



NUNAVUT WILDLIFE RESOURCE AND HABITAT VALUES

AMENDMENT

Prepared for:

Nunavut Planning Commission
Cambridge Bay, Nunavut

Prepared by:

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EXECUTIVE SUMMARY

Wildlife populations play an important role for the people of Nunavut in terms of culture, social interaction and economics. Inuit relationship with the land depends upon the ability to harvest wildlife for a well-balanced diet and traditional stories typically convey the relationship between Inuit and wildlife species. Accurate information on habitat use is critical for the management of sustainable populations.

As in integrated management plans, land use planning can examine the best mechanism to employ for protection of wildlife habitat while still maintaining opportunities for sustainable development. Guidelines established in land use plans for specific areas and activities are generally used for guidance by regulators and adopted through licensing or permitting processes. The Nunavut Planning Commission is initiating a land use planning process to ensure the sustainable development of the lands, waters, wildlife, and offshore areas of Nunavut. The primary objectives of this study are to identify wildlife species important for ecological, social, cultural and economic reasons, review their current status, habitat needs, and challenges, and present potential solutions to those challenges.

A short list of species was developed that focused on species of importance for Inuit subsistence use, commercial harvest and harvest viability, species important for outfitting, ecologically sensitive species, and species with special status (e.g., special concern, threatened, endangered, or subject to protection or special commitments) at territorial, federal and international levels. The list of focal species identified 76 mammals, fish, invertebrates and birds that utilize terrestrial and aquatic habitat in Nunavut. For each short-listed species, information on current status, distribution, general ecology, key habitat requirements, population status and trends, issues or pressures, and considerations for land use planning was compiled and reviewed. In addition to this comprehensive literature review, all available spatial data on wildlife habitat and values was compiled for each focal species to be used in the identification of important or key habitat for each species or species group. Knowledge gaps were identified in cases where information is missing or is not current enough to be able to accurately assess habitat use or values, and ongoing or future research has not been identified.

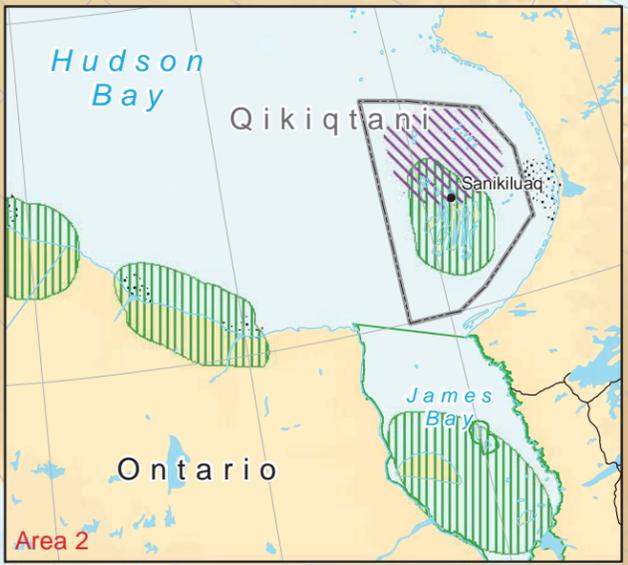
The analysis of important habitat should not be considered exhaustive, but rather an overview of presently available information. It presents a comprehensive summary of the information that is currently available. Important or critical habitat for aquatic or terrestrial wildlife can include a variety of different habitats and timing considerations. Important wildlife habitat in Nunavut may include concentration, feeding, nursing, breeding areas, migration routes and denning locations.

Important habitat for marine mammals (Figure 1-1) includes areas of known birthing or rearing locations, including; denning locations (polar bears) and pupping sites (ringed and bearded seals). Known concentration areas and high density locations were also represented, especially if they overlapped between species groups. Areas that have previously been identified as important habitat for marine mammals such as Wildlife Areas of Special Interest (WASI; polar bears), high suitability habitat (bowhead whales) and the Marine Protected Area of Niginaniq (Isabella Bay) are also been identified.

There is little available information on specific areas in Nunavut that may be considered important habitat for freshwater and marine fish. The summary figure represents known areas of Arctic char abundance, coral and sponges, common areas of occurrence for Greenland halibut, Greenland shark, Icelandic scallop and shrimp (Figure 1-2).

Important habitat for terrestrial wildlife and birds includes Important Bird Areas and key migratory sites (Figure 1-3), Wildlife Areas of Special Interest, and Muskox management areas (Figure 1-4). Further important habitat may also be protected within the International Biological Programme sites as well as Parks and National Historic sites of Nunavut (Figure 1-5).

Research on Arctic wildlife populations can be financially or logistically challenging and there is a general lack of information available for Nunavut wildlife species. Much of the research conducted on wildlife species in Nunavut has been related to population or stock status related to important subsistence species. Information for species of lesser social or economic importance is not readily available. The existing body of information on Nunavut wildlife provides a basis on which future research needs and priorities can be assessed and pursued. Although in many cases, the identification of critical habitat cannot be made with the information currently available, it provides the building blocks for informed decision making regarding Nunavut lands and waters.

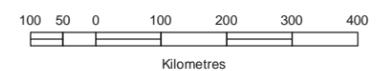


Nunavut, Canada
Figure 1-1
Important Habitat for Marine Mammals in Nunavut

- Denning Area (Polar Bear)^{4,5}
- WASI-Polar Bear Habitat³
- Island with Largest Known Haul-out Site (Walrus)²
- Common in Winter (Walrus)⁴
- Common in Summer (Beluga)⁴
- Common in Winter (Narwhal)⁴
- Common in Summer (Narwhal)⁴
- Whelping Area (Harp Seal)⁴

- Base Features**
- Community
 - Road
 - Conservation Area
 - Lakes / River
 - Nunavut Regional Boundary
 - National Park
 - Migratory Bird Sanctuary
 - National Wildlife Area

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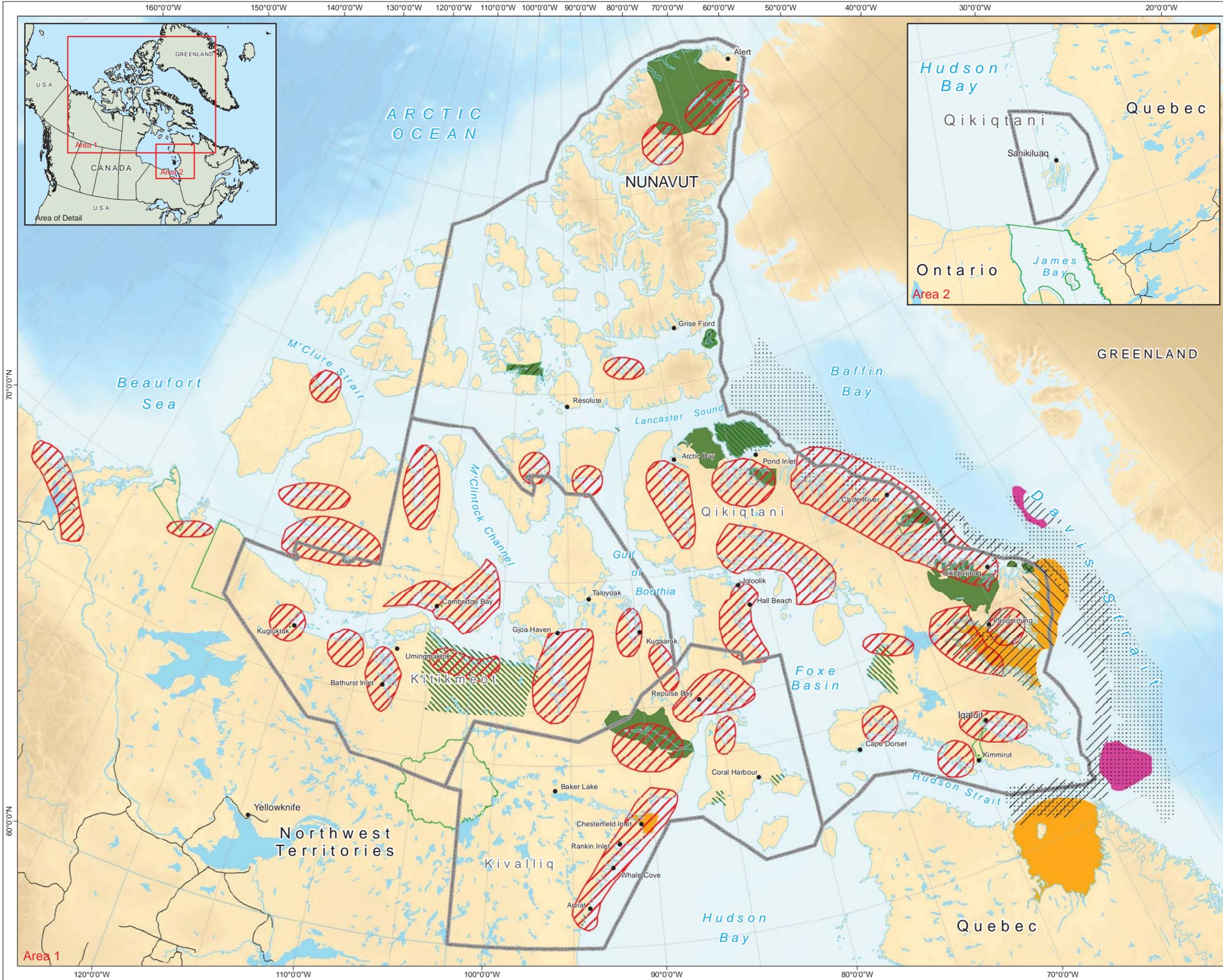


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- References:
- ¹COSEWIC. 2006. Assessment and update status report on the Atlantic Walrus *Obodenus rosmarus rosmarus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa, ON. ix + 65pp.
 - ²DFO. 2002. Atlantic walrus. Science Stock Status Report EF-21 Department of Fisheries and Oceans.
 - ³Ferguson, S.H. 1995. Wildlife Areas of Special Interest to the Department of Renewable Resources. Wildlife Management Division, Department of Renewable Resources, Government of the Northwest Territories. Nunavut Wildlife Management Board version adapted from original 1987 publications. 80 pp. *digitized by Government of Nunavut 2005
 - ⁴Stephenson, S.A. and Hartwig, L (Eds.). 2010. The Arctic Marine Workshop. Winnipeg, Manitoba. Freshwater Institute, Fisheries and Oceans Canada. Canadian Manuscript Report of Fisheries and Aquatic Sciences 2934. 67 pp. (shape files provided by DFO to Nunami Stantec). January 20, 2012.
 - ⁵Urquhart, D.R. and R.E. Schweinsburg. 1984. Polar bear life history and known distribution of polar bear in the Northwest Territories up to 1981. Northwest Territories Renewable Resources. Yellowknife NWT. 70 pp. *digitized by Government of Nunavut 2005

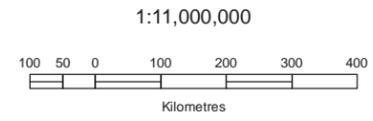


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Nunavut, Canada
Figure 1-2
Important Areas for Fish and Invertebrates in Nunavut

- Coral and Sponges²
 - Arctic Char Area of Abundance¹
 - Greenland Halibut Common²
 - Greenland Shark Area of Abundance¹
 - Icelandic Scallop Area of Abundance¹
 - Northern, Striped and Pink Shrimp Area of Abundance^{1,2}
- Base Features**
- Community
 - Road
 - Conservation Area
 - Lakes / River
 - Nunavut Regional Boundary
 - National Park
 - Migratory Bird Sanctuary
 - National Wildlife Area



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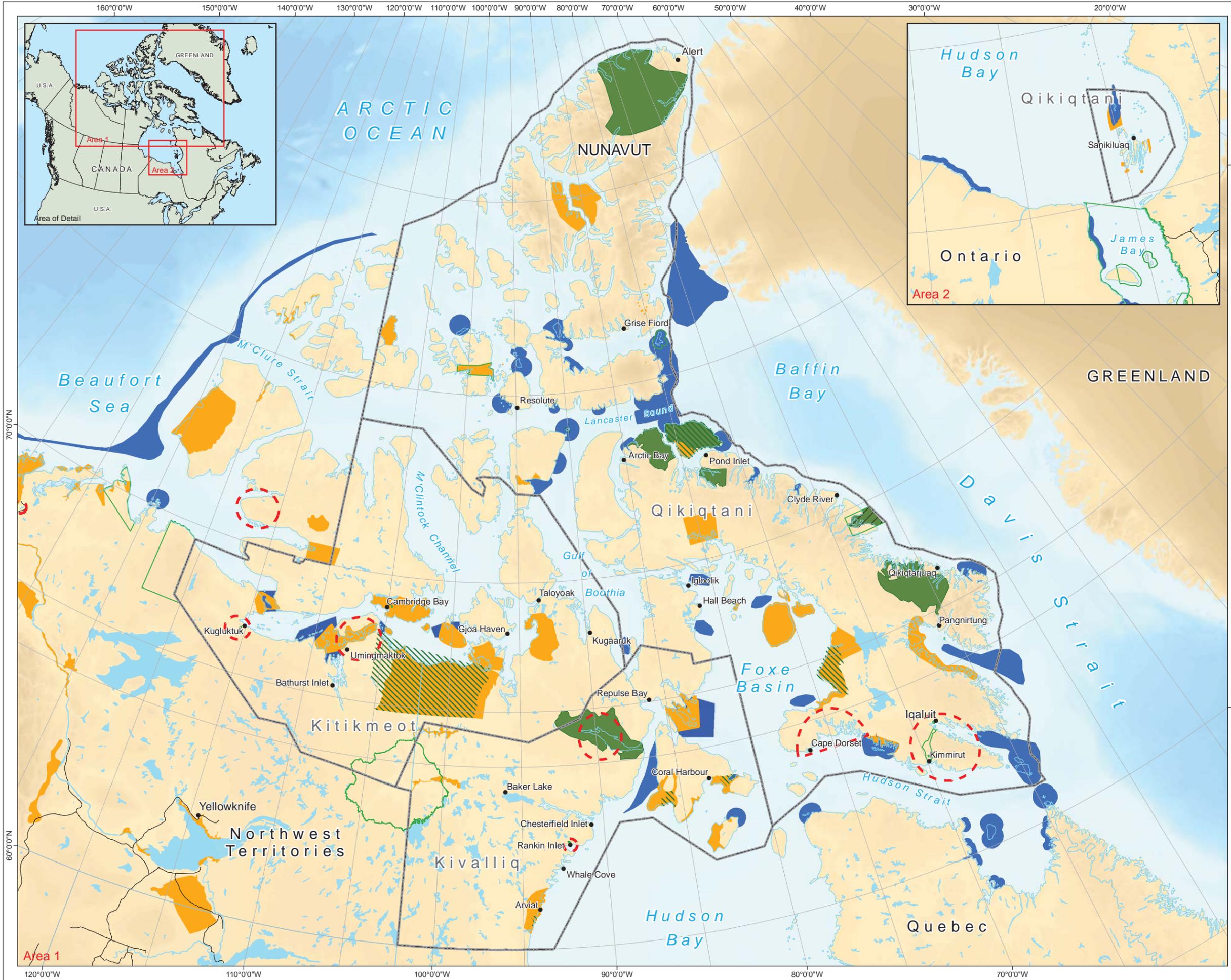
References:

¹Mercier, F., F. Rennie, D. Harvey and C.A. Lewis (Eds.). 1994. Arctic Marine Workshop Proceedings. Winnipeg, Manitoba. Park Establishment Branch, National Parks Directorate, Parks Canada Department of Canadian Heritage.

²Stephenson, S.A. and Hartwig, L (Eds.). 2010. The Arctic Marine Workshop. Winnipeg, Manitoba. Freshwater Institute, Fisheries and Oceans Canada. Canadian Manuscript Report of Fisheries and Aquatic Sciences 2934. 67 pp. (shape files provided by DFO to Nunami Stantec). January 20, 2012.

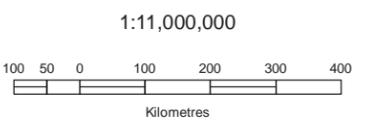


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**Nunavut, Canada
Figure 1-3
Important Habitat for
Birds in Nunavut**

- Key Migratory Bird Marine Habitat Sites^{1,4}
- Key Migratory Bird Terrestrial Habitat Sites^{1,3}
- WASI Site Gyrfalcon and Peregrine Falcon²
- Base Features**
- Community
- Road
- Conservation Area
- Lake / River
- ▭ Nunavut Regional Boundary
- National Park
- ▨ Migratory Bird Sanctuary
- National Wildlife Area



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References:

¹CWS. 2010. CWS key migratory bird habitat sites in Nunavut (amended shape files provided to Nunami Jacques Whitford). March 22, 2010.

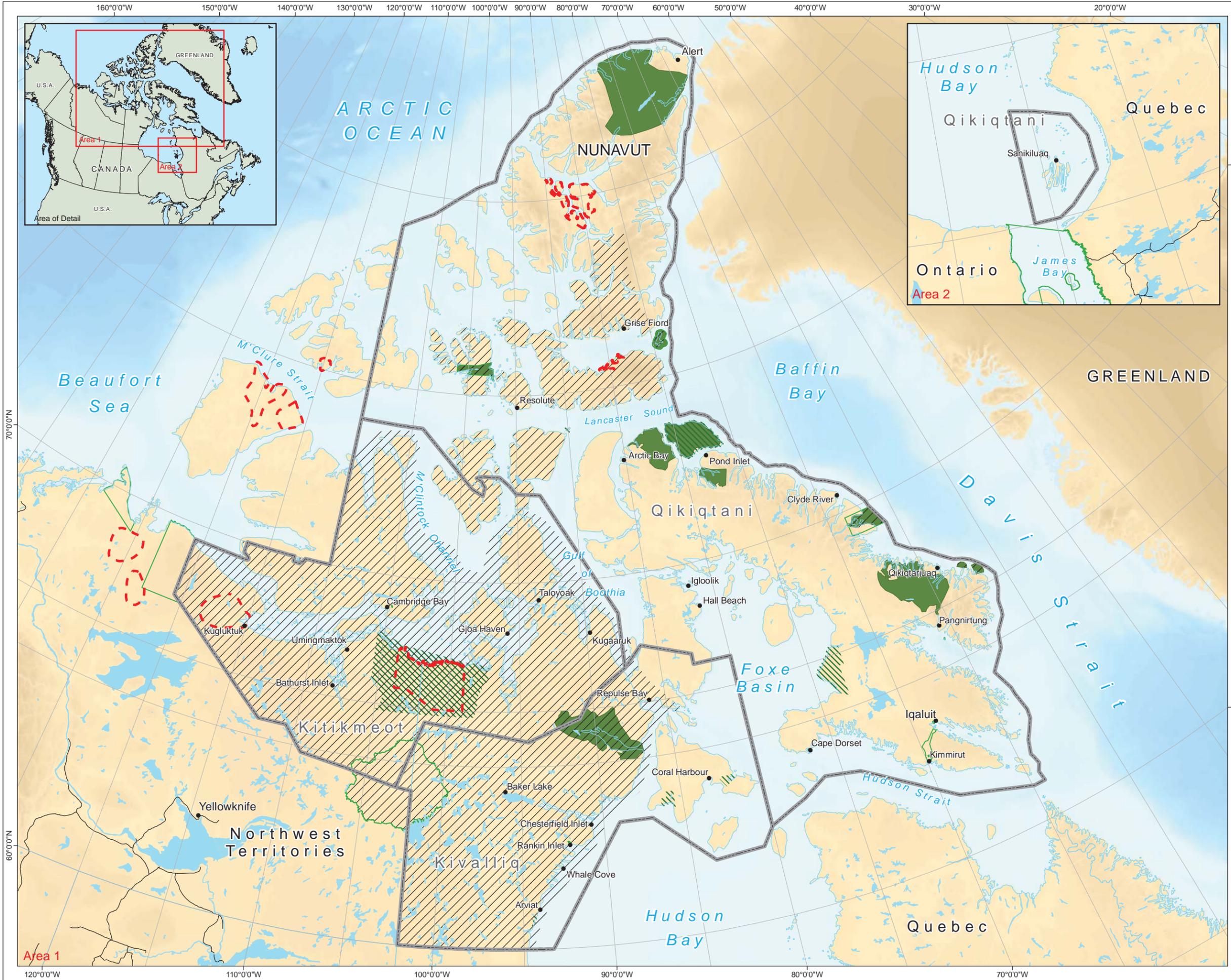
²Ferguson, S.H. 1995. Wildlife Areas of Special Interest to the Department of Renewable Resources. Wildlife Management Division, Department of Renewable Resources, Government of the Northwest Territories. Nunavut Wildlife Management Board version adapted from original 1987 publications. 80 pp. *digitized by Government of Nunavut 2005

³Latour, P.B., J. Leger, J.E. Hines, M.L. Mallory, D.L. Mulders, H.G. Gilchrist, P.A. Smith and D.L. Dickson. 2006. Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut. 3rd ed. Canadian Wildlife Service Occasional Paper No. 114.

⁴Mallory, M.L. and A.J. Fontaine. 2004. Key marine habitat sites for migratory birds in Nunavut and the Northwest Territories. Canadian Wildlife Service Occasional Papers 109. *digital data provided by CWS, reproduced with the permission of Environment Canada

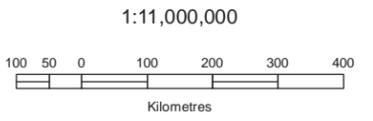


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Nunavut, Canada
Figure 1-4
Important Habitat for Muskox in Nunavut

- /// Muskox Management Area²
- - - WASI Site Muskox¹
- Base Features**
- Community
- Road
- Lake / River
- Conservation Area
- Nunavut Regional Boundary
- National Park
- Migratory Bird Sanctuary
- National Wildlife Area



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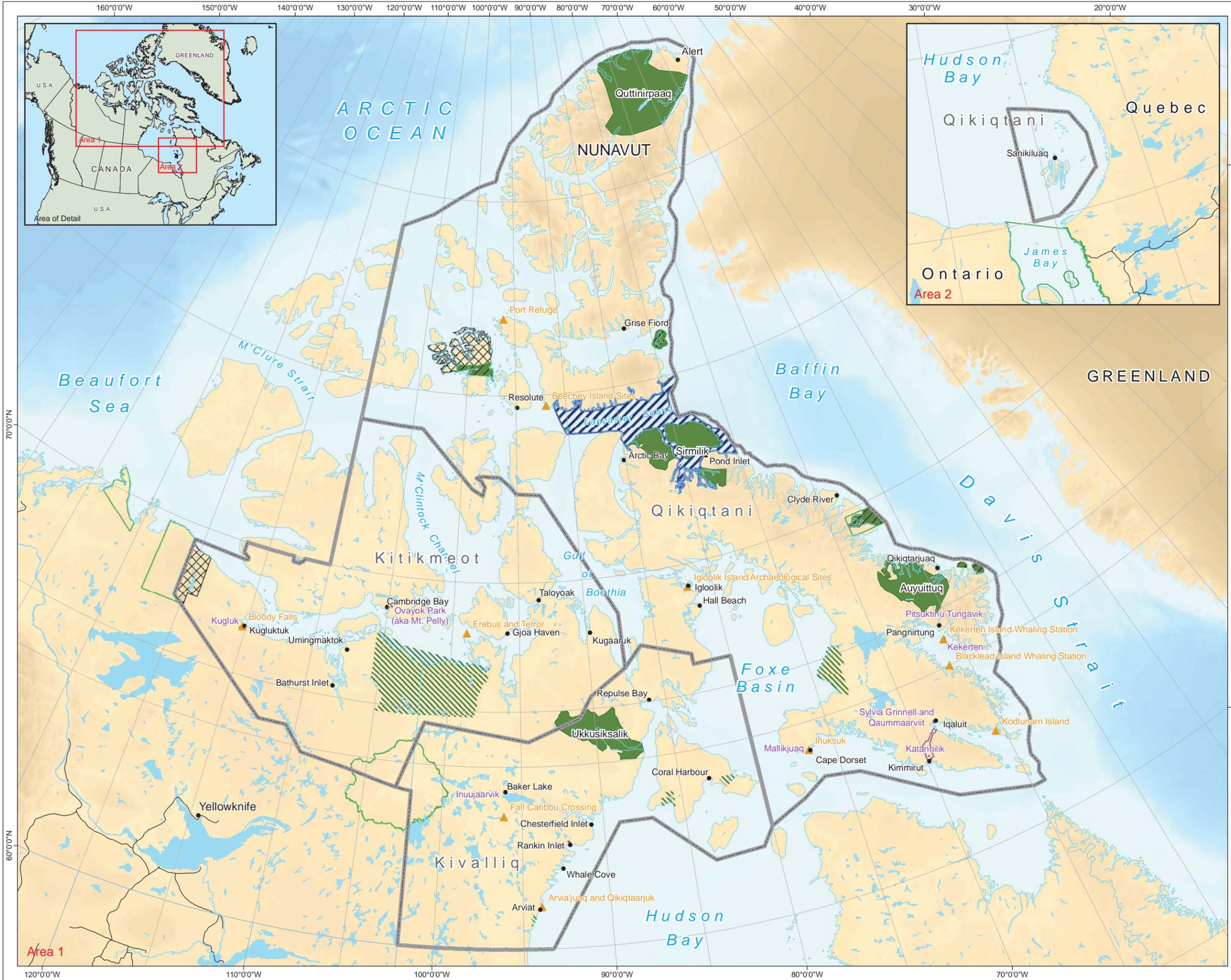
References:

¹Ferguson, S.H. 1995. Wildlife Areas of Special Interest to the Department of Renewable Resources. Wildlife Management Division, Department of Renewable Resources, Government of the Northwest Territories. Nunavut Wildlife Management Board version adapted from original 1987 publications. 80 pp.
 *digitized by Government of Nunavut 2005

²Government of Nunavut. 2003. In reference to the Consolidation of Wildlife Management Muskox Areas Regulations R.R.N.W.T. 1990, c. W-11, as duplicated for Nunavut by s. 29 of the Nunavut Act. Department of Environment.

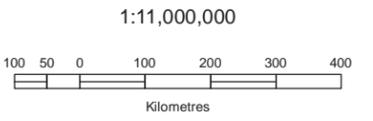


Data Sources: Geogratis Atlas, GNDnE, Parks Canada
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**Nunavut, Canada
Figure 1-5
Protected Areas and
Proposed Parks in Nunavut**

- ▲ National Historic Sites⁵
- Proposed Lancaster Sound National Marine Conservation Area¹
- Proposed National Park^{2,3}
- National Park⁴
- Territorial Park⁶
- Base Features**
- Community
- Road
- ▬ Lake / River
- ▭ Conservation Area
- ▭ Nunavut Regional Boundary
- ▭ Migratory Bird Sanctuary
- ▭ National Wildlife Area



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- References:
- ¹Shape provided by Parks Canada to Nunami Stantec. December 2010.
 - ²Bathurst Island Land Withdrawal. Map Depiction of Northern Bathurst Island National Park of Canada. Shape provided by Parks Canada to Nunami Stantec. July 2009.
 - ³Tuktut Nogait shape provided by Parks Canada to Nunami Stantec.
 - ⁴National Parks. Shapes extracted by Nunavut Planning Commission from data provided by Parks Canada. 2010.
 - ⁵Shapes Provided by Parks Canada to Nunavut Planning Commission
 - ⁶Shapes Provided by Government of Nunavut, Department of Environment to Nunavut Planning Commission.



Data Sources: Geogratis Atlas, GNDnE, Parks Canada
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