



**SUBMISSION TO THE
NUNAVUT WILDLIFE MANAGEMENT BOARD**

FOR

Information:

Decision: X

Issue: Draft Management Plan for High Arctic Muskoxen of the Qikiqtaaluk Region

Background:

In response to the delay in developing new regulations for Muskoxen in support of the *Wildlife Act*, the Kivalliq Regional Wildlife Board and community HTOs, driven by a desire to see management changes for muskoxen in their region, have developed a consensus-based draft management plan. This effort has not only been successful in the Kivalliq but has fueled further action based on its success.

Current Status:

Using the existing management plan for the Kivalliq as a template, DoE has developed a draft for the Muskoxen of the High Arctic Islands of the Qikiqtaaluk region, has shared this draft with the co management partners, and has consulted with relevant communities this past winter. The proposed Draft Management Plan for high Arctic Muskoxen of the Qikiqtaaluk Region has been developed in conjunction with input from the communities of Arctic Bay, Resolute, and Grise Fiord, as well as NTI. Revisions to the current draft have been made according to input received to date.

The Plan seeks to use the information presented in the DoE report “*Recent trends and abundance of Peary Caribou and Muskoxen in the Canadian Arctic Archipelago, Nunavut,*” (Jenkins et al., 2011) as a baseline to monitor future trends. Through community based ground surveys that are conducted annually, but on a spatially cyclic basis, changes in herd status can be monitored. An annual meeting to discuss results and potential management recommendations will be used to target future survey efforts and in the event of observed declines or concerns of herd status, trigger further action which may include increased ground survey frequency or aerial surveys. Recommendations that would change harvest rates or Non-Quota Limitations such as harvest seasons would be sent the NWMB for decision.

Consultations:

Extensive consultations have been conducted in the high Arctic communities of Arctic bay, Resolute, and Grise Fiord, all of whom harvest from the six muskox

island groups identified in the management plan. Workshops were held in Grise Fiord and Resolute in the fall of 2010 to share research results from the aerial surveys done to estimate Peary Caribou and Muskoxen population and distribution from 2001-2008. These workshops were very well received and generated significant discussion about management implications and Inuit knowledge about muskox of the high Arctic.

Consultation on the draft management plan was conducted in Arctic Bay, Resolute, and Grise Fiord in March 2012. Support was generally high for the draft management plan and DOE personnel collected input and feedback on the plan that was incorporated into the latest draft. The final draft has been sent to the three community HTOs for final review in parallel with this Request for Decision submission. Overall, the three communities have expressed support for the Management Plan and its recommendations, in particular because of the ongoing collaborative process it outlines for the management of muskoxen in the region.

Recommendations:

DOE is requesting approval from NWMB on the following:

- Approve the Draft Muskox Management Plan
- Change the regulations under the *Wildlife Act* to eliminate existing muskox harvesting zones, and replace them with 6 management units identified in the Muskox Management Plan (Figure 1).
- Change the regulations under the *Wildlife Act* to remove all existing TAHs and harvest seasons for all muskox populations in the high Arctic
- Approve the new TAH recommendation for the Bathurst Island Group
- Approve the new TAH recommendation for the Devon Island Group

References:

Jenkins, D. and M. Campbell, G. Hope, J. Goorts, and P. Mc Loughlin. 2011. *Recent trends in abundance of Peary Caribou (*Rangifer tarandus pearyi*) and Muskoxen (*Ovibos moschatus*) in the Canadian Arctic Archipelago, Nunavut*. Department of Environment, Government of Nunavut, Technical Report Series.

**DRAFT MANAGEMENT PLAN FOR HIGH ARCTIC MUSKOXEN OF THE
QIKIQTAALUK REGION
2012 – 2017**

Prepared in collaboration with:
NTI Wildlife, Resolute Bay HTO, Arctic Bay HTO, Grise Fiord HTO and the Qikiqtaaluk
Wildlife Board

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1.0 SUMMARY

Prior to the enactment of protection in 1917 (Burch, 1977), muskox populations throughout the central Arctic were hunted to near extinction. Although limited information is available on the status of muskoxen in much of the eastern Mainland (Fournier and Gunn, 1998), populations throughout Nunavut are currently re-colonizing much of their historical range. Qikiqtaaluk harvesters have reported increased sightings of muskoxen in close proximity to their communities which indicates that the animals have expanded their ranges significantly over the last few decades.

The Qikiqtaaluk Muskox Management Plan will serve as a tool to assist the Nunavut Wildlife Management Board (NWMB), the Qikiqtaaluk Wildlife Board (QWB), Government of Nunavut Department of Environment (DoE) and Nunavut Tunngavik Inc. (NTI Wildlife), in properly protecting, conserving and managing the muskoxen of the Qikiqtaaluk region. Arctic Bay, Resolute and Grise Fiord represent the three Baffin communities who harvest muskoxen and are represented on the QWB by their respective HTO Chairmen. Inuit Qaujimagatuqangit and community consultations have been utilized throughout the development of this management plan. Community involvement will continue to be instrumental in defining the direction of muskox management in the Qikiqtaaluk Region.

The goals of the Management Plan are to protect, conserve and manage muskoxen in a sustainable fashion while working co-operatively with all co-management partners. The priorities include permanent changes to the Wildlife Act Regulations reflecting alterations of management unit boundaries, elimination of seasons where appropriate and making recommendations for Total Allowable Harvest (TAH). An action plan has been developed to implement this plan however it is the intention of the parties to revisit the Management Plan on an annual basis or as necessary when new information becomes available.

2.0 THE QIKIQTAALUK MUSKOX POPULATION AND RANGE

2.1 Muskox Range

The precise population size and boundaries for muskoxen in the region are currently in question. The most recent survey data supports the division of the Qikiqtaaluk Region into six main island groups of muskoxen. The DoE report "*Recent trends and abundance of Peary Caribou and Muskoxen in the Canadian Arctic Archipelago, Nunavut,*" (Jenkins *et al.*, 2011) is the most current and comprehensive study of Qikiqtaaluk muskoxen to date. This report forms the basis for the following recommended muskox management units, as well as providing the population estimates and trends for management purposes.

Grouping islands is necessary as research and inventory is conducted by island groups. It is also generally recognized that water bodies limit short term dispersal of muskoxen. This plan recognizes six island groups based on existing scientific and Inuit knowledge and refers to each management group by the 'Island Group' name (See Figure 1 in Section 5.5).

2.2 Communities that Harvest Muskoxen

In the Qikiqtaaluk region, muskoxen are harvested by three communities: Arctic Bay, which harvests primarily from the Devon and Prince of Wales Groups, Repulse Bay, which harvests primarily from the Bathurst, Prince of Wales and Devon Groups, and Grise Fiord, which harvests primarily from the Ellesmere and Devon Groups

3.0 THE NEED FOR A MUSKOX MANAGEMENT PLAN

The need for a management plan for muskox is born out of several issues including Inuit harvesting rights, territorial responsibility for species management, changes in land use needs, population recovery, and changing climate, among others. The DoE study on Peary caribou and muskoxen "*Recent trends and abundance of Peary Caribou (Rangifer tarandus pearyi) and Muskoxen (Ovibos moschatus) in the Canadian Arctic Archipelago, Nunavut*" has produced the most current, comprehensive assessment of the current status of muskoxen in the Qikiqtaaluk region of Nunavut. The development and implementation of a management plan is the next step following the completion of the DoE research report. It will also build on the success in collaborative muskox management planning achieved at the community workshops held in Grise Fiord and Resolute in 2010. Furthermore, development of regulations for muskoxen in support of the *Wildlife Act* is outstanding, and will be facilitated through the finalization of the Muskox Management Plan.

The Purpose of the Plan is to:

- Establish principles and goals for ensuring the long-term sustainability of muskoxen;
- Identify the need for a plan now and the importance of working together;
- Provide current population estimates and trends;
- Define roles and responsibilities of the stakeholders;
- Define the information required to effectively manage the herds;
- Describe how to make decisions on managing the herds;
- Provide a framework for determining when management actions should be taken; and
- Ensure full involvement of Inuit in the future monitoring and management of muskoxen.

4.0 ROLES OF WILDLIFE CO-MANAGEMENT PARTNERS AND STAKEHOLDERS

4.1 Role of the Co-Management Partners

The QWB will be responsible for providing on-going IQ advice and support to co-management partners, allocating annual Total Allowable Harvest (TAH) to their respective communities, regulating their members, fulfilling other wildlife co-management obligations in accordance with the NLCA, and reviewing the management plan as necessary.

DoE will be responsible for the protection, management and sustainable use of Qikiqtaaluk muskoxen. DoE will also be responsible for conducting research when required, preparing reports, and providing information and support to the QWB and all co-management partners as necessary.

NTI Wildlife will be responsible for ensuring that all processes adhere to the NLCA; NTI will also provide information and support to the co-management partners as needed.

The community HTOs will be responsible for ensuring harvest reporting by members, allocating TAH among members where appropriate and conducting community based monitoring and research with the support of the other co-management partners.

The NWMB shall make decisions on TAH and Non Quota Limitations as per the NLCA.

4.2 Role of Communities

The communities of Resolute, Grise Fiord and Arctic Bay will play a vital role in muskox management; it is through their local HTOs and subsequently the Qikiqtaaluk Wildlife Board that their knowledge, expertise, concerns and wishes will be addressed. The community HTOs will be responsible for ensuring harvest reporting by members, allocating TAH among members (where a TAH has been applied) and conducting community based monitoring with the support of the other co-management partners.

4.3 Inclusion of Inuit Qaujimajatuqangit

Inuit Qaujimajatuqangit (IQ) is the system of values, knowledge, and beliefs gained by Inuit through generations of living in close contact with nature. For Inuit, IQ is an inseparable part of their culture and includes rules and views that affect modern resource use.

Recommendations for the management of muskoxen will continue to be guided by the

best available scientific and IQ information. Observations from Elders and knowledgeable people including harvesters from local communities will be taken along with scientific data and observation to contribute to management decisions for each management unit, as well as to identify information gaps, areas of uncertainty, and to set research priorities.

The practical application of local IQ with scientific information demonstrates the value of local consultations, and documenting and preserving IQ before it is lost. The communities of the Qikiqtaaluk, through the QWB, will continue to be consulted on an ongoing basis to ensure that IQ is utilized in conjunction with scientific information in the management of Qikiqtaaluk muskoxen.

5.0 QIKIQTAALUK MUSKOX MANAGEMENT PLAN

5.1 Goals of the Management Plan

The goals of the Management Plan are:

- To guide the management of muskoxen in a co-operative manner that involves the full participation of communities and co management partners.
- To include local knowledge, Inuit Qaujimagatuqangit and scientific knowledge equally in the management process.
- To promote local and regional involvement in wildlife decision making.
- To protect, conserve and manage high Arctic Island muskoxen in a sustainable manner in accordance with the principles of conservation as outlined in Section 5.1.5 of the NLCA.

5.2 Management Plan Priorities

In addition to the goals of the Management Plan, the following specific priorities have been identified and supported by the co-management partners:

- Permanently change the regulations under the *Wildlife Act* to eliminate existing muskox harvesting zones and create 6 new management units based on the 6 Island Groups identified in Figure 1.
- Permanently change the regulations under the *Wildlife Act* to remove existing restrictions on harvesting seasons currently in place for high Arctic muskox, and enable the implementation of new TAH levels as needed.
- Make recommendations for TAH for each muskox management unit that will ensure sustainable harvest of high Arctic muskoxen.

5.3 Management Strategies

Subpopulation management involves monitoring the trend of the 6 island group subpopulations to help guide decisions about population monitoring and muskox harvesting. The Plan proposes the following strategies to determine appropriate management actions for each of the 6 muskox management units that are based on the

status of each subpopulation with respect to natural long term population fluctuations:

- **Strategy A – Core Management (Stable or Increasing Trend/High Population)** Core management applies at all times during population cycles and represents the minimum level of management activities that need to be conducted. Core management actions would be applied when population surveys and /or other indicators suggest that population trend is increasing or stable and that population size is above existing commercial, resident and subsistence harvesting needs. Core management actions will include:
 - Annual stakeholder meetings
 - Maintaining ground survey priority in the survey cycle
 - Continuation of existing TAH
 - Continuation of existing community-based harvest monitoring programs

- **Strategy B – Enhanced Management (Declining Trend)** As population trend declines, management actions need to be intensified to ensure that herds will be able to follow their natural cycle and increase in size again. Enhanced management will be applied when population censuses and/or other indicators suggest that population trend is declining or that population size has decreased below existing commercial, resident and subsistence harvesting needs. Enhanced management actions may include:
 - Annual stakeholder meetings
 - Increase in ground survey priority in the survey cycle
 - Consideration of reduced harvesting
 - Continuation of existing community-based harvest monitoring programs

- **Strategy C – Critical Threshold Management (Population level below Basic Needs Level, BNL)** Critical Threshold management would apply when the population size is at a low point of the cycle and there are not enough muskoxen in a given management unit to meet the basic needs levels of Inuit (as defined in the NLCA). Maximum monitoring and management effort will be required for a decreasing herd with a population level that is below BNL. Critical threshold management actions may include:
 - Emergency stakeholder meetings
 - Targeted ground surveys
 - Potential aerial surveys
 - Consideration of harvest reduction or moratorium
 - Continuation of existing community-based harvest monitoring programs

Before being implemented, any management actions will be discussed among the stakeholders at the annual meeting, and consensus will be sought. Furthermore, as per the co-management system set out in the NLCA, although HTOs may restrict harvesting on their members as they deem appropriate, formal changes to any TAH are required to go through the NWMB decision-making process.

5.4 Muskox Monitoring and Indicators

Regular monitoring of herds within each management unit by means of surveys is an essential tool for the effective management of Qikiqtaaluk muskoxen. Although aerial surveys are the most accurate means of determining trend and population numbers, they are expensive and logistically difficult in the remoteness of the high Arctic. Community based ground surveys, if carried out on a cyclical basis, would contribute significantly to ongoing monitoring that could be used to trigger more intense survey efforts should conditions warrant.

Accurate and timely information is necessary for making good decisions that will help muskoxen. Because they are a shared resource between communities and regions, it is also important that information is collected and shared by all harvesters and co management partners.

It is important to have up-to-date information, and so the frequency of research and monitoring effort is very important. A basic level of monitoring will take place regardless of herd status. However, the frequency and intensity of monitoring will vary in response to herd status. Some indicators of herd status can be difficult or expensive to measure. In these cases there may be some information available through long-term research programs or methodical collection of IQ. All of this information will be considered by the co management partners.

Working with all stakeholders an ongoing community based ground survey program will be established with the appropriate financial and technical support. This would occur, due to the spatial scale, on a rotating basis so that areas will be monitored at least every two or three years, unless observations of decline trigger more intensive efforts. The ground based surveys will be primarily in areas where regular community harvest occurs. Annual surveys will be followed with an annual meeting of stakeholders to review the results and recommend management changes if required.

Further changes observed from community monitoring program (observations of die offs, starvation, population increase or decrease) can trigger:

1. Aerial surveys if declines are considered significant,
2. Increased frequency and coverage of community ground survey if declines are considered less significant but still of concern,
3. Community based changes in harvest level that would occur within a predetermined upper and lower limit.

5.5 Muskox Management Units

The following Figure (Figure 1) and Table (Table 1) summarize the proposed new Muskox Management Units, as well as relevant current and historic information and

data that will inform management decisions for all six management units. Descriptions of each Island Unit follow the figure and table.

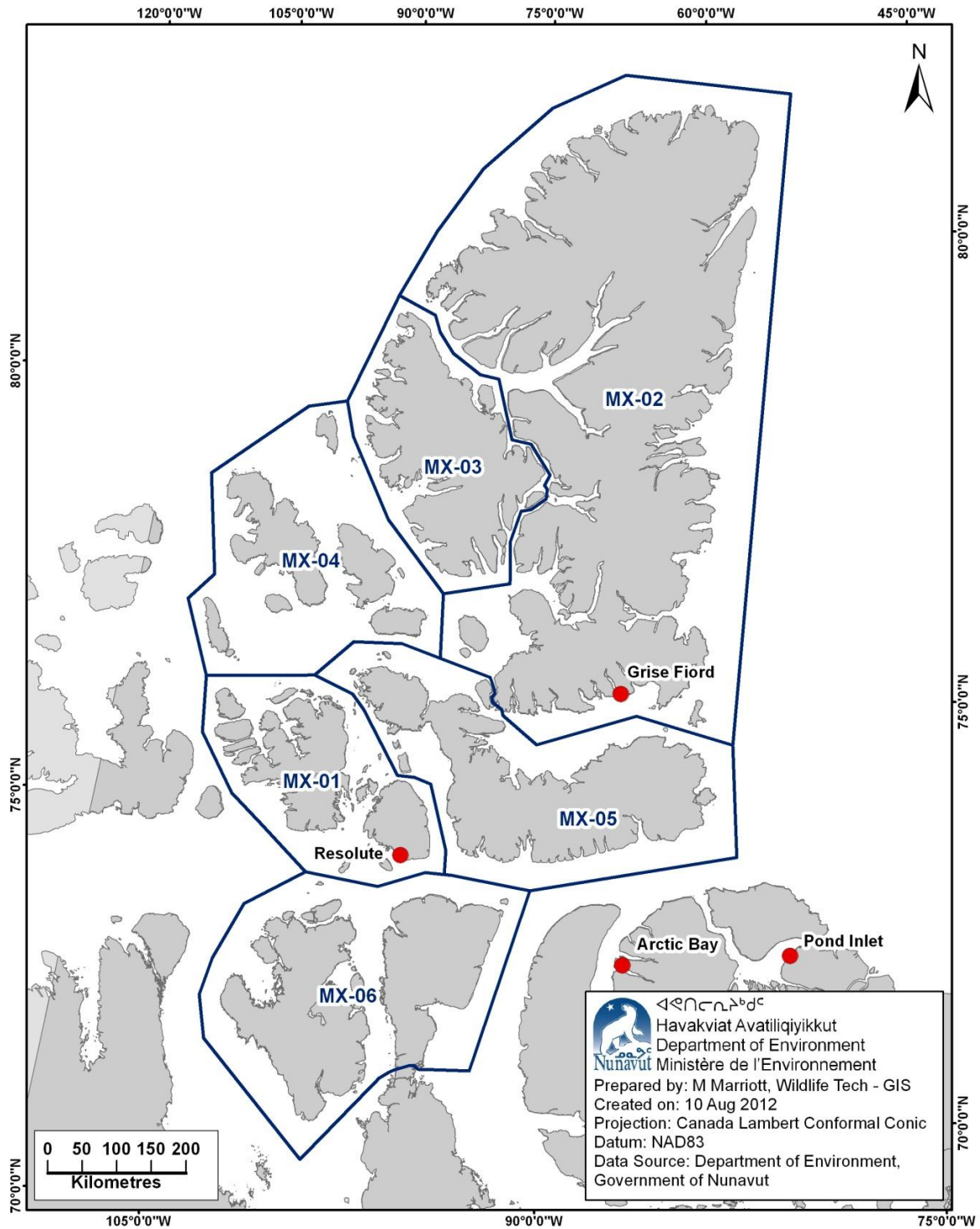


Figure 1. Proposed Qikiqtaaluk Muskox Management Units; MX-01: Bathurst Group, MX-02: Ellesmere Group, MX-03: Axel Heiburg Group, MX-04: Ringnes Group, MX-05: Devon Group, MX-06: Prince of Wales Group.

Table 1. Qikiqtaaluk Muskox Summary Table: Classification, Status, and Harvest Rates

Proposed Management Unit Number	Island Group Name	Estimated Population High ¹ (year, estimate)	Estimated Population Low ¹ (year, estimate)	Most recent Population estimate ² (year, estimate)	Current TAH	Proposed TAH	Total Reported Harvest from 1990 to 2010 ³
MX/01	Bathurst Island Group	1961, 1136	1997, 124	2001, 82 ⁴	40	30	60
MX/02	Ellesmere Group	2005-2006, 8671	1961, 4000	2005-2006, 8671	74	No TAH required	344
MX/03	Axel Heiburg Group	1961, 1000	1961, 1000	2007, 4237	N/A	No TAH required	No known harvest
MX/04	Ringnes Islands Group ⁴	2007, 21 ⁵	1961, 0	2007, 21 ⁵	N/A	No TAH required	No known harvest
MX/05	Devon Group	1967, 450	1961, 200	2008, 513	15	15	74
MX/06	Prince of Wales Somerset Group	1980, 2381	1975, 313	2004, 3996	20	No TAH required	127

1 - Comparison of historic survey estimates is difficult due to different methodologies and spatial extent of surveys. Information presented here is compiled in greater detail in Jenkins *et al.* 2011.

2 - Methodology and confidence intervals (where available) are available in full detail in Jenkins *et al.* 2011.

3 - This represents known harvest, without a formalized harvest reporting program compilation of data is difficult and these numbers probably represent an under estimate. Further detail is available in Jenkins *et al.* 2011.

4 - Portions of the Ringnes Islands group have been surveyed in 1961, 73, 74, 85, and 97, muskox were only observed during the 2007 survey.

5 - This represents an actual count of adults, no estimate was derived

5.5.1 The Bathurst Island Group. This group of islands includes the Bathurst Island Complex (BIC) and Cornwallis/Little Cornwallis Islands. The BIC (19,644 km²) includes Bathurst Island and four major satellite islands (> 200 km²; Cameron, Vanier, Alexander, Massey, and Helena), and three minor satellite islands. These islands are low-lying with few areas exceeding 300 m elevation. The terrain is sparsely vegetated however low-lying wetlands such as the Goodsir-Bracebridge Inlet have a higher cover of sedges and low-growing willows.

Cornwallis and Little Cornwallis Islands (7,474 km² including small proximal islands) are low-lying with uplands and hills below 300 m and mostly polar desert with sparse vegetation. Portions of the western coastline and Eleanor Lake watershed (Cornwallis Island) support more diverse vegetation, including prostrate shrubs in moderately moist habitats, and sedges in the wet areas.

5.5.2 Devon Island Group. Devon Island (55,534 km²; including small proximal islands) is characterized by several mountain ranges (e.g. Cunningham Mountains, Treuter Mountains, and the Douro Range), coastal lowlands, and extensive glaciers. The Devon Ice Cap covers a large portion of eastern Devon Island. Extensive uplands stretch west of the Ice Cap across central Devon Island. Low-lying areas occur in coastal areas, primarily along the north and western coast (the Truelove lowlands), but also other smaller areas. The landscape is predominantly polar desert with sparse cover of vascular plants; however low lying areas support a greater diversity of vegetation dominated by low shrubs and sedges.

5.5.3 Ellesmere Island Group. Ellesmere Island is the largest of the Queen Elizabeth Islands (197,577 km²). The island is largely covered by mountain ranges and glaciers that are separated by a series of east-west passes. These features fragment the island, particularly where the north end of Vendom Fiord approaches the Prince of Wales Ice Cap, and divides the southern portion of the island from the north.

5.5.4 Axel Heiberg Group. Axel Heiberg Island (42,319 km²) is separated from Ellesmere Island by Nansen and Eureka Sound. This island is mountainous and includes the Princess Margaret Range, which runs north to south through its center. Large ice caps cover much of the landmass and spawn many glaciers that flow primarily to the west. East of the Princess Margaret Range, vegetation progresses from an herb-shrub transition zone at higher elevations to an enriched low shrub zone along the low-lying coast. Plant species are diverse and dense, dominated by shrubs and sedge meadows.

5.5.5 Ringnes Island Group. This island group consists of Ellef Ringnes, Amund Ringnes, Lougheed, King Christian, Cornwall, and Meighen Islands are all situated to the west of Axel Heiberg Island and north of the Bathurst Island Complex. Lougheed Island (1,321 km²) has vegetation described as entirely herbaceous with rich vegetation patches. Ellef Ringnes Island (11,428 km²) is sparsely vegetated with low plant diversity.

Amund Ringnes Island (5,299 km²) is relatively low lying but features greater relief in the north. Vegetation is entirely herbaceous with the southern half of the island supporting more diverse vegetation, primarily herbaceous plants with some shrubs and sedges. To the south of Amund Ringnes is Cornwall Island, a small hilly landmass also dominated by herbaceous vegetation. Meighen Island (approximately 933 km²), to the northeast of Amund Ringnes, is low-lying with sparse herbaceous vegetation and a large centrally located glacier. King Christian Island is located southwest of Ellef Ringnes, has an area of 647 km².

5.5.6 Prince of Wales/Somerset Island Group. Prince of Wales (33,274 km²) is a tundra-covered island that features many small inland lakes. Although the island is generally below 300 m in elevation, some uplands occur along the eastern coast and across the north. Russell Island and Prescott Island are small proximal island's north and east of Prince of Wales, respectively. Somerset Island (24,548 km²), separated from the Prince of Wales Island by Peel Sound, is hilly with extensive uplands.

6.0 ACTION PLANS

Action plans are an important part of the management plan because they describe what needs to be done to achieve the management plan's goals. Action plans outline essential tasks that must be conducted to allow communities to make appropriate decisions to ensure that herds and ranges are maintained. Detailed Action Plans are described in Appendix B.

Appendix A

RECOMMENDATIONS FOR HARVEST MANAGEMENT

GENERAL RECOMMENDATIONS

Update harvest restrictions based on up-to-date information

Although muskoxen in the Kivalliq and Kitikmeot have shown significant recovery from historic lows, some of the island groups in the Qikiqtaaluk region are still experiencing low numbers and caution must be exercised with respect to harvest levels. Harvest restrictions should only be recommended to the degree that is appropriate to reasonably address valid conservation concerns. In line with Nunavut's wildlife co-management system, harvest restriction recommendations must involve thorough consultation with affected harvester groups. Given the current status of some Qikiqtaaluk herds, there may be an opportunity to relax harvest restrictions currently in place in some areas.

There is a need for provisions within subpopulation-specific management plans developed in the future to allow for finer scale management in response to population fluctuations, such as those observed through community monitoring or by additional survey work where warranted. In particular, it is recommended that HTOs control local harvesting within an agreed upon upper and lower limit, thus allowing for finer scale management at the community level through the HTOs.

Establish Harvest Reporting/Monitoring Programs

Harvest reporting and monitoring at the community level will be a critical factor in ensuring that harvest levels are set to appropriately reflect what subpopulations can sustain. It is highly recommended that harvest reporting and sample collection programs be put in place in order to provide accurate and up-to-date information that will inform management decisions.

It is recommended that community HTOs implement bylaws that require harvest reporting and sample collection for muskoxen. Each harvest should be reported through the submission of hunter kill reports and the continued use of tags. Information collected on the reports should include date and location (Latitude and Longitude) of harvest, hunters name, tag number, animal's sex and approximate age, and size of herd harvested from. Harvesters should also be required to collect and submit a sample of skin with hair attached (equal or equivalent to a 2 by 2 inch square) from the harvested muskox. A skin sample will increase our understanding of muskox populations through genetic analysis as well as to monitor the sex ratio of the harvest in

the instance of a reported decline and/or increase in a population's growth rate. Other samples should also be considered for monitoring of disease and general health.

Establish New Management Units

A key recommendation in this management plan is to establish management units (See Figure 1) based on the existing six Island groups as presented in the DoE report *Recent trends and abundance of Peary Caribou (Rangifer tarandus pearyi) and Muskoxen (Ovibos moschatus) in the Canadian Arctic Archipelago, Nunavut*. This will facilitate future consistent collection of data for comparison and management decisions.

Establish Community Based Ground Survey Program

Working with all stakeholders an ongoing community based ground survey program should be established with the appropriate financial and technical support. Due to the spatial scale, ground surveys should occur on a rotating basis so that areas will be monitored at least every two or three years, unless observations of decline trigger more intensive efforts. The ground based surveys would primarily be done in areas where regular community harvest occurs. Annual surveys should be followed with an annual meeting of stakeholders to review the results and recommend management changes where required.

Observed changes from community monitoring programs (observations of die offs, starvation, population increase or decrease) could trigger:

- 1) Potential aerial surveys if declines are considered significant,
- 2) Increased frequency and coverage of community ground survey if declines are considered less significant but still noteworthy,
- 3) Community based changes in harvest level that would occur within a predetermined upper and lower limit.

SPECIFIC ISLAND GROUP RECOMMENDATIONS

Bathurst Island group (MX-01)

This subpopulation has shown wide fluctuation over time according to historical surveys. Previous estimates from 1993 and 1995 place the subpopulation near 1000 animals; however 1974 indicates a low of 164. The 2001-2002 survey produced an actual count of 100 with no estimate produced. Local knowledge indicates that this group has seen recovery since the 2001 survey. However these historical fluctuations pose a conservation concern therefore it is recommended that harvest is reduced from

the current TAH of 40 to a new level of 30. This is within the current reported annual harvest which has averaged only 14% of available tags in the last 20 years.

Ellesmere group (MX-02)

Given the current status of the subpopulation, and current/historic harvest levels, no TAH is required.

Axel Heiburg group (MX-03)

Given the current status of the subpopulation, and current/historic harvest levels, no TAH is required

Ringnes Islands group (MX-04)

Although the population appears low, no harvesting occurs here so no TAH is required. Should harvest begin to be reported in this group, consideration should be given to TAH.

Devon Island group (MX-05)

This subpopulation appears to have sustained its population with current harvest levels. It is recommended that the harvest season be removed, and the current TAH of 15 be maintained for this group.

Prince of Wales group (MX-06)

The subpopulation is abundant and stable, therefore no TAH is required.

Appendix B

ACTION PLAN

The following action plan supports the implementation of the management plan. It lists essential tasks that the co management partners recommend for the ongoing monitoring and management of muskoxen. The actions support and emphasize programs and projects that will be invaluable in decision making and recommends what needs to be done to achieve the goals of the management plan.

The Action Plan assigns responsibilities for conducting programs and projects and covers the following categories:

1. Aerial survey program
2. Community based ground survey program
3. Establishing a harvest reporting program
4. NWMB Decision on Regulatory Changes
5. Annual Stakeholders meeting

1. Establishing an Aerial Survey Program

Background:

Aerial surveys are expensive and require significant logistic preparation. An aerial survey will be used in two fashions: as part of a cyclic program over the long term to monitor population size and trend and when community observation and ground surveys indicate the need for precise population estimates.

Problem Statement:

DoE has limited funds available for research of all species under its mandate for all of Nunavut. Regular surveys are expensive both in terms of financial and human resources. Co-management partners need to agree on a monitoring cycle that is financially viable and that will still allow for surveys to occur in emergent situations when ground based surveys observe significant die offs or declines.

Objectives:

1. Get commitment from NWMB for Nunavut Wildlife Research Trust Fund (NWRTF) support for a long term survey as well as seek out other funding sources, such as INAC, Environment Canada under federal funding.

2. Stakeholders will agree upon an aerial survey schedule and thresholds that will trigger aerial surveys in emergent situations, such as observed dies offs and extreme weather events.

Methods:

1. DOE proposal to NWMB for NWRTF with inventory schedule and maximum three year term request.
2. DOE to make formal requests to other third parties, via letter, for additional financial support for monitoring programs

Schedule:

Upon acceptance of Management Plan – GN DoE to seek support from third parties

November 2013 – GN DOE proposal to NWMB

November 2013 – Letter from co management partners to NWMB supporting DoE proposal

Evaluation: Ongoing at annual Stakeholder meeting

Lead Role: GN DOE

Support Role: Iviq HTO, Resolute HTO, Arctic Bay HTO, QWB

2. Establishing a Community based ground survey program

Ground surveys are expensive and require significant logistic preparation. Community based ground surveys will be used as part of a cyclic program over the long term to monitor population size and trend as well as other indices such cow/calf ratio and bull/cow ratio.

Problem Statement:

HTOs have limited capacity to conduct monitoring programs. Regular surveys are expensive both in terms of financial and human resources. Co management partners need to agree on a monitoring cycle that is financially viable and has the financial and technical support to succeed.

Objectives:

1. Get commitment from NWMB for HTO proposals to the community Studies Fund support for community based ground surveys on an annual and cyclic basis.

2. Stakeholders will agree upon a ground survey schedule and thresholds that will triggers additional ground surveys such as observed die offs and extreme weather events.

Methods:

1. HTOs submit proposal to NWMB for Studies Fund
2. Co management partners to provide technical, logistic and financial support.

Schedule:

Upon acceptance of Management Plan – HTOs to seek support from third parties

November 2013 – HTO proposals to NWMB

November 2013 – Letter from co management partners to NWMB supporting HTOs proposals.

Evaluation: Ongoing at annual Stakeholder meeting

Lead Role: HTOs

Support Role: QWB, NIWS, GN DoE

3. Establishing Harvest Reporting Program

Background:

Harvest monitoring and caribou health monitoring are identified in the Plan as important for management decisions. Collection of harvest data and condition are means of Inuit involvement at the individual level.

Problem Statement:

Currently harvest monitoring is not official or well organized.

Objectives:

1. Get commitment from stakeholders to implement a harvest reporting program
2. Harvest reporting will include submission of samples for analysis to help understand herd structure and influence decisions.

Methods:

1. NIWS, NTI and GN DOE to assist QWB in developing harvest reporting program
2. NTI and GN DOE to provide letters of support

Schedule:

Upon acceptance of plan - Determine harvest and sample collection needs and design reporting form

Evaluation: Annually at stakeholder meeting

Lead Role:

QWB / HTOs/ GN DOE / NTI Wildlife

4. NWMB Decision on acceptance of the Plan and Regulatory Changes

Background:

The co-management partners are responsible for the protection, conservation, and management of muskoxen in a sustainable manner. However, the NWMB has the mandate to make decisions under the NLCA with regards to changes in the *Wildlife Act* and regulations as well as approval of management plans. The Plan will serve as the basis for formal changes for the management of muskoxen under the *Act*.

Problem Statement:

The NWMB must realize that the proposed management plan, action plan and recommended changes to the regulations are the result of consensus by the co-management partners.

Objectives:

The co management partners have developed the Management Plan and Action Plan and in regards to implementing changes in the management of muskoxen. The objective is to have the plan approved by NWMB so that the plan can be implemented and form the basis for regulatory changes.

Methods:

1. Signatories will make a joint submission of the plan to the NWMB for decision.

Schedule:

Upon completion of an acceptable draft plan –submit Management Plan, and briefing note to NWMB for first available regular meeting
September 2012 –submit briefing note and letter(s) to NWMB

Evaluation: Annual stakeholder meeting

Lead Role: QWB / GN DOE / NTI Wildlife/ HTOs

5.0 Annual Stakeholder Meeting

Background:

The co-management partners need to ensure that all information gathered annually on muskoxen, such as harvest and survey results, are shared fully and reviewed collaboratively for the purposes of taking action when needed. The action plan shall undergo annual review at this meeting and be amended as required

Problem Statement:

Scheduling and financing meetings in the remote communities of Nunavut is a challenge. Support is needed by all co management partners to ensure that the parties can meet and discuss, by whatever means is available, the current information available.

Objectives:

To ensure that participants are adequately supported to effectively participate in the annual stakeholder meeting.

Methods:

1. Co management partners will seek to plan and budget the adequate resources for their respective participants to effectively participate in the annual meeting.
2. Where possible the participants may already be in joint attendance at other meetings and this should be capitalized upon.

Schedule:

The annual general meeting shall occur at a mutually convenient time that allows for the data collected in the previous year to be analyzed and summarized for use by the co management partners.

Evaluation: Annual stakeholder meeting

Lead Role: QWB / GN DOE / NTI Wildlife/ HTOs