

Western Science Legend

	1		Beverly South Calving Area*
	2		Lorillard Calving Area*
	3		Qamanirjuaq Calving Area*
	4		Caribou Calving Grounds - BQCMB
	5		Proposed Protection Area Boundaries^

^Density values include survey data and telemetry data collected up to 2010.

IQ Legend

	Caribou Calving Area - IAND Interviews~
	Caribou Calving Area - IAND Biology~
	Caribou Calving Area>
	Caribou Calving Area<

Mine Site Legend

	Proposed Kiggavik Site
	Proposed Winter Road (Preferred)
	Proposed All-Season Road (Option)
	Meadowbank All-Season Road (Existing)

References

^Mychasiw,L. NWT Wildlife Service.1984. Five Year Review of the Beverly and Kaminuriak Caribou Protection Measures. File Report No.42

*Nagy, John A., Deborah L. Johnson, Nicholas C. Larter, Mitch W. Campbell, Andrew E. Derocher,Alicia Kelly, Mathieu Dumond,Danny Allaire, and Bruno Croft. 2011. Subpopulation structure of caribou (Rangifer tarandus L.) in arctic and subarctic Canada. Ecological Applications 21:2334–2348. <http://dx.doi.org/10.1890/10-1410.1>

^Campbell, M. W., J.G. Shaw, C.A. Blyth. 2012. Kivalliq Ecological Land Classification Map Atlas: A Wildlife Perspective.Government of Nunavut, Department of Environment. Technical Report Series # 1-2012. 274 pp.

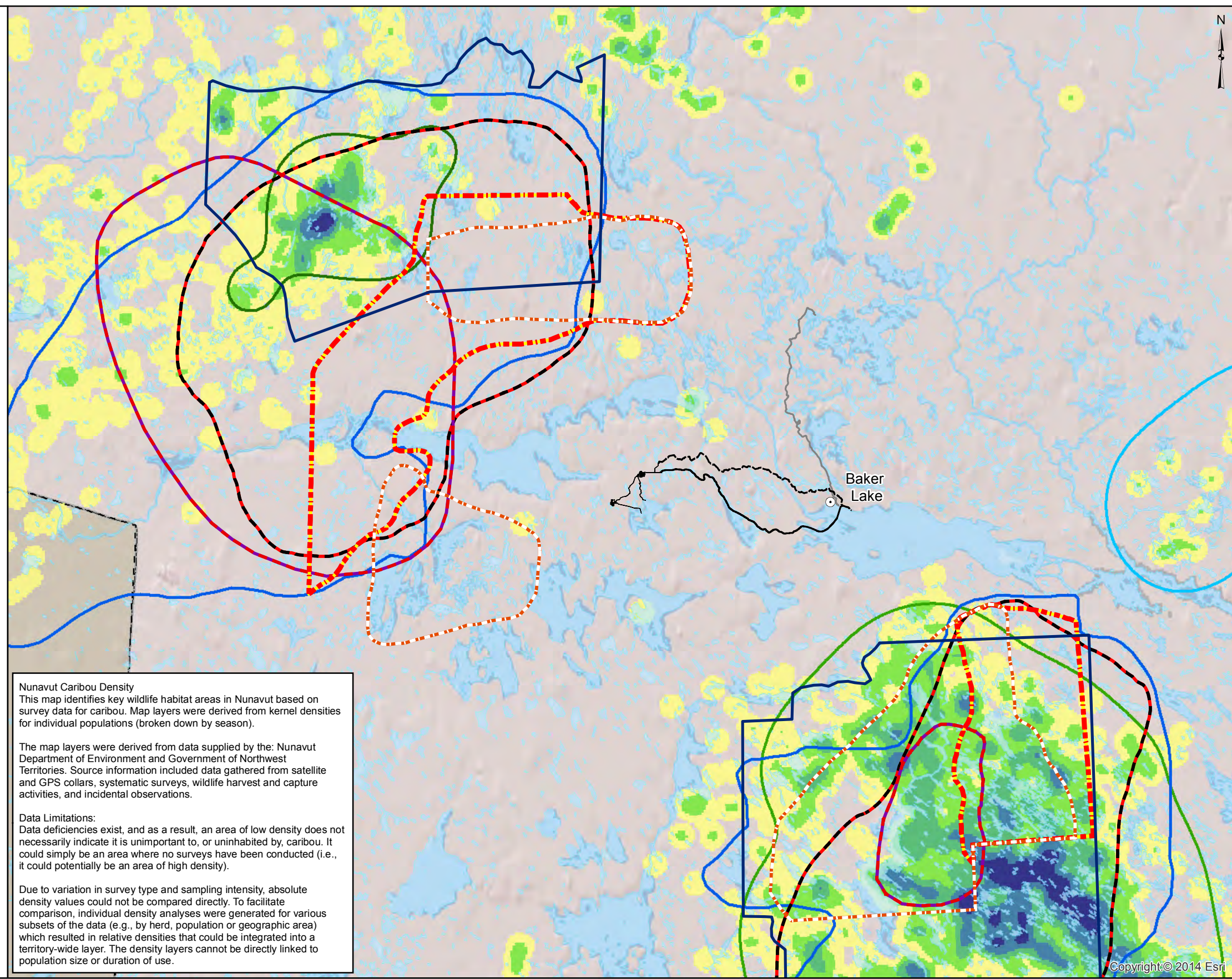
<Riewe, Rick (Editor). 1992. Nunavut Atlas. Canadian Circumpolar Institute and the Tungavik Federation of Nunavut.Edmonton,AB.Art design Printing Inc.

>AREVA 2014. Kiggavik Environmental Impact Statement. Tier 3, Technical Appendix 3B: IQ Documentation.

~Department of Indian Affairs and Northern Development. 1978. Effects of Exploration and Development in Baker Lake Area Volume 1-Study Report & Volume 2-Map Supplement. Prepared by Interdisciplinary Systems Ltd. Winnipeg, MB.

Data Sources:
Natural Resources Canada, Caslys Consulting Ltd.
Department of Environment (Government of Nunavut)

This map is not intended to be a complete representation of what is known



Nunavut Caribou Density
This map identifies key wildlife habitat areas in Nunavut based on survey data for caribou. Map layers were derived from kernel densities for individual populations (broken down by season).

The map layers were derived from data supplied by the: Nunavut Department of Environment and Government of Northwest Territories. Source information included data gathered from satellite and GPS collars, systematic surveys, wildlife harvest and capture activities, and incidental observations.

Data Limitations:
Data deficiencies exist, and as a result, an area of low density does not necessarily indicate it is unimportant to, or uninhabited by, caribou. It could simply be an area where no surveys have been conducted (i.e., it could potentially be an area of high density).

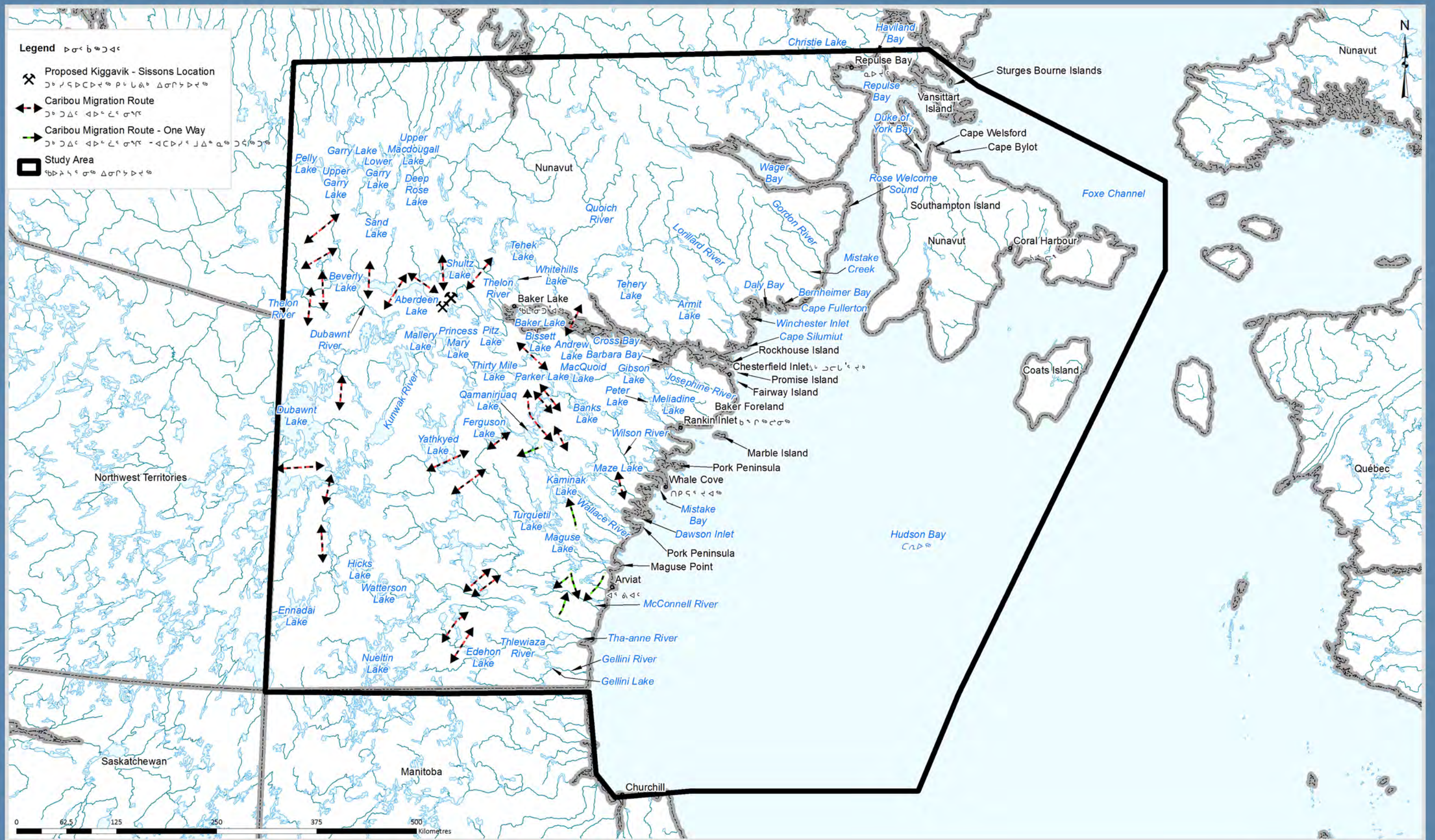
Due to variation in survey type and sampling intensity, absolute density values could not be compared directly. To facilitate comparison, individual density analyses were generated for various subsets of the data (e.g., by herd, population or geographic area) which resulted in relative densities that could be integrated into a territory-wide layer. The density layers cannot be directly linked to population size or duration of use.



4 Results for the Kivalliq Communities

4.1 Community Results

The following sections summarise the results of the literature review, interviews, Elder and hunter focus group discussions, and community review meetings. This report also incorporates information related to wildlife, plants, and resource harvesting activities identified during the Socio-Economic focus group discussions for each of the seven Kivalliq communities. Figure 4.1-1 shows caribou routes identified during a review of the Nunavut Atlas (Riewe 1992), as well as place names mentioned in the following sections. Information from the Nunavut Atlas was based upon community-based research in each of the Nunavut communities (Riewe 1992). Knowledge related to changes in weather patterns has been summarised and appears at the end of this section.



Projection: NAD 1983 UTM Zone 14N
 Creator: CDC/MK
 Date: 19/08/2011 Scale: 1:4,500,000
 File: K108A215
 Data Sources: Natural Resources Canada, Geobase*, National Topographic Database, AREVA Resources Canada Inc., Nunavut Atlas, Canadian Circumpolar Institute and Tungavik Federation of Nunavut

FIGURE 4.1-1
 CARIBOU ROUTES IDENTIFIED IN NUNAVUT ATLAS
 KIGGAVIK PROJECT - EIS

4.2 Baker Lake

The Baker Lake hunters and Elders described themselves as inland people, very few of whom harvest, or have an interest in marine mammals (IQ-BLH 2009; IQ-BLE 2009; IQ-BLHT 2011²²). Before moving into the settlement of Baker Lake, people were centred along the Thelon River, Kunwak River (south of Mallery Lake) and Kazan River systems and inland at Beverly Lake (Freeman 1976:92,108). Baker Lake Elders had lived in various camps on the tundra in the Baker Lake region and began to move into the community prior to 1960 (IQ-BL03 2008). Elders said that they moved to Baker Lake so their children could attend school, and one Elder described the difficulty of sending children to school while they were still living in an igloo around 1969 (IQ-BL03 2008). Some Elders added that the availability of social services was also an important consideration for moving to Baker Lake (IQ-BL13 2008), while others added that poverty, and the lack of food and wildlife were also important reasons (IQ-BL08 2008; BL13 2008). One of the Elders said his family was forced to move to the Baker Lake community by the RCMP (IQ-BL02 2008).

The following sections describe the various harvesting and other traditional activities of the Baker Lake Inuit, as well as culturally important areas identified during the literature review, interviews, focus group discussions, and community review meetings. For a discussion on Inuit use of the land refer to Technical Appendix 1 F. The assessment discussion on caribou and terrestrial environment can be found in Volume 6 while socio-ecological context is discussed in Volume 9. Details from the 2008 interviews, the 2009 focus group discussions, the 2011 community review meetings and the 2014 meetings with the Baker Lake and Chesterfield Inlet HTOs are available in Attachment B of Appendix 3B IQ Documentation.

4.2.1 Wildlife and Harvesting

Figure 4.2-1 shows caribou information gathered during interviews and focus group discussions held in Baker Lake. Figure 4.2-2 shows other wildlife habitat information while Figure 4.2-3 shows identified hunting and caching areas gathered from interviews, focus group discussions and meetings.

Most Elders participating in the Project interviews said that in the past, caribou and fish were their major food source (IQ-BLE 2009). One Elder explained that fox and Arctic hare were eaten when caribou were scarce (IQ-BL01 2008), and another said that their diet was fish only, as caribou were scarce after moving to Baker Lake (IQ-BL06 2008). Another Elder explained that caribou and

²² IQ-BLHT 2011: *Hunters emphasized that most people in Baker Lake still depend on caribou for food*

ptarmigan were their main food source, as they did not have fishing rods to catch fish in the summer (IQ-BL08 2008). Hunters emphasized that most people in Baker Lake still depend on caribou for food (IQ- BLH 2009; BLHT 2011), and that it is a major food staple for many families (IQ-BLH 2009²³IQ-BLHTO 2014²⁴).

The hunters who were interviewed in the 2011 community review meeting explained that some hunters need to go out every week in order to catch caribou to feed their families (IQ-BLHT 2011²⁵). During the 2014 HTO meeting, members explained that they hunt all the land and that they don't have specific routes that they follow (IQ-BLHTO April 2014²⁶, IQ-BLHTO April 2014²⁷)*According to traditional caribou hunting practices, the first group of the migrating herd must be allowed to pass through an area undisturbed, and after a few days the hunting can commence* (IQ-BLHT 2011). Pregnant cows are not typically hunted, and calves are only hunted when Elders make a request for softer meat (IQ-BLHT 2011²⁸²⁹; IQ-BLE 2011³⁰). The Elders have noticed that the caribou and other animals like to go where there is shelter, and they usually try to stay in areas where there are big lakes (BLE 2011).

According to one participant from the community review in 2011, there is a spring migration of caribou that crosses the Thelon River (IQ-BLHT 2011). Another hunter said that in July and August caribou from the Beverly herd are hunted by Quoiich River (IQ-BLHT 2011). It was noted that in August and September, caribou travel to the Baker Lake area from the south-east and south-west, but they do not migrate down from the north at this time (IQ-BLHT 2011). It was reported that in December, caribou from the Kamaniriak herd are hunted south of Baker Lake (IQ-BLHT 2011).

Areas used for hunting, trapping, and other resources are dependent on the movements of the caribou. A comparison between areas used by residents of Baker Lake in the past, and areas

²³ IQ-BLH 2009: *Because most of the people depend on caribou as a food source, they believe it is important to protect the whole environment, including migration routes, bird nesting area, and marine mammals.*

²⁴ IQ-BL HTO April 2014: *Caribou is our priority. We are not entirely agreeing with opening the mine. There are a lot of activities such as tourism. We are concerned with the impact on our food supply.*

²⁵ IQ-BLHT 2011: *caribou meat doesn't last long, especially if you have a family. A biologist took all the meat from a number of caribou and on average 50lbs of edible meat per caribou. So some people need to go out every week.*

²⁶ IQ-BL HTO April 2014: *As a hunter and fisherman all my life, I hunt all the land and it's hard for me to tell you and document the routes I take. I just pack up and go hunt and fish.*

²⁷ IQ-BL HTO April 2014: *You asked where we hunt. We hunt everywhere. We hunt where the caribou go. Caribou is our priority.*

²⁸ IQ-BLHT 2011: *Some elders like the tender meat from calves. A hunter may take a calf in an Elder requests.*

²⁹ IQ-BLHT 2011: *the way some of us were raised, we don't unless you are starving. We do hunt by season: August-November before the rut we hunt bulls. After the rut, we hunt barren (non-pregnant) cows. If you have been hunting your whole life, you can tell when a caribou is pregnant .*

³⁰ IQ-BLE 2011: *If hunted, calves are taken in September as they are more tender at this time of year*

currently used is difficult as variations in caribou migration routes have occurred over the years. For example, one of the people interviewed *believes that caribou naturally change their migration patterns every few years* (IQ-BL01 2009), and an Elder explained that *while herds used to start migrating towards the southeast and cross at Annigguq Lake and the mouth of Kazan River, they now start to migrate from the southeast towards the northwest* (IQ-BL05 2008). Another Elder simply stated that *the herds do not take the same routes anymore* (IQ-BL02 2008).

The hunters from the community review in 2011 also noted that it is normal for caribou migration routes to vary from year to year, and mentioned that in 2011 Baker Lake hunters did not observe as many caribou around Baker Lake as in previous years (IQ-BLHT 2011³¹). The interview participants felt that exploration activities, airplanes, and transport trucks may be disturbing the caribou migration (IQ-BLHT 2011³²). Specifically, the HTO representatives perceive that the Rankin Mine and the Meadowbank Mine have caused negative impacts to the caribou in the past and are concerned that a similar process will take place at Kiggavik (IQ-BLHT 2011³³, also see Section 3.1.6). This perception was again expressed during the 2014 meeting with the HTO in regards to a discussion on calving grounds. One member said *“We don’t see Beverly traditional calving because caribou have moved on; calving elsewhere now. Something impacted them to move. Thelon Basin, Shultz, Aberdeen area, heavy mining mineral exploration; this is why caribou moved”*. (IQ-BLHTO April 2014) Another member said *he looked for the Beverly herd and one year found it far away due to industry drilling (or some type of activity)* (IQ-BLHTO April 2014). The participants reported *that in October and November (2011) the caribou were observed passing through the area around Baker Lake, but very few have been seen since* (IQ-BLHT 2011). The participants were hopeful that *the caribou would return with the spring migration, but said that only time would tell* (IQ-BLHT 2011).

³¹ IQ-BLHT: *Not many caribou have come through Baker Lake this year (2010/11). There were very few caribou in the summer months.*

³² IQ-BLHT: *This year people are not finding many caribou. Exploration activities, transport trucks may be disrupting caribou migration. In Oct/Nov caribou passed right through and since then there have been very few caribou. Maybe they will come back during spring migration but time will tell.*

³³ IQ-BLHT: *Meadowbank was once an area where caribou would migrate to and thru, however there are no caribou there this year (2010/11).*

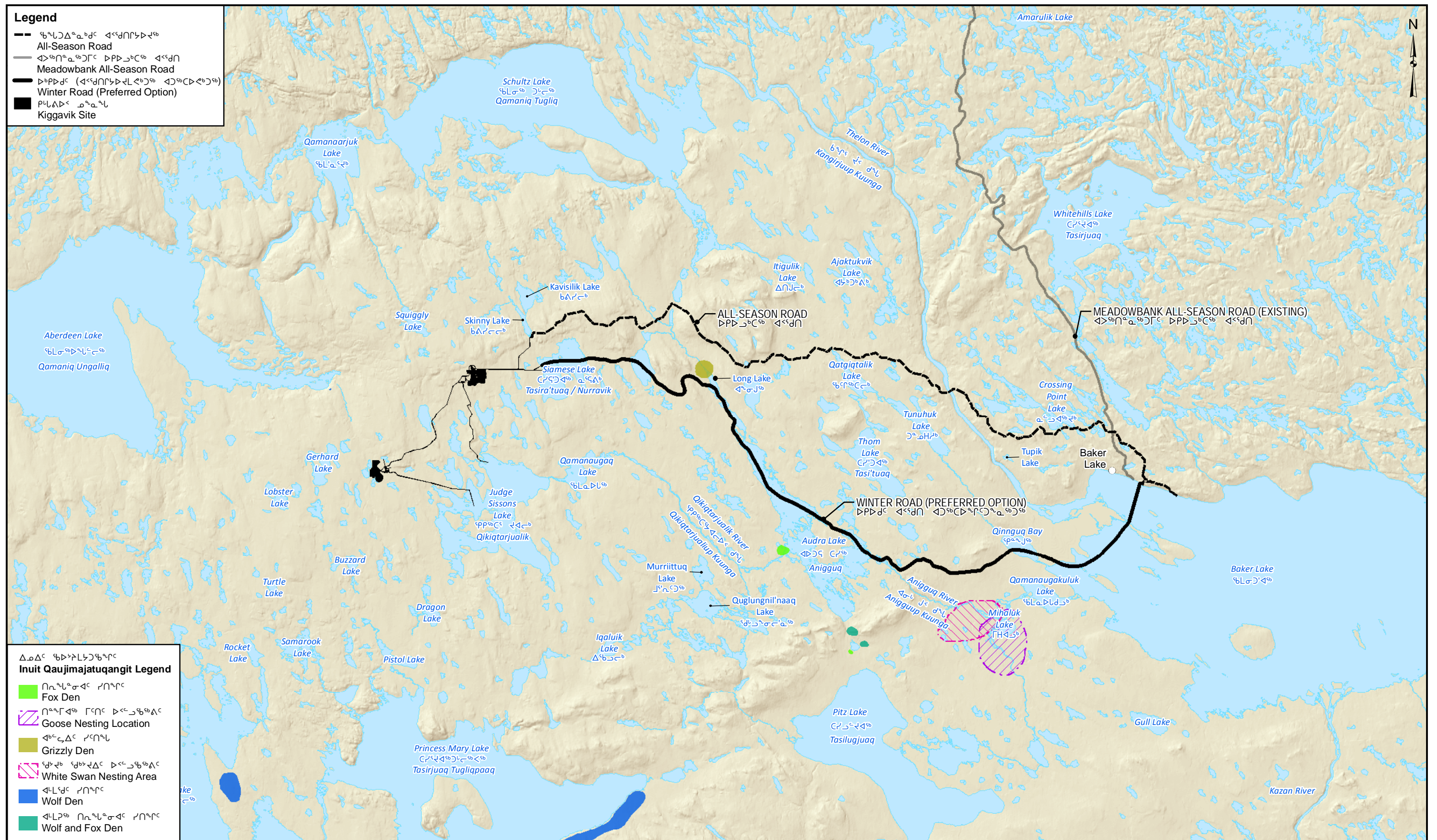


FIGURE 4.2-2
IDENTIFIED WILDLIFE HABITAT AREAS FROM IQ

ENVIRONMENTAL IMPACT STATEMENT
VOLUME 3 - PART 2

Projection: NAD 1983 UTM Zone 14N
Compiled: TL
Date: 04/08/2014 Scale: 1:450,000
Data Sources: *Natural Resources Canada, Geobase®, Nation
Topographic Database, Baker Lake Elders, AREVA
Resources Canada Inc.*

File: Q:\SHEQ\GIS\KIGGAVIK\2014\EIS\Volume 3 - Public Engagement and IQ\Volume 3 - Tier 2\IQ - Part 2\Maps\MXD\Figure 4.2-2 IDENTIFIED WILDLIFE HABITAT AREAS FROM IQ.mxd

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