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IKKATTUAQ MIGRATORY BIRD SANCTUARY MANAGEMENT PLAN



Environment and
Climate Change Canada

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Changement climatique Canada

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About Environment and Climate Change Canada's Protected Areas & Management Plans

What are Environment and Climate Change Canada Protected Areas?

Migratory Bird Sanctuaries are established under the authority of the *Migratory Birds Convention Act, 1994* and provide a refuge for migratory birds in the marine and terrestrial environment. Environment and Climate Change Canada establishes marine and terrestrial National Wildlife Areas for the purposes of conservation, research and interpretation. National Wildlife Areas are established to protect migratory birds, species at risk, and other wildlife and their habitats. National Wildlife Areas are established under the authority of the *Canada Wildlife Act* and are, first and foremost, places for wildlife.

How has the federal government's investment from Budget 2018 helped manage and expand Environment and Climate Change Canada's National Wildlife Areas and Migratory Bird Sanctuaries?

The Nature Legacy represents a historic investment over five years of \$1.3B and will help ECCC expand its National Wildlife Areas and Migratory Bird Sanctuaries to contribute to Canada's biodiversity targets and increase ECCC's capacity to manage its protected areas.

ECCC will be conserving more areas, and have more resources to effectively manage and monitor the habitats and species who reside in its protected areas

What is the size of the Environment and Climate Change Canada Protected Areas Network?

The current Protected Areas Network consists of 55 National Wildlife Areas and 92 Migratory Bird Sanctuaries, comprising more than 14 million hectares across Canada.

What is a management plan?

A management plan provides the framework in which management decisions are made. They are intended to be used by Environment and Climate Change Canada staff to guide decision-making, notably with respect to permitting. Management is undertaken in order to maintain the integrity of the protected area and to maintain the attributes for which the protected area was established.

Environment and Climate Change Canada prepares a management plan for each protected area in consultation, or co-written with Indigenous peoples, and in consultation with the public and other stakeholders. In the Nunavut Settlement Area, the management plan is written in partnership with Nunavut Inuit.

A management plan specifies activities that are allowed and identifies other activities that may be undertaken under the authority of a permit. It may also describe the necessary improvements needed in the habitat, and specify where and when these improvements should be made. A management plan identifies Indigenous rights and allowable practices specified under land claims agreements. Further, measures carried out for the conservation of wildlife must be consistent with any law respecting wildlife in the province or territory in which the protected area is situated.

What is Protected Area Management?

Management includes monitoring wildlife, maintaining and improving wildlife habitat, periodic inspections, enforcement of regulations, as well as the maintenance of facilities and infrastructure. Research is also an important activity in protected areas; hence, Environment and Climate Change Canada staff carries out or coordinates research in some sites.

The series

Environment and Climate Change Canada will write management plans for all of the Migratory Bird Sanctuaries administered by the Department. This template can also be used by other agencies and departments to write management plans for Migratory Bird Sanctuaries in other jurisdictions. These management plans will be initially reviewed 5 years after the approval of the first plan, and every 10 years thereafter.

To learn more

To learn more about Environment and Climate Change Canada's protected areas, please visit our website at <https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas.html> or contact the Canadian Wildlife Service.

Ikkattuaq Migratory Bird Sanctuary

The Ikkattuaq Migratory Bird Sanctuary (Ikkattuaq MBS) is located at the northern extremity of Hudson Bay within the Kivalliq Region of Nunavut on Southampton Island. Situated 110 km southwest of Coral Harbour, the Ikkattuaq MBS is within the drainage basin of Ikkattuap kuunga (Boas River). The MBS includes the delta and estuary of Ikkattuap kuunga, the adjacent tidal flats in Bay of God's Mercy, and surrounding lowland areas. The MBS is underlaid with limestone and covered with glacial drift and beach deposits. Most of the MBS lies below 60 m of elevation. Flowing southward through the area, Ikkattuap kuunga cuts across an extensive sedge meadow lowland and forms a braided delta 5 km wide and 13 km long. Extensive tidal flats, at least 13 km wide, occur along the coastline. Scattered throughout the sedge lowlands are numerous lakes bordered by sedge-willow meadows. Dominant vegetation on the sedge lowlands includes sedge, cotton-grass, bog-rush and a variety of mosses and willows. Lichens and sedges are representative of higher elevations.

In 1957, Environment and Climate Change Canada's Canadian Wildlife Service (CWS) proposed the establishment of a sanctuary at Ikkattuap kuunga to protect the main nesting areas of lesser snow geese from disturbance from potential prospecting and tourist activities on Southampton Island. CWS established the Harry Gibbons MBS in 1959. Salliqmiut, present-day Inuit from Coral Harbour, have traditionally referred to the MBS area as "Ikkattuaq" meaning "flat shallow area" for the extensive tidal flats. The Innuirviit ACMC proposed an official name change to the MBS in 2015 to recognize the use of its traditional Inuit language name and hereafter refers to the MBS as Ikkattuaq MBS.

Importance of the Ikkattuaq MBS

Recent aerial photo survey results estimate that the MBS and adjacent areas supports a nesting population of 690,000 combined light geese (>5% of the lesser snow goose mid-continent population). The greatest concentration occurs around the delta of Ikkattuap kuunga. The grassy islands of the braided delta provide an abundance of nesting sites. The sedge lowlands that extend beyond the sanctuary boundaries provide good feeding and moulting habitat. An estimated 6,000 nesting Atlantic brant (4% of the population) used the MBS in the past, but current use is unknown. Cackling goose, Ross's goose, common eider, king eider, long-tailed duck and tundra swan also nest in the sanctuary.

Fifty species of birds have been recorded in the MBS but the presence of more species is very likely. Common breeding species include Pacific and red-throated loon, Sabine's and herring gull, parasitic and long-tailed jaeger, ruddy turnstone, and red phalarope. Historical accounts and more recent

studies on bird movements indicate that the tidal flats of the Ikkattuaq MBS are an important fall stopover site for several species of Arctic nesting shorebirds.

There are thirteen species at risk (listed under the federal *Species at Risk Act* or assessed by the COSEWIC) confirmed or suspected to use Ikkattuaq MBS for at least part of the year. The MBS also provides important summer habitat for polar bear and barren-ground caribou have used some portions as calving grounds in the past.

There is a long history of Inuit use of the MBS. Traditionally, Inuit lived and travelled there to harvest seals, walrus, and whales and to trap Arctic foxes. There are several known archaeological and cultural sites within the MBS, but none are officially registered. The Ikkattuaq MBS is more accessible during the winter, and Salliqmiut will occasionally harvest polar bears for subsistence and guide sport hunters there. There is also infrequent use of the MBS for Arctic char fishing.

Co-Management and Approval Process

As required by the *Nunavut Agreement (NA)*, an *Inuit Impact and Benefit Agreement for National Wildlife Areas and Migratory Bird Sanctuaries in the Nunavut Settlement Area (IIBA)* was first concluded in 2006 for a seven-year term and renegotiated in 2016 for an additional seven years. *Article 3 (Co-Management)* of the *IIBA* states the following objectives:

- a. effective co-management of NWAs and MBSs by Inuit and CWS in accordance with the *NA*, and particularly Articles 9 and 5 of the *NA*;
- b. decision-making for NWAs and MBSs that is substantially informed and influenced by Inuit Qaujimajatuqangit; and
- c. local Inuit involvement in the planning and management of NWAs and MBSs.

CWS manages the Ikkattuaq MBS in partnership with the Irniurviit Area Co-Management Committee (Irniurviit ACMC) of Coral Harbour, Nunavut. The ACMC provides advice on all aspects of MBS management, including all significant policy decisions affecting the MBS. This includes advising on the management plan, permit applications, any research conducted within the MBS, the management and protection of wildlife and wildlife habitat, and visitor use. The Irniurviit ACMC has six members, three appointed by the Kivalliq Inuit Association (KivIA), and three appointed by the federal Minister of the Environment. Five of the members are from Coral Harbour and when possible appointed from Community Lands and Resources Committee; the remaining member is a CWS employee.

As per the *IIBA*, the Irniurviit ACMC prepared the management plan for Ikkattuaq MBS in consultation with Inuit, the Kivalliq Inuit Association, Nunavut Tunngavik Incorporated (NTI) and local interested parties in Coral Harbour. The ACMC shall recommend the completed management plan to the Nunavut Wildlife Management Board (NWMB) for approval in accordance with s.5.2.34(c) and s.5.3.16 of the *NA*. The ACMC shall provide the KivIA and NTI with a copy of the completed management plan when it sends the plan to the NWMB (*IIBA* s.3.6.2). In accordance with the decision-making process set forth in the *NA*, if the NWMB or the Minister rejects, in whole or part, the completed management plan and returns it to the ACMC for reconsideration, the ACMC shall reconsider the management plan and re-submit it to the NWMB for final decision. Once the Minister has accepted the management plan, the Minister shall proceed forthwith to do all things necessary to implement it.

For greater certainty, nothing in this management plan shall be construed so as to abrogate or derogate from the protection provided for existing Indigenous or treaty rights of the Indigenous peoples of Canada by the recognition and affirmation of those rights in *Section 35* of the *Constitution Act, 1982*.

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List of abbreviations

ACMC	Area Co-Management Committee
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CWA	<i>Canada Wildlife Act</i>
CWS	Environment and Climate Change Canada's Canadian Wildlife Service
IIBA	<i>Inuit Impact and Benefit Agreement for National Wildlife Areas and Migratory Bird Sanctuaries in the Nunavut Settlement Area</i>
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
GN	Government of Nunavut
HTO	Hunters and Trappers Organization
IHT	Inuit Heritage Trust
IOL	Inuit-Owned Lands
IQ	Inuit Qaujimajatuqangit
KivIA	Kivalliq Inuit Association
MBCA	<i>Migratory Birds Convention Act</i>
MBS	Migratory Bird Sanctuary
MBSR	<i>Migratory Bird Sanctuary Regulations</i>
NIRB	Nunavut Impact Review Board
NA	<i>Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada, also known as Nunavut Agreement</i>
NPC	Nunavut Planning Commission
NTI	Nunavut Tunngavik Incorporated
NuPPAA	<i>Nunavut Planning and Project Assessment Act</i>
NWA	National Wildlife Area
NWMB	Nunavut Wildlife Management Board
SARA	<i>Species at Risk Act</i>



1.

DESCRIPTION OF THE PROTECTED AREA

The Ikkattuaq MBS was established in 1959, under the federal *Migratory Birds Convention Act*, 1994 (MBCA), for the protection and conservation of migratory birds. The 1,433 km² MBS is located at the northern extent of the Hudson Bay on Southampton Island, Nunavut. The MBS extends 50 km along its axis and is 40 km at its widest point (Figure 1).

The Ikkattuaq MBS is within the drainage basin of Ikkattuap kuunga, and includes the delta, estuary, the adjacent tidal flats in the Bay of God's Mercy, and surrounding lowland areas. The grassy islands of the delta provide abundant nesting sites for a diversity of bird species, including waterfowl, shorebirds, and several other species of coastal and inland waterbirds. The sedge lowlands provide important feeding and molting habitat for geese.

The sanctuary supports breeding habitat for nationally significant populations (defined as greater than 1%) of lesser snow goose (*Anser caerulescens caerulescens*) and Atlantic brant (*Branta bernicla hrota*). Over fifty species of birds have been recorded in or near the MBS but the presence of more is very likely. Thirteen species at risk (listed under the federal *Species at Risk Act* or assessed by the COSEWIC) occur or have the potential to occur within the MBS. The Ikkattuaq MBS also serves as year-round and seasonal habitat for nineteen species of marine and terrestrial mammals.

Little research has taken place in the MBS since the 1950s and there are no permanent research camps. Recent tracking studies indicate that Arctic nesting shorebirds use Ikkattuaq MBS as an important stopover site during southbound migration. This finding is consistent with historical accounts of bird use of the MBS but also highlights how little we know about the MBS's contribution to conservation, with the exception of its importance to the goose population.

The MBCA and the *Migratory Bird Sanctuary Regulations* (MBSR) allow authorizations to access Ikkattuaq MBS. Only Nunavut Inuit have right of access for the purpose of subsistence harvest and do not require a permit to carry out activities related to subsistence harvesting. For all other users (i.e. non-Inuit), the standard prohibitions under the MBSR apply, except under the authority of a permit issued by Environment and Climate Change Canada's Canadian Wildlife Service (CWS). Prohibitions include 1) hunting migratory birds, 2) disturbing or destroying the nest of a migratory bird, 3) the possession of a live migratory bird, carcass, skin, nest or egg of a migratory bird, 4) the possession of firearms or other hunting appliances.

Table 1: Ikkattuaq Migratory Bird Sanctuary Summary Information

Protected Area Designation	Migratory Bird Sanctuary
Criteria for Protected Area Designation	<p>An area will be considered suitable for the establishment of a Migratory Bird Sanctuary if it meets one or more of the following criteria:</p> <ol style="list-style-type: none"> 1. It supports populations that are concentrated, for any part of the year, in order to meet one or several essential needs; as such, the area figures prominently in the requirement for the management of regional populations of migratory birds. 2. The area is vulnerable to area-specific threats. As a significant portion of the populations could be affected, threats may include intensive hunting, exploration, development, etc. Such key habitat sites could include areas for nesting, moulting, wintering or staging. 3. It supports populations that occupy habitats of restricted geographical area and that are vulnerable to human disturbance. Areas that support threatened, endangered or rare species are examples. 4. It regularly supports at least 1% of a population of one species or subspecies. In Nunavut, the Northwest Territories and Yukon (north of the Arctic Circle for Yukon), national population totals (when known) will be used as benchmarks. South of the Arctic Circle (including southern Yukon), the provincial or regional population status of featured species will be used.
Criteria Met by this Protected Area	1, 2, 3, 4
Province or Territory	Nunavut
Region	Kivalliq
Associated Communities	Coral Harbour
Latitude/Longitude	63°45' N / 85°40' W
Size	1,433 km ² , including 190 km ² of marine habitat
Elevation (m)	Sea level to 60 m
Year Established (Gazetted)	1959
Protected Area (PA) Designation Criteria	<p>Historically: Established to protect the main nesting areas of the lesser snow goose (10% of population), Atlantic brant (4% of population)</p> <p>Currently: Area supports over 5% of the mid-continent population of lesser snow goose, 1% the Atlantic brant population (assumed)</p>

Protected Area Designation	Migratory Bird Sanctuary		
Protected Area Classification System	Category A, high conservation value, species or critical habitat conservation		
International Union for Conservation of Nature (IUCN) Classification	Category 1b (Wilderness Area)		
Order in Council Number	P.C. 1959-629 (SOR/74-514)		
Directory of Federal Real Property (DFRP) Number	N/A		
Inuit Owned Lands (Parcel ID)	Parcel ID	Rights	Total Area (km ²)
	CH-13	Surface	714 km ²
Additional Designations	<ul style="list-style-type: none"> • Boas River and Associated Wetlands Important Bird Area (NU022) • Important Areas for Birds in Nunavut (Site 13) • Boas River International Biological Program Site (Site 6-5) • Key Terrestrial Habitat Site for Migratory Birds (NU Site 43) 		
Faunistic and Floristic Importance	<ul style="list-style-type: none"> • Meets Important Bird Area criteria for Globally Significant: Congregatory Species, Waterfowl Concentrations • 5% of mid-continent snow geese breed here • 4% of Atlantic brant bred here previously • Used as an important stop-over site during the southbound migration of Arctic nesting shorebirds • Important polar bear summer habitat • Barren-ground caribou used portions as calving grounds in the past 		
Invasive Species	None Confirmed		

Protected Area Designation	Migratory Bird Sanctuary
Species at Risk	<p>Listed under the federal <i>Species at Risk Act</i> (SARA)</p> <p><u>Endangered:</u></p> <p>Red knot (<i>Calidris canutus rufa</i>)</p> <p><u>Special Concern:</u></p> <p>Peregrine falcon (<i>Falco peregrinus/tundrius</i>) Polar bear (<i>Ursus maritimus</i>) Red-necked phalarope (<i>Phalaropus lobatus</i>) Short-eared owl (<i>Asio flammeus</i>) Wolverine (<i>Gulo gulo</i>)</p> <p>Assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) essed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC)</p> <p><u>Threatened:</u></p> <p>Barren-ground caribou (<i>Rangifer tarandus</i>) Lumpfish (<i>Cyclopterus lumpus</i>)</p> <p><u>Special Concern:</u></p> <p>Atlantic walrus (<i>Odobenus rosmarus rosmarus</i>) Beluga whale (<i>Delphinapterus leucas</i>) Bowhead whale (<i>Balaena mysticetus</i>) Narwhal (<i>Monodon monoceros</i>) Ringed seal (<i>Pusa hispida</i>)</p>
Management agency	<p>Environment and Climate Change Canada's Canadian Wildlife Service in partnership with the Innuirviit ACMC.</p>
Public access & use	<p>Nunavut Inuit have a free and unrestricted right of access for the purpose of harvesting to all lands, waters and marine areas within the MBS (as set forth in <i>Article 5</i> of the <i>IIBA</i> and subject to s.5.7.18 of the <i>Nunavut Agreement</i>). Permits may be required for Inuit commercial activities. Non-Inuit may access the MBS for recreational or other purposes with appropriate permits as per the <i>MBCA</i>.</p>

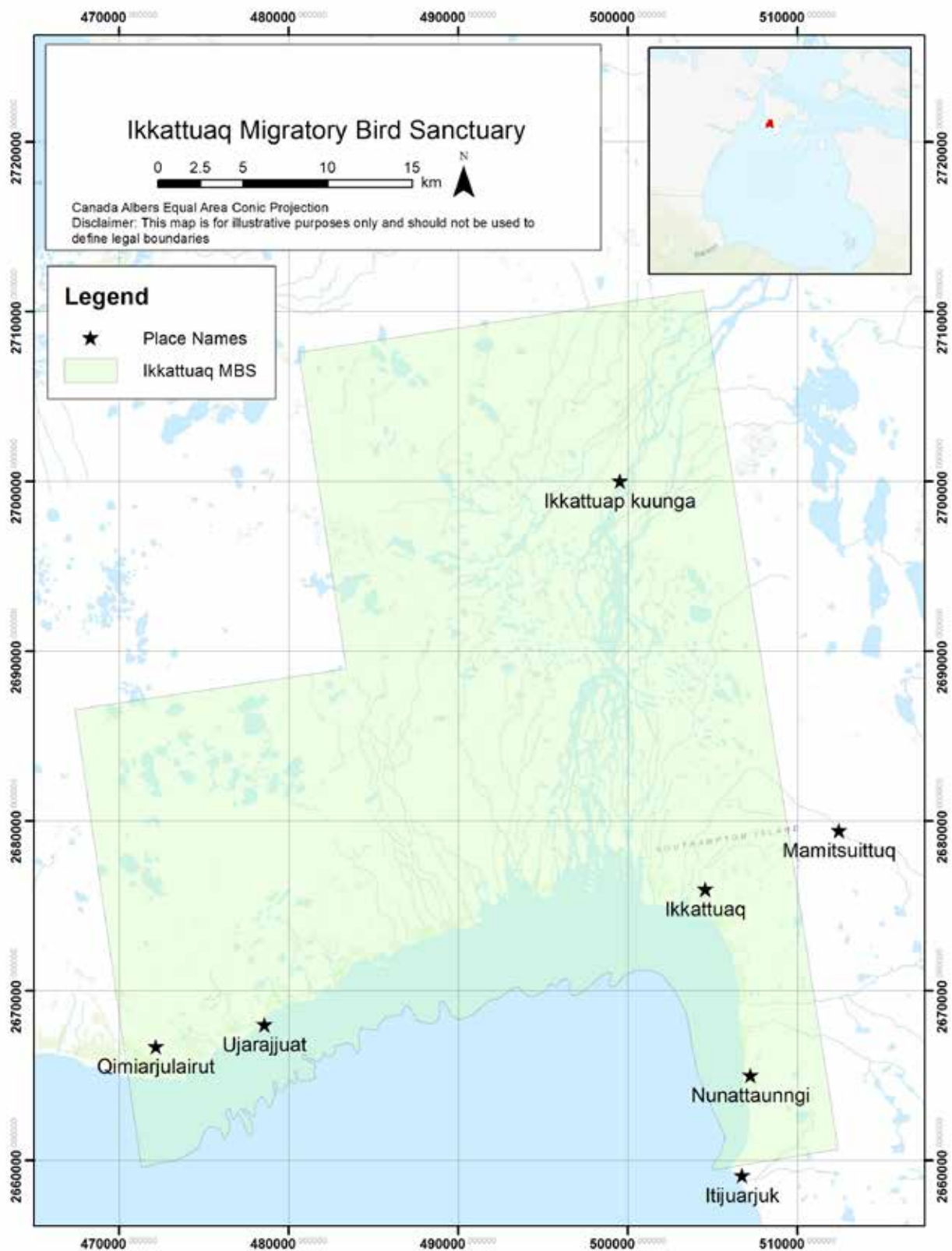


Figure 1: Location of the MBS and traditional place names (adapted from Inuit Heritage Trust data).

1.1 Regional Context

The Ikkattuaq MBS (63°45'N, 85°40'W) is located on the southwestern part of Southampton Island, a large island at the northern extent of Hudson Bay, in the Kivalliq Region of Nunavut. The MBS is about 110 km from the only settlement on the island, the community of Coral Harbour, which has a population of approximately 891 individuals (Statistics Canada, 2016).

The main feature of the MBS is Ikkattuap kuunga, which drains into the Bay of God's Mercy. A series of hills borders the MBS to the east, and raised beaches to the west. The MBS includes approximately 45 km of coastline and the extensive tidal flats and sedge lowlands associated with Ikkattuap kuunga. The terrain is relatively flat with most of the area below an elevation of 60 m.

Southampton Island, including the MBS, is largely undeveloped and undisturbed. Subsistence harvesting continues to be an important cultural, social and economic activity for Salliqmiut (Section 3.2 and 3.3). The main transportation on the island is by snowmobile or dog sleigh in the winter and all-terrain vehicle (ATV) and boat in the summer. The remoteness of the area and the absence of vehicle infrastructure or facilities make transportation into the MBS difficult without the use of an aircraft.

Ikkattuaq MBS is within the Southampton Island Plain ecoregion (Table 2). The mean annual temperature is approximately -11°C (summer mean of 2°C; winter mean of -23°C). This ecoregion has a predominantly mid-arctic ecoclimate. Frost and snow can be expected in all months except July. Waters along the south coast of Southampton Island are open most of the year contributing to a relatively high amount of moisture. The annual precipitation in Coral Harbour is 302.9 mm, somewhat higher than areas on the mainland of Nunavut.

Table 2: Physiographic and Ecological Classifications of the MBS

Physiographic Region	Canadian Shield
Geological Province	Hudson Bay Platform
EcoZone	3 Southern Arctic
EcoProvince	3.2 Keewatin Lowlands
EcoRegion	3.2.46 Southampton Island Plain
EcoDistrict (Land Resource Areas)	3.2.46.185 Boas River
Marine Bioregion	Hudson Bay Complex

1.2 Historical Background

The goose colony at Ikkattuap kuunga was the most thoroughly studied colony in the Canadian Arctic between the early 1930s and late 1950s. Approximately 20,000 geese were banded in the area between 1952 and 1958. The colony was of great interest to biologist as “blue geese” and “snow geese” were believed to cross-breed there (Cooch & Barry, 1957). Back then, the two color

morphs were believed to be separate species. In 1957, CWS proposed the establishment of a MBS to protect the colony at Ikkattuap kuunga and protect important breeding grounds for brant, which was then listed as endangered, and the only second known breeding location of Ross’s goose in the Canadian Arctic.

On May 21, 1959, the Ikkattuap kuunga area was established as the Harry Gibbons Migratory Bird Sanctuary by Order-In-Council (P.C. 1959-629). The sanctuary was named in honour of Harry Gibbons Unainnuk (c. 1900-1954). Unainnuk was born at Wager Bay and worked for the Hudson Bay Company, U.S. Army, and the RCMP. He was awarded a coronation medal in 1933 for his services as a guide and interpreter to many scientists (Cooch, 1957).

A draft management plan was prepared in 1986 prior to the creation of the territory of Nunavut and the signing of an IIBA (Stephenson & McCormick, 1986).

1.3 Land Ownership and Interests

The MBS is largely on federal crown land with the exception of a parcel of Inuit Owned Land (IOL) in the southeast corner (CH-06, Surface rights; Figure 2). IOL is private land managed by the Kivalliq Inuit Association (KivIA) on behalf of, and for the benefit of all Inuit. The federal Minister of Crown-Indigenous Relations and Northern Affairs Canada under the *Territorial Lands Act*, holds all subsurface rights. The land surrounding the MBS is a mixture of crown land and IOL.

CWS is responsible for the management and protection of migratory birds, nests and eggs everywhere they occur, and for migratory bird habitat on federal crown land within the MBS. Habitat management on IOL within the MBS is the responsibility of the KivIA.

The IOL ends at the ordinary high water mark (NA s.19.8.13). The seafloor and marine areas extending beyond the IOL boundary is federal jurisdiction.

Fisheries and Oceans Canada (DFO) selected the nearshore waters around Southampton Island and Chesterfield Inlet as an area of interest (AOI). This marks the beginning of a Marine Protected Area (MPA) establishment process. The Southampton Island AOI currently includes the marine waters of Ikkattuap MBS, however DFO and their partners will determine the final boundary of a potential MPA following further assessments and extensive consultation.

1.4 Facilities and Infrastructure

There is one cabin in the MBS owned by the Aiviit Hunters and Trapper’s Organization (HTO) located at Ujarajjuat (Figure 1; Table 3). The building is approximately 10 years old and used during the ice season to support harvesting activities, in particular polar bear hunting.

Table 3: Facilities & Infrastructure in the MBS

Type (identifying name)	Condition	Approximate Size (feet)	When Built	Responsibility	Location
Sleeping cabin	Unknown	10 x 10	2008	Aiviit HTO	63° 39’ 17”, -86° 09’ 42”

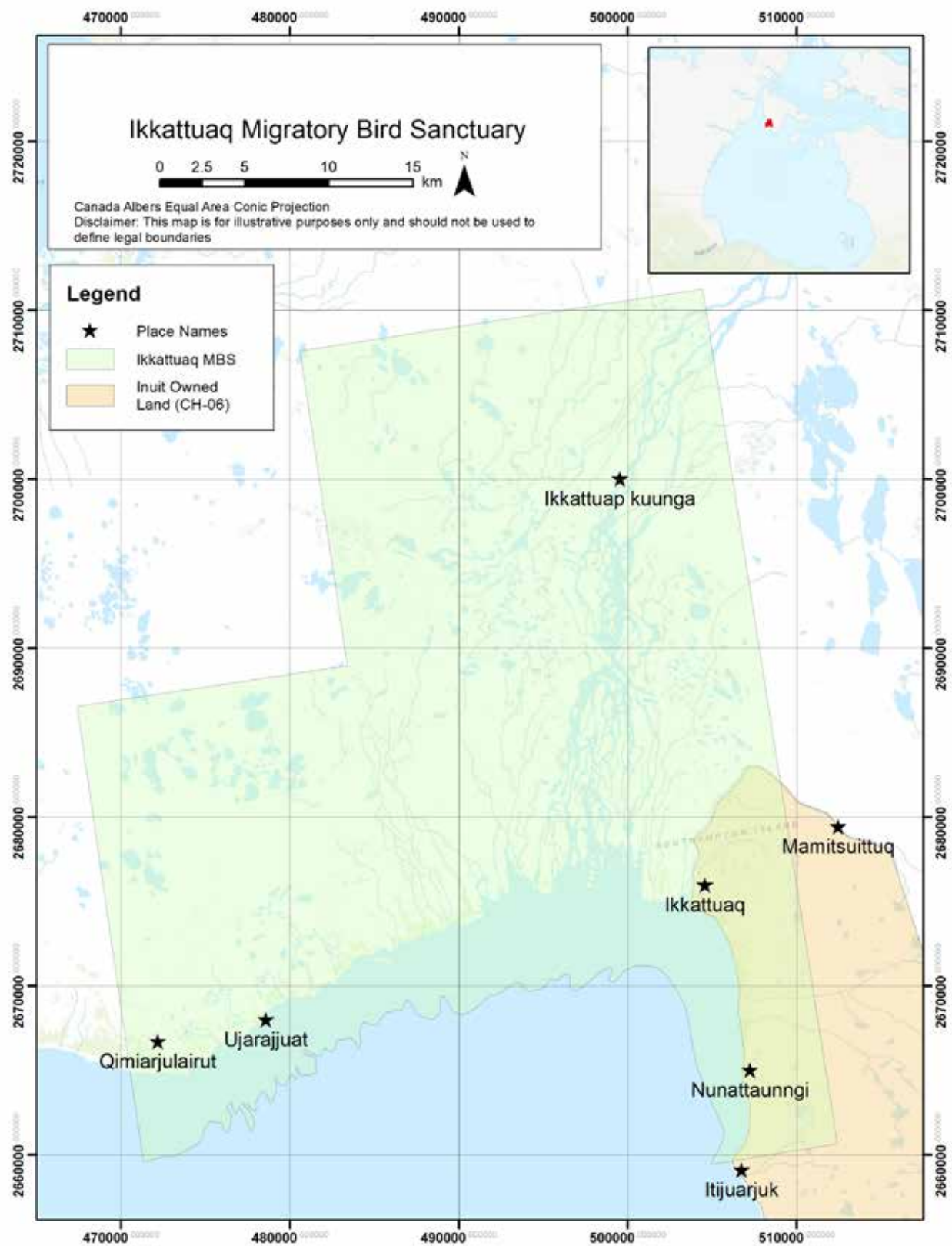


Figure 2: Inuit-Owned Lands within the MBS.



2.

ECOLOGICAL RESOURCES

2.1 Terrestrial and Aquatic Habitats

With its headwaters located near the center of Southampton Island, Ikkattuap kuunga is the largest river on the island. The river channel is broad, ill defined, and shallow; being only a few meters above sea level. Ikkattuap kuunga cuts across extensive sedge meadow lowland and forms a braided delta 5 km wide and 13 km long before emptying into the Bay of God's Mercy. Low tide exposes broad mud flats 13 km or more in width along the coastline (Latour, 2008). Lowlands are generally less than 30 m in elevation and scattered by numerous lakes.

Fontaine et al. (2011) developed a land cover classification for all of Southampton Island providing a valuable baseline from which habitat changes can be monitored. Twenty habitat types were identified within the Ikkattuaq MBS. However, for the purpose of this plan, these habitat types were grouped into four broad habitat classes. The majority of habitat in the MBS is vegetated tundra, both moist (35%) and wet (28%), followed by 20% dry unvegetated (i.e. sand, mud, gravel, or bedrock) and 18% water (Figure 3).

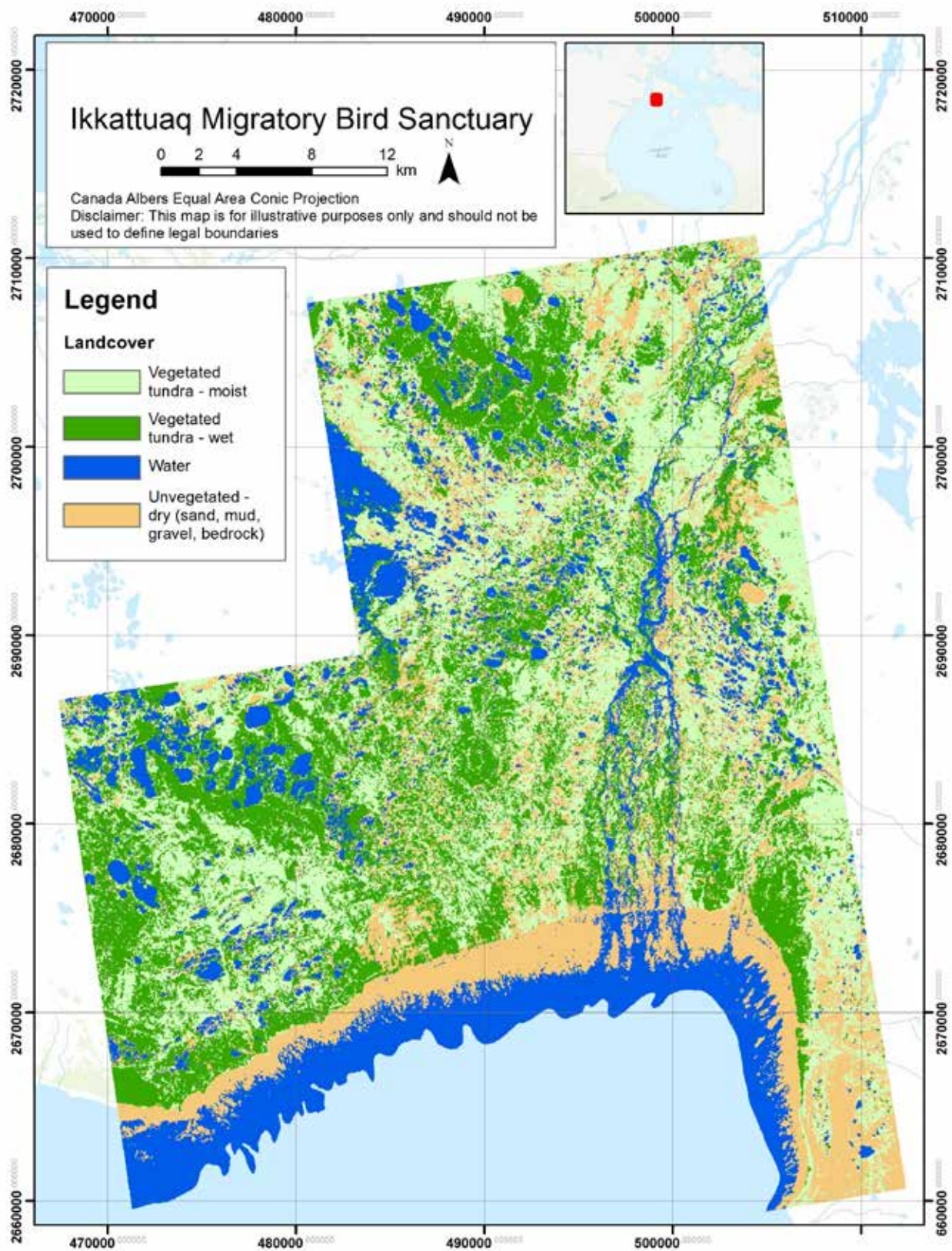


Figure 3: Main habitat classes within the MBS (adapted from Fontaine and Mallory, 2011).

2.2 Birds

The Ikkattuaq MBS is located in Bird Conservation Region 3 – Arctic Plains and Mountains (Environment Canada, 2013). Both its terrestrial and coastal habitats support a wide variety of birds. Over fifty species of birds use the MBS, and at least half breed within the MBS or surrounding areas. As there has been little research since the 1950s and few visitors in the MBS during the breeding season, it is very likely that more bird species are present. The avian community is likely as diverse as other inventoried lowland habitats on Southampton Island.

2.2.1 Geese

The MBS provides ideal nesting habitat for geese. A large population of lesser snow geese (*Anser caerulescens*) breeds within the colony at Ikkattuaq kuunga, one of several colonies on Southampton Island. In 2014, the light goose population (i.e. combined lesser snow and Ross's geese) was approximately 689,700 nesting geese (J. Leafloor, CWS, personal communication). Ross's goose (*Anser rossii*) numbers have increased substantially on Southampton Island since the 1970s (Kerbes, et al., 2014), and they account for an increasing proportion of the combined light goose population based on recent banding records. Ross's geese accounted for <1% of all light geese banded annually on Southampton Island before 1980 (Kerbes, et al., 2014), but represent approximately 12.5% of all light geese banded from 2009-2018 (J. Leafloor, CWS, personal communication).

The lesser snow goose population in the colony at Ikkattuaq kuunga represents over 5% of the mid-continent population. The area occupied by nesting geese at the colony has changed over time and currently extends beyond the boundaries of the Ikkattuaq MBS (Figures 4 and 5). In some years (e.g. in 1997-2004), the colony formed a contiguous goose nesting area with the colony at Ell Bay, which was established in the early 1970s (Kerbes, 1975).

Lesser snow geese remain an important source of food for Salliqmiut, and particularly in years when caribou was extirpated or scarce on Southampton Island (Carter, et al., 2018). Lesser snow geese arrive in mid-May to early June and begin nesting almost immediately on islands or drier uplands near and between long shallow waterbodies (Sutton, 1931; Bray, 1943). After hatching in mid-July and during the flightless period, they move inland up Ikkattuaq kuunga and scatter over the western lowlands (Cooch, 1957; Bray, 1943; Parker & Ross, 1973). Non-breeding lesser snow geese leave Southampton Island in mid-August, and breeding geese depart in late August or early September (Sutton, 1932).

Ikkattuaq MBS also provides important habitat for Atlantic brant (*Branta bernicla hrota*). Cooch (1957) estimated approximately 6,000 brant in the MBS at establishment, representing approximately 4% of the Atlantic brant population at the time (Atlantic Flyway Council, 2011). The Foxe Basin is the main breeding grounds for Atlantic brant (Atlantic Flyway Council, 2011). During coastal surveys of the Foxe Basin and northern Hudson Bay in 1979, observers recorded moderate numbers of brant around Bay of God's Mercy (Gaston, et al., 1986). A significant decrease in the abundance of nesting brant has been recorded at Qaqsauqtuuq (East Bay) MBS on Southampton Island over the last 30 years (Sharp & Abraham, 2010; Nissley, 2016). It is unclear what percentage of the Atlantic brant population currently uses the Ikkattuaq MBS and whether the local breeding population has followed recent trends observed at other key nesting areas.

Brant arrive about 2 weeks later than other geese on Southampton Island (Nissley, 2016). Brant prefer coastal areas along the mouth of Ikkattuap kuunga, nesting below the territory of the other geese on the small islands, which rise above mud flats, and shallow channels of fresh water at low tide (Bray, 1943). Eggs hatch in mid to late July and flightless brant walk out onto the tidal flats (Cooch & Barry, 1957).

Cackling geese (*Branta hutchinsii*) are also common in the MBS. Cackling geese arrival and nesting phenology closely resembles that of snow geese. Numbers of cackling geese have increased significantly in other parts of Southampton Island since 1979–1980 (Nissley, 2016; Sharp & Abraham, 2010). The status of cackling geese in the Ikkattuaq MBS is unknown.

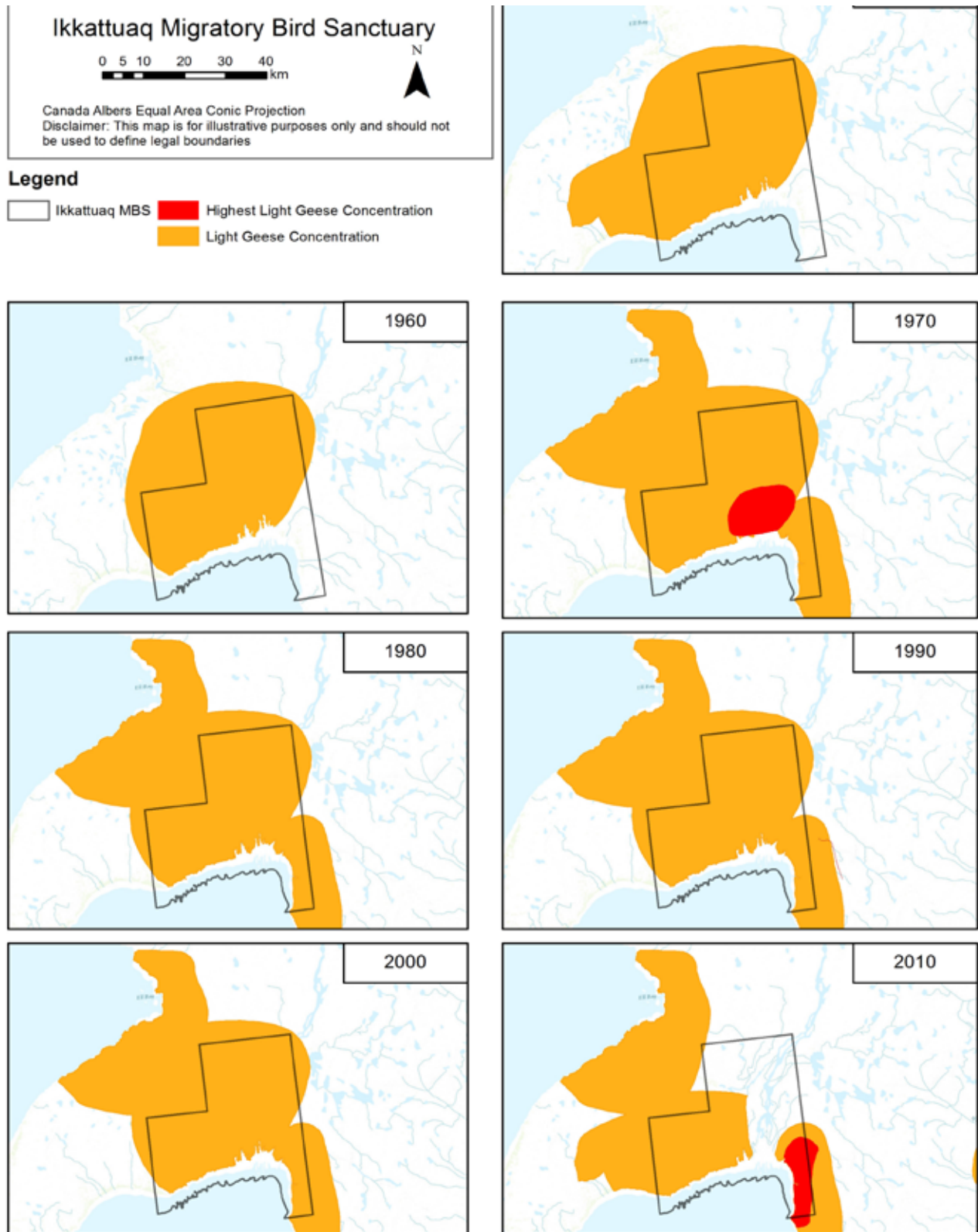


Figure 4: Inuit knowledge on the distribution of light geese within the MBS (adapted from Carter et al. 2018). Areas of concentration represent the collective knowledge of 21 study participants.

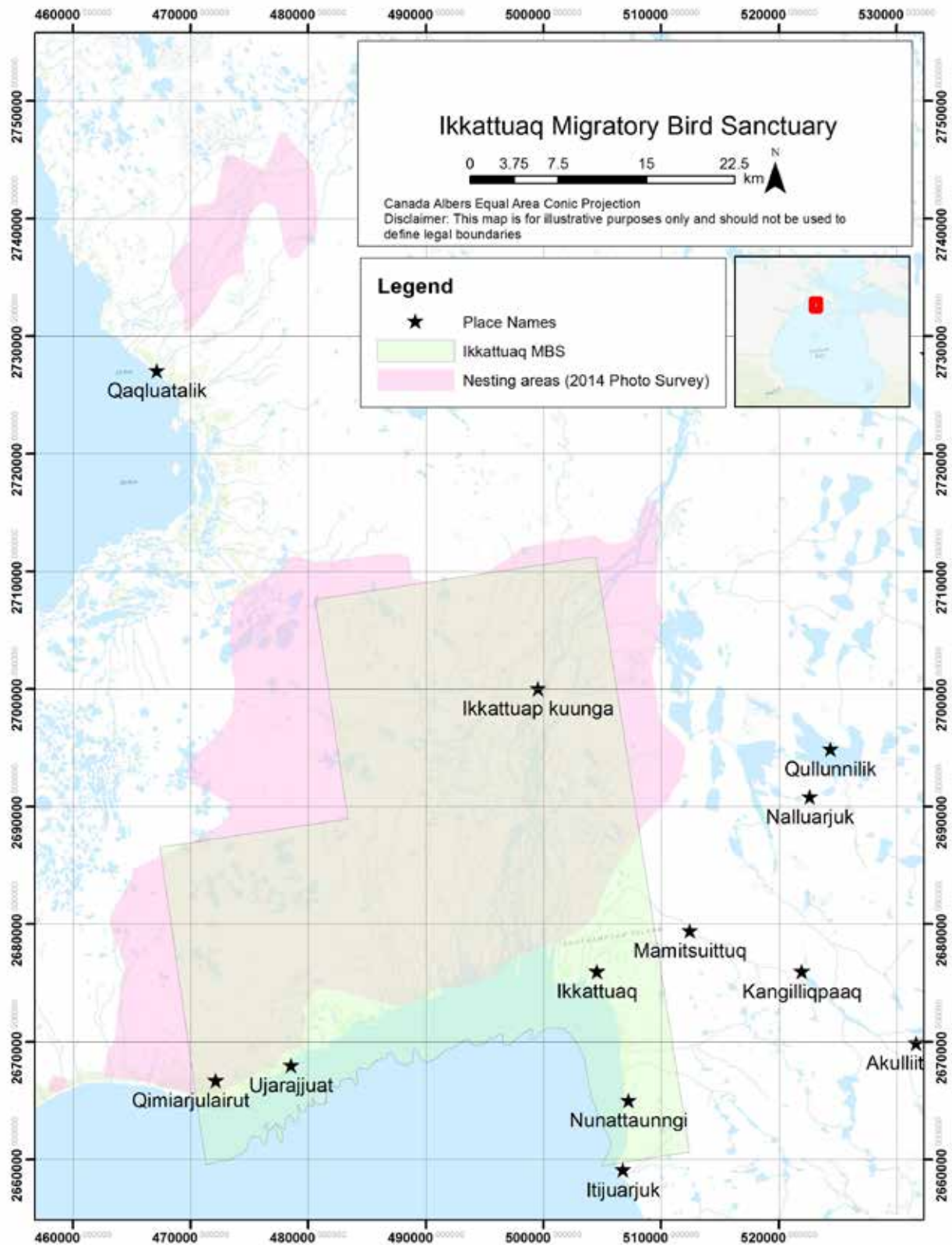


Figure 5: Light geese nesting areas delineated during the 2014 Southampton Island aerial photo surveys.

2.2.2 Shorebirds

Shorebird populations are showing widespread declines across North America (Gratto-Trevor, et al., 2011). Breeding densities within the Ikkattuaq MBS are unknown, but are likely comparable to other lowland areas of Southampton Island which have been surveyed (Smith, et al., 2012). Red phalarope (*Phalaropus fulicarius*), semipalmated sandpiper (*Calidris pusilla*), dunlin (*Calidris alpina*), and white-rumped sandpiper (*Calidris fuscicollis*) are among the most common species (Bray, 1943). Other species suspected to breed within the MBS include black-bellied plover (*Pluvialis squatarola*), semipalmated plover (*Charadrius semipalmatus*), American golden-plover (*Pluvialis dominica*), ruddy turnstone (*Arenaria interpres*), and red knot (*Calidris canutus*).

Salliqmiut report declines in the abundance of shorebirds on Southampton Island, particularly red phalarope, dunlin, and other sandpipers (Carter, et al., 2018). Salliqmiut used to see shorebirds frequently and in high densities in the spring near Coral Harbour, but those sightings are now rare.

Historical accounts report important use of the tidal flats at Ikkattuaq MBS by shorebirds during southbound migration until the end of August (Bray, 1943). The list of migrants includes ruddy turnstones, dunlin, red phalarope, white-rumped sandpiper, red knots, semipalmated sandpiper, and pectoral sandpiper. Recent findings from migration studies of Arctic nesting shorebirds support historical accounts. Both whimbrel (*Numenius phaeopus*) and black-bellied plover (*Pluvialis squatarola*) were tracked through Ikkattuaq MBS on their southbound migration with the use of satellite transmitters (J. Rausch, CWS, personal communication). Technology is not yet available for smaller bodied shorebirds.

2.2.3 Other birds

Other common birds known to breed in the MBS include herring gull (*Larus argentatus*), Arctic tern (*Sterna paradisaea*), both parasitic and long-tailed jaeger (*Stercorarius parasiticus* and *S. longicaudus*), Sabine's gull (*Xema sabini*), red-throated and Pacific loon (*Gavia stellata* and *G. pacifica*), long-tailed duck (*Clangula hyemalis*), tundra swan (*Cygnus columbianus*), and northern pintail (*Anas acuta*).

Salliqmiut have expressed concerns over the lower abundance of some of these species, particularly Arctic terns and loons (Carter, et al., 2018). Mamitsuittuq is a spring migration route for thousands of rock ptarmigan (*Lagopus mutus*) heading east.

2.3 Other Wildlife

2.3.1 Terrestrial Mammals

Ten species of terrestrial mammals occur or have the potential to occur in the Ikkattuaq MBS. Southampton Island is recognized for its high density of Arctic fox (*Alopex lagopus*). Arctic fox numbers, however, fluctuate with the cycles of its primary prey species collared and brown lemmings (*Dicrostonyx groenlandicus* and *Lemmus sibiricus*; Parker, 1974).

Barren-ground caribou (*Rangifer tarandus*) were once common on Southampton Island, but by 1955 overharvesting had caused this species to become locally extirpated (Sutton, 1932). In 1967, biologists transferred caribou to Southampton Island from neighboring Coats Island (Manning, 1967; Parker, 1975). Since re-introduction, abundance peaked at 30,000 caribou in 1997. The Southampton Island herd has increased between the 2013 and 2015 surveys. The population is approximately 12,300 individuals (Campbell & Boulanger, 2015). Most of the Ikkattuaq MBS is summer range habitat (Parker, 1975). However, caribou are not common; the area is too wet and gravelly. At least historically,

the northwestern portion of the Ikkattuaq MBS overlapped the Southampton Island caribou calving grounds (Nunavut Planning Commission, 2000). Recent information suggests that important caribou calving grounds now surround the community of Coral Harbour further to the east (Nunavut Planning Commission, 2012).

Wolves (*Canis lupus*) were once numerous, but were extirpated from Southampton Island by local harvesters due to their impact on the declining caribou. The last resident wolf was shot in 1937 (Manning, 1942). Wolves and red foxes (*Vulpes vulpes*) are a rare sighting. Only a couple of wolverines (*Gulo gulo*) have ever been trapped on Southampton Island, but one was observed at Ikkattuaq kuunga within the MBS in 2002 (Fontaine & Mallory, 2011). These three species occasionally cross Roes Welcome Sound from the mainland.

Arctic hare (*Lepus arcticus*) is not common within the MBS, and is generally found on higher terrain. Ermine (*Mustela erminea*) could also be present in the MBS. There was an observation of one on the east side of Southampton Island in 2015.

2.3.2 Marine Mammals

Nine marine mammal species occur in the waters of the Bay of God's Mercy, and therefore may be present in Ikkattuaq MBS. The nearby Roes Welcome Sound polynya is a wintering area for beluga whale (*Delphinapterus leucas*), and harbor seal (*Phoca vitulina*). Harbor seals commonly haul out in the MBS at low tide. Bearded seal (*Erignathus barbatus*), are present year round in the Bay of God's Mercy. The summer aggregation range of the bowhead whale (*Baleena mysticetus*) includes the Bay of God's Mercy, where it occasionally feeds (Latour et al., 2008; Fontaine and Mallory, 2011).

The coastal lowlands of the MBS are important feeding areas for polar bear (*Ursus maritimus*) during the summer months (Fontaine, 2011). Polar bear may be found year-round and have known denning sites within the MBS, including Qimiarjulairut and near Itijuarjuk (Manico Point). Inuit knowledge suggests that the polar bear population increased from 2004-2012, while mark-recapture studies, satellite telemetry data and annual aerial surveys over the past two decades suggest that the Foxe Basin subpopulation is stable. Salliqmiut and researchers have noticed an increase in the frequency of polar bear observations.

2.3.3 Freshwater and Marine Fish

The numerous lakes, ponds, rivers, and bays in the MBS supply freshwater and marine habitat for a variety of fish. A comprehensive fish inventory is lacking for the MBS. However, at least 40 species of anadromous and marine fish, including one species at risk, have the potential to occur in the MBS (Table 4; Coad and Reist, 2004).

2.4 Vegetation

The most common vegetation community in the Ikkattuaq MBS is sedge-heath transition. Sedges are dominant, although *Arctagrostis latifolia*, *Luzula nivalis*, and *Juncus albescens* are also common. *Dryas integrifolia*, *Salix reticulata*, and lichens are restricted to drier areas. Upright willows such as *Salix richardsonii* and *S. arctica* predominate the sedge-willow meadows, but sedges are also abundant. Sedges, such as *Carex misandra* and *C. bigelowii* are the dominant species in patterned ground tundra. In drier areas, *Dryas spp.* is the sub-dominant species, whereas in damp areas it is willow (*Salix arctica* and *S. reticulata*).

Stephenson and McCormick (1986) compiled a provisional list of plant species from various sources. The list includes two algae, seven fungi, 23 lichens, 28 bryophytes and 103 vascular plants species.

2.5 Species at Risk

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the conservation status of species in Canada. There are six categories used during the COSEWIC assessment. In order from most at risk to least at risk, the categories are Extinct, Extirpated, Endangered, Threatened, Special Concern, and Not at Risk.

The federal *Species at Risk Act* (SARA) establishes Schedule 1, as the official list of wildlife species at risk. Following a consultation process, the Governor in Council on the recommendation of the federal Minister of the Environment decides on whether species should be added to Schedule 1.

Thirteen species at risk (either COSEWIC-assessed or SARA-listed) occur or have the potential to occur within Ikkattuaq MBS (Table 4).

Table 4: Species at risk in the MBS

Common and scientific names of species	Status in Canada		Presence in Ikkattuaq MBS
	COSEWIC-assessed	SARA-listed	
Birds			
Red knot <i>Calidris canutus rufa</i>	Endangered	Endangered	Confirmed
Red-necked phalarope <i>Phalaropus lobatus</i>	Special Concern	Special Concern	Potential
Short-eared owl <i>Asio flammeus</i>	Special Concern	Special Concern	Potential
Peregrine falcon <i>Falco peregrinus</i>	Not at Risk	Special Concern	Confirmed
Mammals			
Caribou, barren-ground population <i>Rangifer tarandus</i>	Threatened	No Status	Confirmed
Atlantic walrus (Central/Low Arctic population) <i>Odobenus rosmarus rosmarus</i>	Special Concern	No Status	Confirmed
Beluga whale (Western Hudson Bay population) <i>Delphinapterus leucas</i>	Special Concern	No Status	Confirmed

Common and scientific names of species	Status in Canada		Presence in Ikkattuaq MBS
	COSEWIC-assessed	SARA-listed	
Bowhead whale (Eastern Canada-West Greenland population) <i>Balaena mysticetus</i>	Special Concern	No Status	Confirmed
Narwhal <i>Monodon monoceros</i>	Special Concern	No Status	Potential
Polar bear <i>Ursus maritimus</i>	Special Concern	Special Concern	Confirmed
Ringed seal <i>Pusa hispida</i>	Special Concern	No Status	Confirmed
Wolverine <i>Gulo gulo</i>	Special Concern	Special Concern	Confirmed
Fish			
Lumpfish <i>Cyclopterus lumpus</i>	Threatened	No Status	Potential

2.6 Invasive Species

Human activity has resulted in species occurring beyond their natural range (Canadian Endangered Species Conservation Council, 2011). The Government of Nunavut has designated 14 species of vascular plants as exotic within Nunavut. None of these species are invasive or a threat to Nunavut's biodiversity. There are no known non-native or invasive plant species within the boundary of the Ikkattuaq MBS.



3.

CULTURAL RESOURCES

The focus of a MBS is the conservation of migratory birds and their habitat, but the *IIBA* also recognizes that people are part of the environment. Inuit knowledge and Inuit Qaujimajatuqangit (IQ) provide valuable information regarding the lands, waters, and resources specific to the area, which can lead to more informed decision-making. Accordingly, this section describes past and present land use in the MBS and surrounding region and includes a review of the known tangible and intangible cultural resources.

Travel routes, place names and knowledge of weather and the ways of animals are a few examples of intangible heritage, while archaeological sites, artifacts, structures (i.e. caches, fox traps, fish weirs, kayak stands, and inuksuit), and the remains of past habitations are all part of the tangible heritage of Inuit land use. Intangible resources are difficult to identify, as there is no physical manifestation of the resource. It is important to remember that there are stories, place names, songs, and traditions associated with many of these archaeological sites.

3.1 Cultural Resources Inventory and Interpretative Materials Study

The Inuit Land Use and Occupancy Project (INAC, 1976) report explained and mapped the historical development of Inuit occupancy over much of the surface of Nunavut (including sea ice). The Nunavut Atlas (Riewe, 1992) refined this by showing the most intensively used lands, those which were visited by Inuit every year before the centralization of people into their present communities, along with those lands which were visited regularly, though not necessarily every year. Although valuable resources, the Inuit Land Use and Occupancy Project and the Nunavut Atlas focus on subsistence practices rather than other cultural practices.

NTI has obligations under *Article 6* of the *IIBA* to prepare inventories of resources important to Inuit for MBSs and NWAs in Nunavut. The purpose of the inventories is to support the management of each protected area, aid the development of interpretive materials, document information of cultural importance to Inuit, and support the development and use of official Inuit language names in management of these protected areas. The Innuirviit ACMC will revise Section 3 of this management plan when an inventory is completed and made available for the Qaqsauqtuuq MBS.

3.2 Historical Inuit Land Use

Inuit have inhabited Southampton Island for thousands of years. Historically, Inuit lived in areas near hunting grounds for marine mammals (Bird, 1953). Early houses were made of snow or sod, depending

on the season. Inuit later settled in permanent winter villages with homes made from stone, bone, and sod. During the summer, Inuit moved into skin tents held down by rocks (Collins, 1956).

Inuit made tools from chipped stone, bone, antler, ivory and wood (some tipped in iron); and had a well-developed artistic carving culture. Harpoons, kayaks, and umiaks were used for hunting. Light and heat came from harvested oil.

Explorer journals and diaries reference Southampton Island as early as the 1600s, but there are few records about the resident Sallirmiut (“island people” or “people living on the island”). After the 1860s, whalers frequented the waters of Roes Welcome Sound. Inuit provided the whalers with food and clothing and helped with various whaling activities (Van Stone, 1960).

In the winter of 1902-1903 disease struck, killing nearly the entire Sallirmiut population on Southampton Island. Whalers likely introduced the disease. With no one to assist the whaling boats, whalers brought Inuit from Repulse and Wager Bay in 1908 to Southampton Island to work in the industry.

In 1924, the Hudson’s Bay Company (HBC) relocated its post from Coats Island to Coral Harbour and Inuit (originally from Southern Baffin) were transferred along with the post. Fox trapping became an important source of income for Inuit who needed to purchase goods from the HBC (tea, ammunition, etc.). In the 1940s, Americans built an Air Force Base just outside of Coral Harbour. Later, federal programs such as education, health and the opportunity for wage employment drew most of the scattered camps along the coastline into the settlement of Coral Harbour. In 1951, a settlement with a population of 12 was still present near Itijuarjuk on the shores of Bay of God’s Mercy within Ikkattuaq MBS (Bird, 1953).

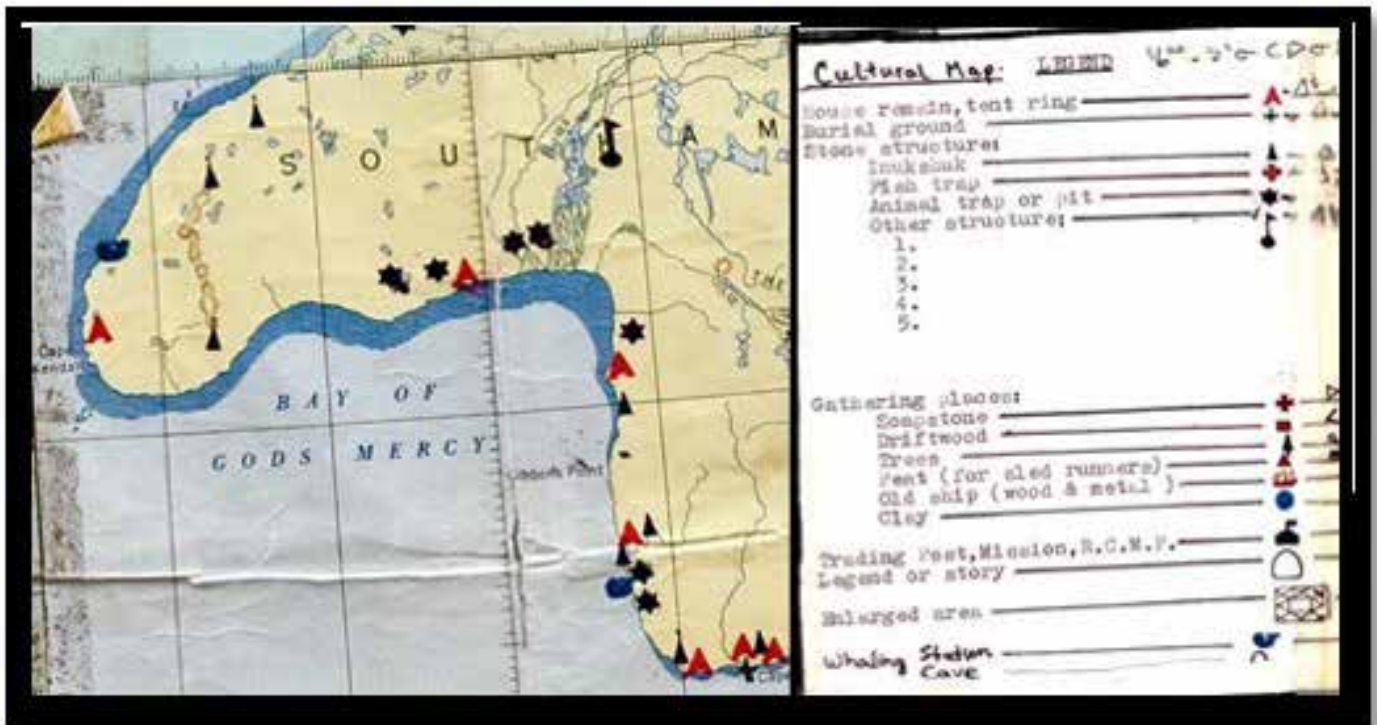
Prior to the establishment of the HBC in Coral Harbour, the Sallirmiut of Southampton Island led a migratory lifestyle moving annually from camp to camp generally following game. They depended almost exclusively on the sea for survival, hunting marine mammals such as seals, whales, and walrus (Bird, 1953; Collins, 1956). Before the goose colonies had become of interest to researchers, marine mammal harvesters traditionally visited the MBS. The HBC’s demand for Arctic fox pelts, however, prompted Inuit to establish trap-lines and travel inland. Fox trapping and polar bear hunting became important sources of income during winter. Fishing and sealing provided much of the fresh meat, caribou, and birds to a lesser extent. Present-day Inuit from Coral Harbour, or Salliqmiut, traditional trap-lines ran throughout the southern region of the island, including within the MBS along the the coastline of Bay of God’s Mercy (Figure 6).

Southampton Island has numerous archaeological sites, cultural features, and artifacts. In 1983, J. Reid reported two archaeological sites (KjHq-1 & KjHq-2) just outside the MBS boundary. The sites are a burial site and sod houses, both located at Itijuarjuk. The Nunavut Atlas identifies several other archaeological sites and recent campsites within the Ikkattuaq MBS (Figure 6). An occupancy map featuring the region around Bay of God’s Mercy also identifies a number of animal traps or pits, and house remains or tent rings within the boundaries of the MBS (Source: William Kemp, NTI’s cultural resources inventory consultant; Figure 6).

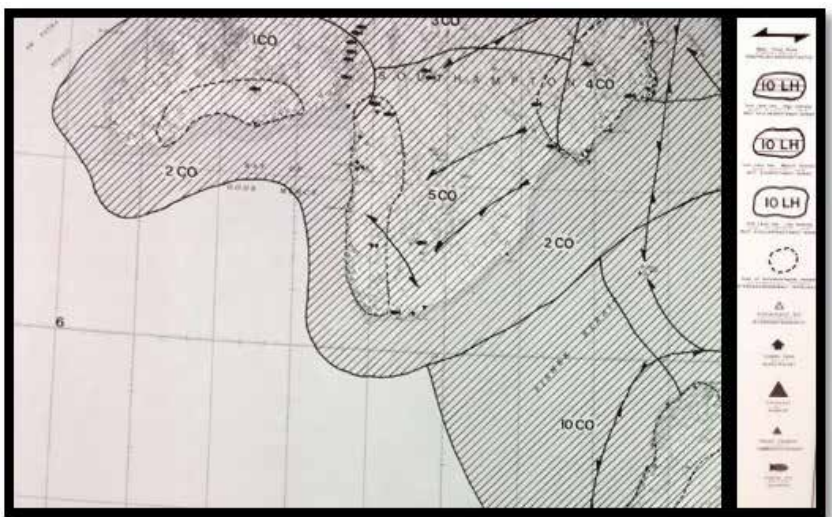
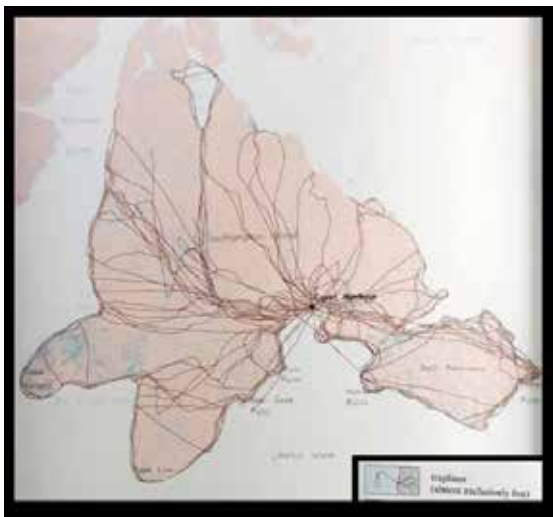
A significant cultural site containing dozens of animal traps and pits made of shale plates (possibly for geese), a kayak rack and more unknown structures exists along a ridge northeast of Itijuarjuk. This site has no official record, but the Innuviit ACMC is working with the Government of Nunavut’s Department of Culture and Heritage to have it registered and properly inventoried. Salliqmiut identified several place names within the Ikkattuaq MBS, demonstrating intimate knowledge of the area and its abundance of wildlife (Figure 1; Table 5).

Table 5: Traditional place names in the MBS (adapted from Inuit Heritage Trust data)

Roman	Inuktitut	Feature	Official Name	Description
Qimiarjulairut	ᓂᐱᑦᕿᔭᒃᗳᖅ	Esker		The end of a gravelly ridge
Ujarajjuat	ᐁᙵᚰᖅ	Point	Ikatuaq Point	Rocks, limestone
Ikkattuaq	ᐘᑲᑐᔨᖅ	Tidal Ar-ea	From Itijuarjuk to Ujarjjuat	Shallows
Ikkattuap kuunga	ᐘᑲᑐᔨᖅ ᐋᕈᑎᖅ	River	Lower Boas River up to officially-named Tasialuk Lake	Named for the effect of the tide on the river
Mamitsuittug	ᐄᖅᑐᔨᑐᖅ	River Se-lection		Current. Always open. Never “heals”. Many char here
Itijuarjuk	ᐘᑏᚰᖅ	Cliff		Steep-sided hill. Land-mark
Nunattaunngi	ᐇᑯᑐᔩᖅ	Camp		Not a good camping area



Source: NTI, 2014



Source: Inuit Land Occupancy Project. INAC, 1976

Source: Nunavut Atlas. Riewe, 1992

Figure 6: Historical Inuit land use of Southampton Island.

3.3 Current Inuit Land Use

Today, Salliqmiut still rely on the meat and skins of wild animals for subsistence purposes. Subsistence harvesting is a species-based seasonal activity on Southampton Island. It includes gathering eggs, goose hunting, and hunting of land and sea mammals like polar bear, caribou, seals, whales, and walrus (Figure 7). Salliqmiut do not commonly travel as far as Ikkattuaq MBS for goose and egg harvesting as these are now available much closer to the community.

However, Salliqmiut still use the MBS for camping and harvesting activities periodically. Although rare, some Salliqmiut harvest geese within the MBS in spring before Ikkattuap kuunga melts while travelling there to fish for Arctic char (*Salvelinus alpinus*) at Mamitsuittuq (Unhealing Brook). The Ikkattuaq MBS is used regularly for polar bears hunts (subsistence and sport hunts), especially in the fall.

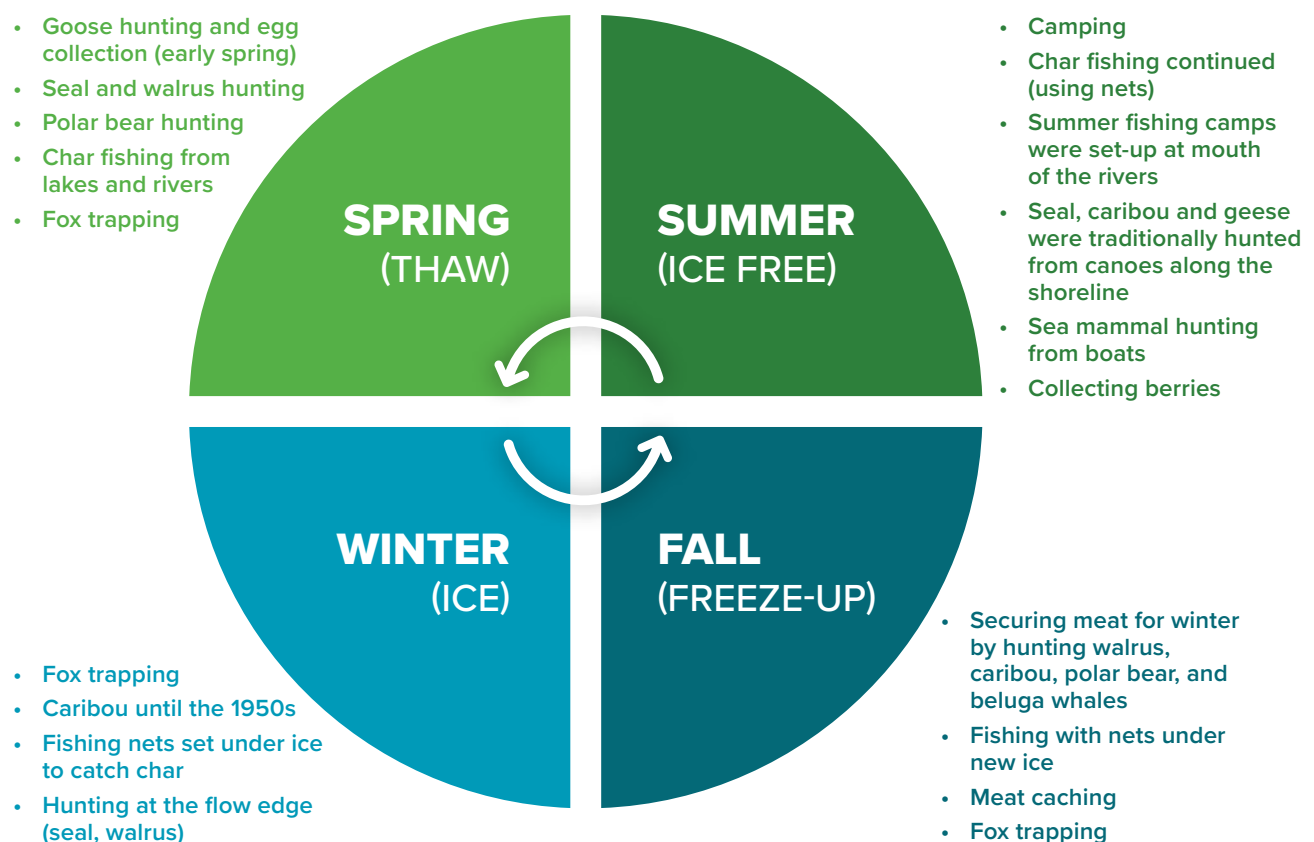


Figure 7: Past and current seasonal subsistence harvesting activities on Southampton Island.



4.

GOALS AND OBJECTIVES

4.1 Vision

The vision for the MBS is:

The Ikkattuaq MBS is managed to ensure the long-term conservation and protection of the land and water for all wildlife, Inuit rights and their heritage while considering Inuit Qaujimajatuqangit in all decisions.

The long-term vision for the management of the Ikkattuaq MBS takes into account these values:

- Conservation of wildlife and protection of their habitat, including migratory birds and species at risk;
- Protection of archaeological and cultural resources (as per *Article 2 – IIBA*);
- Inuit rights to use and harvest; and ensuring Inuit benefits (as per *Article 2 – IIBA*);
- Recognition of IQ principles in conservation, management, research decisions;
- Increase awareness of the importance of the MBS;

4.2 Goals and Objectives

The management goals for the Ikkattuaq MBS are critical to achieve and maintain the vision (Table 6). The Irniurviit ACMC developed the management objectives in Table 6 to (i) meet the management goals, and (ii) address management challenges and threats to the MBS (Section 5.0 – Management Considerations).

The goals appear in order of importance to the ACMC.

Table 6: Management Goals and Objectives

Goals	Objectives
Goal 1: Protect the land and water for all wildlife, Inuit rights and heritage	<p>Objective 1.1: Work towards converting the MBS to a National Wildlife Area to ensure it is best suited to co-management and to the year-round protection of habitat for all wildlife, and especially species at risk.</p> <p>Objective 1.2: Encourage and support research or monitoring, including the collection of Inuit Qaujimagatuqangit, which informs the management of the MBS or serves to fill knowledge gaps.</p> <p>Objective 1.3: Coordinate with and support partner organizations (IHT/ GN/NTI) to document the cultural resources within the MBS.</p> <p>Objective 1.4: Increase awareness of the MBS and the significance of the natural and cultural resources within the MBS..</p>
Goal 2: Ensure local awareness, participation and benefits	<p>Objective 2.1: Develop a communication plan with Salliqmiut to facilitate sharing information and knowledge, discuss concerns, and input into research priorities.</p> <p>Objective 2.2: Encourage Salliqmiut employment and mentorship in research and monitoring and increase awareness of opportunities.</p> <p>Objective 2.3: Increase local awareness of permitted activities within the MBS.</p>
Goal 3: Minimize the impacts of human activities on the natural and cultural resources	<p>Objective 3.1: Ensure everyone follows the permitting processes.</p> <p>Objective 3.2: Promote best practices to minimize the disturbance or destruction of natural and cultural resources.</p> <p>Objective 3.3: Participate in regional processes or initiatives that support the conservation of the MBS and surrounding areas.</p>

4.3 Evaluation

CWS will conduct annual monitoring within the limits imposed by the availability of financial and human resources. The Innuviit ACMC will review the management plan 5 years after its initial approval and review and update it every 10 years thereafter. The evaluation will be a review of management activities for the MBS and data obtained from the monitoring and research projects. CWS and the ACMC will then establish priorities for action and allocate resources.



5.

MANAGEMENT CONSIDERATIONS

Presently, there are no significant or immediate threats to the Ikkattuag MBS. Habitat is mostly intact, and the MBS is relatively isolated. However, the following management considerations have the potential to affect the MBS.

Light geese population and habitat

When CWS established the MBS in 1959, it was one of a few relatively small goose colonies throughout northern Canada and had approximately 28,000 light geese (Cooch & Barry, 1957). The colony at Ikkattuap kuunga extends beyond the boundaries of the MBS, and from 1997 until more recently, formed one contiguous goose nesting area with the colony at Ell Bay (Kerbes, et al., 2014). Most recent surveys in 2014 estimated over 689,700 nesting light geese in the colony at Ikkattuap kuunga (J. Leafloor, CWS, personal communication). At a continental scale, populations of light geese experienced exponential growth over the past 50 years and are now “overabundant” in Canada and the United States. Midcontinent snow geese, which includes geese nesting on Southampton Island, averaged 12.6 million adults (Alisauskas, et al., 2018a), and Ross’s geese averaged 1.6 million adults from 2006-2015 (Alisauskas, et al., 2018b).

Increases in population size have led to concerns about potential impacts to the Arctic’s coastal and lowland habitats caused by the foraging activities of large numbers of geese (Batt, 1997). Studies on Southampton Island report alteration of foraging habitats used by geese in coastal lowlands near the colony at Ikkattuap kuunga (Carter, et al., 2018; Fontaine and Mallory, 2011). Habitat changes are similar to that observed in the Hudson Bay Lowlands (Jano, et al., 1998; Kotanen and Jefferies, 1997). ECCC researchers are currently studying habitat loss due to grubbing and over-grazing to understand what effect it may have on other bird species in terms of reduced food availability and loss of nesting habitat (Flemming, et al., 2016). The impact on other wildlife species is still unclear.

Climate Change

Climate change, by itself and acting together with other factors, is playing a role in observed changes to habitat in the Ikkattuag MBS. Changes to the extent and duration of sea and freshwater ice, permafrost and snow cover, as well as increased air temperatures measured across the Arctic is leading to growing habitat shifts and corresponding responses in species (CAFF, 2010). For example, progressive earlier ice break-up in Hudson Bay has forced polar bears ashore much earlier (Lunn, et al., 2016) leading to documented increases in predation of breeding bird nests on Southampton and Coats Islands (Smith, et al., 2010).

Other observations of habitat changes in the MBS include drying of the land, lower water levels, and erosion in some places. These habitat changes were documented in other studies in the Arctic (Smol & Douglas, 2007; Kokelj, et al., 2005) and linked to climatic warming. Salliqmiut are also observing new species and changes to the distribution and migration patterns of other species (Carter, et al., 2018).

Community participation and awareness

Salliqmiut have expressed concerns about disruption from aircrafts supporting research and the greater need for the inclusion of Inuit Qaujimajatuqangit in both research and management decisions. Salliqmiut also want to fully benefit and participate in economic and other opportunities arising from the management of the Ikkattuaq MBS. The successful co-management of the MBS depends on addressing these challenges.

Human Activities

Interest in natural resource development has increased significantly across the Canadian Arctic. Geologists identified a high-grade limestone deposit near the southern boundary of the MBS and exploration activities are likely to continue to determine the economic potential of the resource. Limestone is an important product for gold extraction during mining and this deposit could serve Kivalliq gold mines as a local source.

Approximately 43 ships per year pass south of Southampton Island on the way to the Kivalliq mainland. These ships take supplies and fuel to local communities and mine sites. The threat of an oil spill entering the Ikkattuaq MBS is a concern due to the strong currents in the Bay of God's Mercy.

Salliqmiut have also expressed interest in developing an ATV trail that may have impacts on the MBS. The proposed route crosses Ikkattuap kuunga and ends near the Aiviit HTO cabin on the western portion of the MBS coastline. Improved access to the Ikkattuaq MBS could lead to increased interest in local outfitting and tourism opportunities. These future considerations will need careful planning to minimize impacts to wildlife and their habitat in Ikkattuaq MBS.

Table 7: Summary of management considerations and approaches

Management Consideration	Corresponding Goals/Objectives from Table 6	Management Approaches
Converting MBS to a National Wildlife Area to ensure it is best suited to co-management and to the year-round protection of habitat for all wildlife, and especially species at risk	1.1, 1.2, 1.3, 1.4	6.1 Cultural Resources Management 6.2 Wildlife and Wildlife Habitat Management 6.3 Monitoring and Research 6.4 Public Awareness and Information Management
Light geese population which could be causing habitat alteration and negatively affecting other wild-life	1.2	6.2 Wildlife and Wildlife Habitat Management 6.3 Monitoring and Research
Salliqmiut concerns about research	2.1	6.4 Public Awareness and Information Management
Exploration and development of limestone deposit adjacent to MBS	1.2, 1.3, 3.2, 3.3	6.3 Monitoring and Research 6.4 Public Awareness and Information Management
Salliqmiut concerns about inclusion of Inuit Qaujimajatuqangit in research and management decisions	2.1	6.4 Public Awareness and Information Management 6.3 Monitoring and Research
Salliqmiut concerns about benefitting and participating in economic and other opportunities arising from the management of the MBS	2.2	6.4 Public Awareness and Information Management
Effects of climate change on management of the MBS	1.2	6.3 Monitoring and Research
Increased shipping to the Kivalliq mainland and risks of oil spills	1.2, 3.2, 3.3	6.3 Monitoring and Research 6.4 Public Awareness and Information Management
Potential ATV access trail inside the MBS	2.3, 3.1, 3.2, 3.3	6.4 Public Awareness and Information Management
Potential increased interest in sport hunting/outfitting with increased access	2.3, 3.1, 3.2	6.4 Public Awareness and Information Management



6.

MANAGEMENT APPROACHES

CWS, in partnership with the Irniurviit ACMC, will manage the Ikkattuaq MBS by focusing on four main management approaches: Cultural Resources Management (Section 6.1), Wildlife and Wildlife Habitat Management (Section 6.2), Monitoring and Research (Section 6.3), and Public Awareness and Information Management (Section 6.4). These approaches will support meeting the vision, goals, and objectives of this management plan while being cognizant of the management considerations. CWS will implement these management actions through the annual work planning process, as human and financial resources allow.

6.1 Cultural Resources Management

6.1.1 Cultural and Heritage Resources

The management of the Ikkattuaq MBS will include the protection of archaeological and cultural heritage of Inuit (*IIBA* s.2.1.7). This includes protection and conservation of archaeological sites, artifacts, and cultural sites of importance to Inuit. All activities within the MBS must comply with the requirements of the *Nunavut Archaeological and Palaeontological Sites Regulations* and *Article 33* of the *NA*. If any permittee encounters a new archaeological site, specimen, or artifact, they will photograph it and records its geographic coordinates. This information must then be provided to the Government of Nunavut's Department of Culture and Heritage, the Inuit Heritage Trust, and NTI as soon as reasonably practicable.

The management of the Ikkattuaq MBS should avoid social and cultural disruption to Inuit and their relationship with and use of the lands (including IOL), the waters, and the resources of the MBS (*IIBA* s.2.1.4). The management of the MBS will preserve, support, and promote the use of traditional place names and the use of Inuit-language (*IIBA* s.2.1.6). CWS and the Irniurviit ACMC will seek information from NTI with respect to Archaeological Sites, and Cultural Sites of Importance to Inuit, obtained through the inventories conducted under s.6.4-6.7 of the *IIBA*, when necessary to manage the MBS.

CWS and the ACMC will need field surveys, conducted by qualified professionals, to document, assess, and preserve cultural resources within the MBS. This will help inform management decisions.

6.1.2 Wildlife Areas of Importance to Inuit

NTI will identify Wildlife Areas of Importance to Inuit within the Ikkattuaq MBS, through *Article 6* of the *IIBA*, and provided them to CWS. These areas shall be managed in cooperation with other agencies having jurisdiction over wildlife and in a manner consistent with *Article 5* of the *NA (IIBA s.12.2)*. In managing the MBS and Wildlife Areas of Importance to Inuit, CWS shall:

1. Minimize disturbance to wildlife and wildlife habitat, and promote the maintenance of vital, healthy wildlife populations;
2. Make all reasonable efforts, consistent with the Minister's jurisdiction under the *MBCA* and *SARA* to respect the cultural significance of Wildlife Areas of Importance to Inuit, taking into account any Inuit Qaujimajatuqangit documented and presented to it by Inuit, the Inniurviit ACMC and other knowledgeable parties;
3. Investigate public concerns regarding the protection or management of wildlife and document the response, or refer the matter to the wildlife management agency having jurisdiction; and,
4. As appropriate, consult Inuit organizations about issues pertaining to the effective management of wildlife and wildlife habitat within the MBS.

6.1.3 Place Names

An objective of the *IIBA* (s.2.1.6) is to document Inuit place names and promote the use of these place names in the management of the protected area. Place names were documented on two occasions for Southampton Island (2006 and 2012). CWS and the Inniurviit ACMC will also promote any additional information collected and will incorporate revisions brought to their attention.

6.2 Wildlife and Wildlife Habitat Management

6.2.1 Change in designation of the protected area

Although the current level of protection of the Ikkattuaq MBS serves well for migratory bird species, other species at risk and wildlife would benefit from year round protection. A National Wildlife Area would provide better protection for all wildlife and cultural resources, and better enable CWS to meet its commitments under the *IIBA*. There are criteria for designation of an area as a National Wildlife Area which the Ikkattuaq MBS meets (Section 8).

The Inniurviit ACMC wholly supports the designation change. The ACMC has written letters to CWS, NTI, and KivIA (06 July 2015) formally requesting CWS pursue the option of a status change. *Article 13* of the *IIBA* outlines this process and includes (but is not limited to) notification and consultation with NTI, KivIA, the associated communities and the ACMC, and will involve the establishment of an assessment group to consider the status change. A boundary change discussion may accompany this process.

6.2.2 Overabundant Light Geese

The severity, extent, and ecological impacts of overgrazing geese within the Ikkattuaq MBS are not well understood, but CWS is considering all viable management approaches and tools to address the issue. Light geese are an over-abundant species, and studies have documented some impacts on the habitat within the MBS near the colony (Carter, et al., 2018; Fontaine and Mallory, 2011). Liberal hunting regulations designed to increase light goose harvest in the midcontinent region of Canada

and the United States have been in place since 1999. Though harvests have increased substantially, growth of goose populations have outpaced increases in harvest, and harvest rates have actually declined overall. Nonetheless, there is evidence that recruitment of young geese has declined over time as the population has grown, and population growth has levelled off on its own in recent years (Ross, et al., 2017).

The Irniurviit ACMC supports several strategies to increase the local harvest of light geese. These include the promotion of harvest, inter and intra community sharing, sport hunting and commercial opportunities (Carter, et al., 2018). However, the ACMC also recognizes that light geese are important components of the ecosystem and wildlife heritage within the Ikkattuaq MBS. Ongoing research and monitoring are key to help understand the dynamics of breeding geese and other species within the Ikkattuaq MBS. The Irniurviit ACMC will base its advice on the best available knowledge and support a wide range of research and monitoring. ECCC researchers are investigating concerns about the effects of habitat loss on other species of migratory birds and other ecosystem components.

6.2.3 Species at Risk

When a species is listed under the federal *Species at Risk Act*, a recovery strategy (for species listed as ‘Endangered’ or ‘Threatened’) or a management plan (for species listed as ‘Special Concern’) is developed for that species. These recovery documents describe the habitats that species at risk need to survive.

Knowledge of habitat use by species at risk in the Ikkattuaq MBS will aid in the development and implementation of recovery documents. The MBS will protect habitat that species at risk need to survive and recover to healthy population sizes. A change in designation of the Ikkattuaq MBS from a Migratory Bird Sanctuary to a National Wildlife Area (Section 8) will aid in the year-round protection of this area for all wildlife (in particular non-bird species at risk; Table 4).

6.2.4 Non-native and Invasive Species

There are no observations or records of non-native (introduced) or invasive species of concern within the boundary of the MBS. As climate change alters Arctic ecosystems and enables greater human activity, biological invasions are likely to increase. CWS, in consultation with the Irniurviit ACMC, will develop an action plan should any monitoring detect the presence of invasive species.

6.2.5 Harvesting

The Irniurviit ACMC recognizes that hunting is an important source of food, income, and connectivity to the land for Inuit. In this regard, the ACMC will increase local awareness of permitted activities in the MBS (Section 7.1) to help dispel past and currently perceived infringements to Inuit rights to harvest. The management of the Ikkattuaq MBS shall be consistent with Inuit harvesting rights under the *NA* as per the *IIBA* s.2.1.5. Management of hunting activities for waterfowl and other game birds will be consistent with the *NA*, the *MBCA*, and its associated regulations.

6.2.6 Air Traffic

Seasonally (i.e. when birds are present), air traffic above the Ikkattuaq MBS will be managed to avoid and minimize flights in sensitive areas and during vulnerable periods (migration, nesting and moulting). Specifically, air traffic will:

1. Keep a minimum flight altitude of 650 m (2,100 ft.);
2. Plan flight paths to avoid known concentrations of birds (e.g., bird colonies, moulting areas) by a lateral distance of at least 1.5 km;
3. If avoidance is not possible, maintain a minimum flight altitude of 1,100 m (3,500 feet) over areas where birds are known to concentrate; and,
4. (Avoid staging areas used by flocks of coastal waterfowl and seabirds during spring and fall migration by a lateral distance of 3 km.

Depending on the nature of the work being conducted, these minimum flight altitudes may not be practical (e.g., wildlife surveys) and will be considered during the permitting process.

6.2.7 Marine Traffic

CWS and the Innuviit ACMC will manage the marine habitat in Ikkattuaq MBS in consultation with federal, territorial, and local governments and agencies, as well as local fishermen/harvesters. This will minimize impacts to marine habitat from vessels travelling through the waters within and adjacent to the MBS.

Year-round, vessels should:

1. Comply with the *Arctic Shipping Pollution Prevention Regulations of the Arctic Waters Pollution Prevention Act (1985)*;
2. Not dump bilge water, exchange ballast water or dump sewage within the MBS boundary;
3. Minimize noise emissions (such as sudden engine noise from acceleration and avoiding using horns) from vessels within 1 km of the MBS (subject to safety considerations); and,
4. Consult with the CWS office in Iqaluit before project commencement to discuss ship routing and appropriate emergency preparedness requirements.

Seasonally (i.e. when birds are present), all vessels will, at a minimum:

1. Avoid activity near nesting birds (May-August);

Keep a 500 m setback distance from aggregations of birds and/or colonies (ECCC, 2016).

6.3 Monitoring and Research

Effective and efficient monitoring requires a coordinated approach and will be carried out through liaison with researchers and partner agencies in a manner that contributes to the goals and objectives outlined in this plan and relevant recovery documents for species at risk.

In order of priority, ongoing monitoring and research needs include:

1. (The distribution and abundance of light geese, and the annual survival and harvest rates influencing the population;
2. The nature, intensity and geographic extent of habitat change as well as the rate of recovery of habitat;
3. Surveys to document Archaeological sites in the MBS;
4. The distribution and abundance of shorebirds and other waterbirds; and,
5. The impacts of climate change on ecosystems and species, including changes to their distribution, reproduction, and survival.

The Innuirviit ACMC will consider unsolicited monitoring and research activities for permitting when it:

1. Contributes to research priorities identified by Salliqmiut;
2. Increases knowledge of the abundance and distribution of ecological resources within the MBS to mitigate potential impacts from planned human activities;
3. Improves knowledge of IQ and cultural resources and heritage; and,
4. Informs about the effects of habitat change on wildlife populations.

CWS and the Innuirviit ACMC will examine proposals to ensure compatibility with management goals and objectives. The Innuirviit ACMC does not support projects that require extensive collecting, excessive depletion of any population, and significant disturbance of animals or disruption of habitat. The Innuirviit ACMC will encourage researchers to integrate or collect IQ as part of their project proposals. Applicants must submit all monitoring and research proposals to Environment and Climate Change Canada's Canadian Wildlife Service. Refer to Section 7 of this management plan for information related to permitting. Permit holders are required to provide a summary of findings to the Innuirviit ACMC and report on any identified issues that have the potential to affect the management of the species and habitats.

6.4 Public Awareness and Information Management

The Innuirviit ACMC plays a key role in promoting the Ikkattuaq MBS and facilitating dialogue and understanding surrounding management of the MBS between Salliqmiut, researchers, Inuit organizations, government, and industry. Increasing awareness among Salliqmiut and the public about the MBS will be an annual and ongoing management responsibility of the ACMC.

6.4.1 Local awareness and understanding

For the successful co-management of the MBS, the Innuirviit ACMC will need to balance the monitoring and research needs of the MBS with Salliqmiut concerns. The ACMC will develop a communication plan, in consultation with Salliqmiut, to increase local awareness of current and

permitted activities in the MBS as well as disseminating any important health or safety issues. One objective of the plan could be to provide regular and meaningful opportunities to share information and knowledge among users, and to discuss concerns and evaluate research priorities. This may also involve facilitating a community workshop. The Innuirviit ACMC will also encourage permit applicants to translate project summaries and annual reports as a standard recommendation for permit approval in order to increase accessibility to Salliqmiut.

6.4.2 Public Awareness

CWS and the Innuirviit ACMC will promote the natural, cultural and heritage resources of the Ikkattuaq MBS to Salliqmiut, Nunavummiut, visitors to Nunavut and all Canadians (*IIBA s.6.1.1(d)*). NTI will develop interpretive materials, such as signs, displays, brochures, and other information about the natural and cultural resources in and around the MBS (*IIBA s.6.8.1*). The primary purpose of interpretive materials is to facilitate the development of environmentally sustainable tourism and guiding in and around the MBS.

All materials (written, audio and video) to educate or inform the public about the MBS will be available in the Inuit Languages (*IIBA s.6.2.1*). CWS and the ACMC will also preserve Inuit language by supporting and promoting it in the management of the MBS. For example, maps, signs, or interpretive materials will feature traditional place names. All materials should incorporate IQ, with special regard to the MBS's physical features, ecology, wildlife, and Inuit heritage and culture (*IIBA s.6.8.4*) and will be reviewed by CWS, to ensure the accuracy of the biological and ecological information contained within the interpretive materials (*IIBA s.6.8.5*).

If CWS displays information on the Ikkattuaq MBS, it will make use of visitor centres or similar facilities in Coral Harbour (e.g., airport) in accordance with *s.6.9.1* of the *IIBA*. Information may also be available online through the Government of Canada's website or an ACMC hosted website.

6.4.3 Student Initiatives

Student initiatives such as youth participation in research and the management of the Ikkattuaq MBS is an important component in fostering a close relationship with the land as well as promoting conservation-related work. CWS has agreements in place to hire, train, and mentor Inuit students (*IIBA s.9.2*). CWS also co-operates with the GN in the development of materials and information designed to explain conservation-related jobs, career and business opportunities to Nunavut youth (*IIBA s.9.2.1*). ECCC is a participating federal department in the Inuit Learning Development Program, which aims to help Nunavut Inuit develop skills for potential employment in the federal public service in Nunavut. The Innuirviit ACMC will encourage permit applicants to hire Inuit students and Nunavut youth (e.g. Nunavut Sivuniksavut, Inuit Mentoring Program, and Inuit Field Research Assistant Program) as a standard recommendation for permit approval. The Innuirviit ACMC will also support other initiatives that serve to build local capacity for youth to participate in research and management of the MBS.

6.4.4 Tourism Activities

In accordance with the *IIBA*, NTI administers funds to build capacity among Inuit Tourism Providers in Coral Harbour and develop effective community-based tourism services. These services include training or mentoring for interested Inuit Tourism Providers; developing local services for tourists; and developing strategies, tourism packages, and marketing plans (*IIBA s.7.2*). The Innuirviit ACMC recognizes tourism as a legitimate land use and supports sustainable tourism operations within the Ikkattuaq MBS. The season, location, and intensity of the tourism activity are subject to periodic

review. CWS and the ACMC may impose limits if deemed necessary to avoid adverse impacts on the ecological and cultural resources within the MBS. Tourism activities within the MBS may also be subject to other applicable licenses or authorizations under the *Nunavut Travel and Tourism Act*, the *Nunavut Wildlife Act*, the *Nunavut Archaeological and Paleontological Sites Regulations*, and the *Nunavut Planning and Project Assessment Act*. Inuit should fully benefit from and fully participate in the economic and other opportunities arising from the management of the MBS (*IIBA s.2.1.3*).

6.4.5 Camps

The Inniurviit ACMC will maintain a list of existing cabins (camps) within the Ikkattuaq MBS. If a visitor wishes to visit an outpost camp, the ACMC shall advise the visitor on the appropriateness of the visit and provide owner contact information to seek permission of use (*IIBA s.5.5.5*).

New outpost camps in the MBS are permitted subject to the approval of the appropriate HTO or HTOs (*NA s.7.2.2*). Inuit intending to establish a new outpost camp in the Ikkattuaq MBS shall discuss the intended location of the camp with the Aiviit HTO and the Inniurviit ACMC, to minimizing impacts on wildlife or wildlife habitat (*IIBA s.5.5.4*). At this time, the Inniurviit ACMC has identified no areas where the establishment of a new outpost camp would be inconsistent with the conservation of wildlife and wildlife habitat, including the maintenance of healthy wildlife populations (*IIBA s.5.5.2*). ECCC staff and the ACMC may inspect camps and other permanent infrastructure periodically to ensure they are in good condition and there is no negative impact on the habitat around them.

6.4.6 Inuit Owned Lands

Inuit Owned Lands within the MBS will be managed in accordance with *Article 4* of the *IIBA* which states that the natural resource values will be maintained. *Article 4* also defines the roles and responsibilities of the KivIA and the Minister in managing IOL within the MBS, outlines the dispute resolution process and ensures access considerations (by CWS agents, employees and contractors), as well as access across the MBS to IOL.

6.4.7 Compliance Promotion

Promotion of compliance with the laws, regulations, and agreements related to protected areas in Nunavut is a key tool in managing these protected areas. CWS and the ACMC will conduct compliance promotion by sharing information to increase public awareness and education about the protected area, the legislation and policies affecting the area, and the goals and objectives for management of the area.

Management actions for compliance promotion in Ikkattuaq MBS should include:

- Distribution of this management plan;
- Implementation of the communication plan developed in consultation with Salliqmiut;
- Installing signage at primary entry points to the MBS;
- Ensuring information is available at strategic locations in Coral Harbour;
- Ensuring marine traffic is aware that they may require a permit to access the waters of the MBS;
- Ensuring air traffic is aware that they may require a permit to land within the boundaries of the MBS;
- Ensuring Salliqmiut and the public, including local businesses, are aware that permits may be required for certain activities within the MBS;

- Encouraging Salliqmiut and the public to report illegal activities within the MBS or involving migratory birds to CWS or another authority (see Section 10 for contacts); and,
- Encouraging regular patrol visits or desktop patrols (such as reviewing track log files from marine vessels or aircraft) of the MBS.

6.4.8 Regional Processes and Initiatives

While outside influences are not within the scope of this management plan or the mandate of the Irniurviit ACMC, participation in regional processes or initiatives may be essential for effective management of the MBS and for the conservation of migratory birds and other wildlife.

The Irniurviit ACMC may participate, as a party or through public input opportunities, in regional regulatory processes. These may include:

- Review of projects, as defined under *NuPPAA*, that may affect wildlife and habitat within the MBS; and,
- Nunavut Land Use Plan and future revisions.

Other initiatives and opportunities occasionally arise to further regional conservation of migratory birds and other wildlife, including:

- Establishment of conservation areas in the Kivalliq region; and,
- NWA Strategy and Action Plan (*IIBA* s.3.4.3).

The ACMC will discuss and determine its level of participation in these processes and initiatives on a case-by-case basis. The level of risks to the MBS, potential conservation benefits, and capacity may influence the extent of the ACMC's involvement. Other unanticipated opportunities may warrant the ACMC's participation as well.



AUTHORIZED ACTIVITIES, PROHIBITED ACTIVITIES AND ACCESS

The *MBCA* is the regulatory framework that protects migratory birds, and their nests and eggs, from destruction, collection, disturbance, and injury. The *MBSR* stem from the *MBCA* and enable the establishment of MBSs. The *MBSR* provide the basis for their management. The *MBSR* set out activities that are prohibited (*MBSR* s.3-5, and s.10) and provide authority to the Minister of the Environment to authorize or permit activities in MBSs that are otherwise prohibited (*MBSR* s.9).

As provided for in the *NA* and subject to certain limitations, “Inuit have a free and unrestricted right of access for the purpose of harvesting to all lands, waters and marine areas within the Nunavut Settlement Area” (*NA* s.5.7.16). This includes the Ikkattuaq MBS. The *NA* also exempts Inuit from the requirement to obtain a permit to harvest migratory birds and engaging in activities reasonably incidental to the harvesting of migratory birds in a MBS.

This management plan, the *IIBA*, and ECCC’s Policy when Considering Permitting or Authorizing Prohibited Activities in Protected Areas Designated Under the *Canada Wildlife Act* and *Migratory Birds Convention Act, 1994* will guide the authorization or permitting of activities in the Ikkattuaq MBS.

The *MBSR* do not allow the following activities except under authority of a permit (note the Inuit harvesting exception mentioned above):

- No person shall hunt migratory birds.
- No person shall disturb destroy or take the nests of migratory birds.
- No person shall have in his possession a live migratory bird, or a carcass, skin, nest or egg of a migratory bird.
- No person shall have in his possession any firearm or hunting appliance.
- No person shall permit their cat or dog to run at large,
- No person shall carry on any activity that is harmful to migratory birds or their eggs, nests or habitat of migratory birds.

7.1 Authorizations

7.1.1 Authorizations by Permit

Under the *MBSR* and upon application, the Minister of the Environment may authorize a prohibited activity under the *MBSR* through the issuance of a permit. That activity must meet one or both of the following purposes and pre-conditions as described in ECCC's Policy when Considering Permitting or Authorizing Prohibited Activities in Protected Areas Designated Under the *Canada Wildlife Act* and *Migratory Birds Convention Act*, 1994.

Purposes:

- The activity is not harmful to migratory birds, their eggs, nests, or habitats; or
- The activity is consistent with the purpose and criteria used for which the MBS was established and is consistent with the most recent management plan for the MBS.

Pre-conditions:

- Alternatives to the project/activity have been considered, and;
- Mitigation measures have been considered and adopted.

Terms and conditions governing the activity, which the Minister considers necessary for protecting and minimizing the impact of the authorized or permitted activity on migratory birds and their habitat, may be added to a permit. Refer to Section 7.1.7 for more information on permits.

7.1.2 Nunavut Inuit Activities Authorized Without a Permit

Nunavut Inuit have a right of access to MBSs, without fee or permit, for the following activities:

- Harvesting and activities incidental (*NA* s.5.7.18 and *IIBA* s.5.2),
- Removal of up to 50 cubic yards of carving stone within the MBS and any amount from IOL within the MBS (*NA* s.19.9.4 and *IIBA* s.5.4), and
- Establishment of new outpost camps (so long as consistent with Section 6.4.5, *IIBA* s.5.5, as well as the *NA*).

The *IIBA* (s.5.3) gives Inuit a further right of access without permit to guide sport hunters in or across the Sanctuary, and to carry a firearm for self-protection or the protection of clients. It also extends the right of access without permit for harvesting and covers activities that are reasonably incidental to harvesting.

Non-Inuit cannot be assigned this right of access and exemptions, even if harvesting rights are assigned to that person pursuant to *NA* s.5.7.35.

7.1.3 Nunavut Inuit Activities Authorized Only By Permit

Commercial ventures or businesses require a permit to conduct commercial activities within the MBS even if the commercial venture or business is Nunavut Inuit-owned. The one exception to commercial activities is guiding sports hunters or sport fishermen. A Nunavut Inuit guide does not require a permit, but the non-Inuit hunters or fishermen he or she is guiding do require a permit. Refer to Section 7.1.5 for non-Inuit. Other types of guiding (eco-tourism, canoeing, etc.) by Nunavut Inuit may require a permit. Refer to Section 7.1.7 for more information on permits.

7.1.4 Non-Inuit Activities Authorized Without a Permit

All activities, including entry and access, may require a permit for non-Inuit when migratory birds are present (April through October), and at any time of year if the activities may result in the destruction of migratory bird habitat. This applies even if harvesting rights are assigned to that person under s.5.7.35 of the *NA*. Refer to Section 7.1.7 for more information on permits.

7.1.5 Non-Inuit Activities Authorized Only By Permit

Non-Inuit must have a permit to carry a firearm in a MBS. Non-Inuit also require a permit to shoot and have dead migratory birds in their possession. This includes non-Inuit hunters on guided hunts for any wildlife species, even when the guide is a Nunavut Inuk that does not require a permit (*IIBA* s.5.3.1; Section 7.1.2). Refer Section 7.1.7 for more information on permits.

7.1.6 Activities Authorized by Permit on Inuit Owned Lands

The *MBCA* and its Regulations apply on Inuit Owned Lands that are within MBSs. The Minister of the Environment may issue permits to undertake activities on Inuit Owned Lands, in consultation with the Kivalliq Inuit Association. There is a special process for determining whether to issue a MBS permit on Inuit Owned Lands, where the Kivalliq Inuit Association expressly supports the permit application. *Article 4* of the *IIBA* describes this process.

In addition to the MBS permit, a proponent must also obtain permission from the Kivalliq Inuit Association to enter any Inuit Owned Lands within the MBS.

7.1.7 CWS Permit Application Process

For project proposals located in the Ikkattuaq MBS, the CWS is a regulatory authority under the *Nunavut Planning and Project Assessment Act*, which defines Nunavut's integrated regulatory system. All project proposals in Nunavut must be first submitted to the Nunavut Planning Commission (NPC). The NPC assesses project proposals for conformity with the Keewatin Land Use Plan and sends a conformity determination and any recommendations to the CWS. The NPC also sends the project proposal, with its determination and any recommendations, to the Nunavut Impact Review Board (NIRB) for screening, unless the project proposal is exempt. The NIRB determines whether the project has the potential to result in significant ecosystemic or socio-economic impacts and whether further review is required. The NIRB submits a screening decision report to the CWS.

The CWS cannot issue a permit until it has received either a positive conformity determination with notification that the project is exempt from screening from the NPC or a positive screening assessment from the NIRB stating that the project may proceed. In addition, in its role to advise the Minister on all aspects of the planning and management of the MBS, the Irniurviit ACMC reviews CWS permit applications and provides recommendations prior to CWS issuing a permit (*IIBA* s.3.3). Figure 8 illustrates the permitting process.

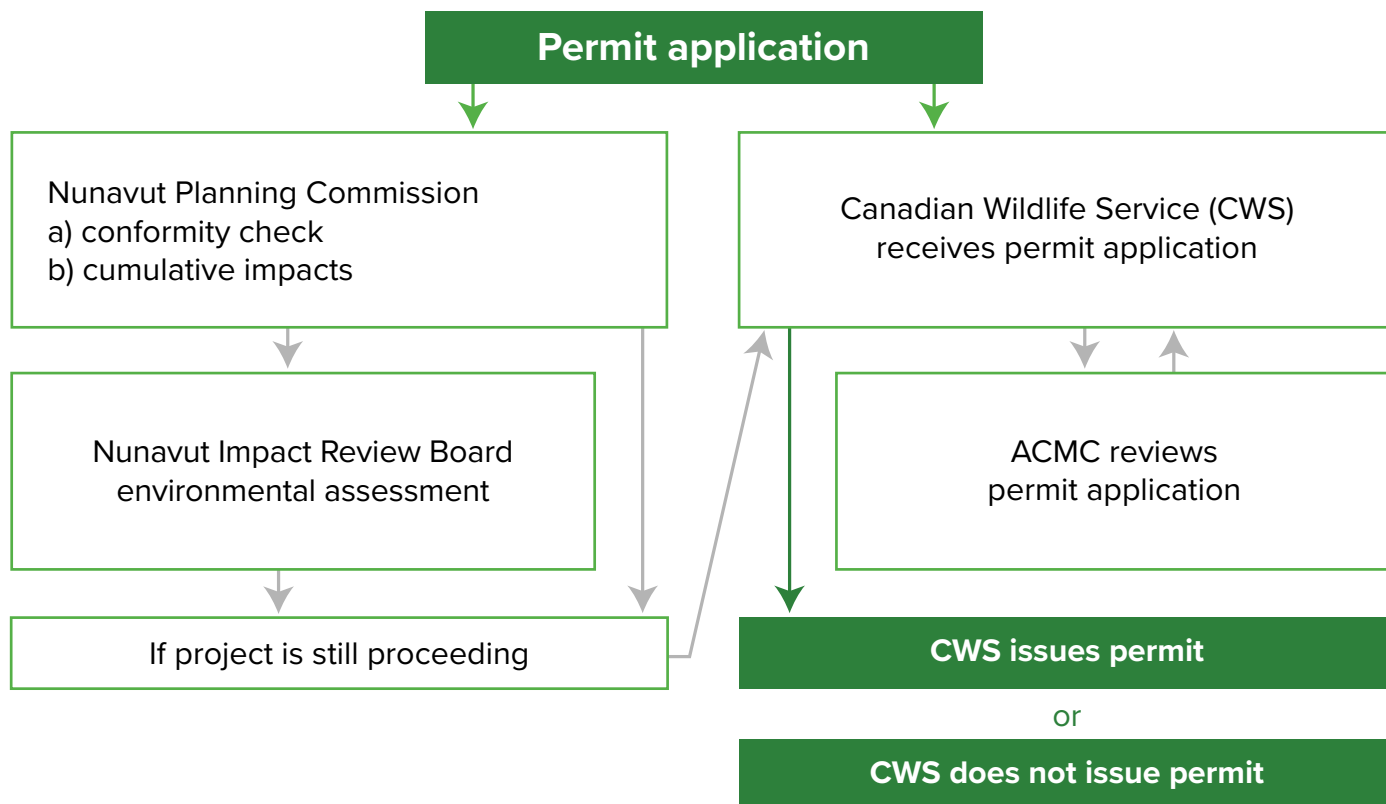


Figure 8: Migratory Bird Sanctuary permit application process

Permit requests must be made to:

Canadian Wildlife Service
Environment and Climate Change Canada
Prairie and Northern Region
PO Box 1870
Qilaut Building, 933 Mivvik Street, 3rd Floor
Iqaluit, NU X0A 0H0
Email: ec.cwspemnitnorth-nordpermisscf.ec@canada.ca

Contact ec.cwspemnitnorth-nordpermisscf.ec@canada.ca or 1-800-668-6767 (in Canada only) if you have any questions, comments, or concerns about federal wildlife permits in Nunavut or if you need assistance completing an application form.

7.2 Other Federal and Territorial Authorizations and Permits

Depending on the type of activity, other federal or territorial authorizations or permits may be required to undertake an activity in the Ikkattuaq MBS. For example, research may require a Scientific Research Licence from the Nunavut Research Institute or a Wildlife Permit from the Government of Nunavut – Department of Environment. Contact your regional federal and territorial permitting offices for more information.



8.

SITE DESIGNATION

Ikkattuaq is currently a Migratory Bird Sanctuary; however, the year-round protection afforded to the wildlife and cultural resources as a National Wildlife Area would be better.

The original designation of the conservation area as a MBS suited the species conservation at the time, protecting the snow goose colony during the breeding season. However, over the past 60 years, the needs for conservation of other nationally important migratory bird populations, other wildlife habitat and wildlife at risk, as well as Inuit cultural resources of the area have changed.

When CWS established the MBS in 1959, federal tools to protect federal land that had value as habitat for wildlife were limited. The *Canada Wildlife Act* did not receive Royal Assent until 1973. This Act allows for the creation, management and protection of NWAs for wildlife research activities, conservation or interpretation.

An area must meet at least one of the below criteria for proposal as a NWA. Ikkattuaq MBS currently meets three of the criteria for designation as a NWA (Table 8).

Table 8: Criteria assessment for the designation of Ikkattuaq as a NWA

Criteria for eligibility as a NWA	Ikkattuaq criteria assessment
1. The area supports at least 1% of the Canadian population of a species or subspecies of migratory bird or species at risk ¹ .	<ul style="list-style-type: none"> Over 5% of the Canadian population of lesser snow goose nests within the MBS Over 1% of the Atlantic brant population may be nesting within the MBS based on historical surveys
2. The area supports an appreciable assemblage ² of species or subspecies of migratory birds or species at risk, or an appreciable number of individuals of any one or more of these species or subspecies where total populations are not known or the assemblage represents a regionally significant area.	<ul style="list-style-type: none"> Six species at risk listed under the federal <i>Species at Risk Act</i>, and an additional seven COSEWIC assessed species Over 50 different species of birds have been recorded to use the MBS Extensive tidal flats are used as an important stop-over site during the southbound migration of Arctic nesting shorebirds Important polar bear summer habitat Includes traditional barren-ground caribou calving grounds
3. The area has been identified as critical habitat for a listed migratory bird or other species at risk population, subspecies or species.	Not applicable.
4. The area is a rare or unusual wildlife habitat of a specific type in a biogeographic region, or has special value for maintaining the genetic and ecological diversity of a region because of the wide range, quality and uniqueness of its flora and fauna ³ .	<ul style="list-style-type: none"> Extensive tidal flats are used as an important stopover site during the southbound migration of Arctic nesting shorebirds
5. The area possesses a high potential for restoration or enhancement, now or in the future, such that wildlife populations could be increased or managed to meet national objectives.	Not applicable.

¹ This criterion includes areas on which species or subspecies depend to complete any part of their life cycle, such as nesting, feeding, migration and wintering areas.

² An "appreciable assemblage" of species or subspecies would be a grouping that, in relative terms, is generally accepted as being sufficient to warrant conservation action, such as waterfowl.

³ This criterion allows for habitats that always have been rare in a region, as well as habitats reduced to a remnant of their former extent.

In addition to the above criteria, the Ikkattuaq MBS has a long history of research, particularly for geese. Table 9 summarizes the research and monitoring history in the MBS from available permitting files and a literature review.

Table 9: Summary of research and monitoring in the MBS

Year	Researcher Last Name (Organization)	Purpose or Topic
1934	Manning (Royal Geographical Society and British Museum)	Bird research/Expedition
1936	Bray, Manning (British-Canadian Arctic Expedition)	Bird research/Expedition
1952-1953	Cooch (Canadian Wildlife Service, ECCC)	Goose research – Snow goose
1953, 1956-1957	Barry (Canadian Wildlife Service, ECCC)	Goose research – Brant
1961	MacInnes (University of Western Ontario)	Goose research – Cackling goose
1966	Kerbes (Canadian Wildlife Service, ECCC)	Waterfowl surveys
1972-1973	Kerbes (Canadian Wildlife Service, ECCC)	Photo survey of goose colony
1979	Reed, Dupuis (Canadian Wildlife Service, ECCC)	Photo survey of goose colony
1984	MacNeil (Parks Canada)	Field Surveys
1987	Unknown	Terrain Surveys
1991-1995	Caswell (Canadian Wildlife Service, ECCC)	Goose research
1997	Kerbes (Canadian Wildlife Service, ECCC)	Photo survey of goose colony
1999-2001	Bazin (Canadian Wildlife Service, ECCC)	Goose research
2003-2004	Smith (Science and Technology Branch, ECCC)	Shorebird research
2005-2008	Caswell (Canadian Wildlife Service, ECCC)	Goose research
2009-2020	Leafloor (Canadian Wildlife Service, ECCC)	Goose research
2011	Leafloor (Canadian Wildlife Service, ECCC)	Waterfowl surveys
2014-2020	Rausch (Canadian Wildlife Service, ECCC)	Shorebird research

A National Wildlife Area designation would also help protect areas of cultural and historical importance like gravesites, former settlements and traditional camping areas that the Innuviit ACMC would like to see better preserved. The spirit and intent of the *IIBA* was to provide a framework for managing conservation areas in Nunavut for all wildlife and cultural resources. However, a MBS designation does not offer the legislation with which to carry out these management activities, while that of a NWA does.

The Innuviit ACMC wholly supports the designation change. The ACMC sent letters to CWS, NTI and KivIA (06 July 2015) formally requesting that CWS pursue the option of a status change. *Article 13* of the *IIBA* outlines this process. It includes, but is not limited to, notification and consultation with NTI, KivIA, Salliqmiut, and the ACMC, and will involve the establishment of an assessment group to consider the status change.

Consultations on potential boundary changes should accompany the conversion process. There have been past recommendations to consider changing the MBS boundary (CACNMP, 1990; Allison, 1977). Additional cultural and heritage sites located just outside the current MBS boundary as well as important polar bear denning and barren-ground caribou habitat may be considerations. Various surveys would be required to inform a boundary change to maximize protection and conservation outcomes for cultural and wildlife resources.



9.

SECURITY, HEALTH AND SAFETY

**In the case of environmental emergencies, please contact the Canadian Environmental Emergencies Notification System for the Northwest Territories and Nunavut:
1-867-920-8130**

CWS will protect the health and safety of the public by informing users and visitors of any known or anticipated hazards or risks, using all reasonable means. Further, CWS staff will take all necessary precautions to protect their own health and assure their safety as well as that of their co-workers. However, any person or group must make all reasonable efforts to inform themselves of risks and hazards and must be prepared and self-sufficient. Natural areas contain some inherent dangers. All should be aware that CWS staff do not regularly patrol or offer services for public safety in Migratory Bird Sanctuaries.

Any person or group should report all incidents within the Ikkattuaq MBS to the below offices, and may request anonymity:

- Royal Canadian Mounted Police detachment in Coral Harbour: 867-925-0123, or during an emergency 867-925-1111
- Government of Nunavut Wildlife Office in Coral Harbour: 867-925-8823
- Environment and Climate Change Canada's Wildlife Enforcement Office (Yellowknife or Iqaluit): ec.dalfnord-wednorth.ec@canada.ca
- Environment and Climate Change Canada's Canadian Wildlife Service Permitting Office (Iqaluit): ec.cwspemnitnorth-nordpermisscf.ec@canada.ca
- Any member of the Irniurviit ACMC in Coral Harbour.

9.1 Bear Kills

Any person that kills a bear within the MBS, because of an emergency or accident, must report it as soon as possible. The primary contacts are the Government of Nunavut's Wildlife Conservation Officer in Coral Harbour (867-925-8823) and Environment and Climate Change Canada's Canadian Wildlife Service Permitting Office (ec.cwspermitnorth-nordpermisscf.ec@canada.ca). Disposal of any valuable parts of wildlife killed in an emergency, illegal, or accidental kill should be in accordance with s.5.6.55 of the *NA*. Compensation to the Aiviit HTO for a bear kill within the MBS will follow s.12.3 of the *IIBA*. Persons entering the MBS should take training in bear awareness and firearms safety, or have a bear monitor accompany them.



10.

ENFORCEMENT

For the administration of the *MBCA* and *MBSR*, ECCC Wildlife Officers possess the powers of a police constable. Designated territorial Conservation Officers and the Royal Canadian Mounted Police have the authorization to enforce the *MBSR* under the *MBCA*.

ECCC Wildlife Officers monitor compliance with authorizations and permits issued under the *MBCA* and the *MBSR* on an ongoing basis and will initiate investigations as required. ECCC Wildlife Officers also universally enforce the *MBSR* for prohibited activities without a permit, and when necessary, will lay charges.

In the Ikkattuaq MBS, the general prohibitions of the *SARA* (s.32 and s.33) apply everywhere for migratory birds and aquatic species, and to all wildlife species on parcels of federal lands and waters. These prohibitions apply to all species listed on Schedule 1 as extirpated, endangered, or threatened. It is illegal to kill, harm, harass, capture, or take individuals of such listed species, and to damage or destroy their residences. If CWS identifies critical habitat of a listed species within the MBS, there is a requirement to publish a description of that habitat in the *Canada Gazette*. Section 58 of the *SARA* prohibits the destruction of critical habitat.

Anyone can report suspected illegal activities within the Ikkattuaq MBS to any federal or territorial wildlife officer, RCMP detachment, CWS at ec.cwspemritnorth-nordpermisscf.ec@canada.ca or directly to any of the Innuviit ACMC members in Coral Harbour.



11.

PLAN IMPLEMENTATION

CWS and the Irniurviit ACMC will implement the management plan over a 10-year period. Implementation will be contingent on annual work planning, as well as human and financial resources. CWS and the ACMC will favor an adaptive management approach.

The ACMC will direct implementation efforts based on the mutual commitment of all parties involved (*IIBA s.2.1.9*). CWS will evaluate the implementation of the plan five years after initial acceptance and every ten years thereafter based on the management activities identified in Table 10. This section of the management plan does not replace annual work planning but helps establish priorities.

CWS and the ACMC will review data obtained from monitoring and research projects, and use it to inform future management decisions. When appropriate, they will also consult Salliqmiut. CWS will also use this information to evaluate federal contributions towards achieving the goals of the protected area, including future designation goals.

Table 10: Five-year management plan implementation schedule

Activity	Year				
	1	2	3	4	5
Advise the Minister of Environment, as appropriate, on all aspects of management planning; carefully considering any Inuit Qaujimajatuqangit brought forward by members (<i>IIBA</i> s.3.3).	X	X	X	X	X
Fulfill the other functions of the ACMC set forth in the <i>IIBA</i> , including advising on: <ul style="list-style-type: none"> • The NWA Strategy and Action Plan for Nunavut (<i>IIBA</i> s.3.4); • Management Plans (<i>IIBA</i> s.3.5 to 3.7); • RIA-Supported Permit Applications (<i>IIBA</i> s.4.3); • Camps and cabins in Ikkattuaq MBS (<i>IIBA</i> s.5.5); • The inventories of resources important to Inuit, including oral history projects, archaeological projects and Inuit Language place names (<i>IIBA</i> s.6.4 to 6.7); • Research within Ikkattuaq MBS (<i>IIBA</i> s.10.2) • CWS's role in the protection of Archaeological Sites, Artifacts and Specimens and Cultural Sites of Importance to Inuit (<i>IIBA</i> s.11.3); • The management and protection of wildlife and wildlife habitat within the Ikkattuaq MBS (<i>IIBA</i> s.12.2); • The Establishment, Enlargement, Status Change, Reduction or Disestablishment of Ikkattuaq MBS, as appropriate (<i>IIBA</i> s.13.5); and • Visitor use of Ikkattuaq MBS (<i>IIBA</i> s.14.2 and 14.4). 	X	X	X	X	X
Encourage and support research or monitoring, including the collection of IQ, which informs the management of the Ikkattuaq MBS or serves to fill gaps.	X	X	X	X	X
Develop a communication plan, in consultation with Salliqmiut, to increase local awareness of current and permitted activities in the MBS, important health or safety issues, and provide meaningful opportunities to have discussions among users.	X	X	X		
Implement local communication plan.			X	X	X
Increase public awareness of the importance of the Ikkattuaq MBS for all wildlife and cultural resources.			X	X	X
Document and report incidents of illegal activities.	X	X	X	X	X
Participate in regional processes or initiatives that support the conservation of the MBS and surrounding areas	X	X	X	X	X
Maintain a list of existing cabins with the MBS and coordinate with the Aiviit HTO	X	X	X	X	X

11.1 Management Plan Amendment

CWS may amend a management plan at any time. Any government or person affected by this management plan may propose an amendment by contacting CWS (*IIBA* s.3.7.1). Management plans and any subsequent revisions are subject to the approval of the Nunavut Wildlife Management Board.

The Inniurviit ACMC will finalize any revisions or changes to the management plan. CWS will then coordinate external consultation and review of the plan. Any changes to the review process and approval steps will be in accordance with s.5.3.34(c) and s.5.3.16 of the *NA*.

11.2 Management Authorities & Mandates

The authority of the federal Minister of the Environment under the *MBCA* and *MBSR* allows ECCC to establish and manage MBSs. CWS administers this authority within ECCC. In Nunavut, Inuit have a significant role in the decision making of wildlife and wildlife habitat through the *NA*. The Inniurviit ACMC enacts many provisions of the *NA* and *IIBA* as the advisory committee responsible for the day-to-day management of the Ikkattuaq MBS.



COLLABORATION

The ultimate success of this management plan depends on collaboration and consultation between CWS, Salliqmiut, other federal agencies and departments, the Government of Nunavut, non-government organizations; who by virtue of their objectives, have a role to play in the protection of the Ikkattuaq MBS and the long-term conservation of wildlife species and their habitats. This includes collaboration in research, land management, and wildlife and fisheries management. Successful implementation and operation of programs, projects, and protection described for the MBS would not be possible without these formal and informal collaborative arrangements. The Inniurviit APMC and CWS will ensure coordination of efforts.

12.1 Inuit and Public Partners

The Inniurviit APMC will advise on the management of migratory bird populations in consultation with regional institutions of public government (i.e. NWMB, NPC, and NIRB) as well as local resource co-management boards and authorities. The NWMB plays a key role in wildlife management within Nunavut including regulating harvesting activities within the MBS. Other local and regional partners include the Kivalliq Inuit Association, the Kivalliq Wildlife Board, the Aiviit HTO, the Hamlet of Coral Harbour, the Paqquitiit Elders Committee, the Inuit Heritage Trust, and Travel Nunavut.

12.2 Government of Nunavut

The GN Department of Environment - Wildlife Management Division has a legislated mandate for the management of terrestrial wildlife species in Nunavut. In addition to the *Nunavut Wildlife Act*, the Wildlife Management Division is responsible for fulfilling government responsibilities under a wide range of federal legislation and both national and international agreements and conventions, including on-going responsibility for the co-management of Nunavut wildlife as obligated under the *NA*. One of the primary goals of the Division is to achieve a balanced approach to wildlife management that meets legislative requirements, uses both science and IQ and reflects the values and needs of Nunavummiut.

The GN Department of Culture and Heritage develops and implements policies, programs, and services. These services aim to strengthen the culture, language, heritage, and physical activity of Nunavummiut. The GN Department of Culture and Heritage maintains close working relationships with the professional archaeology and palaeontology communities, with Nunavut communities, with the Inuit Heritage Trust, and with other territorial and federal government agencies.

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APPENDIX A: LEGAL DESCRIPTION

The legal description as copied directly from the *Migratory Bird Sanctuary Regulations* (C.R.C., c. 1036; 1958) is as follows:

“Harry Gibbons Bird Sanctuary

All those portions of Southampton Island and the waters of Hudson Bay, in the District of Keewatin, in the Northwest Territories, said portions being more particularly described as follows:

COMMENCING at a point at the mean low tide water mark of said Island at Manico Point on a due east-west line passing through the most westerly extremity of said Point; THENCE, due east to longitude eighty-five degrees thirty minutes; THENCE, due north to latitude sixty-four degrees; THENCE, due west to longitude eighty-six degrees; THENCE, due south to latitude sixty-three degrees fifty minutes; THENCE, due west to longitude eighty-six degrees twenty minutes; THENCE, due south to the mean low tide water mark of said Island; THENCE, easterly and southerly along the last-described water mark to the point of commencement, said portions containing together 575 square miles, approximately.

All being described with reference to the latest appropriate map sheet of the National Topographic Series on a scale of 8 miles to 1 inch, available on the 2nd day of March, 1959.”

The legal land description in the *Migratory Bird Sanctuary Regulations* is accurate and no corrections are required