



# QUTTINIRPAAQ

NATIONAL PARK OF CANADA

## *Management Plan*





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*Management Plan*

OCTOBER 2009

# Minister's Foreword



Canada's national historic sites, national parks and national marine conservation areas offer Canadians from coast-to-coast-to-coast unique opportunities to experience and understand our wonderful country. They are places of learning, recreation and inspiration where Canadians can connect with our past and appreciate the natural, cultural and social forces that shaped Canada.

From our smallest national park to our most visited national historic site to our largest national marine conservation area, each of these places offers Canadians and visitors several experiential opportunities to enjoy Canada's historic and natural heritage. These places of beauty, wonder and learning are valued by Canadians - they are part of our past, our present and our future.

Our Government's goal is to ensure that Canadians form a lasting connection to this heritage and that our protected places are enjoyed in ways that leave them unimpaired for present and future generations.

We see a future in which these special places will further Canadians' appreciation, understanding and enjoyment of Canada, to the economic well-being of communities, and to the vitality of our society.

Our Government's vision is to build a culture of heritage conservation in Canada by offering Canadians exceptional opportunities to experience our natural and cultural heritage.

These values form the foundation of the new management plan for Quttinirpaaq National Park of Canada. I offer my appreciation to the many thoughtful Canadians who helped to develop this plan, particularly to our dedicated team from Parks Canada, the Quttinirpaaq Park Planning Team, the Quttinirpaaq Joint Park Management Committee, the Qikiqtani Inuit Association, the Nunavut Wildlife Management Board, the communities of Grise Fiord and Resolute Bay, and other government departments, organizations and individuals. They have all demonstrated their good will, hard work, spirit of co-operation and extraordinary sense of stewardship.

In this same spirit of partnership and responsibility, I am pleased to approve the Quttinirpaaq National Park of Canada Management Plan.

A handwritten signature in blue ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

Jim Prentice  
*Minister of the Environment*





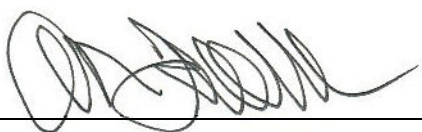


# Recommendation Statement

## QUTTINIRPAAQ NATIONAL PARK OF CANADA

### MANAGEMENT PLAN

Recommended for approval by:



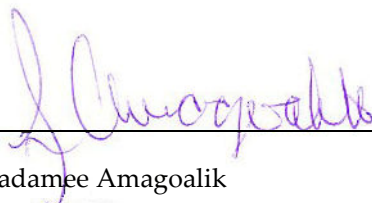
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Parks Canada



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Joadamee Amagoalik  
Chair  
Quttinirpaaq Joint Inuit/Government Park Planning & Management Committee

# Acknowledgements

The preparation of this plan involved many people. The input of this diverse group of individuals has resulted in a plan that will guide the management of the park for many years. The following individuals have made special contributions to the plan and deserve mention:

## **QUTTINIRPAAQ NATIONAL PARK OF CANADA PARK PLANNING TEAM**

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Inuktitut translations and interpretation during this planning process were completed by a number of individuals, including Susan Salluviniq, Rebecca Mike, Marty Kulugutuk and Connie Alivuktuk. Qujannamik!



## In Memory



**MINNIE NUNGAQ**  
at Tanquary Fiord,  
Quttinirpaaq National Park,  
June 2002

Minnie Nungaq was one of the original members of the Joint Park Management Committee when it was first created for Quttinirpaaq National Park.

Minnie was a bright and energetic person who contributed greatly toward creating a management plan for the park. Minnie died in a tragic accident in late 2002. Although she is gone, her words and wisdom are still found in this management plan.

Her straightforwardness and her insight into Inuit values will be missed.



**ABRAHAM PIJAMINI**

Abraham Pijamini was one of the first Inuit to participate in the negotiations for the establishment of Quttinirpaaq National Park.

Abraham continued his involvement with the park by becoming one of the original members of the Joint Park Management Committee. Abraham's excellent knowledge of the environment, land, and historical and cultural features of the landscape contributed greatly to the development of the management plan for the park.

His knowledge and wisdom of the park area are recognized within this management plan.

**Connie Alivaktuk**

Connie Alivaktuk was the Inuktitut interpreter for the early meetings of the Park Planning Team and the Joint Park Management Committee. Her work was of great assistance in the development of this management plan. She passed away on March 27, 2006.

# Executive Summary

Located on Ellesmere Island, Quttinirpaaq National Park of Canada occupies the northernmost portion of the Canadian High Arctic. It is a remote, beautiful, and sometimes hostile environment. Established in 1988, the park is remarkable for its extensive glaciers and ice caps, desert-like conditions, and life forms that are uniquely adapted to the extreme polar environment. Quttinirpaaq is the second largest national park in Canada and plays a significant role in our understanding of global environmental change, protecting Inuit archaeological features, and maintaining Canadian sovereignty.

The park receives approximately 150 visitors annually; up to forty are backpackers or skiers, and the remainder arrive by cruise ship for a brief visit. Travelling in Quttinirpaaq is often viewed as a once-in-a-lifetime opportunity. The experience boasts unique, dramatic landscapes and wildlife, extreme remoteness, and opportunities to travel freely over vast distances.

Over the next five years, the management plan will guide the management of Quttinirpaaq. It was developed with Inuit of Nunavut, who manage the park cooperatively with Parks Canada. The plan describes a fifteen-year vision of the park that focuses on maintenance and protection of the park's ecological integrity and cultural resources, understanding of High Arctic ecosystems and history, providing memorable experiences and learning opportunities, partnerships with key organizations, and involvement of the public.

The park has a high level of ecological integrity. The native components of the park's ecosystems are present and key ecological processes are not significantly impaired. Wildlife populations are relatively healthy, although the High Arctic Peary caribou population that is found in the park is being assessed within the Canadian species-at-risk program. Impacts from global environmental threats, such as climate change, ozone thinning, and long-range pollutants, are evident in the park. Local impacts are relatively small-scale, but include contaminated sites and noise from aircraft.

The priorities for park management are set out in the plan in the form of goals, objectives, and key actions. Targets are also identified to measure progress over time. Priorities are:

1. To manage the use of Quttinirpaaq in order to protect and maintain its ecological integrity, cultural resources and Arctic wilderness experiences.
2. To describe and understand park ecosystems through science and Inuit Traditional Knowledge and through the stories and knowledge of people who have a long connection to the park area, and to incorporate this information in heritage presentation.
3. To improve site-specific ecological integrity through Environmental Management System measures, local clean-ups, and site remediation.
4. To identify the state of Inuit archaeological sites and historical artifacts in the park by monitoring representative and unique sites.
5. To communicate the results of an active research and monitoring program, emphasizing global environmental change, in order to make Quttinirpaaq relevant to Canadians.
6. To build awareness, understanding and support of Quttinirpaaq with Canadians, visitors, and the residents of Grise Fiord and Resolute Bay through innovation in heritage presentation.

7. To increase the community tourism capacity of and the tourism benefits for Grise Fiord and Resolute Bay in partnership with others.
8. To continue to manage Quttinirpaaq cooperatively.
9. To aim to have a representative level of Inuit employment in the Nunavut Field Unit of Parks Canada by 2020<sup>1</sup>.
10. To initiate, maintain, and nurture key partnerships for science, cultural resources management, logistics, tourism and marketing, and education.
11. To develop a suite of indicators and targets for the management of Quttinirpaaq.

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<sup>1</sup> At the signing of the *Nunavut Land Claims Agreement*, Nunavut Tunngavik Incorporated identified the representative level as 85%.

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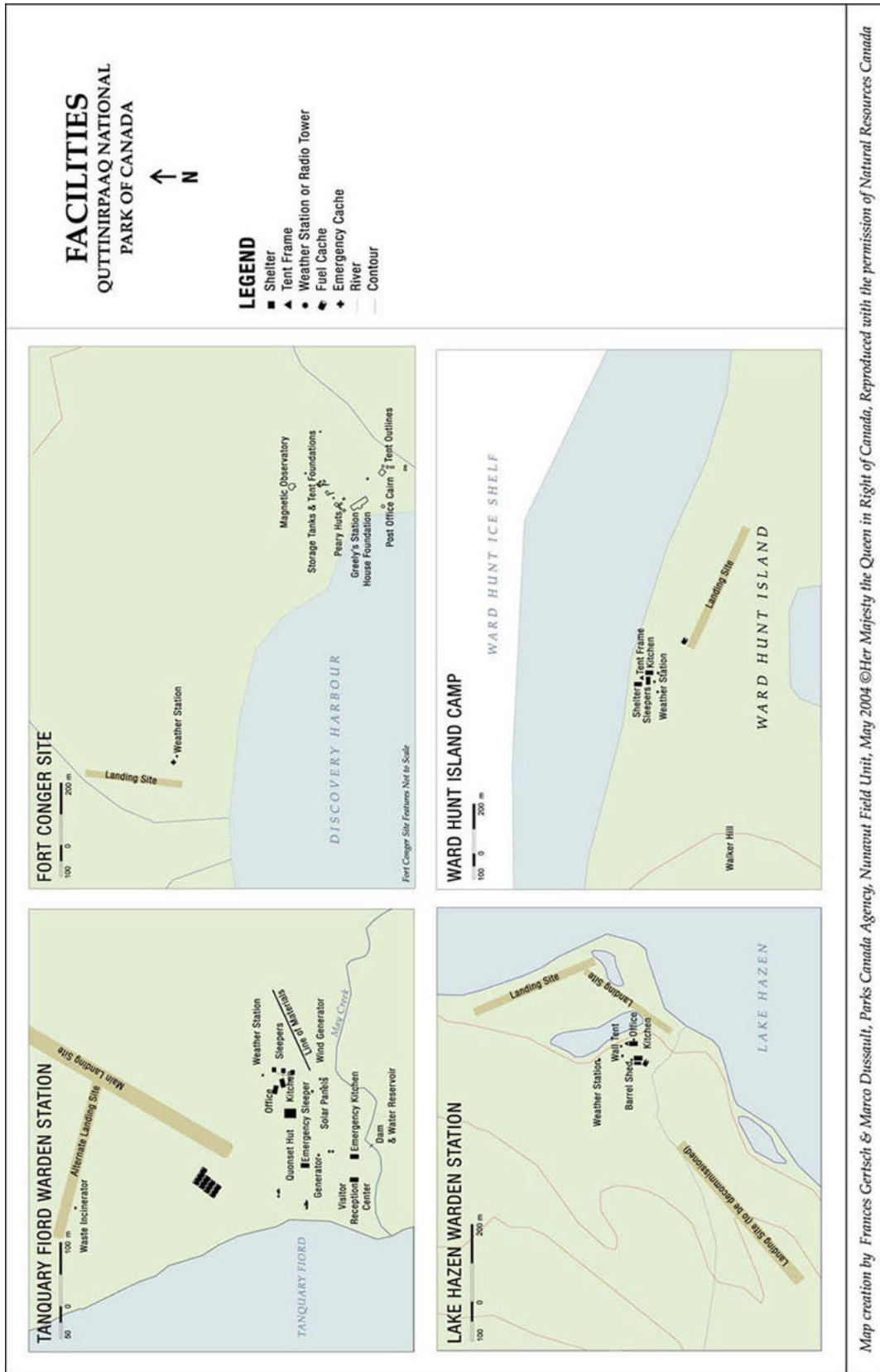
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FIGURE 2. Areas of Interest in Quttinirpaaq National Park of Canada





# 1. Introduction

Quttinirpaaq National Park of Canada is located at the northern end of Ellesmere Island in the Canadian Arctic Archipelago. At 37,775 km<sup>2</sup>, Quttinirpaaq is the second largest national park in Canada.

This is the first park management plan for Quttinirpaaq National Park of Canada. Interim Management Guidelines for the park were approved in 1988. The *Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq and Sirmilik National Parks (1999)* required park managers to use the draft management plan from 1994 as Interim Management Guidelines until this management plan was completed.

## 1.1 PURPOSE OF THE PARK MANAGEMENT PLAN

A management plan is the central document that guides Parks Canada in the protection, management, and operation of a national park. As the key accountability document for the park to the Canadian public, the management plan outlines how Parks Canada's legislated mandate of protection, education, and enjoyment of the national park will be met. The plan also provides the framework for how Parks Canada, Inuit, stakeholders, and the general public will work together to manage the park for the long term.

## 1.2 LEGISLATIVE AND POLICY BASIS FOR THE PARK MANAGEMENT PLAN

The *Canada National Parks Act* requires that a management plan be created and tabled in Parliament for each national park. A management plan must be developed with the involvement of the Canadian public, and must be formally reviewed every five years. The plan has a lifespan of fifteen years.

The *Nunavut Land Claims Agreement*<sup>2</sup> also requires the development of a park management plan for the national parks in Nunavut. The *Nunavut Land Claims Agreement*<sup>3</sup> requires that this management plan accord with the relevant terms and conditions of the *Inuit Impact and Benefit Agreement*.

The park management plan, and all operations of the national park, will comply with Parks Canada's *Guiding Principles and Operational Policies*.

## 1.3 INUIT QAUJIMAJATUQANGIT

Inuit Qaujimajatuqangit refers to the knowledge and understanding of all things that affect the daily lives of Inuit and the application of that knowledge for the survival of a people and their culture. It is a knowledge that has sustained the past and that is to be used today to ensure an enduring future<sup>4</sup>. Inuit Qaujimajatuqangit will be incorporated into the management of Quttinirpaaq National Park.

The six guiding principles of Inuit Qaujimajatuqangit are:

1. **Pijitsimjig:** The concept of serving and providing for; a concept related to stewardship.
2. **Aajiqatigiingni:** The Inuit way of decision-making by comparing views or taking counsel; consensus decision-making.

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<sup>2</sup> *Nunavut Land Claims Agreement*, Section 8.4.13

<sup>3</sup> *Nunavut Land Claims Agreement*, Section 8.4.14

<sup>4</sup> Department of Justice, Government of Nunavut, 2003; Nunavut Social Development Council Board of Directors & Nunavut Tunngavik Incorporated, 2004.

3. **Pilnimmaksarniq:** The passing on of knowledge and skills through observation, doing, and practice.
4. **Piliriqatigiingniq:** The concept of collaborative working relationships or working together for a common purpose.
5. **Avatittinnik Kamattiarniq:** The concept of environmental stewardship.
6. **Qanuqtuurniq:** The concept of being resourceful to solve problems<sup>5</sup>.

Inuit Traditional Knowledge is knowledge that is derived from Inuit culture and the accumulated life experience of all members of the community. It is the Inuit understanding of Arctic terrestrial and marine ecosystems and how to live and flourish within these ecosystems. Park management and planning must give equal consideration to scientific information and Inuit Traditional Knowledge<sup>6</sup>. Inuit Traditional Knowledge is referred to as a segment of Inuit Qaujimajatuqangit in this management plan and is defined in Section 4.7.

## 1.4 MANAGEMENT PLANNING PROCESS

The management plan for Quttinirpaaq was prepared cooperatively with the park's Joint Park Management Committee and the Park Planning Team<sup>7</sup> over four years (2001 to 2005). The Park Planning Team developed the initial draft management plan. The Quttinirpaaq Joint Park Management Committee was involved in the development and detailed review of the draft management plan. The Committee approved the final draft plan and recommended it to the Minister responsible for national parks. The Nunavut Wildlife Management Board also reviewed the plan and approved sections pertaining to wildlife and wildlife habitat<sup>8</sup>. The planning process was guided by the Inuit Impact and Benefit Agreement, Parks Canada's *Guiding Principles and Operational Policies*, and the involvement of the Canadian public.

The Park Planning Team hosted a series of planning workshops and public consultation events to bring together key individuals to set direction for the park's management. A variety of consultation techniques, including newsletters and public meetings, were used to engage the public of Grise Fiord (Ausuittuq), Resolute Bay (Qausuittuq), and Iqaluit in the planning program. Scientists, park visitors, and other interested members of the public were invited to share their comments directly. All public meetings were held in Inuktitut and English; public documents were made available in Inuktitut, English, and French.

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<sup>5</sup> Nunavut Social Development Council Board of Directors & Nunavut Tunngavik Incorporated, 2004.

<sup>6</sup> *Inuit Impact and Benefit Agreement*, Section 5.3.2 (f)

<sup>7</sup> The structure and function of the Joint Park Management Committee is described in Section 2 of this plan.

<sup>8</sup> *Nunavut Land Claims Agreement*, Section 5.2.34 (c) and (d)

## 1.5 PARK ESTABLISHMENT

Interest in the northern portion of Ellesmere Island as a possible site for a national park was first expressed formally in 1978 in the Government of Canada's "Six North of Sixty" initiative. Ellesmere Island National Park Reserve<sup>9</sup> was established on September 16, 1988, through the *National Parks Act Amendment*.

The *Nunavut Land Claims Agreement* was signed in Iqaluit, Northwest Territories (now Nunavut) on May 25, 1993. The signing of this Agreement paved the way for the negotiation of the *Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq and Sirmilik National Parks*, which was signed on August 12, 1999.

On February 19, 2001, the *Canada National Parks Act* came into force turning Ellesmere Island National Park Reserve into Quttinirpaaq National Park of Canada.

Obligations for the establishment and management of Quttinirpaaq National Park are outlined in the *Nunavut Land Claims Agreement and the Inuit Impact and Benefit Agreement*.

## 1.6 PARK PURPOSE

The purpose of Quttinirpaaq National Park of Canada was defined in the *Inuit Impact and Benefit Agreement*<sup>10</sup>.

The purpose of the park is:

1. to protect for all time a representative natural area of Canadian significance in the Eastern High Arctic Natural Region;
2. to respect the special relationship between Inuit and the area; and
3. to encourage public understanding, appreciation, and enjoyment of the park, including the special relationship of Inuit to this area,

so as to leave the park unimpaired for future generations.

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<sup>9</sup> A national park reserve is a national park that has been established pending the settlement of comprehensive land claims or treaties. *The Canada National Parks Act* applies to these reserves as if they were national parks. After the comprehensive land claim or treaty has been settled, the *Canada National Parks Act* is amended and the area is established as a national park, rather than a national park reserve.

<sup>10</sup> *Inuit Impact and Benefit Agreement*, Schedule 5-2.

## 2. Cooperative Management

Inuit and Parks Canada manage Quttinirpaaq National Park cooperatively. The Joint Park Management Committee<sup>11</sup> is the cooperative management board for the park. Their role is to advise Parks Canada, the Minister responsible for national parks, the Nunavut Wildlife Management Board, and other agencies on all matters related to park management<sup>12</sup>.

The creation of the Joint Park Management Committee was provided for in *the Nunavut Land Claims Agreement*<sup>13</sup>. The *Inuit Impact and Benefit Agreement* created the Committee, and outlined the details of its structure and governance. Each member of the Joint Park Management Committee has the responsibility to act impartially in the public interest and for the public good<sup>14</sup>.

The Joint Park Management Committee plays an important role in park management planning. The Committee is involved in the review and approval of the draft plan, and must approve it before it can be recommended to the Minister responsible for national parks for approval and tabling in Parliament.

The members of the first Quttinirpaaq Joint Park Management Committee were appointed in Fall 2000 and held their first meeting in March 2001. The Committee meets at least twice each year and consists of six members: three appointed by the Qikiqtani Inuit Association and three appointed by the Government of Canada.

**FIGURE 3. Role of the Joint Park Management Committee**

The role of the Joint Park Management Committee includes, but is not limited to, involvement in the following matters\*:

- a) outpost camps;
- b) carving stone;
- c) water licences;
- d) the protection and management of archaeological sites and sites of religious or cultural significance;
- e) park planning and management;
- f) research;
- g) park promotion and information;
- h) park displays, exhibits, and facilities;
- i) visitor access to and use of the park;
- j) employment and training of Inuit employees;
- k) economic opportunities;
- l) participation in the joint review of the IIBA; and
- m) changes to the boundaries of the park.

\* Inuit Impact & Benefit Agreement, Section 5.1.3

<sup>11</sup> The Joint Park Management Committee and the abbreviated JPMC, is referred to as the Joint Inuit/Government Park Planning & Management Committee in the Inuit Impact and Benefits Agreement.

<sup>12</sup> *Nunavut Land Claims Agreement*, Section 8.4.12

<sup>13</sup> *Nunavut Land Claims Agreement*, Section 8.4.11

<sup>14</sup> *Inuit Impact & Benefit Agreement*, Section 5.1.2

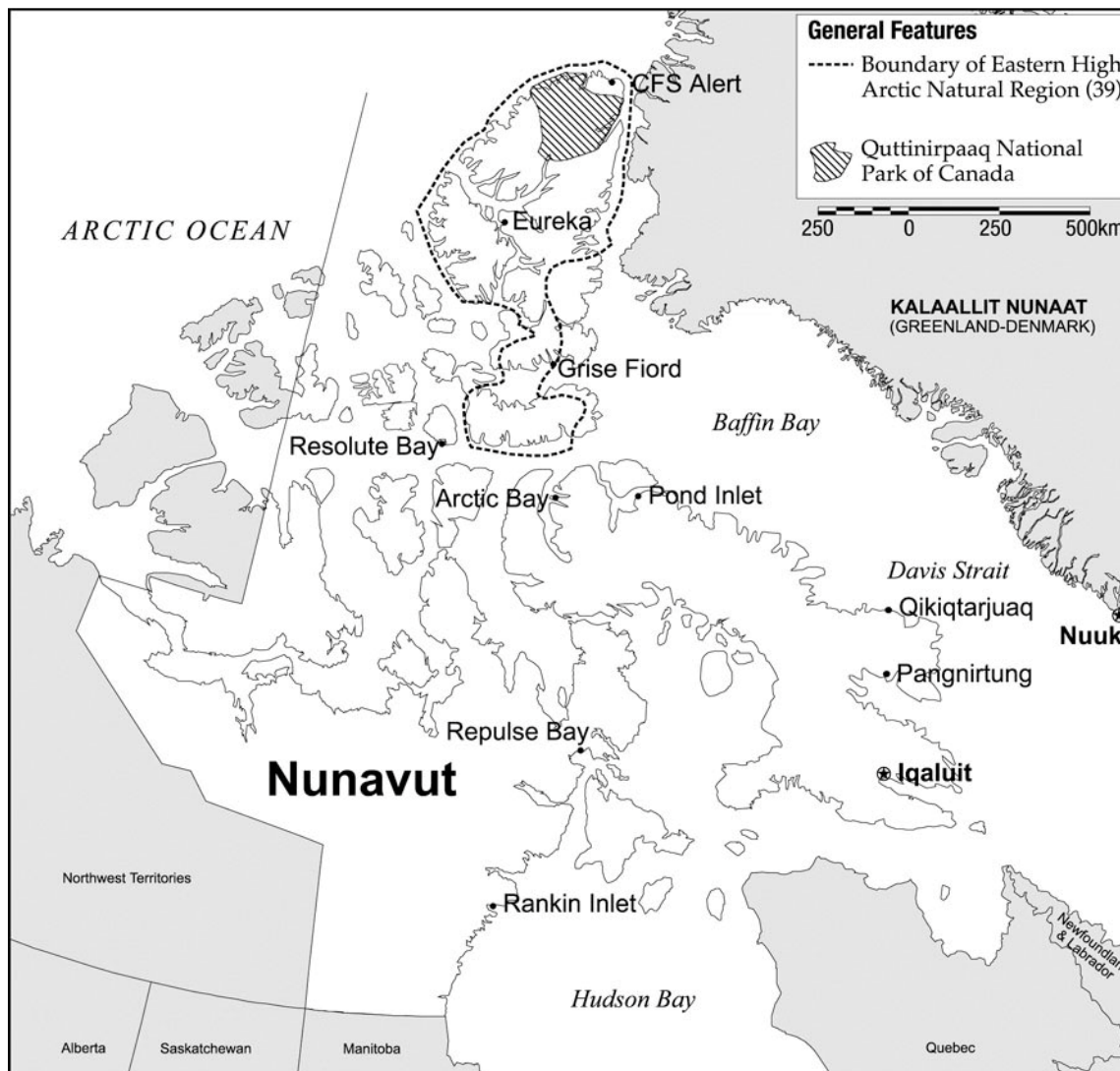


### 3. Role of the Park in the National System

Quttinirpaaq National Park of Canada is part of the national parks system, a family of national parks protecting representative examples of Canada’s landscapes and natural elements. National parks are natural areas of Canadian significance designated by Parliament. They are key symbols of the Canadian identity. They are managed under the *Canada National Parks Act* for the benefit, education and enjoyment of all Canadians so as to leave them unimpaired for future generations.

The *National Parks System Plan* divides Canada into 39 distinct “National Park Natural Regions” based on landforms and vegetation, with national parks currently representing 27 of these regions. Quttinirpaaq protects a representative sample of the Eastern High Arctic Natural Region (Natural Region 39). This natural region is one of rugged mountains, vast ice caps, and barren tundra, interspersed with few lakes and limited areas of vegetation where wildlife is more abundant. The High Arctic climate is cold and dry, with little precipitation.

FIGURE 4. Eastern High Arctic Natural Region



## 4. Planning Context

### 4.1 REGIONAL SETTING

Quttinirpaaq is located in the Queen Elizabeth Islands of Canada's High Arctic. The park's nearest civilian community is Grise Fiord (Ausuittuq). Grise Fiord has a population of approximately 163<sup>15</sup> and is located 640 kilometres south of the park on Ellesmere Island. Resolute Bay (Qausuittuq) is located 900 kilometres south of Quttinirpaaq on Cornwallis Island, and is the location of the closest major airport to the park. Resolute Bay has a population of approximately 215<sup>15</sup>. Quttinirpaaq is approximately 750 kilometres south of the geographic North Pole. Greenland is just 25 kilometres to the east of the park, across Robeson Channel.

Scientific research by universities and government agencies is a major activity in the park region. The Polar Continental Shelf Project (Natural Resources Canada), based in Resolute Bay, provides logistical support for these activities.

The residents of Ellesmere Island include the year-round residents of Grise Fiord, the military and civilian personnel associated with Canadian Forces Station Alert (45 kilometres northeast of the park), the summer base of operations for the Canadian Department of National Defence at Eureka, the personnel working at the weather station at Eureka (225 kilometres south of the park), and the Parks Canada staff working in Quttinirpaaq from May through August each year.

### 4.2 WORLD HERITAGE SITES

In May 2004, the Government of Canada released a new "Tentative List" of properties that have the potential to meet the World Heritage criteria for outstanding universal value. These properties will, tentatively, be nominated for status as World Heritage Sites.

Quttinirpaaq National Park of Canada was included as one of eleven proposals on the May 2004 Tentative List. Key reasons for the park's possible nomination as a World Heritage Site include:

- The cultural resource values related to the earliest and successive habitation of the Canadian Eastern Arctic by early Palaeo-Eskimo and subsequent cultural traditions;
- The exceptional natural and scenic beauty and superlative natural phenomena, including mountains, polar desert, and a thermal oasis;
- The geological processes connected with high-latitude glaciation and ice shelves that represent major stages of the earth's history; and
- The diversity of High Arctic wildlife species.

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<sup>15</sup> Statistics Canada, 2001 Census of Canada

### **4.3 THE ECOSYSTEMS OF QUTTINIRPAAQ NATIONAL PARK OF CANADA**

Much of Quttinirpaaq's vast landscape is dominated by glaciers and mountains that support limited biological productivity. The long, cold winters and brief, cool summers, along with low precipitation year-round, create polar desert conditions.

Some of the park's lowland areas are remarkably lush for such high latitude. The Lake Hazen Basin, for example, experiences a warmer climate and is wetter than surrounding areas, supporting meadows of lush grasses and arctic flowers during the short summer season. In these thermal oases, Arctic hare congregate in groups of hundreds. Small herds of musk ox and Peary caribou, a few Arctic wolves, Arctic foxes, and about 30 species of migratory birds thrive. The park also contains freshwater and marine ecosystems that support biological communities and physical processes unique to the High Arctic environment.

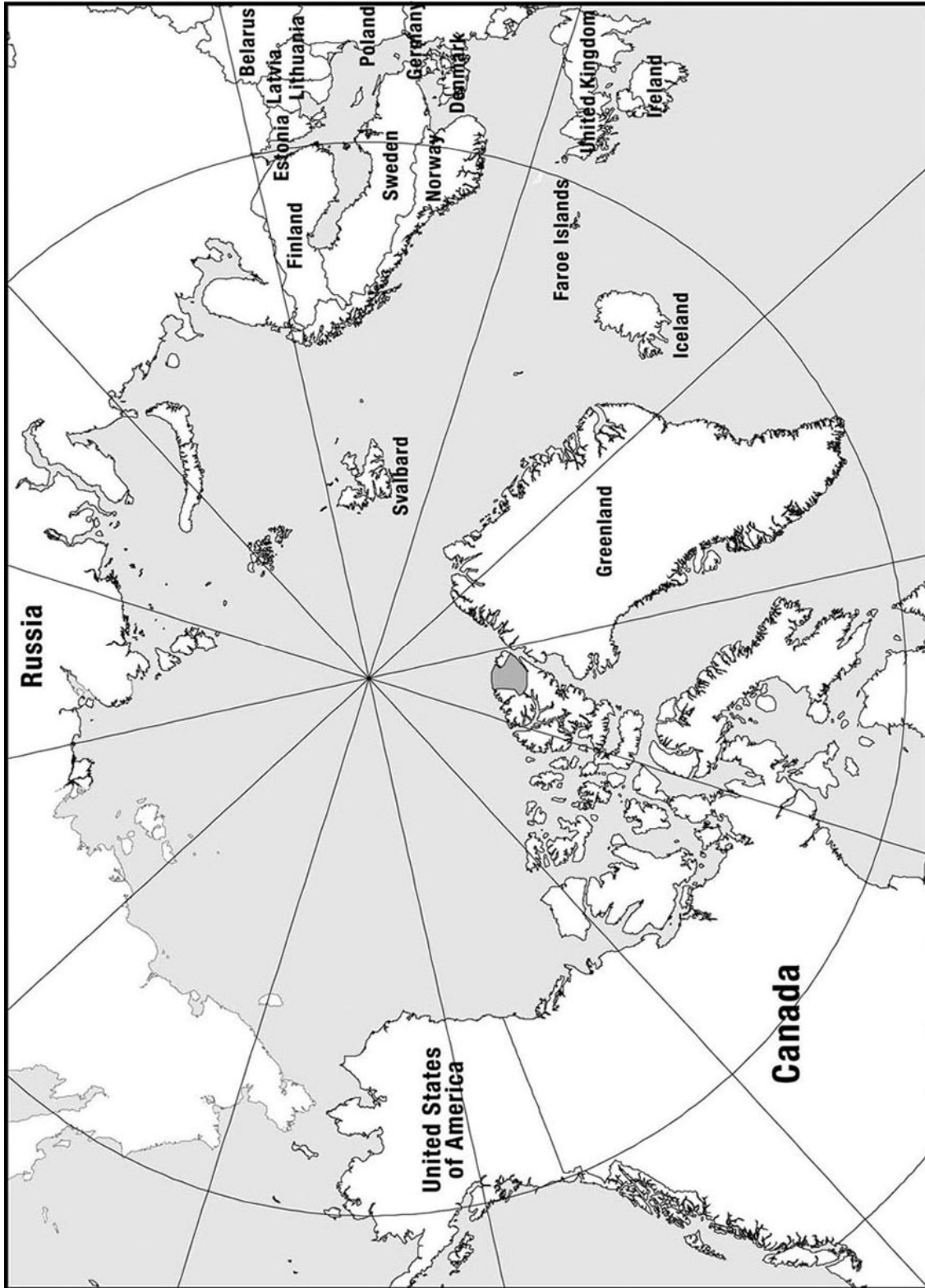
Quttinirpaaq's ecosystems are currently healthy. They are, however, fragile and sensitive to change, having adapted to these extreme conditions. Impacted ecosystems in the High Arctic take many years to recover, and changes to the landscape are often irreversible.

### **4.4 ROLE OF THE PARK IN THE GREATER ECOSYSTEM**

The greater park ecosystem is vast. The Queen Elizabeth Islands, including Axel Heiberg, Ellef Ringes, and southern Ellesmere, provide corridors for migrating terrestrial wildlife that extend even to Greenland. Other wildlife, such as marine mammals and birds, undergo extensive migrations to distant locations for the winter season. Winds, currents, and sea ice carry contaminants to the High Arctic region from many areas around the world.

At present, North American polar ecosystems have a relatively high level of ecological integrity, and Quttinirpaaq is not easily discernible from its greater ecosystem. Harsh climate and remote location have limited human settlement and industrial activity in the region. However, new technologies are opening the High Arctic to industrialization (mineral, oil, and gas exploration and development) and global stressors (global warming and long-range transport of contaminants) are causing impacts in the North. As more of the Arctic opens to settlement and industrialization, and with an increase in international shipping traffic expected in the Arctic, Quttinirpaaq National Park will play an increasingly important role as an undisturbed benchmark ecosystem against which to assess regional versus global impacts, and as a protected area for wildlife, such as Peary caribou.

FIGURE 5. Greater Park Ecosystem Relationships





## 4.5 PAST AND PRESENT LAND USE

Northern Ellesmere Island has been inhabited and used discontinuously by several cultural groups over the last 4,500 years. The Palaeo-Eskimo peoples of the Independence I, II, and Dorset cultures, and the Neo-Eskimos or Thule Inuit, ancestors of modern Inuit and Inughuit<sup>16</sup>, occupied the Park at various times from 2500 BC to AD 1700. These peoples adapted to the northern environment with technologies such as stone and bone tools, ittait (skin tents), igluvigait (snow houses), qullit ukkusiksait (soapstone lamps), qamutiit (sleds), and qajait (kayaks), some of which are used by modern Inuit. The High Arctic location of Quttinirpaaq fosters its unique role in studying continuity and change in archaeologically known cultures, since the subtle processes of change can be more apparent in marginal areas where they are not obscured by extraneous factors.

Quttinirpaaq's sequence of cultural history, as it is now understood, begins with the Independence I people from 2500 – 1000 BC. Because northern Ellesmere is unique in containing a concentration of Independence I sites, it will contribute to our future understanding of this little-known cultural group.

Independence I people subsisted on terrestrial mammals; this people's survival in a severe climate without sea mammal resources was difficult. The park protects the *Muskox Way*, a natural corridor between glaciers and mountains connecting the High Arctic islands to Greenland, and a hypothetical travel route of Independence I people across northern Ellesmere to Greenland.

The park's uniqueness is further exemplified at the Rivendell site on Lake Hazen, occupied about 950 – 1050 BC, where there is a transition from the Independence I to Independence II culture. Although Independence II culture in the High Arctic is often considered equivalent to Early Dorset culture in more southerly latitudes, the transitional Rivendell site shows that these may be separate groups. The Independence II culture on northern Ellesmere dates from 1000 - 500 BC, and is followed by a hiatus from 500 BC – AD 700.

Late Dorset peoples appear from AD 700 – 1300. Noted for their exceptional ritual and artistic carvings of natural, stylized, and transformational subjects, they are the Tuniit of legend, encountered by the Thule Inuit as they spread across the Canadian Arctic.

Linguistically and physically distinct from the preceding Palaeo-Eskimos, Thule Inuit migrated across the Arctic, possibly following migrating whales and possibly in search of the meteoric iron at Cape York in Northwestern Greenland. Copper from the Coppermine River area in the central Arctic and trade metals from Greenlandic Norse may also have attracted them. The Thule Inuit occupied northern Ellesmere from about AD 1100 to 1700, subsisting mainly on land animals, in contrast to Thule in other parts of the Arctic who were known for their bowhead hunting.

Artifacts of Greenlandic Norse origin (smelted iron, copper, bronze, wood, yarn), appearing in the eastern High Arctic, and possibly as far west as the central Arctic coast, hint of interactions and trading networks between the Greenlandic Norse and Dorset and Thule peoples in the park area. Artifacts of Greenlandic Norse origin have been recovered at Slidre Fiord and the Bache Peninsula on Ellesmere. Within Quttinirpaaq, smelted iron was recovered from a Thule site on Lake Hazen.

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<sup>16</sup> Greenlandic Inuit

After the Thule period, the High Arctic was abandoned, including Ellesmere Island. The park was not continually occupied again.

For almost two centuries after AD 1700, Inughuit (*Great People*) or Polar Inuit from Avanersuaq of north-western Greenland used northern Ellesmere intermittently. They were the only people inhabiting this high latitude at this time when they encountered the British expedition of John Ross on north-western Greenland in 1818.

The remarkable history of exploration and scientific research in the Park begins with the European and American expeditions of Sir George Strong Nares, (1875-76); Lieutenant Adolphus Washington Greely (1881-83); and Robert Edwin Peary (1898-1909). The expeditions of Nares and Peary illustrate the late nineteenth-century rivalry between British and American interests in attaining the North Pole. Peary is credited with reaching the Pole in 1909. Greely directed the United States Polar Year Expedition of 1881-84, and constructed the original building at Fort Conger, later re-used by Peary. Stories of hardship, starvation, and cannibalism accompany Greely's expedition.

Inughuit from Avanersuaq in northern Greenland supported the nineteenth-century explorers and the twentieth-century patrols by the RCMP. Inuit from Grise Fiord have worked with scientists, worked as special constables with the Royal Canadian Mounted Police (RCMP) and Canadian Rangers, and have travelled extensively on Ellesmere Island.

Canadian government exploration began with patrols by the RCMP in the 1920s. Government activities included scientific exploration by the Defence Research Board from 1953 to 1974. The Board established research camps at Lake Hazen, Ward Hunt Island, and Tanquary Fiord, which are still used as research camps today.

Both the Canadian and American military have operated from Canadian Forces Station Alert and Eureka. Military use, particularly at Lake Hazen, dates from the establishment of the Alert Wireless Station in 1950 (later the Canadian Forces Station Alert). The Canadian Forces now operate on Northern Ellesmere Island from both Alert and Eureka.

Today, visitor use of Quttinirpaaq is relatively constant, yet still limited by the remote location, the short visitor season, and the high cost of access. Scientific research is increasing as the park becomes a focus for international scientists.

#### 4.6 REGIONAL EDUCATIONAL AND RECREATIONAL OPPORTUNITIES

Quttinirpaaq has the potential to play an important role in education in the region. Presently, general awareness of the park in even the closest communities is very low. At a national level, this awareness is even lower. The park can be positioned in school curricula and in outreach programs aimed at broad audiences as a prominent feature of Canada's north that fulfills several important functions (e.g. ecological protection and understanding, tourism destination, community benefits). Much work remains to be done to reach key audiences and build awareness of the park's existence and role.

Although Inuit travelled to northern Ellesmere Island in the past, few travel to the park today unless they are involved in park operations or other work. The people of Resolute Bay and Grise Fiord have the opportunity to build local knowledge of the park's natural and cultural resources, the wider High Arctic ecosystem and of Parks Canada's mandate, through involvement in cooperative management efforts.

The features that make Quttinirpaaq unique, such as extreme remoteness, also limit its potential for recreation because of the distance and associated expense of getting there. Nonetheless, tourism to the park has important potential in the context of Canada's High Arctic. Currently, there are between 50 and 200 visitors to the park annually. They are seeking a rare and rewarding experience. They expect that their High Arctic wilderness experience will match the cost to get to the park and that they will have a world-class experience at "the top of the world." They also seek the opportunity to walk in the footsteps of polar expeditions, testing themselves in the surreal and unfamiliar landscape. Quttinirpaaq can take its place on the list of other world-renowned wilderness destinations, along with the Galapagos Islands, the Serengeti Plains, and Mount Everest. Realistically, the costs, challenges, and small market associated with the park will keep the numbers of visitors low.

In the context of local tourism benefits, however, these numbers are significant. The majority of visitors to the park travel through Resolute Bay. Resolute Bay serves as the staging ground for visitors to the park, and can enrich their experience both before and after their visit to the park. The economic impact of 30 to 50 backpackers and skiers, plus 100 to 150 cruise ship passengers, can be significant. There are opportunities to build in-town tourism support through additional services and products such as local tours, arts and crafts, and cultural experiences. New heritage presentation programs can also be developed for visitors to the region who cannot access the park in person. This service offer could be integrated with outreach and education efforts in the communities.

## 4.7 PRINCIPLES AND TOOLS FOR MANAGING QUTTINIRPAAQ

Parks Canada uses a number of principles and tools to manage the ecological and cultural resources of Quttinirpaaq National Park. Some of these are described below, in no particular order. The Inuit Impact and Benefit Agreement requires that scientific information be considered equally with Inuit Traditional Knowledge<sup>17</sup>.

### 1. Knowledge Generation<sup>18</sup>:

- a. Inuit Qaujimagatuqangit: Inuit Qaujimagatuqangit encompasses all aspects of traditional Inuit culture, including values, world-view, language, social organization, knowledge, life skills, perceptions, and expectations. It is not necessarily location-specific: Inuit Qaujimagatuqangit from southern Ellesmere Island and from Inughuit in Greenland may be applied to the park area. The principles of Inuit Qaujimagatuqangit are explained in Section 1.3 of this plan.
- b. Inuit Traditional Knowledge: Inuit Traditional Knowledge is living knowledge. It is knowledge that exists for those who attain it through experience. It is a vital, dynamic and evolving knowledge system. Inuit Traditional Knowledge includes an in-depth understanding of the land and waters. The content and extent of knowledge varies from Inuk to Inuk. It is the knowledge of Inuit who have become experts on specific topics.
- c. Research: Scientific research helps to enhance ecological knowledge and contributes to understanding of High Arctic ecosystems in Canada and the circumpolar world. Research enhances knowledge of cultural resources and contributes to understanding

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<sup>17</sup> *Inuit Impact and Benefit Agreement*, Section 5.3.2(f)

<sup>18</sup> Intellectual property will be respected and appropriate credit provided.

of Inuit culture and history in Arctic Canada. By filling data gaps and providing information about the ecological processes and cultural resources of Quttinirpaaq, research results help to improve decision-making for the management and operation of the park and allow for effective State of the Park reporting.

- d. **Monitoring:** Monitoring is the regular and ongoing recording, analysis, and reporting of information.

**Ecological Monitoring:** Ecological monitoring is essential for determining whether park management actions being taken are having the desired effects and for understanding the state of park ecosystems over the long term. Management directions for ecological monitoring are addressed in Section 6.4.5 of this plan.

**Cultural Resources Monitoring:** Cultural resources monitoring will measure the impacts of threats on cultural resources, evaluate the effectiveness of management actions, and provide park managers with a general understanding of the condition of specific resources. Management directions for cultural resources monitoring are addressed in Section 7.3.5 of this plan.

2. **Adaptive Management:** Adaptive management is a way of managing that allows for learning while doing. It is a process where the outcomes of management efforts are checked periodically to see whether objectives are being achieved. If outcomes are different from what was expected, management actions can be changed and the monitoring efforts continued.
3. **Precautionary Principle:** The precautionary principle is the principle that *where there is a threat of reduction or loss of biological diversity or other irreversible environmental impacts, lack of full scientific certainty shall not be used as a reason for postponing measures to avoid such threats*. The precautionary principle can also apply where there is a threat of reduction or loss in the socio-economic domain. In either case, where clear proof of potential harm does not exist, the principle dictates a prudent approach.
4. **Remediation:** Remediation involves the removal and clean-up of contaminants and hazardous materials from the park environment. It also involves some action to leave the site in a condition in which it can restore itself (e.g. active erosion control). Risk reduction strategies are implemented to decrease the potential for further impacts to the environment after remediation is complete.
5. **Environmental Assessment:** Environmental assessment is defined as an assessment of the environmental effects of an activity or project being conducted in the park. Physical, social, and economic effects are considered. Cumulative environmental effects are the combined long-term, area-wide effects of activities and projects on the park's physical, social, and economic environments, and are also considered when assessing projects and activities.
6. **Information Management:** Information on Quttinirpaaq's ecological integrity and cultural resources is available from many sources. The organization and accessibility of the diversity of information and its metadata<sup>19</sup> is of significant importance for the management of ecological and cultural resources. For further information about how information management will be addressed, see Section 11.1.5 of this plan.

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<sup>19</sup> Metadata is information about how the data was collected or organized.

7. **Communicating about Ecological Integrity and Cultural Resources:** Effective communication, in part through outreach and education programs, about ecological integrity and cultural resources is necessary to achieve cooperation with communities, Inuit organizations, government agencies, universities, and non-governmental organizations.
8. **Inuit Employment Plan:** The Nunavut Field Unit's Inuit Employment Plan recognizes that Inuit are an integral part of park ecosystems and that Inuit Traditional Knowledge, culture, and practices are important to the management of the ecological and cultural resources in National Parks in Nunavut. The Inuit Employment Plan is reflective of Parks Canada's commitment to Article 23 of the Nunavut Land Claim Agreement with the objective to increase Inuit participation in government employment to a representative level by 2020<sup>20</sup>.

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<sup>20</sup> At the time of the signing of the *Nunavut Land Claims Agreement*, Nunavut Tunngavik Incorporated identified the representative level as 85%.

## 5. Park Vision

This statement describes the vision for Quttinirpaaq National Park in 15 years. It is an inspirational view of a future of the park that will help to focus planning, management, and operations during the life of this plan. In fifteen years:

- The ecological integrity of Quttinirpaaq will be protected and maintained. Native species, including Peary caribou, Arctic wolf, muskox, Arctic hare, and Arctic char, will be sustained at naturally occurring population levels. The diversity of ecosystems will be protected, and natural processes, such as reproduction and predation, will continue.
- Inuit will continue to be an integral part of High Arctic ecosystems.
- The park's terrestrial, marine, and aquatic ecosystems will be better understood. A shared understanding of the park's ecosystems will be developed among park managers, park visitors and users, and community residents. The significance of the park's ecosystems will be recognized, supported, and understood by the park's target audiences.
- Inuit Traditional Knowledge will be given equal consideration with scientific information in managing the park. Inuit will be involved in ongoing research and monitoring programs.
- Research conducted in the park will enhance understanding of High Arctic ecosystems and global environmental conditions. The knowledge gained from research will inform park management decisions and contribute to global knowledge of the circumpolar north.
- Monitoring programs will measure and report on important indicators of ecological integrity and environmental change and will create understanding of the condition of key cultural resources. Indicators and targets will be developed for management of the park.
- The park will be active in recovery efforts for species at risk, such as Peary caribou.
- The park's high concentration of cultural resources related to pre- and post-contact history of the High Arctic will be protected and managed. The national and international significance of these cultural resources will be recognized, shared, and understood.
- Appreciation of Inuit Traditional Knowledge and culture will be encouraged through public education programs targeting Arctic communities, scientists, and park visitors.
- Visitors will have a high-quality Arctic wilderness experience. Park visitors and users will be prepared for the challenges inherent to visiting the park. The experience of visitors and users in the park will be integral to the protection of Quttinirpaaq's ecological integrity and cultural resources
- The park will play an important role in regional tourism and will contribute to the economies of Nunavut, Grise Fiord and Resolute Bay. Inuit will be involved in tourism.
- Partnerships will enhance the protection of the park's natural and cultural resources. Partnerships will be established to enhance local capacity and benefit.

- Ward Hunt Island will be fully included in the park under the *Canada National Parks Act*.
- Quttinirpaaq will continue to be cooperatively managed.
- The *Nunavut Land Claims Agreement* and the *Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq, and Sirmilik National Parks* will be implemented and respected.
- The Nunavut Field Unit aims to have a representative level of Inuit employment by 2020<sup>21</sup>.

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<sup>21</sup> At the time of the signing of the *Nunavut Land Claims Agreement*, Nunavut Tunngavik Incorporated identified the representative level as 85%.



## 6. Managing for Ecological Integrity

**FIGURE 6. Definition of Ecological Integrity**

Ecological integrity, with respect to a park, is a condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes.

*Source: Canada National Parks Act*

### 6.1 ECOLOGICAL STATE OF THE PARK

Quttinirpaaq is a large and remote national park embedded within an immense greater ecosystem that is healthy. It has a high level of ecological integrity. In Quttinirpaaq, the expected components of the ecosystems, such as native plants and animals, are all present, but some species have been designated as species at risk. Key ecological processes, such as production, predation, and decomposition, appear to be functioning normally. There is no known significant impairment of the park environment at this time.

Quttinirpaaq's ecosystems, however, are extremely fragile and sensitive. Global environmental threats — such as climate change, ozone thinning, and long-range transport of pollutants — are affecting the entire circumpolar world, and evidence of these impacts is already being seen in the park. There is also some evidence of localized impacts, such as contaminated sites from historical uses of the park area. Many of these localized impacts can be mitigated or remediated. Scientific understanding of polar ecosystems and how they will react to human-induced change is limited, but it is increasing.

### 6.2 QUTTINIRPAAQ NATIONAL PARK'S ECOSYSTEMS

Quttinirpaaq's ecosystems are characterized by low species diversity, simple food webs, and low productivity. The climate is typical of the High Arctic, with cool, short, and dry summers and cold, long, and dry winters. The extreme seasonality in solar radiation input (24-hour sunlight in summer and 24-hour darkness in winter) and low amounts of precipitation create severe conditions for living organisms. Mean winter temperatures are about -30°C; mean summer temperatures are about -2°C.

#### 6.2.1 Terrestrial Ecosystems

A large portion of the park — including the 36% of the park that is covered by glaciers and ice caps — supports limited numbers and diversity of living organisms. There are extensive ice fields up to 900 metres thick, with nunatait<sup>22</sup> reaching to over 2,500 metres. Mount Barbeau, at 2,616 metres, is the highest peak in eastern North America.

<sup>22</sup> Nunatait (more than one nunatak) are small terrestrial areas (small mountains) isolated from main mountains and completely surrounded by an ice field.

Continuous permafrost underlies the park. The active layer<sup>23</sup> in the glacier-free area is shallow, limiting plant growth and soil development. Poor soils combined with cool temperatures limit most vegetation cover to areas with adequate moisture, resulting in patchy concentrations of hummocky tundra vegetation and wet tundra meadows, which are found in places where surface moisture cannot drain away. In the mountainous areas, the dominant vegetation is cold-hardy plants such as sedges, grasses, mosses, and lichens.

In the oasis-like Lake Hazen Basin, the habitat is richer because of the increased availability of water from glacial run-off, the warmer climate in the shelter of the south-facing mountains, and the impact of the West Greenland Current. The Lake Hazen Basin is a unique and important ecosystem and is the best-known area of the park. Areas of wet tundra meadows are extensive, resulting in increased abundance and diversity of plants and wildlife.

Characteristic wildlife includes aquatic bird species like snow geese, red-throated loons, and common eider ducks, as well as land birds such as rock ptarmigan, snow bunting, ruddy turnstone, and ringed plover. Land mammals include Arctic hare, lemming, ermine, Arctic fox, Arctic wolf, muskox, and Peary caribou.

### **6.2.2 Freshwater Ecosystems**

Cold temperatures, significant ice cover, low nutrients, low productivity, and low species diversity characterize freshwater systems in Quttinirpaaq. Given the rugged terrain, there are many rivers and relatively few lakes within the park. Lake Hazen, in the centre of the park, is one of the largest lakes north of the Arctic Circle. Arctic char, the only species of freshwater fish in Quttinirpaaq, are found throughout the park in lakes and rivers. Smaller water bodies and many rivers contain only invertebrates. Epishelf lakes form on top of the oceanic ice shelves along the park's northern coast and support unique microbial communities (see Figure 7).

### **6.2.3 Marine Ecosystems**

Quttinirpaaq contains approximately 2,375 km<sup>2</sup> of marine habitat, with numerous deep fiords. Ice is the principal factor influencing the park's marine waters. Huge ice shelves extend from the north coast and fiords and cover hundreds of square kilometres of ocean. Moving pack ice covers much of the remainder, eroding coastal shorelines, reflecting sunlight, limiting productivity, and influencing marine mammal distribution. Some park waters do experience a short ice-free season, providing important sunlight to the marine environment and allowing some additional species diversity. Marine mammals regularly observed in the park area are only those species that can live in permanent pack ice: ringed seal, bearded seal, narwhal, and polar bear. Even these species are not present year-round.

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<sup>23</sup> The active layer is the depth to which the ground thaws in summer.

## 6.3 ECOLOGICAL STRESSORS: IMPACTS AFFECTING THE PARK

Although Quttinirpaaq has a relatively high level of ecological integrity, it faces some stressors that may impair the park's ecological integrity.

The most significant stressor for Quttinirpaaq is expected to be global climate change, which will be greatest near the poles (Hassol, 2004). Scientists predict that northern Ellesmere Island will see the largest temperature shifts in Canada. Depending on the prediction model<sup>24</sup>, average temperatures are expected to increase by 3 to 5°C over the land and up to 7°C over the oceans by the end of the century (Hassol, 2004).

Ecological stressors for the park have been identified in the *State of the Parks* and *State of Protected Heritage Areas* reports since 1990. The following ecological stressors have been reported:

1. **Climate change** (e.g. changing temperature and precipitation patterns)
2. **Long-range transport of pollutants** (e.g. contaminants, persistent organic pollutants, heavy metals, ozone depletion/increased UVB radiation)
3. **Localized impacts** (e.g. contamination from abandoned fuel caches and camps, wildlife disturbance from overflights, human waste disposal at Ward Hunt Island, Tanquary Fiord and Lake Hazen, sport fishing, limited risk of parasite transmission from domestic animals)

Actions to address these stressors are identified in this management plan.

## 6.4 MANAGEMENT GOALS, OBJECTIVES, AND ACTIONS

### 6.4.1 Protecting Ecological Integrity<sup>25</sup>

#### 6.4.1.1 Strategic Goal

*The processes, structure, and function of the park's terrestrial, aquatic, and marine ecosystems will not be impaired.*

#### 6.4.1.2 Objectives

1. To maintain the biodiversity of the park's ecosystems.
2. To maintain the park's relative abundance of terrestrial wildlife species.
3. To maintain healthy aquatic (freshwater) ecosystems in the park.
4. To maintain healthy marine ecosystems in the park.
5. To ensure that the natural physical processes supporting ecological communities are not disrupted by park management and visitor activities.
6. To understand and communicate the impacts of global stressors on the park.

<sup>24</sup> Climate models and global emission scenarios.

<sup>25</sup> Refer to Table 1 for ecological indicators and targets.

7. To improve the ecological condition of impacted sites in the park.
8. To provide park visitors and users with access to a healthy and functioning Arctic ecosystem.

#### 6.4.1.3 Key Actions

1. Close sport fishing in the park until the NWMB determines whether the ecosystems of the Park can sustain sport fishing<sup>26</sup>. Provision of a sustainable fishing experience in the park may be revisited in the next management plan review.
2. Complete research on muskox distribution and preferred habitats.
3. Complete research on Peary caribou distribution, preferred habitats, and population genetics.
4. Continue to conduct regular wildlife surveys in the park to monitor numbers and reproductive success of key species.
5. Minimize disturbance of wildlife populations where possible.
6. Initiate remediation of the contaminated sites at Tanquary Fiord, Lake Hazen, and Ward Hunt Island as referenced in section 11.1.1.
7. Develop indicators and targets of ecological integrity and implement protocols suitable for long-term monitoring.
8. Communicate with the Nunavut Wildlife Management Board and the Hunters' and Trappers' Organizations in Grise Fiord and Resolute Bay on wildlife and wildlife habitat issues.

**FIGURE 7. Fishing in Quttinirpaaq National Park of Canada**

People have been fishing in northern Ellesmere for many years. Significant fishing activities occurred at the end of the 19<sup>th</sup> century to supply the expeditions to the North Pole (Dick, 2001). Outfitting camps also existed on Lake Hazen before the park was established. Current sport fishing continues to be focused around Lake Hazen, although other small lakes are also visited. Sport fishing has been conducted by military personnel, park staff, visitors, and researchers. Little is known about the number of fish caught on an annual basis and no information is available on the carrying capacity of Lake Hazen or other small lakes.

The sport fishing of Arctic char was identified as an issue during management planning because of concerns that removal of fish may be having significant effects on the integrity of the park's aquatic ecosystems.

*Source: Gertsch, Dodds, Manseau and Amagoalik (2003)*

#### 6.4.2 Understanding Ecological Patterns and Processes

##### 6.4.2.1 Strategic Goal

*An understanding of the structure, function, and processes of the terrestrial, aquatic, and marine ecosystems in the park will be developed by using science and Inuit Traditional Knowledge.*

<sup>26</sup> Section 8.1.14 of the *Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq and Sirmilik National Parks* states the following: Upon ratification of this Agreement, Parks Canada and the QIA will ask the NWMB to consider prohibiting sport fishing in Quttinirpaaq National Park until the NWMB determines whether the lakes in the Park can sustain sport fishing

#### 6.4.2.2 Objectives

1. To understand and describe ecosystems in areas of the park that are not well known.
2. To understand the population structures of key terrestrial and aquatic wildlife species, including Arctic char, muskox, Peary caribou, Arctic hare, and lemming.
3. To develop a baseline understanding of all park ecosystems.
4. To assist park managers with decision-making by providing access to existing knowledge and to information gained from science and Inuit Traditional Knowledge about ecosystems on Northern Ellesmere Island.

#### 6.4.2.3 Key Actions

1. Continue to complete resource inventories of the park in cooperation with universities, government, and other agencies.
2. Describe the community structure of the aquatic ecosystems in the Lake Hazen watershed.
3. Complete the vegetation map for the park.
4. Identify important habitats for Arctic char, muskox, Peary caribou, Arctic hare, and lemming.
5. Continue to collect ecological knowledge, oral histories, and unpublished materials from people who have travelled to Northern Ellesmere Island (e.g. Inuit, pilots, military). Continue to collect knowledge related to the park's ecosystems, including information about climate change, from Inuit and Inughuit.
6. Provide access to information gained from science and Inuit Traditional Knowledge through databases and regular reporting.

#### 6.4.3 Scientific Research

The Quttinirpaaq Joint Park Management Committee plays an important role in reviewing and advising the Superintendent on the approval of Scientific Research and Collection Permits<sup>27</sup>. The Committee encourages researchers to collaborate with each other to maximize research efforts and minimize their impact on the national park

##### 6.4.3.1 Strategic Goal

*The park will be a focal area for and major contributor to research and understanding of High Arctic ecosystems.*

#### 6.4.3.2 Objectives

1. To contribute to circumpolar understanding of the impacts of global environmental threats on High Arctic ecosystems.

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<sup>27</sup> *Inuit Impact and Benefit Agreement*, Article 6

2. To fill knowledge gaps in areas relevant to the management of the park.
3. To ensure that research activity conducted in the park complements Parks Canada research priorities.
4. To enhance research in the park by building partnerships with other research organizations.
5. To position the park as a focal point for research and understanding of High Arctic ecosystems.

#### **6.4.3.3 Key Actions**

1. Develop a prioritized research plan, in consultation with Arctic researchers and Inuit, based on gaps in knowledge identified in the park's *Resource Description and Analysis*.
2. Seek advice from the Joint Park Management Committee about research priorities for Quttinirpaaq National Park of Canada.
3. Encourage Canadian and International researchers, scientific organizations, and post-secondary institutions to use the park as a research site and to focus on Parks Canada research priorities.
4. Continue to enhance the strong relationship that exists between Parks Canada and the Polar Continental Shelf Project (Natural Resources Canada) to facilitate research in Canada's High Arctic.
5. Build partnerships with local, regional, national, and international organizations to enhance scientific research.
6. Facilitate the relationship between Inuit and researchers, in order to create opportunities for Inuit Traditional Knowledge to inform and be incorporated into scientific research. Encourage the active involvement of Inuit in research.
7. Require all park researchers to provide information about the results of their research to the residents of Grise Fiord or Resolute Bay.

#### **6.4.4 Species at Risk**

A portion of research and monitoring efforts already described will be directed specifically at species identified by Committee on the Status of Endangered Wildlife in Canada as potentially at risk and other rare species. At this time in Quttinirpaaq National Park, these species include: Porsild's bryum (a moss), ivory gull, gyrfalcon, narwhal, polar bear, and Peary caribou.

##### **6.4.4.1 Strategic Goal**

*The park will contribute to local and national research and recovery efforts for species at risk.*

#### 6.4.4.2 Objectives

1. To contribute to understanding of species-at-risk ecology.
2. To contribute to species-at-risk recovery efforts by actively participating on cooperative recovery teams.
3. To ensure that species at risk and their habitats are protected.

#### 6.4.4.3 Key Actions

1. Record observations of species at risk and share data with other agencies with responsibilities for the protection and management of species at risk.
2. Evaluate key habitats for known species at risk.
3. Evaluate protection requirements for key habitats for species at risk.
4. Participate in species-at-risk recovery teams.

#### 6.4.5 Ecosystem Monitoring

The purposes of the ecological monitoring program in Quttinirpaaq are:

- to measure the ecological health of the park;
- to measure and report on the impacts of stressors on park ecosystems;
- to provide information on the state of park ecosystems for management decisions;  
and
- to evaluate the effectiveness of management actions.

The information gathered and assessed as part of the ecological monitoring program will provide a basis for evaluation of this plan in future *State of the Park* Reports.

In 2007, Quttinirpaaq National Park has a basic ecosystem monitoring program. The monitoring program needs to be expanded and formalized in accordance with Parks Canada's Monitoring Framework.

##### 6.4.5.1 Strategic Goal

*Important indicators of ecological integrity will be measured and used to report on the state of the park's ecological integrity*

#### 6.4.5.2 Objectives

1. To acquire information that will enable reporting on the state of the park's baseline ecological integrity.



2. To enhance understanding of the state of High Arctic ecosystems by contributing to national and circumpolar monitoring networks.
3. To enhance understanding of the impacts of global environmental threats by contributing to international knowledge.
4. To increase awareness of the impacts of global environmental threats on the park's ecosystems.
5. To assist in decision-making at park, regional, national, and international levels by making monitoring information available.

#### **6.4.5.3 Key Actions**

1. Develop indicators and targets of ecological integrity, and implement protocols suitable for long-term monitoring.
2. Implement protocols and share data with national and circumpolar monitoring networks (e.g. Ecological Monitoring and Assessment Network – North; International Tundra Experiment).
3. Include monitoring measures specific to understanding the effects of global and local stressors in the park's ecological monitoring program.
4. Communicate messages related to the effects of global environmental threats to local communities and national and international audiences.

## **6.5 ECOLOGICAL INDICATORS AND TARGETS**

Indicators of Quttinirpaaq's ecological integrity are listed in Table 1. Many of the stressors that will potentially affect Quttinirpaaq are global in nature, occurring over large temporal and spatial scales. As such, many of the measures listed are not designed to detect significant change over the five-year life of this plan. It is expected that over longer time periods, they will pick up on trends and important changes in the global environment. The park strategy for addressing these global stressors is to influence public debate and behaviour by communicating results to a global audience. This ecosystem monitoring strategy reflects the global importance of Quttinirpaaq as a benchmark of environmental change in the circumpolar world and the relatively limited local-scale impacts associated with the park.

As part of a national initiative, and in conjunction with Parks Canada's Northern Bioregional Monitoring Group, seven ecological indicators were selected for northern parks. Of these seven indicators, the following six apply to Quttinirpaaq: Tundra, Freshwater, Glacier/Ice Field, Coastal, Marine and Wetland. These indicators will be developed and eventually used to measure the state of ecological integrity in Quttinirpaaq. In the interim, the state of ecological integrity will be evaluated using the measures identified in Table 1. A key action for each of the applicable indicators will be to develop suitable measures, including protocols and analyses, which will provide reliable information on the park's ecological integrity.

**FIGURE 8. Benchmark Ecosystems in the Circumpolar Environment**

In 2002, scientists working on the northern coast of Quttinirpaaq National Park made a startling discovery: the Ward Hunt Ice Shelf – the largest ice shelf in the Arctic – was breaking apart. Quttinirpaaq National Park lost an entire ecosystem in the process.

The ecosystem that was lost was a unique freshwater ecosystem. It was an epishelf lake — a body of fresh water that floats on denser ocean water — that was dammed by the Ward Hunt Ice Shelf. The lake, located in Disraeli Fiord, represented a rare Arctic ecosystem with a unique biological community. Scientists speculate that it may have contained microbial species not yet known to science. It was the largest and best understood epishelf lake in the Northern Hemisphere. The lake was lost when the ice shelf fractured and the fresh-water layer it dammed (3 billion cubic metres), drained into the Arctic Ocean.

Scientists estimate that there has been a 90% reduction in the ice shelf since Robert Peary’s explorations of the High Arctic at the turn of the 20<sup>th</sup> century. Climate data from Alert, together with climate information gathered from ice cores and lake sediments, demonstrates accelerated warming of the region over the past 150 years. Gradual environmental change through time can lead to sudden and catastrophic changes to park ecosystems, even in large and remote parks like Quttinirpaaq.

Quttinirpaaq’s ongoing research and monitoring partnerships, together with its communications networks, allow Parks Canada to contribute to the international discussion on the impacts of environmental change on circumpolar ecosystems and on protected areas. The significance of the crack in the Ward Hunt Ice Shelf garnered worldwide attention from the scientific community and the media, generating reports in journals, magazines, newspapers, and textbooks, and on television, radio, and the Internet.

*Source: Scott, 2004; National Aeronautics and Space Administration, 2004*

**TABLE 1. ECOLOGICAL INDICATORS AND TARGETS FOR QUTTINIRPAAQ NATIONAL PARK OF CANADA**

Objectives	Indicators	Ecosystem Indicators	Interim Measures	Interim Targets	Actions
To maintain the biodiversity of park ecosystems.	Biodiversity	Tundra, Freshwater, Coastal, Wetland	<ul style="list-style-type: none"> <li>• Number of native bird species observed</li> <li>• Presence/absence of wildlife species</li> <li>• Plant species diversity</li> </ul>	<ul style="list-style-type: none"> <li>• No decline in the number of native species or gain in exotic species.</li> </ul>	<ul style="list-style-type: none"> <li>• Manage the use of the park so that sensitive species are not disturbed.</li> <li>• Ban domestic animals (e.g. pet dogs) from the park.<sup>28</sup></li> <li>• Close sport fishing until the NWMB determines whether the ecosystems of the Park can sustain sport fishing.</li> </ul>

<sup>28</sup>The domestic animal ban does not include a ban on working dogs (e.g. sled dogs, polar bear dogs, seeing eye dogs).

Objectives	Indicators	Ecosystem Indicators	Interim Measures	Interim Targets	Actions
To maintain the relative abundance of terrestrial wildlife species in the park.	Terrestrial Ecosystems: Wildlife and Habitat	Tundra, Freshwater, Coastal, Wetland	<ul style="list-style-type: none"> <li>Advanced Very High Resolution Radiometer (AVHRR) measures of habitat-specific productivity levels</li> </ul>	<ul style="list-style-type: none"> <li>No significant change*</li> </ul>	<ul style="list-style-type: none"> <li>Evaluate effectiveness of AVHRR and, if required, develop a new measure.</li> </ul>
		Tundra	<ul style="list-style-type: none"> <li>Distribution and relative abundance of muskox and Peary caribou</li> </ul>	<ul style="list-style-type: none"> <li>Relative abundance of muskox is within the normal range.</li> <li>Relative abundance of Peary caribou is maintained above current minimum population of 45 animals.</li> <li>No major change in distribution trends for Peary caribou or muskox.</li> </ul>	<ul style="list-style-type: none"> <li>Complete research on muskox distribution and preferred habitats.</li> <li>Complete research on Peary caribou distribution, preferred habitats, and population genetics.</li> <li>Continue to conduct regular wildlife surveys in the park to monitor numbers and reproductive success of key species.</li> <li>Contribute to Peary caribou recovery team.</li> <li>Minimize disturbance of Peary caribou population.</li> </ul>
To maintain healthy aquatic ecosystems in the park. To maintain healthy aquatic ecosystems in the park.	Aquatic (Freshwater) Ecosystems	Freshwater	<ul style="list-style-type: none"> <li>Water quality</li> <li>Contaminant levels in Lake Hazen Arctic char tissue</li> </ul>	<ul style="list-style-type: none"> <li>No increases in organic nutrients or contaminant levels in water.</li> <li>No increase in contaminant levels in char from baseline measures.</li> </ul>	<ul style="list-style-type: none"> <li>Report on and communicate results of monitoring to key audiences.</li> </ul>
	Marine Ecosystems	Marine	<ul style="list-style-type: none"> <li><i>To be developed</i></li> </ul>	<ul style="list-style-type: none"> <li><i>To be developed</i></li> </ul>	<ul style="list-style-type: none"> <li><i>To be developed</i></li> </ul>
To ensure that natural	Natural Physical	Freshwater	<ul style="list-style-type: none"> <li>Water discharge from Lake Hazen</li> </ul>	<ul style="list-style-type: none"> <li>No significant change.*</li> </ul>	<ul style="list-style-type: none"> <li>Report on and communicate</li> </ul>

Objectives	Indicators	Ecosystem Indicators	Interim Measures	Interim Targets	Actions
physical processes supporting ecological communities are not disrupted	Processes				results of monitoring to key audiences.
To understand and communicate the impacts of global stressors on the park's ecosystems.	Global Stressors, Atmosphere & Climate	Tundra, Freshwater, Coastal, Wetland, Glacier/ice field	<ul style="list-style-type: none"> <li>• Climate/local weather</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change.*</li> </ul>	<ul style="list-style-type: none"> <li>• Report on and communicate results of monitoring to key audiences.</li> <li>• Share data.</li> </ul>
		Tundra, Coastal, Wetland	<ul style="list-style-type: none"> <li>• Changes in plant flowering dates</li> <li>• Depth of active layer</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change.*</li> </ul>	
		Glacier/ice field	<ul style="list-style-type: none"> <li>• Glacier mass balance</li> <li>• Ice on / ice off dates for Kettle Lake &amp; lake Hazen</li> </ul>	<ul style="list-style-type: none"> <li>• No significant change.*</li> </ul>	
To improve the ecological condition of impacted sites in the park	Park-specific & Regional Stressors	Tundra	<ul style="list-style-type: none"> <li>• Number of contaminated sites.</li> <li>• Trafficability</li> <li>• Size of footprint of Tanquary Fiord, Lake Hazen and Ward Hunt Island camps.</li> </ul>	<ul style="list-style-type: none"> <li>• Contaminated sites at Tanquary Fiord, Lake Hazen and Ward Hunt Island are cleaned up to the Residential / Parkland Standard of the Canadian Council of Ministers of the Environment.</li> <li>• Reduction in size of footprint at Tanquary Fiord, Lake Hazen and</li> </ul>	<ul style="list-style-type: none"> <li>• Clean up the sites at Tanquary Fiord, Lake Hazen and Ward Hunt Island.</li> <li>• Remove all unnecessary structures, equipment, etc. from Warden stations.</li> </ul>

Objectives	Indicators	Ecosystem Indicators	Interim Measures	Interim Targets	Actions
				Ward Hunt Island camps.	
To provide park visitors and users with access to a healthy and functioning Arctic ecosystem.	<ul style="list-style-type: none"> <li><i>To be developed</i></li> </ul>	Tundra, Freshwater, Coastal, Wetland, Glacier/ice field, Marine	<ul style="list-style-type: none"> <li><i>To be developed</i></li> </ul>	<ul style="list-style-type: none"> <li><i>To be developed</i></li> </ul>	<ul style="list-style-type: none"> <li><i>To be developed</i></li> </ul>

\* The targets in this table are designed for the five-year life of this management plan. Although this measure may not provide indication of significant change over five years, in the long-term, trends and significant change may be demonstrated.

## 7. Cultural Heritage: Protecting Cultural Resources

### 7.1 CULTURAL RESOURCES IN QUTTINIRPAAQ NATIONAL PARK OF CANADA

Quttinirpaaq National Park protects a wealth of cultural resources related to ancient Arctic cultures, Inuit history and culture, historic exploration, Arctic research, and Canadian sovereignty.

A cultural resource is an object or structure made or altered by humans, a place that shows evidence of human activity, or a place that has spiritual or cultural meaning and has been determined to be of historic value. Cultural resources in Quttinirpaaq National Park will be managed in accordance with the principles and practices of Parks Canada's Cultural Resource Management Policy. The principles of this policy are: value, public benefit, understanding, respect, and integrity.

The Inuit Impact and Benefit Agreement directs Parks Canada to manage archaeological sites and sites of religious or cultural significance in a manner that:

- a) protects and promotes the cultural, historical and ethnographic heritage of Inuit society, including Inuit Traditional Knowledge and oral history related to these sites; and
- b) respects and is compatible with the role and significance of these sites in Inuit culture<sup>29</sup>.

#### 7.1.1 Archaeological Resources in Quttinirpaaq National Park

About 285 archaeological sites have been documented in Quttinirpaaq. These sites include dwellings of Independence, Dorset, and Thule peoples who inhabited the park discontinuously from about 2500 B.C. to A.D. 1700. Also included are the relics of historic Inuit/Inughuit and exploratory, scientific, and government activities of the nineteenth and twentieth centuries.

Many artifacts remain *in situ* in the park. Artifacts have been collected from Quttinirpaaq through archaeological excavation and surface collection. Artifacts removed from the park under permit are curated at the following repositories:

- Western Canada Service Centre, Parks Canada, Winnipeg, Manitoba
- Prince of Wales Northern Heritage Centre, Yellowknife, Northwest Territories
- Archaeological Survey of Canada, Canadian Museum of Civilization, Gatineau, Quebec

The Western Canada Service Centre holds most archaeological and historical artifacts collected after the Park was scheduled in 2000.

The Prince of Wales Northern Heritage Centre is the repository for the majority of the artifacts collected at Fort Conger and other cultural sites in the 1970s.

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<sup>29</sup> *Inuit Impact and Benefit Agreement*, Section 4.1.1

The Canadian Museum of Civilization holds much of the archaeological collections made in the 1980s and earlier.

The Quttinirpaaq Joint Park Management Committee has identified an interest in eventually repatriating, to Parks Canada, the cultural resources from other institutions removed from the park since its establishment in 1987. These resources are to be held in Nunavut.

The known archaeological sites in the park have been evaluated by archaeologists to assess condition, threats, research potential, and educational opportunities. In general, the sites have a high potential for interpretation about the importance of their cultural resources.

Any archaeological resources identified through monitoring as vulnerable to immediate loss or damage will be evaluated as soon as possible for heritage values and assessed for designation as threatened sites<sup>30</sup>. Impacts will be monitored and managed.

Two sites, Crane City (UgAt-1) and Ruggles Outlet Site (TkAu-1), were listed as threatened sites. The threat to the former, a staging area on Peary's trek to the North Pole, has been mitigated by mapping and recording surface artifacts and features and by preparing a type collection of artifacts. The threat to the Ruggles Outlet Site, a rare Thule winter house site that was damaged by annual flooding, was mitigated by mapping and recording the site's features and by excavating two winter houses and two caches in 2004. Both sites have been removed from the threatened site list.

### **7.1.2 Discovery Harbour**

Discovery Harbour, in Lady Franklin Bay on eastern Ellesmere Island, was the northern base for three Arctic explorers: Sir George Nares (1875-1876); Lieutenant Adolphus Greely (1881-1883); and Robert Peary (1899-1909).

Nares established a camp at Discovery Harbour as part of the British Arctic Expedition. Greely's American expedition (1881-1883) conducted scientific studies as part of the First International Polar Year of 1882-1884, which was the first major study of natural phenomena in the polar regions. Greely constructed a large building, called Fort Conger, to house his men. The foundation remains at the site. Greely's expedition was heavily supplied, and many of these materials, which were also re-used by Peary, remain at the site.

In June 1981, the Historic Sites and Monuments Board of Canada designated the First International Polar Year as an event of national historic significance. One of two plaques commemorating this event is located at Fort Conger; the other is at Fort Rae, Northwest Territories.

The American explorer, Robert Peary, conducted three expeditions to reach the North Pole: 1898-1902, 1905-06, and 1908-09. In 1900, he dismantled Greely's Fort Conger and built three huts for the use of his expeditions. Peary's accomplishments as an Arctic explorer resulted in large part from the assistance of Greenlandic Inughuit and from Peary's adoption of Inuit ways of hunting, travelling, and constructing shelters and clothing.

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<sup>30</sup> A threatened site is a site that will disappear in five to ten years if preventive action to mitigate the threat is not taken.



The buildings that remain at Fort Conger represent Peary's adaptation to the rigours of the High Arctic, based on the environmental knowledge transmitted to him by Inughuit (Dick, 1991a). These structures have been reviewed by the Federal Heritage Buildings Review Office and have been designated classified<sup>31</sup> by the Minister responsible for the Parks Canada Agency under the *Federal Heritage Buildings Policy*.

In 2002, extant recording<sup>32</sup> of the buildings at Fort Conger identified no significant structural problems and little change to the structures since the previous recording in 1979. Monitoring of the site has shown that there has been a loss and movement of some artifacts. Some concern exists regarding the effects of climate change on the condition of the buildings (e.g. warmer temperatures may accelerate decay and affect permafrost, causing structural changes to the buildings), and the erosion of the shoreline. Artifacts from Fort Conger are at Alert and the Prince of Wales Northern Heritage Centre.

### 7.1.3 Defence Research Board/Defence Research Establishment of the Pacific

Between 1953 and the mid-1970s, the Defence Research Board (DRB) of the Canadian Department of National Defence played a lead role in High Arctic science. The DRB, which effectively asserted Canadian sovereignty in the Arctic, established camps at Lake Hazen (1957-1958), Ward Hunt Island (1959), and Tanquary Fiord (1962). The camps at Lake Hazen and Tanquary Fiord are used today as seasonal centres for park operations.

While the final DRB Operation, *Tanquary*, concluded in 1978, the Defence Research Establishment of the Pacific — the DRB's successor — continued to sponsor research in the region into the 1990s. Since 1978, the Polar Continental Shelf Project has coordinated logistics for High Arctic research. These initiatives have made major contributions to the current knowledge of the park area. Quttinirpaaq's Resource Description and Analysis was based on this work. A background study and detailed inventory of structures and historic objects from Tanquary Fiord, Lake Hazen, and Ward Hunt Island have been completed (Dick, 1991b). Collected historic artifacts have been evaluated. Historic structures and artifacts relate to the work of the Defence Research Board.

## 7.2 CULTURAL RESOURCE MANAGEMENT PRACTICES

Parks Canada's practice of cultural resource management is outlined in *the Cultural Resource Management Policy* and includes inventory, evaluation, consideration of historic value, and monitoring. Parks Canada will examine all management actions for their potential individual and cumulative impacts to the historic character of cultural resources in the park. Measures that respect the historic character of the affected cultural resources will be the ones that are implemented.

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<sup>31</sup> The term *classified* is a designation of a Federal Heritage Building, based on its historic value. The Federal Heritage Buildings Review Office of the Government of Canada determines the historic value of federally owned buildings and designates them accordingly. *Classified* is the highest designation a building can receive from this office.

<sup>32</sup> Extant recording is the detailed recording of an *in situ* cultural resource. The objective is to describe the object as fully as possible and in such a manner that the resource could be reconstructed if required. The purpose of extant recording at Fort Conger is to monitor the condition of the buildings in detail and not to reconstruct the buildings.

## 7.3 MANAGEMENT GOALS, OBJECTIVES, AND ACTIONS

### 7.3.1 Inventory

An inventory is a list of cultural resources with key pieces of information about each artifact. An inventory allows managers to keep track of the condition and location of artifacts and features and helps them to make key decisions about artifact management.

#### 7.3.1.1 Strategic Goal

*An inventory of cultural resources will provide a basis for evaluation, consideration of historic value, and monitoring activities.*

#### 7.3.1.2 Objectives

1. To ensure that a current inventory of cultural resources exists to assist with park management decisions.
2. To learn as much as possible from threatened and vulnerable cultural sites.
3. To share local knowledge about the park and area with park visitors and users, community members, the Inuit Heritage Trust, and others.
4. To complete an inventory of cultural resources in areas of the park that are not well known.

#### 7.3.1.3 Key Actions

1. Maintain and provide access to a current database of all known cultural resources in the park.
2. Continue to develop an inventory of cultural resources.
3. Document and share knowledge about Inuktitut place names in the park.

### 7.3.2 Evaluation and Consideration of Historic Value

Evaluation is a process used to determine the historic value of a cultural resource and its vulnerability to threats. An understanding of historic value focuses Parks Canada's efforts at protection, presentation, and appropriate use.

#### FIGURE 9. Historic Value

Historic value is determined by consulting cultural resources specialists, park staff, Inuit, and others. Many sources of information are used, including historical documents, oral histories, local traditions, scientific studies, and the resource's physical characteristics. Factors determining historic value can include: physical traits such as age, location, or type of feature; symbols; associations with persons or events; or geographic features. When determining whether a resource has historic value, it must be assessed both as an individual resource and as part of any group of related resources.

### 7.3.2.1 Strategic Goal

*All known cultural resources in the park have been evaluated to determine their historic value. Inuit knowledge has been used to inform evaluation decisions.*

### 7.3.2.2 Objectives

1. To determine the historic value of all known cultural resources in the park in a manner that integrates Inuit Traditional Knowledge.
2. To determine whether there is potential for all or part of the cultural resources in the park to be presented for nomination as a place of national, territorial, or local historic significance.
3. To implement the *Inuit Impact and Benefit Agreement* and Parks Canada directions related to threatened sites<sup>33</sup>.

### 7.3.2.3 Key Actions

1. Multi-disciplinary teams of Inuit, historians, archaeologists, and park staff evaluate cultural resources in the park.
2. Facilitate the Joint Park Management Committee's nomination of particular sets of cultural resources in the park to be recognized as being of national historic significance to the Historic Sites and Monuments Board of Canada<sup>29</sup> by providing the Committee with assistance to advance the nomination process.
3. Document any potential threats to archaeological or historical sites or sites of religious or cultural significance and report them to the Inuit Heritage Trust with one copy to the Quttinirpaaq Joint Park Management Committee<sup>34</sup>.
4. Continue to complete evaluations of vulnerable sites in the park as they are identified.

### 7.3.3 Research and Inuit Traditional Knowledge

Ongoing research is necessary to make responsible decisions for managing cultural resources in the park. It is important that relationships are developed between researchers and Inuit and that Inuit are fully informed and consulted about research occurring in the park.

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<sup>33</sup> *Inuit Impact and Benefit Agreement*, Section 4.1.4

<sup>34</sup> The cultural resources that could be considered include Inuit archaeological sites, Fort Conger, and possibly other sites associated with the history of the area. Parks Canada cannot facilitate the nomination process and the Historic Sites and Monuments Board of Canada cannot consider the nomination until the negotiation of an *Inuit Impact and Benefit Agreement* for National Historic Sites in Nunavut is completed

### **7.3.3.1 Strategic Goal**

*Sound research and Inuit Traditional Knowledge will be used to build understanding of the cultural and ecological resources in the park.*

### **7.3.3.2 Objectives**

1. To build understanding of cultural and ecological resources in the park.
2. To provide access to local knowledge about the park's cultural resources.
3. To encourage Inuit and researchers to share their knowledge about Inuit culture and cultural resources.
4. To ensure that research activities conducted in the park complement Parks Canada's research priorities.

### **7.3.3.3 Key Actions**

1. Continue to gather information, oral histories, and Inuit Traditional Knowledge from Inuit Elders, Inuit, and others who have travelled and worked in Quttinirpaaq and the surrounding area. Gather knowledge from Inuit in Grise Fiord and Resolute Bay. Where possible, gather knowledge from Greenlandic Inughuit; Inuit of the communities of Pond Inlet (Mittimatalik), Arctic Bay (Ikpiakjuq), and Clyde River (Kangiqtugaapik); and Inuit of Nunavik (Northern Quebec). Store the information in a useable format.
2. Involve Inuit Elders in the identification of archaeological sites and in explaining how these sites were used<sup>35</sup>.
3. Facilitate the relationship between Inuit and researchers to create opportunities for Inuit Traditional Knowledge to inform and be incorporated into research. Encourage the active involvement of Inuit in research, seek collaborative research training opportunities for Inuit, and include Inuit Heritage Trust where appropriate.
4. Require all park researchers to provide information about the results of their research to the residents of Grise Fiord and/or Resolute Bay.
5. Encourage national and circumpolar researchers, scientific organizations, and post-secondary institutions to use the park as a research site and to focus on Parks Canada research priorities.
6. Build partnerships with local, regional, national, and international research organizations.
7. Seek advice from the Joint Park Management Committee about research priorities for Quttinirpaaq National Park of Canada.

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<sup>35</sup> *Inuit Impact and Benefit Agreement*, Section 4.1.2

8. Provide organizations and individuals with controlled access to the park's database of cultural resources and local knowledge.

#### 7.3.4 Protecting Cultural Resources

Management decisions about specific cultural resources in the park are required. All management actions will be evaluated for potential impacts and will consider the historic value of cultural resources. The *State of the Parks 1997 Report* identified archaeological sites and buildings that were in poor or fair condition. These archaeological sites will be a priority for opportunistic re-evaluation and assessment. For all buildings in Quttinirpaaq, those that are serviceable and feasible for park operational use are being adaptively re-used with minimal intervention and basic required maintenance. The remaining buildings that have not been assessed to be of national significance are being left to deteriorate naturally and may be removed from the park in the future, as necessary.

##### 7.3.4.1 Strategic Goal

*Cultural resources will receive the highest protection measures possible so that they are not damaged or lost.*

##### 7.3.4.2 Objectives

1. To select and implement management actions that offer the best opportunity to protect the park's cultural resources and their historic value.
2. To determine appropriate management directions for the structures and artifacts at Fort Conger and Discovery Harbour.
3. To ensure the protection of structures related to the history of the Defence Research Board and the Defence Research Establishment of the Pacific.

##### 7.3.4.3 Key Actions

1. Within two years, and in conjunction with the Joint Park Management Committee, develop park-specific archaeological permit conditions that conform to existing guidelines<sup>36</sup> and consider existing best practices<sup>37</sup>.
2. Continue to educate park visitors, users, and staff about the importance of cultural resources of the park to help protect and preserve artifacts and *in situ* archaeological features.
3. Evaluate future options for the management of the structures and artifacts at Fort Conger.

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<sup>36</sup> Guidelines from the *Nunavut Land Claims Agreement*, the *Inuit Impact and Benefit Agreement*, the Canada National Parks Act, Parks Canada's Cultural Resources Management Policy, and Parks Canada's research permit directives and others.

<sup>37</sup> Existing best practices include, but are not limited to, the Government of Nunavut's *Guidelines for Applicants and Holders of Nunavut Territory Archaeology and Palaeontology Permits* and any other advice or information from Inuit Heritage Trust or others.

4. Continue to ensure that the maintenance of structures related to the Defence Research Board and the Defence Research Establishment of the Pacific is consistent with their historic value.
5. Continue to evaluate threats to cultural resources and mitigate them when appropriate, drawing on the advice of an archaeologist and/or the Joint Park Management Committee.

### 7.3.5 Cultural Resources Monitoring

#### 7.3.5.1 Strategic Goal

*Monitoring programs will ensure that the condition of identified cultural resources in the park is known and that the need for management actions is identified and acted upon as required.*

#### 7.3.5.2 Objectives

1. To identify and measure threats to cultural resources.
2. To expand monitoring programs for cultural resources at Fort Conger.

#### 7.3.5.3 Key Actions

1. Monitor targeted and/or selected cultural resources in relative high-use areas of the park to ensure their integrity.
2. Evaluate and revise the monitoring protocols for sites at Kettle Lake and Blister Creek as signs of disturbance have been noted.
3. Enhance existing monitoring programs to help ensure the continued protection of the park's cultural resources.
4. Continue the Fort Conger monitoring program and extant recording and expand the program to include monitoring of gravesites and environmental parameters.

## 7.4 EFFECTIVENESS OF PROTECTION OF CULTURAL RESOURCES

The effectiveness of protection of cultural resources will be measured by:

Performance Measure	Expected Results
Number of threatened cultural sites	No cultural sites becoming threatened.
Amount of disturbance and number of artifacts lost	The disturbance and loss of artifacts is decreasing or eradicated.
Completion of inventory and evaluation	An inventory and evaluation of all known cultural sites is completed.
Current condition is known and appropriate action is taken promptly	Valuable features are not lost.



## 8. Heritage Presentation: Telling People about the Park

### 8.1 HERITAGE PRESENTATION IN QUTTINIRPAAQ NATIONAL PARK OF CANADA

Parks Canada shares the stories of Quttinirpaaq National Park with Canadians through heritage presentation programs.

Heritage presentation takes two forms: interpretation, which is public education that occurs inside the park, and outreach, which is public education that occurs outside the park. These programs will play a role in public education, resources protection, public safety, and law enforcement. Heritage presentation programs for Quttinirpaaq require development. A mix of personal and non-personal interpretation methods will be used to contact the park's main audiences.

Heritage presentation and public education programs are important for building understanding of and appreciation for Quttinirpaaq. These programs help to create general awareness of the national system of protected heritage areas, enhance support for park management efforts, and build visitors' understanding of Arctic ecosystems and Inuit heritage.

The heritage presentation and communications programs for the park will be guided by *Engaging Canadians: Parks Canada's Strategy for External Communications and the Inuit Impact and Benefit Agreement*.

### 8.2 TARGET AUDIENCES FOR HERITAGE PRESENTATION

A target audience is a specific group of people who would be interested in Quttinirpaaq for a variety of reasons (e.g. tourism, formal education, general interest, employment, etc.). Each audience has its own set of motivations, needs, and expectations. Grouping people into audiences enables Parks Canada to reach these groups effectively with the right messages and services.

The following major target audiences have been defined for heritage presentation:

- Park visitors and potential park visitors
- North Pole adventurers
- Residents of Grise Fiord and Resolute Bay
- Circumpolar residents, including Inughuit
- Commercial operators
- Department of National Defence staff operating in the High Arctic
- Researchers
- Educators in Nunavut and Canada
- Interested general public (in Nunavut, in Canada, and abroad)

### 8.3 KEY MESSAGES

Key park messages will be conveyed to target audiences in a variety of ways. Heritage presentation programs will aim to help park visitors and Canadians understand and appreciate these messages.

**TABLE 2. KEY MESSAGES**

Key Messages	
1	One of the key goals of a national park is to protect, maintain, and restore the ecological integrity — or health — of the park. The park’s landscapes are dominated by glaciers and mountains. Lowland areas support a diversity of ecosystems and life forms.
2	Inuit are an integral part of Arctic ecosystems. Inuit live successfully in, and are closely tied to, Arctic ecosystems.
3	Quttinirpaaq’s ecosystems are some of the most northerly in the world. These ecosystems are benchmarks for circumpolar research and monitoring and tell us about the health of the Canadian and global environments. Some areas of the park are particularly unique, including Lake Hazen and the Ward Hunt Ice Shelf.
4	The park plays a key role in protecting a high concentration of archaeological resources from the Palaeo-Eskimo, Dorset, and Thule people and modern Inuit who lived and travelled in the park area.
5	The park area has had a diverse history of use for sovereignty, national defence, research, northern exploration, and North Pole travel.
6	Inuit have played an important role in the High Arctic exploration, sovereignty activities, and scientific research that have occurred in and around the park.
7	Quttinirpaaq is cooperatively managed by Inuit and the Government of Canada.
8	Visiting the park requires a high level of preparedness for and understanding of Arctic wilderness conditions and challenges.
9	Quttinirpaaq is part of a Canada-wide family of special heritage places that includes national parks, national historic sites, and national marine conservation areas.

### 8.4 HERITAGE PRESENTATION OPPORTUNITIES

#### 8.4.1 In-Park Interpretation Opportunities

Opportunities for in-park interpretation exist at four main sites in the park: Tanquary Fiord, Lake Hazen, Ward Hunt Island, and Fort Conger (Figure 10). Parks Canada cannot, however, reach all park visitors through its own heritage presentation programs. Park visitation occurs primarily through commercially guided trips. Parks Canada relies on the relationship tour operators have with their clients to provide visitors with key interpretive opportunities. Parks Canada will work to establish stronger partnerships with tour operators in an effort to help them deliver park messages to their clients.

**FIGURE 10. Opportunities for In-Park Interpretation**

**Tanquary Fiord Warden Station**

Most of the visitors that come to the park have their first contact with Parks Canada staff at the Tanquary Fiord Warden Station. Heritage presentation facilities at the station include a small, rustic visitor reception centre, the park operations office, and a display of Defence Research Board artifacts from the 1960s. In addition, the Kettle Lake archaeological sites are located a short distance from the station and provide an opportunity for self-guided walks.

**Lake Hazen Warden Station**

There are no specific heritage presentation facilities at Lake Hazen Warden Station, although the kitchen shelter doubles as a visitor reception facility and is used for visitor orientations provided by park staff.

**Fort Conger**

All park visitors and users who access Fort Conger by motorized means must be accompanied by a Parks Canada staff member. This provides an opportunity for personal interpretation of the site and protection of the site's cultural resources.

**Ward Hunt Island\***

North Pole adventurers and researchers are the main users of Ward Hunt Island. Non-personal interpretation methods may be used at this location.

\* Ward Hunt Island is not yet part of Quttinirpaaq National Park of Canada, although Parks Canada administers this land. Once the island is included within the land description of the park in the Canada National Parks Act, initiatives for the island can be implemented.

**8.4.2 Outreach Opportunities**

Outreach efforts will concentrate on reaching educators in Nunavut and will include school programs in Grise Fiord, Resolute Bay and Iqaluit. They will also focus on using the park's website and other technology for communicating science and Inuit Traditional Knowledge and for connecting Canadians to the park.

**8.5 MANAGEMENT GOALS, OBJECTIVES, AND ACTIONS**

**8.5.1 Heritage Presentation**

**8.5.1.1 Strategic Goal**

*Target audiences will appreciate and understand key messages about the park.*

*Informed and aware visitors and users will have a sufficient level of understanding of the park to have an educational and enjoyable experience.*

**8.5.1.2 Objectives**

1. To reach more Nunavummiut and Canadians with park messages.
2. To help park visitors and users prepare for their trip to the park.
3. To involve Inuit in strategic planning for heritage presentation programs and products.

4. To determine the effectiveness of heritage presentation efforts in delivering key messages to target audiences.

### 8.5.1.3 Key Actions

1. Make all public information about the park available in Inuktitut<sup>38</sup>.
2. Partner with other organizations to develop and deliver heritage presentation programs for presentation to target audiences.
3. Highlight Inuit culture and history in park programs.
4. Develop exhibits in Resolute Bay and Grise Fiord. Integrate replicas of cultural resources, including those from Inuit history, in the exhibits.
5. Create and implement educational outreach programs for schools and interpretive programs for park visitors and users.
6. Provide visitors with the information required to prepare for their trip to the park (e.g. pre-trip information package, website, orientation).
7. Involve Inuit in the development and presentation of heritage presentation programs for park visitors and users.
8. Develop and implement a system to evaluate the effectiveness of heritage presentation efforts in delivering key messages to target audiences.

### 8.5.2 Communicating About Ecological Integrity in High Arctic Ecosystems

Protecting ecological integrity in the park depends partly upon public information and education. Goals, objectives, and actions related to ecological integrity extend beyond the boundaries of the park and cannot be accomplished without broad public support.

#### 8.5.2.1 Strategic Goal

*Target audiences will have an increased understanding of the uniqueness of High Arctic ecosystems and of how their actions may ensure the health of the park.*

#### 8.5.2.2 Objectives

1. To promote stewardship and knowledge of High Arctic ecosystems within the circumpolar community, the interested general public, and the Parks Canada Agency.
2. To share information with target audiences on the effects that activities in the greater park ecosystem may have on the park's ecological integrity.
3. To increase awareness of, and involvement in, the research process by the residents of Grise Fiord and Resolute Bay.

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<sup>38</sup> *Inuit Impact and Benefit Agreement*, Section 7.1.2

4. To influence decisions about land and water use in adjacent jurisdictions during environmental assessments, in order to reduce the impact of development and activities on the park's resources.
5. To maintain a collection of published and unpublished sources of information about Quttinirpaaq.

### 8.5.2.3 Key Actions

1. Encourage sharing of knowledge and information about the park with target audiences, specifically among researchers, educators, and Inuit elders in Resolute Bay and Grise Fiord.
2. Provide park visitors and users with information about actions that will help in maintaining the park's ecological integrity.
3. Facilitate the dissemination of park ecosystem information in Inuktitut to local communities and regional organizations.
4. Actively participate in environmental assessment processes that affect the park.
5. Collect published and unpublished sources of information (e.g. journals, papers, presentations, videos) about Quttinirpaaq for use in park management and heritage presentation.

### 8.5.3 Communicating the History of the Park and its Cultural Resources

Quttinirpaaq National Park protects a wealth of cultural resources. Communicating key messages about these resources will help in their protection. Inuit play a key role in building this understanding and in sharing these stories of the park's cultural history with park visitors and other target audiences.

To achieve the goals, objectives, and actions related to cultural resources, broad public support is required. This support can be achieved through effective communication to target audiences.

#### 8.5.3.1 Strategic Goal

*Target audiences will have an increased understanding of the national and international importance of the cultural resources protected by the park.*

*The stories of Quttinirpaaq's cultural history will be shared using a variety of interpretation and outreach methods.*

#### 8.5.3.2 Objectives

1. To develop interpretation and outreach programs about the park's cultural history.
2. To increase target audiences' awareness of the Palaeo-Eskimo, Dorset, and Thule cultures.

### 8.5.3.3 Key Actions

1. Develop a self-guided walking tour of archaeological resources at Kettle Lake (near Tanquary Fiord) to inform visitors and users about these cultural resources and their sensitivity.
2. Communicate key messages about site sensitivity to all visitors to and users of Fort Conger through a variety of media, orientations, and on-site interpretation<sup>39</sup>.
3. Provide interpretive media products about the Inuit cultural sites around Fort Conger and about Inuit contributions to historical events that occurred at the site during polar exploration efforts and the race to the North Pole.
4. Develop media products that include publications that interpret the park's diverse history and culture, including the Palaeo-Eskimo, Dorset and Thule history of Quttinirpaaq.
5. Include Inuktitut place names in pre-trip information and public interpretation and outreach material, where possible.

## 8.6 MEASURES OF VISITOR AWARENESS AND UNDERSTANDING

Indicators for visitor awareness and understanding will be developed during the life of this plan. In the interim, the level of visitor awareness and understanding of Quttinirpaaq will be measured by:

Measure	Target
Number of residents of Grise Fiord and Resolute Bay who are aware of Quttinirpaaq and of the system of national parks.	Increasing number.
Inclusion of key messages in curricula in Nunavut schools.	Inclusion of key messages in curricula.
Amount of positive media coverage about the park.	Increase in number of positive media stories about the park.
Number of public/school presentations about Quttinirpaaq by park staff.	Increased number of presentations

<sup>39</sup> This management plan requires all visitors who are accessing Fort Conger by motorized means to be accompanied by a knowledgeable Parks Canada staff member. This staff member will be able to provide on-site interpretation of Fort Conger, the associated artifacts and their sensitivity.

## 9. Visitor Experience and Other Park Uses

For many people, a visit to Canada's High Arctic, or to Quttinirpaaq, is a once-in-a-lifetime experience. They come to experience the adventure and challenge of travelling in the remote Arctic wilderness. These visitors are immersed in an immense and magnificent landscape not found elsewhere in the world. The many varied dimensions of a trip to Quttinirpaaq help those who experience this place to develop a better appreciation for and understanding of the natural and cultural heritage of the High Arctic and the circumpolar world.

People who travel in this landscape soon come to recognize that Quttinirpaaq's ecosystems are fragile and that impacts on the landscape can last for decades and are often irreversible. Low-impact travel techniques will be encouraged so that others can experience the same solitude, remoteness and relatively untouched Arctic wilderness in the future.

### 9.1 PARK VISITORS AND USERS

There are three groups of people who do or could come to Quttinirpaaq: park visitors, park users, and Inuit. Park visitors<sup>40</sup> are specifically defined in the *Inuit Impact and Benefit Agreement*, and the term refers primarily to recreational users of the park. Researchers, military personnel, and others are not considered to be part of the definition of park "visitors"<sup>41</sup> and are all considered to be park users.

#### 9.1.1 Park Visitors

Quttinirpaaq provides a variety of visitor opportunities, including backcountry hiking, day hiking, ski touring, cruise ship tours, and day use. In addition, Parks Canada administers Ward Hunt Island<sup>42</sup>, the launching point for most North Pole expeditions that depart from North America. The park receives fewer than 200 visitors each year; the majority of these visitors (up to 150) arrive with cruise ships that come to the park each summer.

Quttinirpaaq's low visitation results from its remote location and the extremely high cost of travelling to the park. With the exception of cruise ship passengers, visitors are generally self-sufficient wilderness travelers. Most travel to the park as part of a guided group. The park's main visitor season is July and August.

Commercial tour operators and guides are valued for the roles they play in providing visitors with pre-trip information, delivering the park's key messages, and acting as role models for "leave no trace" principles and practices.

Visitors are free to travel wherever they choose, subject to park zoning, public safety, area closures, and other guidance provided during registration with Parks Canada. Dispersed hiking is encouraged to reduce the formation of trails in the park. All visitors to the park are required to participate in an orientation with park staff prior to, or at the beginning of,

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<sup>40</sup> A park visitor, as defined by the *Inuit Impact and Benefit Agreement*, is: A person who enters or uses the Park, but does not include: (a) an Inuk; (b) a researcher; (c) an employee or contractor of Parks Canada; or (d) an employee or contractor of the Government of Canada acting on behalf of Parks Canada.

<sup>41</sup> Parks Canada staff are not included in this definition. Direction for park management and operational activities is outlined in Section 11, Administration and Operations.

<sup>42</sup> Ward Hunt Island is not yet part of Quttinirpaaq National Park of Canada, although Parks Canada administers this land. Once the island is included within the land description of the park, the *Canada National Parks Act* will apply.

their visit to Quttinirpaaq. Cruise ships containing larger numbers of visitors will enter the park where there are staff to enhance the experience of visitors and provide special educational programming.

### 9.1.2 Park Users

The number of park users varies each year. There are usually fewer than ten scientific research teams in the park annually. These researchers provide key information to park managers, to help improve decision-making. Research results are shared with local communities and others. Authority to conduct research in the park is granted by a Scientific Research and Collection Permit that is reviewed by the Joint Park Management Committee. Parks Canada will continue to work closely with the Polar Continental Shelf Project in support of research in the park.

Department of National Defence personnel are active in the park for approximately six weeks during the summer season, conducting routine annual maintenance on communication towers. Department of National Defence personnel travel by airplanes and helicopters and are supported from Eureka and Alert.

Parks Canada will continue to work with park users to help protect the park's ecosystems and cultural resources. Once each year, all park users are required to participate in an orientation with park staff prior to or at the beginning of their first visit to the park.

**FIGURE 11. Department of National Defence Activities**

The Canadian Department of National Defence is active on northern Ellesmere Island and within Quttinirpaaq National Park. Its activities include military training/adventure exercises, maintenance of communications systems (Operation Hurricane), and transportation of personnel and equipment to and from Canadian Forces Station Alert. In addition, the Department of National Defence conducted a sovereignty patrol reconnaissance in the park area in 2003 and a sovereignty patrol in 2004.

Parks Canada and the Department of National Defence will continue to work cooperatively to minimize and mitigate any potential impacts that military activities may have on the park's ecological integrity or cultural resources and to ensure that Department of National Defence objectives are met. Activities of the Department of National Defence are guided by the *Memorandum of Understanding between Department of National Defence and Parks Canada Agency (Formerly Department of the Environment – Canadian Parks Service) Concerning Certain Sites within Quttinirpaaq National Park of Canada (Formerly Ellesmere Island National Park Reserve)*. Parks Canada will seek the advice of the Joint Park Management Committee regarding non-emergency activities that are conducted in the park by the Department of National Defence, including security operations. The Department of National Defence may conduct operations within the confines of the park in times of national crisis.



## 9.2 RECREATIONAL ACTIVITIES

A range of activities has been assessed to provide outstanding visitor experiences and satisfy the needs of users of the park in Quttinirpaaq National Park (Table 3). These activities were chosen by assessing the park's ability to accommodate each activity. The park is able to accommodate activities when they:

- Lead to experiences that encourage public understanding, appreciation, and enjoyment of the park's natural and cultural heritage;
- Leave the park unimpaired for future generations;
- Do not conflict with other visitors' experiences; and
- Do not contravene the *Nunavut Land Claims Agreement* or the *Inuit Impact and Benefit Agreement*.

Any new activities proposed in the park will be evaluated. Some recreational activities in Quttinirpaaq are naturally limited by seasons.

Motorized access<sup>43</sup> in the park will be limited. Aircraft access will require a permit approved by the superintendent, who will consider the impacts of the access on wildlife and visitor experience. The superintendent will seek the advice of the Chairperson of the Joint Park Management Committee on all permit applications for aircraft access to Zone I areas. The Superintendent will inform the Director of Lands at QIA of any air access permits approved for Zone I areas. Snowmobiling will be permitted through guided tours, led by licenced guides, in the Tanquary Fiord Zone III areas. Cruise ship tours will be permitted in the Zone III area at Tanquary Fiord. Business Licence requirements will apply to all guided tours or commercial operations in the park.

Facilities that are provided in the park are aircraft landing sites at Tanquary Fiord, Lake Hazen, Ward Hunt Island, and Fort Conger; emergency facilities at Tanquary Fiord, Lake Hazen, and Ward Hunt Island; and strategically placed emergency caches. Ward Hunt Island is sometimes used as a staging area for North Pole expeditions in late winter/early spring. These groups have no impact on other park visitors because of the timing of their visit, and little impact on the park's natural and cultural resources because of the short time they are actually in the park. North Pole expeditions will be permitted to stage expeditions from the park if the activity has been identified as an activity that can be accommodated by the park in the management plan (refer to Table 3).

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<sup>43</sup> This management plan does not restrict motorized use by Inuit undertaking activities permitted by the *Nunavut Land Claims Agreement* (e.g. harvest) in the park.

**TABLE 3. RECREATIONAL ACTIVITIES FOR QUTTINIRPAAQ NATIONAL PARK OF CANADA**

Type of Activity	Specific Activities
Backpacking	<ul style="list-style-type: none"> <li>• Casual</li> <li>• Expedition</li> </ul>
Boating	<ul style="list-style-type: none"> <li>• Cruise ship tours<sup>44</sup></li> </ul>
Camping	<ul style="list-style-type: none"> <li>• Primitive</li> <li>• Group camping at Tanquary Fiord</li> </ul>
Climbing	<ul style="list-style-type: none"> <li>• Mountaineering</li> <li>• Technical climbing</li> <li>• Scrambling</li> </ul>
Dog Sledding <sup>45</sup>	<ul style="list-style-type: none"> <li>• Expedition</li> <li>• Guided tours</li> </ul>
Heritage Appreciation	<ul style="list-style-type: none"> <li>• Art activities</li> <li>• Bird watching</li> <li>• Wildlife observation</li> <li>• Photography</li> <li>• Learning about Inuit history/culture</li> </ul>
Hiking/Walking	<ul style="list-style-type: none"> <li>• Day hiking</li> <li>• Overnight hiking</li> </ul>
Interpretive Programs	<ul style="list-style-type: none"> <li>• Interpretive walks</li> <li>• Curriculum-based school programs</li> <li>• Audio-visual presentations</li> <li>• Special events</li> <li>• Demonstrations</li> </ul>
Orienteering	
Paddling	<ul style="list-style-type: none"> <li>• Day canoeing/kayaking</li> <li>• Canoe/kayak tripping</li> <li>• Sea kayaking/canoeing</li> </ul>
Skiing	<ul style="list-style-type: none"> <li>• Backcountry touring</li> <li>• Ski mountaineering</li> <li>• Glacier travel</li> <li>• Ski touring</li> </ul>
Snowmobiling	<ul style="list-style-type: none"> <li>• Guided trips in Tanquary Fiord Zone III area</li> </ul>
Snowshoeing	<ul style="list-style-type: none"> <li>• Day trips</li> <li>• Overnight trips</li> </ul>

<sup>44</sup> Cruise ship visitation presents a unique opportunity for visitor learning. Cruise ships will be completely self-contained, including waste management. The cruise ships that visit Quttinirpaaq will be of ice-breaking class to travel to the park and will generally have a limited capacity for passengers (up to 150, including staff). Timing will be coordinated to minimize impacts on other visitors. Park staff will provide personal interpretation onboard the ship. Cruise ship visitation will continue to be managed through the business licencing process and through appropriate licence conditions, to minimize any environmental impacts.

<sup>45</sup> All working dogs (e.g. sled dogs, polar bear dogs, seeing eye dogs) entering the park with visitors or under a Parks Canada Business Licence will be required to have immunizations against rabies, distemper, and parvo. Inuit beneficiaries conducting activities, such as harvest, pursuant to the *Nunavut Land Claims Agreement* are encouraged, but not required, to have immunizations for their dogs. Parks Canada will provide financial assistance to Inuit beneficiaries of the *Nunavut Land Claims Agreement* for the rabies, distemper, and parvo immunizations that are not already available free of charge in the communities if they wish to travel in the park under a business licence or to conduct activities under the *Nunavut Land Claims Agreement*. In order to reduce the risk of parasite transmission to wild animals in the park, domestic animals (other than working dogs) will be prohibited in the park.

## 9.3 MANAGEMENT GOALS, OBJECTIVES, AND ACTIONS

### 9.3.1 Directions on Visitor Experience and Park Users

#### 9.3.1.1 Strategic Goal

*The park will be managed so that visitors have:*

- *a memorable High Arctic wilderness experience;*
- *learning opportunities; and*
- *the opportunity to participate in a range of recreational activities that are suitable in the park's wilderness environment;*

*and so that visitors and users will have:*

- *the opportunity to experience the park's natural and cultural features;*
- *safe and enjoyable experiences in the park; and*
- *minimal impacts on the park's ecological and cultural resources.*

#### 9.3.1.2 Objectives

1. To protect and maintain the wilderness experience sought by visitors in the context of maintaining/restoring ecological integrity.
2. To help visitors to plan their trip to the park.
3. To assist business licence holders in providing their clients with positive, educational, safe, and coordinated experiences visiting Quttinirpaaq, Resolute Bay, and Grise Fiord.
4. To ensure that park activities foster public education, appreciation and enjoyment in the Park.

#### 9.3.1.3 Key Actions

1. Develop indicators of visitor experience. Establish and implement a program to monitor these indicators.
2. Establish standards, in collaboration with business operators and park users, to ensure the continued protection of the Lake Hazen Basin, including guidance for visitor, user, and park management activities that occur in the area (e.g. base camping).
3. Provide visitors with adequate information prior to their trip, in order to help them plan their visit.
4. Monitor human activities to ensure the continued protection of ecological and cultural resources.
5. Participate in territorial and regional tourism initiatives.
6. Educate aircraft operators about respecting applicable legislation, regulations, and policy for aircraft operations above the park and for access to the park.

### 9.3.2 Nunavut Land Claims Agreement Beneficiaries' Use of the Park

*The Nunavut Land Claims Agreement provides Inuit of the Nunavut Settlement Area with specific rights related to national parks in Nunavut. It provides all Inuit<sup>46</sup> with:*

*"...free and unrestricted right of access for the purpose of harvesting to all lands, water and marine areas within...Parks [in Nunavut]..."<sup>47</sup>*

and *"...entry at no cost into Parks"<sup>48</sup>*

This management plan respects these rights and all others granted in *the Nunavut Land Claims Agreement*.

Recently there has been little or no use of the park by Inuit.

#### 9.3.2.1 Strategic Goal

*Beneficiaries' use of the park in accordance with the Nunavut Land Claims Agreement and the Inuit Impact and Benefit Agreement will be respected.*

#### 9.3.2.2 Objectives

1. To manage the park so that Inuit continue to have access.

#### 9.3.2.3 Key Actions

1. Limit visitor access to areas of the park in which Inuit are participating in activities permitted by the *Nunavut Land Claims Agreement*, when requested.

### 9.3.3 Public Safety Services

In a remote and mountainous wilderness park like Quttinirpaaq, public safety is a significant concern. Public safety must be a shared responsibility. Visitors must take precautions that reflect the risk involved in their chosen activity. This involves having knowledge of natural hazards, proper equipment and provisions, adequate skill and fitness, and the ability to cope with self-rescue. Visitors to this national park will be expected to accept a high level of responsibility for their own safety.

The park's public safety program relies on visitors receiving the information they require to prepare adequately for their experience in the park. A key element of the park's public safety program is the education and information sharing that occurs with visitors early in the trip planning cycle, rather than once visitors arrive at the park. Search and rescue services in the High Arctic can only be provided through cooperation with other agencies and organizations, including the Department of National Defence, the Polar Continental Shelf Project (Natural Resources Canada), the Banff-Jasper National Park Public Safety Specialists, the Royal Canadian Mounted Police, the Emergency Measures Organization,

<sup>46</sup> See definition of Inuit from the *Nunavut Land Claims Agreement* in the glossary of this plan.

<sup>47</sup> From Section 5.7.16 of the *Nunavut Land Claims Agreement*. Section 5.7.18 of the *Nunavut Land Claims Agreement* states that the right of access granted by Section 5.7.16 is subject to laws enacted for public safety, conservation restrictions established by the Nunavut Wildlife Management Board, agreements between Inuit and Parks Canada and conflicting land use activities. Refer to the *Nunavut Land Claims Agreement* for specific wording of Section 5.7.18.

<sup>48</sup> *Nunavut Land Claims Agreement*, Section 8.4.15.

the Canadian Coast Guard, the Rescue Coordination Centre (Trenton), Parks Canada Dispatch Centre (Jasper), the Civil Air Search and Rescue Association (CASARA), and cruise ship companies. Search and rescue response will always be limited by the availability of aircraft and personnel, weather conditions, and the location of the emergency.

#### **9.3.3.1 Strategic Goal**

*The park's public safety program will be based on prevention, readiness, response, and shared responsibility.*

#### **9.3.3.2 Objectives**

1. To provide a public safety program for the park that allows visitors to assess their own capability for travel in the park prior to arrival, encourages self-sufficiency and self-rescue, offers good and current information to the public, and provides a basic level of search and rescue response in the event of an emergency.
2. To maintain emergency supplies for backcountry travellers, which will help to sustain park visitors and users during emergency situations in the summer season.
3. To maintain basic response capability in the park.
4. To help visitors and users be adequately prepared for their park experience.
5. To develop and maintain partnerships with other organizations to assist in search and rescue operations.

#### **9.3.3.3 Key Actions**

1. Distribute pre-trip information packages to all visitors through a variety of sources (e.g. Internet, e-mail, mail, personal contact).
2. Update and maintain a Public Safety Plan for the park.
3. Maintain the equipment and training required for Parks Canada staff to provide the appropriate level of public safety response.
4. Maintain emergency shelters at Tanquary Fiord Warden Station, Lake Hazen Warden Station, Ward Hunt Island, and caches at six other key locations in the park<sup>49</sup>.
5. Input all public safety occurrences into the Parks Canada Occurrence Tracking System, and use this data to inform management decisions.
6. Cooperate with other organizations and agencies, including licenced outfitters and Nunavut Tourism, to distribute public safety and pre-trip planning information.
7. Maintain relationships for the provision of public safety services in the park with Polar Continental Shelf Project (Natural Resources Canada), the Department of

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<sup>49</sup> Emergency supplies are located at 9 key locations in the park, as identified in Figure 1.

National Defence, the Royal Canadian Mounted Police, Resolute Bay and Grise Fiord community search and rescue groups, Civil Aviation Search and Rescue Association, the Rescue Coordination Centre (Trenton), Parks Canada Dispatch Centre (Jasper), and the Banff-Jasper National Park Public Safety Specialists.

#### 9.3.4 The Role of the Park in Tourism in Nunavut

Along with other national and territorial parks and historic sites, Quttinirpaaq plays an important role in Nunavut's tourism industry. The park's role in tourism in Nunavut focuses on:

- Promotion;
- Economic benefits to Grise Fiord and Resolute Bay, as identified in the *Inuit Impact and Benefit Agreement*;
- Tourism business operations in Nunavut;
- Regional cooperation in tourism development and marketing; and
- Sustainability.

Parks Canada will focus on promoting the park as part of heritage tourism in cooperation with the Government of Nunavut, Nunavut Tourism, and the Tourism Taskforce of Nunavut. Heritage tourism focuses on visiting a place of historic, cultural, or natural significance. The tourism offer in Quttinirpaaq will include a range of opportunities for people to appreciate, understand, and enjoy the park and its unique features and resources. Tourism in the park will be sensitive to the fragility of the park and will be conducted in a way that ensures the continued protection of the park's ecological integrity, cultural resources, and wilderness character. It is essential that cooperation between Parks Canada, the Joint Park Management Committee, tour operators, and the tourism industry be developed and maintained to achieve the goal of sustainable tourism for the park.

As required by the *Inuit Impact and Benefit Agreement*<sup>50</sup>, Parks Canada completed a Community Tourism Strategy for both Grise Fiord and Resolute Bay in 2002. Parks Canada will support the implementation of these plans.

##### 9.3.4.1 Strategic Goal

*The park will be promoted as part of a sustainable heritage tourism offer in the High Arctic and in Nunavut, in cooperation with the communities of Grise Fiord and Resolute Bay, and in partnership with others.*

##### 9.3.4.2 Objectives

1. To assist the Grise Fiord and Resolute Bay communities in benefiting from tourism to the park.

<sup>50</sup> *Inuit Impact and Benefit Agreement*, Article 10, Part 4

2. To understand trends in Arctic tourism sufficiently to enable Parks Canada to plan for changes in park visitation (e.g. the types of visitors, the number of visitors, or the kinds of activities).

### 9.3.4.3 Key Actions

1. Develop partnerships with Nunavut Tourism to advance heritage tourism and learning travel in the park and in Nunavut, and to cooperatively market the park experience.
2. Assist Grise Fiord and Resolute Bay with the implementation of their Community Tourism Strategies through contributions of staff time and expertise.
3. Help the communities of Resolute Bay and Grise Fiord access federal, territorial, and other funding to implement their Community Tourism Strategies.
4. Facilitate opportunities for tourism capacity building where possible and as appropriate.
5. Provide assistance to community tourism businesses in Resolute Bay and Grise Fiord to promote their services.
6. Conduct regular visitor satisfaction surveys to ensure outstanding visitor experiences in the park. Share data with other agencies in Nunavut as required.

## 9.4 VISITOR EXPERIENCE MEASURES

Visitor experience indicators and measures will be developed during the life of this plan. In the interim, the level of satisfaction with visitor services provided by Quttinirpaaq will be measured by:

Measure	Target
Number of visitors who indicate satisfaction with their visit to the park	85% of visitors indicate satisfaction
Number of public safety occurrences	0% increase in the relative frequency of occurrences
Number of visitors who receive educational messages	100% visitors receive educational messages

In addition, tourism activity in Grise Fiord and Resolute Bay related to the park will be measured, with an increase in tourism activity as the target.

# 10. Cooperative Management, Partnership, and Public Involvement

The successful management of Quttinirpaaq requires effective cooperation and participation of both Inuit and the government. Partnerships and the involvement of Canadians are equally important to achieving the park's vision.

Parks Canada and the Quttinirpaaq Joint Park Management Committee will strive for open, active, and regular communication with local community members, residents of Nunavut, and Canadians. Involvement of Inuit in park management will continue to be a high priority for Quttinirpaaq. Partnerships in tourism, research, and cultural resources management will be enhanced during the life of this plan.

## 10.1 MANAGEMENT GOALS, OBJECTIVES, AND ACTIONS

### 10.1.1 Cooperative Management

Quttinirpaaq National Park is cooperatively managed by Inuit and Parks Canada. An effective relationship is being developed between the Quttinirpaaq Joint Park Management Committee and Parks Canada, which will help to build a strong future for the park. Effective involvement of the Committee is critical to the success of Parks Canada programs on the local, regional, and national scales.

#### FIGURE 12. Implementation of the Management Plan

The Quttinirpaaq National Park Management Plan will be implemented by Parks Canada with the advice of the Joint Park Management Committee.

The *Inuit Impact and Benefit Agreement* outlines key areas of responsibility for monitoring and evaluating the plan's implementation. The Superintendent, in cooperation with the Qikiqtani Inuit Association's Director of Lands, will:

- Monitor the implementation of the management plan; and
- Prepare an annual report on the implementation of the management plan\*.

Each year, the Joint Park Management Committee is responsible for reviewing progress on the implementation of the plan. The Superintendent or the Director of Lands may, at any time, request that the Committee undertake a more formal evaluation of the plan's implementation.

In addition, the superintendent is required to send the annual park business plan to the Joint Park Management Committee for review\*\*. This business plan must be clearly linked to the park management plan\*\*\*.

\* The key action for the annual report is in Section 10.1.3.3, #1 of this management plan.

\*\* *Inuit Impact and Benefit Agreement*, Sections 5.3.41 to 5.3.49

\*\*\* *Inuit Impact and Benefit Agreement*, Section 5.4.3



#### **10.1.1.1 Strategic Goal**

*The Quttinirpaaq Joint Park Management Committee will continue to be active in the planning and management of the park.*

#### **10.1.1.2 Objectives**

1. To ensure the Quttinirpaaq Joint Park Management Committee is active in the planning and management of the park.

#### **10.1.1.3 Key Actions**

1. Provide the Quttinirpaaq Joint Park Management Committee with the information, resources, and training they require for park planning and management.
2. Assist the Quttinirpaaq Joint Park Management Committee in building relationships with other organizations and agencies.

#### **10.1.2 Partnerships**

The success of Parks Canada's programs in Quttinirpaaq and in Nunavut depends on the strong partnerships the Agency has with a number of regional and national organizations. *The Nunavut Land Claims Agreement* and the *Inuit Impact and Benefit Agreement* also require that a working relationship be established with the Nunavut Wildlife Management Board as part of the management planning process for these parks.

Work with territorial and regional organizations on collaborative initiatives is important for the park to be able to reach its goals, especially in relation to the protection of cultural resources in northern Ellesmere Island.

Existing partnerships with the Polar Continental Shelf Project (Natural Resources Canada) and the Department of National Defence are critical to the operation of the park.

Partnerships with universities and government departments are important for the continued development of research and monitoring programs in Quttinirpaaq. They provide Parks Canada with technical expertise and specialist advice about the natural and cultural resources in the park that is not available elsewhere.

**FIGURE 13. Polar Continental Shelf Project**

Parks Canada's operations in Quttinirpaaq would not be possible without the support of the Polar Continental Shelf Project of Natural Resources Canada. For the past 40 years, the Polar Continental Shelf Project has been making Arctic research possible for hundreds of scientists from around the world. Each year, Polar Shelf provides ground and air support services to Quttinirpaaq, as well as to approximately 150 scientific groups from more than 40 universities or government agencies.

Day-to-day operations for Quttinirpaaq are supported by Polar Shelf's base in Resolute Bay. Park staff and researchers rely on Polar Shelf for regular radio communications and supply flights. Polar Shelf also provides support to the park in case of emergency. Parks Canada and Polar Continental Shelf Project maintain a Memorandum of Understanding for the use and maintenance of facilities at Tanquary Fiord by scientific researchers studying on northern Ellesmere Island. Some facilities at Tanquary Fiord, owned by Polar Shelf, are maintained by Parks Canada.

#### **10.1.2.1 Strategic Goal**

*Partnerships will be established and maintained to assist with the protection, management, and presentation of the park.*

#### **10.1.2.2 Objectives**

1. To establish and maintain local, regional, national, and international partnerships for the management of Quttinirpaaq National Park.

#### **10.1.2.3 Key Actions**

1. Maintain and enhance the current partnership with the Polar Continental Shelf Project.
2. Maintain and enhance the current partnership with the Department of National Defence.
3. Involve universities, government departments, and other organizations in the development and implementation of research and monitoring programs in the park.
4. Work with the Nunavut Wildlife Management Board on decisions related to the management of wildlife and wildlife habitats<sup>51</sup>.
5. Work with Canadian northern educators, departments of education, universities, museums, archives and other partners to increase opportunities for presentation of the park and its key messages.

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<sup>51</sup> *Nunavut Land Claims Agreement*, Section 5.2.34(c)

### 10.1.3 Public Involvement

A variety of forms of public consultation were undertaken as part of the management planning program. Organizations and individuals who participated in the program expressed interest in continued public involvement during implementation of the plan.

#### 10.1.3.1 Strategic Goal

*Inuit from Grise Fiord and Resolute Bay and members of the general public in Nunavut will be involved in park management.*

#### 10.1.3.2 Objectives

1. To ensure the park is accountable to the public.
2. To maintain and build interest in and awareness of the park among the general public in Nunavut.

#### 10.1.3.3 Key Actions

1. Produce and distribute an annual report on the implementation of the park management plan, in English, French, and Inuktitut, with the advice of the Quttinirpaaq Joint Park Management Committee.
2. Consult with the public and stakeholders on major new initiatives.

## 10.2 INVOLVEMENT OF ABORIGINAL PEOPLE AND OF PARTICIPATION BY CANADIANS

The level of involvement of Aboriginal people in Quttinirpaaq will be measured by:

Performance Measure	Expected Results
Number of Inuit on the Quttinirpaaq JPMC	At least 5 members on the JPMC are Inuit
Number of Inuit on the Quttinirpaaq Park Planning Team	At least 2 members on the Park Planning Team are Inuit
Number of Inuit working for Parks Canada in Quttinirpaaq National Park	Contribution of Quttinirpaaq National Park to the implementation of the Nunavut Field Unit Inuit Employment Plan. <sup>52</sup>
Number of Inuit participating in Parks Canada programs (e.g. research and volunteer programs)	Increasing number of Inuit participating
Number of Inuit businesses and/or guides operating in the park	Increasing number of Inuit businesses and/or guides

<sup>52</sup> The Nunavut Field Unit Inuit Employment Plan sets targets towards representative Inuit employment in the Nunavut Field Unit by 2020 (*Nunavut Land Claim Agreement*, Article 23).

The level of participation by Canadians will be measured by:

<b>Performance Measure</b>	<b>Expected Results</b>
Number of partnerships maintained and developed	Increasing number of partnerships
Number of Canadian visitors to the park	Increasing number of Canadian visitors
Number of inquiries about the park from Canadians	Increasing number of inquiries from Canadians
Number of businesses in adjacent communities that contribute to the operation of the park	Steady or increasing number of businesses in adjacent communities contribute to the operation of the park
Number of Canadian volunteers contributing to the park.	At least 2 volunteers, preferably from adjacent communities, contributing to the park each year,
Number of people participating in public meetings in Nunavut related to Quttinirpaaq	Continuation of active participation in meetings

# 11. Administration and Operations

## 11.1 MANAGEMENT GOALS, OBJECTIVES, AND ACTIONS

### 11.1.1 Environmental Management

Parks Canada has developed a National Environmental Management Systems Framework to provide a structured method for reducing the impact of the Agency's operations on the environment. This method ensures that the greatest environmental risks receive the highest priority.

In conjunction with other Parks Canada sites in the Nunavut Field Unit, Quttinirpaaq completed a first Environmental Management Action Plan in 2000 that has been and will continue to be updated and implemented during the life of this management plan. Key focus areas include petroleum storage tanks, contaminated sites, solid waste management, wastewater management, energy conservation, and green procurement<sup>53</sup>.

Parks Canada's services in Quttinirpaaq will not include the provision of treated drinking water for park users or visitors. All park visitors and users will be informed that all water consumed should be treated and that they are required to be self-sufficient in doing so. Water treatment for Parks Canada staff at the Tanquary Fiord camp will continue.

#### 11.1.1.1 Strategic Goal

*Quttinirpaaq will be a leader in environmental management and "green" operations in the High Arctic.*

*Parks Canada will demonstrate sound environmental practices in all of its activities, services, and products.*

*Environmental management will be fundamental to the operation of all businesses that offer services in the park.*

#### 11.1.1.2 Objectives

1. To improve park operations so that they become more environmentally sound.
2. To reduce consumption of fossil fuels in the park.
3. To decrease the production of waste arising from park management, visitor, and user activities in the park.
4. To implement operational standards at Lake Hazen that are sensitive to the area's fragile ecosystem and high potential for long-term impact<sup>54</sup>.

<sup>53</sup> Green procurement is the purchase of environmentally friendly products.

<sup>54</sup> See Section 9.4.1.3(2) of this plan.

5. To educate park visitors and users on how to ensure the continued protection of the park.
6. To encourage business licence holders to implement sound environmental management practices (e.g. refueling of aircraft).

#### **11.1.1.3 Key Actions**

1. Update and implement the Nunavut Field Unit's Environmental Management Action Plan to ensure that the current impacts of the park's operations are minimized and mitigated.
2. Ensure that all contaminated sites in the park are listed in the national inventory and that funding is sought for remediation and monitoring of these sites. Identify and begin remediation at priority sites, including sites at Tanquary Fiord, Lake Hazen, and Ward Hunt Island.
3. Require all park visitors and users at base camps — a camping location for one or more people for three or more nights — to pack their human waste out of the park.
4. Investigate and implement an effective system for managing human waste at Tanquary Fiord, Lake Hazen, and Ward Hunt Island.
5. Establish standards, in collaboration with business operators and park users, for the management of Zone 1 areas and, particularly, in the Lake Hazen Basin, that will include direction for the management of all visitor, user, and park management activities that occur in the area (e.g. base camping).
6. Educate park visitors and users about decreasing the waste material brought into the park.
7. Demonstrate environmental leadership by communicating the park's environmental performance to stakeholders and to the people of Canada.
8. Educate aircraft access permit holders on environmentally sound refuelling practices.
9. Provide the Joint Park Management Committee with a pre-season estimate of motorized activity and a report on motorized activity post season related to park operations.

#### **11.1.2 Infrastructure Management**

The park administration office is housed in the Nunavut Field Unit headquarters in Iqaluit during the winter months. For the summer season, operations are based out of the Tanquary Fiord Warden Station. An ongoing review of park operations will ensure that the existing facilities and infrastructure at Tanquary Fiord and Lake Hazen Warden Stations meet the needs of park operations.

Many of the facilities in the park are in fair condition. No major new operational infrastructure is projected during the life of this plan. Recapitalization and maintenance will be the focus for the next three to five years, with management concentrating on the basic improvements required for safe and efficient operations in the field.

#### **11.1.2.1 Strategic Goal**

*Infrastructure in the park is what will be required for park operations and the needs of the Polar Continental Shelf Project and will be maintained in an environmentally sound, low-impact, sustainable manner.*

#### **11.1.2.2 Objectives**

1. To remove unnecessary infrastructure within the park if the infrastructure is causing negative impacts to the park's ecological integrity, if it is not of historic value, or if the costs are not prohibitive.

#### **11.1.2.3 Key Actions**

1. Review current park facilities and infrastructure at Tanquary Fiord, Lake Hazen, and Ward Hunt Island to ensure that they meet the long-term needs of park operations, research, and administration, and are not in excess of what is required. Reduce the footprint<sup>55</sup> for these camps to the extent possible.
2. Decommission the third landing site at Lake Hazen (see Figure 2).
3. Leave the two Defence Research Board "pumpkins"<sup>56</sup> (81.5°N, 76.6°W and 81.5°N, 76.5°W) in their current location in the park.

#### **11.1.3 Operations and Logistics**

Because of the park's remote location, park operation requires the support of other organizations and agencies. The Polar Continental Shelf Project (Natural Resources Canada) provides subsidized transportation services, which allows Parks Canada to continue a seasonal operation in the park.

#### **11.1.3.1 Strategic Goal**

*The park will be operated efficiently and effectively using partnerships for cost sharing and logistics.*

#### **11.1.3.3 Objectives**

1. To maintain and enhance the partnerships required for seasonal park operation.

#### **11.1.3.4 Key Actions**

1. Maintain the Memoranda of Understanding with the Polar Continental Shelf Project for support of seasonal park operation.

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<sup>55</sup> The footprint is the area of impact at and around a development (e.g. around the Warden Stations or camps).

<sup>56</sup> The pumpkins are dome-shaped, orange, fibreglass shelters.

#### 11.1.4 Law Enforcement

Parks Canada's law enforcement responsibilities centre on resource protection using *the Canada National Parks Act* and the National Parks Regulations as the primary legislation. Parks Canada is committed to the protection of park resources through the delivery of an effective law enforcement program.

Visitor and user activities in Quttinirpaaq extend from March to August. The numbers of people in the park are limited and, for the most part, access is controlled. A basic level of law enforcement will be provided in Quttinirpaaq. Prevention and education will be the cornerstones of the park's law enforcement strategy.

##### 11.1.4.1 Strategic Goal

*Park resources will be protected through education and awareness and based on the provisions of the Canada National Parks Act, National Park Regulations, and the Nunavut Land Claims Agreement.*

##### 11.1.4.2 Objectives

1. To carry out law enforcement responsibilities to ensure the park's resources are protected.

##### 11.1.4.3 Key Actions

1. Maintain and implement the Nunavut Field Unit's law enforcement plan, with an emphasis on providing information and obtaining voluntary compliance by all park users and visitors.
2. Input all law enforcement incidents into the Parks Canada Occurrence Tracking System.

#### 11.1.5 Information Management

Many of the actions identified in this plan require the collection and analysis of information. Information and data should be accessible by all park staff, researchers, decision-makers, and the public. The databases for the park are located in Iqaluit at the Nunavut Field Unit office, which is where all of the data and information management activities for the Nunavut Field Unit occur.

##### 11.1.5.1 Strategic Goal

*Information and data will be shared to support heritage presentation programs and products and to ensure the continued protection of the park.*



### 11.1.5.2 Objectives

1. To maintain an effective data management and geographic information system.
2. To collect and better integrate Inuit Traditional Knowledge and information on natural and cultural resources into decision-making.
3. To increase public understanding of park resources and of information that is used to make management and operational decisions.

### 11.1.5.3 Key Actions

1. Maintain a database of natural and cultural resource information and of data relating to visitor experience and park users.
2. Digitize information contained in the Resource Description and Analysis, as well as other historical information, so that it is retrievable and useable by researchers and decision-makers.
3. Develop a process for the collection and retrieval of Inuit and local knowledge and natural and cultural resource data.
4. Share information and data with others.
5. Develop a Data and Information Plan.

## 11.2 ENVIRONMENTAL LEADERSHIP

The Nunavut Field Unit's Environmental Management Action Plan addresses the following key issues: petroleum storage tanks, contaminated sites, solid waste management, wastewater management, energy conservation, and green procurement. The environmental leadership performance in Quttinirpaaq will be measured by the following key results:

Performance Measure	Expected Results
Number of contaminated sites remediated and other sites cleaned up.	Contaminated sites at Tanquary Fiord, Lake Hazen, and Ward Hunt Island remediated.
Number of motorized vehicles/rate of use of motorized vehicles for park management.	No increase in the number/rate of use of motorized vehicles for park management.
Use of alternative renewable energy sources (solar/wind power).	Maintain ability to generate the majority of energy required in the park from solar/wind power.
Size of footprint of Tanquary Fiord, Lake Hazen and Ward Hunt camps.	Decrease the footprint of camps to the extent possible.

## 12. Park Zoning

Parks Canada's National Park Zoning System classifies areas according to their need for protection and considers the suitability of areas for visitor activities. The system's five categories are described in *Parks Canada Guiding Principles and Operational Policies*. Only Zones I, II, and III have been applied in Quttinirpaaq. The zoning system does not prevent resource harvesting activities and subsistence use by Inuit in accordance with the *Nunavut Land Claims Agreement*. Tables 4, 5, and 6 describe the zoning plan for the park.

In all zones, park visitors and users will be expected to implement low-impact backcountry travel practices, including dispersing when hiking as a group, appropriately disposing of human waste, and avoiding disturbance of wildlife. Sport fishing is not permitted anywhere in the park<sup>57</sup>; provision of a sustainable fishing experience in the park may be revisited in the next management plan review. Specific management regimes for each zone are described in Tables 4, 5, and 6.

As indicated in Figure 11, Parks Canada and the Department of National Defence will continue to work cooperatively to minimize and mitigate any potential impacts that military activities may have on the park's ecological integrity or cultural resources and to ensure that Department of National Defence objectives are met. The Department of National Defence may conduct operations within the confines of the park in times of national crisis. In some circumstances, the Department of National Defence may require motorized access to all zones of the park for non-emergency activities such as security operations. Parks Canada will seek the advice of the Joint Park Management Committee regarding non-emergency activities that are conducted in the park by the Department of National Defence, including security operations.

### 12.1 ZONE I: SPECIAL PRESERVATION (9.75% OF THE PARK)

#### Definition

Zone I lands deserve special protection because they contain or support unique, threatened, or endangered natural or cultural features or are among the best examples of the features of the natural region represented by the park.

Motorized use is not permitted, except for strictly controlled access in the Lake Hazen area. Aircraft access in this Zone 1 area will require a permit approved by the superintendent, who will first seek the advice of the Chairperson of the Joint Park Management Committee.

There are four Zone I areas in the park:

- Lake Hazen Basin
- Lewis Lake
- Kettle Lake
- Fort Conger

<sup>57</sup> Section 8.1.14 of the *Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq and Sirmilik National Parks* states the following: Upon ratification of this Agreement, Parks Canada and the QIA will ask the NWMB to consider prohibiting sport fishing in Quttinirpaaq National Park until the NWMB determines whether the lakes in the Park can sustain sport fishing.

## 12.2 ZONE II: WILDERNESS (90.00% OF THE PARK)

### Definition

Zone II contains extensive areas that are good representations of a natural region and are conserved in a wilderness state. The perpetuation of ecosystems with minimal human interference is the key consideration. Zone II areas offer opportunities for visitors to experience first-hand the park's ecosystems and require few, if any, rudimentary services and facilities. In much of Zone II, visitors have the opportunity to experience remoteness and solitude. Motorized use by visitors is not permitted except for strictly controlled air access in remote areas.

Controlled aircraft access will be allowed but will require a permit approved by the superintendent. For park operations or research, controlled use of snowmobiles will be permitted. Researchers must request approval for all motorized use in their application for a Scientific Research and Collection Permit, which is reviewed by the Joint Park Management Committee before approval by the superintendent. No other motorized use will be permitted, except for strictly controlled access by permit.

The Zone II area in this plan contains all areas of the park not otherwise identified as a Zone I or Zone III area.

## 12.3 ZONE III: NATURAL ENVIRONMENT (0.25% OF THE PARK)

### Definition

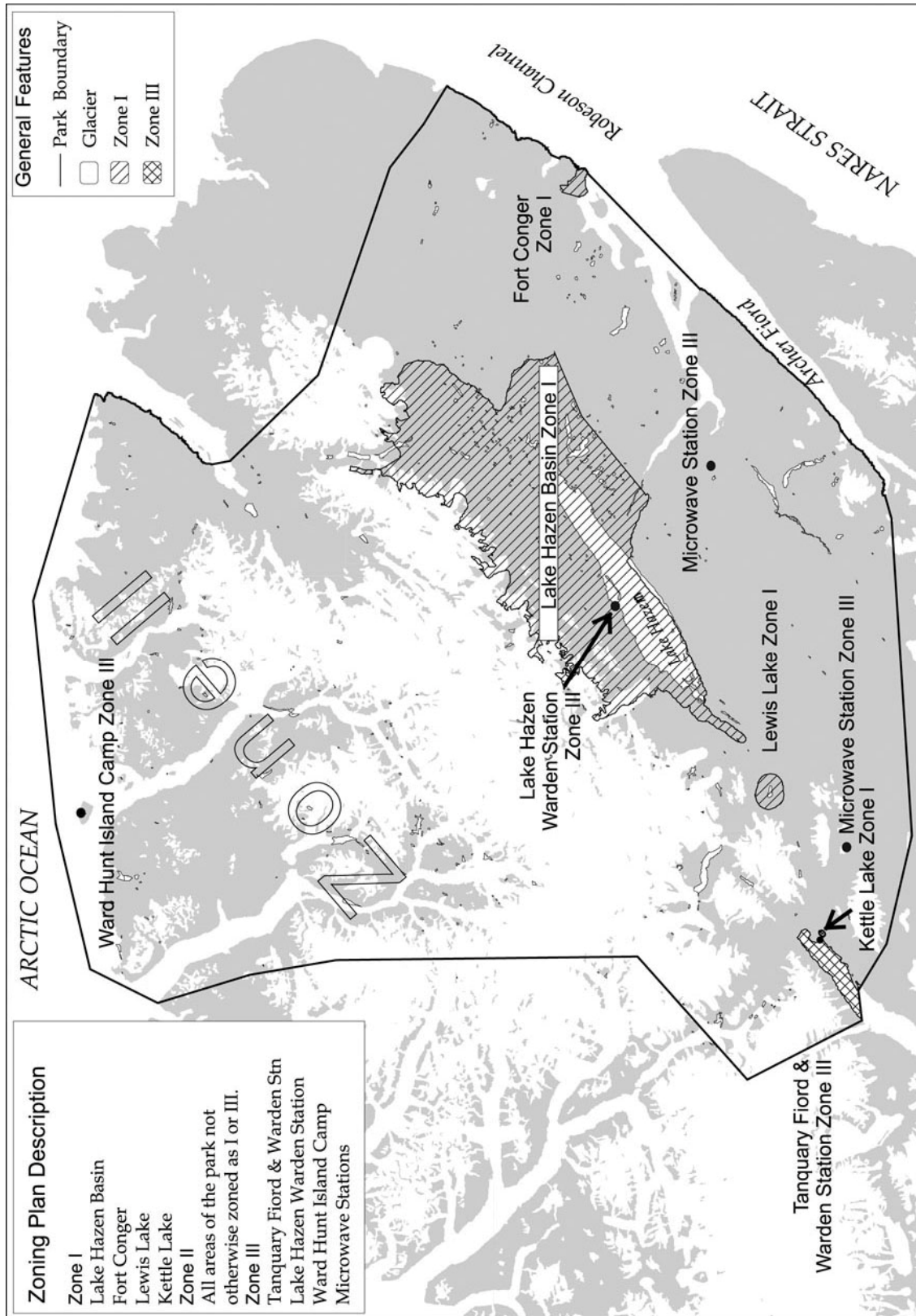
In Zone III areas, visitors can discover the park's natural and cultural heritage through recreational activities that require a few rustic services and facilities. Only controlled access by motorized vehicle will be permitted.

There are four Zone III areas in the park:

- Tanquary Fiord Warden Station
- Tanquary Fiord (Marine Area)
- Lake Hazen Warden Station
- Ward Hunt Island Camp

Any motorized activity permitted in the Zone III areas will be conducted as a business operation (under a Business Licence issued by Parks Canada), by researchers (under a Scientific Research and Collection Permit issued by Parks Canada), by the Department of National Defence (under the Memorandum of Understanding with Parks Canada), or by Polar Continental Shelf Project (under the Memorandum of Understanding with Parks Canada). Private motorized activities will not be permitted.

FIGURE 14. Zoning Plan for Quttinirpaaq National Park



**TABLE 4. ZONE I AREAS IN QUTTINIRPAAQ NATIONAL PARK**

<b>Lake Hazen Basin: Zone I (3,657.12 km<sup>2</sup> or 9.68% of the park)</b>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>Recognized as a unique area for more than 100 years.</li> <li>Relatively high diversity and abundance of vegetation and wildlife. One of four oases in the High Arctic and one of two with protected area status.</li> <li>One of the highest concentrations of Palaeo-Eskimo archaeological sites in northern Canada (shores of Very River, Ruggles River, Lake Hazen).</li> <li>Lake Hazen is one of the largest lakes north of the Arctic Circle.</li> </ul>	<ul style="list-style-type: none"> <li>Provide education to visitors, park employees, researchers and other users to ensure the continued protection of archaeological sites.</li> <li>No camping permitted within 1 kilometre of the west end of Lake Hazen because of the sensitive nature of the archaeological sites found there.</li> <li>Area of focus for research into ecosystem structure and function.</li> <li>No sport fishing (also applies to the entire park).</li> <li>Require visitors and users to pack out their human waste from base camps (see Glossary).</li> <li>For park operations or research, controlled use of snowmobiles and outboard motors may be allowed on Lake Hazen, and controlled aircraft access may be permitted. Department of National Defence (DND) use of snowmobiles may be permitted. Researchers will request approval for this motorized use in their application for a Scientific Research and Collection Permit, which is reviewed by the Joint Park Management Committee (JPMC) before approval of the superintendent. Parks Canada will seek JPMC advice on non-emergency uses of the park by DND.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple routes from Tanquary Fiord to Lake Hazen (8 to 10 days) and from Lake Hazen to Fort Conger (8 to 12 days).</li> <li>Unmarked routes with no trails in an Arctic wilderness, with multiple river crossings and passing next to immense glaciers. Ancient archaeological sites can be observed.</li> <li>From Lake Hazen to Fort Conger, visitors have the opportunity to retrace the steps of Arctic explorers.</li> </ul>

<b>Kettle Lake Archaeological Sites: Zone I (1.5 km<sup>2</sup> or less than 1% of the park)</b>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>Representative of High Arctic archaeology</li> <li>Includes two different types of fox traps, as well as caches, hunting blinds and an Independence I site.</li> <li>Numerous artifacts remain on the ground in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Self-guided interpretive walk will be developed for visitors and users, with interpretive details about the area's features and sensitivity.</li> <li>No camping in this area.</li> <li>Continued monitoring of the archaeological resources.</li> </ul>	<ul style="list-style-type: none"> <li>Day use from Tanquary Fiord will be permitted.</li> <li>Visitors and users will receive an orientation to Kettle Lake before going to the site.</li> <li>Once it is developed, all visitors and users will be given the self-guided interpretive walk information.</li> </ul>

<b>Lewis Lake: Zone I (52.65 km<sup>2</sup> or less than 1% of the park)</b>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>• Protection of the Arctic wolves that inhabit this area: a history of past disturbance, the importance of denning to the seasonal cycle of wolf populations, and the apparent occupation of this den area for several thousand years.</li> </ul>	<ul style="list-style-type: none"> <li>• No camping will be permitted within this zone, which extends three kilometres from the shore on all sides of Lewis Lake.</li> <li>• Education will be provided to visitors about the importance of this area to Arctic wolves and about actions that will ensure their protection.</li> </ul>	<ul style="list-style-type: none"> <li>• Most of the multi-day hiking routes from Tanquary Fiord to Lake Hazen require that visitors pass through the Lewis Lake Area.</li> </ul>

<b>Fort Conger: Zone I (29.83 km<sup>2</sup> or less than 1% of the park)</b>		
<i>The Zone I area includes the Fort Conger site at Discovery Harbour, where the buildings and other historical artifacts are located. It does not include the landing site that is approximately 1 kilometre northwest of the buildings.</i>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>• The artifacts and buildings at Fort Conger represent British and American explorations of the High Arctic.</li> <li>• The commemoration of the International Polar Year (1882-1883) at this site identifies that the events that took place at Fort Conger were of national significance.</li> <li>• The buildings at the site have been identified as “classified” by the Federal Heritage Buildings Review Office.</li> <li>• The site tells a unique story of the contributions Inuit made to the success of Arctic explorers.</li> <li>• The features at Fort Conger are vulnerable and should be afforded the highest protection available. Concern exists related to the theft/removal of artifacts from the site.</li> <li>• Protect Inuit archaeological sites near Fort Conger.</li> </ul>	<ul style="list-style-type: none"> <li>• A Parks Canada staff member will accompany all park visitors and users accessing the general area by motorized means, including the landing site (Zone II), and will provide information about the importance of the artifacts found in the area.</li> <li>• Education about polar bear safety for all visitors to/users of the site.</li> <li>• Camping will be encouraged to occur near the landing site.</li> </ul>	<ul style="list-style-type: none"> <li>• Travelling to Fort Conger provides visitors with the opportunity to step back in time and learn about how early explorers adapted the ways of Inughuit (Greenlandic Inuit) in order to live on the land in the High Arctic.</li> <li>• Visitors have the opportunity to visit places travelled by Arctic explorers such as Nares, Greely, and Peary.</li> </ul>

**TABLE 5. ZONE II AREAS IN QUTTINIRPAAQ NATIONAL PARK**

<b>All Areas Not Otherwise Designated as Zone I or III: Zone II (33,931.65km<sup>2</sup> or 90% of the park)</b>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>• Protection of diverse Arctic ecosystems (terrestrial and marine) that are representative of the Eastern High Arctic Natural Region.</li> </ul>	<ul style="list-style-type: none"> <li>• All visitors will identify their anticipated hiking route to park staff.</li> <li>• Low-impact backcountry travel practices will be encouraged to prevent the creation of trails and erosion.</li> <li>• Visitors and users will be required to pack out their human waste from base camps.</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-day backcountry hiking and skiing trips.</li> <li>• Visitor experiences of solitude, remoteness, and wilderness.</li> <li>• Day hiking and educational opportunities exist near Tanquary Fiord.</li> </ul>

**TABLE 6. ZONE III AREAS IN QUTTINIRPAAQ NATIONAL PARK**

<b>Tanquary Fiord Warden Station: Zone III (0.18 km<sup>2</sup> or less than 1% of the park)</b>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>• Concentration of operational and visitor activity.</li> <li>• High level of use of this site by the Canadian Department of National Defence.</li> <li>• A large fuel cache, multiple buildings (weather havens, Quonset Hut), a large airstrip, and power generation (wind, solar energy, and gas generator) make Tanquary Fiord the site of the most intensive activity in the park. Frequent aircraft access by the Department of National Defence occurs during six weeks of the summer season.</li> </ul>	<ul style="list-style-type: none"> <li>• The entire landing strip, the extensive fuel cache, and an area around all of the buildings and other infrastructure at this site is included in the zone.</li> <li>• Aircraft access requires a permit. The superintendent has the authority to grant aircraft access permits for the park.</li> <li>• Limited motorized activity required for park operations will be permitted (e.g. ATV).</li> <li>• No other motorized access will be permitted, except for strictly controlled access by permit.</li> <li>• Visitor information will indicate that Tanquary Fiord Warden Station is a high-use area.</li> </ul>	<ul style="list-style-type: none"> <li>• Location where the primary contact between park visitors/users and staff occurs.</li> <li>• Staging area for multi-day hiking routes.</li> <li>• Day hiking opportunities exist.</li> <li>• Centre for park operations. Use of machinery by park staff and regular flights by Polar Continental Shelf Project and the Department of National Defence may negatively impact visitors' expectations for solitude, quiet, and remoteness.</li> <li>• The large fuel cache and numerous buildings may be unexpected by visitors.</li> </ul>

<b>Tanquary Fiord (Marine Area): Zone III (102.01km<sup>2</sup> or less than 1% of the park)</b>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>• Existing access by cruise ships.</li> <li>• Potential access by guided snowmobile tours with guides from Grise Fiord or Resolute Bay.</li> <li>• Shipping of fuel for Department of National Defence, Polar Continental Shelf Project, air charter companies, and Parks Canada.</li> </ul>	<ul style="list-style-type: none"> <li>• The waters of Tanquary Fiord up to the ordinary high water mark will be designated a Zone III area.</li> <li>• Cruise ship visitation and guided snowmobile tours will be permitted in this zone.</li> <li>• No other motorized access will be permitted (e.g. no private boats).</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunities to visit the park by cruise ship in shoulder season.</li> <li>• Potential for guided snowmobile tours during spring season<sup>58</sup>.</li> </ul>

<sup>58</sup> This activity is not currently occurring in the park.

<b>Lake Hazen Warden Station: Zone III (0.03 km<sup>2</sup> or less than 1% of the park)</b>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>• Use of the Lake Hazen Warden Station as a secondary site for staging expeditions, park operations, and Department of National Defence activity.</li> <li>• Presence of limited park facilities, two contiguous landing sites, and a limited fuel cache.</li> <li>• Located in the most ecologically sensitive part of the park, activity here has the potential to impact ecological resources.</li> </ul>	<ul style="list-style-type: none"> <li>• The zone will include the two active landing sites, the fuel cache, and the footprint of the camp itself.</li> <li>• Every effort will be made to restrict activity in and potential impact to the Zone III area and to prevent impacts on the surrounding Zone I lands.</li> <li>• Options for managing the impacts of base camps in this area will be examined and implemented in cooperation with tour operators.</li> <li>• Education will be provided to ensure the continued protection of the Lake Hazen Basin.</li> <li>• The third landing site at Lake Hazen Warden Station will be decommissioned.</li> </ul>	<ul style="list-style-type: none"> <li>• Day hiking opportunities exist.</li> <li>• Shorter three- to five-day backpacking loop routes are possible from this area.</li> <li>• The Station is also used as a secondary staging area for multi-day hiking trips to Tanquary Fiord and Fort Conger.</li> <li>• In recent years, base camping in the vicinity of the Lake Hazen Warden Station has become popular for guided groups.</li> <li>• This zone is one of the few areas where conflict between visitors and users may occur due to the proximity of their use and differences in types of use.</li> </ul>

<b>Ward Hunt Island Camp: Zone III (0.03 km<sup>2</sup> or less than 1% of the park)</b>		
<i>Ward Hunt Island is not yet part of Quttinirpaaq National Park of Canada, although Parks Canada administers this land. Once the island is included within the land description of the park, the Canada National Parks Act will apply. It is expected that the Island will become part of the park early in the life of this plan. At that time, this zoning regime will begin to apply.</i>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>• Use of Ward Hunt Island as a research base and as a staging area for North Pole expeditions.</li> <li>• Presence of a landing site, small fuel cache, and three historic structures.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to allow Ward Hunt Island to be used as a staging area for North Pole expeditions and as a research base.</li> </ul>	<ul style="list-style-type: none"> <li>• Ward Hunt Island provides a base for researchers and a staging area for North Pole expeditions.</li> <li>• The landing site on Ward Hunt Island is the closest on land to the North Pole and, as such, attracts late winter/early spring expeditions in some years.</li> <li>• The Ward Hunt Ice Shelf is the largest ice shelf in the northern hemisphere and, as such, is attractive to scientific researchers.</li> <li>• The structures in the camp provide emergency shelter for the island's few visitors and users.</li> </ul>

<b>DND Microwave Towers: Zone III (0.5 km<sup>2</sup> or less than 1% of the park)</b>		
<b>Zoning Rationale</b>	<b>Management Regime</b>	<b>Visitor Experience</b>
<ul style="list-style-type: none"> <li>• Two microwave towers in the park.</li> <li>• Frequent visits by helicopter to the sites for maintenance work during the field season.</li> <li>• The microwave stations each include a small building, a satellite dish, and sensitive equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Department of National Defence will maintain the microwave towers as per its Memorandum of Understanding with Parks Canada.</li> </ul>	<ul style="list-style-type: none"> <li>• Visitors are not permitted in the area as per the Department of National Defence's Memorandum of Understanding with Parks Canada.</li> </ul>



## 12.4 DECLARED WILDERNESS AREAS

The *Canada National Parks Act* provides for the declaration, by regulation, of wilderness areas in the park. The intent of wilderness declaration is to help ensure a high level of ecological integrity by preventing activities likely to impair wilderness character. Only development and activities required for essential services and the protection of park resources will be permitted in declared wilderness areas. Declared wilderness areas are managed based on ecological and visitor experience objectives, in accordance with the *Canada National Parks Act*. The wilderness declaration regulation would not prevent resource harvesting activities and subsistence use by Inuit, in accordance with the *Nunavut Land Claims Agreement*.

The major differences between park zoning and wilderness declaration are:

- Park zoning is a planning tool that — while maintaining ecological integrity as a top priority — determines areas and sets limits on what and where uses can occur in the park. These limits can be amended every five years through the management plan review process
- Wilderness declaration regulation is a legislative tool that guarantees the public that development and uses inconsistent with wilderness character will not occur; consequently, the regulation provides a virtually permanent degree of protection for the declared wilderness areas. Boundaries of declared wilderness areas can only be changed through the formal process of regulations amendments, which requires an Order in Council.

### 12.4.1 Key Action

1. The Joint Park Management Committee will consider the Designated Wilderness Area concept in the next plan review.

## 13. Strategic Environmental Assessment: Decision Statement

The *Quttinirpaaq National Park of Canada Management Plan* underwent an environmental assessment according to the Cabinet Directive, *The Environmental Assessment of Policy, Plan and Program Proposals*. The environmental assessment was conducted on a draft of the management plan to ensure that the environmental effects of initiatives in the plan were fully considered before irrevocable decisions were made.

Actions proposed in the management plan target ecological integrity, cultural resources, heritage presentation and communications, visitor experience, cooperative management, partnership and public involvement, administration and operations, and park zoning. For each action, possible environmental effects were discussed and mitigation was proposed. Potential adverse impacts included disturbance to wildlife, destruction of vegetation, destruction of cultural resources, accumulation of and contamination from waste, and impairment of visitor experience. Positive effects included enhanced knowledge of the park's natural and cultural resources, increased environmental awareness, increased appreciation of the park and its resources, the development of partnerships for increased marketing of the park and improved tourism products, and reduction of the area of high use sites at high use areas.

The positive and negative Residual Effects were assessed for their significance on Valued Ecosystem Components. Although some negative effects will remain, the magnitude of these Residual Effects is small and limited in geographic extent. For those initiatives that may result in increased use of the park, monitoring programs will be required to assess some of the localized impacts over time. Unacceptable levels of impact may require the development of mitigation measures and plans for specific areas.

The negative Residual Effects were also examined for their contribution to Cumulative Effects. The Residual Effects, however, were found to be small in magnitude and geographic extent, and would not combine with external stresses to result in significant Cumulative Effects. Many of the initiatives in the management plan will address external stresses and will contribute to the ecological integrity of the park.

The environmental assessment has concluded that the potentially adverse environmental effects from the proposals within the *Quttinirpaaq National Park of Canada Management Plan* can be mitigated to insignificance.

# Glossary

<b>Ausuittuq</b>	Grise Fiord
<b>Ausuitturmiut</b>	Residents of Grise Fiord
<b>Base Camp</b>	A base camp is a single location used for camping by a group of one or more people for a period of three nights or more.
<b>Cultural Resource</b>	A cultural resource is a human work, or a place that gives evidence of human activity or has spiritual or cultural meaning, and that has been determined to be of historic value. Cultural resources are distinguished from other resources by virtue of their assigned historic value. This value derives from an association with an aspect or aspects of human history. Parks Canada may apply the term cultural resource to a wide range of resources in its custody, including, but not limited to, cultural landscapes and landscape features, archaeological sites, structures, engineering works, artifacts, and associated records ( <i>Guiding Principles and Operational Policies, 1994</i> ).
<b>Ecological Integrity</b>	Ecological integrity, with respect to a park, is a condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change, and supporting processes ( <i>Canada National Parks Act</i> ).
<b>Footprint</b>	A footprint is the area of disturbance around a development, such as a Warden Station or a camp. It can include vegetation disturbance or elimination, erosion, soil compaction or trails, as well as the location of the building itself.
<b>IIBA</b>	See Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq and Sirmilik National Parks
<b>Interim Management Guidelines</b>	Guidelines prepared prior to the development of the first management plan for the park that direct essential park operations until the plan is approved. Interim Management Guidelines are called for in new parks where there are critical operational issues requiring immediate guidance. In the past, Interim Management Guidelines were prepared, as a matter of course, for all new national parks.
<b>Inuit</b>	According to the <i>Nunavut Land Claims Agreement</i> (Section 1.1.1) “Inuit” means:  (a) for the purpose of Sections 2.7.1 and 2.7.2 and Part 1 of Article 40, and of references of a general historical nature, all those members of the aboriginal people, sometimes known as Eskimos, that have traditionally used and occupied, and currently uses and occupies, the lands and waters of the Nunavut Settlement Area, but does not

include persons enrolled in any other Canadian aboriginal land claim agreement,

(b) for the purpose of all provisions of the Agreement other than Sections 2.7.1 and 2.7.2, Part 1 of Article 40, and Sections 5.7.36, 35.3.1 and 35.3.2 and those containing references of a general historical nature,

(i) until such time as the Inuit Enrolment List has been developed in accordance with Article 35, all those persons entitled to be enrolled under that Article,

(ii) upon development of the Inuit Enrolment List, those persons enrolled from time to time under the terms of Article 35.

**Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq & Sirmilik National Parks**

The agreement negotiated in accordance with Article 8 of the *Nunavut Land Claims Agreement* that includes matters connected with a proposed park that would have a detrimental impact on Inuit or that could reasonably confer a benefit on Inuit either on a Nunavut-wide, regional, or local basis. The *Inuit Impact and Benefit Agreement* was signed on August 12, 1999.

**Inughuit**

Greenlandic Inuit

**Inuit Qaujimagatuqangit**

Inuit Qaujimagatuqangit encompasses all aspects of traditional Inuit culture including values, world-view, language, social organization, knowledge, life skills, perceptions, and expectations. Inuit Qaujimagatuqangit is as much a way of life as it is sets of information (*Nunavut Social Development Council*).

**JPMC**

See Quttinirpaaq Joint Park Management Committee

**NLCA**

See Nunavut Land Claims Agreement

**Nunavummiut**

Residents of Nunavut

**Nunavut Field Unit**

The management unit of Parks Canada that is responsible for the management and operation of national parks in Nunavut.

**Nunavut Land Claims Agreement**

The comprehensive land claims agreement entitled *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in the right of Canada* that was ratified by a vote of the Inuit of the Nunavut Settlement Area and by the *Nunavut Land Claims Agreement Act*. The *Nunavut Land Claims Agreement* was signed in 1993.

**Nunatak**

A small terrestrial area (small mountain) isolated from main mountains and completely surrounded by an ice field. Plural is nunatait.

**Park Manager**

The term “park manager” is used generically throughout this plan in reference to Parks Canada staff and members of the Park Planning Team.

<b>Park Planning Team</b>	The team identified in the <i>Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq and Sirmilik National Parks</i> whose role is to complete a park management plan for Quttinirpaaq.
<b>Qausuittuq</b>	Resolute Bay
<b>Qausuitturmiut</b>	Residents of Resolute Bay
<b>Quttinirpaaq Joint Park Management Committee</b>	The committee established under Section 5.1.1 of the <i>Inuit Impact and Benefit Agreement for Auyuittuq, Quttinirpaaq and Sirmilik National Parks</i> and referred to in Section 8.4.11 of the <i>Nunavut Land Claims Agreement</i>

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## Quttinirpaaq National Park of Canada: Management Plan, October 2009

### ERRATA

On Page v of the Management Plan (Acknowledgements), the following person should also be listed under “Other Parks Canada Staff”:

Kataisee Attagutsiak

On Page 73 of the Management Plan (References),

the following reference:

Greely, A. W. 1986. *Three years of Arctic service: An account of the Lady Franklin bay Expedition of 1881-84*. Volume II, Bently and Sons, London.

should read:

Greely, A. W. 1886. *Three years of Arctic service: An account of the Lady Franklin bay Expedition of 1881-84*. Volume II, Bently and Sons, London.