbers are still very low. Note: This fall, ENR and Tłıchǵ Government did not provide support for any fall caribou harvests.
22		The Board recommends that the Tłıchǵ Government consider negotiating caribou harvesting overlap agreements with Nunavut and the Sahtu region to make certain that existing relationships endure.	Vary Tlıcho Government will consider.
23	11.1 Commercial, Outfitting	The Board recommends that all commercial, outfitted and resident	Accept

	& Resident Harvest of Ahiak Caribou	harvesting from the Ahiak caribou herd within Wek'èezhii be set to zero in order to prevent incidental harvest of Bathurst caribou for the 2010/11, 2011/12 and 2012/13 harvesting seasons.	
24	11.2 Aboriginal Harvest of Ahiak Caribou	The Board recommends that the Tłıchǵ Government and ENR do not provide harvester assistance and/or incentives to access the Ahiak herd.	Reject ENR and Tłıchǵ Government did not provide support for fall caribou harvests in 2010. However, for ENR, it may be necessary to provide some assistance as part of accommodation for limiting harvest of the Bathurst herd. ENR is working with harvesters to carefully monitor the harvest of the Ahiak herd.
25		The Board recommends that the Tłıchǵ Government consider negotiating caribou harvesting overlap agreements with Nunavut and the Akaitcho region to make certain that existing relationships endure.	Vary (as per recommendation # 22 for overlap agreements with Nunavut) Tłıchǵ Government currently has a boundary agreement with Akaitcho.
26		The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual fall hunt, areas within which the harvest will be attributed to the Ahiak caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.	Accept (as per response #12)
27		The Board recommends that ENR should, in discussion with the Tłıchǵ Government and other Aboriginal groups, identify and make public, prior to the annual winter hunt, areas within which the harvest will be attributed to the Ahiak caribou herd. The Board and public should be advised of any changes to these areas made necessary by movements of the caribou.	Accept (as per response #13)
28	12.2 Tłıchǵ Knowledge Research and Monitoring Program	The Board recommends the Tłıchǵ Government implement the <i>Special Project, Using Tłıchǵ Knowledge to Monitor Barren Ground Caribou</i> of the overall TK Research and Monitoring Program.	Vary The Tłıchǵ Government will be implementing the project based on its obligations and commitments pursuant to the provisions in the Tłıchǵ Agreement. Start date of the TK Research and Monitoring Program is anticipated in summer 2011.

PREAMBLE: (#29-39)

The Tłıchǵ Government agrees with the recommendations 28-42 of the Recommendation Report related to the Revised Joint Proposal on Caribou Management Actions in Wek'èezhìi. We are committed to documenting and reporting on observations and trends observed by caribou harvesters and elders. Implementation of the 'Tłıchǵ Knowledge Research and Monitoring Program: Special Project, Using Tłıchǵ Knowledge (to Monitor Barren Ground Caribou' will take approximately eight months.

The traditional monitoring system continues among the harvesters and elders. Nevertheless the logistics of realizing a system that will rigorously and accurately document and report harvesters' observations and trends has yet to be initiated. The program requires trained Tłıchǵ researchers, offices, and equipment, all of which requires a realistic annual budget and extensive fundraising with those who will also benefit from Tłıchǵ knowledge research and monitoring.

29	12.3 Monitoring Recommendations	The Board recommends that ENR and the Tłıchǵ Government implement the <i>spring calf survival</i> monitoring action as identified below: • Scientific – Spring composition surveys to determine calf survival should continue. In addition, ENR should explore methods to improve estimation of cow mortality that do not involve large numbers of collars to better inform the interpretation of cow/calf ratios • TK – In listening to the oral narratives of Tłıchǵ harvesters, the TK researchers should document the harvesters' observations of the number of calves, cows and bulls along migration routes where caribou fences were once located.	Scientific: Accept ENR will provide the Board with a power analysis of how frequently spring composition surveys are required. ENR has not recently used collars to assess cow mortality rate. ENR would appreciate any suggestions from the Board on alternative methods to estimate cow mortality. Because the existing numbers of radio-collars on the Bathurst herd are insufficient to reliably monitor cow mortality rates, the joint proposal emphasized annual calving reconnaissance surveys to monitor the trend in the herd's numbers of breeding cows. High mortality rates in cows would translate to a declining trend in numbers of cows on the calving ground: low cow mortality rates would translate to increasing numbers of cows on the calving ground. TK – See Preamble
30		The Board recommends that ENR and the Tłıchǵ Government implement the <i>health and condition</i> monitoring action as identified below: • Scientific – Cows should NOT be harvested specifically for health and condition monitoring. If appropriate per collection methodology, suitable samples from harvested caribou should be collected by Aboriginal harvesters in the community. • TK – In listening to the oral narratives of Tłıchǵ harvesters, the TK researchers should document the harvesters' visual appraisals of fitness on hoof and sensory appraisals	Scientific: Accept ENR expects that some Bathurst cows will be taken by hunters; therefore, sample kits will be available to all hunters to record basic information on health, condition and pregnancy rates of cows. Details of samples to be collected will be provided to TG community caribou monitors and ENR staff. Typically, community hunts are an opportune time to take such samples. TK – See Preamble

		during skinning, butchering, preparing of meat and hides.	
31		The Board recommends that ENR and the Tłıchǵ Government implement the <i>birth rate</i> monitoring action as identified below: • Scientific – Birth rate estimates determined from composition surveys on the calving ground should continue. • TK – In listening to the oral narratives of Tłıchǵ harvesters, the TK researchers should document the harvesters' observations of calves, cows and bulls on the barrens in the summer (post-birthing rate).	Scientific: Vary Birth rate information will be collected in different ways for different herds. - For example, the size of the Ahiak and Bathurst caribou herds is estimated using the calving ground photo census surveys. Birth rate is estimated from a composition survey that is conducted on the calving ground right after the photo census. - This photo census technique is not usually used for the Bluenose-East herd (rather, herd size is estimated from a post-calving ground photo census survey). Instead, pregnancy rates are based on information collected from harvested Bluenose-East cows, and indirectly from composition surveys that assess the calf:cow ratio.. TK – See Preamble
32		The Board recommends that ENR and the Tłıchǵ Government implement the <i>adult sex ratio and fall calf survival</i> monitoring action as identified below: • Scientific – Fall composition surveys to determine adult sex ratio and calf survival should continue. As above, this should be augmented with better estimates of cow mortality to better inform the interpretation of bull/cow ratios. • TK – In listening to Tłıchǵ harvesters, the TK researchers should document the harvesters' observations of numbers and behaviour of bulls, cows and calves.	Scientific: Accept The result of the fall composition survey is one of the parameters used to determine a population estimate for the Bathurst and Ahiak herds. Fall adult sex ratio surveys for these herds are planned for 2011 and 2012 prior to photographic survey scheduled for 2011 (Ahiak/Beverly) and 2012 (Bathurst). The next Bluenose-East fall adult sex ratio survey is planned for 2011 to get more basic information on the number of bulls and cows for this herd. TK – See Preamble
33		The Board recommends that ENR and the Tłıchǵ Government implement the <i>estimate of herd size</i> monitoring action as identified below: • Scientific – A calving ground photo-survey should be conducted in June 2012. • TK – In listening to Tłıchǵ harvesters, the TK researchers should document the harvesters' observations and their	Scientific: Accept ENR will work with all partners to undertake the: • Bathurst calving ground photo survey in June 2012. • Ahiak calving ground photo survey in 2011. • Bluenose-East post calving ground survey in 2012 or 2013. TK – See Preamble

		assessment of caribou abundance at key locations.	
34		The Board recommends that ENR and the Tłıchǵ Government implement the <i>wolf abundance (den occupancy)</i> monitoring action as identified below: - Scientific – To enhance the ability of managers to assess management actions in the future, appropriate indices of wolf abundance, wolf predation rates and population responses to changing caribou abundance should be developed and implemented. - TK – In listening to the Tłıchǵ harvesters, the TK researchers should document the harvesters' observations and their assessment of wolf abundance associated with caribou.	Scientific: Vary ENR will continue with current wolf den surveys, which provide an index of wolf abundance. ENR in consultation with the Tłıchǵ Government will provide a proposal with potential options and costings that are relevant to wolf monitoring, research, and management. The Parties will continue to explore new options with respect to monitoring and managing wolves. TK – See Preamble
35		The Board recommends that ENR and the Tłıchǵ Government implement the <i>wolf condition and reproduction</i> monitoring action as identified below: - Scientific – A carcass collection program and assessment of carcasses collected for physical condition and reproductive status should continue. - TK – In listening to the Tłıchǵ harvesters, the TK researchers should document the harvesters' observations of the condition of wolves associated with caribou.	Scientific: Accept Through the Genuine Mackenzie Valley Fur Program the GNWT provides harvesters \$200 for each intact wolf carcass and will provide a collection report to the WRRB and Tłıchǵ Government in June 2011 on the carcass collection. TK – See Preamble
36		The Board recommends that ENR and the Tłıchǵ Government implement the <i>wolf harvest</i> monitoring action as identified below: - Scientific – Harvest data from a combination of carcass collection, fur sales, resident harvest questionnaires, and mandatory reporting of non-resident harvests should be collected. - TK – Tłıchǵ researchers will manage the collection of Tłıchǵ harvest data.	Scientific: Accept ENR will provide a report to the WRRB and Tłıchǵ Government in June 2011 on wolf harvest data. TK – See Preamble
37		The Board recommends that ENR and the Tłıchǵ Government implement the <i>state of habitat</i> monitoring action as identified below: Scientific – Landscape changes, including fires and	Scientific: Vary ENR will continue to provide an annual report to the WRRB and Tłıchǵ

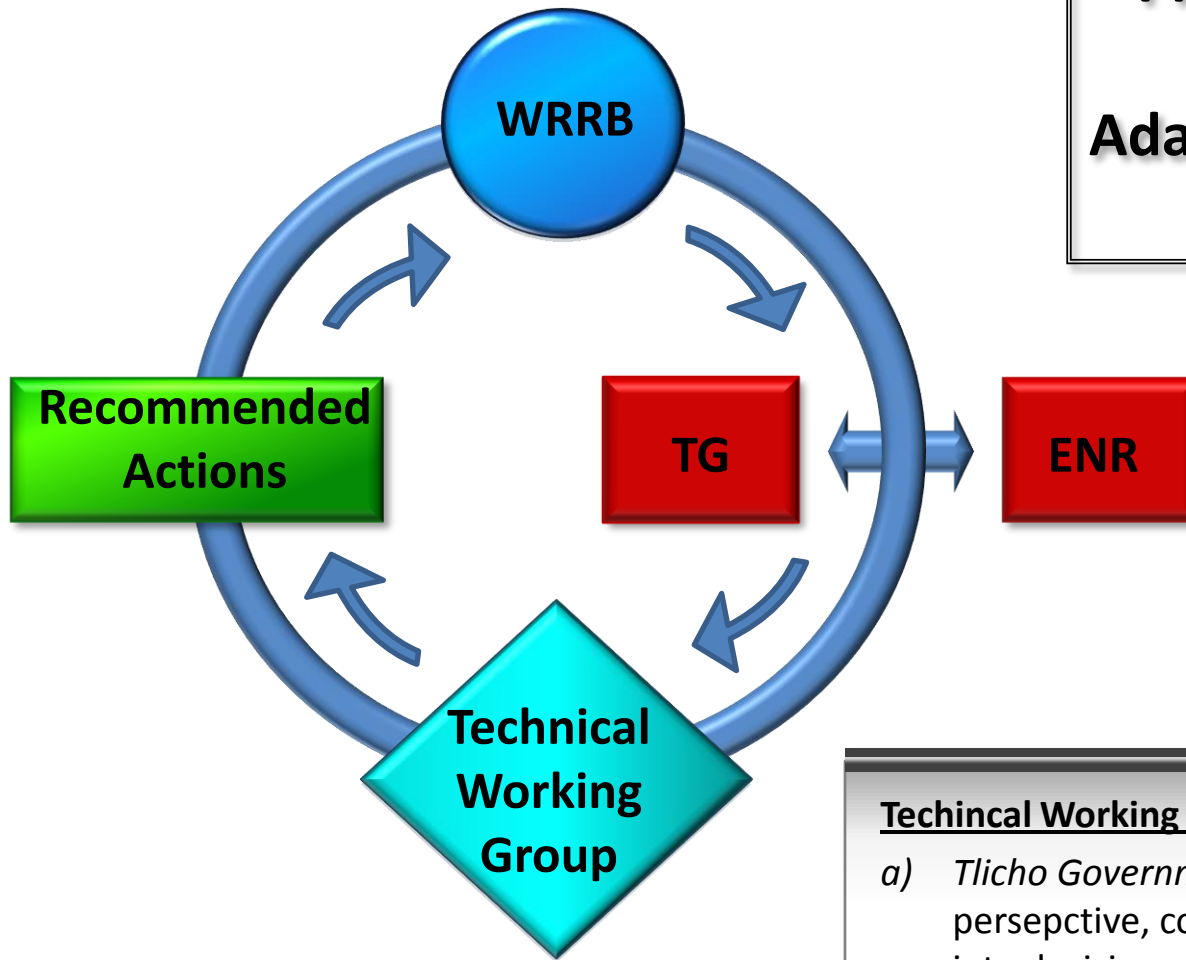
		industrial exploration and development, should be monitored to assess potential impacts to caribou habitat. TK – In listening to the Tłıchǵ harvesters, the TK researchers should document the harvesters' detailed observations of caribou habitat.	Government on fire activity. ENR expects a number of research projects investigating the impact of fires on caribou habitat to be completed in 2012 and will provide an annual progress report to the WRRB and Tłıchǵ Government. ENR will continue to explore new ways to monitor landscape change driven by industrial exploration and development with our partners (e.g., INAC). TK – See Preamble
38		The Board recommends that ENR and the Tłıchǵ Government implement the <i>pregnancy rate</i> monitoring action as identified below: - Scientific – Cows should NOT be harvested specifically for determining pregnancy. - TK – In listening to the oral narratives of Tłıchǵ harvesters, the TK researchers should document the harvesters' visual appraisals of pregnancy and pregnancy of any cows harvested.	Scientific: Accept Note: ENR will make available, sample kits to hunters so that any Bathurst or Bluenose-East cows that are harvested can be tested to determine pregnancy rates. The community hunts are opportune times to do this work. TK – See Preamble
39		The Board recommends that ENR implement the <i>density of cows on calving ground</i> monitoring action as identified below: - Scientific – Annual calving ground reconnaissance surveys should continue. - TK – As Tłıchǵ harvesters have not gone to the calving grounds in the past, there is no suggested action.	Scientific: Vary ENR will undertake these surveys for the Bluenose-East, Bathurst and Ahik herd in 2011 and 2012. TK – See Preamble
40		The Board recommends Tłıchǵ Government implement the <i>caribou harvest</i> monitoring action as identified below: - TK – Tłıchǵ harvesters should report their caribou harvest to the TK researchers who will manage the harvest data - Scientific – Harvest data should not be collected through a scientific process as Tłıchǵ should collect and manage their own harvest data.	Vary ENR and Tłıchǵ Government will continue to work with harvesters to report harvests. Methods will be based on the last 2 years of harvest monitoring in the Tłıchǵ communities. A community based program will be developed in the 2010/11 season.
41		The Board recommends that ENR and Tłıchǵ Government reporting on monitoring results to the WRRB and the general public a minimum of three times per year in April, September and December.	Accept To make information available to the public, ENR will also post reports provided to the WRRB on the ENR website.
42	13. WRRB	The Board recommends that the Tłıchǵ Government develop and	Accept

	RECOMMENDATIONS ON RULES-BASED APPROACH	implement a TK conservation education program to support the relationship and respect Tłjchq have for caribou. The program should be taught by elders and include: • Tłjchq rules and their holistic approach to monitoring and managing their relationship with caribou; • The idea of learning by travelling traditional trails so the 'land' can be observed and monitored; and • Information on alternate resources to be harvested when caribou is scarce.	The Tłjchq Government has developed a Tłjchq Ekwo Working Group (TEWG) which held its orientation workshop on Dec 13-15. This group will assess and make recommendations for the TK conservation education program.
43		The Board recommends that ENR develop and implement a scientific conservation education program to foster an increased appreciation of the resource. The program should be aimed at better harvesting and handling practices, increased knowledge of caribou and their role in the ecosystem, and an enhanced understanding of scientific management practices.	Accept ENR will undertake this work jointly with Tłjchq Government in Wek'èezhii and with other Aboriginal groups outside of Wek'èezhii. ENR will prepare facts sheets that will be posted on the ENR website. ENR has developed an interactive Caribou Educational Program that can be used in schools for youth to learn about scientific management practices.
44	14. WRRB RECOMMENDATIONS ON ADAPTIVE COMANAGEMENT FRAMEWORK	The Board recommends that ENR and Tłjchq Government implement a process of information flow, review and assessment as described above.	Vary The flow chart from the WRRB recommendation on page 44 suggests that the TK and scientific programs will be developed independently of one another. The Tłjchq Government and ENR would like to see a more integrated strategy between science and TK as discussed in the joint revised proposal. See Attached Draft Flow Chart
45		The Board recommends that the WRRB staff be a full participant in the Tłjchq – ENR Technical Working group without prejudice to the Board.	Accept
46		The Board recommends that criteria be developed by ENR and Tłjchq Government for assessing success or failure that would indicate when management actions are to be revised, including reinstatement of harvest for residents, outfitters and commercial tags. These criteria should be approved and implemented by the	Accept As per recommendations #4 and #6, these criteria will be developed as part of a long term management plan.

		Technical Working Group.	Both ENR and Tłıchǵ Government agree that wildlife resources should benefit everyone as long as allocation of these resources in Wek'èezhìi is consistent with the Tłıchǵ Agreement.
47	15. WRRB RECOMMENDATIONS ON DEVELOPMENT, HABITAT AND WILDLIFE MANAGEMENT	The Board recommends ENR continue discussions with the Government of Nunavut for identifying opportunities for calving ground protection.	Accept Note: This issue is also being raised in Nunavut by the Beverly and Qamanirjuaq Caribou Management Board (BQCMB). INAC is the primary land manager in the NWT and Nunavut. Discussion will need to take place with INAC and Nunavut.
48		The Board recommends ENR and INAC collaboratively develop best practices for mitigating effects on caribou during calving and post-calving, including the consideration of implementing mobile caribou protection measures.	Vary This can be tied into the long term management plan. Discussion will be needed to take place with INAC and Nunavut.
49		The Board recommends Tłıchǵ Government work towards development and implementation of a land use plan for Wek'èezhìi, including the consideration of thresholds for industrial land use.	Reject As per chapter 22.5 of the Tłıchǵ Agreement, it is the responsibility of Canada or GNWT to develop and implement a land use plan for Wek'èezhìi.
50		The Board recommends that ENR and INAC monitor landscape changes, including fires and industrial exploration and development, to assess potential impacts to caribou habitat.	Vary (as per response #37) ENR has carried out some cumulative effects modeling to assess effects to date of diamond mines on the Bathurst herd, and will continue to build on this modeling.
51		The Board recommends that ENR and Tłıchǵ Government assess the need for forest fire control in areas of important caribou habitat.	Accept
52	16. WRRB RECOMMENDATIONS ON WOLF MANAGEMENT	The Board recommends the harvest of wolves should be increased through the suggested incentives, except for assisting harvesters to access wolves on wintering grounds.	Accept
53		The Board recommends that focused wolf control not be implemented. If Tłıchǵ Government and ENR believe that focused wolf control is required, a management proposal shall be provided to the WRRB for its consideration.	Accept

54	17. WRRB RECOMMENDATIONS ON BISON MANAGEMENT	The Board recommends that ENR and Tłıchǵ Government submit a joint management proposal for wood bison in Wek'èezhii by the fall of 2011 to substantiate the establishment of zones and quotas made through the Interim Emergency Measure.	Vary 10 year Wood Bison Management Plans for the Nahanni, Slave River Lowland, and Mackenzie herds are set to be completed by the winter of 2012. Development of these plans will review current interim harvest measures for Wood Bison in Wek'èezhii. Draft plan will be provided to WRRB for approval. In December 2010, ENR completed a regulation change to extend the season to September 1 st .
55	18. WRRB RECOMMENDATIONS ON LONG-TERM CARIBOU MANAGEMENT	The Board recommends that ENR and Tłıchǵ Government work collaboratively to meet the obligations of Section 12.11 of the Tłıchǵ Agreement with support from WRRB staff as needed and a meeting be convened by January 2011.	Accept
56	19. IMPLEMENTATION	The Board recommends that the Tłıchǵ Government increase their capacity to ensure full participation in monitoring and management of caribou.	Accept
57		The Board recommends that ENR, Tłıchǵ Government and INAC implement its recommendations no later than January 1, 2011. ENR's Emergency Interim Measures, put into effect on January 1, 2010, should remain in place until then.	Vary Will be incorporated as part of the implementation plan.
58		The Board recommends that Tłıchǵ Government and ENR conduct consultations regarding the Recommendations Report prior to January 1, 2011.	Accept
59		The Board recommends that ENR and Tłıchǵ Government develop a detailed implementation and consultation plan incorporating the WRRB's recommendations as soon as possible.	Accept
60		The Board recommends that ENR develop and implement an effective and continuing enforcement and compliance program.	Accept The current protocol for ENR enforcement and compliance program is effective. However given the scope of the issues ENR has enhanced its program to be a partnership with other affected aboriginal organizations.

Process of Information Flow Adaptive Co-Management Framework



Technical Working Group

- a) *Tlicho Government* - ensure the community perspective, concern and TK monitoring is brought into decision making.
- b) *ENR/GNWT* - To ensure science indicators are brought into the decision making process
- c) *WRRB* – Overall instrument of wildlife management within Wek'eezhii.



June 17, 2011

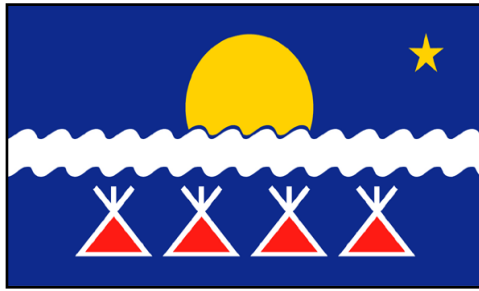
Dear Mr. Pryznyk:

The Department of Environment & Natural Resources (ENR) and Tłıchǫ Government (TG) have prepared an Implementation Plan (IP) in consultation with the Wek'èezhì Renewable Resources Board (WRRB) staff that will demonstrate how the parties will implement proposed management and monitoring actions to promote the recovery and stabilization of the Bathurst Caribou herd.

Sincerely,

Ernie Campbell, ADM
Environment & Natural Resources

Eddie Erasmus, Grand Chief
Tl'cho Government



REVISED JOINT PROPOSAL ON CARIBOU MANAGEMENT ACTIONS IN WEK'ÈEZHÌ

IMPLEMENTATION PLAN

Submitted to:

Wek'èezhì Renewable Resource Board

Submitted by:

Tłıchǫ Government

Behchokǫ, NT.

And

Department of Environment and Natural Resources,

Government of the Northwest Territories

Yellowknife, NT.

June 22, 2011

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DISCLAIMER

TG and ENR have been working jointly to review and propose commitments to address each of the Wek'èezhii Renewable Resources Board (WRRB) 60 Recommendations as seen in *Part B: Caribou Management Actions in Wek'èezhii – Implementation Plan Activity Sheets*. These proposed commitments listed by TG and ENR depend on available resources including funding for each fiscal year and may be subject to change as caribou management programs evolve as part of the adaptive management approach.

List of Acronyms

BNE	Bluenose East
CEC	Chief's Executive Council
ENR	Environment and Natural Resources, Government of the Northwest Territories
IP	Implementation Plan (this document)
IWC	Interim Wildlife Coordinator
LUP	Land Use Plan
NT	Northwest Territories
TCM	Tłıchǫ Community Monitor
TEWG	Tłıchǫ Ekwo Working Group
TG	Tłıchǫ Government
TLPD	Tłıchǫ Lands Protection Department
TWC	Tłıchǫ Wildlife Coordinator
TWG	Technical Working Group
YKDFN	Yellowknives Dene First Nation
WRRB	Wek'èezhìi Renewable Resources Board

INTRODUCTION & WRRB RECOMMENDATIONS ON CARIBOU IN WEK'EEZHII

This Implementation Plan (IP) for Caribou Management in Wek'èezhìi was developed by the Tłıchǫ Government (TG) and the Government of the Northwest Territories, Environment & Natural Resources, (ENR) in consultation with the Wek'èezhìi Renewable Resource Board (WRRB). The plan outlines activities and actions that will be carried out by the two governments from the 2010/2011 hunting season through the 2012/2013 hunting season, to manage and conserve barren-ground caribou in Wek'èezhìi in a spirit of respect, collaboration, and co-management with Tłıchǫ communities. The overall goal for the Bathurst herd is to promote stabilization and recovery, by reducing caribou cow and calf mortality rates. This will require recognition of traditional respect for caribou and the land, and an understanding of the relationship between caribou and people.

The caribou management actions proposed by TG, ENR and WRRB were developed in large part because of the rapid decline of the Bathurst herd from more than 100,000 in 2006 to an estimated 32,000 caribou in 2009. More detailed information about the background and context for this plan is in the Revised Joint Proposal on Caribou Management Actions in Wek'èezhìi submitted by TG and ENR to the WRRB at the end of May 2010, and in the Recommendations Report of the WRRB in Oct. 2010. These documents and related ones can be found on the WRRB web-site (www.wrrb.ca).

This implementation plan is viewed as a “living” or “working” document by TG, ENR and WRRB, recognizing that management will need to be adaptive, adjusting to new information about caribou, wolves and hunter harvest, and adjusting to the relative success of the management methods proposed. This implementation plan was structured to be consistent with the organization of the revised joint-management proposal to show how TG and ENR are implementing the proposed management actions; this format also incorporated and linked the WRRB's recommendations to the implementation plan. Throughout this plan, reference is made to 60 numbered recommendations from the WRRB Report in Oct. 2010 (listed in Table 1), to show how the plan addresses one or more of those recommendations¹. The overall implementation plan is referred to by WRRB recommendations 58, 59, and 60.

The time-frame for this implementation plan is primarily for the short-term, until a new population survey is carried out for the Bathurst herd in June 2012. However, TG, ENR and WRRB support the development of collaborative long-term plans for the Bathurst and Bluenose-East caribou herds that

¹ The reader is also referred to the Table of Contents in this Implementation Plan, where bracketed numbers in the section headings indicate WRRB recommendations from its October 2010 report. Similarly, WRRB recommendation numbers are bracketed within each of the section and subsection headers in the body of this plan, and summarized accordingly in the Activity Sheets.

will consider all factors that affect caribou, and respect the views of all interested governments and communities with responsibility for these caribou herds. The Tłıchǫ Agreement (Section 12.11) requires comprehensive management planning for barren-ground caribou in Wek'èezhìi.

TG, ENR, and WRRB recognize that management of the Bathurst and Bluenose-East caribou herds will depend in part on actions taken outside of Wek'èezhìi in other parts of the Northwest Territories (NT) and Nunavut. Joint management of the Bathurst caribou harvest under a separate agreement between the Yellowknives Dene First Nation (YKDFN) and ENR in Oct. 2010 is important to managing for the Bathurst herd's recovery, as the YKDFN traditional territory takes in a significant portion of the Bathurst herd's winter range and half the 300 Bathurst caribou to be hunted are assigned to the YKDFN.

Part A of this implementation plan is a narrative text that describes the approach to management, based on the joint TG-ENR caribou management proposal, WRRB recommendations of Oct. 2010, and implementation actions taken or planned as of April 2011. Part B of the plan is comprised of a linked set of Activity Sheets, which can be used as a stand-alone tabular summary of the narrative. The Activity Sheets summarize all management actions or activities completed to date or planned, with reference to the WRRB recommendations and TG-ENR proposal, as well as listing lead responsibilities, timing guidelines, and budget estimates for programs and projects. Budget commitments by TG and ENR are dependent on available funding for each fiscal year, and subject to change as caribou management programs evolve.

The overall time-frame for this plan is for caribou hunting seasons Aug. 2010-May 2011, 2011-2012, and 2012-2013. Elements of the plan carry over into planned long-term management plans for the Bathurst, Bluenose-East and Beverly/Ahiak caribou herds.

Table 1: WRRB Recommendations Oct. 2010 on caribou management in Wek'eezhii (in short form)

(BNE = Bluenose-East herd, B/A = Beverly/Ahiak herd)			
Recomm- endation #	Subject	Recomm- endation #	Subject
1	Harvest targets – report effectiveness	31	Composition surveys, calving grounds – continue
2	Bathurst caribou – close commercial harvest	32	Fall composition surveys (sex ratio) – continue
3	Bathurst caribou – close outfitted harvest	33	Bathurst population survey 2012 – carry out
4	Outfitter harvest – reinstatement	34	Wolf den surveys – continue
5	Bathurst caribou – resident harvest	35	Wolf condition monitoring – continue
6	Resident harvest – reinstatement	36	Wolf harvest monitoring – continue
7	Bathurst harvest – target $300 \pm 10\%$	37	Caribou habitat monitoring – continue
8	Bathurst harvest Tłı̨chǫ 225; others 75	38	Cow pregnancy rate (if cows taken) - monitor
9	Bathurst harvest sex ratio 85 bulls:15 cows	39	Calving reconnaissance surveys – continue
10	Bathurst harvest >300 – close; TAH possible	40	Caribou harvest monitoring via TK program
11	Bathurst harvest >45 cows – close; TAH possible	41	TG & ENR report 3 times/year; April, Sept. & December
12	Bathurst caribou – map for fall hunt	42	TK conservation education via elders
13	Bathurst caribou – map for winter hunt	43	Hunter/conservation education
14	BNE caribou – close commercial, outfitted, resident harvest	44	Adaptive co-management framework (TG,ENR,WRRB)
15	BNE caribou – harvest target 2800 caribou	45	Adaptive co-management – include WRRB staff in meetings
16	BNE caribou – harvest sex ratio 85 bulls:15 cows	46	Adaptive management – criteria for success/failure & altered management
17	BNE caribou – harvest >2800 – close harvest	47	Talk to NU re calving ground protection
18	BNE caribou – harvest >420 cows – close harvest	48	Best practices calving & post-calving
19	BNE caribou – map for fall hunt	49	Land use plan for Wek'eezhii
20	BNE caribou – map for winter hunt	50	Monitor landscape change (fire, development)
21	BNE caribou – no harvester assistance	51	Need for forest fire – assess
22	BNE caribou - TG overlap agreements with NU and Sahtu	52	Wolf harvest – increase via incentives; no focused wolf control
23	B/A caribou – close commercial, outfitted, resident harvest	53	Focused wolf control – TG & ENR to submit proposal if required
24	B/A caribou – no harvester assistance	54	Bison - joint management proposal
25	B/A caribou - TG overlap agreements NU and Akaitcho	55	Long-term caribou management planning
26	B/A caribou – map fall hunt	56	TG to increase capacity for caribou management & participation
27	B/A caribou – map winter hunt	57	Implement WRRB recommendations Jan. 1, 2011
28	TG – implement TK caribou program	58	Consultation on WRRB recommendations
29	Spring recruitment surveys – continue	59	Implementation plan (ENR & TG)
30	Health & condition monitoring (if cows taken)	60	Enforcement & compliance program

PART A. NARRATIVE TEXT

1.0 Implementing Management Actions for Barren-ground Caribou Herds

Due to the Bathurst herd's rapid decline 2006-2009, a major emphasis in the joint TG-ENR management proposal was on harvest management and secondarily on wolf management to help stabilize this herd. Monitoring and management were also proposed for the Bluenose-East herd, and to a lesser extent for the Beverly/Ahiak herd, which rarely occurs in Wek'èezhìi.

1.1 Bathurst herd – Harvest & Wolf Management [1-13]

The WRRB focused most of its recommendations on attempting to halt and reverse the rapid decline of the Bathurst herd. Both governments and the WRRB recognized that many factors affect barren-ground caribou herds, and that some of these are weather-dependent and beyond human control. In the short-term, the need to reduce mortality rates of cows, and secondarily mortality rates of calves, was the highest priority for management. Reduction or elimination of cow harvest was effective in stabilizing the Bluenose-West and Cape Bathurst herds, which like the Bathurst herd had been declining rapidly in the early 2000s.

Population modeling described in other reports² (see WRRB web-site) suggested that harvest of about 300 caribou/year from the Bathurst herd would have little additional effect on population trend, because the herd's cow mortality rates would then largely be the result of natural factors, not harvest. To further increase the herd's chances of stabilizing and recovering, increased wolf harvest was proposed by TG and ENR and supported by WRRB.

1.1.1 Bathurst herd – Harvest targets vs. strict limits [1]

Discussions between TG and ENR in April and May 2010 suggested that “hard” limits to caribou harvest had a history of association with the heavy hand of government this occurred most recently, without extensive Tłıchǫ community consultation, through the interim emergency hunting ban enacted by the GNWT in January 2010. Tłıchǫ hunters and people have a long intertwined history with caribou, and a return to traditional respect for caribou and land had to be part of the overall approach to Bathurst caribou management. Caribou harvest management for Tłıchǫ hunters and communities was most likely to succeed if it was shaped by them in ways that made the most

² See Boulanger, J. and Gunn, A. (2007) *Exploring possible mechanisms for the decline of the Bathurst Herd of Barren-Ground Caribou using Demographic Modeling*. ENR-GNWT Manuscript Report No. 175

Nesbitt, L. and Adamczewski, J. (2009) *Decline and Recovery of the Bathurst Caribou*. Workshop Report.

Boulanger, J. and Gunn, A., Croft, B. and Adamczewski, J. (2009) *Exploration of the decline of the Bathurst caribou herd using a data-driven demographic model*. Manuscript submitted to Canadian Journal of Zoology Dec 2009.

Boulanger, J. (2010) *Simulations of Harvest and Recovery for the Bathurst Caribou Herd, with Annual Variation*. DRAFT Report March 12, 2010)

Adamczewski, J., Boulanger, J., Croft, B., Cluff, D., Elkin, B., Kelly, A., D'Hont, Nicolson, C. (2009) *Decline in the Bathurst Caribou Herd 2006-2009: A Technical Evaluation of field Data and Modeling*. DRAFT Technical Report.

sense. As a result, the initial approach to harvest limitations was to use somewhat flexible harvest targets rather than strict limits that would be seen as imposed from outside. Greater detail on this issue is provided in the joint caribou management proposal for Wek'èezhìi. The WRRB recommendation report accepted this approach, but WRRB retained the right to declare a Total Allowable Harvest (TAH) if the harvest target approach was not successful in limiting the harvest of Bathurst caribou.

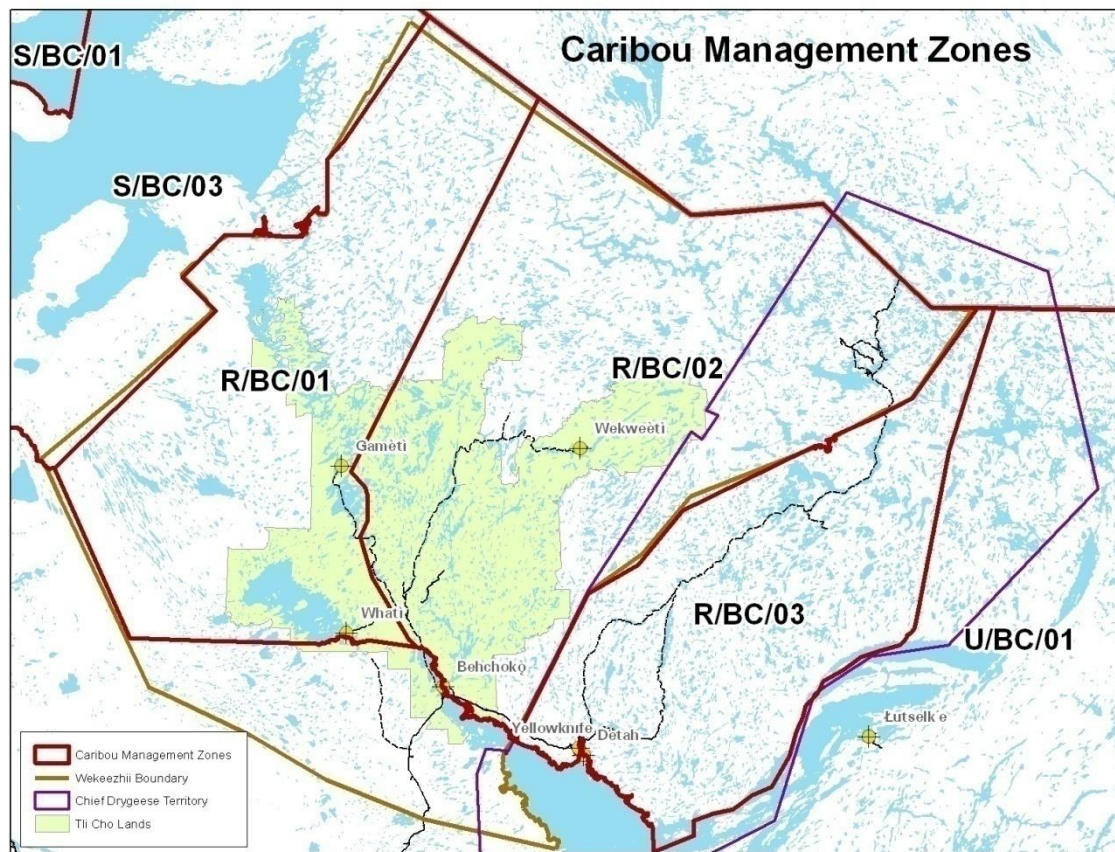
TG, ENR and WRRB recognize that the “harvest target” approach to limiting caribou harvest used for the first time in 2010-2011 is untested in this region. Harvest numbers and reviews of the approach will occur in May 2011 when the winter harvest season is closed.

WRRB recommendation 1 accepted the use of harvest targets over strict limits or a Total Allowable Harvest.

[1.1.2 Bathurst herd – commercial, resident & outfitted harvest \[2,3,4,5,6\]](#)

In keeping with the Tłı̨chǫ Agreement and other northern land claims and treaties, TG and ENR proposed that commercial, outfitted and resident harvest of Bathurst caribou be reduced to zero in the short term. WRRB recommendations 2, 3, and 5 agreed with this approach. WRRB recommendations 4 and 6 requested that TG and ENR make public their views on reinstatement of commercial, outfitter and resident harvest. In response, TG and ENR varied those recommendations and proposed that discussions about reinstatement of harvest for users other than aboriginal harvesters are best addressed through collaborative and comprehensive caribou management planning. Elsewhere in the NT, co-management boards have taken the lead on restricting or closing harvest of caribou for conservation reasons, and on harvest allocation. ENR and TG suggest that the appropriate steps in harvest planning are first to establish goals or objectives for each herd, second to determine acceptable sustainable harvest levels depending on the herd's status and goals, and the third is determining allocation for hunter groups. These steps are best addressed through collaborative and comprehensive long-term planning for each herd.

Figure 1: Map of Wek'èezhii, Chief Drygeese Territory, and caribou management zones.



1.1.3 Bathurst herd – Aboriginal harvest targets and harvest sex ratio [7,8,9,10,11]

TG & ENR agree with WRRB recommendation 7 on the harvest target of $300 \pm 10\%$ Bathurst caribou and will monitor harvest closely and report to WRRB through the hunting season. TG and ENR suggest regulation changes or other restrictions should be jointly determined by TG, ENR, & WRRB if harvest targets for Bathurst total harvest and/or cow harvest (recommendations 7-11) are exceeded. WRRB retains the option of recommending a Total Allowable Harvest (TAH) if the harvest targets are exceeded (recommendations 10 & 11).

In their joint proposal, TG and ENR proposed that the sex ratio in the harvest of 300 Bathurst caribou should be at least 80% bulls. WRRB recommendation 9 proposed that the harvest sex ratio should be at least 85% bulls. TG and ENR varied the recommendation with the rationale that the originally proposed 80% sex ratio is an appropriate management objective and that a 5% increase in proportion of bulls provides little to no population-level benefit given that the overall harvest target is ca. 300 Bathurst caribou. The WRRB's suggestion to increase the composition of bulls by 5% translates to 15 fewer cows being taken (45 cows as opposed to 60) as part of the harvest target of 300. At this scale of herd size and trend, a high proportion of cow mortality is due to natural

causes and in effect the herd is close to being naturally regulated. ENR's surveys and estimates of population trend would not be able to detect a small change in cow mortality of this size, from a herd of 32,000 caribou.

Division of Aboriginal harvest

In recognition of the Chief Drygeese traditional territory encompassing a large part of the Bathurst winter range and the traditional hunting of Bathurst caribou by YKDFN members, the TG/ENR joint caribou proposal called for an equal division of the 300 Bathurst caribou by Tłıchǫ and YKDFN hunters. This division was also agreed to by ENR and YKDFN in a separate agreement in Oct. 2010. WRRB recommendation 8 proposed that Tłıchǫ hunters should have 225 of the 300 Bathurst caribou, TG and ENR varied that recommendation to retain the 150:150 division first agreed on by TG, ENR and YKDFN.

Possible Total Allowable Harvest

The recent and rapid decline of the Bathurst herd from 2006 to 2009 prompted ENR to enact a no-hunting zone for the main Bathurst winter range in early 2010. WRRB recommendations 10 and 11 indicated that the board took the herd's decline very seriously as well; while accepting TG and ENR's preference for harvest targets over strict limits, WRRB has the authority to impose a Total Allowable Harvest (TAH) if the overall target of 300 Bathurst caribou or the cow target number of 60 cows is exceeded (recommendations 10 and 11 as varied, respectively). TG and ENR have monitored the Bathurst and Bluenose-East caribou harvest by Tłıchǫ hunters closely in the winter of 2010-2011, and cooperative efforts with the YKDFN are also tracking YKDFN winter harvest closely. If the cow harvest target is reached or materially exceeded, TG and ENR will declare an end to cow harvest and a bulls-only hunt from that point on. Similarly, once the limit of 300 caribou is reached or materially exceeded, TG and ENR will declare Bathurst caribou hunting closed for the year, and Tłıchǫ hunters will be asked to hunt other caribou for the remainder of the winter.

1.1.4 Bathurst herd – fall and winter range maps and hunter harvest [12, 13]

ENR has made available to TG, WRRB and YKDFN maps of radio-collar locations of Bathurst, Bluenose-East and Beverly/Ahiak caribou during fall and winter 2010-2011. This spatial information is used to attribute harvest to one of the three herds, and could be used to assist hunters in accessing areas where bulls are abundant.

1.2 Administering Tłıchǫ Caribou Harvest [7-11, 40, 41, 45, 46, 54, 56]

In this section, harvest management measures carried out in winter 2010-2011 or planned for 2011-2012 are reviewed briefly.

Harvest monitoring is described in greater detail in section 2.2.3; however, harvest management for the Bathurst herd had to include close monitoring, particularly as the winter harvest approached the target limits. WRRB recommendations 7 & 9-10 supported a total Bathurst harvest

target of $300 \pm 10\%$, recommendation 11 as varied by government supported a sex ratio of 80% bulls, and a cow harvest limited to 60 cows. Caribou harvest by Tłıchǫ and YKDFN hunters for 2010-2011 was tracked by a combination of community monitors, check-stations and interviews in the communities. These methods were used in 2007-2008 and 2008-2009 to monitor caribou harvest by Tłıchǫ communities in joint ENR- Tłıchǫ programs. For the 2011-12 harvest season, revised methods of administering the Tłıchǫ harvest will be developed and implemented, consistent with WRRB recommendation 40 for monitoring Tłıchǫ harvest via Traditional Knowledge study methods.

[1.2.1 Planning and managing hunting for Tłıchǫ hunters \[7-11, 40, 54\]](#)

WRRB recommendations 21 and 24 proposed that no assistance be provided to caribou hunters accessing the Bluenose-East and Beverly/Ahiak herds. TG and ENR rejected those recommendations and further suggest the limited assistance to harvesters provided for several years by GNWT ITI should be continued and could assist in achieving harvest objectives such as a bull-focused harvest. In addition, the agreement signed in October 2010 by YKDFN and ENR included limited assistance to YKDFN hunters accessing the Beverly/Ahiak herd.

The Tłıchǫ Government receives \$141,000 in CHAP funding from GNWT ITI every year, which is divided between the 4 Tłıchǫ communities. The chiefs of each community receive this funding and disburse it at their own discretion. Previously this money was used for fall hunts and to assist trappers with the cost of fuel and supplies. In the harvest season of 2010-2011 this money was used to help hunters gain access to the BNE animals as the BNE caribou are less accessible to Tłıchǫ hunters than the Bathurst caribou. ENR made a commitment to Wekweètì to assist in clearing an existing trail to Hottah Lake so that hunters from that community could hunt BNE caribou. These CHAP funds were also used by some communities to access moose and bison.

In the coming hunting season, the Tłıchǫ Government and ENR will consider limited assistance and/or incentives to harvesters, youth and elders for educational purposes to promote traditional hunting values and principles. This would be in the form of well managed and monitored community hunts in the fall or late winter where harvesters and youth would have an opportunity to learn the traditional and respectful way of harvesting and handling caribou. Traditional Tłıchǫ fall hunts focused on taking limited numbers of bulls.

[1.2.2 Authorization Cards \[1,40-41\]](#)

The Tłıchǫ Government and ENR (with recommendations made by the Tłıchǫ Ekwo Working Group) developed an authorization card that will be required for the Tłıchǫ to harvest Bathurst caribou in R/BC/02 and R/BC/03 in 2011-2012.

ENR and the YKDFN have also developed an authorization card that is required for YKDFN hunters to harvest Bathurst animals in R/BC/02 and R/BC/03. These cards will be given to harvesters in R/BC/02 and R/BC/03. One card is equal to one caribou and hunters in R/BC/02 and R/BC/03 are expected to carry them when harvesting caribou. After harvest they are expected to return the card to the individual they obtained the card from. Hunters will be expected to report their harvest to community monitors. This will ensure greater accountability and monitoring of the harvest. Once all authorization cards have been given out TG and ENR will conduct public education and consultation to encourage harvesters to stop harvesting in zones R/BC/02 and R/BC/03. If the cow harvest target is reached or materially exceeded, TG and ENR will declare an end to cow harvest and a bulls-only hunt from that point on. Similarly, once the limit of 300 caribou is reached or materially exceeded, TG and ENR will declare Bathurst caribou hunting closed for the year, and Tłıchǫ hunters will be asked to hunt other caribou for the remainder of the winter. This will help to monitor the harvest in these two zones and ensure that enforcement is appropriately used if needed.

At the end of the hunting season in May of each year, this system will be examined and a report will be written by TG and ENR with recommendations to improve the system the following year. WRRB recommendation 1 requests annual reporting on the effectiveness of the harvest target approach, and recommendations 40 and 41 address harvest monitoring and reporting on harvest management.

1.2.3 Community Wildlife Monitors (winter 2010-2011) [1, 40, 41, 44-46]

For the winter harvest of 2010-2011, ENR hired one community monitor for Wekweètì, Gametì and Whatì. The community wildlife monitor (CWM) will be a seasonal position commencing in December and ending at the end of April or whenever the winter hunting season ends.

The CWM and ENR staff jointly monitored the harvest in each Tłıchǫ community by interviewing active hunters regularly during the caribou hunting season to document the location, sex and age of each caribou harvested. The CWM reported to the North Slave office of ENR. They regularly updated the Tłıchǫ Government. The CWM assisted ENR staff when required to interview hunters travelling along the winter road.

ENR prepared a map of numbers of caribou harvested for each herd by location, sex and age every two weeks. The map was made available to the Tłıchǫ Government Lands Protection Department, ENR, WRRB and SRRB.

TG and ENR staff will prepare a joint annual report on the overall success of the harvest target approach in June of 2011, 2012 and 2013, as requested by WRRB recommendation 1. Recommendation 41 requests reporting by TG and ENR at least 3 times annually and recommendations 44-46 address adaptive co-management where review of information and management is used to adjust monitoring and management actions as needed.

[1.2.4 Winter Road Check Station \[1, 40, 41\]](#)

ENR hired and maintained the winter road check station attendants. The check station was in operation from Jan 1, 2011 until the winter road closed for the season in early April. The winter road check station attendants reported to ENR. ENR will report harvest data to the TG and WRRB in its regular reports combining harvest data from community monitors and the winter road check station.

A final report will be written at the end of season to assess the success of the winter road check station and to make recommendations for future hunting seasons, addressing WRRB recommendations on harvest target effectiveness (1), harvest monitoring via the TK project (40), and periodic reporting to WRRB and the public (41).

[1.3 Wolf harvest \[52, 53\]](#)

Wolves are the single most important predator on caribou (other than man) and take calves and adults throughout the year. A large part of the natural mortality of barren-ground caribou is attributed to predation. Given the overall focus of short-term management for Bathurst caribou and reduction of cow and calf mortality rates, TG and ENR recommended that wolf harvest be increased through incentives to wolf hunters and trappers. The measures in place for winter 2010-2011 were to increase incentives for wolf carcasses from \$100 to \$200, and fur incentives for well-handled wolf pelts from \$200 to \$400. More intensive wolf management would be considered if initial measures proved unsuccessful and the Bathurst herd continued to decline. WRRB recommendation 52 supported increased incentives for wolf carcasses and pelts, but requested a comprehensive proposal to WRRB (recommendation 53) prior to any more intensive wolf management being undertaken.

A summary of wolf harvest numbers, as well as new information from summer wolf den surveys and wolf condition assessment will be reported by ENR and TG as the information becomes available, and initially in May 2011. Monitoring of wolves and associated WRRB recommendations are found in section 2.2.6 (Wolf harvest and wolf monitoring).

[1.4 Bluenose East herd – Harvest Management \[14,15,16,17,18, 19,20,21,22\]](#)

The Revised Joint Proposal on Caribou Management Actions in Wek'èezhii submitted to WRRB at the end of May 2010 and the WRRB recommendations on this proposal were both finalized before population size estimates for the Bluenose-East (BE) herd from June 2010 and July 2010 were available. The revised joint proposal assumed that the herd had continued to decline at the same annual rate as from 2000 to 2006, and the WRRB recommendations were also made without the final population estimates known. Fortunately, the most recent data on trend and herd size of the BE herd were better than expected. Both the calving and post-calving photo surveys indicated a herd of about 100,000, with good calf recruitment in recent years, and an increasing trend from 2006 to 2010. In view of these findings, recommended harvest for the BE herd will need to be re-

evaluated. Allocation among aboriginal governments and communities will also need to be re-considered.

A management planning process currently underway for the Bluenose-West, Bluenose-East, and Cape Bathurst herds is led by NT co-management boards as well as representatives from Nunavut. Over the short-term, co-management boards and aboriginal governments in the Sahtu, Dehcho, Inuvialuit, Tlicho and Akaitcho are currently discussing harvest management recommendations for the BNE herd. These may include a proposed harvest limit, sex ratio of harvest and regional harvest management allocations. The TWG will be involved in implementation of recommendations once received.

[1.4.1 Bluenose-East herd – Resident, Commercial and Outfitted Harvest \[14\]](#)

As with the Bathurst herd, commercial, outfitted and resident harvest for the BE herd were reduced to zero by GNWT regulation changes of Jan. 2010, as requested by WRRB recommendation 14.

[1.4.2 Bluenose-East herd – Aboriginal Harvest \[15-20\]](#)

WRRB Recommendation 15 proposed an aboriginal harvest target for the BE herd of 2800 caribou with a sex ratio (Recommendation 16) of 85:15 (bulls:cows), with steps to be taken (Recommendation 17) if this is exceeded by 10%, or (Recommendation 18) more than 420 cows are taken. As with the harvest sex ratio for the Bathurst herd, TG and ENR varied recommendation 16 to an 80:20 bull to cow ratio. Pending new or revised aboriginal harvest recommendations for the BE herd, TG and ENR support WRRB's recommendations of a conservative aboriginal harvest with a focus on bulls. The proposed target will be finalized through discussion with wildlife co-management boards and aboriginal governments in the Sahtu, Dehcho and Wek'èezhii. ENR and TG will work with other aboriginal governments and communities to track their harvest of this herd.

ENR made available to TG, WRRB and YKDFN maps of radio-collar locations of Bathurst, BE and Beverly/Ahiak caribou for the fall and winter seasons 2010-2011. Collar locations were used to attribute harvested caribou to one of the three herds. ENR worked with TG and WRRB in making these assessments. This information may be supplemented in future by aerial reconnaissance surveys to locate concentrations of caribou. This spatial information may also be used to direct hunters to areas with substantial numbers of bulls.

WRRB Recommendations 19 and 20 requested maps that show where BE caribou are considered to be for the fall and winter hunting seasons. In practice, radio-collar locations of Bathurst and BNE caribou were mapped with known caribou harvest locations through winter 2010-2011 and reviewed by TG, ENR and WRRB to assign harvest numbers to the two herds and track caribou movements.

[1.4.3 Bluenose-East herd – Assistance for Aboriginal Harvest \[21\]](#)

The Tłı̨chǫ Government and ENR agree that a cautious approach to harvest management for the Bluenose-East herd is still required. As described earlier in section 1.2.1, careful use of assistance to

hunters could help in achieving recommended harvest totals and sex ratio. WRRB recommendations 21 and 24 recommended no assistance be provided to caribou hunters accessing the Bluenose-East and Beverly/Ahiak herds. TG and ENR rejected the recommendation suggesting instead that the limited assistance to harvesters provided for several years by GNWT ITI should be continued and could assist in achieving harvest objectives such as a bull-focused harvest by a resumption of traditional fall canoe hunts for bulls. In addition, the agreement signed in October 2010 by YKDFN and ENR included limited assistance to YKDFN hunters accessing the Beverly/Ahiak herd.

[1.4.4 Overlap Agreement between Tłıchǫ Government and Nunavut and Sahtu \[22\]](#)

The Tłıchǫ Government will consider the WRRB recommendation on TG establishing harvest overlap agreements with the Sahtu region and Nunavut. TG will provide a response to the WRRB once the recommendation has been internally reviewed.

[1.5 Beverly/Ahiak Herd – Harvest Management \[23, 24, 25, 26, 27\]](#)

Based on radio-collar location information, caribou of the Beverly/Ahiak herd have rarely been found within Wek'èezhii. Occasionally Tłıchǫ hunters have hunted in the Lutsel K'e area, which often has access to this herd in the winter. Reconnaissance surveys of the calving grounds of this herd in the Queen Maud Gulf area have suggested a declining trend 2006-2010, but the herd remains a substantial one. A population survey is planned for June 2011, led by the Government of Nunavut and supported by GNT-ENR. In general, the joint TG-ENR caribou management proposal supported recommendations of the Beverly and Qamanirjuaq Caribou Management Board (BQCMB), which has recommended better harvest tracking, restricting harvest to what hunters need, and promoting bull harvest.

[1.5.1 Beverly/Ahiak Herd – Resident, Commercial and Outfitted Harvest \[23\]](#)

As for the Bathurst and Bluenose-East herds, commercial, outfitted and resident harvest for the Beverly/Ahiak herd were reduced to zero by GNWT regulation changes of Jan. 2010, as called for by WRRB recommendation 23.

[1.5.2 Beverly/Ahiak Herd – Aboriginal Harvest and Incentives \[24, 26, 27\]](#)

GNWT through the Department of Industry, Tourism and Investment (ITI) has for several years made limited funds available to aboriginal hunters and communities, including Lutsel K'e, for caribou harvest in the winter. This support will continue as in the past, but the caribou harvest is unlikely to be greater than in past winters. Most of the winter harvest of this caribou herd is thought to be from communities in northern Saskatchewan. ENR has a cost-shared program with the Prince Albert Grand Council and Saskatchewan Environment in northern Saskatchewan, to build community relations and to improve tracking of caribou harvest in these communities. ENR will be working with communities such as Lutsel K'e to track their caribou harvest.

ENR also has an agreement with the Yellowknives Dene First Nations (YKDFN) on management of caribou harvest in the Chief Drygeese traditional territory, which includes limited support for

YKDFN hunters accessing the Beverly/Ahiak herd. As a result WRRB Recommendation 24 requesting that assistance and/or incentives not be made to aboriginal hunters accessing the Beverly/Ahiak herd was rejected by government.

ENR made available to TG, WRRB and YKDFN maps of radio-collar locations of Bathurst, BE and Beverly/Ahiak caribou through the fall and winter hunting seasons. WRRB Recommendations 26 and 27 requested maps that show where Beverly/Ahiak caribou are considered to be for the fall and winter hunting seasons.

1.5.3 Overlap Agreement between the Tłı̨chǫ Government, the Nunavut Government and Akaitcho [25]

The Tłı̨chǫ Government currently has an Agreement with Akaitcho Territory Dene First Nations on overlapping interests in lands and resources. The Tłı̨chǫ Government will consider the recommendation and begin internal discussions. TG will provide a response to the WRRB once the recommendation has been considered.

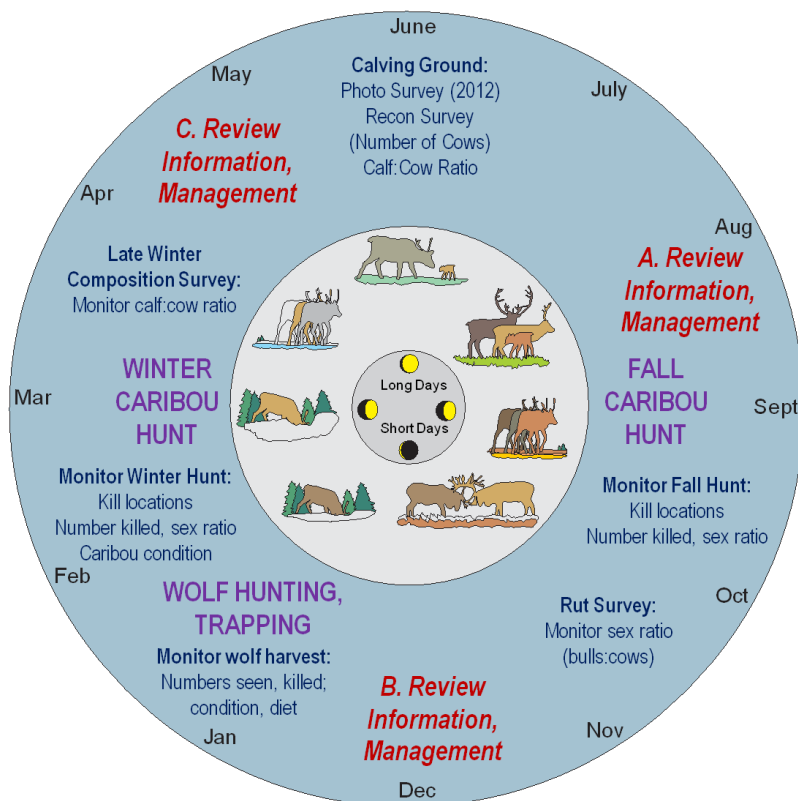


Figure 3: Adaptive Co-Management Annual Caribou Cycle

1.6 Monitoring Actions within an Adaptive Co-Mgmt Context (Cycle; 44,45,46)

In their joint caribou proposal in 2010, TG and ENR proposed using an annual cycle built around the seasons of the caribou, caribou harvest, and information review, as shown in the diagram above. In this cycle, information would be reviewed jointly by TG and ENR at 3 times of year – at the end of the winter hunting season in May, prior to the fall hunting season in August, and during mid-winter in December. WRRB recommendation 41 supports this approach and requests that information be reported to WRRB and the public at 3 times of year (April, September and December). ENR and TG accepted that recommendation but propose herein that late May would be a better time to review the end of the winter hunting season, given that hunting may extend into early May, depending on snow-melt.

At the May meeting, key information to review would be (1) the winter's caribou harvest information, (2) the success of the harvest monitoring and management, (3) wolf harvest information, (4) any health and condition monitoring results and (5) results of the spring caribou recruitment survey. This would also be an appropriate time to plan how to adapt harvest management for fall 2011 and winter 2011-2012 and changes to monitoring or overall management.

If the fall meeting occurs before hunting begins, this would be an appropriate time to (1) finalize plans for the hunting season, (2) review information from the June calving reconnaissance survey, and (3) review any new information on fires, relative severity of the insect season, or other environmental information.

At the December meeting, information to review could include (1) results of any fall composition surveys, (2) fall caribou harvest and condition information, and (3) any initial information on winter caribou harvest. This meeting would also provide an opportunity to refine winter harvest management plans.

Given the importance of monitoring the Bathurst caribou harvest, TG, ENR and WRRB agree that updates on caribou harvest and other information should occur on a regular basis through the hunting season. This was the case through the 2010-2011 hunting season.

WRRB recommendations 44 and 45 address adaptive co-management and information flow that will include WRRB as a partner with TG and ENR. TG and ENR agree with these recommendations and WRRB staff have been participants in TWG meetings through winter 2010-2011. Recommendation 46 requests that TG and ENR establish criteria for establishing success or failure of management actions, as well as how management actions might be altered based on these criteria. Table 4 from the Revised Joint Proposal on Caribou Management Actions in Wek'èezhii May 2010 is included in section B tables in this plan. It suggests criteria for monitoring outcomes

that would mean either amending management (Bathurst herd declining further) or staying the course (Bathurst herd stable or increasing).

2.0 Traditional Knowledge and Technical Monitoring and Reporting [28-40]

Given the rapid decline of the Bathurst caribou herd 2006-2009, close monitoring of the herd's trend, productivity, and harvest were recommended by TG and ENR and supported by WRRB.

2.1 Tłıchǵ Knowledge Research and Monitoring Program [28-39]

Recommendations from WRRB requested that information about caribou harvest by Tłıchǵ hunters be recorded via the *Special Project, Using Tłıchǵ Knowledge to Monitor Barren Ground Caribou* of the overall Traditional Knowledge Research and Monitoring Program. In addition, WRRB recommendations requested that hunters' information about caribou condition, pregnancy rate and other biological observations and insights be recorded via the TK project, in parallel with technical studies and surveys carried out by ENR.

The Tłıchǵ Government agrees with recommendations 28-42 of the *Recommendation Report related to the Revised Joint Proposal on Caribou Management Actions in Wek'èezhii*. The Tłıchǵ Government is committed to documenting and reporting on observations and trends observed by caribou harvesters and elders. Implementation of the 'Tłıchǵ Knowledge Research and Monitoring Program: Special Project, Using Tłıchǵ Knowledge to Monitor Barren Ground Caribou' will take approximately eight months and is expected to be implemented by September 2011.

The traditional monitoring system continues among the hunters and elders. Nevertheless the logistics of realizing a system that will rigorously and accurately document and report harvesters' observations and trends has yet to be initiated. The program requires trained Tłıchǵ researchers, offices, and equipment, all of which require a realistic annual budget and extensive fund-raising with those who will also benefit from Tłıchǵ knowledge research and monitoring.

The Tłıchǵ Government will inform the WRRB when this program has been implemented and ensure that data collection and sharing reflect WRRB recommendations.

WRRB recommendations 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, and 41 make reference to the Tłıchǵ TK program, either in recording caribou harvest by Tłıchǵ hunters or in recording hunters' observations about caribou, wolves and habitat. Detailed responses to these WRRB recommendations, as they refer to Tłıchǵ hunters, will be provided in future.

2.2 Biological monitoring & reporting on caribou, wolves & harvest [28-40]

The monitoring actions described in this section are intended to enable close monitoring of the Bathurst herd's trend, productivity and harvest, given the herd's rapid decline 2006-2009 and the

goal of promoting stabilization and recovery of the herd. Monitoring of wolf abundance and harvest are also summarized in this section, recognizing that this predator affects mortality rates of caribou calves and adults. Actions and activities described here are primarily of a technical nature, although the intent is to consider technical and traditional knowledge in tandem when recommending changes to monitoring and management. Activities and actions in this section are grouped into 6 categories: Caribou Surveys, Radio-collars, Caribou Harvest Monitoring, Caribou Health and Condition Monitoring, Wolf Harvest and Wolf Monitoring, and Reporting to WRRB and the public.

2.2.1 Caribou Surveys [29, 31-33,39]

The surveys described here have all been previously carried out for the Bathurst herd. The most expensive surveys are the ones that produce an estimated number of breeding females in the herd and overall herd size. Less expensive monitoring surveys provide an index of herd trend or productivity, which can serve as indicators of population change or continuity.

Late-winter recruitment surveys

Composition surveys in late winter (usually March or early April) provide a calf:cow ratio that is an index of the numbers of calves that were born the previous year and survived to 10 months of age. Ratios of consistently less than 20 calves: 100 cows are indicative of declining herds, while consistent ratios of 40 or more calves: 100 cows are typically indicative of increasing herds. These surveys will be carried out by ENR staff and observers from TG and YKDFN.

ENR will conduct a power analysis to assess the frequency with which these surveys should be carried out to adequately monitor trends in recruitment over time. Recommendations for the frequency of surveys should also consider herd trend (increasing, decreasing or stable) and whether the herd is at high, medium or low numbers. Results will be made available to TG and WRRB and other co-management partners.

WRRB recommendation 29 requests that these recruitment surveys continue.

Calving reconnaissance surveys and estimation of cow survival rates

Standardized reconnaissance surveys carried out by small fixed-wing aircraft over caribou calving grounds have been used by ENR to map distribution of calving females in June. Flight lines are flown 5 or 10 km apart and numbers of caribou and sex and age of groups of caribou are recorded. These surveys have been shown to be a repeatable method that provides an index of the number of breeding cows in a herd, if carried out in consecutive years or at regular intervals. These surveys are the lead-in to more comprehensive calving photographic surveys of the Bathurst herd and other barren-ground caribou herds. These surveys will be carried out by ENR staff and observers from TG and YKDFN.

In recommending that spring recruitment surveys be conducted for the Bathurst herd, WRRB also recommended that ENR should explore methods of estimating cow survival rates that do not involve large numbers of radio-collars. Currently there are no other practical ways of estimating

caribou cow survival. Twenty or fewer radio-collars are not an adequate sample size for estimating adult female survival rates with a reliable degree of precision. Instead, ENR is proposing that an index of breeding cow numbers can be derived from consistent annual or regular calving reconnaissance surveys. The main reason for assessing cow survival rate in caribou is that population trends are closely tied to cow survival rate and that appropriate interpretation of calf:cow and bull:cow ratios relies on an understanding of trends in cow survival. The calving reconnaissance surveys provide an index of breeding cow numbers in the herd. Because breeding cows are the most important and most numerous proportion of the herd, these surveys will provide a measure of trend in cow numbers, hence a measure of population trend.

Later in 2011, ENR will conduct a power analysis to assess the frequency with which these surveys should be done to adequately monitor trends in breeding cow numbers over time. Recommendations for the frequency of surveys should also consider herd trend (increasing, decreasing or stable) and whether the herd is at high, medium or low numbers. The results will be made available to TG, WRRB and other co-management partners.

WRRB recommendation 39 requests that these calving reconnaissance surveys continue. Recommendations 29 & 32 refer to means of assessing cow survival rate other than collars.

Composition surveys on the calving grounds to assess productivity

ENR has carried out composition surveys on the Bathurst calving grounds to provide an estimate of herd pregnancy rate or initial productivity. Additional information about pregnancy rate can be gathered from health and condition studies of cows harvested during winter, although the sample numbers are often less than 100 cows, whereas the composition surveys on the calving grounds include thousands of cows. If the pregnancy rate is lower than normal, these surveys and/or pregnancy data would provide an early warning of poor conditions for the herd, and might be used to adjust management of harvest or predators.

There are ongoing concerns about disturbance to cows and newborn calves on calving grounds. Helicopter-based composition surveys on calving grounds have evolved accordingly to eliminate low flying over high densities of cows and calves and minimize direct disturbance to large groups of caribou. The majority of the classification is carried out by observers on the ground after the helicopter has landed at some distance from the caribou. These surveys will be carried out by ENR staff and observers from TG and YKDFN.

Later in 2011, ENR will conduct a power analysis to assess the frequency with which these surveys should be carried out to adequately monitor trends in pregnancy or initial productivity over time. Recommendations for the frequency of surveys will also consider herd trend (increasing, decreasing or stable) and whether the herd is at high, medium or low numbers. The results will be made available to TG, WRRB and other co-management partners.

WRRB recommendation 31 recommends continuing these composition surveys on the calving grounds.

Fall composition surveys to assess sex ratio

Composition surveys have been carried out in the fall by ENR, usually at the peak of the rut in late October when all sex and age classes are mixed together and a representative sample can be obtained. For caribou herds where the calving photo-survey is used, an estimate of sex ratio is needed, to extrapolate from the estimate of breeding cows on the calving ground to overall herd size. Fall surveys also provide an opportunity to assess the calf:cow ratio, as calf mortality is usually highest during the first 5 months after calving. A population estimate based on a calving photo-survey in June 2012 will require at least one and preferably two estimates of fall sex ratio. The next fall composition surveys for the Bathurst and Beverly/Ahiak herds will be carried out in 2011.

Concerns have been raised in some communities about the effects of a bull-focused harvest on sex ratio in the caribou herds. Monitoring of the fall sex ratio can provide an assessment of whether the sex ratio is within normal range or has dropped to lower levels. These surveys will be carried out by ENR staff and observers from TG and YKDFN.

Later in 2011, ENR will conduct a power analysis to assess the frequency with which these surveys should be carried out to adequately monitor trends in sex ratio over time. Recommendations for the frequency of fall surveys should also take into account whether a calving photo-survey is planned, the herd trend (increasing, decreasing or stable) and whether a bull-focused harvest has been taking place. The results will be made available to TG, WRRB and other co-management partners.

WRRB recommendation 32 recommends continuing these fall composition surveys.

June calving photo-survey for Bathurst herd, June 2012

With several caribou herds at low numbers and/or declining in the 2000s, ENR's 2006-2010 Caribou Management Strategy called for population surveys every 3 years. When last surveyed in June 2009, the Bathurst herd was found to be in rapid decline compared to 2006 data, thus a new population survey in June 2012 was proposed by TG and ENR and supported by WRRB. If the herd is found to be stable or beginning to increase, intervals between population surveys and other surveys can be re-considered, but the rapid decline in 2006-2009 suggests that close monitoring should continue in the near future.

Later in 2011, ENR will conduct a power analysis for ENR to assess the frequency with which population surveys should be carried out to adequately monitor herd size and population trend. Recommendations for the frequency of surveys should also consider the herd trend (increasing, decreasing or stable) and whether the herd is at high, medium or low numbers. The results will be made available to TG, WRRB and other co-management partners.

The June 2012 survey will be carried out by ENR staff and observers from TG and affected Akaitcho communities.

WRRB recommendation 33 supports the planned calving photo-survey of the Bathurst herd in June 2012.

2.2.2 Caribou Radio-collars – Bathurst Herd [29, 32]

WRRB recommendations 29 & 32 requested ENR consider methods of estimating cow survival that did not rely on a large number of collars. As a result of concerns among Tł̓ch̓ elders, over the handling of animals and use of radio-collars on caribou, there have never been more than 20 radio-collars on Bathurst caribou cows. Owing to periodic mortality of collared caribou and eventual collar failure, there have at times been as few as 8 or 9 collars on Bathurst caribou. Section 2.2.1 discusses the applicability of annual calving ground reconnaissance surveys for establishing trends in breeding females and serving as a rough indicator of survival for the interpretation of herd composition ratios.

During winter, collared caribou are the only way of identifying where the herd is and which herd caribou are being hunted from. In areas where there is substantial overlap with Bluenose-East caribou, the low number of collared Bathurst caribou is a handicap in knowing which caribou are being taken. There are currently about 4 times as many collars on Bluenose-East caribou (80) as on Bathurst caribou (20). In addition, management recommended by ENR and TG, and supported by WRRB, calls for limits on cow harvest and an effort to harvest mostly bulls from the Bathurst and Bluenose-East herds. Radio-collared Bathurst and Bluenose-East bulls, and a larger number of radio-collared Bathurst cows, would increase the confidence of managers attempting to assign the harvest to one of the two herds, and would make it easier to direct hunters to areas where bulls are abundant.

Radio-collars on caribou are used for many purposes by ENR, however the numbers of radio-collars needed for each of the uses varies. Later in 2011, ENR will conduct a power analysis to assess the numbers of radio-collars needed for a more precise estimate of cow survival, for the purposes of appropriately allocating harvest among the BE and Bathurst herds and other purposes such as seasonal range delineation, cumulative effects studies, assessing rates of exchange among neighbouring herds, fidelity to calving grounds and timing of migration. The results will be made available to TG, WRRB and other co-management partners and discussed by the TWG, TG, WRRB and ENR.

2.2.3 Caribou Harvest Monitoring [40]

TG, ENR and WRRB recognize that timely and accurate reporting of caribou harvest is a priority in monitoring and managing the Bathurst and Bluenose-East caribou herds. This is particularly important for the Bathurst herd where a limit of 300 caribou $\pm$ 10% and at least 80 % bulls are the targets. WRRB recommended that harvest reporting by Tł̓ch̓ hunters be recorded via the Traditional Knowledge program, not by ENR's methods for monitoring harvest. However, government varied that recommendation as it was not practical to implement harvest reporting via the Traditional Knowledge program for the fall 2010 and winter 2010-2011 hunting seasons, thus harvest reporting for the 2010-2011 season is different from the expected approach for 2011-2012.

Hunting season Aug. 2010 to May 2011

Caribou harvested by Tłıchǵo hunters during the fall season (August & September 2010) was essentially zero because caribou from the Bathurst, Bluenose-East and Beverly/Ahiak herds were well north of Wek'èezhìi during this time. In fact, collared caribou from the Bathurst and Beverly/Ahiak herds were north of treeline and in Nunavut through the fall. A few radio-collared Bluenose-East caribou were within the NT but well north of Tłıchǵo communities. Fall harvest by YKDFN hunters was also essentially zero, for the same reasons.

Winter harvest by Tłıchǵo and YKDFN hunters for 2010-2011 was tracked by a combination of community monitors, check-stations and interviews in the communities. These methods were used in 2007-2008 and 2008-2009 to monitor caribou harvest by Tłıchǵo communities in joint ENR-Tłıchǵo programs.

TG and ENR will report the results of these monitoring actions three times a year in May, September and December. WRRB recommendation 40 refers to monitoring of Tłıchǵo harvest via the TK study program, recommendation 41 requests at least 3 annual reports from TG and ENR on caribou harvest and management, and recommendations 44, 45 and 46 address adaptive co-management where information is reviewed at least 3 times annually and the status of indicators from monitoring activities will be used to determine if changes to current management actions are required as per the adaptive management approach.

Hunting season Aug. 2011 to May 2012

As noted earlier (section 2.1), WRRB requested that information about caribou harvest by Tłıchǵo hunters be recorded via the *Special Project, Using Tłıchǵo Knowledge to Monitor Barren Ground Caribou* of the overall Traditional Knowledge Research and Monitoring Program. The Tłıchǵo Government is committed to documenting and reporting on observations and trends observed by caribou harvesters and elders. Implementation of the “Tłıchǵo Knowledge Research and Monitoring Program: Special Project, Using Tłıchǵo Knowledge to Monitor Barren Ground Caribou” will take approximately eight months and is expected to be implemented by September 2011.

WRRB recommendations 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 40, and 41 make reference to the TK program and recording of information from Tłıchǵo hunters about reporting caribou harvest and observations of caribou, as well as reporting results to WRRB.

2.2.4 Caribou Health, Condition and Pregnancy Monitoring [30,38]

Samples for monitoring the health, condition and pregnancy rate of female caribou will be collected opportunistically when hunters hunt for themselves or for a community hunt. As recommended by the WRRB, biological monitoring will not be used as a primary rationale for hunting cows. Sample kits will be prepared to measure and collect the following items: pregnancy (presence of foetus), back fat thickness, collection of left kidney with the fat to assess contaminant levels and condition,

hunter condition score, collection of front part of the lower jaw with incisors for age determination, and location, date and sex of the animal harvested.

Monitoring of caribou health and condition will be carried out jointly by the Tł̥ch̥q̥ wildlife coordinator, community monitors and ENR staff. Training with methods and sample kits will be held jointly prior to each hunting season and will involve the wildlife coordinator, community monitors and ENR staff. Health, condition and pregnancy monitoring will be reflected in Wildlife Research Permits and results will be reported to the TWG in the May, September and December meetings.

WRRB recommendations 30 & 38 supports continued health and condition monitoring of Bathurst and Bluenose-East caribou from hunter-killed animals, with cow hunts not being conducted primarily for study purposes.

[2.2.5 Wolf Monitoring \[34, 35, 36\]](#)

The importance of wolves as predators on caribou throughout the year was recognized by TG and ENR in their joint caribou management proposal. Increased wolf harvest via increased incentives for wolf pelts and wolf carcasses, to reduce caribou adult and calf mortality rates, was supported by WRRB (noted earlier in section 1.3; recommendations 52 & 53).

Wolf den surveys

WRRB recommendation 34 requested that appropriate indices of wolf abundance, wolf predation rates and population responses to changing caribou abundance be developed and implemented. ENR varied the recommendation and will continue with wolf den surveys that have been carried out since the summer of 1996. This research was conducted at the south end of the Bathurst caribou summer/fall range and was designed to monitor trends in den occupancy and productivity. Results of the den surveys since 2005 suggest that wolf numbers have dropped rapidly in the wake of much reduced caribou numbers.

ENR, in consultation with the Tł̥ch̥q̥ Government, will provide a research proposal to develop a better assessment of wolf numbers associated with Bathurst caribou. The overall goal will be to understand how wolf numbers are responding to changing caribou densities and harvest incentives. This undertaking could help determine if current management actions are working or more intensive management is required to facilitate caribou recovery. Den occupancy is one measure of wolf abundance but the technique can be imprecise. A population estimate of wolves associated with the Bathurst caribou herd can verify and validate trend indices. A population estimate of wolves is best done in winter when Bathurst caribou congregate on their winter range. Collared wolves are needed to measure sightability of wolves during aerial abundance surveys, which can mitigate a potentially significant bias.

Wolf condition and reproduction

ENR will provide \$200 for each intact wolf carcass brought in by hunters or trappers in the North Slave region, which represents an increase from \$100 previously offered, and will provide a report to WRRB and the Tłıchǵ Government in June 2011 on the wolf carcass collection.

WRRB recommendation 35 supports monitoring of wolf condition.

Wolf harvest

ENR will provide a report to WRRB and Tłıchǵ Government in May of each year on wolf harvest data from all sources monitored by ENR.

WRRB recommendation 36 supported monitoring of wolf harvest. In addition, recommendation 52 supported increased incentives for wolf trapping or hunting, and recommendation 53 requested a proposal if more focused wolf control measures were being considered.

2.2.6 Reporting to WRRB and the public [41]

Based on the revised joint proposal from TG and ENR, information about caribou, wolves and related observations would be reviewed three times annually by TG and ENR in consultation with Tłıchǵ hunters and communities. This would be timed to fit the annual caribou cycle and the fall and winter hunting seasons. TG and ENR will report three times annually, in May, September and December.

WRRB recommendation 41 refers to monitoring results being reported at least 3 times annually to WRRB and the public.

3.0 Engaging Communities, Developing Capacity and Co-Management [42-46,56-58,60]

The decline of the Bathurst herd, the development of the initial and revised joint management proposals with ENR, and the WRRB hearings in March and August 2010 have proven to be a challenging period and yet a time for learning and mutual respect. The implementation of the revised joint management proposal and WRRB recommendations will rely on many factors and people working together, including the Tłıchǵ leadership, elders, harvesters, and youth, TG staff, ENR and WRRB board members and staff, and others. Tłıchǵ elders, harvesters and community members must be well informed and understand the situation if they are to support the programs underway.

WRRB recommendation 56 addresses the need for the Tłıchǵ government to increase its capacity for full participation in caribou monitoring and management.

3.1 Tłıchǵ Government Initiatives [56]

Tłıchǵ government efforts have focused on bringing together representatives of the four communities to review the information, improve understanding of caribou conservation, and devise ways of implementing conservation that will work in the communities.

3.1.1 Tłıchǵ Ekwo Working Group [56]

The Tłıchǵ Government has developed the Tłıchǵ Ekwo Working Group (TEWG). The primary role of the TEWG is to make recommendations to the Tłıchǵ Lands Protection Department (TLPD) and ultimately the Tłıchǵ Chief's Executive Council (CEC) on issues regarding implementation of the Revised Joint Proposal on Caribou Management in Wek'èezhii. The TEWG membership is comprised of 4 individuals chosen by the Lands Department and approved by the CEC for their particular skillsets, and one representative from each community chosen by the chief and council. This group will help to bring the Tłıchǵ community perspective into any decisions that are being made and will increase local knowledge of the Bathurst caribou conservation issue.

Some of the issues that the TEWG will consider and make recommendations on are as follows:

- Potential ways to increase access to bull caribou given the emphasis the revised joint management proposal has on hunting bulls (e.g. reconnaissance surveys, elders guiding younger harvesters);
- Possible increased use of collars on cows and potentially on bulls;
- Potential options to re-define the current management areas into smaller zones based on Tłıchǵ Traditional Knowledge and Place-names;
- Recommendations on conservation education and traditional knowledge education needs
- Recommendations on communication and consultation strategies for Tłıchǵ communities.

The TEWG will meet approximately 4-6 times per year with different topics being the focus of each workshop. They held an orientation workshop December 2010 and a second workshop in February 2011 where conservation and caribou education was the focus. The TEWG will provide recommendation to TG, ENR and the TWG throughout the year and at the end of the summer each year a report will be written on overall recommendations and needs for the following year.

3.1.2 Tłıchǵ Wildlife Coordinator(s) [56]

The TG and ENR are cost-sharing the new position of wildlife coordinator in the Tłıchǵ lands Protection Department. The position had been filled on a part time basis for the winter hunting season 2010-2011. The interim wildlife coordinator's (IWC) role is to work with elders, harvesters and community members to educate and inform people of the overall process and situation with Bathurst caribou. Once the winter season 2010-2011 is complete, the TLPD and the IWC will determine the best approach for the TWC in the next season.

TG anticipates having the equivalent of a full-time (F/T) employee hired by June 1, 2011.

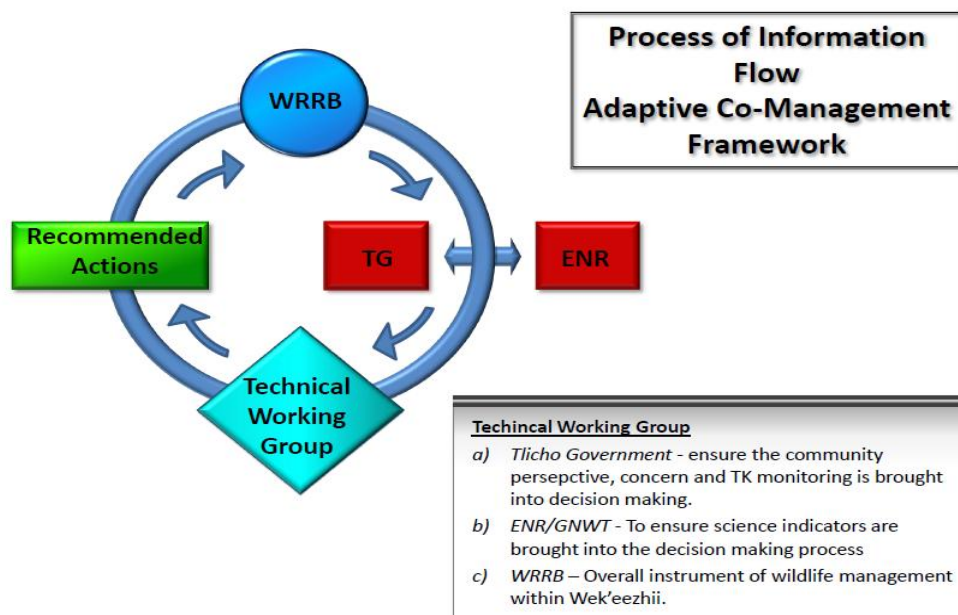
3.2 Co-Management Initiatives [44, 45, 46]

In the revised TG/ENR joint caribou proposal, a technical working group made up of TG and ENR representatives was proposed as a way of carrying on for the group that developed the joint proposal. This was one way of ensuring that the program continued with frequent communication, information review, and adjustment of management between the two governments. Since that time, the value of having the WRRB as a partner at the same table became clear, although the mandates of each of the three partners are in some areas distinct. Thus the TG/ENR working group has become the TG/ENR/WRRB working group.

3.2.1 Tłı̨chǫ -ENR-WRRB Technical Working Group (TWG) [44,45,46]

The Tłı̨chǫ Government and ENR proposed an integrated approach between science and TK as described in the TG/ENR revised Joint Proposal for Caribou Management Actions in Wek'èezhii. The governments' rationale for this approach is that the respective research and monitoring programs can be mutually informative during the early phases of program delivery, including development of specific research questions and study design, as well as collection of field data. The governments assert that the collaboration should occur throughout all phases of the respective research and monitoring programs, and not just occur once data have been collected and interpreted (See Figure 4 below).

Figure 4: Revised Information Flow Process



The Tłıchǫ Government, ENR and WRRB will be active participants in the TWG. Roles and Responsibilities will be laid out in Terms of Reference. The TWG will meet a minimum of 3 times per year as per the adaptive co-management framework, and at other times if needed. This will provide the TWG an opportunity to review new monitoring and any other information and implement adapt management actions. TG and ENR through the TWG will develop criteria to assess the success or failure and would indicate when management actions need to be revised.

In the TG/ENR joint proposal on caribou management, a number of examples of adaptive management were provided. For example, if reconnaissance surveys on the Bathurst calving grounds in June provided evidence of a continuing decline in cow numbers, recommended harvest might be re-visited and more intensive wolf management might be considered. Similarly, if spring recruitment surveys show two consecutive years of recruitment below 20 calves:100 cows, harvest and wolf management might be re-evaluated, as suggested by WRRB recommendation 46. A table from the joint proposal with initial suggested criteria is included in Part B of this implementation plan.

[3.2.2 Traditional Knowledge and scientific hunter/conservation education \[42, 43\]](#)

Traditional Knowledge Education Program

The TEWG will be tasked with doing an assessment of the current conservation education programs that have been developed from both a science and TK perspective. A summary report will be written following a workshop held in Feb. 2011 which will be shared with the TWG. The TWG will then determine the needs and steps required to implement a holistic conservation education program that will reach all demographic sectors of the Tłıchǫ population. Once the TWG has completed this assessment, a report will be written with recommendations to TG, ENR and the WRRB for implementation. This work will address WRRB recommendation 42.

Scientific Conservation Education Program

ENR will undertake this work jointly with Tłıchǫ Government in Wek'èezhìi and with other aboriginal groups outside Wek'èezhìi.

ENR will prepare facts sheets that will be posted on the ENR website. ENR has developed an interactive Caribou Educational Program that can be used in schools for youth to learn about scientific management practices. A contractor was hired by ENR in 2010 to develop and promote hunter ethics and education with co-management partners and communities.

The TWG will be tasked with assessing this conservation & hunter education program and making suggestions and recommendations as to how to make it more useful and culturally appropriate. As an example, the CircumArctic Rangifer Monitoring and Assessment Network (www.carmanetwork.com) has developed several education tools, including videos on hunter training and community perspectives on caribou (Voices of the Caribou People) and a caribou

anatomy atlas, which have potential for adaptation to conservation education in Tłıchǫ communities.

This work will address WRRB recommendations 42 and 43 on hunter & conservation education.

3.3 Implementation, Consultation & Enforcement [57,58,59,60]

The revised TG/ENR joint caribou proposal proposed that managing the aboriginal harvest could best be achieved by harvest targets and seeking methods of managing and reporting harvest that would have support in the Tłıchǫ communities. WRRB endorsed the overall approach but also recommended that the harvest and the effectiveness of management be closely monitored, and that enforcement was needed to effectively implement the program.

3.3.1 Implementation [57,58,59]

Implementation of key aspects of caribou management in Wek'èezhìi began before Christmas 2010. This included hiring of community monitors and an increased enforcement presence from ENR wildlife officers in the Tłıchǫ communities and in areas frequented by hunters. New regulations as of December 10, 2010 eliminated the current no hunting caribou zone and replaced it with two new hunting zones called R/BC/02 and R/BC/03 and authorized a limited harvest of Bathurst caribou within these two new zones.

ENR, TG and WRRB staff reviewed early drafts of an implementation plan for Wek'èezhìi in Feb. and March 2011 and a detailed plan will be finalized in May 2011. Key activities in the plan are already underway, including periodic review of harvest information as it is updated. Indian and Northern Affairs Canada (INAC) did not participate in the development of the revised joint TG/ENR caribou proposal and WRRB recommendations pertaining to land use, where INAC might be involved, will be addressed later in 2011.

The Tłıchǫ Government carried out a community consultation tour the week of Nov 24-26, 2010 in the communities of Gamètì, Whatì and Behchokò. The Lands Protection staff held a detailed meeting with the Chief and Council during the day in each community and then held a community meeting in the evening. A similar community meeting was held in Wekweètì in January 2011. WRRB recommendations 57, 58 and 59 request that implementation occur no later than January 1, 2011 and that the hunting ban remain in place until that time; consultations occur prior to January 1, 2011; and, that a detailed Implementation and Consultation Plan be developed as soon as possible

3.3.2 Enforcement and compliance [60]

The ENR North Slave regional office is currently working on an enforcement and compliance program that will be in place in time to address each of the pertinent WRRB recommendations. ENR wildlife officers maintained an increased presence in Tłıchǫ communities until the end of the winter hunting season in early May 2011. They also worked with community monitors to ensure that

caribou harvest was reported reliably. In addition, ENR wildlife officers maintained an increased presence in areas like Hottah Lake where caribou harvesting occurred in the winter of 2010-2011.

WRRB recommendation 60 requests from ENR an effective enforcement and compliance program.

4.0 Development, Habitat and Management Planning for Caribou Herds [47,48,49,50,51,55]

TG, ENR and WRRB support the development of comprehensive management plans for the Bathurst, Bluenose-East and Beverly/Ahiak caribou herds. The Tłı̨chǫ Agreement requires comprehensive management planning for barren-ground caribou (section 12.11). The revised joint proposal to WRRB from TG and ENR was focused primarily on short-term management of caribou mortality rates, given the Bathurst herd's steep decline. However, comments in several community meetings and workshops emphasized the need to consider all factors that affect barren-ground caribou herds, including development and cumulative effects, fire on the winter range and climate change/global warming.

WRRB recommendation 55 refers to ENR and Tłı̨chǫ Government working collaboratively to meet the obligations of Section 12.11 of the Tłı̨chǫ Agreement with support from WRRB staff.

4.1 Development and Caribou Habitat Management [47-51,55]

At the Caribou Summit held in Inuvik in Jan. 2007, delegates from many communities voiced their concerns over the importance of taking care of the landscapes that sustain caribou through the seasons. Protection of calving grounds in the NT and Nunavut was a top priority for management actions, and limits to the pace of development were an important concern. TG, ENR and WRRB recognize that over the long-term, conservation of habitat is of primary importance to caribou.

4.1.1 Calving ground protection in Nunavut [47]

ENR has initiated discussions with Nunavut concerning protection of calving grounds of trans-border herds, and will continue these discussions. The issue has also been raised by the Beverly and Qamanirjuak Caribou Management Board (BQCMB). It should also be recognized that INAC is the primary land manager in the Northwest Territories and Nunavut.

ENR accepted WRRB recommendation 47 to continue discussions with Nunavut on protection of caribou calving grounds.

4.1.2 Industry best practices for caribou calving and post-calving ranges [48]

ENR has been working on standard terms and conditions for wildlife that would be available for industry and regulators. ENR will be working collaboratively with other agencies to develop best practices for mining operations in the NT, and this is a commitment under the new draft Caribou Management Strategy for GNWT. Best practices can also be addressed in the development of long-

term management plans for the Bathurst, Bluenose-East and Beverly/Ahiak herds. INAC is the primary land manager for crown lands in NT and Nunavut and would need to be engaged in these discussions.

WRRB recommendation 48 was varied by ENR such that the development of best industry practices for caribou during calving and post-calving be done through the management planning process.

4.1.3 Land use plan for Wek'èezhìi [49]

The Tłıchǵ Government is currently undergoing a land use planning (LUP) process for Tłıchǵ Lands within Wek'èezhìi and would prefer to defer discussions of land use planning for Wek'èezhìi until this plan is complete. The Tłıchǵ Government rejected WRRB's recommendation as it is not responsible to establish a mechanism for the preparation, approval and implementation of a LUP in Wek'èezhìi. Pursuant to chapter 22.5.1 and 22.5.3 of the Tłıchǵ Agreement, the parties will determine how to move forward in the development of a land use plan for Wek'èezhìi Lands once the Tłıchǵ LUP process is complete.

4.1.4 Monitoring landscape changes (fire and development) [50]

ENR will continue to provide annual reports to WRRB and the Tłıchǵ Government on wildfire activity in the North Slave region. ENR expects that a number of research projects (both Traditional Knowledge and Scientific) on fire ecology and use of burned and unburned winter ranges by caribou will be completed by 2011-2012. Results of these studies will be made available to WRRB and TG. A number of studies were summarized in the Dec. 2009 ENR Bathurst technical report (on the WRRB web-site).

The ENR Fire Management Program is currently under review. The new program will reflect the position of ENR in regard to the need for forest fire control in areas of important caribou habitat, taking into account older and more recent information on fire ecology, and a realistic understanding of the limited resources available to combat fires on a very large landscape.

A cumulative effects project on the Bathurst summer range is being written up and further work on impacts of industrial exploration and development on caribou is planned. Assessing effects of development on caribou that are also affected by many other factors remains a complex challenge.

WRRB recommendation 50 requesting ENR and INAC to monitor landscape changes, including fires and industrial exploration and development, to assess potential impacts to caribou habitat was varied to reflect commitment to the above initiatives. Recommendation 51 requests that TG and ENR assess the need for forest fire control in areas of important caribou habitat.

4.2 Long-term management planning for caribou herds in Wek'èezhìi [55]

The TG/ENR/WRRB Technical Working Group will initiate discussions early in 2011 towards the development of a long-term Bathurst caribou management plan. Previous discussions between TG

and ENR included a review of management plans developed for other caribou herds that could serve as examples or models for a Bathurst plan. A multi-stakeholder management plan for the Bathurst herd was completed in 2004 but was not formally endorsed by all the parties. This section also provides summaries on management planning for the Bluenose-East and Beverly/Ahiak herds.

Bathurst Long-Term Management Plan

Management planning for the Bathurst herd is required by section 12.11 of the Tłıchǵ Agreement and has been under discussion by TG and ENR since 2007. A process for a Bathurst management plan will be determined in early 2011 by TG, ENR and WRRB, with a completion date sometime in late 2012.

Bluenose East herd Long-Term Management Plan

A management planning process currently underway for the Bluenose-West, Bluenose-East, and Cape Bathurst herds is directed by the Advisory Committee for Cooperation on Wildlife Management (ACCWM) which consists of the Northwest Territories and Nunavut co-management boards. The WRRB, TG and ENR are represented in the technical group that is developing the plan. Once the plan is approved by all participating co-management boards the ACCWM will recommend it to government.

Beverly/Ahiak herd Long-Term Management Plan

The Beverly and Qamanirjuaq caribou herds have been managed in part by the Beverly and Qamanirjuaq Caribou Management Board since 1982. The last photographic calving ground survey of the Beverly herd was conducted in 1994 when there were 276,000 caribou estimated in the herd. A calving ground survey has not been possible since early 2000 because the density of breeding females has dropped dramatically to the extent that current distribution and abundance of breeding females on the Beverly calving area is a remnant of the densities observed in the 1980s and 1990s. In the absence of a population estimate, it is not known precisely which factors have caused the virtually abandonment of the traditional Beverly calving ground observed recently in June 2010. The simplest explanation is that the abandonment was driven by both an overall decline in population size as well as a shift in calving distribution by breeding females, but to what extent each factor played is uncertain. There is evidence of some Beverly cows shifting from the traditional Beverly calving ground in the late 2000s to a calving ground in the Queen Maud Gulf area.

The BQCMB will review the existing management plans for the Beverly and Qamanirjuaq herds in 2011-2012, and will need to evaluate its mandate given the altered numbers and distribution of the Beverly/Ahiak herd. The governments of NU and NT are represented on this board, as are NT communities such as Lutsel K'e and Fort Smith. ENR and TG anticipate that BQCMB will develop updated management plans for the Qamanirjuaq and Beverly/Ahiak herds in 2012.

5.0 Use of Other Wildlife Species

During previous times of caribou scarcity, Tłıchǵ, and other aboriginal hunters, adapted by increasing their use of fish, moose, or muskoxen. Present-day hunters can also adapt their diets to other meat sources.

5.1 Use of Other Species as Country food [54]

Bison Management Plan

ENR has developed a 10-year wood bison strategy, which recommends that management plans be completed by 2012 for each of the three NT populations (Mackenzie, Slave River Lowlands and Nahanni). Bison in Wek'èezhìi are considered part of the Mackenzie population, thus TG and WRRB would be participants in the development of this management plan. New bison harvest zones were created at the time that the hunting ban was put in place by ENR in January 2010 in part to accommodate the impact of restricted caribou harvest. The Revised Joint Proposal requested that the bison hunting season for the new zones be changed to start September 1. WRRB supported the request and a regulation change was carried out to begin the bison hunting season on September 1.

WRRB recommendation 54 requests a joint management proposal from TG and ENR for wood bison in Wek'èezhìi to substantiate the establishment of zones and quotas for bison harvest made under the Interim Emergency Measures.

ENR has recognized that limited barren-ground caribou harvesting may mean deflected hunting pressure onto moose, muskoxen and other game species. As funding allows, surveys to monitor these species will be carried out to assess whether hunting remains sustainable.

6.0 Conclusion

This Implementation Plan (IP) for Caribou Management in Wek'èezhìi has outlined activities and actions that will be carried out by Tłıchǵ government and ENR from the 2010/2011 hunting season through the 2012/2013 hunting season, to manage and conserve barren-ground caribou in Wek'èezhìi in a spirit of respect, collaboration, and co-management with Tłıchǵ communities. This Plan is a “living” or “working” document, recognizing that management will need to be adaptive, adjusting to new information about caribou, wolves and hunter harvest, and adjusting to the relative success of the management methods proposed. ENR, TG and WRRB staff reviewed early drafts of the Plan in February and March 2011 and a detailed plan will be finalized in May 2011.

Part B: Caribou Management Actions in Wek'èezhìi – Implementation Plan Activity Sheets

Section 1: Implementing Management Actions for Barren-ground Caribou Herds

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
1.1 Bathurst herd – Harvest and Wolf Management					
1.1.1 Bathurst herd – Harvest targets vs. strict limits A key point in the TG/ENR joint management proposal, which WRRB accepted, was the use of harvest targets for Aboriginal harvest rather than hard limits like a Total Allowable Harvest (TAH). A harvest target was defined as a number of caribou or a number of cows, within a range of 10% higher or lower. A TAH was likely to be seen as the heavy hand of government. However, WRRB shared the concern of TG and ENR as to whether harvest targets would be effective. WRRB Recommendation 1) TG and ENR to report annually on success of harvest target approach to Bathurst aboriginal harvest Management.					
1.1.1	1. Harvest monitored & reported to TG, ENR, WRRB throughout hunting season, especially as targets approached. If needed, management can be altered.	TG/ENR	Reports every week or every 2 weeks during hunting season	No extra cost associated ³	1
1.1.1	2. Annual report from TG and ENR in May on harvest totals and effectiveness of harvest target approach	TG/ENR	Report May 2011, 2012, 2013	No extra cost associated	1
1.1.2 Bathurst herd – commercial, resident & outfitted harvest WRRB Recommendation 2) Commercial harvest of Bathurst caribou set to zero for 2010-13 3) Outfitted harvest of Bathurst caribou set to zero for 2010-13 4) ENR & TG to make public prior to 2012 Bathurst population survey their positions on reinstatement of outfitter harvest 5) Resident harvest of Bathurst caribou set to zero for 2010-2013 6) ENR & TG to make public prior to 2012 Bathurst survey their position on reinstatement of resident Harvest					

³ No extra cost associated refers to in kind support that will be provided by TG/ENR and WRRB

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
1.1.2	1. Interim Emergency Measures Regulation Changes set Commercial, Outfitted and Resident Harvest for Bathurst Caribou to Zero	ENR	Jan 1, 2010	No extra cost associated	2,3,5
1.1.2	2. Changed status of Barren-Ground Caribou Management Zone R/BC/02 and R/BC/03, from a No-Hunting Conservation Zone, to a special management zone; Commercial, Outfitted & Resident harvest remain at 0.	ENR	Completed Dec 8, 2010	No extra cost associated	2,3,5
1.1.2	3. Reinstatement of Outfitter & Resident harvest of Bathurst caribou TG & ENR suggest that reinstatement of outfitter and resident harvest should happen as part of a long-term plan for Bathurst herd, where the first step is establishing goals for the herd, the second is determining acceptable sustainable harvest levels depending on the herd's status and goals, and the third is determining allocation for hunter groups. Best done via long-term planning process to be completed 2012.	ENR, TG	Completion of Bathurst longterm management plan 2012	Bathurst long-term planning \$200,000 (ENR proposed; Caribou Mgmt Strategy)	4,6 (55 indirectly)

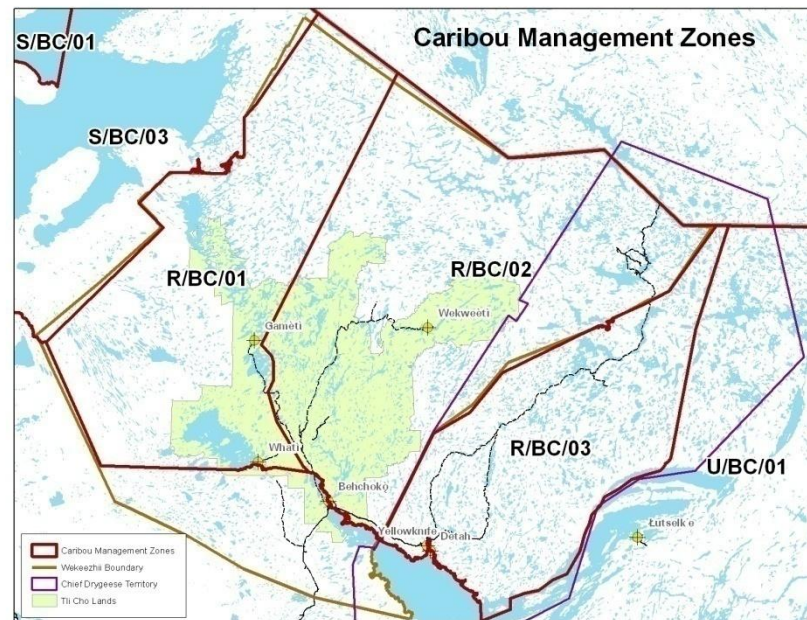


Figure 1. Map of Wek'èezhìi, Chief Drygeese Territory, and caribou management zones.

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
1.1.3. Bathurst herd – Aboriginal harvest targets and harvest sex ratio WRRB Recommendation 7) Harvest target for Bathurst herd should be $300 \pm 10\%$ 8) Allocation of harvest should be 225 for Tliche hunters, 75 for other aboriginal hunters 9) Harvest sex ratio for Bathurst herd should be at least 85 bulls:15 cows 10) If Bathurst harvest near or likely soon over $300 \pm 10\%$, close all harvest; TAH possible 11) If Bathurst harvest near or likely soon over 45 cows, close cow harvest; TAH possible					
1.1.3	1. TG & ENR agree with WRRB recommendations on harvest target of 300 Bathurst caribou and will monitor harvest closely & report to WRRB through hunting season. Suggest regulation changes or other restrictions to be jointly decided on by TG, ENR, & WRRB. WRRB retains option of calling for TAH.	TG, ENR, WRRB	Harvest monitored and reported throughout hunting season (Aug-Sept & Nov-May)	No extra cost associated	7,10
1.1.3	2. The TG/ENR joint caribou proposal called for an equal division of the 300 Bathurst caribou by Tliche and YKDFN hunters. Agreement between ENR and YKDFN also calls for equal sharing between Tliche and YKDFN. TG & ENR prefer to retain 150:150 division.	TG, ENR	Applicable to fall (Aug-Sept) and winter (Nov-May) hunting seasons	No extra cost associated	8
1.1.3	3. TG and ENR proposed 80:20 harvest sex ratio target and prefer to retain this split. Modeling suggests small variation in sex ratio has limited significance to herd.	TG, ENR	Applicable to fall (Aug-Sept) and winter (Nov-May) hunting seasons	No extra cost associated	9
1.1.3	4. TG & ENR agree with WRRB recommendations on harvest target of 45 Bathurst cows and will monitor harvest closely & report to WRRB through hunting season. Suggest regulation changes or other restrictions to be jointly decided on by TG, ENR, & WRRB. WRRB retains option of calling for TAH.	TG, ENR, WRRB	Harvest monitored and reported throughout hunting season (Aug-Sept & Nov-May)	No extra cost associated	11
1.1.4 Bathurst herd – fall and winter range maps and hunter harvest WRRB Recommendation 12) Identify and make public the area to harvest Bathurst caribou prior to fall hunt 13) Identify and make public the area to harvest Bathurst caribou prior to winter hunt					

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
1.1.4	1. TG & ENR suggest detailed information on caribou collar locations best limited to aboriginal groups hunting them. ENR was requested at 2007 Inuvik Caribou Summit to limit publicizing caribou collar information, consistent with conservation measures of reducing caribou harvest.	ENR	Applicable to fall (Aug-Sept) and winter (Nov-May) hunting seasons	No extra cost associated	12,13
1.1.4	2. Collar Location Maps will be provided weekly to TG and WRRB during fall and winter hunting seasons.	ENR	Applicable to fall (Aug-Sept) and winter (Nov-May) hunting seasons	No extra cost associated	12,13
1.1.4	3. The TWG will be kept updated of the collared caribou movements on a bi-weekly basis; if the animals begin to move out of the designated areas, discussion and re-evaluation of the zones will ensue with recommendations made to the TG and ENR. Based on winter 2010-2011, collar locations are key to assigning harvest to Bathurst, Bluenose-East herds and directing hunters – see also section 2.2.2 on radio-collars.	TG/ENR/TWG	As needed	No extra cost associated	12,13 (29, 32 indirectly on collars)

1.2 Administering Tłıchǫ Caribou Harvest

This section in the implementation plan corresponds in part to WRRB recommendation 40 on reporting Tłıchǫ harvest, recommendation 56 on TG increasing capacity to participate fully in caribou monitoring and management, recommendations 44, 45 and 46 on adaptive co-management, and recommendations 42 and 43 on hunter education. These are addressed in other sections of the plan and tables. However, administration of the Tłıchǫ caribou harvest is a key part of the overall caribou program, thus some detail is provided on the measures taken in winter 2010-2011 and planned for the 2011-2012 hunting season.

1.2.1 Planning and managing hunting for Tłıchǫ hunters

1.2.1	1. Meeting to assess community needs for Fall Hunt	TG/TEWG	July/August annually until 2013	No extra cost associated	
1.2.1	2. Recommendation Report on Fall hunt possibilities to TG/ENR/WRRB	TG/TEWG	July/August annually until 2013	No extra cost associated	7,9,10, 11 (indirectly)
1.2.1	3. Assessment of Alternative species harvested and needs and expectations of CHAP funds for next year	TG/TEWG	July/August annually until 2013	No extra cost associated	40, 54 (indirectly)
1.2.1	4. Reporting requirements to be developed regarding ITI funds	TG/TEWG	July/August annually until	No extra cost associated	40 (indirectly)

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
			2013		
1.2.2 Tłı̨chų Harvest Authorization Cards					
Authorization cards were developed and are required by the Tłı̨chų to harvest in R/BC/02 and R/BC/03 for hunting season 2010-2011 & 2011-2012					
1.2.2	1. Authorization cards Developed and dispensed to Community Chief	TG/ENR	August 2011	No extra cost associated	40 (indirectly)
	2. Reporting system designed and tested	TG/ENR	August 2011	No extra cost associated	40 (indirectly)
	3. Reporting back of harvesters to community monitor or TK researcher	TG/ENR	Ongoing through Hunting season (Aug-April 2011-2012)	No extra cost associated	40
	4. Reports made to TG/ENR every two weeks on the harvest data	TG/ENR	Ongoing through Hunting season (Aug-April 2011-2012 & 2012-2013)	No extra cost associated	40, 41 (indirectly)
1.2.3 Community Wildlife Monitors (winter hunt 2010-2011)					
1.2.3	1. Hire one Community Wildlife Monitor (CWM) for Whatì, Gametì and Wekweètì. The community caribou monitor will be a seasonal position.	ENR/TG	Hired in Dec 2010 until hunting season is finished in 2011.	\$40,000 annually	56
	2. Monitor the harvest in each Tłı̨chų community by interviewing active hunters regularly during the caribou hunting season in order to document the location, sex and age of each caribou harvested.	ENR jointly with CWM	Ongoing through Hunting season (Aug-April 2011)	No extra cost associated	40
	3. Bi-weekly summary report of caribou harvested for each herd by location, sex and age. The summary report will be made available to the TG, ENR, WRRB and SRRB	ENR jointly with CWM	Ongoing through Hunting season (Aug-April 2011)	No extra cost associated	40,41 (indirectly)
	4. Joint Annual Report prepared on success of overall harvest monitoring which will be presented to TWG at meeting in May/June 2011.	TG/ENR	July/August 2011, 2012, 2013	No extra cost associated	1,44,45,46

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
	5. Roles to be reassessed for summer 2011				
1.2.4 Winter Road Check Station					
1.2.4	1. Hire a check station monitor and maintain winter road check station	ENR	Jan 1 – End of winter Road season 2011	\$17,000 annually	40 (indirectly)
	2. Report regularly to ENR	ENR	Ongoing through winter road season 2010-2011	No extra cost associated	40 (indirectly)
	3. Annual Report on success and recommendations for next year provided to TWG	ENR	July/August 2011	No extra cost associated	1,41,46
1.3 Wolf Harvest					
WRRB Recommendation 52) Wolf harvest to be increased through suggested incentives for wolf pelts and carcasses					
1.3	1. Increased incentive for wolf Carcass	ENR/ITI	Initiated fall 2010	\$200/carcass	52
1.3	2. Increased incentive for well handled wolf pelt	ENR/ITI	Initiated fall 2010	\$400/pelt	52
1.3	3. Summary report of wolf harvest for year provided to TWG and considered in tri annual meeting	ENR	May/June 2011, 2012, 2013	No extra cost associated	52
1.3	4. Consideration of summary report and recommendations made to consider wolf harvest in following year	ENR/TG/WRRB	May/June 2011, 2012, 2013	No extra cost associated	52
1.4 Bluenose East Herd – Harvest Management					
1.4.1 Bluenose East Herd – Resident, Commercial, Outfitted Harvest					
WRRB Recommendation 14) Close all commercial, outfitter and resident harvest for Bluenose-East caribou herd.					

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
1.4.1	1. Interim Emergency Measures Regulation Changes set Commercial, Outfitted and Resident Harvest for Bluenose East Caribou to Zero	ENR	Jan 1, 2010	No extra costs associated	14
1.4.2 Bluenose East Herd – Aboriginal Harvest WRRB Recommendation 15) Harvest target of 2800 Bluenose-East caribou, sharing to be determined by co-mgmt boards, aboriginal governments 16) Harvest sex ratio should be at least 85% bulls (85:15 ratio bulls:cows) for Bluenose-East herd 17) If harvest of Bluenose-East caribou near or more than 10% over target, close harvest by regulations 18) If Bluenose-East harvest near or likely soon over 420 cows, close cow harvest by regulations 19) Identify and make public the area to harvest Bluenose-East caribou prior to fall hunt 20) Identify and make public the area to harvest Bluenose-East caribou prior to winter hunt Based on the new 2010 population estimate of the Bluenose-East herd and its increasing trend, wildlife co-management boards and Aboriginal Governments are reviewing information and the proposed targets recommended by the WRRB and plan to develop a harvest management strategy that will be shared among Aboriginal hunter groups. These recommendations may influence recommendations for the 2011-2012 hunting season. Recommendations from WRRB and TG/ENR were made before the final Bluenose-East population estimates for 2010 were known. ENR could assist in developing harvest recommendations by contracting population/harvest modeling for Bluenose-East herd based on scenarios developed collaboratively with TG, WRRB and other partners.					
1.4.2	1. Monitoring of BNE harvest done by Community monitors and winter road check station.	ENR/TG	Ongoing through hunting season Nov.2010-May 2011	Cost as per 1.2.3 and 1.2.4	15,16,17,18
1.4.2	2. Harvest of BNE by other aboriginal groups monitored	ENR,SRRB, WRRB, KIA	Same as Above	Same as above	15,16,17,18
1.4.2	3. Bi-weekly reporting of BNE harvest to WRRB, TG, SRRB	ENR/TG	Same as Above	Same as above	15,16,17,18
1.4.2	4. Assessment of BNE data and recommendations made to TG/ENR	TWG	Same as Above	Same as above	15,16,17,18,1
1.4.2	5. Annual Report of BNE harvest to WRRB, TG, SRRB	ENR/TG	July/August	No extra cost associated	15,16,17,18

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
1.4.2	6. TG & ENR suggest detailed information on caribou collar locations best limited to aboriginal groups hunting them. ENR was requested at 2007 Inuvik Caribou Summit to limit publicizing caribou collar information, consistent with conservation measures of reducing caribou harvest.	ENR	Applicable to fall (Aug-Sept) and winter (Nov-May) hunting seasons	No extra cost associated	19,20
1.4.2	7. Collar Location Maps will be provided weekly to TG and WRRB during fall and winter hunting seasons.	ENR	Applicable to fall (Aug-Sept) and winter (Nov-May) hunting seasons	No extra cost associated	19,20
1.4.2	8. The TWG will be kept updated of the collared caribou movements on a bi-weekly basis; if the animals begin to move out of the designated areas, discussion and re-evaluation of the zones will ensue with recommendations made to the TG and ENR. Based on winter 2010-2011, collar locations are key to assigning harvest to Bathurst, Bluenose-East herds and directing hunters – see also section 2.2.2 on radio-collars.	TG/ENR/TWG	As needed	No extra cost associated	19,20 (29, 32 indirectly on collars)
1.4.3 Bluenose East herd – Assistance for Aboriginal harvest WRRB Recommendation 21) TG & ENR should not provide harvest assistance for Bluenose-East harvest					
1.4.3	1. ENR had previously agreed to provide limited assistance to improve a trail from Wekweètì to Hottah Lake to provide alternative hunting opportunities. ENR will monitor harvest at Hottah Lake and maintain an enforcement presence there.	ENR	Winter 2010-2011	\$30,000	21
1.4.4 TG Overlap Agreement with Nunavut and Sahtu WRRB Recommendation 22) TG to negotiate caribou harvesting overlap agreement with Nunavut and Sahtu region					
1.4.4	1. TG will consider the recommendation and begin internal discussions. TG will provide a response to the WRRB once TG has considered the recommendation	TG	April 2011	No extra cost associated	22
1.5 Beverly/Ahiak Caribou – Harvest Management & Incentives					

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
1.5.1 Beverly/Ahiak herd – Resident, Commercial and Outfitted Harvest WRRB Recommendation 23) Close all commercial, outfitted and resident harvest of Beverly/Ahiak caribou in Wek'èezhii.					
1.5.1	1. Interim Emergency Measures Regulation Changes set Commercial, Outfitted and Resident Harvest for Beverly/Ahiak Caribou to Zero	ENR	Jan 1, 2010	No extra costs associated	23
1.5.2 Beverly/Ahiak herd – Aboriginal Harvest and Incentives WRRB Recommendation 24) TG and ENR not to provide harvest assistance and/or incentives to hunt Beverly/Ahiak caribou 26) Identify and make public the area to harvest Beverly/Ahiak caribou prior to fall hunt 27) Identify and make public the area to harvest Beverly/Ahiak caribou prior to winter hunt					
1.5.2	1. GNWT ITI has provided limited assistance to aboriginal hunters from Lutsel K'e in hunting Beverly/Ahiak caribou for several years. 2. Agreement between ENR and YKDFN provides for limited hunter assistance in accessing Beverly/Ahiak caribou during winter. 3. ENR expectation is that harvest of Beverly/Ahiak caribou will be similar to harvest on recent winters. ENR is working with all aboriginal hunters to monitor Beverly/Ahiak harvest in NT closely. 4. ENR has a cost-sharing agreement with SK and Prince Albert Grand Council to monitor caribou harvest in northern SK communities.	ENR	Winter hunting season Nov-May		24
1.5.2	1. Collar Location Maps of Beverly/Ahiak provided weekly to TG, WRRB, YKDFN and Lutselk'e.	ENR	Weekly throughout harvest season	No extra cost associated	26,27
1.5.2	2. The TWG will be kept updated on the caribou movements on a bi-weekly basis; if the animals begin to move out of the designated areas, discussion and re-evaluation of the zones will ensue with recommendations made to the TG and ENR.	TG/ENR/TWG	As needed	No extra cost associated	26,27
1.5.2	3. TG & ENR suggest detailed information on caribou collar locations best limited to aboriginal groups hunting them.	ENR	Applicable to fall (Aug-Sept)	No direct cost	26,27

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
	ENR was requested at 2007 Inuvik Caribou Summit to limit publicizing caribou collar information, consistent with conservation measures of reducing caribou harvest.		and winter (Nov-May) hunting seasons		
1.5.3. Overlap Agreement between Tẖcẖ Government, Nunavut and Akaitcho WRRB Recommendation 25) TG to consider caribou harvesting overlap agreements with Nunavut and Akaitcho region					
1.5.3	1. TG will consider the recommendation and begin internal discussions. TG will provide a response to the WRRB once TG has considered the recommendation	TG	April 2011	No extra cost associated	22
1.6 Monitoring Actions within an Adaptive Co-Management Cycle Within the context of an adaptive co-management cycle, the TG/ENR and WRRB will have 'official' meetings three times a year in order to review, analyze, make recommendations and coordinate on plans for the following months. These meetings will follow the cycle of the caribou, taking place at logical times based on the data and information being collected throughout the year. Aside from these 'official' meetings, TG/ENR and WRRB TWG will maintain regular meetings throughout the year to work through the details and additional issues that arise.					
1.6	1. Annual meeting for review of winter harvest information; success of harvest monitoring and management; wolf harvest information; results of spring caribou recruitment survey; recommendations for improvement 2. Summary report written and submitted to WRRB and shared with Tẖcẖ communities.	ENR/TG/WRRB	May/June annually	No extra costs associated	1,41,44,45, 46 (in part or indirectly)
1.6	3. Annual meeting to finalize plans for hunting season; review information from June calving reconnaissance survey and calving ground composition survey; review new information on fires, relative severity of insect season, or other environmental information 4. Summary report written and submitted to WRRB and shared with Tẖcẖ communities.	ENR/TG/WRRB	August annually	No extra costs associated	1,41,44,45, 46 (in part or indirectly)
1.6	5. Annual meeting to review results of fall composition surveys; fall caribou harvest and condition information; initial info on winter caribou harvest and refine winter harvest management plans. 6. Summary report written and submitted to WRRB and shared with Tẖcẖ communities.	ENR/TG/WRRB	December annually	No extra costs associated	1,41,44,45, 46 (in part or indirectly)
1.6	7. Annual community tour to share information and consult with communities on caribou issue overall.	TG/ENR/WRRB	Jan/Feb annually	\$25,000 shared	1,41,44,45, 46 (in part or indirectly)

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
	8. Versions of reports suitable for posting on WRRB web-site will be discussed and agreed on by TG, ENR and WRRB.			between 3 parties	indirectly)

Section 2: Traditional Knowledge and Technical Monitoring and Reporting

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
2.1 Traditional Knowledge Research and Monitoring Program					
WRRB Recommendation 28) Implementation of Special Project, using Tłıchǵ Knowledge to Monitor Barren Ground Caribou. 29-39) Monitoring recommendations The Tłıchǵ Government agrees with recommendations 28-42 of the <i>Recommendation Report related to the Revised Joint Proposal on Caribou Management Actions in Wek'èezhii</i>. The Tłıchǵ Government is committed to documenting and reporting on observations and trends observed by caribou harvesters and elders. Implementation of the 'Tłıchǵ Knowledge Research and Monitoring Program: Special Project, Using Tłıchǵ Knowledge (to Monitor Barren Ground Caribou' will take approximately eight months and is expected to be implemented by September 2011.					
2.2 Biological Monitoring & Reporting on Caribou, Wolves and Harvest					
2.2.1 Caribou Surveys WRRB Recommendation 29) ENR to continue monitoring caribou recruitment via March/April composition surveys 31) ENR to continue monitoring caribou birth rate via June composition surveys on calving grounds 32) ENR to continue monitoring caribou sex ratio via fall composition surveys 33) ENR to estimate Bathurst herd size via calving photo-survey June 2012 39) ENR to monitor density of breeding cows on calving grounds via reconnaissance surveys (Note: WRRB Recommendation 37: ENR & TG to monitor landscape changes, including development & fire, is very similar to Recommendation 51. Recommendations 37 & 51 are addressed in section 4.1) Wherever practical, observers from TG and/or other aboriginal groups will participate in surveys.					
2.2.1	1. Late-winter recruitment surveys (Bathurst herd)	ENR	March/April 2011, 2012, 2013	\$70,000	29

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
2.2.1	2. Late-winter recruitment surveys (Bluenose-East herd)	ENR	March/April 2011, 2012, to be determined	\$60,000	29
2.2.1	3. Late-winter recruitment surveys (Beverly/Ahiak herd)	ENR	March/April 2011, to be determined	\$90,000	29
2.2.1	4. Calving reconnaissance surveys (Bathurst herd)	ENR	June 2010, 2011, 2012 (2012 part of photo-survey)	\$70,000	39
2.2.1	5. Calving reconnaissance surveys (Bluenose-East herd)	ENR	June 2012, to be determined	\$70,000	39
2.2.1	6. Calving reconnaissance surveys (Beverly/Ahiak herd)	ENR	to be determined	\$250,000	39
2.2.1	7. Composition surveys on calving grounds (Bathurst herd)	ENR	June 2012 (part of calving photo-survey)	Part of \$400,000 photo-survey	31
2.2.1	8. Fall composition surveys to assess sex ratio (Bathurst herd)	ENR	Late Oct. 2011, 2012	\$70,000	32
2.2.1	9. Fall composition surveys to assess sex ratio (Bluenose-East herd)	ENR	To be determined (1 survey in next 5 years)	\$70,000	32
2.2.1	10. Fall composition surveys to assess sex ratio (Beverly/Ahiak herd)	ENR	Late Oct. 2011	\$90,000	32
2.2.1	11. Calving photo-survey for Bathurst herd	ENR	June 2012	\$400,000	33
2.2.1	12. Post-calving photo-survey for Bluenose-East herd	ENR	July 2012 or 2013	\$200,000	33 (indirectly)
2.2.1	13. Calving photo-survey for Beverly/Ahiak herd (Survey led by Govt of Nunavut; GNT supporting)	Govt of Nunavut	June 2011	\$900,000	33 (indirectly)
2.2.2 Caribou Radio-Collars, Bathurst herd WRRB Recommendations 29 & 32 request ENR to find methods other than large numbers of collars for estimating cow survival. Radio-collars are used for many purposes, in this case including assignment of harvest to herds and managing harvest. ENR suggests calving reconnaissance surveys as a method of tracking breeding cow numbers. For more complete discussion on collars, see text section 2.2.2					

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
2.2.2	1. Replacement radio-collars on Bathurst cows (maximum 20) Costs include purchase, placement, data acquisition	ENR	New collars April 2011	\$104,000	29, 32 (indirectly)
2.2.2	Discussion of value of increased collar numbers, including technical recommendations, will involve TWG, TEWG, TG, ENR and WRRB.	ENR, TG, TWG, TEWG, WRRB	Summer 2011	Estimated \$12,000 for power analyses	29, 32 (indirectly)
2.2.3 Caribou Harvest Monitoring WRRB Recommendation 40) TG to monitor Tłı̨chų caribou harvest via Traditional Knowledge Study, not via ENR technical methods For hunting season of 2010-11, Tłı̨chų TK program not ready to monitor Tłı̨chų harvest; TG & ENR used methods used in 2007-2008 & 2008-2009. For hunting season 2011-2012 and thereafter, Tłı̨chų TK program to monitor Tłı̨chų harvest. More details on caribou harvest monitoring in section 1 text & tables.					
2.2.3	1. Caribou harvest monitoring - winter 2010-2011 (not via TK project)	TG/ENR	Nov. 2010 – May 2011	\$30,000	40
2.2.3	2. Caribou harvest monitoring, winter 2010-2011 (via TK project)	TG	Aug. 2011 – May 2012 & thereafter	To be determined (not small)	40
2.2.4 Caribou Health, Condition & Pregnancy Rate Monitoring WRRB Recommendation 30) Monitor health & condition of harvested caribou, but do not take cows primarily for study 38) Monitor pregnancy rate of harvested cow caribou, but do not take cows primarily for study					
2.2.4	1. Caribou Health & Condition Monitoring (Bathurst & Bluenose-East caribou)	TG/ENR	Nov. 2010 – May 2011 & following 2 winters	\$30,000	30
2.2.4	2. Caribou Pregnancy Rate Monitoring (Bathurst & Bluenose-East caribou)	TG/ENR	Nov. 2010 – May 2011 & following 2 winters	(included above)	38

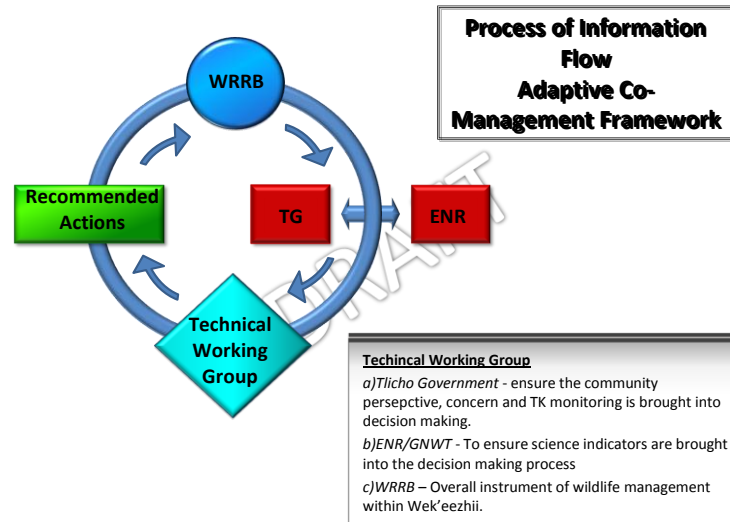
Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
2.2.5 Wolf Monitoring WRRB Recommendation 34) ENR to continue wolf den occupancy surveys 35) ENR to monitor wolf condition and reproduction 36) ENR to continue monitoring wolf harvest Note WRRB recommendations (52, 53) and actions on wolf harvest management are in section 1.3					
2.2.5	1. Wolf Den Surveys (continues annual monitoring since 1996)	ENR	Summer (May-June and Aug.-Sept)	\$25,000/year	34
2.2.5	2. Wolf condition and reproduction monitoring (Assessment late winter at end of wolf hunting)	ENR	Late winter annually	Estimated \$4,000/year	35
2.2.5	3. Wolf harvest monitoring (Assessment late winter at end of wolf hunting)	ENR/TG	Throughout each winter	No extra costs associated	36
2.2.5	4. Research on wolf numbers in response to caribou ENR N. Slave to submit a research proposal on tracking wolf numbers associated with Bathurst caribou	ENR	Summer-Fall 2011	To be determined	34,35,36 (indirectly)
2.2.5	5. Annual reporting on wolf data and harvest	ENR	Tri Annual meeting in May/June annually	No extra cost associated	34,35,36
2.2.6 Reporting to WRRB and public WRRB Recommendation 41) ENR & TG to report on monitoring results 3 times annually to WRRB and public Note: Reporting & review of information 3 times annually is covered more fully in section 1.6.					
2.2.6	1. A summary suitable for public review will be provided to WRRB three times/year (May, Sept, Dec) by TG and ENR.	TG/ENR	May, Sept., Dec., 2011, 2012,2013	No extra cost associated	41

Section 3: Engaging Communities, Developing Capacity and Co-Management

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
3.1 Tłıchǵ Government Initiatives					
3.1.1 Tłıchǵ Ekwo Working Group					
WRRB Recommendation 56) TG to increase capacity to participate fully in caribou monitoring and management					
3.1.1	1. Establish Tłıchǵ Ekwo Working Group (TEWG) with representation from all 4 Tłıchǵ communities	TG	December 2010	\$25,000/meeting	56
3.1.1	2. TEWG meetings held every 2 months	TEWG	Ongoing	\$25,000/meeting	56
3.1.1	3. Determine ways to enhance or encourage Bull Harvest for Tłıchǵ. Consider both local and scientific options. 4. Recommendations to TWG, TG, ENR	TEWG	July 2011	No extra cost associated	56
3.1.1	4. Develop Communication and Consultation strategy for Tłıchǵ community members. 5. Recommendations to TWG, TG, ENR	TEWG	July 2011	No extra cost associated	56
3.1.1	6. Workshop to assess how to break Special Management Zones into smaller zones for future. 7. Recommendations to TWG, TG, ENR	TEWG	August 2011	No extra cost associated	56
3.1.2 Tłıchǵ Wildlife Coordinator					
3.1.2	1. Hire Interim Tłıchǵ Wildlife Coordinator (TWC) for 2010-2011 winter hunting season. Reassess at end of season.	TG/ENR	February 2011 – April 2011	\$40,000 CA between TG and ENR	56
3.1.2	2. Summary report and recommendations on initial TWC program	TG/ENR	June 2011	No extra cost associated	56
3.1.2	3. Hire equivalent of fulltime Tłıchǵ Wildlife Coordinator and assess at end of first year (may be 1 or 2 people hired)	TG/ENR	June 1, 2011	Approx. \$140,000/year joint	56

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
				between TG/ENR	
3.2 Co-management Initiatives					
3.2.1 Tłıchǫ-ENR-WRRB Technical Working Group WRRB Recommendation 44) ENR & TG to implement information flow, review & assessment as per diagram in recommendation report. 45) WRRB staff to be full participants in Technical Working Group with TG, ENR. 46) ENR & TG to develop criteria for assessing success or failure of management, including reinstatement of resident, outfitter & commercial harvest.					
3.2.1	1. Establishment of Technical Working Group (TG-ENR-WRRB) 2. Development of Terms of Reference	TG/ENR/ WRRB	Initial meeting Jan 2011, further meetings Feb, Mar, April 2011	No extra cost associated	45
3.2.1	2. Official TWG meetings held 3 times/year as per adaptive co-management cycle to review key information and data	TG/ENR/ WRRB	May, Aug, Dec Annually	No extra cost associated	44, 45,46
3.2.1	3. Regular Meetings of TWG to ensure frequent communication is maintained between parties	TG/ENR/ WRRB	Monthly or on as needed basis	No extra cost associated	44,45
3.2.1	4. Information flow between TG, ENR and WRRB as per diagram below. TG & ENR suggest 3-way dialogue between TG, ENR, WRRB	TG/ENR/ WRRB	Regular meetings & communication by email, phone	No extra cost associated	44

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations



3.2.1	Criteria on success or failure of management actions Note inclusion of Table 4 from Joint TG-ENR Caribou Management Proposal May 2010 (end of section 3): suggest criteria for monitoring outcomes that would mean either amending management (Bathurst herd declining further) or staying the course (Bathurst herd stable or increasing).	TG, ENR, WRRB	Initial criteria May 2010	No extra cost associated	46
3.2.2 Traditional Knowledge and scientific hunter/conservation education WRRB Recommendation 42) TG to develop & implement TK hunter/conservation education program 43) ENR to develop & implement scientific hunter/conservation education program					
3.2.2	1. Assessment of current conservation education and caribou education materials & options from TG and ENR (Traditional knowledge and Science)	TEWG/TG/ENR	Feb 13-15, 2011 workshop	\$25,000 (as noted in 3.1.1)	42,43

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
3.2.2	2. ENR contractor to focus on hunter education programs (started fall 2010), including collaborative programs with TG, other partners)	ENR/partners	Fall 2010	Estimated \$60,000	42,43
3.2.2	3. Development of Sub-committee to determine conservation education needs and gaps from science and TK perspective	TG/ENR TEWG	June 2011	No extra cost associated	42,43
3.2.2	4. Recommendation Report written to move forward education initiatives	TG/ENR	September 2011	No extra cost associated	42,43
3.3 Implementation, Consultation & Enforcement					
3.3.1 Implementation WRRB Recommendation 57) TG, ENR & INAC to implement WRRB recommendations by Jan. 1, 2011 58) TG & ENR to consult on WRRB recommendations by Jan. 1, 2011 59) ENR & TG to develop detailed implementation & consultation plan as soon as possible					
3.3.1	1. Implementation began Nov. 2010 when winter hunt began	ENR/TG	Varied – Nov. 2010 – March 2011	Various costs TG and ENR (noted elsewhere)	57
3.3.1	2. TG carried out consultation meetings on caribou management in Whati, Gameti, Behchokò and Wek'weètì	TG	Nov. 2010 & Jan. 2011	\$40,000	58
3.3.1	3. 1st draft implementation plan Dec. 22, 2010; further drafts in Feb. and Mar. 2011; draft plans available to WRRB staff	TG/ENR	Final IP due April 2011.	No extra cost associated	
3.3.2 Enforcement and Compliance WRRB Recommendation 60) ENR develop and implement as effective and continuing enforcement and compliance program					
3.3.2	1. ENR has increased enforcement presence in Tłı̨chʼo communities and in hunting areas used by Tłı̨chʼo & YKDFN hunters. ENR wildlife officers and other staff spending increased amount of time in Tłı̨chʼo communities, at check-stations, and working with community monitors tracking caribou harvest	ENR	Increased officer presence in communities & hunting areas - Nov. 2010, will continue to end hunting season.		60

Table 4. Summary of monitoring actions and adaptive management options for Bathurst caribou herd (From TG-ENR Revised Joint Caribou Management Proposal May 31, 2010)

Action	Indicator(s)	Priority	Rationale	Desired Response	Adaptive Management Options	How Often	Notes
1. Reduce cow harvest to <60	1. Numbers (density) of 1+ year old caribou on annual calving grounds reconnaissance surveys	1	Cow survival in Bathurst herd 67-68% in 2009; need at least 85-88% for herd to stabilize/recover. Trend in breeding females correlated to abundance of 1+ year-olds on annual calving ground.	Stable/Increasing trend in numbers of 1+ year old caribou on annual calving ground	If trend in 1+ year old caribou is stable/increasing, continue as before; if trend negative, consider closing harvest and intensifying wolf kill effort	Annual	Further review of best approach to analysing trend from calving reconnaissance surveys to occur with statistician; could use modeling to integrate other data.
	2. Estimate of breeding cows from calving ground photo survey	1	Most reliable estimate for abundance of breeding cows & can be extrapolated to herd size based on pregnancy rate and sex ratio.	Stable/Increasing trend in numbers of breeding cows	If trend in breeding cows stable/increasing, continue as before; if trend negative, consider closing harvest, intensifying wolf kill effort	Every 3 years	Last survey 2009, next 2012. Trend in breeding females is most important; total herd size is best understood by public.
	3. Calf:cow ratio in late winter (March-April); composition survey	1	Herd can only grow if enough calves are born and survive to one year	>40 calves:100 cows on average	If average calf:cow ratio $\geq 40:100$, continue as before; if average ratio $\leq 20:100$, herd likely declining; re-evaluate management	Annual	Calf productivity & survival vary widely year-to-year, affected by several other variables, including weather.
	4. Fall sex ratio; composition survey	2	Tracks bull:cow ratio; Bathurst ratio has been relatively low (31-38 bulls/100 cows); prime bulls key for genetic health, migration	Maintain bull:cow ratio above 30:100	If bull:cow ratio below target, reduce/eliminate bull harvest	Every second year?	Needed for June calving photo survey – extrapolation to herd size
	5. Cow productivity; composition survey on calving ground in spring (June)	2	Relatively low calf:cow ratio in June 2009 – many very young cows not yet breeding; affects recruitment	High calf:cow ratio (80-90 calves:100 cows)	Low ratio may indicate nutritional problems and possibly low recruitment following March; spring recruitment survey integrates initial productivity and calf survival	Every 3 years?	Essential component of June calving ground photographic survey. Could also be done during systematic survey years if required.
	6. Caribou condition assessment/pregnancy rate	1	Condition assessment provides overall index of nutrition/environmental conditions, estimate of pregnancy rate	High hunter condition scores (average 2.5-3.5 out of 4)	Poor condition or low pregnancy rate may indicate poor environmental conditions, possible decline	Annual	Annual participation of hunters required. Sex & age of animals important to confirm. Key component of cultural hunts.
2. Track caribou harvest accurately	7. Numbers of cows and bulls taken by all hunters	1	Cannot assess effectiveness of management if harvest is poorly tracked; harvest well over target could lead to further decline	Accurate harvest reporting & numbers within target limits	If harvest reports accurate and within target limits, continue as before; if harvest not tracked well or well over limit, review/revise harvest reporting and management immediately	Annual	Location of hunter's kill sites used to assign caribou to herds. ENR-GNT grid-based hunter survey method to be developed in collaboration with hunters.
3. Reduce wolf predation on adult and calf caribou	8. Numbers of wolves killed/year	1	Wolves are main non-human predator on caribou; natural cow and calf survival rates should increase	Stable/increasing no. of breeding caribou cows. Annual wolf harvest increased from 40 to 80-100.	If cow numbers stable/increasing, continue as before; if trend negative, consider closing harvest, intensifying wolf kill effort	Annual	Difficult to assess effectiveness on caribou survival. Monitoring will also depend on methods used to increase wolf mortality.
	9. Numbers of wolves seen on den surveys	2	Index of relative wolf numbers and productivity, tracked since 1996	Declining trend in wolf numbers & productivity		Annual	Develop standardized aerial survey methods for estimating wolf numbers
	10. Wolf numbers from hunter reports	2	Hunters may report areas of higher wolf numbers; additional measure of trend in wolf numbers	Declining trend in wolf numbers	Areas with more wolves could be targeted for wolf trapping/hunting efforts	Annual	Need to develop hunter interview methodology to collect data.

Section 4: Development, Habitat and Management Planning for Caribou Herds

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
4.1 Development and Caribou Habitat Management					
4.1.1 Calving Ground Protection in Nunavut					
WRRB Recommendation 47) ENR to continue discussions with Government of Nunavut (GN) on protecting calving grounds					
4.1.1	1. ENR has raised issue with GN at minister's level; GNWT & GN to develop inter-jurisdictional agreement 2. ENR & TG suggest issue could be raised also by TG, WRRB directly with INAC, GN 3. BQCMB has recommended protection of Beverly, Qamanirjuaq calving grounds for several years.	ENR TG & WRRB BQCMB	On-going	No extra cost associated	47
4.1.2 Industry best practices for calving and post-calving ranges					
WRRB Recommendation 48) ENR, INAC to develop best practices for calving & post-calving ranges					
4.1.2	1. Best management practices for mining to be developed.	ENR, INAC, mining companies, monitoring boards	2011-2012	\$125,000 for 2011-2012 (ENR Car. Mgmt Strategy proposed)	48
4.1.2	2. ENR is developing standard terms & conditions for land use activities, focused on mitigating impacts to wildlife & habitat	ENR	On-going	No extra cost associated	48

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
4.1.2	3. ENR meets with diamond mines & monitoring boards several times/year to review/amend wildlife monitoring & assessment & how to respond to wildlife issues	ENR, diamond mines, monitoring boards	On-going	Limited costs to ENR; diamond mines fund monitoring & boards	48
4.1.3 Land Use Planning for Wek'eezhii WRRB Recommendation 49) TG work towards development and implementation of land use plan for Wek'eezhii including consideration of thresholds for industrial land use.					
4.1.3	1. TG notes this is responsibility of INAC and/or GNT to develop and implement a Land Use Plan for Wek'eezhii	INAC, GNT	Defer until land use plan for Tlicho lands complete	Large; would need federal funding (INAC)	49
4.1.4 Monitoring landscape change (fire and development) WRRB Recommendation 50) ENR and INAC monitor landscape changes including fire and development 51) ENR and TG assess need for forest fire control in areas of important caribou habitat Note: WRRB Recommendation 37: ENR & TG to monitor landscape changes, including development & fire, is very similar to Recommendation 51.					
4.1.4	1. Monitor landscape change	ENR, INAC	On-going	Annual budget for fire varies	50, 51(37)
	2. ENR will continue to monitor annual and cumulative wild-fires and report to WRRB, TG and others. Fire program review provides an opportunity to identify key caribou winter ranges for protection.	ENR	On-going	N/A	50,51(37)

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
	3. ENR and partners have a number of projects ending or on-going, on fire, environmental trends and cumulative effects. Will report to TG, WRRB. (Some trends in Dec. 2009 Bathurst technical report).	ENR	On-going	Various; shared by ENR and universities	50, 51(37)
4.2 Long-term management planning for caribou herds in Wek'eezhii					
WRRB Recommendation 55) ENR & TG to work with WRRB on long-term plans for caribou, as per Section 12.11 of Tłı̨chǫ Agreement					
4.2	1. Bathurst caribou long-term management plan	ENR, TG, WRRB (& multiple other partners)	Initial discussions March 2011; TWG to review previous TG-ENR plans Apr. 2011; completion 2012	\$200,000 (ENR Caribou Mgmt Strategy, proposed)	55
4.2	2. Bluenose-East caribou long-term management plan	ACCWM (co-mgmt boards, aboriginal govts)	On-going March 2011.		55
4.2	3. Beverly/Ahiak caribou long-term management plan	BQCMB	BQCMB needs to update existing plans for Qamanirjuaq, Beverly herds. Beverly/Ahiak herd status under review	BQCMB annual funding overall shared by govts of NT, NU, SK, MN.	55

Section 5: Use of Other Wildlife Species

Item	Action/Activity	Lead Responsibility	Timing Guidelines	Estimated Budget	WRRB Recommendations
5.1 Use of Other Wildlife Species as Country Foods					
WRRB recommendation 54) ENR & TG to submit bison management plan to WRRB					
5.1	1. Bison management plan	ENR (wood bison management strategy); bison management plans - multiple partners)	Bison management plans due for 3 NT populations TG & WRRB would be part of planning for Mackenzie population. Draft plan will be provided to WRRB.	\$125,000 (3 herds) ENR proposed for monitoring, surveys, consultation, management (ENR wood bison strategy)	54
5.1	2. Regulation change to start bison hunting season Sept. 1	ENR	Dec. 2010		54
5.1	3. Monitoring alternate game species: ENR has increased survey effort for muskoxen and moose	ENR	2010-2013	To be determined (depending on funds)	N/A

Appendix 1: Overview of Caribou Annual Cycle August 2010 – July 2011, Caribou Monitoring & Management in Wek'èezhìi

2010						2011						
Month	August	September	October	November	December	January	February	March	April	May	June	July
Caribou Seasons & Activities	Summer Range; fattening	Early fall; migration south	Migration south; peak of rut late in October	Last part of migration; winter starts	Early winter	Mid-winter	Mid-Winter	Mid-late Winter	Late winter; slow drift north	Late winter; migration north	End migration (Cows), Calving (peak around June 7-10)	Post-Calving; Early Summer, bug season
Aboriginal Caribou Harvest	Cultural (Canoe) Hunt; Fall Hunt; Mostly Bulls	Cultural (Canoe) Hunt; Fall Hunt; Mostly Bulls	Little/no hunting	Start of Winter Hunt	Winter Hunt; skidoos; cows & bulls; cows preferred	Winter Hunt; skidoos; cows & bulls; cows preferred	Winter Hunt; skidoos; cows & bulls; cows preferred	Winter Hunt; skidoos; cows & bulls; cows preferred	Winter Hunt; skidoos; cows & bulls; cows preferred	Winter hunt ends		
Caribou Harvest Monitoring (TG/ENR)	Little/no harvest; caribou out of range	Little/no harvest; caribou out of range		Community monitors & interviews	Community monitors & interviews	Community monitors & interviews	Community monitors & interviews	Community monitors & interviews	Community monitors & interviews	Community monitors & interviews		
Bathurst Caribou Monitoring			Fall (rut) composition survey (sex ratio, calf:cow ratio)					Late Winter composition survey (calf:cow ratio; recruitment)			Calving comp. survey (calf:cow ratio) & Calving recon. Survey (index trend cow numbers)	
Surveys (pop. survey 2012)												
Wolf harvest				Wolf hunting/trapping season starts	Wolf hunting/trapping continues	Wolf hunting/trapping continues	Wolf hunting/trapping continues	Wolf hunting/trapping continues	Wolf hunting/trapping ends			
Wolf Den Surveys	Den survey in summer range									Den survey in summer range	Den survey in summer range	
Wolf Condition Monitoring				Wolf carcasses collected	Wolf carcasses collected	Wolf carcasses collected	Wolf carcasses collected	Wolf carcasses collected	Wolf carcasses assessed			
Tlìcho Ekwo Working Group Meetings					3-Day Orientation Workshop		3-Day Hunter Training/Education Workshop					
Tlìcho Community Consultation				Meetings in Behchoko, Gameti, Whati Nov. 24-26		Meeting in Wekweeti						
Tlìcho/ENR Community Monitors, Check-station					Community monitors start	Community monitors working	Community monitors working; check-station starts	Community monitors, check-station continue	Community monitors, check-station continue	Hunt ends; monitors, check-station ends		
Tlìcho Wildlife Coordinator(s)						Interviews for coordinator unsuccessful	Joseph Judas on radio, community visits	Joseph Judas on radio, community visits	Joseph Judas on radio, community visits			
Tlìcho Traditional Knowledge Study (under development)												
TG-ENR-WRRB Working Group meetings						Review harvest Info, Terms of Ref., status of implement. plan	Review harvest Info, implement. plan, community education	Review harvest Info, implement. plan, community education				
WRRB meetings & Reports	WRRB resumed hearing on caribou issues		WRRB Recommendation Report		Correspondence TG & ENR with WRRB	Correspondence TG & ENR with WRRB	Correspondence TG & ENR with WRRB	Initial Draft Implementation Plan Complete	WRRB board meeting; review Implementation Plan			
TG & ENR report results to WRRB, public									Implementation Plan finalized	First TG-ENR report to WRRB		

Speaker's Time Allocation at the WRRB 2010

Day	Association	Presenter	Time
Day 1 March 22, 2010	Opening Comments	Co-Chairperson Joseph Judas	1:05 pm
		Co-Chairperson Grant Pryznik	
	Presentation by ENR	• Ernie Campbell • Jan Adamczewski • Bruno Croft • Susan Fleck • Fred Manderville	1 hour
	Question Period for ENR	Tłıchq Government – Arthur Pape	3 hours (10 min. each)
		Independent Expert – Dr. Anne Gunn	
		Registered Intervenors • John Andre – Shoshone Wilderness Adventures • Boyd Warner – Bathurst Inlet Developments • Barry Taylor • Todd Slack – Yellowknives Dene First Nations • City of Yellowknife – Absent • Karen McMaster – Individual Intervenor • Danielle De Fields – North Slave Metis Alliance • Martin Knutsan – NWT Wildlife Federation • Jenni Bruce – NWT – Absent • Amanda Peterson – Peterson's Point Lake Lodge • Joyce Rabesca – Rabesca Resources • Board Legal Counsel and Staff	3:15-3:35 break
		Co-Chairperson Grant Pryznik	End 6:00 pm
Day 2 March 23, 2010		Co-Chairperson Joseph Judas	Begin 9:14 am
		Co-Chairperson Grant Pryznik	
	Presentation by Tłıchq Government	• Bertha Rabesca Zoe • Grand Chief Joe Rabesca • Chief Alfonz Nitsiza • Chief Clifford Daniels • Chief Edward Chocolate • Chief Charlie Football	3 hours Break 10:25 – 10:45 am

		• Dr. John B. Zoe • Elder Edward Weyallon • Elder Jimmy Rabesca • Elder Elizabeth Michel • Elder Philip Huskey • Elder Francis Williah • Elder Romie Wetrade	Break 12:25-1:07pm
	Question Period for Tłchq Government	• Ernie Campbell – ENR • Dr. Anne Gunn • John Andre • Boyd Warner – Bathurst Inlet Developments • Barry Taylor – Arctic Safaris • Chief Edward Sangris – Yellowknife Dene • Karen McMaster • Martin Knutsan – North Slave Alliance • Amanda Peterson – Peterson’s Point Lake Lodge • Joyce Rabesca – Rabesca Resources	1 hour
		Board Legal Counsel and Staff	
	Presentation by Dr. Anne Gunn	Dr. Anne Gunn	30 minutes Break: 2:45-3:05pm
	Question Period for Dr. Anne Gunn	• Susan Fleck – ENR • Jean Teillet – Tłchq Government • John Andre – Shoshone Wilderness Adventures • Boyd Warner – Bathurst Inlet Developments • Anne Taylor – Arctic Safaris • Todd Slack – Yellowknives Dene First Nation • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lodge • Joyce Rabesca – Rabesca Resources • Jan Adamczewski – ENR	45 minutes
	Public General Session	• Elder Peter Beaverho • Elder Harry Apples • Elder Jimmy Martin	Break: 3:36 – 7:07 pm

		• Elder Margaret Sachia (Wekweeti) • Elder Bernadette Nasken • Elder Louis Zoe • Elder Jimmy Kodzin (Wekweeti) • Elder Peter Huskey (Behchoko) • Elder Leon Modeste (Sahtu) • James Lafferty • Elder Phillip Dryneck • Elder Eddie Camille (Behchoko) • Elder Joseph Mantla (Gameti) • Elder Sophie Williah (Whati) • Sam Simpson (Wekweeti) • John Bekale	Break: 8:12-8:24 pm Adjourned 9:14pm
Day 3 March 24, 2010		Co-Chairperson Joseph Judas	Begin 9:10
		Co-Chairperson Grant Pryznyk	
	Continued Question Period for Dr. Anne Gunn	• Jean Teillet – Tłchq Government • John Andre – Shoshone Wilderness Adventures • Boyd Warner – Bathurst Inlet Developments • Barry Taylor – Arctic Safaris • Todd Slack – Yellowknives Dene First Nation • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson's Point Lake Lodge • Joyce Rabesca – Rabesca Resources • Karin Clark – WRRB staff • John Donihee – WRRB • Charlie Rabesca – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	
	Shoshone Wilderness Adventures	John Andre	45 minutes Break: 10:52 – 11:09
	Question Period for Shoshone Wilderness Adventures	• Ray Case – WRRB board member • Ernie Campbell – ENR • Jan Adamczewski – ENR • Bruno Croft – ENR	30 minutes total Break: 12:20 – 12:56

		• Jean Teillet – Tłchq Government • Dr. Anne Gunn • Boyd Warner – Bathurst Inlet Developments • Barry Taylor – Arctic Safaris • Todd Slack Yellowknives Dene First Nation • Gordon Van Tighem – City of Yellowknife • Karen McMaster • Sheryl Grieve – North Slave Metis Alliance • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Joyce Rabesca – Rabesca Resources • Karin Clark – WRRB staff • John Donihee – WRRB counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB	
	Presentation by City of Yellowknife	Mayor Gordon Van Tighem	30 minutes
	Question Period for City of Yellowknife	• Ernie Campbell – ENR • Jean Teillet – Tłchq Government • Dr. Anne Gunn • John Andre – Shoshone Wilderness Adventures • Boyd Warner – Bathurst Inlet Developments • Barry Taylor – Arctic Safaris • Todd Slack Yellowknives Dene First Nation • Karen McMaster • Sheryl Grieve – North Slave Metis Alliance • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Joyce Rabesca – Rabesca Resources • John Donihee – WRRB counsel • Charlie Rabesca – WRRB	15 minutes

		• Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	
	Presentation by Bathurst Inlet Developments	Boyd Warner	30 minutes
	Question Period by Bathurst Inlet Developments	• Ernie Campbell – ENR • Jean Teillet – Tłchq Government • Dr. Anne Gunn • John Andre – Shoshone Wilderness Adventures • Barry Taylor – Arctic Safaris • Todd Slack Yellowknives Dene First Nation • Karen McMaster • Sheryl Grieve – North Slave Metis Alliance • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Joyce Rabesca – Rabesca Resources • John Donihee – WRRB counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	
	Presentation by Yellowknives First Nations	• Chief Edward Sangris • Todd Slack • Elder Alfred Baillangeon	30 minutes Break: 2:22 – 2:36 pm
	Question Period for Yellowknives First Nations	• Ernie Campbell – ENR • Bertha Rabesca Zoe – Tłchq Government • Dr. Anne Gunn • John Andre – Shoshone Wilderness Adventures • Barry Taylor – Arctic Safaris • Mayor Van Tighem – City of Yellowknife • Karen McMaster • Sheryl Grieve – North Slave Metis Alliance • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge	

		• Joyce Rabesca – Rabesca Resources • John Donihee – WRRB counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	
	Presentation by Arctic Safaris	Barry Taylor	30 minutes
	Question Period for Arctic Safaris	• Ernie Campbell – ENR • Bertha Rabesca Zoe – Tłıchǫ Government • Dr. Anne Gunn • John Andre – Shoshone Wilderness Adventures • Barry Taylor – Arctic Safaris • Chief Edward Sangris – Yellowknives Dene First Nation • Mayor Van Tighem – City of Yellowknife • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Joyce Rabesca – Rabesca Resources • John Donihee – WRRB counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	
	General Public Session	• Attima Hadlari (Kitikmeot) • Peter Taktagon (Kugluktuk) • Lucassle Nanoolak (Coral Harbour) • Larry Roy (Alberta Research Counsel) • Elder Pierre Tyokka (Behchoko) • Walter Bayha (Sahtu) • Francis Simpson (Whati) • Fred Sangris • Robert Ruttan • Mary Adele Tatchia (Wekweeti) (Granted 10 minutes) • Leon Lafferty	5 minutes each Break: 4:32 – 4:45
		Co-Chairperson Grant Pryznyk	

		Co-Chair Joseph Judas	Adjourned at 5:08 pm
Day 4 March 25, 2010		Co-Chairperson Joseph Judas	Begin at 9:08am
		Co-Chairperson Grant Pryzynek	
	Presentation by Karen McMaster	• Karen McMaster • Dr. Rick Page	30 minutes
	Question period for Karen McMaster	• John Boulanger – ENR • Jan Adamczewski – ENR • Arthur Pape – Tłchq Government • Dr. Anne Gunn • Martin Knutsan – NWT Wildlife Federation • Jenni Bruce – NWT Tourism • Amanda Peterson – Peterson's Point Lake Lodge • Joyce Rabesca – Rabesca Resources • John Donihee – WRRB counsel • Jody Snortland – WRRB executive director • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	
	Presentation by NWT Wildlife Federation	Martin Knutsan	Break 10:22- 10:38am
	Questions for NWT Wildlife Federation	• Larry Roy – Alberta Research Council • John Boulanger – ENR • Jan Adamczewski – ENR • Bruno Croft - ENR • Jean Teillet – Tłchq Government • Dr. Anne Gunn • Todd Slack – Yellowknives Dene First Nation • Karen McMaster • Jenni Bruce – NWT Tourism • Amanda Peterson – Peterson's Point Lake Lodge • Joyce Rabesca – Rabesca Resources • John Donihee – WRRB counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB	

		• Bruce MacDonald – WRRB • Ray Case – WRRB	
	Presentation by NWT Tourism	• Jenni Bruce • Gerald Leprieur	
	Questions by NWT Tourism	• Ernie Campbell – ENR • Jean Teillet – Tłıchǫ Government • Dr. Anne Gunn • Todd Slack – Yellowknives First Nation • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Joyce Rabesca – Rabesca Resources • John Donihee – WRRB counsel • Jody Snortland – WRRB executive director • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	Break : 11:28 – 12:40
	Presenation by Peterson’s Point Lake Lodge	Amanda Peterson	
	Question Period for Peterson’s Point Lake Lodge	• Bruno Croft – ENR • Bertha Rabesca Zoe – Tłıchǫ Government • Chief Charlie Football – Tłıchǫ Government • Arthur Pape – Tłıchǫ Government • Dr. Anne Gunn • Todd Slack – Yellowknives First Nation • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Jenni Bruce – NWT Tourism • Joyce Rabesca – Rabesca Resources • John Donihee – WRRB counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	Break 1:32 – 1:53 pm

	Registered General Public Session Continued	• Elder Louis Wedawin (Whati) • Eddie Erasmus (Behchoko) • Charlie Nitsiza (Whati) • Jonus Sangris (Dettah) • Elder Philip Drynic (Behchoko) • Grand Chief Joe Rabesca • Elder Alfonz Apple	5-10 minutes each Break 2:55 – 3:10
	Presentation by Rabesca's Resources	Joyce Rabesca	30 minutes
	Questions by Rabesca's Resources	• Jan Adamczewski – ENR • Jean Teillet – Tłchq Government • Dr. Anne Gunn • Barry Taylor – Arctic Safaris • Todd Slack – Yellowknives First Nation • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson's Point Lake Lodge • John Donihee – WRRB counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	15 minutes
	Registered General Public Session	• Madelaine Chocolate Pasquayak (Works for Minister Jackson Lafferty part time, Yellowknife) • John Mantla (Behchoko) • Elder Joe Champagne (Whati) • Elder Dora Migwi • Cecilia Wetradde-Boyd • Celine Mackenzie-Vukson (Behchoko) • Elder Melanie Laffrety • Elder Phillip Whane • Johnny Simpson (Whati) • Charlie Simpson (Whati) • William Weyellon • Chief Charlie Football (Wekweeti) • George Mackenzie (Wek'èezhii Land and Water Board Member) • Chief Isadore Charlie • Joe Nedin • Elder Joe Black (Gameti)	Break 4:03 – 7:05pm 8 minutes

		• Charlie Jim Nitsiza • Georgina Simpson (Whati) • Robyn Mantla	
		Co-Chairperson Joseph Judas	Adjourned 9:10pm
Day 5 March 26, 2010		Co-Chairperson Pryznyk	Began 9:15am
		Co-Chairperson Joseph Judas	
	Presentation by North Slave Metis Alliance	Sheryl Grieve	30 minutes
	Question Period for North Slave Metis Alliance	• Jan Adamczewski – ENR • Bertha Rabesca Zoe – Tłchq Government • Dr. Anne Gunn • Todd Slack – Yellowknives First Nation • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Bob Turner • Joyce Rabesca – Rabesca’s Resources • John Donihee – WRRB counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	15 minutes Break 10:08-10:24am
	Presentation by Robert Turner & David Livingstone	Robert Turner	30 minutes
	Question Period for Robert Turner	• Ernie Campbell – ENR • Bertha Rabesca Zoe – Tłchq Government • Dr. Anne Gunn • Barry Taylor – Arctic Safaris • Todd Slack – Yellowknives First Nation • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Joyce Rabesca – Rabesca’s Resources • John Donihee – WRRB counsel	15 minutes Break 11:10-11:40am

		• Charlie Rabesca – WRRB • Joseph Judas – WRRB • Bruce MacDonald – WRRB • Ray Case – WRRB	
	Tłıchǫ Government – Application to adjourn	Arthur Pape	
	Responses to the Application to adjourn	• Gary Bohnet – ENR • John Donihee – ENR • Karen McMaster • Dr. Anne Gunn • Barry Taylor – Arctic Safaris • Todd Slack – Yellowknives Dene First Nation • Karen McMaster • Martin Knutsan – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Bob Turner • Arthur Pape • Gary Bohnet - ENR	Break 12:28 – 1:24pm Break 1:50 – 2:40pm
	Ruling on the Application to adjourn	• Co-Chairperson Grant Pryznyk • Co-Chairperson Joseph Judas	
		Grand Chief Joe Rabesca	
		Co-Chairperson Joseph Judas	
		Co-Chairperson Grant Pryznyk	Adjourned 3:05pm
Day 6 August 5, 2010		Co-Chairperson Joseph Judas	Begin 9:30am
	Presentation by ENR	• Gary Bohnet • Susan Fleck	30 minutes
	Presentation by Tłıchǫ Government	Grand Chief Joe Rabesca	30 minutes
	Question Period for ENR and Tłıchǫ Government	• Dr. Anne Gunn • Barry Taylor – Arctic Safaris • Todd Slack – Yellowknives Dene First Nation • Gordon Van Tighem – City of Yellowknife • Martin Knutson – NWT Wildlife Federation • Amanda Peterson – Peterson’s Point Lake Lodge • Robert Turner • David Livingstone • Joyce Rabesca- Rabesca’s Resources	1 hour – 5 minutes each Break 11:02 – 11:30am Break 12:15 – 1:20pm Break 2:30 – 2:52pm

		• John Donihee – WRRB legal counsel • Charlie Rabesca – WRRB • Joseph Judas – WRRB • Ray Case – WRRB • Bruce MacDonald • Jody Snortland	
	Closing Comments by Dr. Anne Gunn	Dr. Anne Gunn	20 minutes
	Closing Comments by Arctic Safaris	Barry Taylor	20 minutes
	Closing Comments by Robert Turner and David Livingstone	• Robert Turner • David Livingstone	20 minutes
	Closing Comments by the City of Yellowknife	Gordon Van Tighem	20 minutes
	Closing comments by Karen McMaster	Karen McMaster	20 minutes
	Closing Comments by NWT Wildlife Federation	Martin Knutsan	20 minutes
		Co-Chairperson Joseph Judas	Adjourned 4:20pm
Day 7, August 6, 2010		Co-Chairperson Joseph Judas	Begin 9:22am
		Co-Chairperson Grant Pryznyk	
	Closing Comments by Peterson's Point Lake Lodge	Amanda Peterson	20 minutes
	Closing Comments by Yellowknives Dene First Nation	Todd Slack	20 minutes
	Closing comments by Rabesca's Resources	Joyce Rabesca	20 minutes
	Closing Comments by ENR	Gary Bohnet	30 minutes Break 10:20 – 10:47
	Closing Comments by Tłı̨chǫ Government	Bertha Rabesca Zoe	30 minutes
		Co-Chairperson Joseph Judas	
		Co-Chairperson Grant Pryznyk	Adjourned 11:20