PAULATUK COMMUNITY CONSERVATION PLAN

A Plan for the Conservation and Management of Renewable Resources and Lands within the Inuvialuit Settlement Region in the Vicinity of Paulatuk, Northwest Territories

Parks Canada

Prepared by
the Community of Paulatuk,
the Wildlife Management Advisory Council (NWT)
and the
Joint Secretariat

November 2008

Nelson Allen Green
October 8, 1948 - January 9, 1999

His magical aspirations are very visible. Along with his stern beliefs which are deeply embedded. His love of the land and wildlife, and of which he stands for. The utmost dedication in which he has given. We are forever in gratitude. For this, we give you in your honour, the Paulatuk Conservation Plan.

IMPORTANT DEFINITIONS AND ABBREVIATIONS

The following important words and abbreviations have been used in the Community Conservation Plan and are explained below.

Community
Refers to all the Inuvialuit individuals living in the area and the local organizations which represent them. Those organizations include the Hunters and Trappers Committee, Elders, Community Corporation, Community Education Council and Hamlet.

Conservation
Is ensuring that if we take caribou, there will be caribou the next year and the year after that. The same for anything else. This applies to all uses of the land: if it is used and enjoyed now, it must be left and preserved so that it will be there for the next year and for future years.

Ecosystem
Refers to all of the plants and animals in an area, including the air, water and land on which they depend. The parts of the ecosystem are interconnected and influence one another. Food and energy flow through the ecosystem and are returned to it. Successful conservation and management depend on the recognition that changing one part of the ecosystem may affect the other parts.

CWS - Canadian Wildlife Service
DFO - Department of Fisheries and Oceans
DIAND - Department of Indian Affairs and Northern Development
DOT - Department of Transportation
DENR - Department of Environment and Natural Resources (ENR)
EIRB - Environmental Impact Review Board
EISC - Environmental Impact Screening Committee
FJMC - Fisheries Joint Management Committee
GNWT - Government of the Northwest Territories
GRRB - Gwich'in Renewable Resource Board
GTC - Gwich'in Tribal Council
HTC - Hunters and Trappers Committee
IBP - International Biological Programme
IFA - Inuvialuit Final Agreement
IGC - Inuvialuit Game Council
ILA - Inuvialuit Land Administration
ILAC - Inuvialuit Land Administration Commission
IRC - Inuvialuit Regional Corporation
ISR - Inuvialuit Settlement Region
PCC - Paulatuk Community Corporation
PHTC - Paulatuk Hunters and Trappers Committee
PWNHC - Prince of Wales Northern Heritage Centre
RRC - Renewable Resource Council (Gwich'in)
WMAC(NS) - Wildlife Management Advisory Council (North Slope)
WMAC(NWT) - Wildlife Management Advisory Council (Northwest Territories)
YTG - Yukon Territorial Government

Conservation is ensuring that if we take caribou, there will be caribou the next year and the year after that. The same for anything else. This applies to all uses of the land: if it is used and enjoyed now, it must be left and preserved so that it will be there for the next year and for future years.

Peter Green,
Original Paulatuk Conservation Working Group

This plan has been well thought out, using traditional knowledge. We are the one's who know the area, as well as the different seasons, and the times of when different animals migrate. We've always hunted with the thought of using it wisely. These things are very important to us and our future.

Edward Ruben, Paulatuk Elder

June 2000

The 2000 Paulatuk Community Conservation Plan has been prepared in consultation with the Inuvialuit Community in Paulatuk and Inuvialuit and non-Inuvialuit bodies with an interest in the area. The undersigned representatives hereby adopt this document for the purpose of guiding policy and resource management in the planning area.

Ruben Green
Paulatuk Working Group Member

Noel Green
Paulatuk Working Group Member

Tony Green
Paulatuk Working Group Member

Edward Ruben
Paulatuk Working Group Member

Albert Ruben
Paulatuk Working Group Member

Frank Pokiak
Vice-Chair
Wildlife Management Advisory Council (NWT)

Duane Smith
Chair
Inuvialuit Game Council

Robert Bell
Chair
Fisheries Joint Management Committee

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EXECUTIVE SUMMARY

The **Paulatuk Community Conservation Plan** is a community-based planning document that was originally prepared in 1990 by the Paulatuk Hunters and Trappers Committee, Paulatuk Community Corporation, and Paulatuk Elders Committee. Creation of community-based conservation plans was the first objective of the Inuvialuit Renewable Resource Conservation and Management Plan (1988), a document jointly prepared by the Wildlife Management Advisory Council (NWT) and the Fisheries Joint Management Committee in partial fulfilment of their obligations under the Inuvialuit Final Agreement. Numerous Inuvialuit and non-Inuvialuit organizations were consulted during the planning process. A wide range of existing conservation plans were considered by the joint Working Group and extensive use was made of the Land Use Plan for the Mackenzie Delta Beaufort Sea Region.

The updated 2000 Paulatuk Community Conservation Plan built upon the work of the original document. A Working Group was re-established as part of the review exercise, and extensive consultation was once again undertaken with Inuvialuit and non-Inuvialuit organizations.

In the spring of 2008 the conservation plans were updated with new working groups from each of the Inuvialuit communities.

The document is intended to provide guidance to all those with an interest in the planning area. The Plan contains a brief description of the current conservation and resource management system in the Inuvialuit Settlement Region and describes the strategy to address five broad goals:

1. To identify important wildlife habitat, seasonal harvesting areas and cultural sites and make recommendations for their management.

2. To describe a community process for land use decisions and managing cumulative impacts which will help protect community values and the resources on which priority lifestyles depend.

3. To identify educational initiatives for the Inuvialuit of Paulatuk and others interested in the area which will promote conservation, understanding and appreciation.

4. To describe a general system of wildlife management and identify population goals and conservation measures appropriate for each species of concern in the planning area using the knowledge of community and others with expertise.

5. To enhance the local economy by adopting a cooperative and consistent approach to community decision making and renewable resource management.

The Paulatuk Community Conservation Plan will be subject to a progress review and potential amendment every five years. The HTC is responsible for initiating the review, to be conducted by the Community Conservation Plan Working Group. All feedback should be provided to the Joint Secretariat for integration in updated versions of the Plan. Minor revisions or corrections to the Plan may be sent to the Joint Secretariat at any time, for entry into subsequent versions. A complete review of the Plan by all stakeholders will occur a minimum of every four years.

Copies of the Plan are available from the Wildlife Management Advisory Council (NWT), P.O. Box 2120, Inuvik, NWT, X0E 0T0. Phone (867) 777-2828.

ACKNOWLEDGEMENTS

1990

The Paulatuk Conservation Plan results from the efforts of many people. The Paulatuk Conservation Working Group was established to work on conservation principles as mandated in the Inuvialuit Final Agreement. This group also participated in the Land Use Planning Process for the Mackenzie Delta Beaufort See Region. The Working Group represents the interests of different organizations within the community. Working Group members who participated in the development of this Plan were Nelson Green, Noel Green, Peter Green, Tony Green, Adam Ruben, Albert Ruben, Edward Ruben, Pat Ruben and Paulatuk Community Corporation Chairs. In addition to Working Group members, the majority of community residents contributed directly to this Plan through the consultation process.

The Mackenzie Delta Beaufort Sea Regional Land Use Planning Commission deserves mention for its support and assistance throughout the planning process.

Other individuals who contributed to the various drafts of the Plan and workshops were: Jim Bourque, NWT Department of Renewable Resources, Yellowknife; Mike Drescher, Inuvialuit Land Administration, Tuktoyaktuk; Wanda Erikson, Mackenzie Delta Beaufort Sea Regional Land Use Planning Commission, Inuvik; Bob Ferguson, NWT Department of Renewable Resources, Yellowknife; Gord Hamre, Canadian Parks Service, Yellowknife; Ian Robertson, NWT Department of Renewable Resources, Yellowknife; and Nancy Witherspoon, Department of Fisheries and Oceans, Inuvik.

Tom Nesbitt from Avati Associates in Yellowknife facilitated workshops on the Conservation Plan, prepared early drafts of the document and worked closely with the community Working Group. The final drafts of the Plan were prepared by Leslie Treseder, with the help of Randal Glaholt, Peter Green, Lois Harwood, Bill Mair, the Paulatuk Working Group members and the members of the WMAC(NWT) and FJMC.

The map atlas that accompanies the Plan was drawn by Mike Draper and produced by the Mackenzie Delta Beaufort Sea Regional Land Use Planning Commission, except the fisheries map which was prepared by Jay Bradley under contract to the Land Use Planning Commission. Background research for the map atlas was done by Alan Fehr, also under contract to the Commission. The figures in the Plan were drawn by Mike Draper. The Plan was printed at Printworks Ltd. in Edmonton, Alberta.

2000

Revisions to the 2000 Community Conservation Plan could not have been achieved without the dedicated efforts of: Nelson Green, Noel Green, Ruben Green, Tony Green, Albert Ruben, Bobby Ruben, Edward Ruben, and the staff of the Joint Secretariat. Brian Johnston (Resource Person, WMAC(NWT)) and Michael Muller (GIS Specialist, Joint Secretariat) conducted community consultations and drafted the updated document, based on the recommendations of the community. The current plan is produced and distributed by the Joint Secretariat.

2008

The 2008 Paulatuk Community Conservation Plan would have not been such a success if it were not for the following: The Paulatuk Working Group; David Ruben, Annie Illisiak, Fred Thrasher, Larry Ruben, Ruben Ruben and Bobby Ruben, The Wildlife Management Advisory Council, Fisheries Joint Management Committee and the Joint Secretariat. Also a very big Thank You to the Environment and Natural Resources Department for making the old maps available to the Working Group and drafting the amended maps.

1 INTRODUCTION

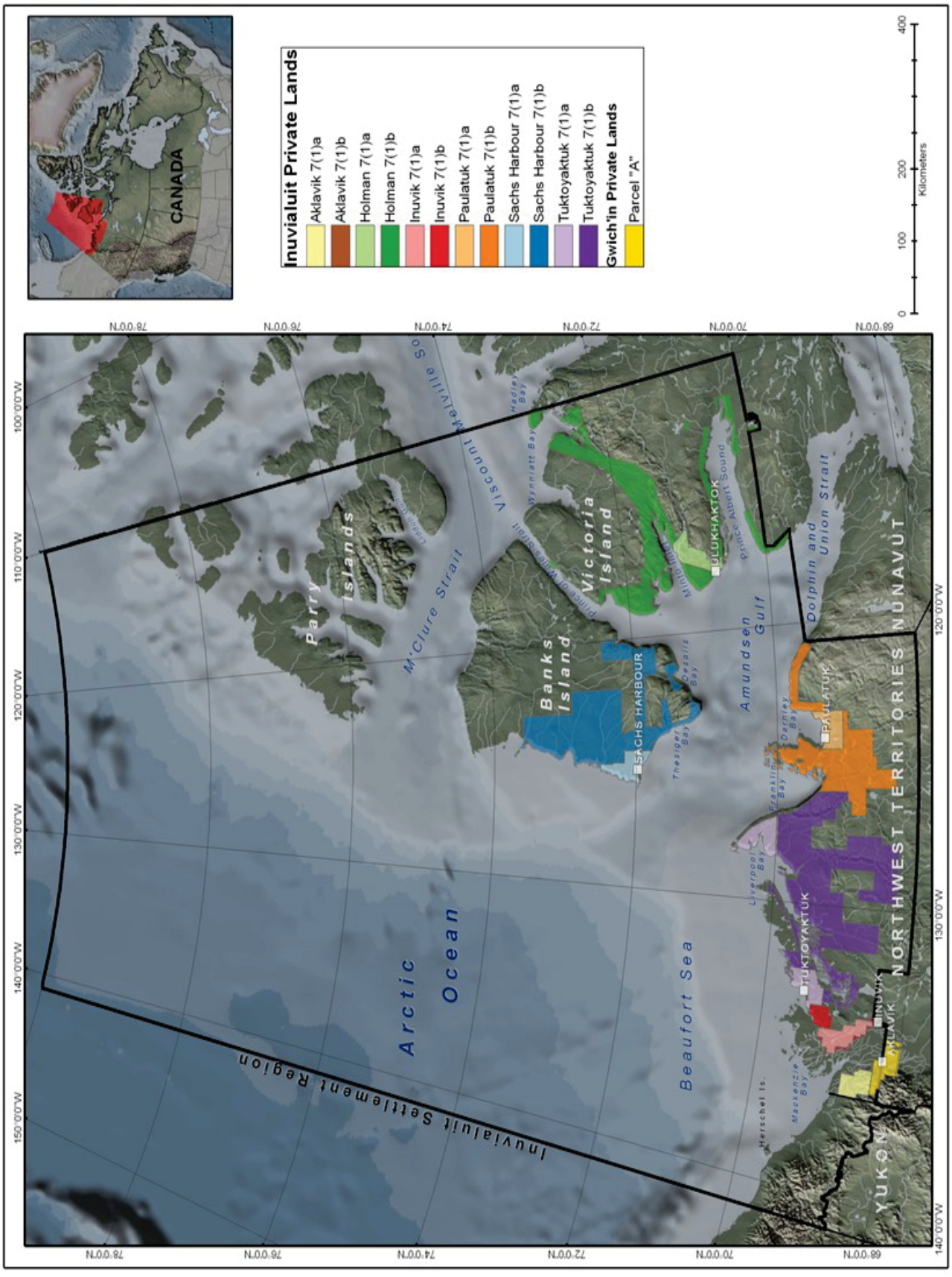
The Inuvialuit of the Beaufort Sea coastal area have relied upon the area's wildlife for many years. This plan was developed to help protect the environment in the Delta / Beaufort Sea coastal area and onshore and offshore areas to ensure cultural survival of the Inuvialuit Community, in accordance with the *Western Arctic (Inuvialuit) Claims Settlement Act* and the Inuvialuit Renewable Resource Conservation and Management Plan.

Development of the original plan was coordinated by representatives of the Paulatuk Hunters and Trappers Committees, the Community Corporations, the Elders and other community representatives. To prepare this plan, the Paulatuk Community Conservation Plan Working Group carefully reviewed the previous community conservation plan, species management plans, the Inuvialuit Renewable Resources Conservation and Management Plan, the Regional Land Use Plan for the Mackenzie Delta-Beaufort Sea Region and relevant documents arising from the Inuit Circumpolar Conference.

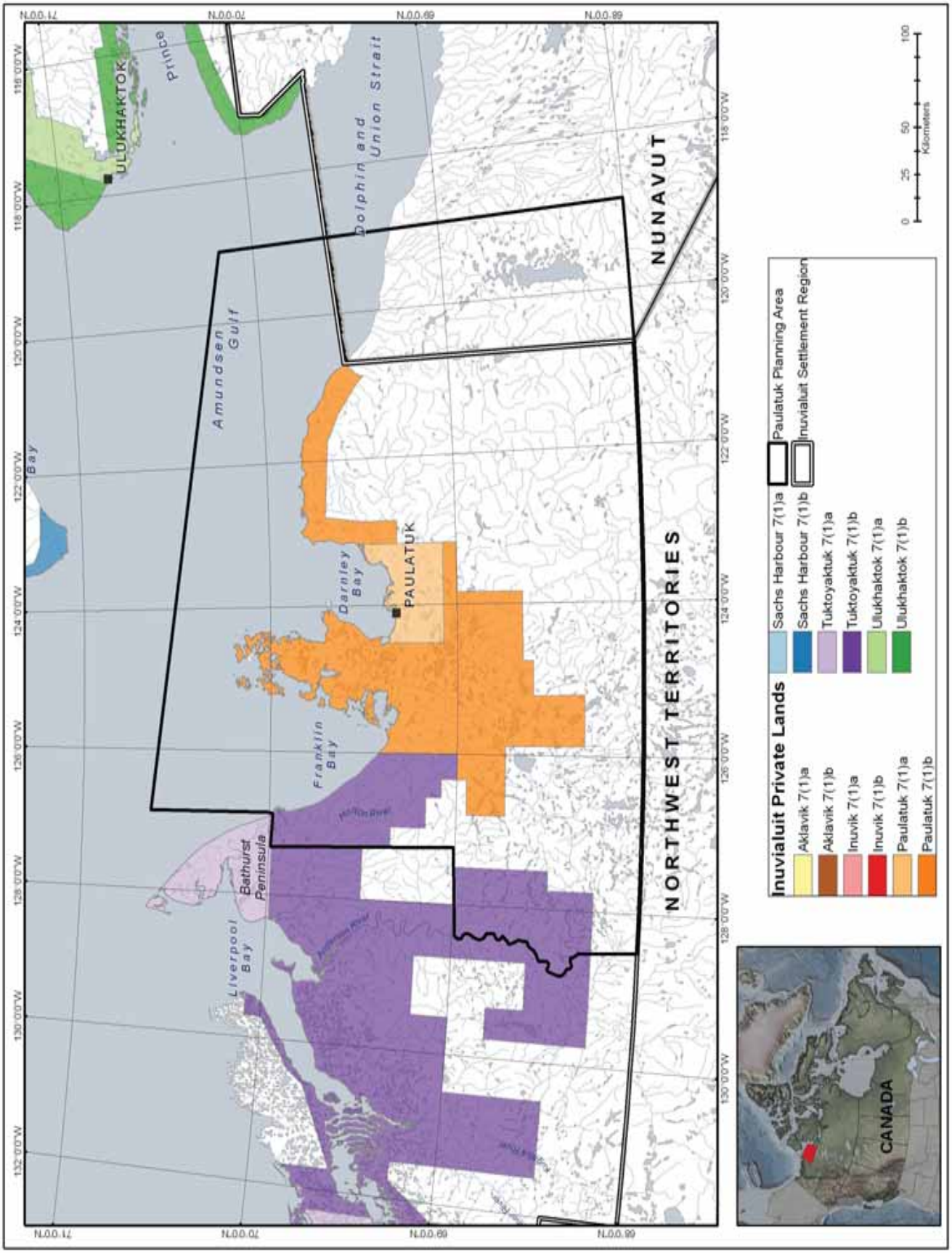
In addition, considerable effort was made to obtain opinion and advice from Inuvialuit members of the Community as well as government agencies. The plan is intended to express the Inuvialuit community's specific goals and objectives with respect to conservation of lands, waters and living resources in the Inuvialuit Settlement Region (Map 1). It makes recommendations and describes activities to be undertaken by individuals and organizations at the local, regional and national level. The plan describes a process for avoiding land use conflicts and dealing with cumulative impacts. We hope the plan will assist the Inuvialuit and others in ensuring conservation and environmental protection of the area.

The Paulatuk Community Conservation Plan has been formally adopted in the Paulatuk Hunters and Trappers Committee (PHTC) and Community Corporation bylaws. The Plan will be reviewed every five years and amended at that time if necessary. An additional annual progress evaluation will be conducted by the PHTC.

The updating exercise of 1998/99 that has produced the present version of the Plan was spearheaded by the PHTC, a newly re-established Community Working Group, and the staff of the Joint Secretariat. Once again, consultation with Inuvialuit and non-Inuvialuit organizations and co-management bodies played an important role in the review process. A multi-stakeholder workshop was held in February 1999 to exchange advice and recommendations before the final version of the Community Conservation Plans were drafted.



Map 1. Inuvialuit Settlement Region and Private Lands



Map 2. Paulatuk Conservation Planning Area and Private Lands

1.1 A BRIEF HISTORY OF THE PAULATUK AREA

The Inuvialuit have lived in the Paulatuk area for thousands of years. The region was abandoned around 1900 as people moved west to participate in whaling and fur-trading activities (Usher 1976). In the 1920's the area was re-colonized due to the success of the fur trade. Early successes were short-lived, however, and people soon returned to the nomadic way of life. Hunting and fishing were the foundations of the economy.

The Roman Catholic Church operated a mission and trading post at the present community site from 1935 to 1954. When people left, the post closed. In 1959 the Distant Early Warning (DEW) Line Station opened at Cape Parry, and a small settlement was established about five kilometres (3 mi) from there. At that time the nomadic way of life was replaced by community living.

Cape Parry was abandoned as a settlement in the mid-1960's. Several families returned to the site of the old mission to establish the present community.

During the 1970's the population of Paulatuk grew rapidly as the community was established (Staples, 1986). By 1986, the population of Paulatuk was 193, and half the people were under the age of 20 (Statistics Canada, 1986). The rapid rate of population increase is expected to continue. Most people who are born in Paulatuk stay in the community, and residents are concerned about supporting their growing population without damaging the renewable resources of the area. Community residents are also anxious to enhance economic opportunities for a growing population.

Paulatuk's current economy is based on the hunting, fishing and trapping way of life, and on wage employment. Limited employment is available in private business and government services. In recent years, there has also been a renewed interest in mineral exploration in the region.

Big game hunting is a large part of the economy. With the establishment of Tuktut Nogait National Park, tourism is also a potential source of future income for the community. Most community residents still depend on the land, and more than 75 per cent of households derive most or all of their food from hunting and fishing (Staples 1986). Four outpost camps south of the community are the focus for trapping, and families live off the land year-round.

Residents of Paulatuk have experienced many changes in the recent past, and they expect more changes for the future. To cope with them they have tried to plan for development of their community. In 1968 Paulatuk was incorporated as a settlement. In 1984 Paulatuk and the other Inuvialuit communities signed the Inuvialuit Final Agreement with Canada. An economic development strategy was prepared in 1986 (Staples 1986), and most of it has been implemented. In 1987 Paulatuk was incorporated as a Hamlet. This Conservation Plan will help the community to further manage change and to preserve the option of living off the land for the present and future generations.

1.2 INUVIALUIT FINAL AGREEMENT AND RENEWABLE RESOURCE MANAGEMENT

1.2.1 Inuvialuit Final Agreement

To secure and protect the homeland of the Inuvialuit in the Beaufort Sea region, known as the Inuvialuit Settlement Region (ISR), the Inuvialuit and the governments of Canada, the Northwest Territories, and the Yukon, negotiated The Inuvialuit Final Agreement (IFA). Proclaimed on July 24, 1984, the IFA includes the Northern Mackenzie Delta, Yukon North Slope and the western portion of the Arctic Islands. The IFA established several new management bodies to help ensure that the land and its living resources are conserved for the benefit of the Inuvialuit (see Appendices D and E). In addition to the summaries presented below, additional detailed information is available from the organizations described.

1.2.2 Wildlife Management Advisory Councils (NWT and NS) and Fisheries Joint Management Committee

The IFA created three new co-management bodies: the Wildlife Management Advisory Council (NWT), (WMAC (NWT)), the Wildlife Management Advisory Council (North Slope) (WMAC (NS)) and the Fisheries Joint Management Committee (FJMC). The WMAC (NWT) provides advice to appropriate government ministers and Inuvialuit agencies on all matters relating to wildlife policy and the management, regulation and administration of wildlife, habitat and harvesting in the Northwest Territories portion of the Inuvialuit Settlement Region. The WMAC (NWT) also advises government on wildlife related issues of park planning and management. The WMAC (NS) fills a similar role as the WMAC (NWT) however, its focus is on the Yukon North Slope. In addition to providing advice to government ministers, the WMAC (NS) is also expected to provide advice to the Porcupine Caribou Management Board, the EIRB and other groups. The FJMC assists Canada and the Inuvialuit in a similar fashion, managing the area's marine mammals and marine and freshwater fisheries. The FJMC also coordinates delivery of the HTC registration system for fishing by non-beneficiaries on private land.

1.2.3 Inuvialuit Game Council and Hunters and Trappers Committees

The IFA also created the Inuvialuit Game Council (IGC) and provided for the creation of a Hunters and Trappers Committee (HTC) in each of the six Inuvialuit communities. The IGC is intended to represent the collective or entire Inuvialuit interest in wildlife and to advise the government, often through the WMAC (NWT) and FJMC. The HTC is, among other things, responsible for local resource allocation and is expected to encourage and promote Inuvialuit involvement in conservation, research, management, enforcement and utilization.

1.2.4 Inuvialuit Land Administration

The Inuvialuit Land Administration (ILA) manages and administers access to Inuvialuit 7(1)(a) and 7(1)(b) lands (see Maps 1 & 2). Development proposals are screened by the ILA although they may also be referred to the Environmental Impact Screening Committee by the Inuvialuit.

All applications submitted to the ILA are distributed to the local HTC's and Community Corporations for review and comment. Final approval of applications is made by the ILAC who will not grant permits without the support and approval of the HTC and Community Corporation. ILAC has the authority to attach a variety of conditions on development proposals on Inuvialuit 7(1)(a) and 7(1)(b) lands to ensure that land and resources are not harmed and that the Inuvialuit benefit. Further information is available in the ILA "Rules and Procedures".

1.2.5 Environmental Impact Screening Committee and Environmental Impact Review Board

Under the terms of the IFA, the Environmental Impact Screening Committee (EISC) screens all development proposals on Crown lands within the ISR to determine if there is potential for significant negative environmental impact (see Appendix H). Projects in the offshore are also screened by the EISC, in response to a request from the Inuvialuit Game Council. Projects which may have significant negative impact are referred to the Environmental Impact Review Board (EIRB) or other equivalent environmental review processes for a public assessment and review. The EIRB has the authority to conduct a detailed public review and make recommendations to the competent governmental authority, with respect to pro-

posed developments.

The community believes that the existing methods for environmental screening and review can be incorporated as part of the general conservation process for the Planning Area (see also Section 4.4). The community supports development where it is compatible with the Conservation Plan's land use and species management priorities. A copy of the EISC and EIRB "Operating Guidelines and Procedures" has been provided to the HTC for public information.

2 COMMUNITY VALUES

The following principles express Inuvialuit community beliefs and values with respect to conservation and resource management in the planning area (see Map 2).

(a) Conservation is First Priority
All uses of the land in the Planning Area, including renewable and non-renewable resource development, must recognize conservation of the renewable resource base as the foremost priority. This applies to uses of the land by the community and by other interests.

(b) Integrated Management
All parts of the environment are interconnected, so they must be managed together. Conservation, stable economic development and sound resource management can only be achieved if all parties work toward a common goal. The Inuvialuit community of Paulatuk recognizes the relationship between direct economic security and resource conservation and the importance of maintaining a spirit of cooperation between all people living in the region.

(c) Maximize Community Benefit
Renewable and non-renewable resource development in the Paulatuk planning area should be of maximum benefit to community residents, with priorities for Inuvialuit as detailed in the IFA. Development projects should be scaled to retain opportunities and ensure the most lasting benefit to the local economy.

(d) Protect Priority Community Activities
Priority activities to be supported and protected by the Paulatuk Community Conservation Plan are hunting, fishing, guiding, trapping, tourism and arts and crafts manufacturing.

(e) Cooperative Management of Shared Resources
The Paulatuk Community Conservation Plan recognizes a special need for cooperation in the management of migratory species which are also used by other Inuvialuit and non Inuvialuit.

(f) Maintain Healthy Environment
The Inuvialuit of Paulatuk place a high priority on maintaining air and water quality and the health of the resources.

(g) Consistency
The Paulatuk Community Conservation Plan should be consistent with the Principles of Wildlife Harvesting and Management from the IFA, (Appendix A), the goals and principles of the Inuvialuit Renewable Resource Conservation and Management Plan (1988), (Appendix B), the goals of the North Slope Wildlife Conservation and Management Plan (1993) (Appendix C), the Regional Land Use Plan (1991), the Arctic Environmental Strategy (1991), and other conservation plans or agreements endorsed by the community's representatives (e.g. Management Agreement for Polar Bears in Population H1 (1991), the Beaufort Sea Beluga Management Plan (1991). The plan has also been developed in consideration of the draft Inuit Regional Conservation Strategy (1986) prepared for the Inuit Circumpolar Conference Environmental Commission.

3 GOALS

The Inuvialuit Community has identified an overall strategy for conservation and resource management in the Paulatuk Planning Area. This strategy is based on five general goals:

1. Identify and Protect Important Habitats and Harvesting Areas
To identify important wildlife habitat, seasonal harvesting areas and cultural sites (for example, cabin sites) and make recommendations for their management.

2. Land Use Decisions
To describe the community process for making land use decisions and managing cumulative impacts which will help protect community values and conserve the resources on which priority lifestyles depend.

3. Education
To identify educational initiatives for the Inuvialuit of Paulatuk and others interested in the area which will promote conservation, understanding and appreciation.

4. Define Species Management
To describe a general system for wildlife management and conservation and identify population goals and conservation measures appropriate for each species of concern in the planning area. This will be done using the knowledge of the Community and others with expertise.

5. Enhance Economy
To enhance the local economy by adopting a cooperative and consistent approach to community decision making and resource management. This approach will help ensure economic stability and maintenance of all components of the Arctic ecosystem.

Information and recommendations required to satisfy the above goals for the Planning Area are described in the sections which follow.

4 SPECIAL AREAS AND RECOMMENDED LAND USE PRACTICES FOR THE PLANNING AREA

Most of the areas and recommended land use practices described in this section were originally identified in the Regional Land Use Plan for the Mackenzie Delta-Beaufort Sea Region (1991). These areas have been identified because they contain important wildlife habitat and/or harvesting areas. Recommendations have been revised and in some cases moved to more appropriate sections of this plan. The method by which special areas were identified and designated to one land use category or another is consistent with selection criteria first described in the Report of the Task Force on Northern Conservation (1984) (see Appendix F for criteria).

Guidelines for land use practices to be followed in these areas are included in the area descriptions which follow, as well as in other sections of this plan. A set of general land use recommendations is provided at the end of Section 4.1. A community-based process for arriving at land use decisions is presented in Section 4.2. Processes to assist with the management of cumulative impacts and recommendations for environmental screening and review of development proposals are presented in Sections 4.3 and Section 4.4, respectively.

In designating land use categories, the Inuvialuit community has attempted to recognize priority land uses and activities, as well as areas of special ecological and cultural importance. Land designations may be modified as additional information becomes available and provided the health and biological productivity of the planning area is maintained. Each area of importance has been given a letter designation corresponding to the categories below:

Category A
Lands where there are no known significant and sensitive cultural or renewable resources. Lands shall be managed according to current regulatory practices.

Category B
Lands where there are cultural or renewable resources of some significance and sensitivity but where terms and conditions associated with permits and leases shall assure the conservation of these resources.

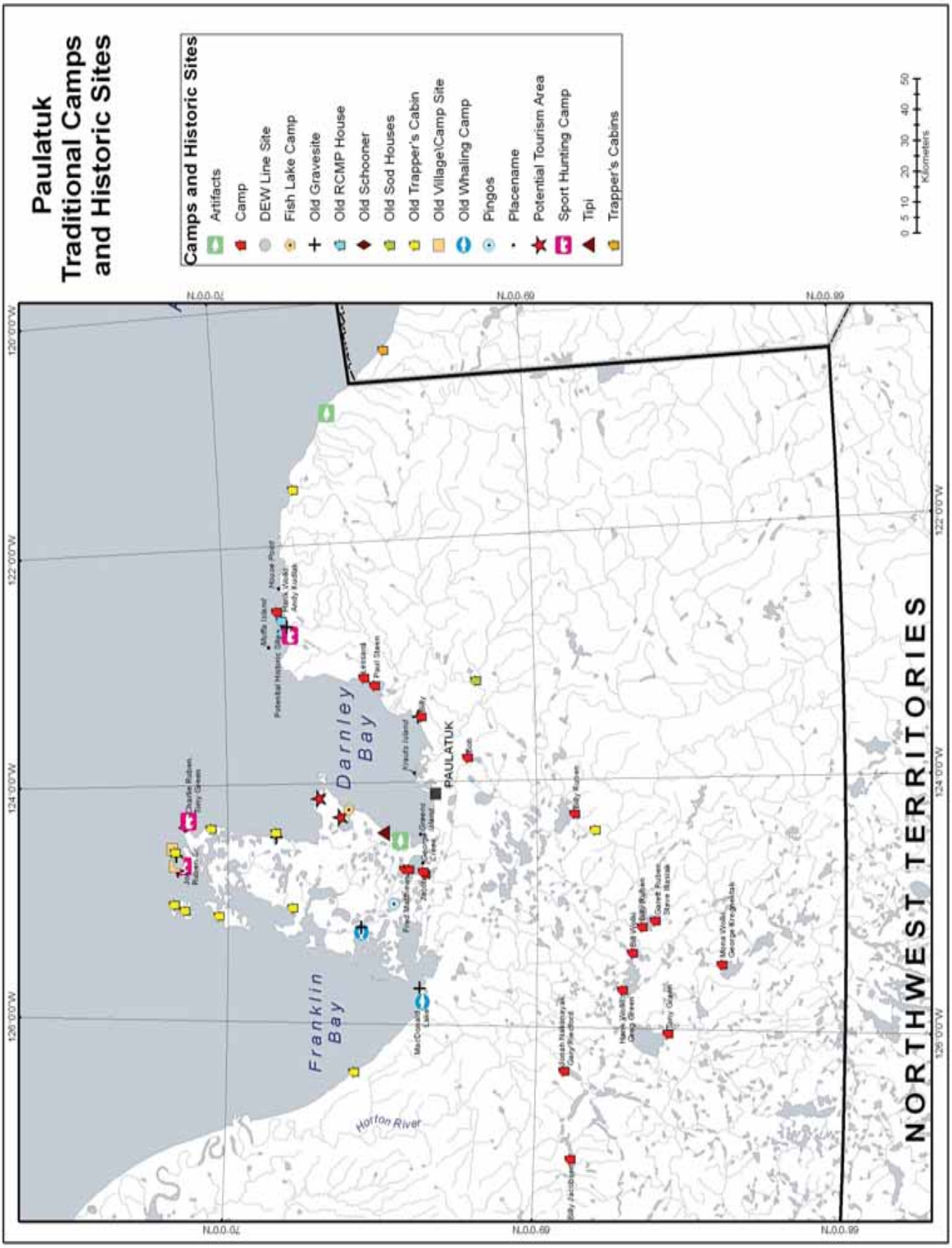
Category C
Lands and waters where cultural or renewable resources are of particular significance and sensitivity during specific times of the year. These lands and waters shall be managed so as to eliminate, to the greatest extent possible, potential damage and disruption.

Category D
Lands and waters where cultural or renewable resources are of particular significance and sensitivity throughout the year. As with Category C, these areas shall be managed so as to eliminate, to the greatest extent possible, potential damage and disruption.

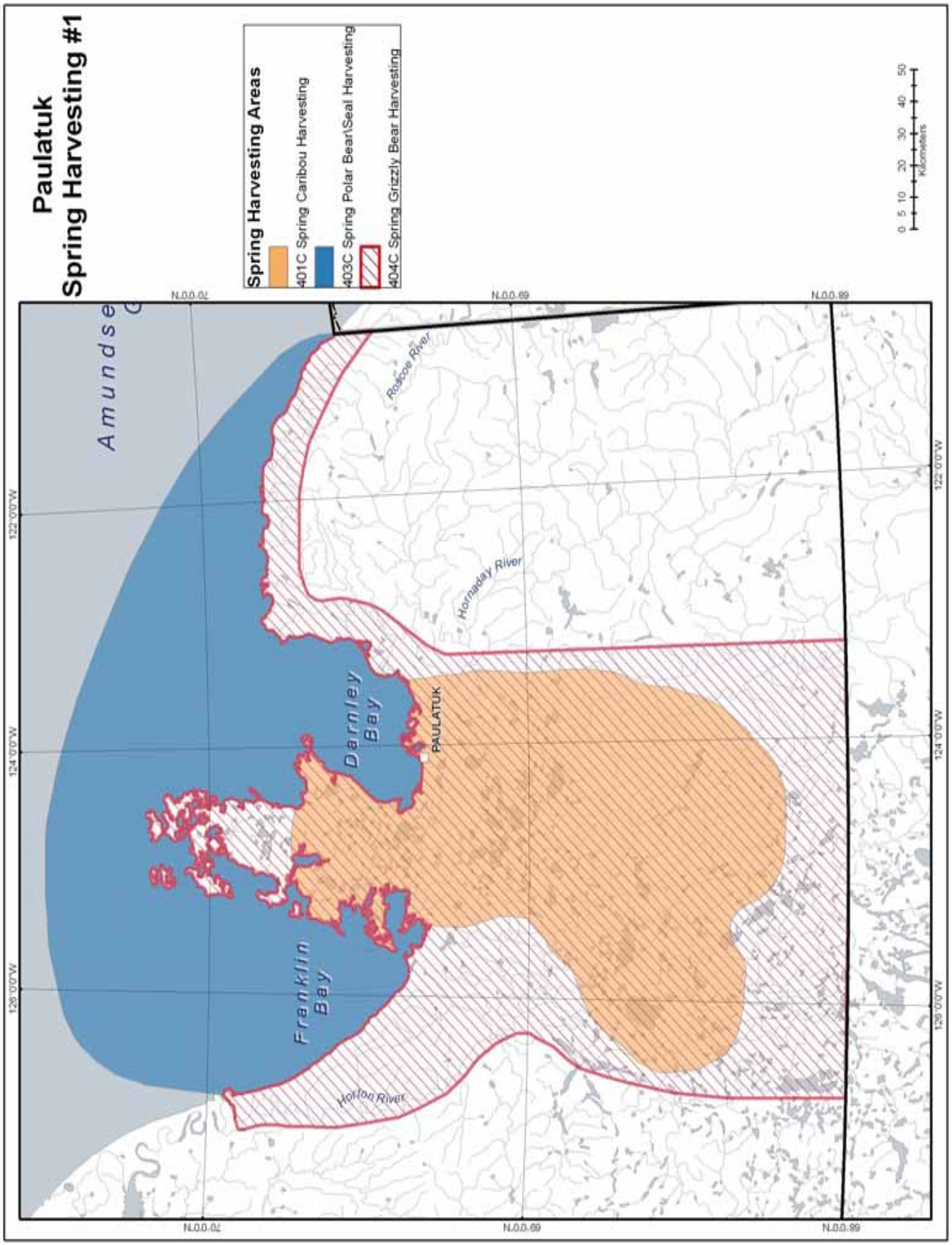
Category E
Lands and waters where cultural or renewable resources are of extreme significance and sensitivity. There shall be no development on these areas. These lands and waters shall be managed to eliminate, to the greatest extent possible, potential damage and disruption. This category recommends the highest degree of protection in this document.

4.1 PAULATUK SUBREGION - SPECIAL DESIGNATED LANDS

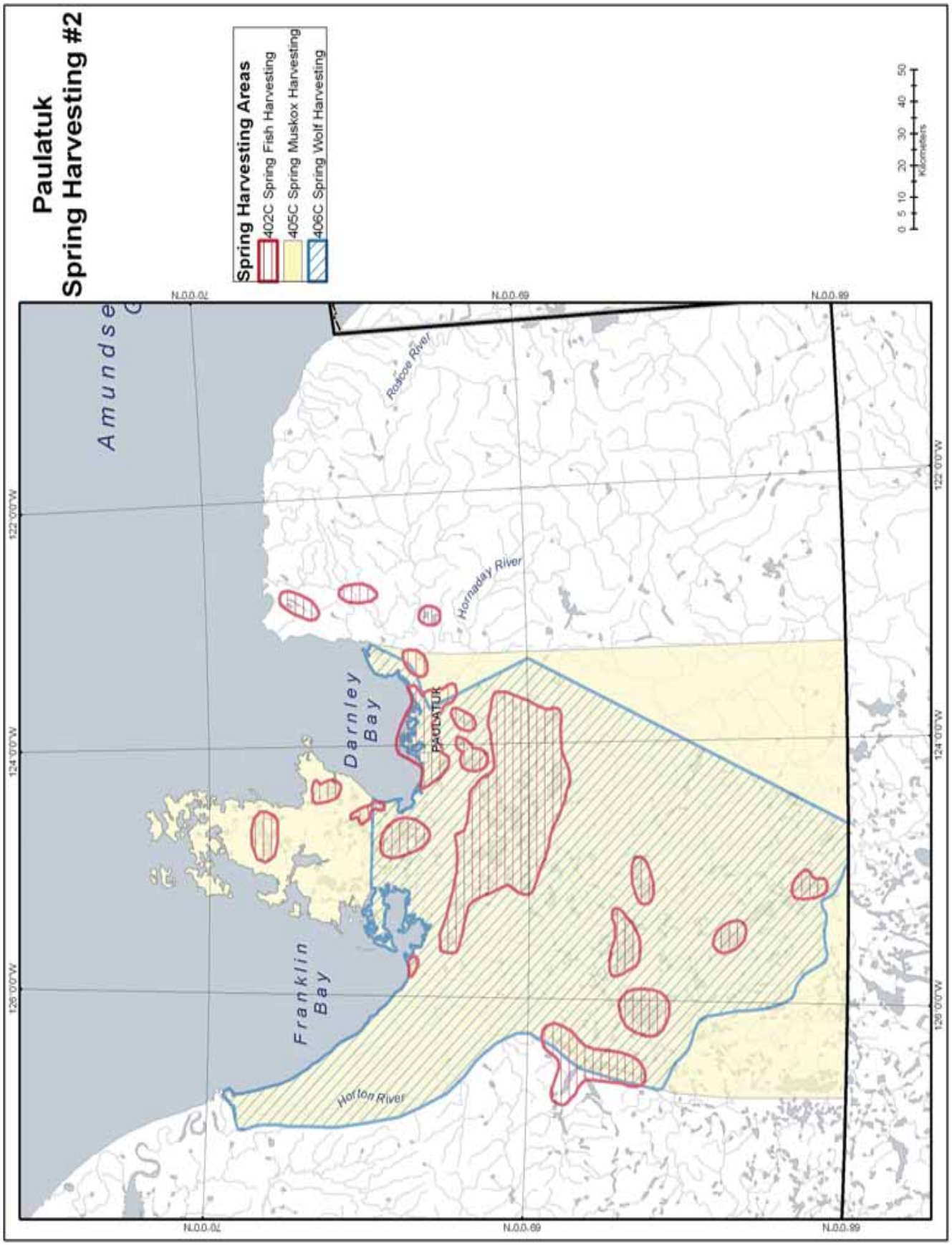
Maps and detailed description of the special designated lands listed below are described in the text which follows:



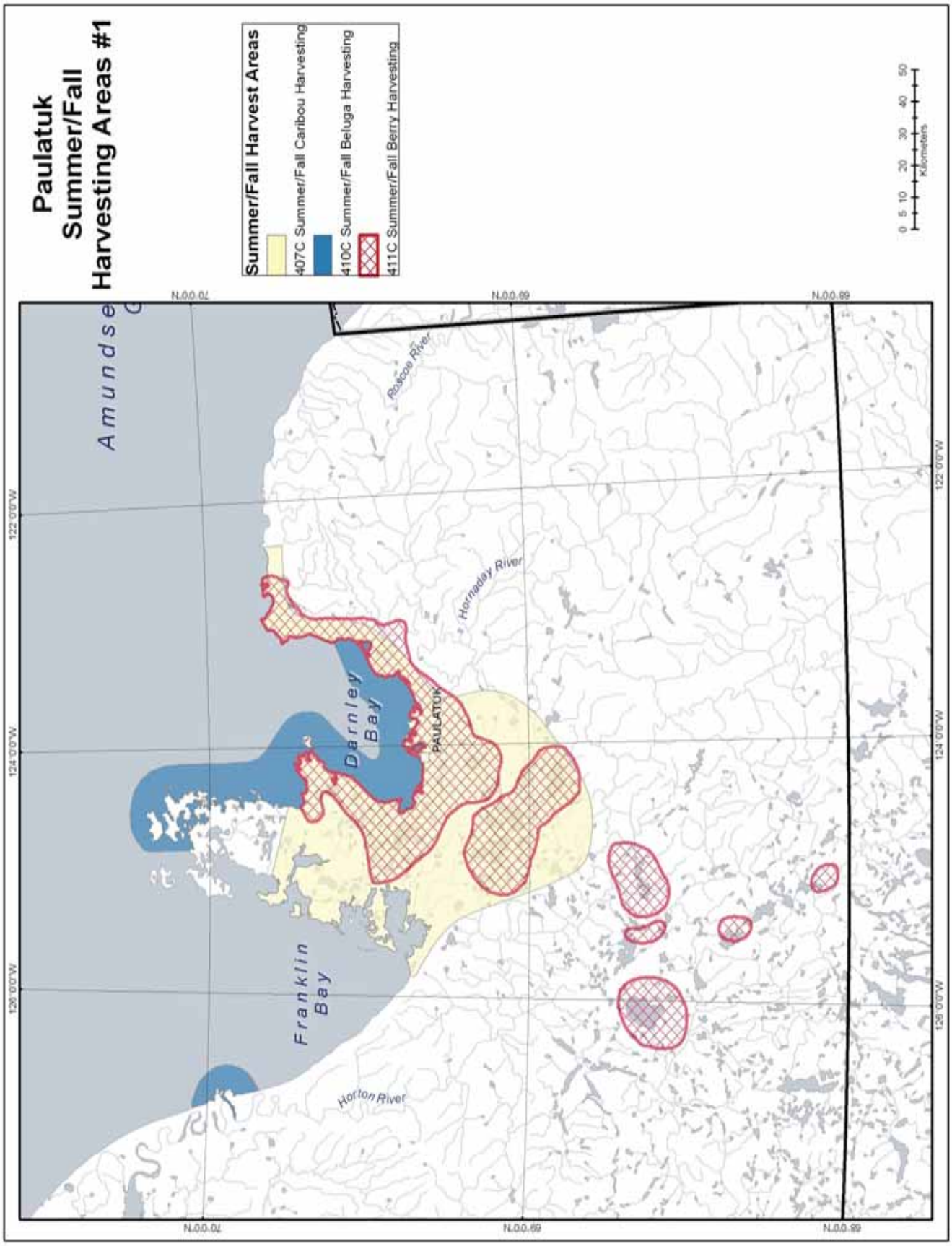
Map 3. Paulatuk Traditional Camps and Historic Sites



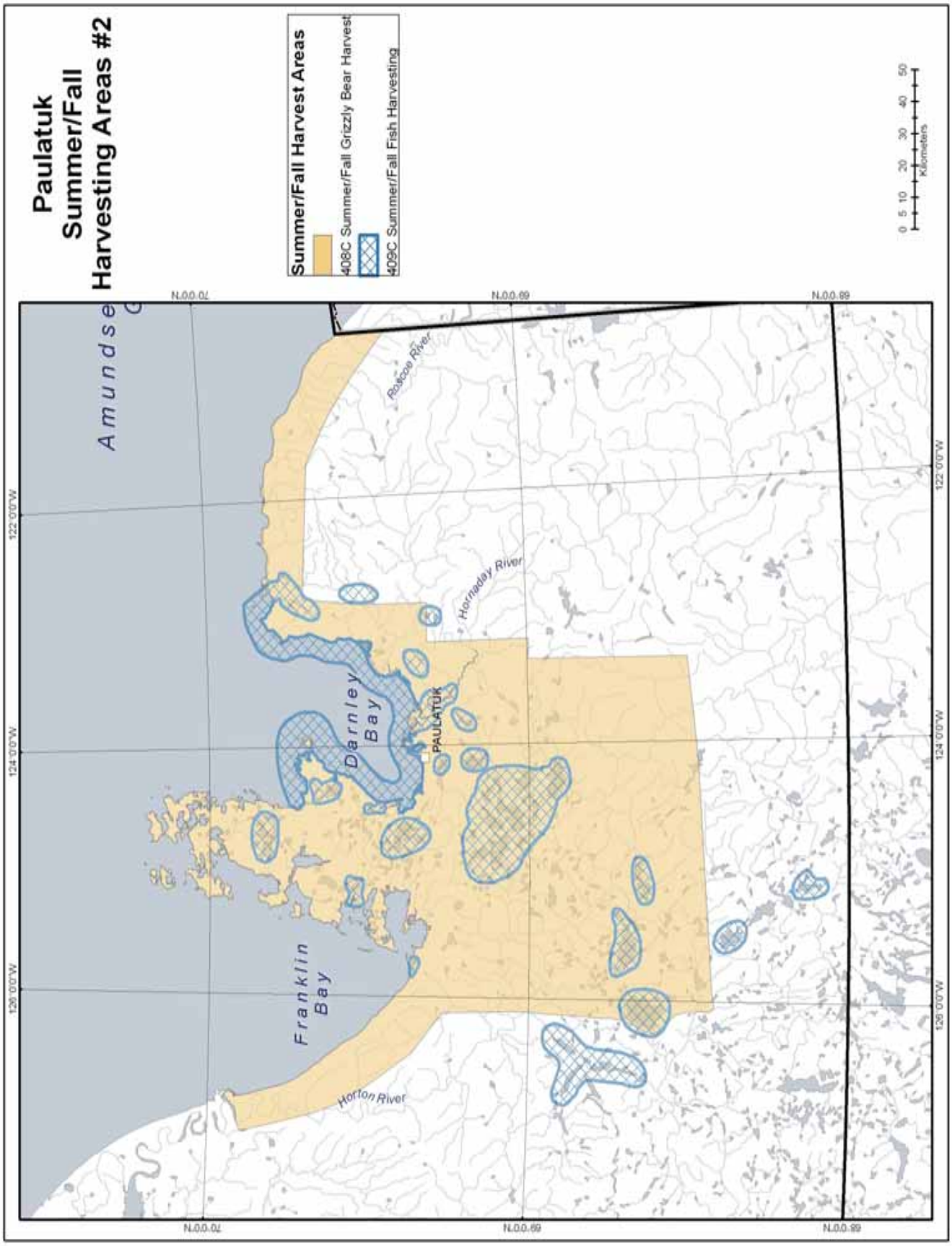
Map 4. Paulatuk Spring Harvesting Areas - #1



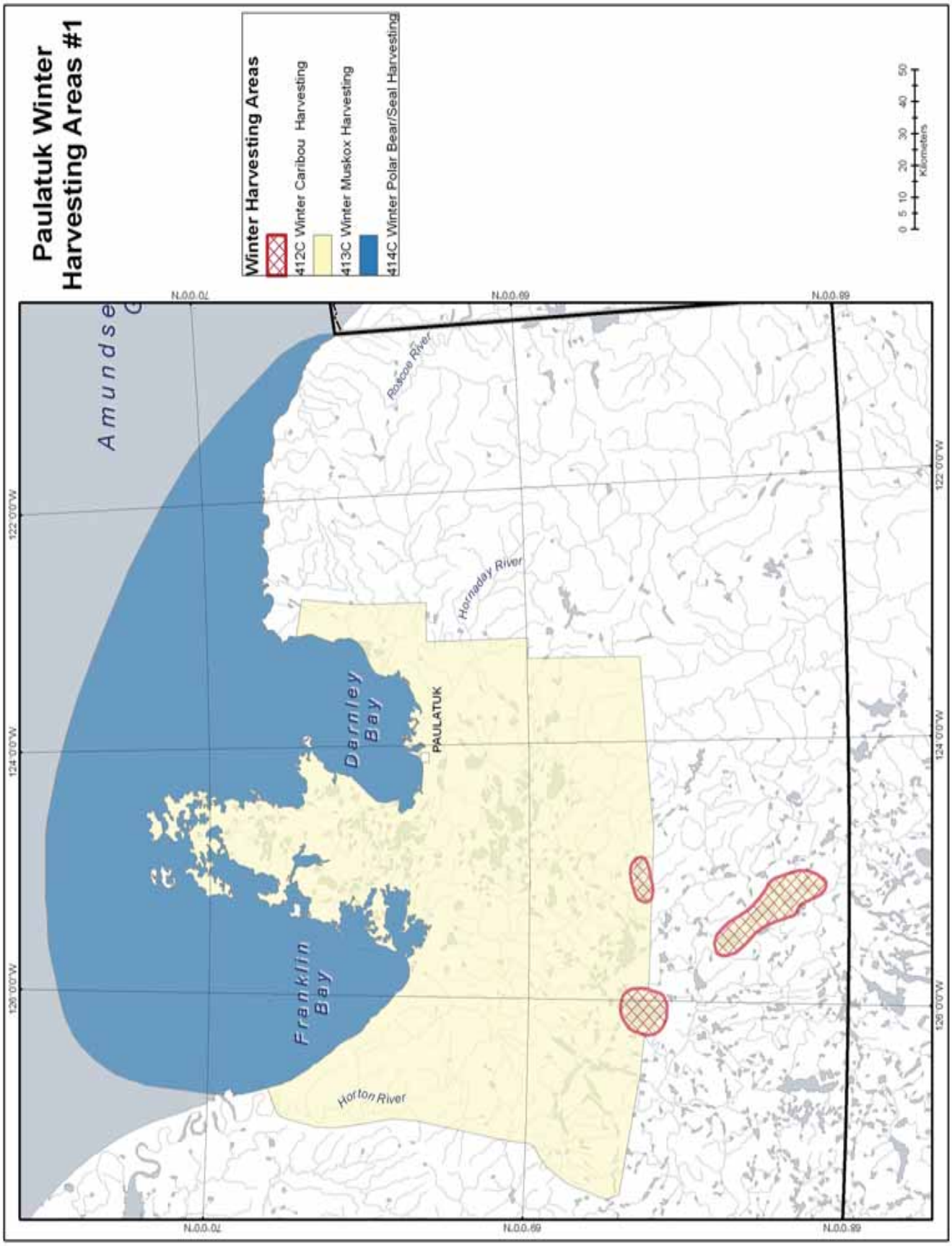
Map 5. Paulatuk Spring Harvest Areas - #2



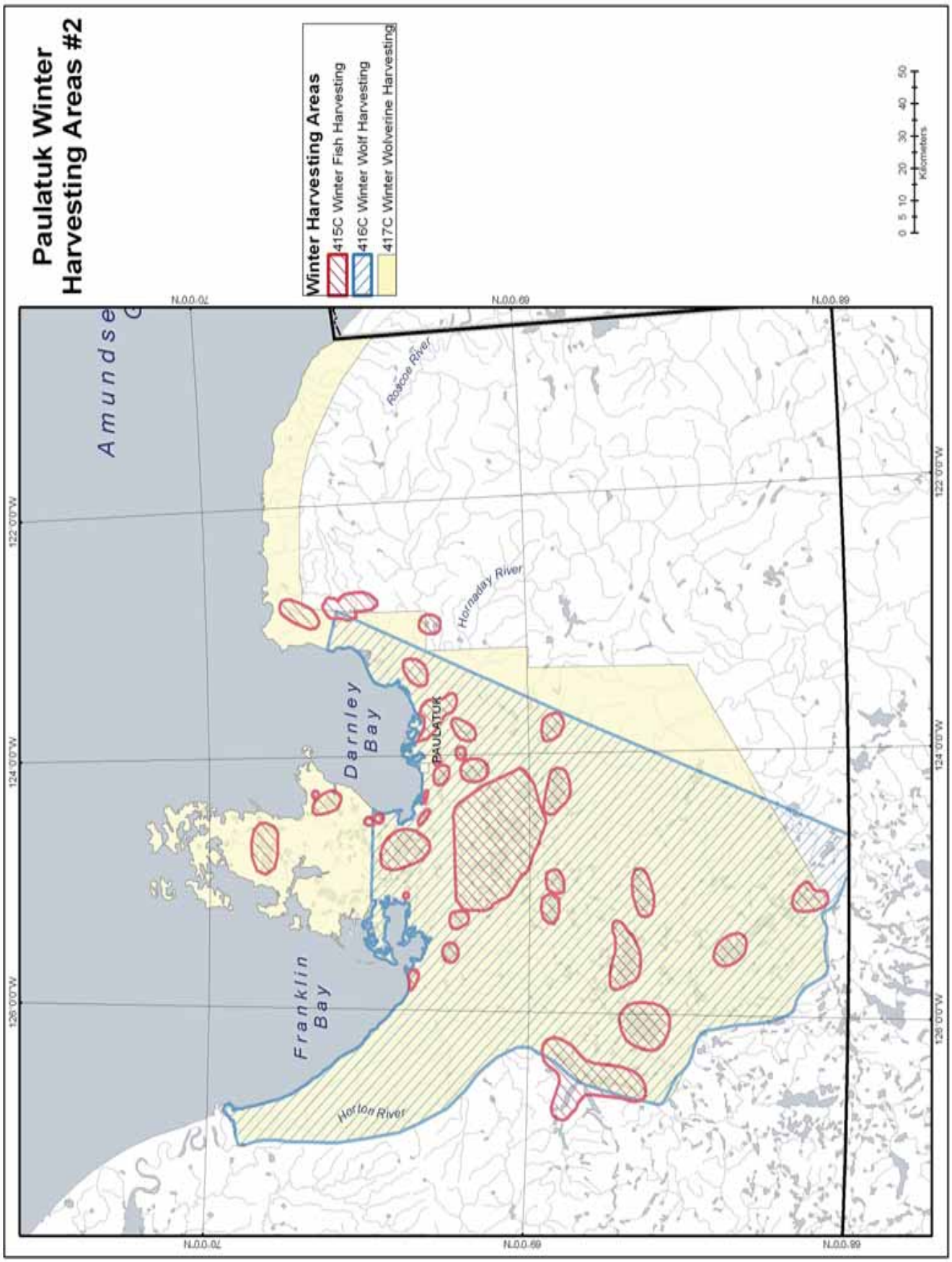
Map 6. Paulatuk Summer / Fall Harvesting Areas - #1



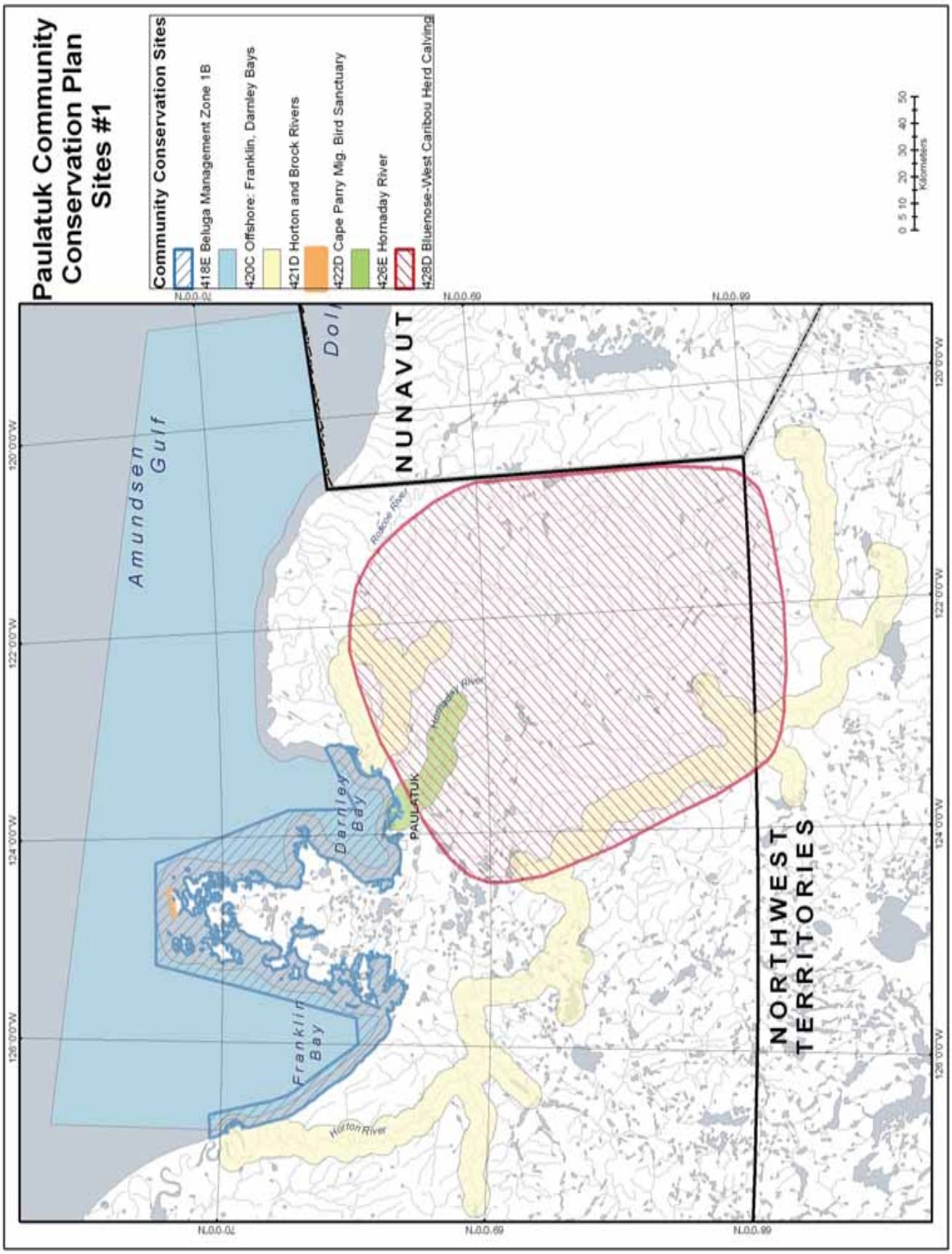
Map 7. Paulatuk Summer / Fall Harvesting Areas - #2



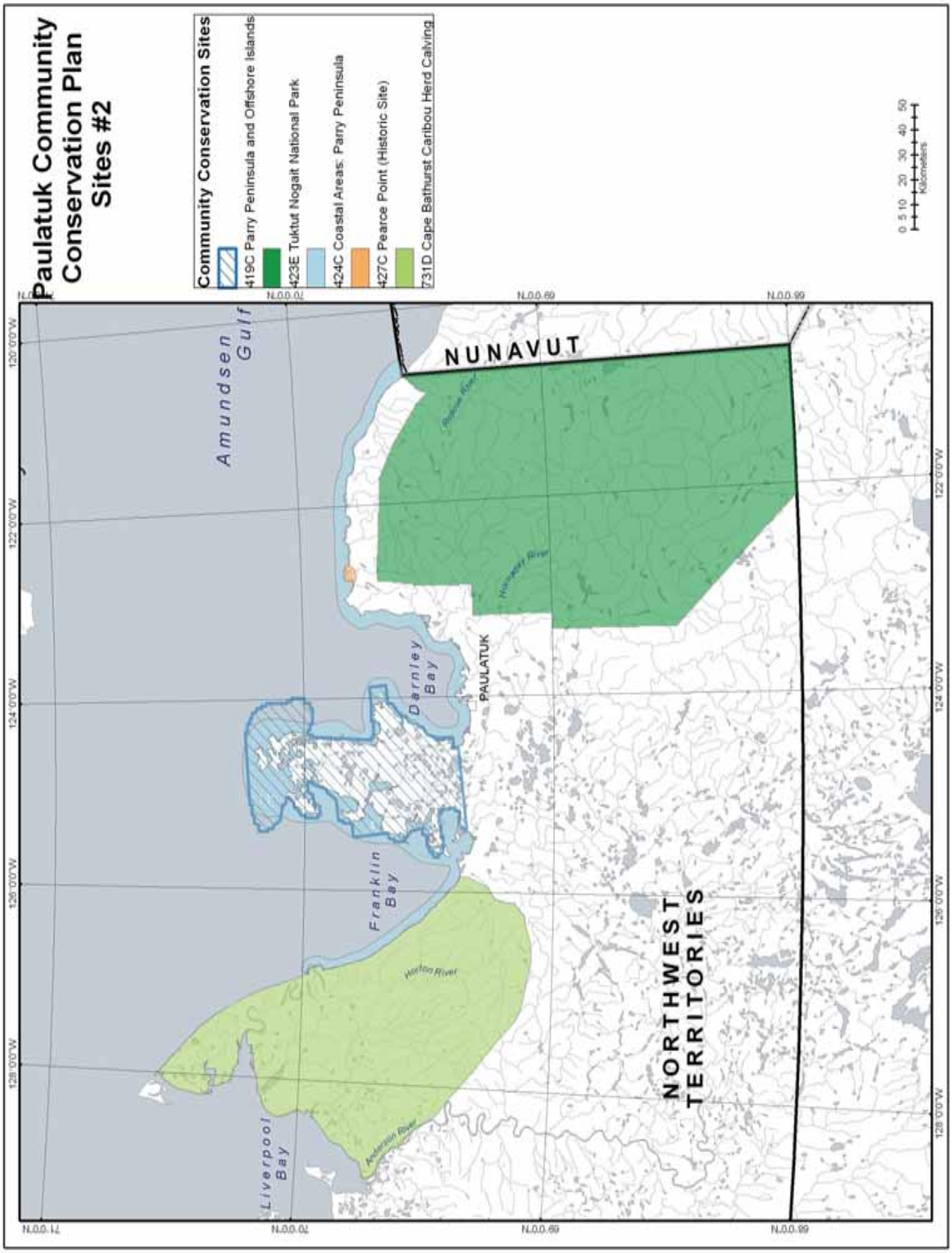
Map 8. Paulatuk Winter Harvesting Areas - #1



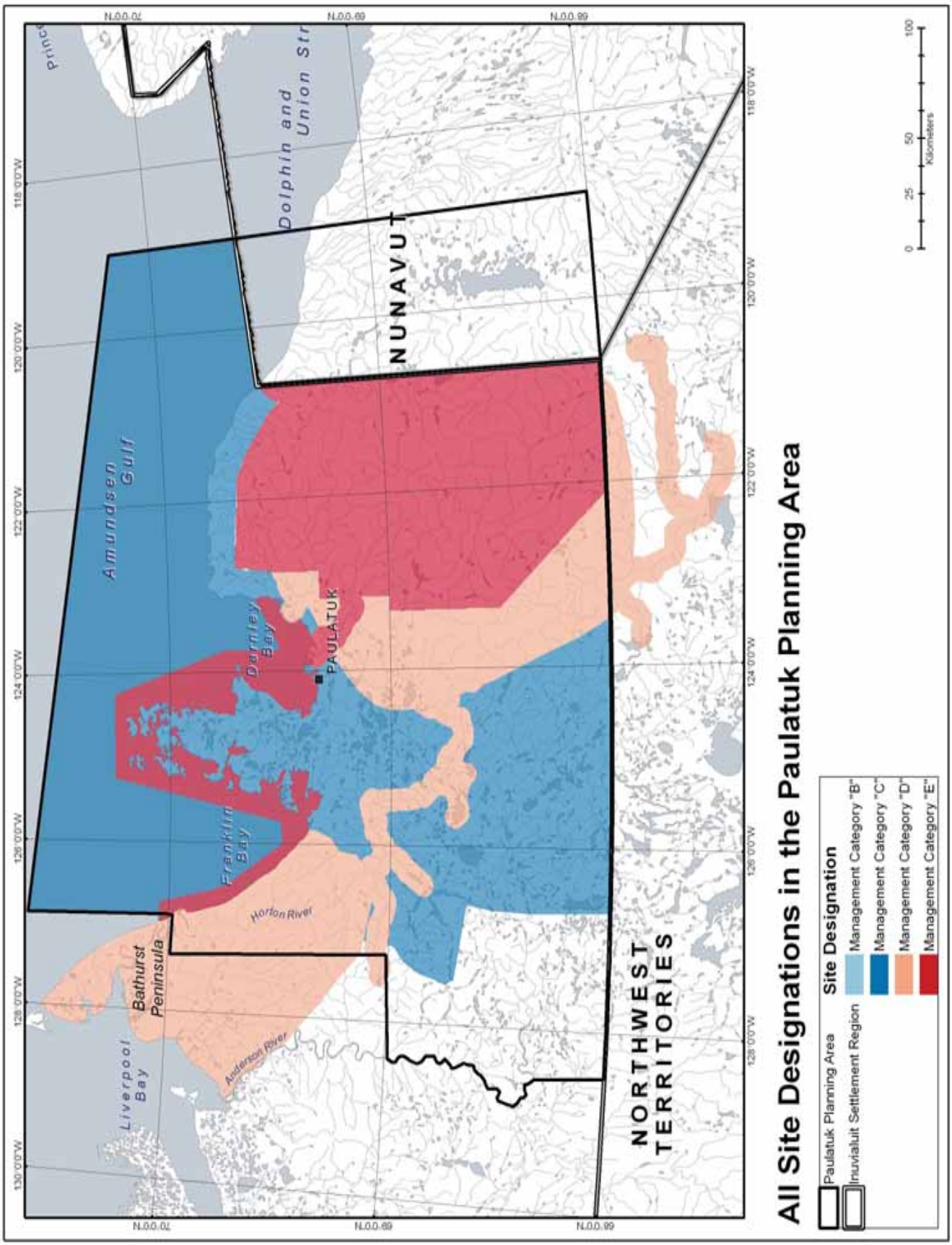
Map 9. Paulatuk Winter Harvesting Areas - #2



Map 10. Paulatuk Community Conservation Plan Sites - #1



Map 11. Paulatuk Community Conservation Plan Sites - #2



Map 12. Overlay of All Site Designations in the Paulatuk Planning Area

SITE NO. 400B PAULATUK OUTPOST CAMPS

Identified By
Paulatuk Community Working Group

Management Category
B

Ownership
Crown lands, private 7(1)a and 7(1)b lands, and Tuktut Nogait National Park

Description
The site is made up of outpost camps used by families from Paulatuk, which are located along the shorelines of Delesse, Granet, Tadenet, Fallaize and Tsoko lakes, and at a river mouth south of Tsoko Lake.

Importance of the Site to the Community of Paulatuk
Extremely important to the families of Paulatuk for hunting, fishing, trapping and gathering berries.

The Bluenose caribou herd migrate through these areas every spring.

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

Overlapping Military, Transportation and Tourism Interests and Activities
Sport hunting for caribou, muskox, wolf and grizzly bear take place in the vicinity of these outpost camps.

Community Working Group Concerns
The Paulatuk Community Working Group is concerned that sport fishermen accessing Inuvialuit lands are not reporting to the local Hunters and Trappers Committee. The Paulatuk Hunters and Trappers Committee must have the opportunity to make sport fishermen aware of sensitive wildlife nesting, calving and denning site. Notification would be both for the safety of the fishermen and for preventing disturbance of sensitive wildlife areas.

Community Working Group Recommendations
FJMC should ensure sport fishermen follow the guidelines of the Inuvialuit sport fishing licence and that special conservation measures must be taken to ensure that sport fishing does not interfere with the traditional use and enjoyment of the land.

SITE NO. 401C SPRING CARIBOU HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Crown lands, private 7(1)a and 7(1)b lands,

Description
Extends from the middle of the Parry Peninsula, north of Ewariege Lake, west of Tadenet Lake and west of the Tuktut Nogait National Park.

Importance of the Site to the Community of Paulatuk
Subsistence caribou hunting.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Horton and Brock Rivers (Site No. 421D)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 402C SPRING FISH HARVESTING AREA

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Crown lands, private 7(1)a and 7(1)b lands, and Tuktut Nogait National Park

Description
Various lakes within the planning area, including: Sadene Lake, Tadenet Lake, Tsoko Lake, Ewariege Lake, Delesse Lake, Granet Lake, Fallaize Lake, Billy Lake, Thrasher Lake, Tasseriuk Lake and Seven Islands Lake.

Importance of the Site to the Community of Paulatuk
Subsistence fishing.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Horton and Brock Rivers (Site No. 421C)
Hornaday River (Site No. 426E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities

Mineral exploration is occurring in the area.

Community Working Group Recommendations
See recommendations in the Paulatuk Charr Management Plan 1998-2002.

SITE NO. 403C SPRING POLAR BEAR/SEAL HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Crown waters in the ISR.

Description
Includes the nearshore and offshore waters of Franklin Bay and Darnley Bay, east to the west side of Clinton point.

Importance of the Site to the Community of Paulatuk
Subsistence and sports hunting of polar bears from December 1 to May 31.

Important habitat for ringed seals all year.

Overlapping Lands of Territorial, National and International Conservation Interest
Beluga Management Plan Zone 1B (Site No. 418)
Franklin Bay, Darnley Bay, Amundsen Gulf-Offshore (Site No. 420)
Coastal Areas of Parry Peninsula, Franklin Bay, Darnley Bay (Site No. 424C)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 404C SPRING GRIZZLY BEAR HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
7(1)a and 7(1)b, and Crown Lands within the Inuvialuit Settlement Region.

Description
Parry Peninsula, west to the mouth of the Horton River, south along the west side of the Horton River, south to the west side of Simpson Lake at the ISR boundary, east to the Horton River, north to the Hornaday River, and east along the coastal zone to the ISR boundary.

Importance of the Site to the Community of Paulatuk
Subsistence and sport hunting of grizzly bear.
Overlapping Lands of Territorial, National and International Conservation Interest

Parry Peninsula and Offshore Islands (Site No. 419)
Horton and Brock Rivers (Site No. 421)
Tuktut Nogait National Park (Site No. 423E)
Hornaday River (Site No. 426E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)
Cape Bathurst Caribou Core Calving Grounds (Site No. 731D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 405C SPRING MUSKOX HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
7(1)a and 7(1)b, and Crown Lands within the Inuvialuit Settlement Region.

Description
Extending from Cape Parry, west to the mouth of the Horton River, south to the ISR boundary, east to the Horton River, and north to the Brock Lagoon.

Importance of the Site to the Community of Paulatuk
Subsistence and sports hunting of muskox.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419)
Horton and Brock Rivers (Site No. 421)
Tuktut Nogait National Park (Site No. 423E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)
Cape Bathurst Caribou Core Calving Grounds (Site No. 731D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 406C SPRING WOLF HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Private 7(1)a and 7(1)b, and Crown Lands within the Inuvialuit Settlement Region.

Description
From Tom Cod Bay at Parry Peninsula, west to the mouth of the Horton River, following the west side of the Horton River, south to the ISR boundary, northeast to the mouth of the Hornaday River, east to Brock

Lagoon.

Importance of the Site to the Community of Paulatuk
Subsistence hunting of wolves.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419)
Horton and Brock Rivers (Site No. 421)
Hornaday River (Site No. 426E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)
Cape Bathurst Caribou Core Calving Grounds (Site No. 731D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 407C SUMMER/FALL CARIBOU HARVESTING AREA

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Private 7(1)a and 7(1)b lands within the Inuvialuit Settlement Region.

Description
Cracroft Bay on the Parry Peninsula, to the south side of Fallaize Lake, northeast along the coastal private lands to House Point.

Importance of the Site to the Community of Paulatuk
Subsistence and sports hunting of caribou.

Overlapping Lands of Territorial, National and International Conservation Interest
Horton and Brock Rivers (Site No. 421D)
Hornaday River (Site No. 426E)
Cape Bathurst Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 408C SUMMER/FALL GRIZZLY BEAR HARVESTING AREA

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Private 7(1)a and 7(1)b lands, and Crown Lands within the ISR.

Description
From the mouth of the Horton River, following a 15 km (9.3 mi) along the coastal shore, including Parry Peninsula, half way to the ISR boundary.

Importance of the Site to the Community of Paulatuk
Subsistence harvesting area for grizzly bears.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Horton and Brock Rivers (Site No. 421D)
Tuktut Nogait National Park (Site No. 423E)
Hornaday River (Site No. 426E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 409C SUMMER/FALL FISH HARVESTING AREA

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Coastal waters, and freshwater lakes within 7(1)a, 7(1)b, and Crown Lands within the ISR.

Description
Various freshwater lakes, and coastal waters in Darnley Bay from north of Bennett Point to Pearce Point.

Importance of the Site to the Community of Paulatuk
Subsistence fishing of charr, lake trout, herring and whitefish.

Overlapping Lands of Territorial, National and International Conservation Interest
Beluga Management Plan Zone 1B (Site No. 418E)
Parry Peninsula and Offshore Islands (Site No. 419C)
Franklin Bay, Darnley Bay, Amundsen Gulf-Offshore (Site No. 420C)
Horton and Brock Rivers (Site No. 421D)
Tuktut Nogait National Park (Site No. 423E)
Coastal Areas of Parry Peninsula, Franklin Bay, Darnley Bay (Site No. 424C)
Hornaday River (Site No. 426E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

Community Working Group Recommendations
See recommendations in the Paulatuk Charr Management Plan 1998-2002.

Closure of fall fishing between Coal Mine and Aklak Creek for the 5-year life of the Plan.

SITE NO. 410C SUMMER/FALL BELUGA WHALE HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Nearshore and offshore waters. (Crown)

Description
Mouth of the Horton River; a 15 km (9.3 mi) area from Balaena Bay at Parry Peninsula, following the coast around Darnley Bay, to Brock Lagoon.

Importance of the Site to the Community of Paulatuk
Important summer feeding area for beluga and bowhead at the mouth of the Horton River.

Subsistence beluga harvesting.

See Beluga Management Plan regarding by-laws for conducting beluga hunts.

Overlapping Lands of Territorial, National and International Conservation Interest
Beluga Management Plan Zone 1B (Site No. 418E)
Franklin Bay, Darnley Bay, Amundsen Gulf-Offshore (Site No. 420C)
Horton and Brock Rivers (Site No. 421D)
Coastal Areas of Parry Peninsula, Franklin Bay, Darnley Bay (Site No. 424C)
Hornaday River (Site No. 426E)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

Overlapping Military, Transportation and Tourism Interests and Activities
Annual sea lift.

Helicopter re-supply at North Warning DND Site.

Community Working Group Concerns
Need to share beluga resources collectively with other users.

Disturbance of belugas by helicopters during the re-supplying of the North Warning DND site.

Community Working Group Recommendations
Extend Beluga Management Zone 1B from the mouth of the Horton River to the south end of Franklin Bay.

SITE NO. 411C BERRY HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Private 7(1)a and 7(1)b lands within the Inuvialuit Settlement Region.

Description
Southeast portion of Parry Peninsula, south of Paulatuk, east along the private lands to Pearce Point.

Importance of the Site to the Community of Paulatuk
Subsistence harvesting of berries.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Horton and Brock Rivers (Site No. 421D)
Hornaday River (Site No. 426E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 412C WINTER CARIBOU HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Land Management Category
C

Ownership
Private 7(1)b lands and Crown lands within the ISR.

Description
The areas around Tadenet Lake, Delesse Lake; from Tsoko Lake to Ewariege Lake.

Importance of the Site to the Community of Paulatuk
Subsistence harvesting of caribou during the winter.

Overlapping Lands of Territorial, National and International Conservation Interest
(Site No. 421D)

Overlapping Nonrenewable Resource Interests and Activities
None.

Community Working Group Concerns
Possible disturbance of caribou by potential mining development.

SITE NO. 413C WINTER MUSKOX HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Private 7(1)a and 7(1)b lands, and Crown lands within the ISR.

Description
Cape Parry, west to the mouth of the Horton River, following southward along the west side of the Horton River, to the south side of Tadenet Lake, east to the Horton River, northeast to Brock Lagoon.

Importance of the Site to the Community of Paulatuk
Subsistence and sports hunting of muskox.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Orton and Brock Rivers (Site No. 421D)
Hornaday River (Site No. 426E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 414C WINTER POLAR BEAR & SEAL HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
7(1)b and offshore (Crown)

Description
Includes the nearshore and offshore waters of Franklin Bay and Darnley Bay, east to the west side of Clinton point.

Importance of the Site to the Community of Paulatuk
Subsistence and sports hunting of polar bears from August 1 to May 31.

Subsistence hunting of seals January 1 to May 1, and August to September.

Overlapping Lands of Territorial, National and International Conservation Interest
Beluga Management Plan Zone 1B (Site No. 418E)
Parry Peninsula and Offshore Islands (Site No. 419C)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

Potential for offshore drilling.

Overlapping Military, Transportation and Tourism Interests and Activities
Tanker traffic.

Community Working Group Concerns
Possible disturbance of polar bear denning areas due to tanker traffic.

Potential disturbance of seal habitat due to offshore drilling.

Possible effects of global warming on ice formation.

Community Working Group Recommendations
CWS and DFO should monitor effect of global warming on polar bear and seal habitat and advise Paulatuk of the expected effects.

SITE NO. 415C WINTER FISH HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan Working Group

Management Category
C

Ownership
Freshwater lakes within Private 7(1)a and 7(1)b lands and Crown Lands within the Inuvialuit Settlement Region.

Description
Various freshwater lakes within the planning area.

Importance of the Site to the Community of Paulatuk
Subsistence harvesting of charr, whitefish, lake trout and loche.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Horton and Brock Rivers (Site No. 421D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

Community Working Group Recommendations
See recommendations in the Paulatuk Charr Management Plan 1998-2002.

SITE NO. 416C WINTER WOLF HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan

Management Category
C

Ownership
Private 7(1)a and 7(1)b lands, and Crown Lands within the ISR.

Description
From Tom Cod Bay at Parry Peninsula, west to the mouth of the Horton River, following the west side of the Horton River, south to the ISR boundary, northeast to the mouth of the Hornaday River, east to Brock Lagoon.

Importance of the Site to the Community of Paulatuk
Subsistence harvesting of wolves.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Horton and Brock Rivers (Site No. 421D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 417C WINTER WOLVERINE HARVESTING AREAS

Identified By
Paulatuk Community Conservation Plan

Management Category
C

Ownership
Private 7(1)a and 7(1)b lands, and Crown Lands within the ISR.

Description
Parry Peninsula, west to the mouth of the Horton River, south along the west side of the Horton River, to the south side of Ewariege Lake, the east side following the Tuktut Nogait National Park..

Importance of the Site to the Community of Paulatuk
Subsistence harvesting of wolverines. November 1– May 31.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Horton and Brock Rivers (Site No. 421D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

SITE NO. 418E BELUGA MANAGEMENT ZONE 1B

Identified By
FJMC and the Paulatuk Hunters and Trappers Committee

Management Category
E

Ownership
Crown waters within the Inuvialuit Settlement Region.

Description
Encircles Parry Peninsula and includes Darnley Bay, to Brock Lagoon.

Importance of Site to the Community of Paulatuk
This zone includes areas where beluga are occasionally harvested by residents of Paulatuk and Holman, and where residents of Sachs Harbour have shown interest in hunting beluga in the future.

Overlapping Lands of Territorial, National, and International Conservation Interest
Franklin Bay, Darnley Bay, Amundsen Gulf-Offshore (Site No. 420C)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in the area.

Community Working Group Recommendations
Guidelines for Zone 1b (as defined in the Beluga Management Plan):
In the review of any development proposal Zone 1 is to be considered a Protected Area according to the guidelines described in the Inuvialuit Renewable Resource Conservation and Management Plan.

The oil and gas industry should not be permitted to explore for resources within Zone 1 waters nor to produce hydrocarbons or construct/operate any type of facility.

No mining activities (e.g. gravel removal) should be permitted from break-up until 7 September.

Development activities such as hydro-electric developments, even if located outside of Zone 1 should be evaluated for their potential deleterious effects on water quality and quantity, or on the stability and integrity of ice in Zone 1a waters.

All shipping activities (including dredging) should be confined to designated routes and areas. Passage through or close to Zone 1 outside of designated routes, even if it's the shortest route, should be avoided from break-up to 15 August.

No port development should be allowed within or on the shores of any Zone 1 waters.

It is recommended that parties proposing industrial development and government agencies evaluating development proposals and other parties interested in development within the zone should seek the advice of the HTCs. To ensure the protection of the beluga resource and harvest, HTCs should be consulted regarding any licenses, permits or operating procedures approved for activities within the zones.

Commercial fishing proposals for Zone 1 should be evaluated and regulated with regard to beluga food species.

- That the Working Group re-discuss the management category of Zone 1B with the FJMC.
- Extend Zone 1B from the south end of Franklin Bay, westward to include the mouth of the Horton River.

SITE NO. 419C PARRY PENINSULA AND OFFSHORE ISLANDS

Identified By
Paulatuk Community Working Group

Management Category
C

Ownership
Private 7(1)(b) lands within the Inuvialuit Settlement Region.

Description
The site includes the offshore islands and all of the Parry Peninsula south to an approximate boundary extending from the southern shore of Langton Bay on the west side of the Peninsula to Argo Bay on the east side. The site is made up of three areas: Cape Parry Islands, Bennett Point and Parry Peninsula - Fish Lake.

Importance of the Site to the Community of Paulatuk
Important habitat for a variety of wildlife. The Cape Parry Islands and Bennett Point are important nesting areas for waterfowl including eiders, gulls, brant and Canada geese.

Overlapping Lands of Territorial, National and International Conservation Interest
Franklin Bay, Darnley Bay, Amundsen Gulf-Offshore (Site No. 420C)
Cape Parry Migratory Bird Sanctuary (Site No. 422D)
Coastal Areas of Parry Peninsula, Franklin Bay, Darnley Bay (Site No. 424C)

Overlapping Nonrenewable Resource Interests and Activities
None.

Overlapping Military, Transportation and Tourism Interests and Activities
Shipping and community resupply.

Sport hunting for polar bear takes place offshore of the peninsula.

Community Working Group Concerns
The Paulatuk Community Working Group is concerned that future tanker and ice breaker traffic and oil/gas development will have a negative impact on nesting waterfowl, polar bear denning and the Inuvialuit subsistence way of life.

Community Working Group Recommendations
1. ILA should restrict land use activities from November 1 to March 31 when polar bears are denning and from May 1 to June 30.

2. Canadian Coast Guard should pursue mechanisms to restrict ship, tanker and ice breaker traffic through Amundsen Gulf from November 1 to June 30.

3. One agency should have the overall responsibility for the offshore to avoid the shifting of responsibilities. Paulatuk will work with the WMAC(NWT), FJMC, IGC, CWS and DFO to determine what agency should have this responsibility.

4. ILA and CWS should include measures to protect polar bear dens through permits issued in the areas.

SITE NO. 420C FRANKLIN BAY, DARNLEY BAY, AMUNDSEN GULF - OFFSHORE

Identified By
Paulatuk Community Working Group and DFO

Management Category
C

Ownership
Crown lands within the Inuvialuit Settlement Region.

Description
The site extends offshore from Cape Bathurst, east to the ISR boundary. It includes Franklin Bay, Darnley Bay, and extends north into Amundsen Gulf for 150 km (93 mi).

Importance of the Site to the Community of Paulatuk
Important habitat for a variety of wildlife. Amundsen Gulf-west is an important pupping area for bearded and ringed seals. Franklin Bay is an important habitat for beluga and bowhead whales and ringed and bearded seals. Amundsen Gulf and tip of Darnley Bay provides a main migration route for beluga whales. The area from the Horton River to Tinney Point is used throughout the year for hunting, fishing and trapping by the people of Paulatuk.

Overlapping Lands of Territorial, National and International Conservation Interest
Beluga Management Plan Zone 1B (Site No. 418E)
Parry Peninsula and Offshore Islands (Site No. 419C)
Coastal Areas of Parry Peninsula, Franklin Bay, Darnley Bay (Site No. 424C)

Overlapping Nonrenewable Resource Interests and Activities
None.

Overlapping Military, Transportation and Tourism Interests and Activities
Possible future tanker, ship and ice breaker traffic.

Shipping and community resupply.

Sport hunting takes place in Amundsen Gulf-west November to March.

Community Working Group Concerns
The Paulatuk Community Working Group is concerned that future tanker and ice breaker traffic and oil/gas development activities will have a negative impact on the wildlife in the area and on the Inuvialuit subsistence way of life. If tanker, ice breaker, or oil and gas activities become a concern, these concerns should be addressed immediately.

Community Working Group Recommendations
Canadian Coast Guard should pursue mechanisms to restrict ship, tanker and ice breaker traffic through Amundsen Gulf from November 1 to June 30.

SITE NO. 421D HORTON AND BROCK RIVERS

Identified By
Paulatuk Community Working Group

Management Category
D

Ownership
Private 7(1)(a), 7(1)(b) and Crown lands within the Inuvialuit Settlement Region.

Description
The site is made up of two rivers: Horton and Brock. The Horton River is northwest of Paulatuk. The Brock River is northeast of Paulatuk.

Importance of the Site to the Community of Paulatuk
Important habitat for a variety of wildlife. The residents of Paulatuk use the rivers extensively for fishing, hunting, trapping and recreational activities. Department of Fisheries and Oceans had allotted a commercial quota for arctic charr, but the Paulatuk Hunters and Trappers Committee closed the fishery when a significant decline in the fish population was discovered. The Community Working Group would like the Brock River developed as a sightseeing area because the area has great tourism potential. Tuktoyaktuk also has interests in the Horton River area as stipulated by the Tuktoyaktuk HTC.

Overlapping Lands of Territorial, National and International Conservation Interest
Tuktut Nogait National Park (Site No. 423E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
None.

Overlapping Military, Transportation and Tourism Interests and Activities
Limited sport fishing on the three rivers.

Recreational rafting and kayaking during the summer months on the Horton River.

Community Working Group Concerns
The Paulatuk Community Working Group is concerned that unauthorized rafting, kayaking and sport fishing on the Horton, Brock and Hornaday rivers is having a negative impact on the subsistence activities on the rivers throughout the spring, fall and summer.

Community Working Group Recommendations
1. Parks Canada should monitor the Horton and Brock rivers for unlicenced tourism operators.
2. FJMC should restrict sport fishing on these rivers from June to September.
3. All tourists should be registered with the Paulatuk HTC before accessing these rivers.

SITE NO. 422D CAPE PARRY MIGRATORY BIRD SANCTUARY

Identified By
Canadian Wildlife Service

Management Category
D
Legislatively protected under Migratory Birds Convention Act.

Ownership
Private 7(1)(b) lands within the Inuvialuit Settlement Region.

Description
Situated on the northern tip at Cape Parry.

Importance of the Site to the Community of Paulatuk
Only nesting thick-billed murre colony in western Canadian Arctic. Offshore staging area for thousands of king eider, common eider, mergansers and oldsquaw.

Birds present during only part of the year - breeding season is May to August. Nesting habitat is coastal cliffs.

Overlapping Lands of Territorial, National and International Conservation Interest
Parry Peninsula and Offshore Islands (Site No. 419C)
Coastal Areas of Parry Peninsula, Franklin Bay, Darnley Bay (Site No. 424C)

Overlapping Nonrenewable Resource Interests and Activities
None.

Overlapping Military, Transportation and Tourism Interests and Activities
North Warning DND site.

Shipping traffic nearby.

SITE NO. 423E TUKTUT NOGAIT NATIONAL PARK

Identified By
The Community of Paulatuk and Parks Canada

Management Category
E

Ownership
Crown lands within the Inuvialuit Settlement Region.

Description
This park is located 40 km (25 mi) east of Paulatuk, and covers 16,340 km^2 (6,307 mi^2). It protects an area representative of the Tundra Hills Natural Region.

Importance of the Site to the Community of Paulatuk
Calving and post-calving ground of Bluenose-West Caribou Herd.

One of the highest densities of nesting falcons, hawks in the Canadian Arctic.

Grizzly bear habitat.

Important charr habitat on the Hornaday River downstream of La Ronciere Falls.

Significant archaeological sites.

High ecotourism values including wilderness, wildlife viewing, hiking, canoeing/kayaking, etc.

Overlapping Lands of Territorial, National and International Conservation Interest
Horton and Brock Rivers (Site No. 421D)
Hornaday River (Site No. 426E)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
Mining exploration is occurring west of the Park.

Overlapping Military, Transportation and Tourism Interests and Activities
Potential for tourism activities (see above).

Community Concerns
Any concerns are dealt with through the Tuktut Nogait National Park Management Board.

Tuktut Nogait National Park Management Board: The Board advises the Minister of Canadian Heritage, and other ministers as appropriate, on all aspects of Park planning, operation and management, and on the means of accomplishing the Park's purposes as set out in the Tuktut Nogait Agreement. Research priorities associated with the park have been developed collaboratively with a wide range of parties, and the Board has now recommended Interim Management Guidelines to the Minister. The Board and Parks Canada expect a Management Plan for Tuktut Nogait to be developed in 2003.

SITE NO. 424C COASTAL AREAS OF PARRY PENINSULA, FRANKLIN BAY, DARNLEY BAY

Identified By
Department of Fisheries and Oceans

Management Category
C

Ownership
Crown lands and waters within the Inuvialuit Settlement Region.

Description
Waters bordering the coast of the Paulatuk Planning Area for a distance of 3 km (2 mi) offshore.

Importance of the Site to the Community of Paulatuk
Arctic cod throughout the site. Saffron cod in large numbers near Cape Parry. Large numbers of arctic cisco in Franklin Bay and Darnley Bay, which are food for ringed seals, beluga and arctic charr. Feeding anadromous charr from rivers in Franklin Bay and Darnley Bay.

Beluga feeding.

Overlapping Lands of Territorial, National and International Conservation Interest
Beluga Management Plan Zone 1B (Site No. 418E)

Parry Peninsula and Offshore Islands (Site No. 419C)
Horton and Brock Rivers (Site No. 421D)
Hornaday River (Site No. 426E)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring in this area.

Overlapping Military, Transportation and Tourism Interests and Activities
Shipping traffic.

Community Working Group Concerns
Potential oil spills from shipping transportation in the area.

SITE NO. 425B MAINLAND FRESHWATER AREAS

Identified By
Department of Fisheries and Oceans

Management Category
B

Ownership
Private 7(1)(a) and 7(1)(b) lands and crown lands within the Inuvialuit Settlement Region.

Description
All freshwater lakes in the Planning Area, excluding Spring Fish Harvesting Area (Site #) and Hornaday River (Site #).

Importance of the Site to the Community of Paulatuk
Support resident populations of coregonids, burbot, lake trout, northern pike, and some arctic grayling.

Brock River - migratory anadromous arctic charr.
Roscoe River - anadromous arctic charr in lower 20-25 km (12.4 - 15.5 mi).

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring west of the National Park.

Community Working Group Recommendations
See recommendations in the Paulatuk Charr Management Plan 1998-2002, for Rummy and Seven Islands Lakes and First Creek.

SITE NO. 426E HORNADAY RIVER

Identified By
DFO, Paulatuk Hunters and Trappers Committee, and the FJMC

Management Category
E

Ownership
Private 7(1)(a) lands and Crown lands within the Inuvialuit Settlement Region.

Description
Mouth of Hornaday River, including the estuary, to La Ronciere Falls.

Importance of the Site for the Community of Paulatuk
Lower 45 km (28 mi.) used by anadromous arctic charr for spawning, nursery and overwintering. Fished commercially from 1968 until 1987, when it was closed because of declining stocks.

Overlapping Lands of Territorial, National and International Conservation Interest
Tuktut Nogait National Park (Site No. 423E)
Coastal Areas of Parry Peninsula, Franklin Bay, Darnley Bay (Site No. 424C)
Bluenose-West Caribou Core Calving Grounds (Site No. 428D)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration is occurring west of Tuktut Nogait National Park.

Overlapping Military, Transportation and Tourism Interests and Activities
Tuktut Nogait National Park.

Community Working Group Recommendations
See recommendations in the Paulatuk Charr Management Plan 1998-2002, for Rummy and Seven Islands Lakes and First Creek.

SITE NO. 427C PEARCE POINT HISTORIC LOCATION

Identified By
Paulatuk Community Working Group

Management Category
C

Ownership
Private 7(1)b lands.

Description
Situated on a jut of land between Cape Lyon and House Point, on the coast of Amundsen Gulf.

Importance of the Site to the Community of Paulatuk
The community has indicated that they would like the site to be designated as a National Historic Site by Parks Canada.

A former RCMP post.

Overlapping Nonrenewable Resource Interests and Activities
None.

Community Working Group Recommendations
See recommendations in the Paulatuk Charr Management Plan 1998-2002, for Rummy and Seven Islands Lakes and First Creek.

SITE NO. 428D BLUENOSE-WEST CARIBOU CORE CALVING AND POST-CALVING GROUNDS

Identified By
Paulatuk Working Groups

Management Category
D

Ownership
Private 7(1)(a) and 7(1)(b) lands and Crown lands within the Inuvialuit Settlement Region.

Description
Southeast of Paulatuk, encompassing most of the Hornaday River, the southern end of the Horton River, to the southern and eastern boundary of the ISR.

Importance of the Site to the Community of Paulatuk
Core and post-calving grounds of the Bluenose caribou herd.

Overlapping Lands of Territorial, National, and International Conservation Interest
Horton and Brock Rivers (Site No. 421D)
Tuktut Nogait National Park (Site No. 423E)
Hornaday River (Site No. 426E)
Coastal Zones of the Tuktoyaktuk Peninsula (Site No. 710CD)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration activity is occurring west of Tuktut Nogait National Park. Aeromagnetic surveys have been conducted and core sampling is planned for more specific sites.

Community Working Group Concerns
The Community Working Group is concerned that future non-renewable resource development and exploration would have negative impact on the caribou calving grounds and summer range, and the fish species found in the area.

Community Working Group Recommendations
All regulatory agencies must take appropriate measures to protect caribou from disturbances during the calving period.

SITE NO. 731D CAPE BATHURST CARIBOU CORE CALVING AND POST-CALVING GROUNDS

Identified By
Tuktoyaktuk and Paulatuk Working Groups

Management Category
D

Ownership
Private 7(1)(a) and 7(1)(b) lands in the ISR.

Description
Situated on the Bathurst Peninsula, with the Anderson River representing the western boundary, and the mouth of the Horton River representing the eastern boundary and extending south through Coal Creek.

Importance of the Site to the Community of Paulatuk
Core and post-calving grounds of the Cape Bathurst Bluenose caribou herd.

Overlapping Lands of Territorial, National, and International Conservation Interest
Coastal Zones of the Tuktoyaktuk Peninsula (Site No. 710CD)

Overlapping Nonrenewable Resource Interests and Activities
Mineral exploration activity is occurring west of Tuktut Nogait National Park. Aeromagnetic surveys have been conducted and core sampling is planned for more specific sites.

Community Working Group Concerns
The Community Working Group is concerned that future non-renewable resource development and exploration would have negative impact on the caribou calving grounds and summer range, and the fish species found in the area.

Community Working Group Recommendations
All regulatory agencies must take appropriate measures to protect caribou from disturbances during the calving period.

4.1.1 General Land Use Guidelines

These recommended guidelines relate to all lands in the Inuvialuit Community Planning Area for Paulatuk:

1. The Inuvialuit Community, the WMAC (NWT), FJMC, IGC, EISC, EIRB and ILA will rely on their procedures, the Paulatuk Community Conservation Plan and the provisions of the IFA to ensure the protection of the Paulatuk community harvesting areas that are within the ISR.

2. All Inuvialuit and non-Inuvialuit bodies with an interest in the planning area acknowledge and actively support the Paulatuk Community Conservation Plan, associated land use designations and recommendations.

3. The Community supports the maintenance of the bird sanctuaries.

4. The protective status of all other candidate areas (areas identified by non-Inuvialuit) for protection be resolved by having the government (e.g. Minister of the Environment, Minister of Fisheries and Oceans and GNWT and YTG, Minister of Renewable Resources) demonstrate to the satisfaction of the Community, WMAC (NWT), FJMC and IGC that such areas are necessary.

5. All regulatory agencies support the priority land uses as outlined in the Paulatuk Community Conservation Plan.

6. Individuals wishing to build a camp will abide by any camp-building bylaw specified by the HTC. That bylaw is presented in points (a) to (g) following:

    (a) Contact your local HTC for information before applying.

    (b) Secure lease for the land you want to build on through ILA.

    (c) No one may build within a five mile radius of another camp already established, unless they have written permission from the person of the established camp to build a cabin, and must respect their wishes to the fullest degree.

    (d) People must respect already established traplines and must not hunt within a 1.6 km (1 mi) radius of an established camp.

    (e) When apply to build, the person must apply on his own and not through someone else.

    (f) No one can cut wood within a 1.6 km (1 mi) radius of an established camp.

    (g) Jiggling creeks used for many years for the purpose of catching fish in the fall time should be respected.

7. The permission granting authority for camps on private land is ILA. ILA has adopted a practice to canvass for comments from existing cabin owners within a 8 km (5 mi) radius and will base a decision for a permit on the merits of each case and not on an HTC bylaw. Reasonable concerns or comments will be considered.

8. The Community, HTC, WMAC (NWT) and FJMC will encourage the people of Paulatuk and others using and visiting the area to keep the land clean and to bring back any garbage for disposal at the local dump or other appropriate location (as determined by the community).

9. The Prince of Wales Northern Heritage Centre and DIAND should implement protection of heritage resources through a strengthened *Heritage Resources Act*.

4.2 INUVIALUIT COMMUNITY PROCESS FOR LAND USE DECISIONS

The community land use decision making process involves a number of steps which are described below and also presented graphically in Appendix H.

1. The Community Corporation and Hunters and Trappers Committee receive notification of development proposals from the Inuvialuit Land Administration, DIAND and/or the EISC.[1]

2. The Community Corporation and HTC hold separate meetings to discuss the proposal.

3. The Community Corporation and HTC review relevant sections of the Community Conservation Plan with careful consideration of land use categories (Sections 4.0, 4.1) and independently pass on their concerns to the ILA and/or EISC.

4. The HTC and Community Corporation formally work together to develop a consensus or community-based land use decision in special cases.

5. The HTC and Community Corporation will hold a secret ballot when considered necessary.

6. The Community Corporation and HTC review relevant sections of the Community Conservation Plan with careful consideration of land use categories (Sections 4.0, 4.1).

7. The ILA or EISC (see Section 4.4) review the responses and decide whether to grant approval (where the ILA is involved) or to refer the project to the Environmental Impact Review Board (for further public review) or to the appropriate government department for permitting (where the EISC is involved).

[1] See recommendation 4.4.1(5)

4.3 CUMULATIVE IMPACTS MANAGEMENT

Cumulative impacts occur when changes to the environment, both good and bad, add to one another over time. Several small impacts may appear unimportant when they occur but, if continued, may result in a large impact over time. Successful management of cumulative impacts involves the following three steps:

- Clearly identify the type of environment and lifestyle you want in the future;
- Monitoring environmental change;
- Appropriate decision making.

In order to better account for incremental or gradual losses of wildlife habitat resulting from changes in land use over time, the Community, as represented by the HTC and Paulatuk Community Corporation, will re-designate areas of remaining habitat in a given management category (Category A, B, C, D) to a more protective category (Category B, C, D, E) in proportion to the amount of effective habitat lost or affected by the authorized land use.

For example, if a proposed land use has negative effects on five percent of Category A wildlife habitat, then five percent (or any other amount) of what Category A habitat remains would be re-designated Category B or higher until such time as the impact of the land use has stopped and the land restored to its original ecological productivity.

This process acknowledges the principle that as wildlife habitat is lost, that which remains becomes more valuable and should require greater public support to alter. Re-designation will be carried out coincident with the two-year conservation plan review by the Community Working Group, and the complete review by all stakeholders every four years.

4.4 ENVIRONMENTAL SCREENING & REVIEW

Review of development proposals within the Inuvialuit Settlement Region is carried out in a cooperative manner and primarily involves the Environmental Impact Screening Committee (EISC), the Environmental Impact Review Board (EIRB) and Inuvialuit Land Administration (ILA) (as described in Section 1.2 and Appendices F and G). These committees routinely seek the advice and comments of the community in reaching their decisions.

At the present time, the ILA is able to specify enforceable conditions for attachment to ILA Land Use Permits on Inuvialuit 7.1(a), 7.1(b) Lands. On Crown lands within the Inuvialuit Settlement Region non-Inuvialuit bodies, such as DIAND, are responsible for attaching conditions to land use permits. ENR issues wildlife research permits and tourism licences. The Prince of Wales Northern Heritage Centre issues permits for archaeological research. Within a national park, Parks Canada issues permits.

4.4.1 Recommendations

1. DIAND and ILA work together wherever possible to develop a consistent set of general land use procedures.

2. The Community recommends that the ILA require developers to indicate the extent to which relevant elements of their development are at variance or consistent with Section 19, (Conduct of Operations in ILA Rules and Procedures) (Appendix I of this plan).

3. Environmental Screening Procedures - The HTC, IGC, WMAC (NWT), WMAC(NS) and FJMC will periodically review the Environmental Impact Screening Committee, Environmental Impact Review Board and Inuvialuit Land Administration operating rules/guidelines and procedures, and offer advice with regard to any changes that may be required to help improve environmental screening and review.

4. Regulatory bodies with jurisdiction over lands within the ISR should work with the Community to ensure that developers are bound to adequately address the Community's environmental concerns. These regulatory bodies should also work with the Community to identify practical state-of-the-art mitigation and reclamation techniques and to involve local people as environmental inspectors (see Section 5.0).

5. Reclamation Plans - As part of land use permits, reclamation plans should be agreed to and a costing mechanism (e.g. bond, promissory note) established to ensure compliance.

6. Consultation - The Community should be consulted on all land use activities in the Paulatuk Planning Area.

7. Revoke Permits - Where there is a violation of land use permit conditions deemed serious by the PHTC or Paulatuk Community Corporation, the permitting agency (e.g. ILA, DIAND) shall investigate immediately and take appropriate action which, with HTC support, may include revoking permits.

8. Education - The Environmental Impact Screening Committee, Environmental Impact Review Board, and Inuvialuit Land Administration should increase community awareness of their mandates and activities (see also Section 5.0).

9. The Inuvialuit Community in Paulatuk will:
   (a) Carefully review all land use proposals and only give their support to land use activities where they are consistent with the Paulatuk Community Conservation Plan.

   (b) Through the HTC, IGC or the IRC, refer any projects on Inuvialuit Land that may be in conflict with the Paulatuk Community Conservation Plan to the environmental screening and review process;

   (c) Through its HTC, consult with developers on projects proposed within the Paulatuk Planning Area;

   (d) With the assistance of the IGC, familiarize itself with the terms and conditions of any relevant Wildlife Compensation Agreements prior to signing off by the IGC, HTC and Developer.

   (e) Through its HTC, advise the EISC and/or ILA of community concerns about development projects in the Paulatuk Planning area;

   (f) Develop a monitoring system with industry, transportation companies and local tourist operators to determine the numbers, impacts and rate of increase of activity to provide the data for more stringent regulations as required.

10. The HTC will ensure that community harvest data are kept current in order to facilitate development of practical and fair Wildlife Compensation Agreements.

5 EDUCATION, TRAINING AND INFORMATION EXCHANGE

The successful implementation of the Paulatuk Community Conservation Plan will require ongoing efforts to educate, train and exchange information. The community recommends that the WMAC (NWT) and FJMC work with other Inuvialuit and non-Inuvialuit agencies to obtain funding and expertise to fulfill the following initiatives:

(a) Prepare an educational audio and video tape or tapes on the local ecosystem, the people, conservation practices and the Inuvialuit Final Agreement.

(b) Organize training for local Inuvialuit in environmental inspection and monitoring as well as proper harvesting techniques.

(c) Prepare summaries (written summaries and as translated audio tapes) of the Paulatuk Community Conservation Plan suitable for school use and for elders.

(d) Prepare home education package (for delivery by parents) to convey cultural values, language and conservation.

(e) Develop and implement a Community Information Program to present and explain the Paulatuk Community Conservation Plan.

(f) Promote the use of environmentally friendly products and proper handling of hazardous wastes.

(g) Encourage researchers visiting the area to make presentations to the Community, and to convey the results of their studies.

(h) Continue to record and convey traditional knowledge of the land, culture, wildlife, and conservation.

(i) The Community should actively assist with the undertaking of the above initiatives.

(j) Continue to promote the use of the local language among the young and others with an interest.

6 WILDLIFE MANAGEMENT AND RESEARCH

The Community supports the general wildlife management process as described in the **Inuvialuit Renewable Resource Conservation and Management Plan (1988),** the **IFA**. Interested readers are advised to consult both of these documents. Both documents provide for the full consultation and participation of the Community and its representatives in the management process.

Improvements to the system can be made in terms of more use of local knowledge, more community involvement in wildlife research and better communication between the Community, government agencies, researchers and the joint management groups. To that end, the Community has developed preliminary guidelines for wildlife management and conservation, including subsistence and commercial harvesting, tourism and local enjoyment. The Community has incorporated local knowledge and outside expertise in developing a one page conservation summary for each species of concern in the area (Section 6.4).

6.1 GENERAL GUIDELINES

To implement the strategy for wildlife management and research the following steps will be taken:

1. The Paulatuk HTC will:

(a) Provide input to the IGC and the joint management groups on wildlife management and research programs in the Planning Area.

(b) Through the IGC and the joint management groups, inform government agencies of its priorities for wildlife research in the Planning Area.

(c) Support conservation initiatives for shared migratory species developed by others, where the Inuvialuit bodies with a mandate for wildlife management endorse those initiatives.

(d) Participate in wildlife research projects in the Paulatuk Planning Area, when they have been consulted and support such projects.

(e) Discourage the use of aircraft for low level (<610 m) (<2,000 ft.) wildlife spotting at any time unless being done in conjunction with authorized research in order to avoid unnecessary disturbance or harassment of wildlife (see also Section 6.3(c)).

(f) Monitor the state of the wildlife and habitats in the Planning Area in cooperation with the biologists employed by the Government of the NWT, FJMC, DFO, Parks Canada and DOE and report any concerns to the WMAC (NWT) and FJMC through the HTC and the IGC.

(g) Regulate Inuvialuit harvesting using bylaws and traditional conservation methods as described in this plan (see Section 6.4), or when this is recommended through community monitoring, by the joint management committees or the IGC.

(h) Pass a bylaw which provides a strong and positive incentive for trappers to carefully manage their harvest. This bylaw will define individual trapping areas and allow trappers to rotate their harvest within their trapping area from one year to the next. The system to be covered by the bylaw will be biologically and culturally based.

(i) Keep the joint management bodies informed, through the HTC, of education programs (see Section 5.0) which are needed to increase community awareness of conservation, wildlife management and research.

(j) Where appropriate, participate in the development and delivery of education programs (see Section 5.0).

(k) Encourage active participation in implementing the Paulatuk Community Conservation Plan. Membership and privileges associated with membership in the HTC will only be granted where individuals support the plan to the satisfaction of the HTC membership.

(l) Manage all harvests on a sustained yield basis.

2. The WMAC (NWT), FJMC and IGC will:

(a) Assist the Community in obtaining regular monitoring information on water quality and ecosystem integrity. (This is a very high priority within the Community).

(b) Recommend to the Minister of Environment, the Minister of Fisheries and Oceans and the GNWT that species management plans continue to be developed and implemented for important wildlife populations identified by the Community in the Paulatuk Planning Area, in consultation with the community and joint management groups. These plans should build upon the species conservation summaries presented in Section 6.4.

(c) Make more use of the media to publicize their activities in the Paulatuk Planning Area.

(d) Recommend to the Aurora Research Institute of the Northwest Territories, the CWS, the DFO, GNWT and YTG that they continue to work with both groups to develop a consistent process for community consultation on wildlife research and the distribution of research results to the Community (see also Section 5.0). They (FJMC, WMAC (NWT), IGC) will further recommend that as part of their research permit, all researchers in the planning area mail or fax a one page summary of the work undertaken to the HTC, within two weeks of leaving the area.

(e) Respond to Community initiatives for conservation measures and education programs.

(f) Develop a consistent set of criteria for establishment of harvest quotas in cooperation with the HTC.

3. Community, the WMAC (NWT), FJMC and IGC will:

(a) Support the development of species management plans, when such plans are prepared in consultation with all groups. In the interim, these bodies and the people represented will endorse and follow conservation guidelines provided in the species summaries (Section 6.4).

(b) Ensure that Inuvialuit are aware that animal numbers typically increase and decrease with the seasons and over the years as part of natural cycles. Ensure that harvesting and management programs consider natural cycles of animal abundance.

(c) Support proposals for renewable resource development in the Planning Area, when they are consistent with the Principles of the Inuvialuit Final Agreement, the Regional Conservation Plan, and with the Community Conservation Plan.

(d) Revise the species conservation summaries listed in Section 6.4 during plan review conducted every four years.

6.2 SUBSISTENCE AND COMMERCIAL HARVESTING - GENERAL GUIDELINES

Under the Inuvialuit Final Agreement (Section 14(36)(a)) the Wildlife Management Advisory Council (NWT) is required to determine the total allowable harvest for game to ensure long term resource conservation. The effectiveness of this activity is very dependent on the cooperation of local subsistence harvesters in Paulatuk and those involved in promotion of commercial wildlife harvesting.

In addition to recommendations and guidelines described elsewhere in this document, the guidelines below will be followed:

(a) Subsistence harvest and traditional patterns of land use associated with subsistence harvesting will take precedence over commercial harvesting.

(b) Subsistence and commercial harvesting will be done in a manner consistent with the Paulatuk Community Conservation Plan, specific population goals and conservation measures stated in the species conservation summaries.

(c) Commercial harvesting of wildlife will be undertaken in a manner developed cooperatively with and endorsed by the FJMC (for crustaceans, fish, seals, whales), WMAC (NWT) (for all other animals) and the GNWT.

(d) Where a commercial quota is identified and considered consistent with conservation for a given species (for example, caribou) a percentage of tags will be retained to preserve for small scale operations (for example, sport hunting, individual supply to commercial market).

(e) Harvests will be monitored monthly by the Inuvialuit Harvest Study in order to provide information necessary for compensation and resource conservation.

(f) Well managed commercial fishing will be allowed in the rivers, but is not recommended for the lakes.

(g) The Community will consider and support the use of alternate harvesting methods (e.g. humane traps, steel shot) where there is a demonstrated need.

6.3 TOURISM GUIDELINES

The Community of Paulatuk believes tourism is a valuable economic activity within the area which is compatible with conservation and cultural needs, provided it is properly managed. The Community recognizes the need to maintain the environment and cultural lifestyles in order to promote tourism. To do this the Community recommends the following:

(a) The total number of tourist operators and/or tourists should be restricted in certain areas at certain times of the year (e.g. nesting and moulting areas for migratory birds, calving areas, denning areas.)

(b) The ILA, and ENR will request that all tourist operators (Inuvialuit and non-Inuvialuit) endorse the Paulatuk Community Conservation Plan and follow its recommendations as one of the conditions of operators license or permit. Licences may be revoked where operators contravene the recommendations and guidelines of this Plan and the conditions of their permit.

(c) Aircraft should fly no lower than 1,100 m (3,500 ft.) over a migratory bird sanctuary during times when nesting birds are present.

(d) Aircraft will not be used to land at sites where concentrations of nesting birds may occur.

(e) Aircraft will not be used for low level (<610 m) (<2,000 ft.) wildlife spotting at any time unless being done in conjunction with authorized research.

(f) Wolf dens should be approached no closer than 500 m (547 yd) if wolves are present.

(g) Tourists and tourist operators should not handle or harass wildlife.

(h) DIAND or ILA, in conjunction with the HTC, should establish a Travel Restricted Area to protect heritage resources when necessary.

(i) ENR should inform tourist operators of concerns regarding protection of heritage resources when issuing outfitting licences.

(j) Tourists and tourist operators shall respect any bylaws passed by the HTC with respect to tourism.

6.4 SPECIES CONSERVATION SUMMARIES

The following Species Conservation Summaries have been prepared by the Community in consultation with the WMAC (NWT), FJMC and IGC. Both local indigenous knowledge and that of others with expertise has been used. General conservation measures are provided in addition to those to be followed in the event of declining wildlife populations. Additional information on important wildlife habitat is contained in the Land Use Section (4.1).

The WMAC (NWT) commissions ENR and CWS to provide updated Species Status Reports on an annual basis for species in the NWT portion of the ISR.

Species Conservation summaries will be updated every two years by the WMAC (NWT), with input from the appropriate agencies. In most cases, precise population or threshold levels remain to be specified. The WMAC (NWT), FJMC, IGC, CWS, GNWT and DFO are encouraged to move forward with species management plans, with priority to species of importance to the Community and which may be impacted by likely developments.

BEAVER (*Castor canadensis*) / **KIGIAQ**

Parks Canada

Biology
Mating occurs in the water during late winter (February and March). After spring break-up, 3 to 4 kits are born in the lodge or burrows. One litter produced per year. Kits mature at 2 years of age or older.

Important Habitat
Mostly found in tree line area.

Management Plans/Agreements
None planned.

Recent Research
Young, D.A., Kerr, D.S. and M.A. Weber. 1984. Beaver and muskrat investigations: fall 1983. Environmental Management Associates.

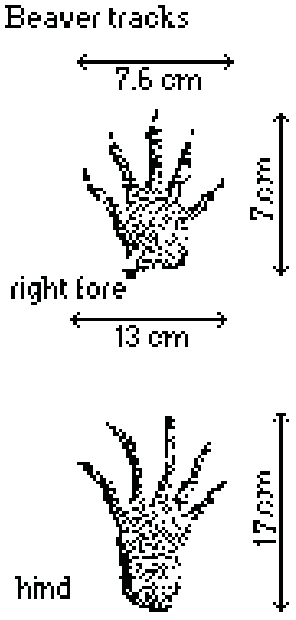
Study done by CWS (Vern Hawley) in late 50's, early 60's.

Research Priority
Low.

Population Status
Unknown.

Population Goal
None.

Conservation Measures
- Do not hunt until population increases.
- Harvest on a sustainable basis.
- Identify and protect important habitats from disruptive land uses.
- Support HTC bylaw (proposed) on designated trapping areas.



BLACK BEAR (*Ursus americanus*) / IGGARLIK


Parks Canada

Biology
Black bears den from October to May. Bear numbers or densities are unknown in the ISR. Occur in forested areas. Breeding peaks in June and July. 2-3 cubs are born toward end of January, early February. Cubs tend to leave mother in second year of life. Females mature at 3-5 years of age and have an average of 2 cubs per litter every 3 years. Most northern black bear population in Canada occurs in ISR. May live to 20 years of age though average maximum age about 10. Average weights for females 40-70 kg (88-154 lb), males 60-140 kg (132-308 lb). Feed on wide variety of plants and animals, primarily herbivorous.

Important Habitat
Below the tree line.

Management Plans/Agreements
No management plans specifically for black bears, managed under general hunting and trapping regulations.

Recent Research
Barichello, N. 1998. Status report on the American black bear, *Ursus americanus*, in Canada. COSEWIC.

Clarkson, P. 1987. Collect baseline information on brown bear movements and numbers to assist in future management decisions. RWED.

Research Priority
Low.

Population Status
Fairly common.

Population Goal
Maintain natural densities, adequate supply at present.

Conservation Measures
- Keep camps clean, properly dispose of garbage.
- Identify and protect important habitats from disruptive land uses.
- Reduce bear-people conflict situations and the number of bears destroyed in problem bear situations.

CARIBOU (*Rangifer tarandus*) / **TUKTU**

Pagniq (bull), Kulavak (cow), Naggaq (calf)

Parks Canada

Biology

Barren-ground caribou (*Rangifer tarandus groenlandicus*) that occupy the northern portion of the Northwest Territories and western Nunavut, Canada, were considered to be part of the Bluenose herd. Work completed by ENR (formerly RWED) in 1999 indicated that there are three herds within that area; the Cape Bathurst, Bluenose-West, and Bluenose-East caribou herds. Since the reindeer were moved off the Tuktoyaktuk peninsula in 2001 there appears to be another group of caribou calving at the upper end. The degree of hybridization occurring is unknown.

Calving occurs late May or early June; typically a single calf. Cows calve every year if in good condition. Sexual maturity at 2 to 4 years of age. Porcupine herd winters in high mountains (Richardson, Ogilvie and Barn Mountains), migrate to calving grounds April and May, spend spring and summer on Alaskan and Yukon North Slope, return to wintering grounds September and October, breed October. Bluenose-West and Cape Bathurst herds generally winter within the treeline east, northeast and southeast of Inuvik, and calve and summer in Brock, Hornaday and Horton River area.

Traditional Use

Highly valued food resource, historically also for clothing and tools.

On the mainland, the Cape Bathurst herd is typically harvested by 5 Inuvialuit and Gwich'in communities. The Bluenose-West herd is harvested by Inuvialuit, Gwich'in, and Sahtu Dene and Metis in 12 communities. In addition, Inuvialuit from Sachs Harbour on Banks Island have historically relied on caribou from the Bluenose-West and Cape Bathurst herds.

Important Habitat

Porcupine Caribou Herd: Coastal plain N.E. Alaska and N.W. Yukon North Slope for calving and insect relief, also Northern Richardson Mountains. Winter habitat in Richardson, Ogilvie and Hart Basins and Eagle Plains/Whitestone River area.

Bluenose-West Caribou Herd: Hornaday, Brock and Horton Rivers area for calving (Tuktut Nogait National Park)

Cape Bathurst Herd: Bathurst peninsula for calving and insect relief; winter habitat northeast of Inuvik.

Tuktoyaktuk Peninsula Herd: north end of Tuktoyaktuk peninsula for calving and insect relief

Management Plans/Agreements

Porcupine:

Canadian (1985) and International (1987) Porcupine Management Agreements in place for the Porcupine Caribou Herd.

Draft Scoping Report for the Preparation of a Harvest Management Strategy in the Canadian Range of the Porcupine Caribou Herd, 2004

Protocol Agreement Respecting the Development of a Harvest Management Strategy in the Canadian Range of the Porcupine Caribou Herd, 2007

Draft North Yukon Land Use Plan.

Cape Bathurst, Bluenose-West and Tuktoyaktuk Peninsula
Bluenose Caribou Herds Management Cooperation Agreement (2000). Signed by the WMAC (NWT), GRRB, SRRB and Tuktut Nogait National Park Management Board.
DRAFT Co-management Plan for the Cape Bathurst, Bluenose-West and Bluenose-East Caribou Herds: Northwest Territories and Nunavut, 1999/2000 to 2003/2004 recommended by WMAC (NWT)
GNWT Environment and Natural Resources. 2006. Caribou Forever – Our Heritage, Our Responsibility: A Barren-ground Caribou Management Strategy for the Northwest Territories 2006-2010.

The drafting and implementation of the Bluenose and Porcupine Caribou management plans has involved the cooperation of the various land claim groups and co-management boards in each jurisdiction, thereby reflecting the trans-boundary nature of the herds.

Recent Research
Porcupine Caribou
Numerous ongoing studies being conducted in Canada and U.S. (contact Porcupine Caribou Management Board).

Russell, D.E. and P. McNeil. 2005. Summer Ecology of the Porcupine Caribou Herd. Porucpine Cariobu Management Board 2nd ed. 16 pp.

Russell, D., A. Martell and W. Nixon. 1993. Range ecology of the Porcupine caribou herd in Canada. Rangifer, Special Issue No. 8, 168 pp.

Urquhart, D. 1983. The status and life history of the Porcupine caribou herd. Yukon Department of Renewable Resources, Whitehorse.
Cape Bathurst, Bluenose-West and Tuktoyaktuk Peninsula Caribou
Numerous ongoing studies being conducted (contact Wildlife Management Advisory Committee (NWT) or Environment and Natural Resources).

Nagy J.A. 2009. Population Estimates for the Cape Bathurst and Bluenose West Barren-ground Caribou Herds using Post-calving photography. Department of Environment and Natural Resources, Government of the Northwest Territories, Inuvik, NT, Canada Man. Rept. 193

Nagy J.A., and D. Johnson. 2006. Estimates of the Number of Barren-ground Caribou in the Cape Bathurst and Bluenose-West Herds and Reindeer/Caribou on the Upper Tuktoyaktuk Peninsula Derived Using Post Calving Photography, July 2006. Department of Environment and Natural Resources, Government of the Northwest Territories, Inuvik, NT, Canada Man. Rept. 171

Nagy, J.A., W.H. Wright, T.M. Slack, and A.M. Veitch. 2005. Seasonal Ranges of the Cape Bathurst, Bluenose-West, and Bluenose-East barren-ground caribou herds. Department of Environment and Natural Resources, Government of the Northwest Territories, Inuvik, NT, Canada Man. Rept. 167

Paterson, B.R., B.T. Olsen and D.O. Joly. 2004. Populations estimate for he Bluenose-East caribou herd using post-calving photography. Arctic 57:47-58.

Research Priority
See:
Porcupine Caribou Herd Management Plan
DRAFT Porcupine Caribou Herd Harvest Management Plan

See:
New Management Plan being developed.
DRAFT Co-management Plan for the Cape Bathurst, Bluenose-West and Bluenose-East Caribou Herds: Northwest Territories and Nunavut, 1999/2000 to 2003/2004 recommended by WMAC (NWT)

Population Status

Porcupine:
approximately 178,000 (1989)
approximately 160,000 (1992)
approximately 152,000 (1994)
approximately 129,000 (1998)
approximately 123,000 (2001)
approximately 100,000 (2007; model estimate)

Census attempted every ear since 2003 with no success due to various reasons. The next census is planned for summer 2010. Radio collars (conventional and satellite) continue to be monitored to provide calf birth rate, calf survival rate, and adult female survival rates.

	Estimate	Range	Year
Tuktoyaktuk Pen.	**3,070**		**(2006)**
	2,750	**2,480—3,010**	**(2009)**
Cape Bathurst	**12,520**	**9,010 – 16,020**	**(1987)**
	19,280	**13,880— 24,680**	**(1992)**
	11090	**9,330 — 12,850**	**(2000)**
	2,430	**2,190 — 2,690**	**(2005)**
	1,820	**1,670 — 1,971**	**(2006)**
	1,890	**1,580 — 2,200**	**(2009)**
Bluenose-West	**88,370**	**81,470 — 95,270**	**(1986)**
	106,890	**102,230 — 111,540**	**(1987)**
	112,360	**86,790 — 137,930**	**(1992)**
	76,376	**62,030 — 90,720**	**(2000)**
	20,800	**18,760 — 22,840**	**(2005)**
	18,050	**17,520 —18,580**	**(2006)**
	17,900	**16,590— 19,210**	**(2009)**
Bluenose-East	**84,000 — 126,000**		**(2000; Patterson et al. 2004)**
	62,000 — 70,000		**(2006; NWT)**
	No estimate		**(2009; NWT)**

Another attempt on the Bluenose-East is planned for 2010. Next population survey for all the herds is scheduled for July 2012.

Population Goal

Porcupine:

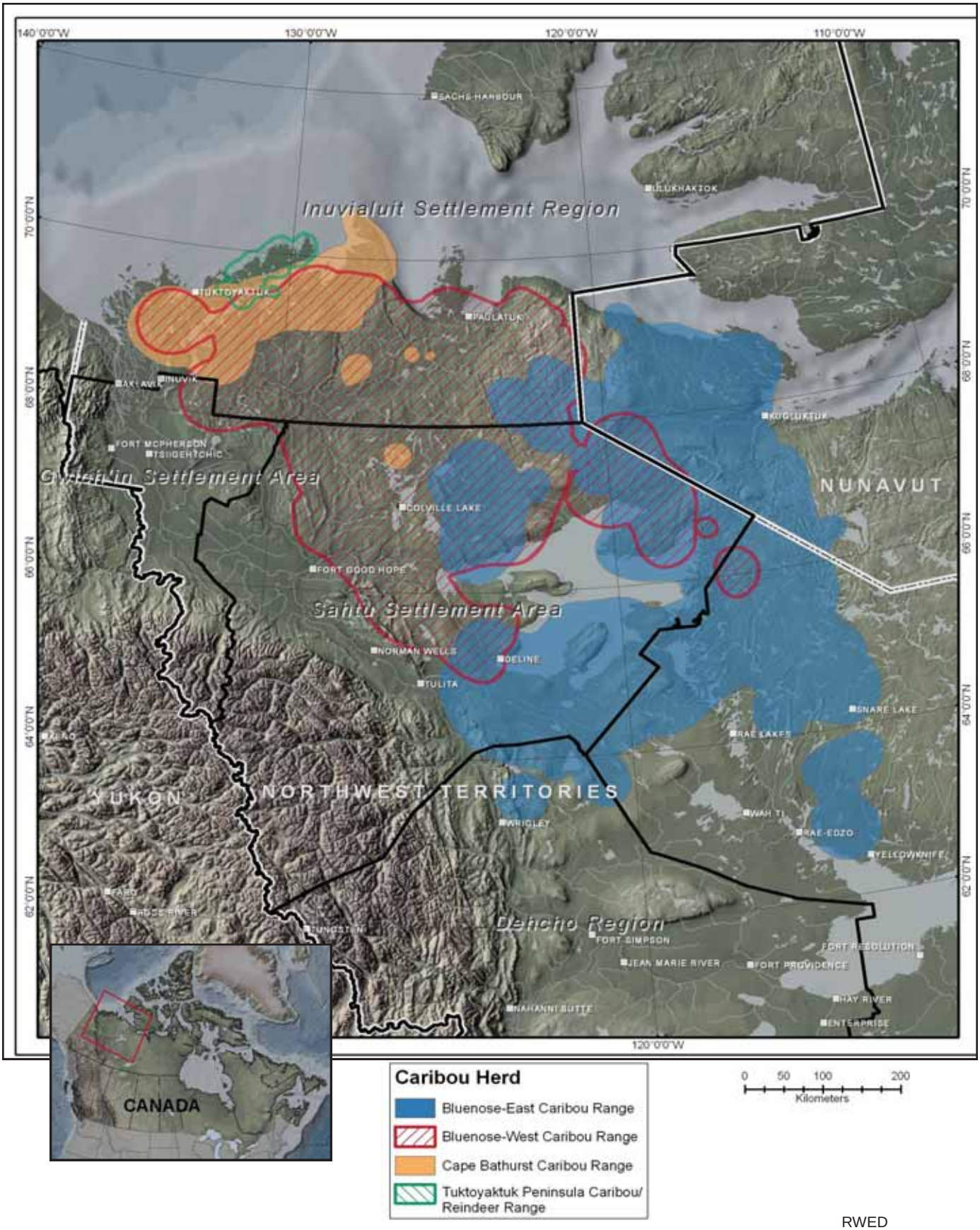
To keep the herd above 125,000 caribou, allowing for enough caribou to meet local demands — see Draft Harvest Management Strategy

Cape Bathurst, Bluenose-West and Tuktoyaktuk Peninsula

Unspecified. Maintain enough to satisfy local demand (including potential commercial harvest of Blue-nose herds) and provide maximum sustained yield.

Conservation Measures

- Support Porcupine Caribou Management Board and Management Plan.
- Support development of Porcupine Caribou Harvest Management Plan
- Identify and protect important habitats from disruptive land uses.
- Avoid shooting mature bulls during the rut.
- Do not harvest more than is needed.
- Convey and promote traditional means of using all of each animal harvested, discourage waste of meat.
- Develop cooperative management relationship between the co-management boards of each relevant land claim group.
- Harvest on sustainable basis, and in manner consistent with recommendations of the management plans and HTC bylaws.
- Support the Barren-ground Caribou Management Strategy



Map 13. Current Ranges of the Cape Bathurst, Bluenose-West, and Bluenose-East Barren-ground Caribou Herds

FOXES

RED FOX (*Vulpes vulpes*) / AUKPILAQTAQ
ARCTIC FOX (*Alopex lagopus*) / TIGIGANNIAQ


Parks Canada

Biology
Arctic Fox
Breed in March, denning April, pups active in May; may stay near den until October. May have from 8 to 20 young. Appears to be four year population cycle (likely coincident with cycle in lemmings). May move great distances (e.g. Alaska to Banks Island).

Red Fox
Breed February to April, 1-13 young, average 5. Family stays together until fall. Sexually mature at approximately 10 months. May live up to 12 years of age. Fur may be various colours (coloured, silver (Marraq), cross (Kaihirutilik)).

Traditional Use
Furbearer.

Important Habitat
Arctic fox are widespread above and below the treeline, often near coastal areas.

Management Plans/Agreements
Draft Co-management Plan for the Fur Industry (2000).

Recent Research
None in ISR

Research Priority
Low: though there is interest/concern over rabies.

Population Status
Can be highly variable year to year.

Population Goal
Unspecified.

Conservation Measures
- Identify and protect important habitats from disruptive land uses.
- Only trap in season.
- Do not disturb denning foxes.

GRIZZLY BEAR (*Ursus arctos horribilis*) / AKLAQ

Biology


Parks Canada

Grizzly bears in the ISR den from October to May. Breed in June-July. On average, females might not begin producing cubs until 5-8 years of age, have 1-3 cubs per litter, and produce a litter every 3-5 years. Grizzly bears are primarily vegetarians, although they will take advantage of any high energy food source available. Some foods and areas may be more important than others from season to season, and from year to year. In the NWT, home-range sizes of females average approximately 2000km^2, whereas males average approximately 7000km^2, much larger than those reported in other North American populations. Average weight for adult females is 125 kg (276 lb), for adult males, 250 kg (551 lb). May live to 25 years.

Traditional Use

Furbearer.

Important Habitat

Mackenzie and Richardson Mountains, Richards Island, Delta, Major river drainages, eskers and southerly slopes for denning. More sightings on Arctic Islands in recent years.

Management Plans/Agreements

Co-Management Plan for Grizzly Bears in the Inuvialuit Settlement Region, Yukon Territory and Northwest Territories, with Work Plans for the Years 1997/98 to 2001/2002. (WMAC (NWT), 1998)

In 1994 community hunting areas were established for Inuvik and Aklavik and the boundaries of all hunting areas were extended to conform to the ISR boundary in the Yukon and NWT.

Grizzly bear bylaws were written for each hunting area in consultation with the affected HTCs and were approved by the WMACs and IGC.

Quotas established for entire ISR in 1993-94. Interim quota adjustments were made by WMAC (NWT) and WMAC (NS) based on local knowledge. Work is underway to get new scientific estimates.

Recent Research

Yukon North Slope:
Population Estimate derived from DNA mark-recapture study
Habitat use studies involving collared grizzly bears
Population growth estimates using data collected from collared animals and captures
Aklavik Local and Traditional Knowledge about Grizzly Bears of the Yukon North Slope Dec 2008 WMAC (NS) and AHTC

NWT
Local and Traditional Knowledge Project with Aklavik, Inuvik, Paulatuk and Tuktoyaktuk HTC members (1999-2000). ENR and HTC.
Various projects are on-going in the NWT in collaboration with University of Alberta students including habitat use to develop Habitat suitability maps for mitigation during development, den habitat modelling and diet analysis
Work is underway to develop a new population estimate for grizzly bears east of the Delta using DNA mark-recapture techniques.

Edwards, M.A., A.E. Derocher, and J.A. Nagy. 2006. Barren-Ground Grizzly Bears of the Western Arctic: Potential Influence of Oil and Gas Development and Climate Change. New Northern Lights: Graduate Research on Circumpolar Studies from the University of Alberta , No. 66

McLoughlin, P.D., M.K. Taylor, H.D. Cluff, R.J. Gau, R. Mulders, R.L. Case, and F. Messier. 2003. Population Viability of Barren-Ground Grizzly Bears in Nunavut and the Northwest Territories. ARCTIC 56: 185-190.

McLoughlin, P.D., M.K. Taylor, H.D. Cluff, R.J. Gau, R. Mulders, R.L. Case, S. Boutin, and F. Messier. 2003. Demography of barren-ground grizzly bears. Canadian Journal of Zoology 81: 294–301.

Mowat, G. and Heard, D.C. 2006. Major components of grizzly bear diet across North America. Canadian Journal of Zoology 84: 473–489

Research Priority

Research on grizzly bear population in Delta is viewed as high priority. Information will be used to set sustainable harvest quota. Currently, research along the Yukon North Slope (completion in 2010), the Oil and gas activity area in Delta (completion 2008), and the ISR east of Delta (completion 2011) is aimed at obtaining more accurate information on population densities and habitat use by grizzly bears. Hair and scat collection fat cabins for DNA provides additional information on bears visiting cabins.

Population Status

In most areas hunters are reporting more grizzly bears. Population estimates when the quotas were established were:

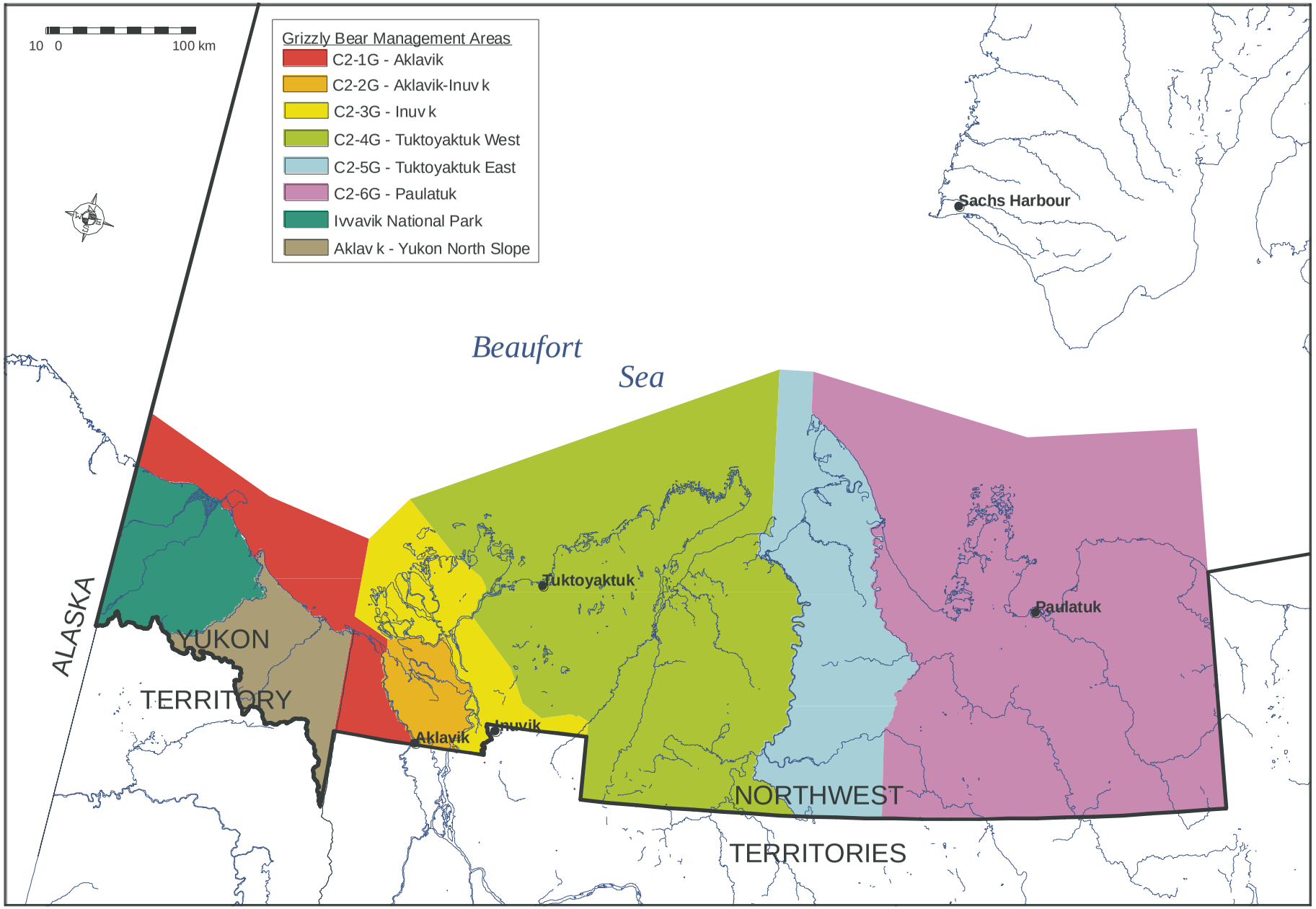
Estimated number of bears (greater than 2 years) in the Ivvavik National Park Management Area: 150
Estimated number of bears (greater than 2 years) in the Yukon North Slope Management Area: 155
Estimated number of bears (greater than 2 years) in the Aklavik Management Area: 35
Estimated number of bears (greater than 2 years) in the Aklavik-Inuvik Management Area: 11
Estimated number of bears (greater than 2 years) in the Inuvik Management Area: 29
Estimated number of bears (greater than 2 years) in the Tuktoyaktuk-West Management Area: 214
Estimated number of bears (greater than 2 years) in the Tuktoyaktuk-East Management Area: 140
Estimated number of bears (greater than 2 years) in the Paulatuk Grizzly Bear Management Area: 244

Population Goal

Stable population that can sustain an annual harvest of approximately 3% of bears older than 2. Research will be used to better determine appropriate harvest rate. (remove better??)

Conservation Measures

- Identify and protect important habitats from disruptive land uses.
- Reduce bear-people conflict situations and the number of bears destroyed in problem situations.
- Do not hunt females and cubs.
- Do not hunt bears in or constructing dens.
- Selectively harvest males.
- Hunt only in March, April and May. (not sure why this is there?
- Harvest on a sustainable basis and in a manner consistent with Management Plan and HTC bylaws.
- Camp assessment and Electric fence program initiated to reduce interactions



Map 14. Grizzly Bear Management Areas

LYNX (*Lynx canadensis*) / **NIUTUYIQ**


RWED

Biology
Breed in March to May. Young observed June through August. Usually 2 to 6 young are born. Numbers of lynx in area tends to cycle with number of snowshoe hare/rabbits. Local observation that lynx are thin when there are lots of rabbits and fat when rabbits are few REALLY? Or is this mixed up. Lynx travel when rabbits are scarce.

Traditional Use
Lynx are highly valued for their fur and as food.

Important Habitat
River valleys and Mackenzie Delta.

Management Plans/Agreements
Draft Co-management Plan for the Fur Industry (2000).

Recent Research
Ongoing pelt measurements.
Ongoing snowshoe hare abundance surveys across NWT.

Carriere, S. 2007. Small mammal survey and hare transect survey in the Northwest Territories – summary report 2006. GNWT, ENR, Yellowknife, NT.

Research Priority
The community would like to know more about what data has already been collected as well as information on:
1. Population status;
2. Movements;
3. Habitat productivity.

Population Status (as indexed by NWT wide pelt sales:)
Population cycles through highs and lows. Peaks at beginning of decade lows at centre.

Population Goal
Unspecified.

Conservation Measures
- Harvest on sustainable basis.
- Identify and protect important habitats from disruptive land uses.

MARTEN (*Martes americana*) / **QAVVIATCHIAQ**


Robert McCaw

Biology
Occur throughout forested regions of Canada and to a limited extent in Rocky Mountains of Northwestern U.S. Males may weigh up to or greater than 1.8 kg (4 lb), females to 1.2 kg (2.6 lb). Mature at about 15 months of age but may not breed until 2 years old. May live to 13 years in wild. Breed in mid-summer, young born mid-March to late April. Females produce one litter or 3-5 young per year. Den in tree hollows high off ground or under rocks, squirrel middens, logs, tree roots or in snow dens. Generally active within a range of a 1-20 km^2 (0.4 - 7.8 mi^2). Males use larger area than females. Feed on small mammals (e.g. lemmings, hares), birds, insects and fruits.

Traditional Use
Furbearer.

Important Habitat
Usually older evergreen forests with abundant small mammals (squirrels, mice, voles). Some regenerated forests following fire are also important. Rarely leave the tree line.

Delesse Lake, Tadenet, Granet, to Tsoko Lake; willowy creeks; occasionally in coastal areas.

Management Plans/Agreements
None.

Recent Research
Nagy, J. and K. Hickling (In progress). Carcass collection study in delta (GNWT, 1991-1992). Ongoing carcass collection out of Tsiigehtchic.

Research Priority
Unspecified.

Population Status
Unknown but variable seasonally and annually.

Population Goal
Unspecified.

Conservation Measures
- Identify and protect important habitats from disruptive land uses.
- Only trap in season when pelt is prime.
- Support HTC bylaw (proposed) on designated trapping areas.

MINK (*Mustela vison*) / **ITIGIAQPAK**


Parks Canada

Biology
May occur at densities of 1 to 8 animals per km^2 (per 0.4 mi^2). Usually solitary. Mate February to April, birth late April to early May, 2-10 young. Young leave den in 7-8 weeks. Females mature in approximately 12 months, males in approximately 18 months. Can dive to depths of at least 5-6 m (16 - 20 ft.) and swim underwater for up to 30 m (98 ft.). Usually active at night, early morning and evening, some day time activity. Feed on small mammals, fish, small birds, insects. May travel to at least 25 km (15.5 mi) in a night if food is scarce.

Traditional Use
Furbearer.

Important Habitat
Den in vacant beaver or muskrat houses, burrows, under tree roots or stones near water. Burrows may be up to 3 m (9.8 ft.) long and 1 m (3.3 ft.) beneath the surface with more than one entrance.

Delesse Lake, Tadenet, Granet, to Tsoko Lake; willowy creeks; occasionally in coastal areas.

Management Plans/Agreements
None.

Recent Research
Poole, K.G. and B.T. Elkin. 1992. Environmental contaminants, population structure, and biological condition of harvested mink in the western Northwest Territories. RWED.

Poole, K.G. and B.T. Elkin. 1997. Identification of Levels of Reproductive Effects of Organochlorine and Heavy Metal Contaminants in Mink, synopsis of research conducted under the 1995-1997 Northern Contaminants Program. Edited by J. Jensen and L.A. Walker. Environmental Studies - Canada. Dept. of Indian Affairs and Northern Development, no.74, p.245-248.

Research Priority
Moderate to high: The community is interested in knowing more of the local biology, population status and important habitat areas. Interest has also been expressed in determining what the best time for a trapping season would be.

Population Status
Unknown.

Population Goal
Unspecified.

Conservation Measures
- Trap only when pelt is in prime condition (suggest pulling traps by approximately January 20)
- Identify and protect important habitats from disruptive land uses.
- Support HTC bylaw (proposed) on designated trapping areas.

MOOSE (*Alces alces*) / TUTTUVAK


Parks Canada

Biology
Calving in May or early June, typically single calf, mature females may have two calves. Males mature by about 2 1/2 years, cows by 2 to 4 years of age. Breeding approximately third week of September (September 20).

Traditional Use
Important alternate food source for community when caribou are unavailable. Preferred by most over Dall's sheep. Historically also used for clothing and tools.

Important Habitat
Wintering areas; typically valleys and creeks with abundant growth of willows. Richardson Mountains, Bell River, Babbage River and Yukon North Slope, use of Northern Delta seems to be increasing again.

Management Plans/Agreements
None at present.

Recent Research
Lambert, C. 2006. Moose aerial survey in the Gwich'in Settlement Area, March 2006. Gwich'in Renewable Resource Board Report 06-01.

Marshal, J.P. and J.A. Nagy. 1999. Moose browse and snow characteristics in the Inuvik-Tsiigehtchic region, Northwest Territories. Gwich'in Renewable Resource Board. Report 99-09.

Research Priority
Implement periodic population and productivity surveys. Survey planned in GSA spring 2010.

Population Status
Moose were abundant in the northern Delta area around 1948 but are believed to have declined since. Appear to continue to be in decline in adjacent areas in the GSA.

Arctic Red River	**5.5/100 km^2**	**(1999)**
	none surveyed	**(2006)**
Northern Richardson Mtns	**4.8/100 km^2**	**(2000)**
	3.5/100 km^2	**(2006)**
Fort McPherson – Peel River	**3-13/100 km^2**	**(1980)**
	0.84/100 km^2	**(2006)**
Inuvik-Tsiigehtchic	**0.09/100 km^2**	**(1996)**
	6/100 km^2	**(1998)**
	1.62/100 km^2	**(2006)**

Population Goal
Unspecified. Maintain population at level which will provide maximum sustained yield.

Conservation Measures
- Do not hunt more than is needed.
- Harvest on sustainable basis.
- Avoid shooting mature bulls during the rut.
- Identify and protect important habitats from disruptive land uses.

MUSKOX (*Ovibos moschatus*) / **UMINGMAK**


Parks Canada

Biology
The muskox on the Yukon North Slope today are an introduced subspecies from Greenland originally introduced to Alaska in 1969 and 1970. Calving generally occurs from about mid April to mid May with the majority born by May 1. Normally produce single calf. Approximately 3 weeks before calf can keep up with herd. Breeding throughout August and early September. Females generally sexually mature at 3 years of age, males at 5. May calve annually and can live to at least 24 years of age. Wolves are the main predator. Winter along valleys, drainages, hilltops. In summer range includes river valleys and lake shores where there is growth of grasses, sedges, crowberry, blueberry and willow.

Important Habitat
Riparian corridors of the Anderson, Horton, Hornaday and Brock rivers.

Management Plans/Agreements
None

Recent Research
Population estimate monitoring.
DNA samples submitted to look at the genetic differences between muskox east and west of the Delta and in the Arctic Islands.
Ongoing disease and parasite monitoring of captures and hunter harvested samples.

Research Priority
There is interest in knowing more about muskox diets, and relationship with caribou.
Information on population numbers and movements of high to moderate priority.

Population Status
Muskox population estimates:

Mainland (ISR, TNNP)	not available	(2009)
	1215 (689 – 1741)	(2002)
	2587 (1062—4072)	(1997) - smaller area surveyed

In the NWT muskox are not protected and can be harvested. There have been sightings as far west s Parson's lake of muskox from the east.

Population Goal
Unspecified. Maintain a healthy population that allows for continued subsistence and non-resident hunter outfitting.

Conservation Measures
- Identify and protect important habitats from disruptive land uses.
- Allow population to increase but not to point where this might have impact on caribou (if there is an impact).

MUSKRAT (*Ondatra zibethicus*) / **KIVGALUK**


Guy Fontaine

Biology
Young are born from June through mid-August, 6-8 young typically. At maturity many weight 3-5 pounds. Muskrats move around a lot in spring. Feed on aquatic weeds from the lake bottoms. There seems to be a cycle in the number of muskrats as with many other animals, some times they are scarce other times abundant. Local trappers feel that muskrats were healthier in delta when there was more trapping. There seem to be more muskrats with poor hair condition/colour and abnormal lives with the decline in trapping.

Traditional Use
Furbearer, also important food resource

Important Habitat
Various creeks and lakes; Rat Lake; George Creek

Management Plans/Agreements
None.

Recent Research
Young, D.A., Kerr, D.S. and M.A. Weber. 1984. Beaver and muskrat investigations: fall, 1983. Environmental Management Associates.

Study done by CWS (Vern Hawley) in late 50's and early 60's.

Research Priority
Low.

Population Status
Undetermined.

Population Goal
Undetermined.

Conservation Measures
- Hunt only in specific seasons (March 1 - June 15).
- Identify and protect important habitats from disruptive land uses.
- Support HTC bylaw (proposed) on designated trapping areas.

POLAR BEAR (*Ursus maritimus*) / NANUQ


Parks Canada

Biology
Females den from November to late March, early April; breeding late April early May. Average litter size is between 1 and 2 cubs. Females may have young every 3 to 4 years. Females may successfully breed at 4 years of age but most do not breed until 5 years of age. Though bears can live close to 30 years in the wild, most do not survive beyond 20-25 years of age. Ringed seals are eaten more frequently than bearded seals.

Traditional Use
Furbearer, occasionally used for clothing.

Important Habitat
Denning areas along North Slope of Yukon, Herschel Island, Kay Point, shear zone offshore from coast.

Management Plans/Agreements
Inuvialuit-Inupiat Polar Bear Management Agreement in the Southern Beaufort Sea (1988 and 2000)
Polar Bear Management Agreement between the Inuvialuit and the Inuit of the western Kitikmeot region (2006)
Management Agreement for Polar Bears in Southern Beaufort Population, Aklavik HTC, Inuvik HTC, Paulatuk HTC, Tuktoyaktuk HTC (1991)
Hunters and Trappers Bylaw written into Regulations under the NWT Wildlife Act.
Draft GNWT– GN Agreement for the management of the shared NB and WM polar bear populations .
All these need to be undated once the boundary between the NB and SB populations is determined.

Recent Research
Mark-recapture studies to provide updated population estimates for the SB and NB sea polar bear populations and information on survival rates and number of cub being born.

Hunter, C.M., H. Caswell, M.C. Runge, E.V. Regehr, S.C. Amstrup, and I. Stirling. 2007. Polar Bears in the Southern Beaufort Sea II: Demography and Population Growth in Relation to Sea Ice Conditions. USGS Alaska Science Center, Anchorage, Administrative Report.

Regehr, E.V., S.C. Amstrup, and I. Stirling. 2006. Polar bear population status in the southern Beaufort Sea: U.S. Geological Survey Open-File Report 2006-1337

Regehr, E.V., C.M. Hunter, H. Caswell, S.C. Amstrup, and I. Stirling. 2007. Polar Bears in the Southern Beaufort Sea I: Survival and Breeding in Relation to Sea Ice Conditions, 2001-2006. USGS Alaska Science Center, Anchorage, Administrative Report.

Rode, K.D., S.C. Amstrup, and E.V. Regehr. 2007. Polar Bears in the Southern Beaufort Sea III: Stature, Mass, and Cub Recruitment in Relationship to Time and Sea Ice Extent Between 1982 and 2006. USGS Alaska Science Center, Anchorage, Administrative Report.

Stirling, I., T.L. McDonald, E.S. Richardson, and E.V. Regehr. 2007. Polar Bear Population Status in the Northern Beaufort Sea. USGS Alaska Science Center, Anchorage, Administrative Report.

Taylor, M.K., J. Laake, H.D. Cluff, M. Ramsay, and F. Messier. 2002. Managing the risk of harvest for the Viscount Melville Sound polar bear population. Ursus 13:185-202.

Collaring of polar bears to look at movements and habitat use

Amstrup, S. C., G. Durner, I. Stirling, N.J. Lunn, and F. Messier. 2000. Movements and distribution of polar bears in the Beaufort Sea. Canadian Journal of Zoology 78:948-966.

Ferguson, S.H., M.K. Taylor, E.W. Born, A. Rosing-Asvid and F. Messier. 2001. Activity and movement patterns of polar bears inhabiting consolidated versus active pack ice. ARCTIC 54:49-54.

Ferguson, S.H., M.K. Taylor, and F. Messier. 2000a. Influence of sea ice dynamics on habitat selection by polar bears. Ecology 81:761-772.

Ferguson, S.H., M.K. Taylor, A. Rosing-Asvid, E.W. Born, and F. Messier. 2000b. Relationships between denning of polar bears and conditions of sea ice. Journal Mammalogy 81:1118-1127.

Mauritzen, M., A.E. Derocher and Ø. Wiig. 2001. Space-use strategies of female polar bears in a dynamic sea ice habitat. Canadian Journal of Zoology. 79:1704-1713.

Predictions and modelling to look at the future

Derocher A.E., N.J. Lunn, and I. Stirling. 2004. Polar bears in a warming climate. Integrative and Comparative Biology 44:163-176.

Durner, G. M., D.C. Douglas, R.M. Nielson, S.C. Amstrup, T.L. and McDonald. 2007. Predicting the future distribution of polar bears in the polar basin from resource selection functions applied to 21st century general circulation model projections of sea ice. USGS Alaska Science Center, Anchorage, Administrative Report.

Stirling, I. and C.L. Parkinson. 2006. Possible effects of climate warming on selected populations of polar bears (*Ursus maritimus*) in the Canadian Arctic. ARCTIC 59:261-275.

Management

Brower, C.D., A. Carpenter, M.L. Branigan, W. Calvert, T. Evans, A.S. Fischbach, J.A. Nagy, S. Schliebe, I. Stirling. 2002. The polar bear management agreement for the Southern Beaufort Sea: An evaluation of the first ten years of a unique conservation agreement. Arctic 55:362-372.

Research Priority

Moderate: Community interest in movements. Population estimates provide information to try to ensure sustainable harvest. International interest very high.

Population Status

Southern Beaufort:	1526 (1211 – 1841)	(2006)
(Likely declining)	1800	(1998)
Northern Beaufort:	1200	(2008)
(Stable)	980 (825 – 1135)	(2006)
	867 (726 – 1008)	(1987)
	745 (499 – 991)	(1975)
Viscount Melville Sound	230	(1996)
(Likely increasing after decline)		

Population Goal

Unspecified. Maintain at level which can produce the maximum sustained yield.

Conservation Measures

- Follow regulations agreed to in the Management Agreement for Polar Bears in Southern Beaufort Sea Population (1991).
- Do not kill females with cubs and restrict female harvest to no more than 33% of total harvest.
- Do not disturb bears in dens or constructing dens.
- Only hunt from December 1 to May 31. (varies depending on community)
- Collect and report all information requested in Management Agreement after making a kill.
- Identify and protect important habitats from disruptive land uses.

Map 15. Polar Bear Management

SNOWSHOE HARE or RABBIT (*Lepus americanus*) / UKALLIQ

Biology
Breed in May. Young born in June and July. Up to 8 in a litter. Very important in food chain for other animals (e.g. lynx, fox, owls, eagles).


Parks Canada

Traditional Use
Highly valued as food item and hides for trim, duffles for mukluks, blankets, arts and crafts.

Important Habitat
Cape Parry to Bennett Point; Pearce Point; around tree line area.

Management Plans/Agreements
None.

Recent Research
Long term snowshoe hare monitoring program (annual pellet count) being undertaken by GNWT.

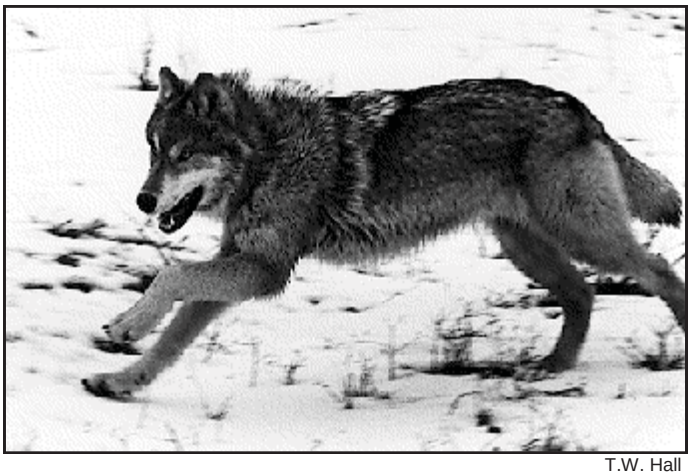
Research Priority
High interest in population biology and role in ecosystem.

Population Status
Unknown.

Population Goal
Adequate numbers to provide for subsistence harvest by local people.

Conservation Measures
- Harvest on sustainable basis.
- Identify and protect important habitats from disruptive land uses.

WOLF (*Canis lupus*) / **AMARUQ**


T.W. Hall

Biology
Wolves occupy dens from May to late July. From 2 to 9 pups have been observed at dens. Average litter size on mainland in ISR is 4.5. Wolves may be sexually mature at about 2 years of age though younger and older ages of maturity are possible. Maximum age of wolves observed in ISR has been 12 years old, however the average age of adult wolves is about 3.

Traditional Use
Furbearer, help maintain balance of nature.

Important Habitat
Treeline-tundra transition area. Bluenose caribou wintering range.

Management Plans/Agreements:
No management plans specifically for wolves, managed under trapping regulations which set season and sport hunting regulations.

Recent Research
Western Arctic Wolf Research Program, 1987-1993 research on wolves associated with Bluenose Herd.

Population survey of North Slope wolves and satellite tracking to determine extent of seasonal movements, 1993-1995. WMAC (NS).

Clarkson, P.L. 1987. Collect baseline information on wolf movements and distribution, and study the relationship that wolves have with the Bluenose caribou. RWED.

Clarkson, P.L. and I. Liepins. 1992. Inuvialuit wildlife studies: western arctic wolf research project progress report April 1989 - January 1991. 32 pp.

Van Zyll de Jong, C.G. and L.N. Carbyn. 1998. Status report on the gray wolf, *Canis lupus*, in Canada. COSEWIC.

Research Priority
Investigate wolf movements, predation, pup production and survival, denning areas, and mortality.

Population Status
Stable. Local people report that there were many wolves in the 1930s and the 1940s. Wolves appeared to decline due to control programs in 1950s, then began to recover in mid 1970s. Density of wolves in Western Richardson areas approximately 3+ wolves/1,000 km^2 (per 386 mi^2).

Population Goal
Maintain a healthy population that can sustain an annual harvest by hunters and trappers.

Conservation Measures
- Identify and protect important habitats from disruptive land uses.
- Do not harvest in summer when fur is poor.
- Hunt by traditional means; do not use aircraft or poison to control wolves.
- Do not disturb wolves or remove pups from den. Keep at least 500 m (547 yd) from active dens.
- If guiding tourists do not hunt wolves.

WOLVERINE (*Gulo gulo*) / **QAVVIK**


Parks Canada

Biology
Breed in March to May, 1-2 young (may have up to 5), young appear in June to July. Young are nursed 8-10 weeks, leave mother in fall. Sexually mature at 2-3 years of age. In North may be active for 3-4 hour intervals between rests. May travel up to 45 km (28 mi) per day. Caves, rock crevices, fallen logs, holes in snow and burrows used for shelter. Home-range sizes in the central Arctic vary between 126 km^2 (females) and 404 km^2 (males). Dispersal distances by females average 133 km (range 69 - 225 km), and males 231 km (range 73 - 326 km). Feed on dead animals, eggs, small and large mammals (lemmings, caribou , sheep). Most large mammals obtained from kills of wolves or bears.

Traditional Use
Fur very important for local use, also important for maintaining balance in nature.

Important Habitat
Coastal areas; Parry Peninsula; around tree line; Tadenet, Tsoko, Granet Lakes area; Hornaday, Brock and Horton Rivers.

Management Plans/Agreements
Draft Co-management Plan for the Fur Industry (2000).

Recent Research
Carcass collection study of sex, age , diet, and reproductive stats of harvested animals.

DNA mark– recapture work is being done in other areas; may be applicable to ISR.

Research Priority
Low: Some interest in population status, biology, important habitat areas and information from carcass collections.

Population Status
Relatively few in Delta.

Population Goal
Unspecified.

Conservation Measures
- Identify and protect important habitats from disruptive land uses.
- Do not disturb dens.
- Do not hunt in summer.
- Do not poison.
- Support HTC bylaw (proposed) on designated trapping areas.

BELUGA WHALE (*Delphinapterus leucas*) / QILALUGAQ

Biology

The beluga is an odontocete, or toothed whale, having up to 40 teeth that are similar in shape and size. They are dark grey and about 1.5 m (5 ft.) in length when they are born. Calving occurs in spring. With each passing year, the skin lightens in colour, by the time a beluga is about 9 years of age, it is white in colour. Adult males are larger than adult females. Belugas feed mainly on squid and fish. They themselves are preyed upon by polar bears, killer whales and humans, and to a limited extent walruses.

They are a very vocal species, having earned the name of "the sea canary". They make sounds which are used for echolocation, that is to help them find their way and their food, as well as sounds to communicate, which are those which can be heard by other whales. They have a habit unique among whales, and that is that they concentrate in estuaries during the summer. This has made them well accessible to hunters and well known to the general public.

Traditional Use

Highly valued food resource.

Important Habitat

Mouth of Horton River.

Calving in Mackenzie Bay and Shallow Bay.

Management Plans/Agreements

Inuvialuit Inupiat Beaufort Sea Beluga Whale Agreement (2000)
Beaufort Sea Beluga Management Plan (1998).
HTC Beluga Bylaws

Recent Research

Beluga Monitoring Program:

- standardized in 1977 in Mackenzie Delta
- Paulatuk added in 1989
- FJMC took over program in 1987
- Continues to present day.
- Samples and enumerates the catch
- Conducted by the HTC representatives and coordinated by the FJMC
- Constitutes the largest and longest database of beluga harvest monitoring in the Arctic.

Aerial Surveys:

- 1970s and 1980s by oil and gas industry contractors

DNA:

- Beaufort Sea beluga constitute one of the largest stocks of beluga in Canada, and one of four that overwinters in the Bering Sea.
- Together these four stocks make up the Bering Sea population.
- Genetic studies have shown the stocks are discreet, with the exception of some wanderings by the large males.

Satellite Telemetry:

- A total of 27 beluga whales were tagged with satellite transmitters in the Mackenzie Delta in 1993 (n=4), 1995 (n=16), 1997 (n=7)
- In two of the study years, when the whales were tagged earlier in the season, the largest males travelled to Viscount Melville Sound where they spent 2-3 weeks diving/feeding, before undertaking their migration back to the Bering Sea
- Females and calves tended to swim counter-clockwise circuits in Amundsen Gulf.

Brennin, R., Murray, B.W., Friesen, M.K., Maiers, D., Clayton, J.W. and B.N. White. 1997. Population genetic structure of beluga whales (*Delphinapterus leucas*): mitochondrial DNA sequence variation within and among North American populations.

Brown-Gladden, J.G., Ferguson, M.M. and J.W. Clayton. 1997. Matriarchal genetic population structure of North American beluga whales, *Delphinapterus leucas*, (Cetacea: Monodontidae).

Byers, T. and L.W. Roberts. 1995. Harpoon and Ulus: Collective wisdom and traditions of Inuvialuit regarding the beluga (qilalugaq) in the Mackenzie River estuary. Unpublished Report. DIAND / FJMC.

de March, B.G.E., Maiers, L.D. and M.K. Freisen. 1999. Genetic differences among Canadian and adjacent beluga whale stocks as determined by mitochondrial DNA and 15 nuclear DNA microsatellite loci. NAMMCO Scientific Committee.

Harwood, L.A., Innes, S., Norton, P. and M.C.S. Kingsley. 1996. Distribution and abundance of beluga whales in the Mackenzie Estuary, Southeast Beaufort Sea, and west Amundsen Gulf during late July 1992. DFO.

Harwood, L.A. and T.G. Smith. 2000. Whales of the Beaufort Sea: an overview and outlook. DFO.

Martin, A.W. and T.G. Smith. 1999. Strategy and capability of wild belugas, Delphinapterus leucas, during deep benthic diving. Cdn Jrnl of Zoology 77: 1783-1793.

Richard, P.R., Martin, A.R. and J.R. Orr. 2000. Summer and autumn movements of belugas of the Eastern Beaufort Sea. DFO.

Wagemann, R., Innes, S. and P.R. Richard. 1996. Overview and regional and temporal differences of heavy metals in Arctic whales and ringed seals in the Canadian Arctic. Science and the Total Envt 186: 41-66.

Wong, P.L. 1999. Beluga whale (*Delphinapterus leucas*), bowhead whale (*Balaena mysticetus*) and ringed seal (*Phoca hispida*) in southeastern Beaufort Sea. DFO.

Research Priority

High - Community interest in the following.

1. Improve collection and analysis of information obtained from harvest, process and summarize all existing data, compare data with other data sets, record traditional knowledge.
2. Regular census including survey of summering range.
3. Inshore and Offshore Movement Study.

Population Status

- Index of 1992 stock size 19,629 (95% Confidence Interval: 15,134 - 24,125) (Harwood et al. 1996)
- growth rate 2.5%
- stock is stable or increasing
- present harvests are less than 1% of conservative estimate of stock size

Population Goal
Unspecified, adequate numbers at present.

Conservation Measures
- Support the Beaufort Sea Beluga Management Plan.
- Follow HTC Beluga Bylaw.
- Identify and protect important habitats from disruptive land uses.

PAULATUK HUNTERS & TRAPPERS COMMITTEE
BELUGA HUNTING BYLAWS

1. Each boat will have the following equipment:
    a) A rifle of not less than .30-30 calibre;
    b) Two harpoons equipped with line and float, or one such harpoon and a “seal hook”;
    c) One grapple hook attached to a sufficient length of line to reach the ocean bottom in the area being hunted;
    d) One float marker with enough line to reach the ocean bottom in the area being hunted, and equipped with an anchor;
    e) A towing line.

2. Each hunter must attempt to retrieve sunken or wounded whales before hunting for another whale .

3. No person shall, at any time, take more whales on a hunt than can adequately be taken care of considering limitations of the boat, weather, the towing distance, and the number of people in the camp available for processing.

4. Beluga hunters must provide Beluga Harvest Monitors with the requested information and reasonable access to harvested whales for measurements and samples.

5. There shall be no hunting in “No Hunting Zones” if applicable

6. There shall be no interference during the hunt by tourists, operators or others.

Beluga Hunting Guidelines

1. A proven method by some hunters has reduced loss rates considerably, by harpooning first. Whales should be harpooned before shooting. No person should hunt alone.

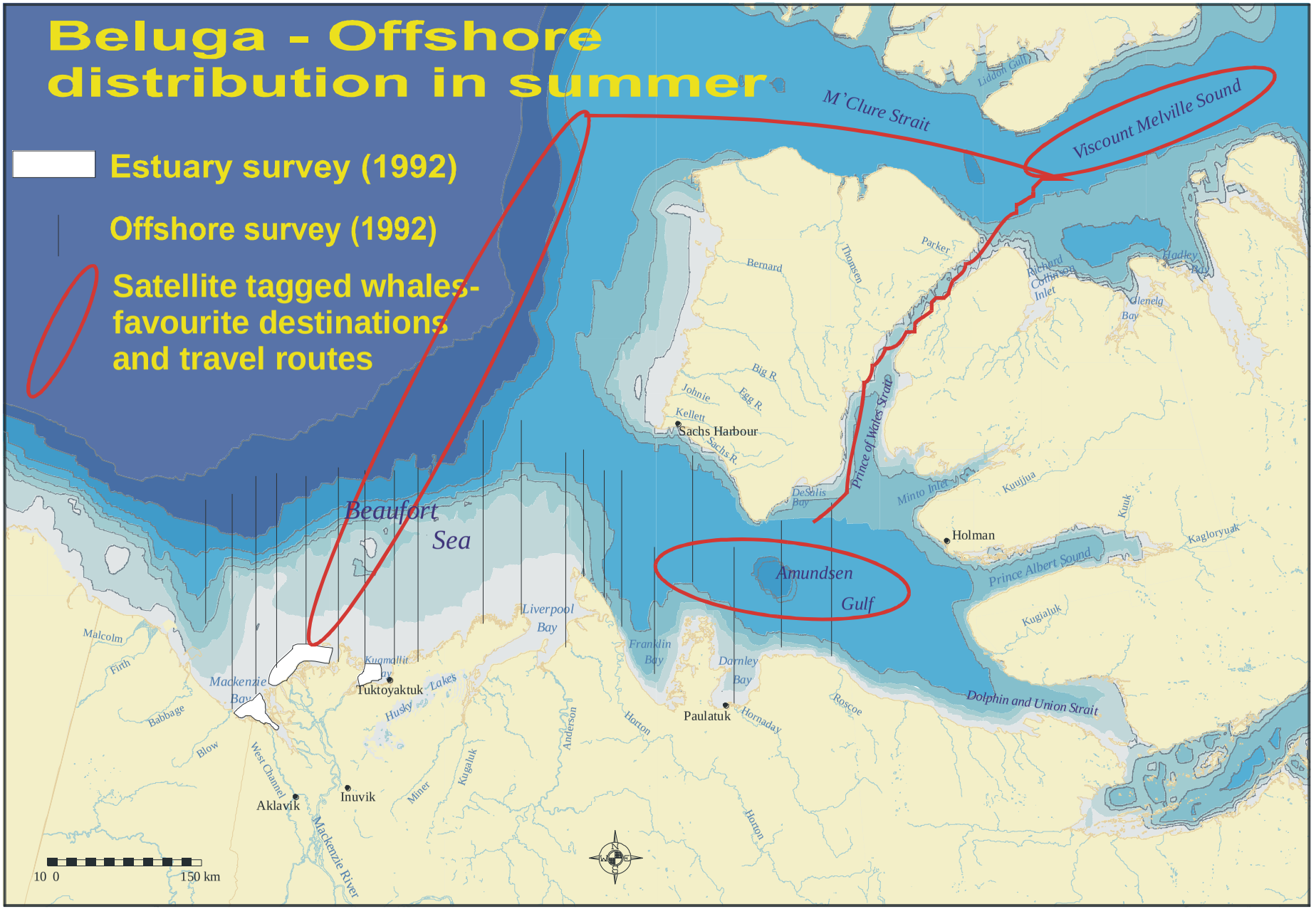
2. Each hunting boat should have at least one experienced hunter.

3. A hunting leader shall be appointed at each camp, and approved by the Paulatuk Hunters and Trappers Committee (PHTC). The hunting leader will advise and make any necessary decisions on matters concerning the safety and efficiency of beluga hunting based from that camp, according to guidelines for hunting leaders provided by the PHTC.

4. Hunters should follow the directions of the appointed hunting leader in each camp.

5. All carcasses must be towed out to deep water or burned after processing.

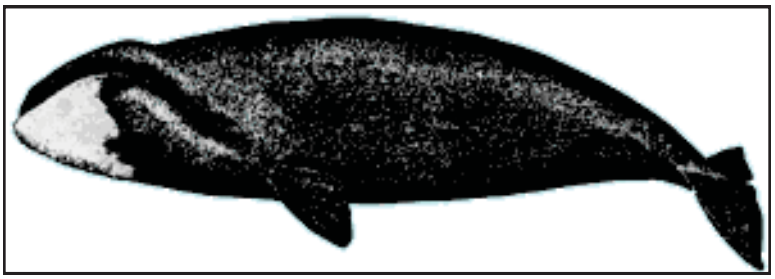
6. These rules may from time to time be changed by the PHTC.



Map 16. Beluga - Offshore Distribution in Summer

BOWHEAD WHALE (*Balaena mysticetus*) / AQVIQ (or) ARVIA

Biology



The bowhead whale is a baleen whale, black in colour except for white markings on chin and tail that usually come with age. Bowheads may reach a length of up to 20 m (65 ft.), with 12-15 m (40-50 ft) being the usual size. A small adult weighs 13,608 kg (30,000 lb). Blubber can be up to 51 cm (20 in.) thick. They reach adulthood at about 20 years, and have one calf every 3 to 5 years. They feed lower in the food chain than the beluga, choosing areas where zooplankton is concentrated. They usually travel singly or in small groups. They make vocalizations which are a lower frequency than beluga.

The Western Arctic population of bowhead whales is one of three remaining in Canada, and constitutes more than 90% of the world's remaining bowhead whales.

The Alaskan Inupiat harvest about 60 whales per year. Aklavik took one bowhead in 1991, and another in 1996.

Important Habitat

Cape Bathurst, Franklin Bay, King Point, Shingle Point, Mackenzie Bay, Herschel Island, West Whitefish Station.

Management Plans/Agreements

Bowhead Whale Management Strategy: DFO, FJMC, Aklavik HTC (Draft 1991).

Recent Research

In the 1980s, extensive, multi-year programs were undertaken to monitor distribution of bowheads in both the Canadian and Alaskan Beaufort Sea areas, to study the effects of industry on bowheads, and photogrammetry to identify individuals.

Currently, if a bowhead whale is harvested, the community harvest monitor takes the measurements and samples, with a biologist from DFO.

FJMC Mitochondrial DNA - Stock identity study, 1992 - ongoing.
U.S. Minerals Management Branch - Acoustical playback study scheduled for 1993.
U.S. Minerals Management Branch - Satellite tagging research 1992 - ongoing.

Braithewaite, L.F., Aley, M.G. and D.L. Slater. 1983. The effects of oil on the feeding mechanism of the bowhead whale.

George, J.C., Bada, J., Zeh, J., Scott, L., Brown, S.E., O'Hara, T. and Suydam, R. 1999. Age and growth estimates of bowhead whales, *Balaena mysticetus*, via aspartic acid racemization.

Harwood, L.A. and T.G. Smith. 2000. Whales of the Beaufort Sea: an overview and outlook. DFO.

Koski, W.R., Miller, G.W. and R.A. Davis. 1988. The potential effects of tanker traffic on the bowhead whale in the Beaufort Sea. NOGAP.

Richardson, W.J., Greene, C.R., Koski, W.R., Smultea, M.A., Cameron, G., Holdsworth, C., Miller, G., Woodley, T. and Wursig, B. 1991. Acoustic effects of oil production activities on bowhead and white whales visible during spring migration near Pt. Barrow, Alaska, 1989 phase: sound propogation and whale responses to playbacks of continuous drilling noise from an ice platform, as studied in pack ice conditions. LGL Limited.

Treacy, S.D. 1998. Aerial surveys of endangered whales in the Beaufort Sea, fall 1997. U.S. Minerals Management Service.

Wagemann, R., Innes, S. and P.R. Richard. 1996. Overview and regional and temporal differences of heavy metals in Arctic whales and ringed seals in the Canadian Arctic. Science and the Total Envt 186: 41-66.

Wong, P.L. 1999. Beluga whale (*Delphinapterus leucas*), bowhead whale (*Balaena mysticetus*) and ringed seal (*Phoca hispida*) in southeastern Beaufort Sea. DFO.

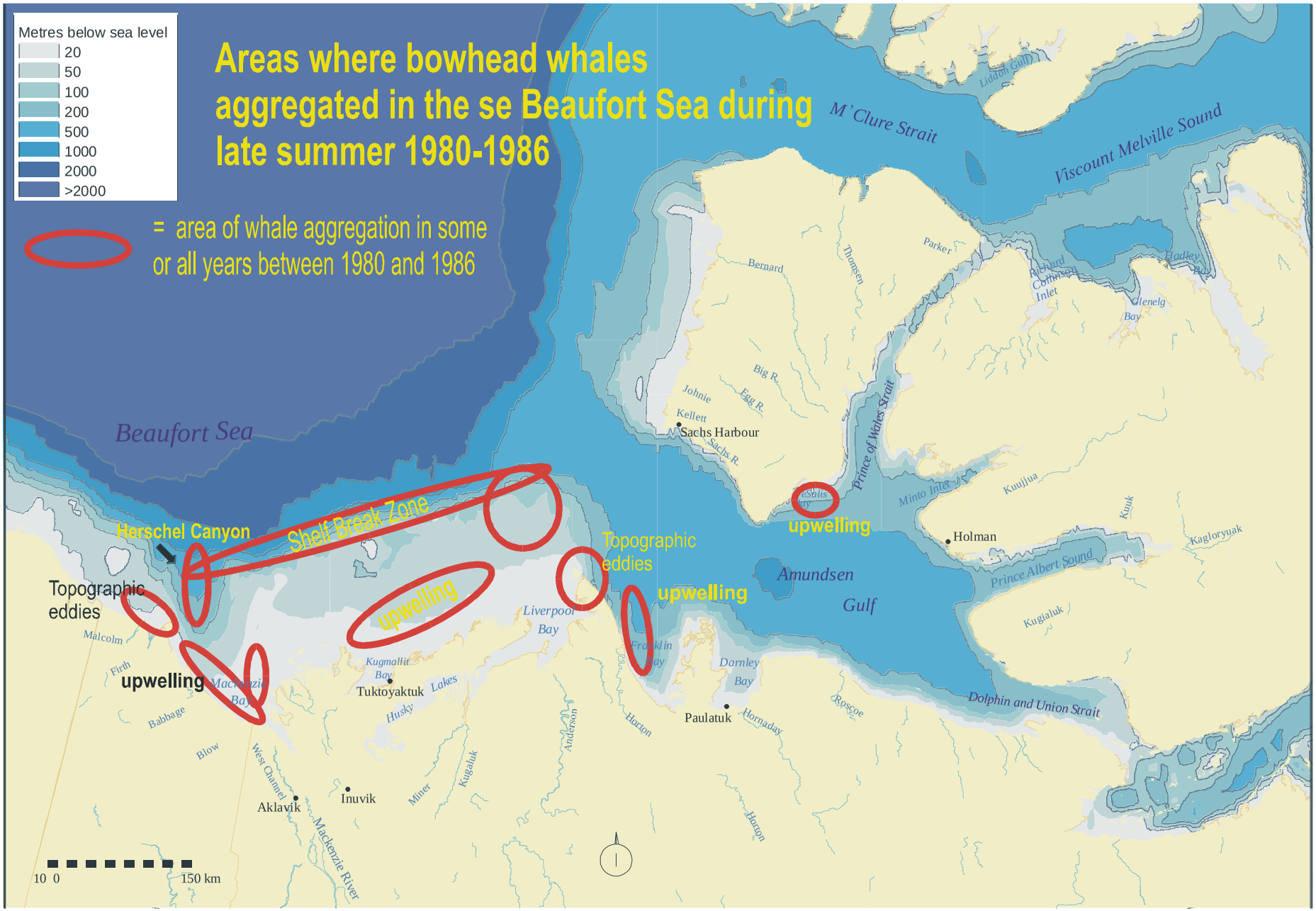
Zeh, J.E. 1995. Population size and rate of increase, 1978-1993, of bowhead whales, *Balaena mysticetus*. International Whaling Commission.

Research Priority
High: Community interested in knowing more about species biology.

Population Status
Approximately 8,200 and increasing at a rate of 3% annually.

Population Goal
Maintain thriving population for subsistence harvest. Unspecified. Currently being managed for population recovery.

Conservation Measures
- Identify and protect important habitats from disruptive uses.



Map 17. Summer Bowhead Whale Habitat

SEALS

RINGED SEAL
BEARDED SEAL


FJMC / DFO

Biology

Ringed seals and bearded seals are important components of the marine ecosystem and serve as the primary prey source for polar bears.

Ringed Seals

Ringed seals are the smallest of all pinnipeds (seals, sea lions, and walruses) with adults in the Beaufort Sea rarely exceeding 1.5 m (5 ft.) in length and 68 kg (150 lb) in weight. Ringed Seals weigh the most in the winter and early spring when they have a thick layer of blubber under their skin. The blubber serves as insulation and as an energy source during the breeding and pupping season. The weight of ringed seals declines with the decrease in feeding during the reproductive and moulting season.

The colouration of ringed seals is quite variable, but the basic pattern is a grey back with black spots and a light belly. The seal gets its name from the black spots ringed with light marks.

Ringed seals eat a variety of invertebrates and fish. The particular species eaten depends on availability, depth of water, and distance from shore. In the Beaufort Sea, the important food species are arctic cod, saffron cod, shrimps and other crustaceans.

The ringed seal is an important element of the arctic marine ecosystem, both as the main prey of polar bears and a major consumer of marine fish and invertebrates. It continues to be an important species in the subsistence harvests and economy of Holman, as well as in Sachs Harbour, Tuktoyaktuk and Paulatuk. Seals are harvested for food, for dog food, and for pelts for handicrafts and clothing. Seal harvests in the ISR between 1988-1996 averaged 1,050 per year, with more than 70% of this coming Holman. Present day harvests are 20-30% of what they were years ago.

Bearded Seals

The bearded seal is the largest true seal normally found in the Beaufort Sea. Bearded seals are heaviest during winter and early spring when they may attain a weight of more than 340 kg (750 lb). From June through September adults usually weigh from 216-239 kg (475-525 lb). This seasonal loss of weight results from decreased feeding during spring and summer and is most obvious in changes of the thick layer of blubber under the skin. Measured from nose to tip of tail (not including hind flippers), adults average about 2.4 m (93 in.). Colour varies from a tawny-brown or silver-grey to dark brown.

Bearded seals have neither spots nor bands. They have comparatively long whiskers, rounded foreflippers of which the middle one of the five digits is longest, relatively small eyes, and four mammary teats rather than two as in the ringed seal.

Females bear a single pup, usually during late April or early May. The average weight of pups at birth is around 34 kg (75 lb), and average length is about 1.3 m (52 in.). By the end of a brief nursing period lasting from 12 to 18 days, pups increase their weight almost three times, to around 86 kg (190 lb).

Bearded seals eat a wide variety of invertebrates and some fishes found in and on the rich bottom of the shallow Bering and Chukchi seas. The main food items are crabs, shrimp, clams and snails.

Traditional Use

Clothing (boots, mittens), some used for food.

Important Habitat
Nearshore (east and west of Paulatuk) in Darnley Bay; Pearce Point; Brown's Harbour area

Management Plans/Agreements
None

Recent Research
Ringed Seal:
Sachs Harbour: seal monitoring programs (reproduction and condition) were conducted from 1987-1989 and in 1992.

Paulatuk: seal monitoring program was conducted from 1993-1994. May be a site of future satellite tagging project with ringed seals (e.g. 2001).

Holman: have been monitoring reproduction and condition of seals each year from 1992-1999, and in Minto Inlet for five years in that time period. Satellite tagging program for ringed seals started in Holman in 1999, with plans to continue in 2000.

Bearded Seal:
None at the present time. Vocalizations were studied in the 1970s near Ramsay Island, near Holman.

Research Priority
Moderate priority: interest in biology and in monitoring health and presence of contaminants.

Population Status
Ringed seals generally more abundant than bearded seals.

Population Goal
Adequate supply at present.

Conservation Measures
- Share hunt among elders.
- Identify and protect important habitats from disruptive land uses.
- Only harvest what is needed.

MAMMALS SPECIES LIST

A total of 37 species of mammals occur in the western arctic. Successful conservation depends on the recognition that all of these species have special habitat requirements and often have significant relationships with all other components of the land and water.

Alaska Vole (*Microtus abbreviatus*)
Arctic Hare (*Lepus arcticus*)
Arctic Fox (*Alopex lagopus*)/Tigiganniq
Bearded Seal (*Erignathus barbatus*)/Ugruk
Beaver (*Castor canadensis*)/Kigiaq
Beluga Whale (*Delphinapterus leucas*)/Qilalugaq
Black Bear (*Ursus americanus*)/Iggarlik
Bowhead Whale (*Balaena mysticetus*)/Aqvic or Arvia
Brown Lemming (*Lemmus sibiricus*)
Caribou (*Rangifer tarandus)*/Tuttu
Coyote (*Canis latrans*)
Greenland Collared Lemming (*Dicrostonyx torquatus*)
Grizzly Bear (*Ursus arctos horribilis*)/Aklaq
Hoary Marmot (*Marmota caligata*)
Least Weasel (*Mustela nivalis*)
Long-tailed Weasel (*Mustela frenata*)
Lynx (*Lynx lynx*)/Niutuyiq
Marten (*Martes americana*)/Qavviatchiaq
Meadow Vole (*Microtus pennsylvanicos*)
Mink (*Mustela vison*)/Itigiaqpak
Moose (*Alces alces*) / **Tuttuvak**
Muskox (*Ovibos moschatus*)
Muskrat (*Ondatra zibethicus*)/Kivgaluk
Polar Bear (*Ursus maritimus*)/Nanuq
Porcupine (*Erethizon dorsatum*)
Red Fox (*Vulpes vulpes*)/Aukpilaqtaq
Ringed Seal (*Phoca hispida*)/Natchiq
River Otter (*Lontra canadensis*)
Snowshoe Hare (*Lepus americanus*)/Ukalliq
Tundra Vole (*Microtus oeconomus*)
Tundra Redback Vole (*Clethrionomys rutilus*)
Wolf (*Canis lupus*)/Amaruq
Wolverine (*Gulo gulo*)/Qavvik
Yellow-cheeked Vole (*Microtus xanthognathus*)

DUCKS / QAUGAIT

King Eider (*Somateria spectabilis*) / **Quingalivik**
Common Eider (*Somateria mollissima*) / **Quingalik**
Mallards (*Anas platyrhynchos*) / **Kurugakpak**
Scoters (Black Duck) (*Melanitta spp.*) / **Taakruaq**
Wigeon (Baldpate Duck) (*Anas americana)* / **Ugiuhiuq**
Oldsquaw (*Clangula hyemalis*) / **Ahaliq**
Pintail (*Anas acuta*) / **Kurugak**
Merganser


Parks Canada

Biology
Arrival and departure of ducks closely tied to breakup and freeze up. Occasional mass die offs of eiders may occur when breakup delayed.

Mallards
Leave wintering grounds in early February through March to early April. Arrive on breeding grounds early to mid-May. May nest up to 500 m or more from water but usually within 100 m. Clutch size may range from 1-18 eggs though average is about 9. Incubate an average of 28 days. Prefer aquatic and shoreline plants as food, though will eat some invertebrates. Along with pintails, one of the last ducks to leave in fall.

Pintail
Largest number of breeding pintails in the Canadian Arctic occurs in the Mackenzie Delta, large numbers also occur at Anderson River Delta. Winter in Texas, Mississippi Delta, Mexico, California. Leave wintering grounds in late January, early February through March, arrive in delta mid-May. Prefer open areas with low vegetation to nest. May nest up to 1.6 km (1 mi) from water but average about 40 m (131 ft.). Clutch size ranges from 3-14 eggs, average about 8. Incubate eggs 22 to 23 days. All eggs tend to hatch within about 8 hours. Eat shoreline vegetation, some aquatic plants, cereal grains (in south) and to some extent aquatic invertebrates. Fall migration begins late August.

Wigeon
The highest density of breeding wigeon in North America occurs in the Mackenzie Delta and Old Crow Flats. Winter through central U.S. to Mexico. Leave wintering grounds in early February through March and early April, arrive on breeding grounds in early to mid-May. May nest up to 400 m from water, average about 36 m. Prefer clumps of brush for nesting. Average clutch size 7 to 9 eggs. Incubate eggs for about 24 days. Prefer stems and leafy parts of aquatic plants and terrestrial grasses. Will eat some cereal grains. Begin fall migration in mid-August.

Old Squaw
Nest in greater numbers in Arctic than any other duck. Winter along west coast as far as California. Leave wintering areas in mid-March to mid-April, arrive on breeding grounds late May, early June. Prefer to nest on small islands or on upland areas near tundra ponds. May nest up to 200 m (656 ft.) or more from water but most are quite close, average is less than 10 m (33 ft.). Clutch size may range from 2 to 11 eggs, average about 7. Incubate eggs for about 26 days. Begin fall migration late August or early September.

Scoters (Surf and White-winged)
Winter along west coast from Alaska to Mexico. Leave wintering areas in March, arrive on breeding grounds late May to early June. Prefer to nest in dense cover, often forested or very bushy areas. Nests are very hard to locate. May nest over 200 m from water, average perhaps about 30 to 100 m (98 - 328 ft.). Clutch size ranges from 5-17 eggs, average about 9 eggs. Incubate for about 28 days. Begin fall migration early September.

Eider (King and Common)
Winter in northern waters generally not far from breeding areas. Rarely as far south as B.C. and Washington. Leave wintering areas in late April, arrive on breeding grounds early June. Most nests close to sea, often on small islands also near tundra ponds distant from coast. Common eider and king eider will occasionally nest together. Common eider clutch size ranges from 1 to 14 eggs, average about 4 to 6. King eider clutch size ranges from 2 to 6 eggs, average about 5. Common eiders incubate eggs about 26-28 days, king eider about 23-24 days. Common eider have been observed diving to about 6 m (20 ft.) depth to feed while there is a record of a king eider diving about 55 m (181 ft.). Both prefer aquatic organisms for food, e.g. mussels, crabs, aquatic insect larvae and some aquatic plants. Begin fall migration as early as July (e.g. male king eider) and runs through to late fall (immature birds).

Important Habitat
King Eider: east coast of Parry Peninsula

Common Eider: east coast of Parry Peninsula, coast of Darnley Bay

Oldsquaw: east coast of Parry Peninsula, coast of Darnley Bay

Surf Scoter: east coast of Parry Peninsula, coast of Darnley Bay, shallow bays along Arctic coast,

White-fronted Scoter: east coast of Parry Peninsula, coast of Darnley Bay, Distribution in the ISR is not well understood.

Lesser and Greater Scaup: Mackenzie Delta, coastal areas

Wigeon: Mackenzie Delta and Old Crow Flats

Northern Pintail: marshes of coastal lakes, near Darnley

Management Plans/Agreements
North American Waterfowl Management Plan (1986) (NAWMP).
Migratory Birds Convention Act (1917)

Recent Research
Standardized annual breeding pair survey conducted jointly by CWS and US Fish and Wildlife.

Migration and harvest of King Eiders, CWS

Research Priority
High: Local interest in biology, also concern here and elsewhere on impact of changing water levels and water quality.

<u>King Eider</u>
- Monitor King Eider numbers as part of multi-species surveys to determine population trends in the ISR.
- Determine the breeding range limits of the western arctic King Eider population using stable isotope analysis.
- Document importance of staging areas in the southeastern Beaufort Sea of King Eiders during moult migration (aerial surveys).
- Document the migration routes and the distribution of King Eiders in moulting and wintering areas in the Chukchi and Bering Sea (satellite telemetry).

<u>Common Eider</u>
- Document the migration routes and the distribution of Common Eiders in moulting and wintering areas in the Chukchi and Bering Seas.

- Determine the reproductive success and annual survival of Common Eiders, including factors affecting productivity and survival.
- Locate critical habitat for brood-rearing Common Eiders.

All Species of Waterfowl
- Analyze, summarize and map harvest study data to determine the total harvest, spring staging areas, and the biological and management significance of these data.

Population Status

King Eider:	371,000 (1996)
	802,000 (1976)
Pacific Common Eider:	73,000 (1996)
	153,000 (1976)
Oldsquaw:	406,751 (1993-1998 average) (Western Canadian Arctic and Alaska)
Scoters:	873,500 (1993-98 average) (North America)
Lesser Scaup:	4.2 million (1993-97 average) (North America)
Continental Goal:	6.2 million
Wigeon:	2.8 million (North America)
Continental Goal:	3.0 million
Northern Pintail:	2.9 million (North America)
Continental Goal:	5.6 million

Population Trends
Scoters: decreasing
Scaups: decreasing
Pintails: decreasing
Mallards: decreasing
Wigeon : fluctuating but stable
Oldsquaw: decreasing
King Eider: decreasing
Common Eider: decreasing

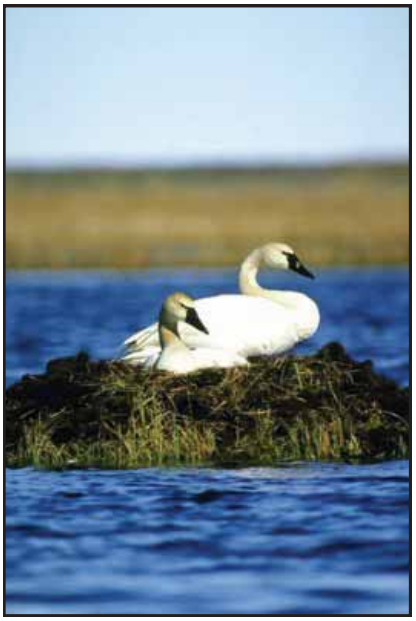
Population Goal
Maintain thriving population for subsistence harvest.

NAWMP (1986) has a combined goal of 60 million ducks for 29 species of duck in North America. See above continental goals, based on NAWMP (1986).

Conservation Measures
- Do not disturb nesting birds.
- Harvest only what is needed.
- Identify and protect important habitats, including wintering areas, from disruptive land uses.

GEESE AND TUNDRA SWAN

Canada Goose (*Branta canadensis*) **/ Uluagullik**
Snow Goose (*Chen caerulescens)* / **Kanguq**
White-fronted Goose (*Anser albifrons frontalis*) / **Nirliq**
Brant (*Branta bernicla*) / **Niglignaq**
Tundra swan (*Cygnus columbianus*) / **Qugruk**


W. Lynch / Parks Canada

Biology

Timing of goose, brant and swan arrival and departure is closely associated with availability of open water and freeze up.

Canada Geese - Local birds part of "Shortgrass Prairie" population, winter central U.S. to Colorado and Texas. Arrive in May. Wide varieties of nest sites. Average clutch size about 4-5 eggs. Incubate eggs about 26 days. Feed on grasses, sedges, berries, seeds, cereal grains. Leave early September.

Snow Geese - Winter California and Mexico. Arrive mid-May. Lay 2-10 eggs (average 6) first week of June. Incubate approximately 22-33 days, off nest first week of July. Feed on terrestrial and aquatic vegetation. Leave early September.

White-fronted Geese - Also known locally as "Yellow legs". Winter in Coastal Texas, Mexico. Leave winter grounds early February through March, arriving Mackenzie Delta mid May through early June. Nest in coastal and upland areas. Typically less down used in nest than other geese. Lay 2-10 eggs, average about 5. Incubate eggs 23-25 days. Feed on seeds and grass.

Brant - Winter along Pacific Coast Mexico to B.C. Arrive late May, early June. Nest close to water. Lay 1-10 eggs, average 3-5 eggs, approximately second week of June. Incubate eggs about 24 days, off nest late July. Some local observation that brant will nest near snowy owls to avoid fox predation.

Swans - Winter east coast U.S. Arrive mid-May. Lay 2-6 eggs (average 5) in June. Remain on nest until mid-August and remain in vicinity until fall migration. Prefer marshy areas, aquatic plants. Fall migration in September.

Traditional Use

Very important food source in spring, down from waterfowl also traditionally used in pillows and blankets.

Important Habitat

Tundra Swan: coastal lakes around Darnley Bay; Parry Peninsula; inland freshwater lakes;

White-fronted Goose: Brock River to Paulatuk; inland lakes of Parry Peninsula (“the Flats)

Canada Goose: nesting on coastal islands near Pearce Point; nesting on islands and cliffs of Parry Peninsula; “The Flats” of Parry Peninsula; along coastal area of Darnley Bay.

Lesser Snow Goose: from Brock River to the “Flats”, around Darnley Bay, to Bennett Point.

Brant: Paulatuk area; Brock River; Fish Lake area

Management Plans/Agreements

Canada, Mexico and U.S. Migratory Birds Conventions (1916 and 1936).
North American Waterfowl Management Plan (1986) (NAWMP).
Arctic Goose Joint Venture (part of NAWMP).
Co-management Plan for Caribou, Muskox, Arctic Wolves, Snow Geese & Small Herbivores on Banks Island (Draft - 2000).
Draft Pacific Coast Brant Management Plan (1991).
Eastern Tundra Swan Management Plan
White Front Goose Management Plan

Recent Research

- Population of Brant on the Mainland of the ISR, CWS
- Productivity of Lesser Snow Geese, Banks Island, CWS
- Monitoring of Snow Goose Habitat on Banks Island, CWS
- Impact of Harvest on Snow Goose Populations in the ISR, CWS

Research Priority

High - The community is interested in knowing more about the biology and ecology of these species. Improving census methods, and identifying important habitat.

White-fronted Goose

- Repeat a subset of aerial transects to determine the population trend in the ISR. (Multi-species surveys)

Snow Goose

- Habitat studies to determine impact of snow geese on the lowland habitat of Banks Island, and to develop a long-term goal for the population.
- Evaluate impacts of increased spring harvest on the different colonies
- Delineate areas where Banks Island geese can be selectively harvested by the mainland communities without impacting the small colonies
- Monitor continuing eastward shift of migrating and wintering geese.
- Carry out air photo surveys at 5-year intervals to document population trends at the three Western Arctic colonies.

Brant

- Complete analysis and write-up of recent studies of the distribution, abundance, survival rates and productivity of brant in the ISR.
- Evaluate the impact of grizzly bear predation and other factors on the colonies of brant and snow geese at Anderson River.

Population Status

Tundra Swan - E. Pop'n	84,000 (1993-98) (North America)
Continental Goal	80,000
Tundra Swan - W. Pop'n	81,000 (1993-98) (North America)
Continental Goal	60,000
White-fronted Goose	70,000 (1989-93) (ISR)
	797,000 (1992-98 average) (North America)
Continental Goal	320,000
Lesser Snow Goose	486,000 (1995) (ISR)
	169,600 (1976) (ISR)
Western Arctic Goal	200,000 breeding population

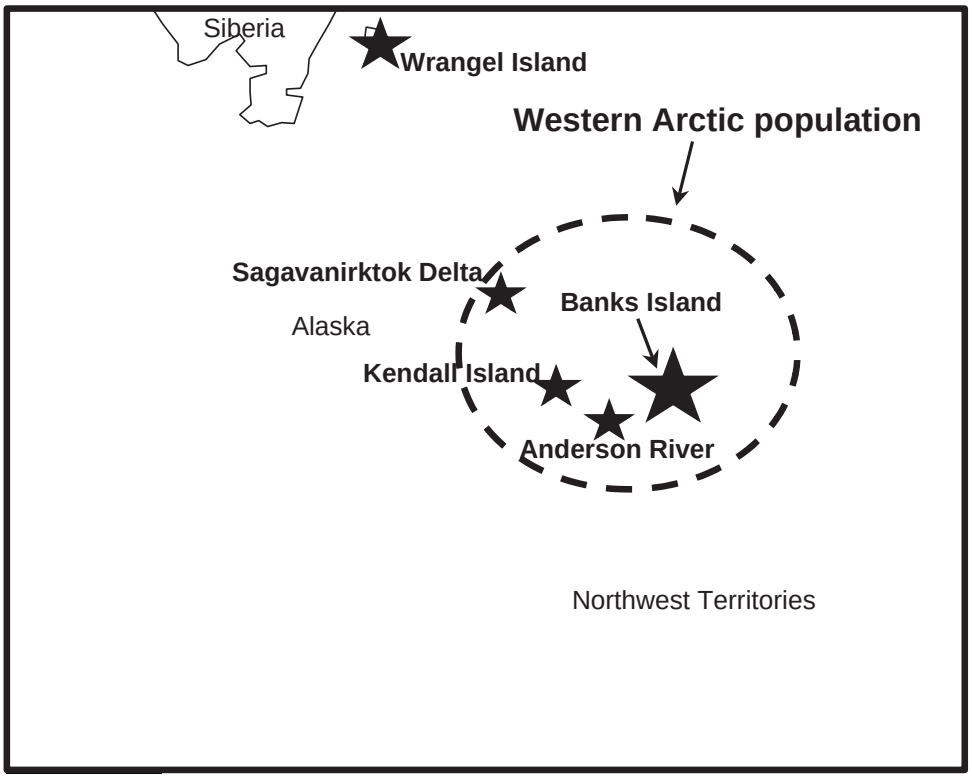
Canada Goose	500,000 (North America)
Continental Goal	150,000
Brant	137,400 (1993 winter average) (North America)
Continental Goal	185,000

Population Trends

Canada Geese	Increasing
Lesser Snow Geese	Increasing
White-Fronted Geese	Stable
Brant	Stable
Swans	Increasing

Population Goal
See continental goals above, based on the North American Waterfowl Management Plan, 1986 (NAWMP).

Conservation Measures
- Identify and protect important habitats, including wintering areas and key resting sites, from disruptive land uses.
- Do not harvest more than is needed.
- Support North American Waterfowl Management Plan (1986) and Arctic Goose Joint Venture.
- Support the "Principles for the Conservation of Migratory Birds in the Inuvialuit Settlement Region" WMAC (NWT).



Map 18. Locations of Lesser Snow Goose colonies in the Western Arctic and Wrangel Island

LOONS

Common Loon (*Gavia immer*) / **TUTLIK**
Yellow billed or King Loon (*Gavia adamsii*) / **Qaqauq**
Pacific Loon (*Gavia pacifica*) / **Maliri**
Red-throated Loon (*Gavia stellata*) / **Suglia**


Canadian Wildlife Service

Biology
Arrive in May, 1 - 2 eggs laid in June, migrate south in September. Feed on small fish. Arctic and red-throated arrive mid-June, leave late August early September. Different loons will use same habitats.

Important Habitat
Red-throated loon: Coastal lakes of Darnley Bay
King loon: mostly found on the ocean
Common Loon: coastal lakes

Management Plans/Agreements
Migratory Bird Convention Act

Recent Research
Barr, J.F. 1997. Status report on the yellow-billed loon, *Gavia adamsii*, in Canada. COSEWIC.

Dickson, D.L. 1988. Monitor reproduction and life history of Red-throated Loons in event of pollution. CWS.

Dickson, D.L., 1992. The Red-throated loon as an indicator of environmental quality. CWS. Occasional Paper No. 73.

Dickson, D.L, 1993. Breeding biology of red-throated loons in the Canadian Beaufort Sea Region. Vol. 46, No. 1.

Vogel, H. 1997. COSEWIC status report on the common loon (*Gavia immer*) in Canada. COSEWIC.

Research Priority
High: Community interested in more information on biology.

Population Status
Local indigenous observation suggests that Yellow-billed loons used to be abundant now are less so.

Population Goal
Thriving population.

Conservation Measures
- Do not disturb nesting birds.
- Identify and protect important habitats from disruptive land uses.

PTARMIGAN (*Lagopus spp.)* / QAIQ

Rock Ptarmigan (*Lagopus mutus)*
Willow Ptarmigan (*Lagopus lagopus*)

Parks Canada

Biology
Breed in early May, lay eggs in June. Willow ptarmigan lay 5-10 eggs, rock ptarmigan lay 6-15 eggs.

Traditional Use
Ptarmigan are a well-liked food source within the community.

Important Habitat
Throughout the planning area.

Management Plans/Agreements
None.

Recent Research
Study of contaminant levels in willow ptarmigan from Anderson River Delta and Kittigazuit Bay area conducted in 1989. GNWT Department of Renewable Resources, Yellowknife. Report in progress. Numerous YTG surveys in northern Yukon for past twenty years.

Research Priority
Low.

Population Status
Varies from year to year.

Population Goal
Unspecified though community would be interested in having more around.

Conservation Measures
- Identify and protect important habitats from disruptive land uses.

SANDHILL CRANE (*Grus canadensis*) / TATIGAQ


Parks Canada

Biology
Winters in southern U.S. to Mexico. Arrive end of April or early May before snow geese. Nest is grass mound in marsh or wet meadow. Lay 2 eggs around middle of May, hatching in mid-June. Feed on insects, lemmings, aquatic plants, grains, amphibians. Fall migration late August early September.

Important Habitat

Management Plans/Agreements
Migratory Bird Convention Act

Recent Research
Austin, J. 1997. Delineation of Sandhill Crane subspecies and their distribution. 1996-1997. Canadian Wildlife Service.

Reed, J.R. 1988. Arctic Adaptations in the Breeding Biology of Sandhill Cranes, *Grus canadensis*, on Banks Island, Northwest Territories. *In* Canadian Field-Naturalist, 102(4): 643-648.

Research Priority
Unspecified.

Population Status
Appear to be increasing.

Population Goal
Unspecified.

Conservation Measures
- Do not disturb nesting birds.
- Identify and protect important habitats from disruptive land uses.

EAGLES

BALD EAGLE (*Haliaeetus leucocephalus*)
GOLDEN EAGLE (*Aquila chrysaetos*) / **TINGMIAQPAK**

Parks Canada

Biology

Bald Eagle

More common in Delta than outlying areas. Usually nest in trees, begin nesting in April-May, incubate eggs approximately 34-35 days, young leave nest (fledge) by 70-80 days. Primarily feed on fish, often dead or dying fish. Fall migration in September.

Golden Eagle

Much more common in Richardson Mountains than Bald Eagles. Use both cliff and tree nests, 1-2 young per year. Begin nesting in April-May, incubate approximately 35-45 days, young leave nest (fledge) after 65-75 days. Primarily feed on rabbits, hares, ground squirrels, will occasionally prey on young of larger mammals. Late fall migration.

Important Habitat

Management Plans/Agreements

None.

Recent Research

Monitoring Raptors and the Canadian Peregrine Falcon Survey (CWS / Parks Canada, 2000)

Kirk, D.A. 1996. Status report on the golden eagle, *Aquila chrysaetos. COSEWIC.*

Lang, A. 1984. Status report on the bald eagle, *Haliaeetus leucocephalus*, in Canada. COSEWIC.

Research Priority

Moderate - Community interested in ecological relationship, role in food chain.

Population Status

Bald Eagles have been more common in delta in early 1990's. Golden Eagles have also been more common in delta in early 1990's but less common than bald eagles.

Population Goal

Unspecified.

Conservation Measures

- Do not harass or disturb nesting birds.
- Do not export birds.
- Identify and protect important habitats (including southern wintering habitat) from disruptive land uses.

PEREGRINE FALCON (*Falco peregrinus anatum*) / **KIRGAVIK**
GYRFALCON (*Falco rusticolus*)
ROUGH LEGGED HAWK (*Buteo lagopus*) / **QILGIQ**

Biology

Peregrine Falcon: May nest in cliffs. Lay 2-4 eggs. Feed on small to medium sized birds.

Gyrfalcon: Nest in cliffs and occasionally trees, lay 3-4 eggs. Feed on ground squirrels, ptarmigan, and occasionally hare. Populations cycle with prey availability.

Rough-legged Hawk: Nest on cliffs. Lay 2-5 eggs. Feed on lemmings, ground squirrels.

Parks Canada

Important Habitat

Management Plans/Agreements

GNWT and Yukon Birds of Prey Regulations.

Convention on International Trade in Endangered Species (CITES); Peregrine Falcon - Appendix 1.

Recent Research

Monitoring Raptors and the Canadian Peregrine Falcon Survey (CWS / Parks Canada, 2000)

Numerous YTG surveys and work on reintroduction of peregrines over past 30 years.

Poole, K. and R. Bromley, 1985. Aspects of the ecology of the gyrfalcon in the Central Arctic, Northwest Territories. GNWT, Department of Renewable Resources File Report No. 52.

Research Priority

Moderate - Interest in ecological relationships, role in food chain.

Population Status

Population Goal

Unspecified, adequate numbers at present.

Conservation Measures

- Do not export.
- Do not harass or disturb nesting birds.
- Identify and protect important habitats from disruptive land uses.

SNOWY OWL (*Nyctea scandiaca*) / **UKPIK**

T.W. Hall / Parks Canada

Biology
Most migrate to region in spring, however, a few may overwinter. Arrive in April, nesting mid to late May. Prefer to nest on elevated ground. Off nest in late August. Lay 5-7 eggs, some reports of 12, incubation 32 to 33 days. May feed on lemmings, birds, fishes. Variable numbers year to year. Appear to have ecological association with brant. Usually low numbers.

Traditional Use
Have been used as food in past.

Important Habitat
Coastal Areas.

Management Plans/Agreements
None

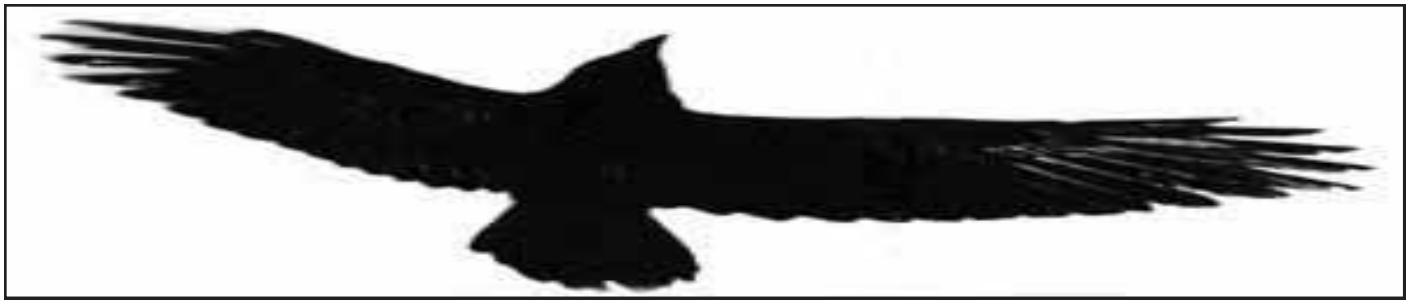
Recent Research
Kirk, D.A. 1995. Status report on the snowy owl, *Nyctea scandiaca*, in Canada. COSEWIC.

Research Priority
Low.

Population Status
Appear to be decreasing, though some sense they were abundant in 1991. Population appear to be high in some years and low in others.

Population Goal
Unspecified. Adequate numbers for community needs.

Conservation Measures
- Hunt only when needed.
- Identify and protect important habitats from disruptive land uses.



BIRD SPECIES LIST

At least 125 species of birds may visit and nest in the mainland western arctic portions of the ISR. Some may only rarely occur and do not routinely breed in the area. A list of birds which may occur in the area is presented below. These species are important components of the ecosystem, contribute to the quality of life in the area and are an attraction for tourists. Many of these species migrate to wintering areas outside of the ISR, their conservation depends on cooperative work with people outside the region.

Species		Wintering Area
Alder Flycatcher	-	South America.
American Wigeon / **Ugiuhiuq**	-	West and south U.S. to South America and Caribbean.
American Robin	-	U.S. to Mexico.
American Tree Sparrow	-	Southern Canada to central U.S.
Arctic Tern / Mitqutailaq	-	Sub-Antarctic seas.
Baird's Sandpiper	-	South America.
Bald Eagle	-	Southwest Canada, west and central U.S.
Bank Swallow	-	South America.
Black Guillemot	-	Pacific Ocean (at sea).
Black-bellied Plover	-	Coastal U.S. to Southern Hemisphere.
Blackpoll Warbler	-	South America.
Bohemian Waxwing	-	Southern Canada, U.S.
Bonapartes Gull	-	West coast U.S. to Mexico.
Boreal Chickadee	-	Boreal Forests North America.
Brant / **Nigilgnaq**	-	Local concentrations on Pacific coast.
Buff-breasted Sandpiper	-	South America, especially Argentina.
Canada Goose / **Uluagulik**	-	North Mexico north to limits of open water.
Canvasback	-	West and east coast U.S. to Mexico.
Cliff Swallow	-	Southern Brazil, central Argentina.
Common Loon / **Tutlik**	-	West coast North America.
Common Snipe	-	Southwest coast Canada, U.S., Brazil.
Common Goldeneye	-	West Coast Canada and U.S. central U.S.
Common Eider / **Quingalik**	-	West coast of Alaska and Aleutians.
Cowbird (Brown-Headed)	-	California, S. Arizona
Dark-eyed Junio	-	Southern Canada, U.S.
Dunlin	-	West coast Canada and U.S.
Fox Sparrow	-	Southern U.S. and west coast U.S.
Glaucus Gull (Ross's Gull)	-	West coast of Alaska, Canada, U.S. to southern California.
Golden Eagle / **Tingmiaqpak**	-	B.C., Alberta, Saskatchewan, U.S.
Gray Jay	-	Boreal forests North America.
Gray-cheeked Thrush	-	Caribbean to Brazil.
Green-winged Teal	-	Mid-U.S. south to Argentina.
Gyrfalcon	-	West coast of Alaska and northern B.C.
Harlequin Duck	-	West coast Canada and U.S.
Harris's Sparrow	-	Southwestern Canada, U.S.
Herring Gull	-	West coast Canada and U.S.
Horned Grebe	-	West coast North America.
Horned Lark	-	Vancouver Island, Mexico, South America.
Iceland Gull	-	Great Lakes and east coast to Maryland.
Killdeer	-	South and central U.S. to central Mexico, Peru.
King Eider / **Quingalivik**	-	Aleutians and northern west coast of North America.
Lapland Longspur	-	Southern Canada to southern U.S.
Least Sandpiper	-	Southern U.S. to Brazil.

Bird Species List (cont'd)

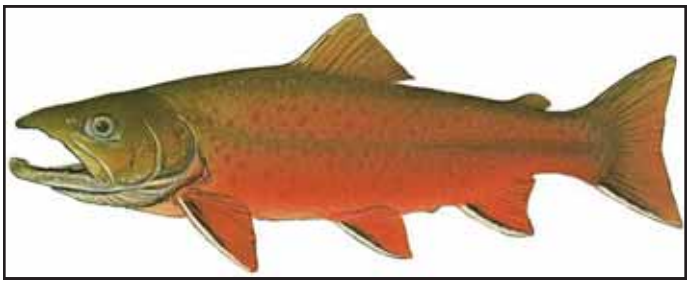
Lesser Golden Plover	-	Mainly east of Rockies, southern South America.
Lesser Yellowlegs	-	Southern U.S. to Argentina.
Long-billed Dowitcher	-	West coast U.S. to Guatemala.
Long-tailed Jaeger	-	Migrant at sea, well off-shore, Southern Hemisphere.
Mallard / **Kurugakpak**	-	Southern Canada to Mexico.
Marsh Hawk	-	SW Canada, central U.S. to South America.
Merlin	-	Southern Canada
Mew Gull	-	West coast Canada and U.S.
Norther Goshawk	-	Year round resident, though may move.
Northern Shoveler	-	West and south U.S. to South America.
Northern Waterthrush	-	Central and South America.
Northern Shrike	-	Southern Canada to U.S.
Northern Flicker	-	West coast Canada, U.S.
Northern Pintail / **Irugaq**	-	Along Pacific coast, southern U.S. to northern S. America.
Northern Fulmar	-	Off coast of western North America to northern Mexico.
Northern Hawk Owl / **Naiquqtauruk**	-	South to western Oregon, Idaho, Wyoming, Nebraska.
Oldsquaw / **Ahaliq**	-	Aleutians and west coast of North America.
Orange-crowned Warbler	-	Southern U.S. to Guatemala.
Pacific Loon / **Maliri**	-	Along coast S.E. Alaska to N.W. Mexico.
Parasitic Jaeger	-	At sea from southern U.S. to Tierra del Fuego.
Pectoral Sandpiper	-	South America.
Peregrine Falcon / **Kirgavik**	-	Sparingly along west coast of Canada and throughout U.S.
Pine Grosbeak	-	Western N.W.T., Yukon, Alaska, B.C., Rocky Mountains.
Pomarine Jaeger	-	At sea from southern U.S. to southern hemisphere.
Raven	-	Year round in North America - widespread.
Red Phalarope	-	Coast of California south, range at sea poorly known.
Red Knot	-	Coast of southern U.S., Mexico, also S. Hemisphere.
Red-breasted Merganser	-	West coast Canada and U.S.
Red-necked Phalarope	-	Pacific Ocean (at sea).
Red-necked Grebe	-	West coast North America.
Red-tailed Hawk	-	U.S.
Red-throated Loon / **Suglia**	-	Along coast to northern Mexico and Florida.
Red-winged Blackbird	-	Northern U.S. south.
Redpoll	-	N.W.T., Yukon, Alaska, central Canada
Rock Ptarmigan / **Qariq**	-	Some withdrawal from higher to lower elevations.
Ross's Goose	-	Mainly in SW U.S.
Rosy Finch	-	Southwestern Canada, west central U.S.
Rough-legged Hawk / **Qilgiq**	-	Southern Canada to southern U.S. but rarely to Mexican
Ruby-crowned Kinglet	-	Southern U.S. to Guatemala.
Ruddy Turnstone	-	Coastal U.S., Hawaii.
Rusty Blackbird	-	Southeastern U.S.
Sabine's Gull	-	In Pacific to Chile, local in Atlantic.
Sanderling	-	West coast of North America.
Sandhill Crane / **Tatigaq**	-	Mexico, locally in southern U.S.
Savannah Sparrow	-	Southern U.S. to Honduras and Caribbean.
Say's Phoebe	-	Southern U.S. to Mexico.
Scaup (Greater)	-	West coast of Canada and locally throughout U.S.
Scaup (Lesser)	-	West coast of U.S., southern U.S. to northern S. America.
Scoter (Surf or White-winged) / **Taakruaq**	-	Aleutians and along Pacific coast.
Semi-palmated Sandpiper	-	Mainly east of Rockies to South America.
Semipalmated Plover	-	West coast of southern North America to South America.
Sharp-shined Hawk	-	Northern U.S. to South America.
Short-eared Owl / **Nipaixuktaq**	-	Southern U.S. to central Mexico.
Smith's Longspur	-	South central U.S.
Snow Goose / **Kangua**	-	North Mexico, Gulf Coast, migrant through interior.
Snow Bunting	-	West coast and central North America, in open country.
Snowy Owl / **Ukpik**	-	Cyclic winters to central U.S., Canada except Arctic.
Solitary Sandpiper	-	Gulf of Mexico to Argentina.
Spotted Sandpiper	-	Southern U.S. to Argentina.
Stilt Sandpiper	-	Southern U.S. to Argentina.
Tennessee Warbler	-	Mexico to Venezuela.
Three-toed Woodpecker	-	West. N.W.T., Yukon, Alaska, N. provinces, Rocky Mtns.
Tree Swallow	-	Southern U.S. to northern South America.
Tundra Swan / **Quqruk**	-	Seaboards of eastern and western North America, end of Alaskan peninsula and locally throughout U.S.

Bird Species List (cont'd)

Upland Sandpiper	-	Argentina.
Varied Thrush	-	West coast Canada and U.S.
Wandering Tattler	-	S.W. Coast to U.S. to Ecuador.
Water Pipit (American)	-	West coast of U.S., southern U.S. south to El Salvador.
Whimbrel	-	West coast of S. North America to S. South America.
White-fronted Goose / **Nirliq**	-	Mexico, Gulf states and occasionally north to Washington.
White-crowed Sparrow	-	Southwestern Canada, U.S.
White-rumped Sandpiper	-	South America.
White-winged Crossbill	-	Western N.W.T., Yukon, Alaska, northern Alberta, BC
Willow Ptarmigan / **Qarigiq**	-	Resident year-round.
Wilson's Warbler	-	Mexico to Panama.
Yellow Warbler	-	Mexico to Peru.
Yellow-billed Loon / **Qaqauq**	-	Along coast of northwestern North America.

ARCTIC CHARR (*Salvelinus alpinus*) / QALUKPIK

Biology



The Arctic charr is present as both a searun and landlocked form. There are some external characteristics which can be used to differentiate between Arctic charr and Dolly Varden. Arctic charr generally have a shorter head and snout, a trait particularly evident in spawning males. The tail of an Arctic charr has a slightly deeper fork than that of a Dolly Varden, and the base of the Arctic charr's tail is narrower.

Spawning occurs in freshwater during late September and early October, at about the same time that the winter ice forms. At spawning time the adults take on their characteristic spawning features and colours. Spawners are easily recognized because they change from silver to orange, red, and often to deep vermilion. Also, the leading edges of the lower fins turn white, and males develop a protruding hook called a 'kype' on their lower jaw.

Adult charr do not spawn each year, taking one or two resting years in between spawning years. They first start to make trips to sea at about age 3-5, depending on the system. Adult charr are thought to spawn every second year, although this is likely variable depending on individual condition, environmental condition and age of this fish. Arctic charr are carnivorous, feeding mainly on small fishes and benthic organisms.

Important Habitat

Mainstem Hornaday River, between Coalmine and Aklak Creek; rearing (nursery) areas still need to be identified. Spawning charr have also been caught in the Seven Islands Lake and Rummy Lake systems, draining the Hornaday, and tests completed in 1996/97 on a small sample (n=5) indicated they were landlocked charr.

Pearce Point; Hornaday River, Brock River, Argo Bay, Fish Lakes area

Management Plans/Agreements

Paulatuk Charr Management Plan was signed off in July 1998 and effective until December 31, 2002.

Research Priority

High

Recent Research

- DFO stock Status report on Hornaday River Arctic Charr stock is to be released early 2000.
- Radio tagging and tracking of charr in Hornaday River in 1999.
- Monitoring of Hornaday River harvest in 1998 and 1999.

Reist, J.D., Johnson, J.D and T.J. Carmichael, 1992. Variation and specific identity of charr from northwestern Arctic Canada. Special Proceedings of the American Fisheries Society Conference on "Fish Ecology of Arctic North America". Fairbanks.

Population Status

Unavailable.

Population Goal

Unspecified

Conservation Measures

- Release smaller fish.
- Take only what you need.
- Use 11 cm (4.5 in.) mesh size on gill nets.
- Identify and protect important habitats from disruptive land uses.
- No 91 m (100 yd) long nets to be set. Only 46 m (50 yd) to be set and used for arctic charr fishing.
- No nets to be left unattended.
- No nets to be set at camps along the river

PAULATUK CHARR MANAGEMENT PLAN - 1998-2002

Goals of the Plan

1. To ensure healthy stocks of charr in the Hornaday River and other charr fishing locations in the Paulatuk area;
2. To preserve and protect charr habitats in the Hornaday River and other charr fishing locations in the Paulatuk area, to ensure that the charr stocks continue to thrive;
3. To manage and conserve Hornaday River and other charr in the Paulatuk area, to ensure that subsistence needs of the residents of Paulatuk are met, for today and for the future.

Recommendations

- To ensure the goals of this Plan are met, we recommend that fishing pressure on the Hornaday River be reduced for a period of not less than 5 years, and that all catches be monitored during this time. The target for the reduction is to limit the summer catch to 1400 charr, and to limit the spring and winter catches to a total of 300 charr. The overall guideline is thus 1700 charr per year.

- To achieve the desired recovery, recognize that these measures will likely need to be in place for a period of 7 or more years.

1. A proportion of the regular Hornaday fishermen will be encouraged and supported to fish at alternate areas so that subsistence needs can be met AND less charr are caught at the mouth of the Hornaday during the August upstream migration.

   Persons obtaining support to fish in alternate areas agree to not fish at the Hornaday at any time during the year in which they receive this support. To apply for this support, the fishermen should contact the alternate areas coordinator or the HTC to fill out an application.

   Pearce Point was found to be an important feeding area for Hornaday charr during the summer during the 1997 tagging study, so is not an alternate site to Hornaday charr.

2. No charr fishing should take place in the Hornaday River mainstem during fall and winter at the Fish Holes between Coalmine and Aklak Creek throughout the life of this plan.

3. Fishermen are encouraged and will be supported to fish during the winter at alternate locations and/or for alternate species such as
   - Lakes west of Biname Lake for charr;
   - Thrasher, Billy and Fallaize Lakes for humpbacks; and
   - Outpost Camp lakes such as Tsoko, Deleese, Tadenet for other fish (e.g. humpbacks) for subsistence use in the winter.

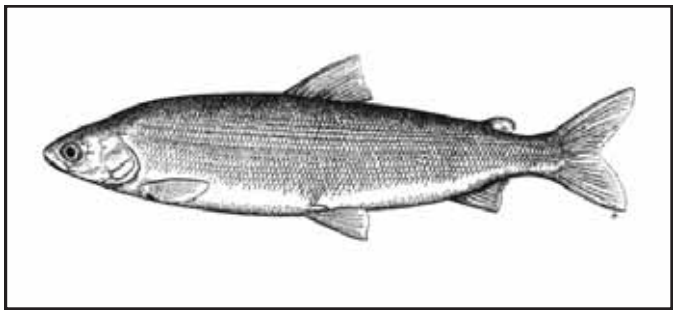
4. There is concern about the proposed establishment of an ATV trail between the community of Paulatuk and the mouth of the Hornaday River, as this will increase access and this in turn may lead to increased fishing pressure.

Life of the Plan

This plan will be in effect for five years (1998-2002) after which time all aspects will be revisited and reviewed.

ARCTIC CISCO (*Coregonus autumnalis*)

Biology



The Arctic cisco is the most saline-tolerant of the anadromous coregonids and is thus found more often and further from the Mackenzie basin than the other species. It is distinguishable from the least cisco by smaller eyes and scales, more silver colour, white pectoral and pelvic fins, and terminal mouth (at the tip of the body). The Arctic cisco is found in arctic Canada and Siberia. They are common along the Yukon coast and in the Mackenzie Delta during summer. The food fishery targets Arctic cisco during its departure or return from overwintering areas, such as in Tuktoyaktuk Harbour, and during spawning migrations during fall. They are believed to spawn only in the large tributaries of the Mackenzie River or in the Mackenzie itself. Spawning probably takes place over gravel in fast water areas such as rapids. They reach a maximum length of near 38 cm (15 in.) and may live for up to 20 years. Arctic cisco feed on small fish and crustaceans.

Important Habitat

Management Plans/Agreements

None.

Recent Research

Index netting program begun in 1999 in Aklavik and Inuvik (also included RRCs in Aklavik, Inuvik, Fort McPherson and Tsiigehtchic) to document average lengths/weights and abundance of all captured species. This is a long-term program that may include Tuktoyaktuk in the future.

FJMC North Slope Stock Identity Study (Charr and Cisco) conducted in 1989.

Dillinger et all. 1992. Can Field Nat 106: 175-180. *Arctic cisco distribution, migration and spawning in the Mackenzie River.*

Harwood, L. 1997. Measurement and tagging of arctic cisco in Tuktoyaktuk Harbour to test the netting program. DFO.

Research Priority

Community considers research on the biology and ecology of these species a high priority.

Population Status

Abundant.

Population Goal

Adequate supply at present.

Conservation Measures

- Identify and protect important habitats from disruptive land uses.
- No drilling in areas where these species concentrate for spawning or migration.
- Ensure all oil related activities are closely monitored.

ARCTIC GRAYLING (*Thymalus arcticus*) / HULUKPAUGAQ

Biology


E. R. Keeley

Distributed throughout northern regions of western provinces, NWT, Yukon, Alaska. Prefers clear water and avoids muddy parts of Mackenzie River. Spawns in smaller streams at beginning of spring break-up. Prefer gravel or rocky areas to spawn. Females may spawn in one or several places in a given spawning season. Adults return to lakes or rivers after spawning. Most grayling do not spawn until 6-9 years of age. Individuals may not spawn every year. Maximum size about 2.7 kg (6 lb). Feed on terrestrial and aquatic insects, occasionally fish, fish eggs, crustaceans, lemmings.

Important Habitat

Hornaday River

Management Plans/Agreements

None.

Recent Research

Some grayling were tagged in the Babbage River in fall 1992 as part of FJMC sponsored project.

Research Priority

Unspecified.

Population Status

Locally common in certain streams.

Population Goal

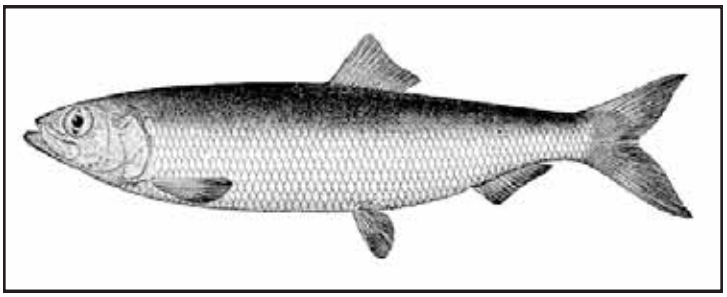
Adequate supply at present.

Conservation Measures

- Harvest only what is needed.
- Identify and protect important habitats from disruptive land uses.

BLUE or PACIFIC HERRING (*Clupea pallasi)*

Biology



Pacific herring are true marine fish and can be identified from other "herring" species (Arctic and least ciscos) by the absence of the adipose fin (a small fleshy "knob" posterior to the dorsal fin) found on salmon, charr, grayling, whitefish, coney and ciscos. Pacific herring are very important to the coastal waters of the Beaufort Sea and are utilised by people in the community of Tuktoyaktuk. Pacific herring are preyed upon by beluga whales, seals and a large number of marine and anadromous fish species. Pacific herring spawn around the time of ice break-up (late June) in the deep coastal bays in which they have over-wintered. Tuktoyaktuk Harbour is a major overwintering area. Spawning is confined to shallow, vegetated areas in the intertidal and subtidal zones. Following spawning, they disperse throughout the Beaufort for feeding and return to overwintering sites beginning in late August. Herring probably spawn every year after reaching sexual maturity at about 6 -7 years of age in this area. The number of eggs varies with the age/size of the fish and averages 20,000 annually. Average life span for these fish is up to 16 years in the Bering Sea. Their food consists of small fish, crustaceans and copepods.

Important Habitat

Coastal area, near Paulatuk.

Management Plans/Agreements

None.

Recent Research

FJMC North Slope Stock Identity Study (Charr and Cisco) conducted in 1989.

Research Priority

Community considers research on the biology and ecology of these species a high priority.

Population Status

Abundant.

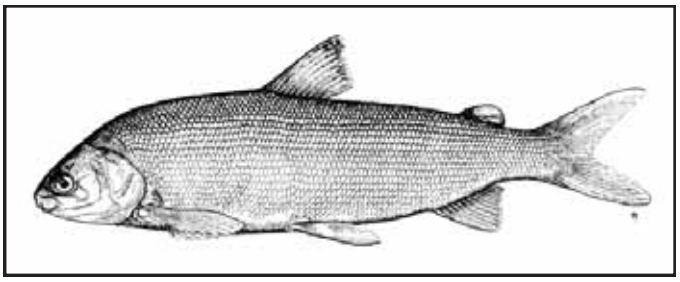
Population Goal

Adequate supply at present.

Conservation Measures

- Identify and protect important habitats from disruptive land uses.
- No drilling in areas where these species concentrate for spawning or migration.
- Ensure all oil related activities are closely monitored.

BROAD WHITEFISH (*Coregonus nasus*) / ANAAKIQ



Biology

Distributed in fresh and brackish waters of arctic drainages of northwestern North America and northern Eurasia, south to approximately the 60th parallel. Spawn mainly over gravel areas in rivers in October or November. Downstream migration of post-spawning fish may occur gradually over the winter. May mature at approximately seven years of age. More frequently encountered in rivers than lakes, although distinct anadromous and non-migratory lake dwelling stocks are known from the Mackenzie River basin. Often found in coastal areas of the Beaufort Sea. Feed on aquatic insects, small molluscs and crustaceans. It is a deep-bodied fish with a blunt snout and short head. Average length is near 45 cm (18 in.).

Important Habitat

Coastal areas of the Beaufort Sea

Management Plans/Agreements

Broad whitefish will be the second species for an Integrated Fisheries Management Plan for this area. Discussions will begin in 2001.

Recent Research

Tallman, R.F., and J.R. Reist. 1997. Proceedings of the broad whitefish workshop: the biology, traditional knowledge and scientific management of broad whitefish (*Coregonus nasus* (Pallus)) in the lower Mackenzie River. Can. Tech. Rpt. Aquat. Sci. 2193.

Treble, M. 1994. Lower Mackenzie River broad whitefish, *Coregonus nasus*: central Delta biological characteristics (1984-1990), commercial and subsistence harvest trends, and local management issues. University of Manitoba.

Research Priority

Unspecified.

Population Status

Locally abundant.

Population Goal

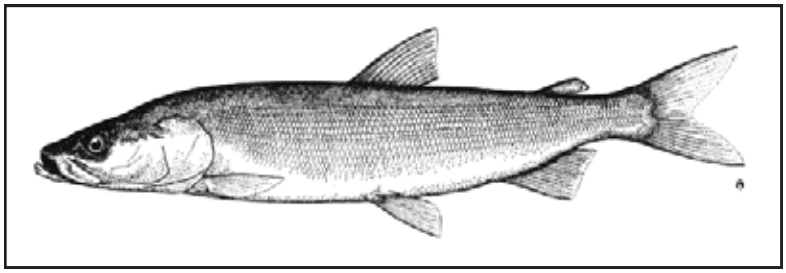
Maintain abundant population to support subsistence harvest.

Conservation Measures

- Only harvest what is needed.
- Identify and protect important habitats from disruptive land uses.

CONEY or **INCONNU** (*Stenodus leucichthys*) / **HIGAQ**

Biology



Found in northwestern North America and in arctic drainages of Asia. In northern Canada it ranges as far east as the Anderson River. Spawning believed to occur in late summer or early autumn. Individual females are believed to spawn every two to four years. Following spawning there appears to be downstream migrations. Migrates from sea or lakes to fresh water streams. Weight may exceed 29 kg (64 lb). Young feed on aquatic invertebrates, adults feed on fish.

Important Habitat

Management Plans/Agreements
None at present.

Recent Research
None.

Research Priority
Unspecified.

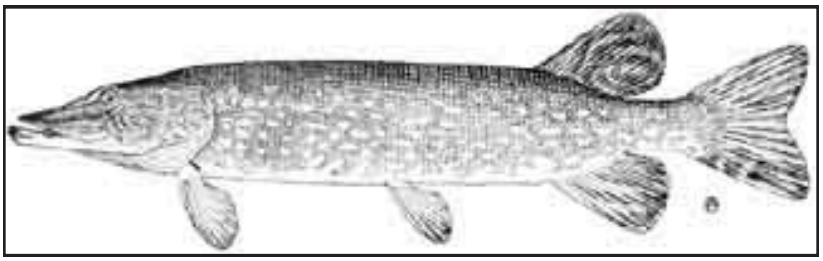
Population Status
Locally common.

Population Goal
Maintain abundant population to sustain subsistence harvest.

Conservation Measures
- Harvest only what is needed.
- Identify and protect important habitats from disruptive land uses.

JACKFISH or NORTHERN PIKE (*Esox lucius*) / SIULIK

Biology



Occurs throughout Canada with the exception of southern B.C. Seldom enters brackish waters. Generally non-migratory. Spring spawner after ice melt (May). May live to 24 to 26 years in Arctic, 10-12 years in southern Canada. Maximum size 18 - 22 kg (40-50 lb). Feed on small fish, occasionally small mammals and ducklings. Prefer clear, slow, warm rivers or warm weedy bays.

Important Habitat

Near tree line - Granet Lake, Tadenet Lake

Management Plans/Agreements

None.

Recent Research

U.D.C. Test Fishery, 1988-93. Data being collected as part of the Mackenzie River Test Fishery (1989-1994).

Research Priority

Unspecified.

Population Status

Abundant.

Population Goal

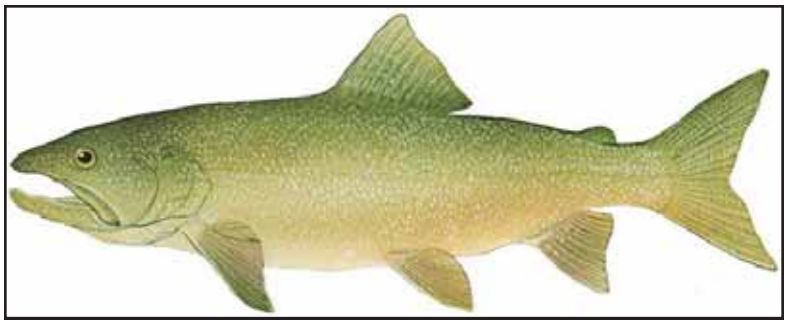
Maintain adequate populations to sustain subsistence harvest.

Conservation Measures

- Harvest only what is needed.
- Identify and protect important habitats from disruptive land uses.
- Harvest within quota where one has been established.

LAKE TROUT (*Salvelinus namaycush*) / IQALUAKPAK

Biology



Spawn in late August early September, occasionally spawn in rivers; temperature and light influence spawning, 4 - 5 months for egg incubation. May return to same spawning bed year after year. Occasionally move long distances (e.g. 100+ km (62+ mi)). May not be sexually mature until 13+ years old and typically reproduce about every two years. Predatory on small fish though will eat aquatic insects as well. Very slow growing.

Important Habitat

Hornaday River; coastal lakes around Darnley Bay.

Management Plans/Agreement

HTC Bylaw requires minimum 11 cm (4.5 in.) mesh size on nets.

Recent Research

None.

Research Priority

High: The community is very interested in knowing more concerning the biology and movement of lake trout in the area and in monitoring water quality where lake trout are harvested.

Population Status

Appears to be stable though no formal studies to date.

Population Goal

Unspecified. Maintain adequate population to support current harvest.

Conservation Measures

- Where commercial fishing is undertaken mesh size should be no smaller than 14 cm (5.5in.)
- Ensure harvest is sustainable.
- Do not take more than is needed.
- Identify and protect important habitats from disruptive land uses.

LEAST CISCO or BIG-EYED HERRING (*Coregonus sardinella*)

Biology

The least cisco is common in the lower Mackenzie Delta and almost all lakes and rivers. Least cisco are much less migratory than the Arctic cisco and in coastal areas tend to be associated with the plume of their home river. The least cisco has a weak lower jaw that projects beyond the upper and has a larger eye than the Arctic cisco. Adults are brown to olive green and silvery below. Least cisco reach sexual maturity at 6-7 years of age. Mature least cisco migrate upstream in the fall to spawn in clear streams with gravel bottoms. Spawning takes place in early October. Least cisco found in lakes seldom exceed 23 cm (9 in.), while those in the Mackenzie River or coastal areas reach almost 40 cm (16 in.) in length. Least cisco are very important in the food chain, as they are eaten by predacious coney, pike, and burbot and undoubtedly, a large number of mammals and birds.

Important Habitat

Management Plans/Agreements

None.

Recent Research

Index netting program begun in 1999 in Aklavik and Inuvik (also included RRCs in Aklavik, Inuvik, Fort McPherson and Tsiigehtchic) to document average lengths/weights and abundance of all captured species. This is a long-term program that may include Tuktoyaktuk in the future.

FJMC North Slope Stock Identity Study (Charr and Cisco) conducted in 1989.

Research Priority

Community considers research on the biology and ecology of these species a high priority.

Population Status

Abundant.

Population Goal

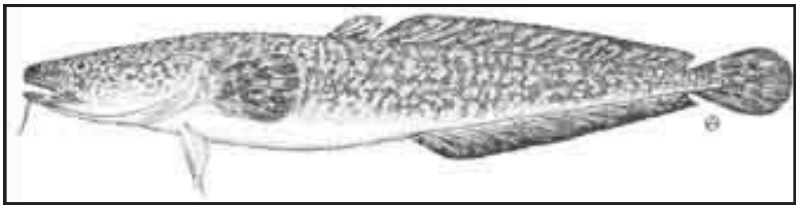
Adequate supply at present.

Conservation Measures

- Identify and protect important habitats from disruptive land uses.
- No drilling in areas where these species concentrate for spawning or migration.
- Ensure all oil related activities are closely monitored.

LOCHE or BURBOT (*Lota lota*) / TITTAALIQ

Biology



One of few Canadian fish that spawns in mid-winter (January-March) under the ice. Spawning usually in 3 m (9.8 ft.) or less of water over sand or gravel in shallow bays or on gravel shoals. Most spawn in lakes though some use rivers. Males arrive to spawn 3 or 4 days before females. Spawn at night. Move into tributary rivers during late winter early spring. Move to deep water in summer. Females generally larger than males. Maximum size known for Canada is about 1 m (3.3 ft.) long and 8.4 kg (18.5 lb). Elsewhere may reach 34 kg (75 lb). Maximum age about 15 years. Feed mostly on aquatic insect as young, adults primarily eat other fish.

Important Habitat

Hornaday River, Thrasher Lake; some lakes near tree line.

Management Plans/Agreements

None.

Recent Research

Lockhart, L. Study of loche Livers from Mackenzie River Near Norman Wells. DIAND Environmental Studies No. 61.

Research Priority

Unspecified.

Population Status

Appear locally common and stable.

Population Goal

Maintain abundant population to support subsistence harvest.

Conservation Measures

- Only harvest what is needed.
- Identify and protect important habitats from disruptive land uses.

FISH SPECIES LIST

Many species of fish occur within the freshwater and marine environments of the mainland western Arctic. Most lakes and rivers support fish populations. A partial list of these including those already mentioned is presented below. It is recognized that these species may be important components of the food chain on which other species (e.g. Arctic Charr, Seals, Polar Bear) depend. As with other species, protection should be given to important habitats or ecological relationship where these become known. The Outer Mackenzie Delta area, particularly Mason and Mallik Bays, is very important overwintering and nursery habitat for a variety of marine and anadromous fish.

Marine Species

Arctic Cod (*Boreogadus saida*)
Blue Herring (*Clupea pallasi*) / Qaluhaq
Capelin (*Mallotus villosus*)
Chum Salmon (*Oncorhynchus keta*)[1]
Fourhorn Sculpin, Deepwater Sculpin or Devil Fish (*Myoxocephalus quadricornis*) / Kanayuq
Greenland Cod (*Gadus ogac*)
Pink Salmon (*Onchonhynchus gorbuscha*)[1]
Saffron Cod ((*Elegiums navaga*)
Sand Lance (*Amodytes sp.*)
Starry Flounder (*Platichthys stellatus*)
Tom Cod (*Microgadus proximus*) / Uugaq

Freshwater

Arctic Charr (*Salvelinus alpinus*) / Qalukpik (land locked)
Arctic Cisco (*Coregonus autumnalis*)
Arctic Grayling (*Thymallus arcticus*) /
Broad Whitefish (*Coregonus nasus*) / Anaakiq
Burbot or Loche (*Lota lota*)
Deepwater Sculpin (*Myoxocephalus quadricornis*) / Kanayuq
Finescale Dace (*Chrosomus neogaeus*)
Flathead Chub (*Platygobio gracilis*)
Inconnu or Coney (*Stenodus leucichthys*) / Higaq
Lake Trout (*Salvelinus namaycush*) /
Lake Whitefish (*Coregonus clupeaformis*) / Qalupaiq
Lake Chub (*Conesius plumbeus*)
Least Cisco or Big-eyed Herring (*Coregonus sardinella*) / Qaluhaq[1]
Longnose Dace (*Rhinichthys cataractae*)
Longnose Sucker (*Catostomis catostomis*)
Nine-spine Stickeback (*Pungitius pungitius)*
Northern Pike (*Esox lucius*)
Pond Smelt (*Hypomesus olidus*)
Rainbow Smelt (*Osmerus mordax*)
Round Whitefish (*Prosopium cylindraceum*)
Slimy Sculpin (*Cottus cognatus*)
Spoonhead Sculpin (*Cottus ricei*)
Trout Perch (*Percopsis omiscomaycus*)
Walleye (*Stizostedion vitreum*)
White Sucker (*Catastomis commersoni*)

1. These fish spend part of their life in salt water and part in fresh water. This life style is called "anadromous".

INSECTS / QUPILGUT

A great number of terrestrial and aquatic insects and other invertebrates occur in the mainland western Arctic portion of the ISR. It is recognized that these species may form an important part of the food chain on which other animals or plants depend and may perform important functions, such as flower pollination and the breakdown of organic matter. Some species such as mosquitoes (**kiktugait**) also have a significant effect on the behaviour and habitat use patterns of by other animals (e.g. caribou) while others, such as butterflies (**taqalukiat**), may be a potential tourist attraction. Species such as the green dragonfly (**niulgia**) known as the "Timberline Emerald" (*Somatochlora sahlbergi*) have characteristics of particular interest to scientists. This species is found across Asia and has a preference for deep mossy ponds. It is one of the few dragonfly species which is known to interbreed with other species of dragonfly. The community recognizes that the unregulated collection of certain rare insects can be a problem.

Important Habitats
Insect habitat is generally abundant and widespread in the western Arctic, however, there are certain habitat areas that tend to support species which have very limited distribution in North America and/or the northern hemisphere.

Examples of these habitats include the following:
- unglaciated areas where dolomite or limestone is common;
- west side of the Richardson Mountains in "White Mountains" area;
- south facing slopes dominated by pasture sage (*Artemesia frigida*).

Conservation Measures
- Protect important habitats and ecological relationships (as appropriate) where these become known.
- Become more familiar with the insect life of the region.

W. Lynch / Parks Canada

PLANTS / NAURIAT OF THE MAINLAND WESTERN ARCTIC

A large number of plant species occur in the mainland western Arctic portion of the ISR. The flora of the area includes approximately 523 species of vascular plants (**nauriat**), at least 100 mosses, 121 lichen, 6 species of liverwort and 11 species of fern. These latter non-vascular plants are collectively known an Ivut. Plants provide an essential component of the ecosystem on which all animals depend. They provide food and shelter for wildlife, influence water quality, provide food for humans and make a valued contribution to the overall appearance of the land. The picking of berries (**asiat**) is an important summer activity.

Research Priority
The community considers research on plants, particularly monitoring the health of important food plants (for humans and animals) a very high priority.

Conservation Measures
Protect important habitats and ecological relationships when these become known. Do not export.

A partial list of plants which have been or may be found in the area is provided below. Not included are the many species of moss, lichen and liverwort referred to above. Plants used for food or other purposes by the Inuit are marked with an asterisk (*). Those which are considered rare are marked with a "+" sign. Where an asterisk is in brackets, there is uncertainty about the plant's identification.

Plant Species List

Achillea sibirica
A. borealis
Aconitum delphinifolium subsp. *delphinifolium*
Agoseris glauca
Agropyron boreale subsp. *alaskanum*
A. b. subsp. *boreale*
A. b. subsp. *hyperarcticum*
A. macrourum
Agrostis borealis
A. scabra
Allium schoenoprasum var. *sibiricum*
Alnus crispa subsp. *crispa*
A. incana subsp. *tenuifolia*
Alopecurus alpinus subsp. *alpinus*
Amerorchis rotundifolia
Andromeda polifolia
Androsace chamaejasme subsp. *lehmanniana*
A. septenrionalis
Anemone drummondii
A. multifida
A. narcissiflora subsp. *interior*
A. parviflora
A. richardsonii
Antennaria friesiana subsp. *compacta*
A. f. subsp. *friesiana*
A. isolepis
A. monocephala subsp. *philonipha*
Aquilegia brevistyla
Arabis hirsuta subsp. *pycrocarpa*
A. drummondii
A. divaricarpa
Arctagrostis latifolia var. *latifolia*
A. l. var. *arundinacea*
Arctophila fulva
Arctostaphylos alpina (Black bearberry, **Paungat** - food)(*)
A. rubra
A. uva-ursi var. *uva-ursi*
Arenaria capillaris
A. humifusa
Armeria maritima subsp. *arctica*
Arnica alpina subsp. *angustifolia*
A. a. subsp. *attenuata*
A. a. subsp. *tomentosa*
A. frigida
A. lessingii subsp. *lessingii*
Artemisia arctica subsp. *arctica*
A. a. subsp. *comata*
A. borealis
A. frigida
A. furcata

Plant Species List (cont'd)

A. tilesii subsp. *elatior*
A. tilesii subsp. *tilesii* (Wormwood - medicine)*
Aster sibiricus
Astragalus aboriginum
A. alpinus subsp. *arcticus*
A. alpinus subsp. *alpinus*
A. bodinii
A. eucosmus subsp. *eucosumus*
A. eucosmus subsp. s*ealei*
A. umbellatus
Atriplex gmelini
Beckannia erucaeformis subsp. baicalensis
Betula glandulosa
B. nana subsp. *exilis* (Dwarf Arctic Birch - food)*
Betula occidentalis
B. papyrifera
Boschniakia rossica
Botrychium boreale
B. lunaria
Braya humilis subsp. *arctica*
B. purpurascens
Bromus pumpellianus var. arcticus
B. p. var. p*umpellianus*
Bupleurum triradiatum subsp. *articum*
Calamagrostis canadensis subsp. *canadensis*
C. c. subsp. *langsdorfii*
C. deschampsioides
C. holmii
C. inexpansa
C. lapponica
C. neglecta
C. purpurascens
Calla palustris
Callitriche hermaphroditica
C. verna
Caltha palustris subsp. *arctica* (Marsh marigold - food)*
Campanula uniflora
Capsella bursa-pastoris
Cardamine bellidifolia
C. hyperborea
C. pratensis subsp. *angustifolia*
Carex albo-nigra
C. amblyorhycha
C. aquatilis
C. atrofusca
C. aurea
C. bicolor
C. bigelowii
C. bonanzensis
C. canescens
C. capillaris
C. capitata
C. chordorrhiza
C. concinna
C. diandra
C. dioica
C. disperma
C. eburnea
C. garberi subsp. *bifaria*
C. glacialis
C. glareosa subsp. *glareosa*
C. holostoma
C. lachenalii
C. laxa
C. limosa
C. livida
C. magellanica
C. machenziei
C. macloviana
C. maritima
C. media
C. membranacea
C. microchaeta
C. microglochin
C. misandra
C. nardina
C. obtusata
C. petricosa
C. podocarpa
C. ramenskii+
C. rariflora (var. *androgyra considerd rare*)+
C. rostrata
C. rotundata
C. rupestris
C. saxatilis
C. scirpoidea
C. subspathacea
C. tenuiflora
C. ursina
C. vaginata
C. williamsii
Cassiope tetragona subsp. *tetragona*
Castilleja caudata
C. elegans
C. hyperborea
C. raupii
Cerastium arvense
C. beeringianum var. *grandiflorum*
Chamaedaphne calyculata
Chenopodium berlandieri subsp. *zschackei*
C. capitatum
Chrysanthemum arcticum subsp. *polare*
C. bipinnatum subsp. *huronense*
C. integrifolium
Chrysosplenium tetrandrum
Cicuta mackenzieana
Cnidium cnidiifolium
Cochlearia officinalis subsp. *arctica*
Corallorrhiza trifida
Cornus canadensis
Corydalis sempervirens
Crepis nana var. *nana*
Cypripedium guttatum subsp. *guttatum*
C. passerinum
Cystopteris fragilis subsp. *dickieana*
C. f. subsp. *fragilis*
Delphinium glaucum
Deschampsia brevifolia
D. caespitosa var. *caespitosa*
D. c. subsp. *orientalis*
Draba cinerea
D. hirta
D. lactea
D. macrocarpa
D. nivalis
Descurainia sophioides
Diapensia lapponica
Dodecatheon pulchellum subsp. *pauciflorum*
D. frigidum
Douglasia arctica

Plant Species List (cont'd)

D. ochotensis
Draba aurea
D. caesia
D. crassifolia
D. lanceolata
D. longipes
D. oligosperma
D. pilosa
D. pseudopilosa
Drosera rotundifolia
Dryas integrifolia subsp. *integrifolia*
D. i. subsp. *sylvatica*
D. octopetala
Dryopteris fragrans
Dupontia fischeri subsp. *fischeri*
D. f. subsp. *psilosantha*
Eleocharis acicularis
E. palustris
Elymus arenarius subsp. *mollis* var. *mollis*
E. a. subsp. *mollis* var. villosissimus
E. innovatus
Empetrum nigrum subsp. *hermaphroditum* (Crowberry/**Paungat** - food, fuel)(*)
Epilobium angustifolium (Fireweed - food, medicine)*
E. davuricum
E. latifolium (River beauty, willowherd - food)*
E. palustre
Equisetum arvense (Horsetail - food, medicine)*
E. fluviatile
E. palustre
E. pratense
E. scirpoides
E. silvaticum (Horsetail - medicine)*
E. variegatum subsp. *variegatum*
Erigeron acris subsp. *politus*
E. compositus
E. elatus
E. eriocephalus
E. grandiflorus subsp. *grandiflorus*
E. humilis
E. hyperboreus
E. lonchophyllus
Eriophorum angustifolium subsp. *subarcticum* (Lettergrass - food, weaving)*
E. brachyantherum
E. callitrix
E. scheuchzeri var. *scheuchzeri*
E. scheuchzeri var. *tenuifolium*
E. russeolum
E. vaginatum subsp. *spissum*
E. vaginatum subsp. *vaginatum*
Erysimum cheiranthoides
E. inconspicuum
Erysimum pallasii
Eutrema edwardsii
Festuca altaica
F. baffinensis
F. brachyphylla
F. rubra
Galium boreale
G. brandegei
G. trifidum subsp. *trifidum*
Gentiana detonsa
G. glauca
G. propinqua subsp. *arctophila*
G. p. subsp. *propinqua*
G. raupii
Geocaulon lividum
Geum glaciale
Goodyera repens var. *ophioides*
Halimolobus mollis
Hedysarum alpinum subsp.*americanum* (Licoriceroot, Eskimo potato, **Masu** - food)*
H. hedysaroides
H. mackenzii
Hierchloe odorata
H. alpina
H. pauciflora
Hippuris tetraphylla
H. vulgaris (Mare's tail - food)*
Honckenya peploides (Seabeach sandwort - food)*
Hordeum jubatum
Juncus arcticus subsp. *ater*
J. biglumis
J. bufonius
J. castaneus subsp. *castaneus*
J. triglumis subsp. *albescens*
J. triglumis subsp. *triglumis*
Juniperus communis subsp. nana
J. horizontalis
Kobresia myosuroides
K. sibirica
K. simpliciuscula
Koeleria asiatica+
Lagotis glauca subsp. *minor*
Lappula occidentalis
Larix laricina var. *alaskensis*
Ledum palustre subsp. *decumbens*
L. p. subsp. *groenlandicum* (Laborador Tea - medicine)*
Lemna trisulca
Lesquerella arctica
Linnaea borealis
Linum perenne subsp. *lewisii*
Listera borealis
Lloydia serotina
Loiseleuria procumbens
Lomatogonium rotatum
Lupinus arcticus
Luzula arctica
L. arcuata subsp. *unalaschcensis*
L. multiflora subsp. *multiflora*
L. parviflora subsp. *parviflora*
L. spicata
L. tundricola
L. wahlenbergii
Lycopodium annotinum
L. confusa
L. selago subsp. *appressum*
L. s. subsp. *selago*
Matricaria matricarioides
Melandrium affine
M. apetalum subsp. *articum*
M. taimyrense
M. taylorae
Menyanthes trifoliata
Mertensia maritima subsp. *maritima*
M. paniculata
Minuartia biflora
M. dawsonensis
M. obtusiloba

Plant Species List (cont'd)

M. rossii
M. rubella
Moehringia lateriflora
Monenses uniflora
Montia fontana subsp. *fontana*
Myosotis alpestris subsp. *asiatica*
Myrica gale var. *tomentosa*
Myriophyllum spicatum
Nuphar polysepalum
Oxycoccus microcarpus
Oxyria digyna (Mountain sorrel - food, medicine)*
Oxytropis arctica
O. borealis
O. campestris subsp. *gracilis*
O. deflexa
O. maydelliana
Papaver hultenii
P. lapponicum subsp. *occidentale*
P. macounii
Parnassia kotzebuei
P. palustris subsp. *neogaea*
Parrya nudicaulis subsp. septentrionalis
Pedicularis capitata
P. kanei subsp. *kanei* (Wooly Lousewort - food)*
P. labradorica
P. langsdorffii subsp. *arctica* (Lousewort - food) (*)
P. lapponica
P. sudetica subsp. albolabiata
P. s. subsp. *interior* (Lousewort - food)(*)
P. verticillata
Petasites frigidus (Sweet Coltsfoot - food)*
P. hyperboreus (Sweet Coltsfoot - food)*
P. palmatus
P. sagittatus
Phippsia algida
Phlox alpigena[1]
P. hoodii
P. sibirica subsp. *richardsonii*
P. s. subsp. *sibirica*
Picea glauca
P. mariana
Pinguicula vulgaris subsp. *vulgaris*
P. villosa
Plantago canescens
P. eriopoda
P. maritima subsp. *juncoides*
Platanthera hyperborea
P. obtusata
Poa alpina
P. arctica subsp. *arctica*
P. glauca
P. lanata
P. paucispicula
P. pratensis
Polemonium acutiflorum
P. boreale subsp. *boreale*
P. pulcherrimum
Polygonum alaskanum (Eskimo rhubarb / Qaugaq - food)*
P. amphibium subsp. laevimarginatum
P. aviculare
P. bistorta subsp. *plumosum* (Bistort - food)*
P. viviparum (food)*
Populus balsamifera subsp. *balsamifera*
Potamogeton berchtoldi
P. filiformis
P. friesii
P. gramineus
P. pectinatus
P. perfoliatus
P. praelongus
P. subsibiricus
P. vaginatus
P. zosterifolius subsp. *zosteriformis*
Potentilla egedii subsp. *egedii*
P. E. subsp. *grandis*
P. E. subsp. *yukonensis*
P. fruticosa
P. hookeriana subsp. *chamissonis*
P. h. subsp. h*ookeriana* var. *hookeriana*
P. hyparctica
P. nivea
P. norvegica subsp. *monspeliensis*
P. palustris
P. pennsylvanica
P. pulchella
P. rubricaulis
P. vahliana
Primula borealis
P. egaliksensis
P. stricta
Puccinellia andersonii+
P. artica+
P. borealis
P. interior
P. phryganodes
P. vaginata
Pulsatilla patens subsp. *multifida*
Pyrola asarifolia var. *purpurea*
P. chlorantha
P. grandiflora
P. minor
P. secunda subsp. *obtusata*
Ranunculus confervoides
R. cymbalaria
R. eschscholtzii
R. gelidus subsp. g*rayi*
R. gmelini subsp. *gmelini*
R. hyperboreus
R. lapponicus
R. nivalis
R. pallasii (Buttercup - food)*+
R. pedatifidus subsp. *affinis*
R. pygmaeus subsp. *pygmaeus*
R. p. subsp. s*abinei*
R. reptans
R. sceleratus subsp. *multifidus*
R. sulphureus var. sulphureus
R. trichophyllus var. *trichophyllus*
R. turneri+
Rhododendron lapponicum
Ribes hudsonianum
R. triste
Rorippa calycina
R. hispida var. *barbareaefolia*
R. islandica subsp. *fernaldiana*
Rosa acicularis
Rubus arcticus subsp. *stellatus* (Arctic raspberry - food)*+
R. chamaemorus (Cloudberry, **Aqpik** - food)*
R. idaeus subsp. *melanolasius*
R. pubescens

Plant Species List (cont'd)

R. acetosa subsp. alpestris
R. sibiricus
R. arcticus (Arctic Dock - food)*
Sagina intermedia
Salix alaxensis (Alaska willow - food, additive to chewing tobacco)*
S. arbusculoides
S. arctica subsp. arctica
S. arctolitoralis
S. arctophila
S. chamissonis+
S. fuscescens
S. glauca subsp. *acutifolia*
S. g. subsp. *callicarpaea*
S. g. subsp. *desertorum*
S. hastata
S. lanata
S. myrtillifolia
S. niphoclada
S. phlebophylla
S. phylicifolia
S. polaris subsp. *pseudopolaris*
S. pulchra (food, medicine, additive to chewing tobacco and snuff)*
S. reticulata subsp. *reticulata*
Sanguisorba officinalis
Saussurea angustifolia
Saxifraga caespitosa
S. cernua (Bulblet saxifrage - food)(*)
S. exilis
S. foliolosa var. foliolosa
Saussurea angustifolia
Saxifraga caespitosa
S. cernua (Bulblet saxifrage - food)(*)
S. exilis
S. foliolosa var. *foliolosa*
S. hieracifolia
S. hirculus (Bog saxifrage - food)(*)
S. nivalis
S. oppositifolia subsp. *oppositifolia*
S. punctata subsp. *nelsoniana* (Cordate-leaved Saxifragi - food)*
S. reflexa
S. rivularis var. *flexuosa*
S. rivularis var. *rivularis*
S. tricuspidata
Sedum rosea subsp. *integrifolium*
Selaginella sibirica
Senecio atropurpureus subsp. *frigidus*
S. a. subsp. *tomentosus*
S. congestus
S. hyperborealis
S. lugens
S. pauperculus
S. resedifolius
S. yukonensis
Shepherdia canadensis
Sibbaldia procumbens
Silene acaulis subsp. *acaulis*
S. a. subsp. *subacaulescens*
Silene repens
Smelowskia calycina
Solidago multiradiata
Sparganium hyperboreum
S. multipedunculatum
Spiraea beauverdiana
Stellaria calycantha subsp. *interior*
S. calycantha var. *isophylla*
S. crassifolia
S. edwardsii
S. humifusa
S. laeta
S. longipes
S. media
S. monantha
Taraxacum alaskanum
T. ceratophorum
T. lacerum ((Dandelion - food)*
T. phymatocarpum
Thellungiella salsuginea
Thlaspi arcticum
Tofieldia coccinea
T. pusilla
Trichophorum caespitosum
Triglochin maritimum
T. palustris
Tripleurospermum phaeocephalum
Trisetum spicatum subsp. *molle*
T. s. subps. *spicatum*
Utricularia intermedia
U. vulgaris subsp. *macrorhiza*
Vaccinium uligonosum subsp. *alpinum* (Blueberry, **Asivit** - food, fuel)*
V. u. subsp. *microphyllum* (Blueberry, **Asivit** - food, fuel)*
V. vitis-idaea subsp. *minus* (Lingonberry, Cranberry, **Kimingnat** - food)*
Valeriana capitata (Valerian - medicine)*
Viola epipsila subsp. *repens*
Wilhelmsia physodes
Woodsia alpina+
W. glabella
Zygadenus elegans

+ Listed as rare vascular plants in: Argus, G.W. and K.M. Pryer 1990 Rare Vascular Plants in Canada. Canadian Museum of Nature.
* Locally used food or medicine plant.

Source:
Argus G.W. and K. Pryer, 1990. Rare Vascular Plants in Canada. Canadian Museum of Nature. Ottawa.

Hulten, E., 1968. Flora of Alaska and Neighboring Territories. A Manual of the Vascular Plants. Stanford University Press. Stanford, California.

HARVEST SEASONS IN THE PAULATUK PLANNING AREA

Jan 1-15	Jan 15-31	Feb 1-15	Feb 15-28	Mar 1-15	Mar 15-31	Apr 1-15	Apr 15-30	May 1-15	May 15-31	Jun 1-15	Jun 15-30
furbearers	furbearers	furbearers	furbearers	furbearers	furbearers	furbearers					
seal	seal	seal	seal	seal	seal	seal	seal	seal	seal	seal	seal
polar bear	polar bear	polar bear	polar bear	polar bear	polar bear	polar bear					
				caribou	caribou	car bou	car bou	caribou	caribou	caribou	caribou
fish	fish	fish	fish	fish	fish	fish	fish	fish	fish	fish	fish
								birds	birds		

Jul 1-15	Jul 15-31	Aug 1-15	Aug 15-31	Sep 1-15	Sep 15-30	Oct 1-15	Oct 15-31	Nov 1-15	Nov 15-30	Dec 1-15	Dec 15-31
								furbearers	furbearers	furbearers	furbearers
seal	seal	seal	seal	seal	seal	seal	seal	seal	seal	seal	seal
beluga	beluga	beluga									
caribou	caribou	caribou	caribou	caribou	caribou	caribou	caribou	caribou			
fish	fish	fish	fish	fish	fish	fish	fish	fish	fish	fish	
birds	birds	birds	birds	birds							
								muskox	muskox	muskox	muskox

APPENDIX A

PRINCIPLES OF WILDLIFE HARVESTING AND MANAGEMENT FROM THE INUVIALUIT FINAL AGREEMENT

1. A basic goal of the Inuvialuit Land Rights Settlement is to protect and preserve the Arctic wildlife, environment and biological productivity through the application of conservation principles and practices.

2. In order to achieve effective protection of the ecosystems in the Inuvialuit Settlement Region, there should be an integrated wildlife and land management regime, to be attained through various means, including the coordination of legislative authorities.

3. It is recognized that in the future it may be desirable to apply special protective measures under laws, from time to time in force, to lands determined to be important from the standpoint of wildlife, research or harvesting. The appropriate ministers shall consult with the Inuvialuit Game Council from time to time on the application of such legislation.

4. It is recognized that one of the means of protecting and preserving the Arctic wildlife, environment and biological productivity is to ensure the effective integration of the Inuvialuit into all bodies, functions and decisions pertaining to wildlife management and land management in the Inuvialuit Settlement Region.

5. The relevant knowledge and experience of both the Inuvialuit and the scientific communities should be employed in order to achieve conservation.

APPENDIX B

GOALS AND PRINCIPLES OF THE INUVIALUIT RENEWABLE RESOURCE CONSERVATION AND MANAGEMENT PLAN

GOALS:

1. **Conserve Resource Base**. To conserve arctic animals and plants and their associated ecosystems within the Inuvialuit Settlement Region.

2. **Integrated Management**. To provide for integrated renewable resource and land management.

3. **Co-operation**. To co-operatively manage shared resources.

4. **Enhance Understanding**. To enhance understanding and appreciation of arctic ecosystems.

PRINCIPLES:

1. **Diversity**. Maintaining the great variety of animals and plants will help ensure the stability and productivity of the arctic ecosystem.

2. **Productivity & Culture**. Maintenance of productive arctic ecosystems is essential for the survival of Inuvialuit cultural values, social systems, local economy and sense of well being.

3. **Communication, Co-operation**. Long term protection of ecosystems can best be achieved through active communication and co-operation of all parties concerned, including the combination of renewable resource and land management activities.

4. **Future Options**. Maintenance of the renewable resource base and its enhancement, where appropriate, will maximize Inuvialuit future options.

5. **Protection**. Special conservation measures, including new legislation, may be necessary from time to time, to protect the renewable resource base.

6. **Population Management**. Management of fish and wildlife resources as discrete populations, where these can be identified is essential to their conservation.

7. **Habitat**. Careful management of habitat is vital to the maintenance of abundant fish and wildlife populations.

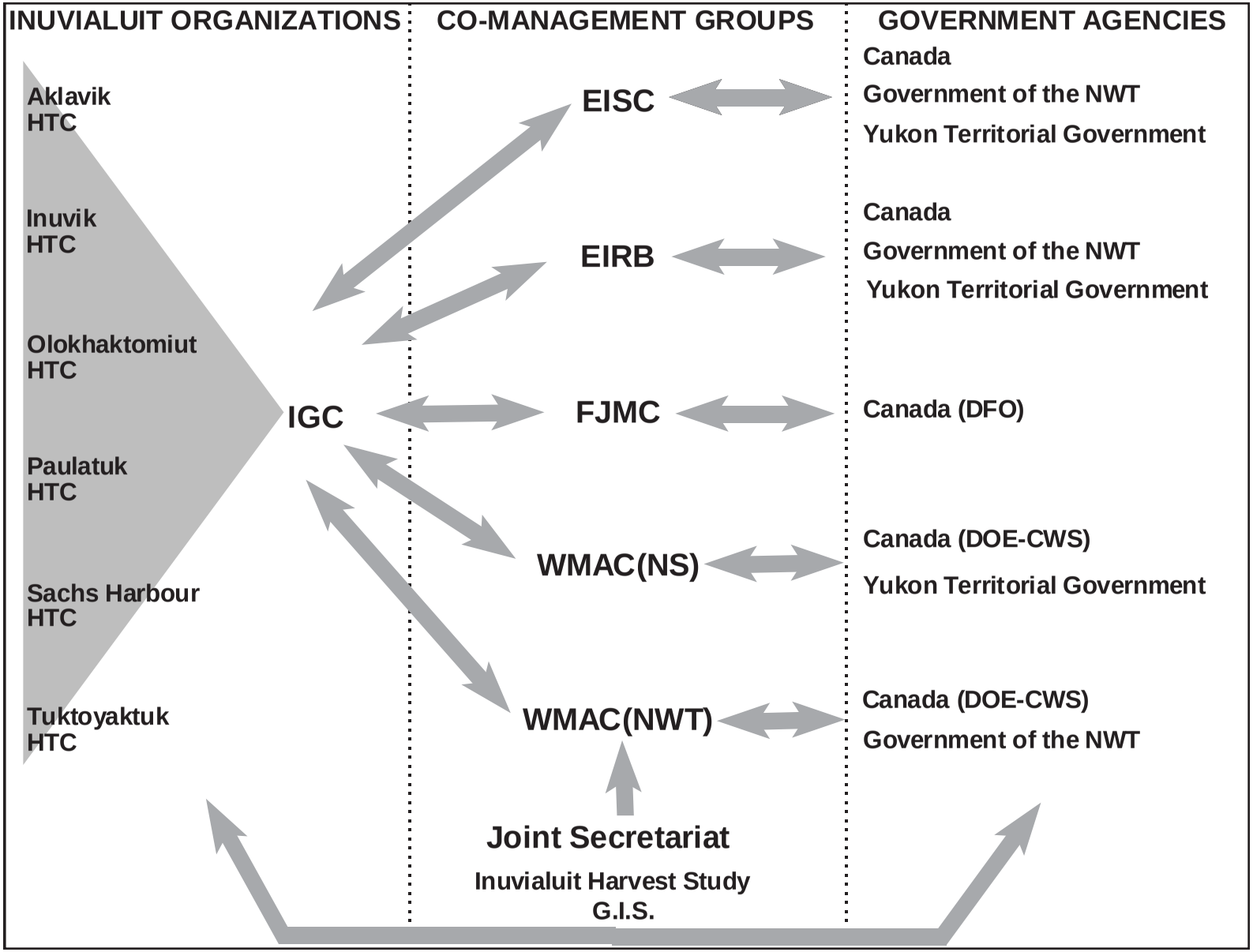
8. **Resource Use**. Subsistence and recreational use of well managed renewable resources is desirable and consistent with their conservation.

9. **Participation**. Participation of the Inuvialuit in renewable resource and land management is essential for the conservation of Arctic plants and animals and the habitats on which they depend.

10. **Traditional Knowledge**. Inuvialuit knowledge and experience are essential elements in the proper management of renewable resources in the Settlement Region.

APPENDIX C

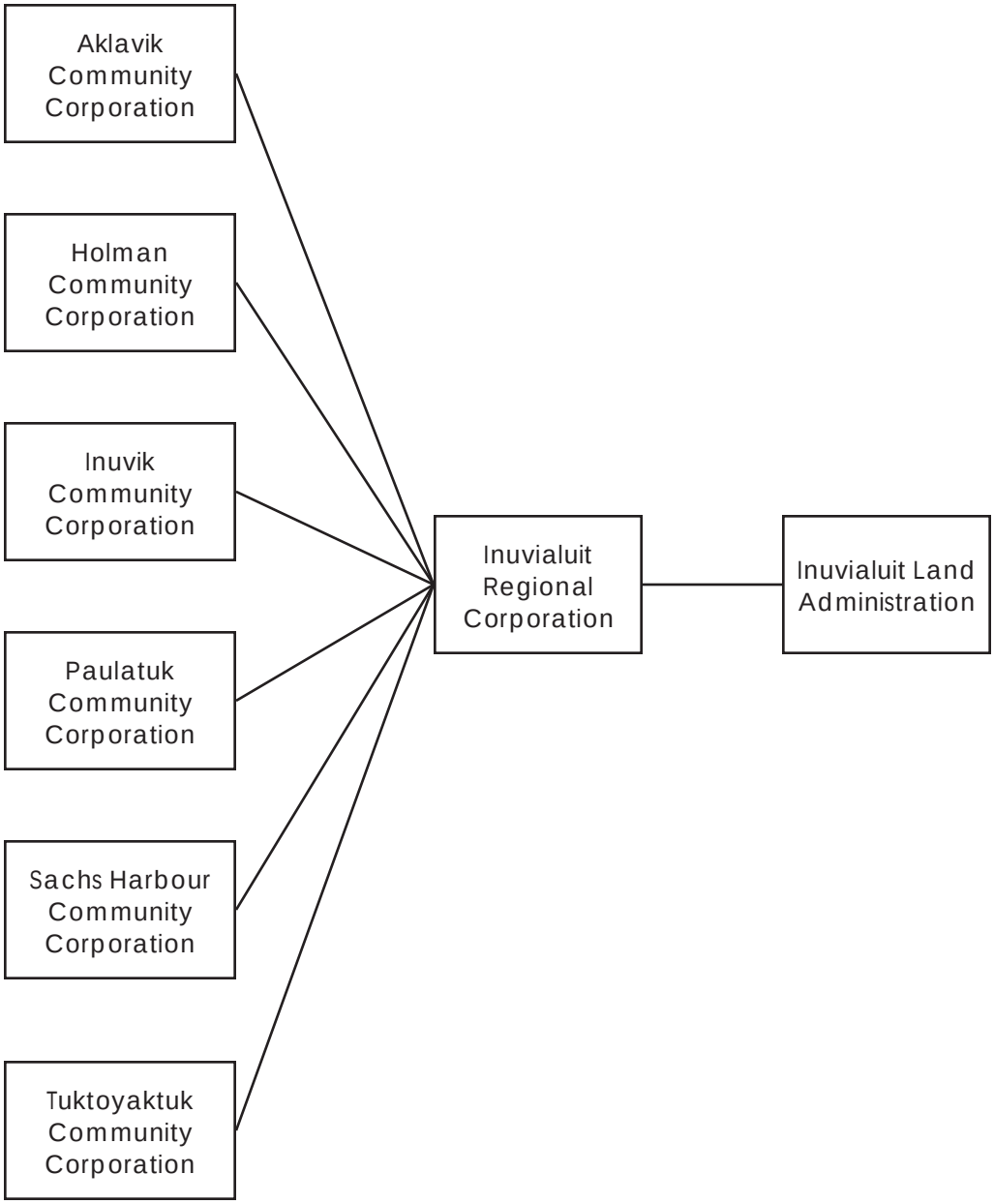
ORGANIZATION CHART FOR RENEWABLE RESOURCE MANAGEMENT UNDER THE INUVIALUIT FINAL AGREEMENT



* Arrows represent the flow of information between organizations

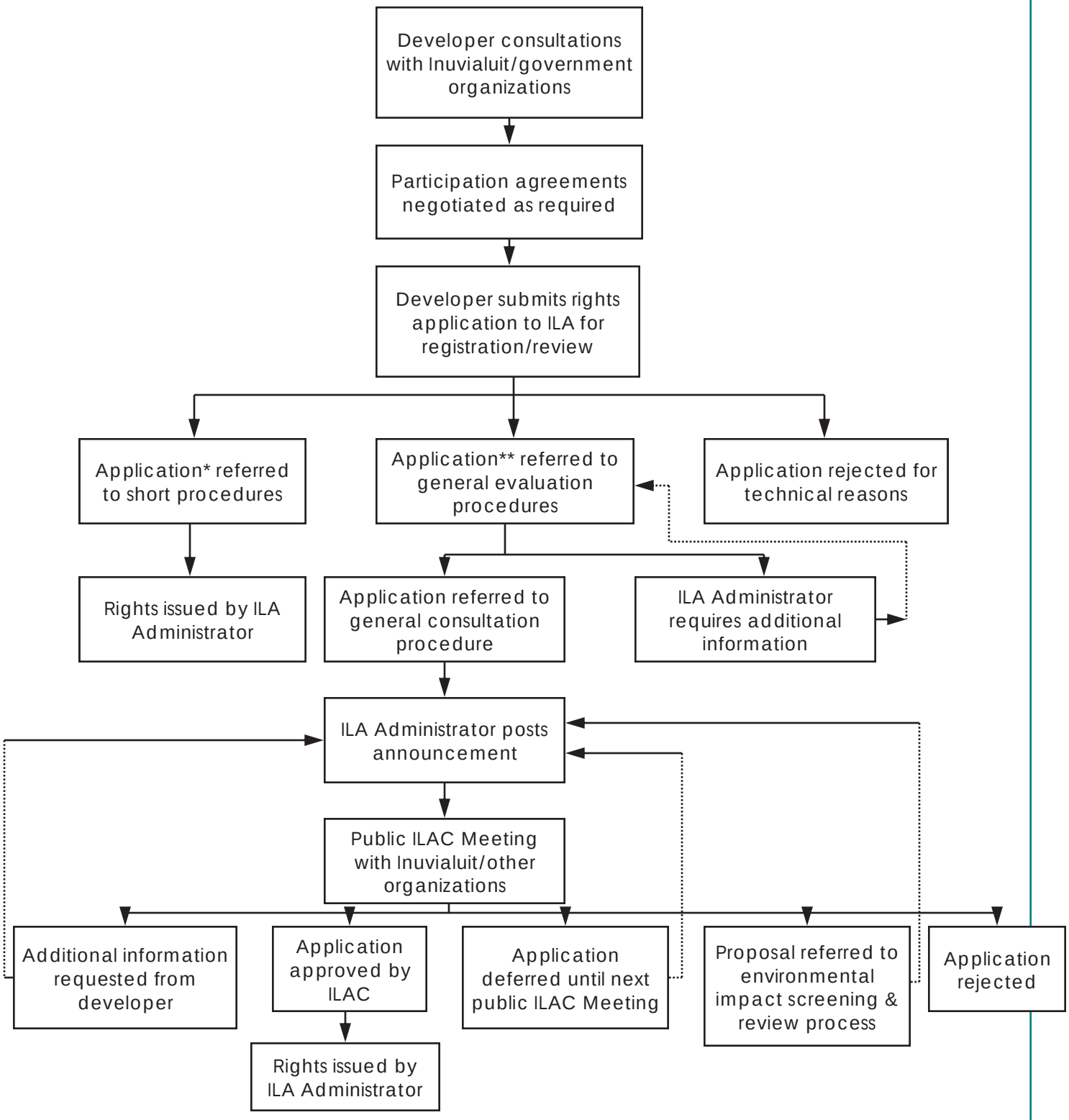
APPENDIX D

ORGANIZATION CHART FOR PRIVATE LAND MANAGEMENT UNDER THE INUVIALUIT FINAL AGREEMENT



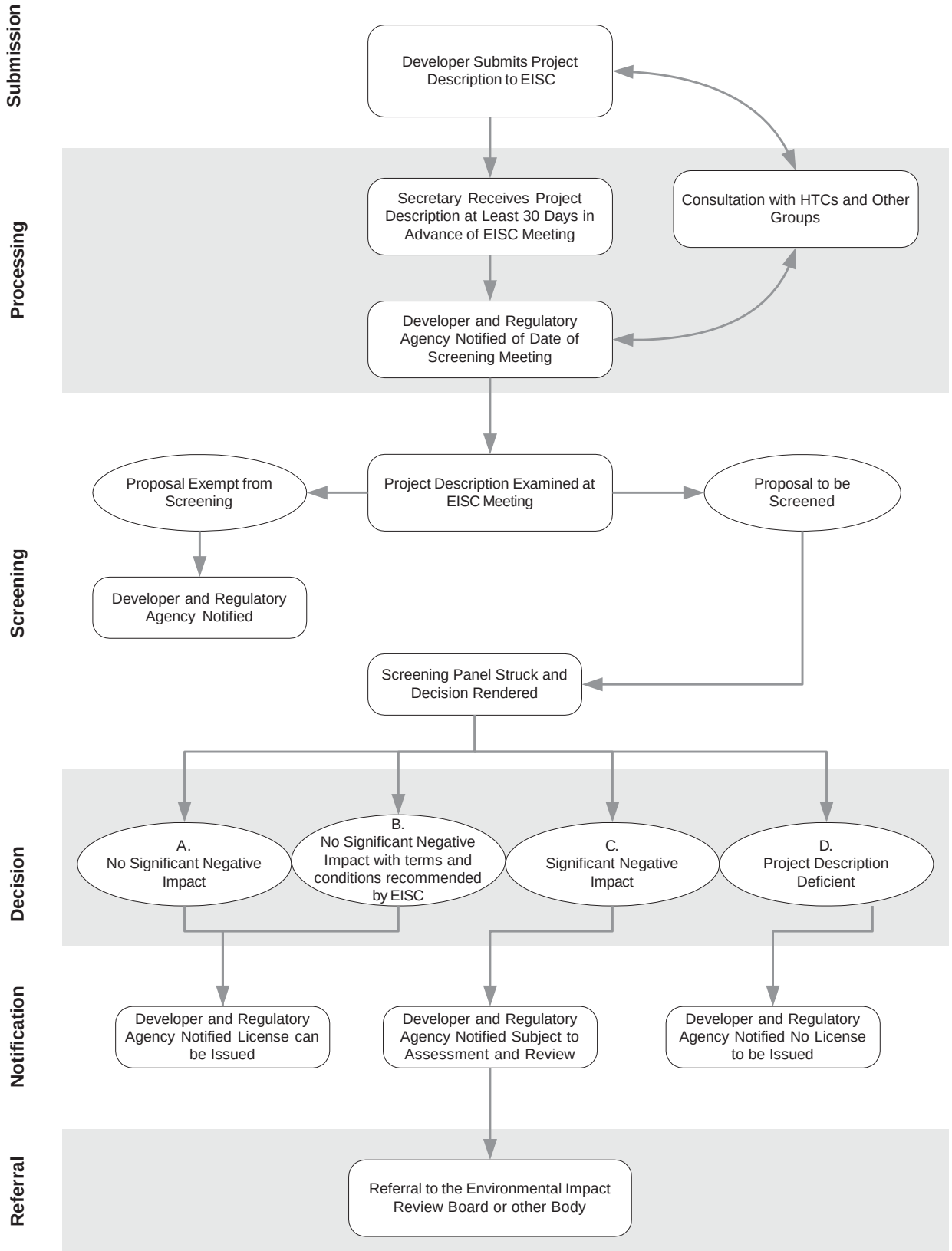
APPENDIX E

INUVIALUIT LAND ADMINISTRATION APPLICATION REVIEW PROCESS



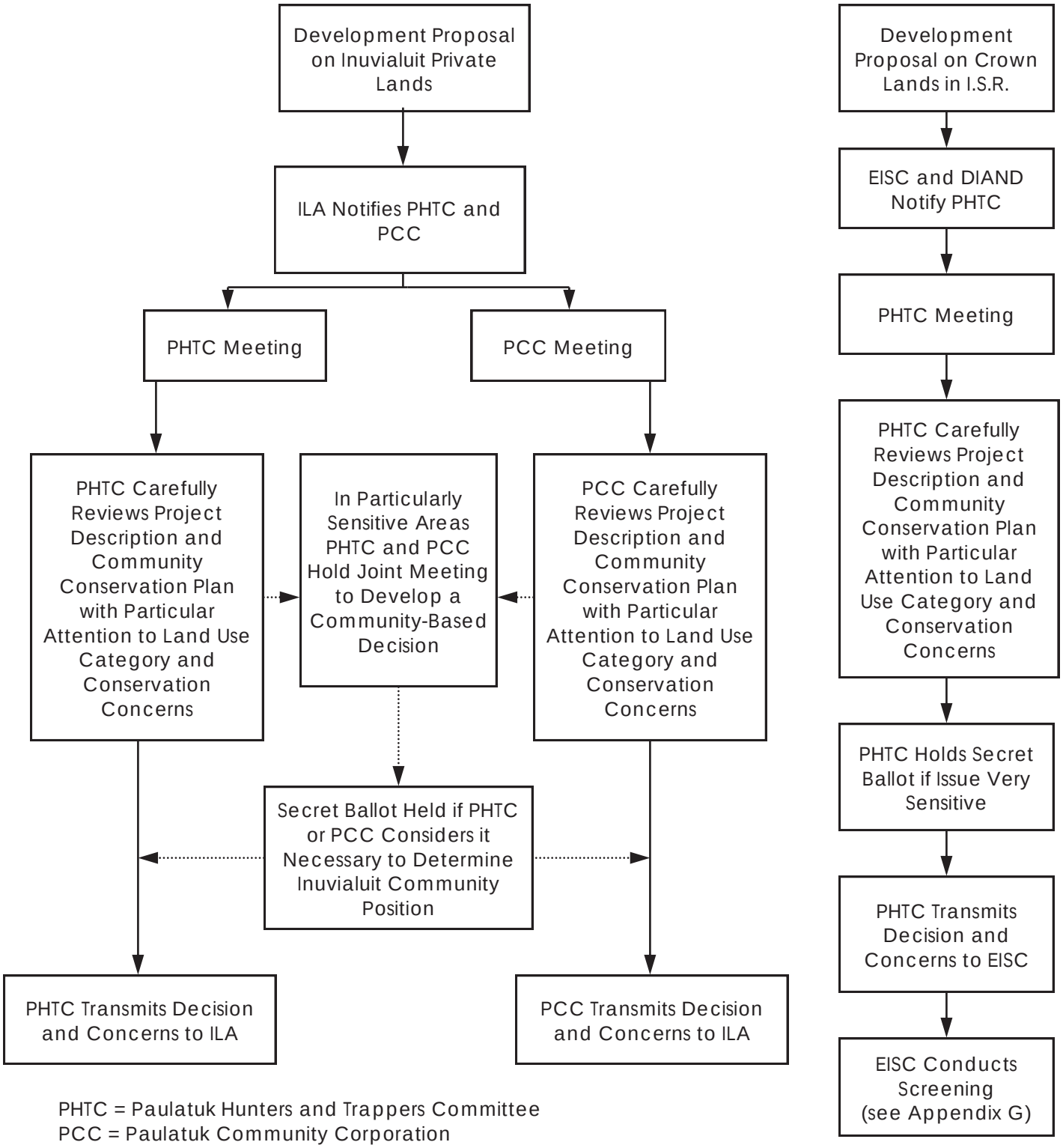
APPENDIX F

INUVIALUIT SETTLEMENT REGION ENVIRONMENTAL IMPACT SCREENING AND REVIEW PROCESS



APPENDIX G

PAULATUK LAND USE DECISION PROCESS



PHTC = Paulatuk Hunters and Trappers Committee
PCC = Paulatuk Community Corporation
ISR = Inuvialuit Settlement Region
EISC = Environmental Impact Screening Committee
DIAND = Department of Indian Affairs and Northern Development

APPENDIX H

CONDUCT OF OPERATIONS

Section 19. From Inuvialuit Land Administration Manual of Rules and Procedures

19(1) Activities Prohibited on Inuvialuit Land
19(2) Excavation
19(3) Water Crossings
19(4) Clearing of Lines, Trails or Rights of Way
19(5) Survey Monuments
19(7) Contingency Plans
19(8) Pingos
19(9) Archaeological Sites
19(10) Campsites
19(11) Sewage
19(12) Restoration of an Area
19(13) Removal of Buildings and Equipment
19(16) Emergencies
19(17) Display of Rights
19(18) Staking
19(19) Cutting of Trees
19(20) Availability of Rules and Procedures

CONDUCT OF OPERATIONS

ACTIVITIES PROHIBITED ON INUVIALUIT LAND

19(1) No Holder shall, unless expressly authorized in his Right or in writing by the Administrator or Inspector:

(a) conduct an operation within 30 m (98 ft.) of a known monument or a known or suspected archaeological site or burial ground;

(b) when excavating Inuvialuit Land within 100 m (328 ft.) of any stream excavate at a point that is below the normal high water mark of that stream, except for buried pipelines;

(c) deposit on the bed or on the ice of any waterbody any excavated material; or

(d) when placing a fuel or supply cache within 100 m (328 ft.) or any stream or waterbody, place the fuel or supply cache below the normal high water mark of that stream or waterbody;

EXCAVATION

19(2) Subject to the terms and conditions of his Right or the express written authority of an Inspector, every Holder, other than the Holder of a Quarry Licence, Quarry Concession or Concession, shall replace all materials removed by him in the course of excavating, other than rock trenching, and shall level and compact the area of excavation, except for backfill over buried pipelines and sumps.

WATER CROSSINGS

19(3) Subject to the terms and conditions of his Right or the express written authority of an Inspector, every Holder shall:

(a) remove any material or debris deposited in any stream or waterbody in the course of an operation, whether for the purpose of constructing a crossing or otherwise, and

(b) restore the channel and bed of the stream or waterbody to their original alignment and cross-section, prior to the completion of the operations or prior to the commencement of spring break-up, whichever occurs first.

CLEARING OF LINES, TRAILS OR RIGHTS OF WAY

19(4) Unless expressly authorized in a Right, no Holder shall:

(a) clear a new line, trail or right-of-way where there is an existing line, trail or right-of-way that can be used;

(b) clear a line, trail, or right-of-way wider than 10 m (33 ft.); or,

(c) while clearing a line, trail or right-of-way, leave leaners or debris in standing timber.

19(5) Where, in the opinion of an Inspector, serious erosion may result from an operation, the Holder shall adopt such measures to control erosion as may be required by the Inspector.

SURVEY MONUMENTS

19(6) Where a boundary, geodetic or topographic monument is damaged, destroyed, moved or altered in the course of an operation, the Holder shall, in accordance with these Rules and laws generally applicable:

(a) report the fact immediately to the Administrator and respective authorities, and pay the costs of:
  (i) investigating such damage, destruction, movement or alteration, and
  (ii) restoring or re-establishing the monument to its original condition or its original place; or
(b) cause the monument to be restored or re-established at his own expense.

CONTINGENCY PLANS

19(7) Holders of a Land Use Permit Class A, Commercial Lease Class 1, Well-Site Lease, Public Lease, Quarry Concession, Concession, Reconnaissance Permit, or Right of Way shall submit to the Administrator and, from time to time, update comprehensive contingency plans to cope with possible major accidents, disasters or catastrophic events during the operations.

PINGOS

19(8) No vehicle shall have access to any Pingo, including a zone of 100 m (328 ft.) surrounding such Pingo.

ARCHAEOLOGICAL SITES

19(9) Where in the course of an operation, a suspected archaeological site or burial ground is unearthed or otherwise discovered, the Holder shall immediately:

(a) suspend the operation on the site; and
(b) notify the Administrator or an Inspector of the location of the site and the nature of any unearthed materials, structures or artifacts.

CAMPSITES

19(10) Subject to the terms and conditions of the Right, every Holder shall dispose of all garbage, waste and debris from any campsite used in connection with an operation by removal, burning or burial or by such other method as may be directed by an Inspector.

SEWAGE

19(11) Sanitary sewage produced in connection with operations, shall be disposed of in accordance with the Public Health Ordinance of the Northwest Territories and any regulations made under the

applicable Ordinance, or as stipulated by the Administrator.

RESTORATION OF AN AREA

19(12) Subject to the terms and conditions of the Right, every Holder shall, after completion of the operations, restore the area as nearly as possible to the same conditions as it was prior to the commencement of the operations.

REMOVAL OF BUILDINGS AND EQUIPMENT

19(13) Subject to subsections 19(14) and 19(15) hereof, every Holder shall, on completion of the operation, remove all buildings, machinery, equipment, materials and fuel drums or other storage containers used in connection with the operations.

19(14) A Holder may, with the prior written approval of the Administrator, leave on Inuvialuit Lands such buildings, equipment, machinery and materials as the permittee deems may be required for future operations or other operations in the area, but any equipment, machinery or materials so left shall be stored in a manner, at a location and for a duration approved by the Administrator, and apply for the reduction of the Land Occupancy Rent as provided for in subsection 17(14) hereof. Where applicable, the Holder may also make an Application for the reclassification of his Right.

19(15) Subject to any applicable mining legislation on 7(1)(b) Lands, a Holder may, without the prior approval of the Administrator, leave diamond drill cores at a drill site on Inuvialuit Lands.

EMERGENCIES

19(16) Any person may, in an emergency that threatens life, property or the natural environment, carry out such operations as he deems necessary to cope with the emergency, whether or not the operation is carried out in accordance with these Rules or any Right that he may have and such person shall immediately thereafter send a written report to the Administrator describing the duration, nature and extent of the emergency operation.

DISPLAY OF RIGHTS

19(17) Every Holder engaged in a work or undertaking authorized by a Right shall display:

(a) an exact copy of the Right, including the conditions thereof, in a prominent place of the operations; and

(b) the ILA number assigned to the Right on such articles and equipment, in such a manner and at such places as the Administrator may require.

STAKING

19(18) A person who desires to obtain a Quarry Concession, Coal Concession or Mineral Concession, shall stake such lands in the following manner:

(a) the area shall not exceed the maximum area permitted by these Rules and the length of any areas shall not exceed twice its width;

(b) the area shall be rectangular in form except where a boundary of a previously staked tract is adopted as common to both areas;

(c) the land shall be marked by the applicant with posts firmly fixed in the ground, one at each corner; alternatively, rock cairns may be used in lieu of posts;

(d) each post shall be at least 25 cm^2 (4 in^2) and when firmly planted shall not be less than 1.25m (4 ft.) above the ground;

(e) each post shall bear markings showing the number of the post, the name of the applicant, the date of the staking and the kind of materials which it is desired to remove;

(f) when rock cairns are used they shall be well constructed and shall not be less than two feet high and two feet in diameter at the base and a metal container shall be built into the cairn, and a notice bearing the number of the cairn, name of the applicant, the date of the staking and the kind of material which it is desired to remove shall be placed therein;

(g) in a timbered area the lines between the posts shall be clearly marked; and in treeless areas mounds of earth or rock not less than 6 m (2 ft.) high and 6 m (2 ft.) in diameter at the base may be used to mark the lines between the cairns;

(h) the applicant shall post a written or printed notice on a post or in a cairn setting out his intention to apply for a Quarry Concession within the time prescribed by these Rules; or

(i) if two or more persons apply for the same area, the person who first staked the area in accordance with these Rules shall be entitled to priority in respect to the issuance of a Quarry Concession.

CUTTING OF TREES

19(19) Holders shall only cut trees where there is no reasonable alternative than cutting trees for the creation of seismic lines, Right-of-Ways, or areas necessary for work camps or buildings. Otherwise, Holders shall under no circumstances cut trees unless specifically authorized in writing by the Administrator.