

4.3 Views and Values

4.3.1 Value and Harvest of Caribou

Caribou is the most important species to the Kivalliq communities, with hunting area spanning through the region. *Hunters emphasize that most people in Baker Lake still depend on caribou for food* (IQ-BLH 2009; IQ-BLHT 2011). As identified through collar data and local IQ, caribou harvested by Baker Lake residents are harvested from the Qamanirjuaq, Beverly, Ahiak, Wager Bay, and the Lorillard herds (FEIS, Tier 3, Volume 6, Terrestrial Environment, Appendix 6C Wildlife Baseline). The current estimated caribou harvest by Baker Lake residents range from 2,000 to 6,000 caribou (FEIS, Tier 3, Volume 6, Terrestrial Environment, Appendix 6C, Section 5.1.5).

Caribou harvest surrounding the Baker Lake area is conducted primarily during the summer months and early to late winter (FEIS Tier 2, Volume 6, Wildlife Baseline). *Bulls are hunted before the rut (August to November), and non-pregnant cows are hunted after the rut* (IQ-BLHT 2011; IQ-BLE 2011; IQ-RBJ 2011; IQ-AVRJ 2011). Caribou meat caching is now more common in the fall, because the summer lasts much longer and the cache ages too much. Occasionally, caribou winter southwest of Baker Lake near Princess Mary Lake where they are hunted from fall through to spring (FEIS Tier 2, Volume 6, Terrestrial Environment). *Today, the old migration routes are not followed, and they will be hunted wherever they are* (IQ-BLHT 2011). Caribou harvest rates are highest within a 20 km radius near and east of Baker Lake (IQ-Riewe 1992⁷), with harvest extending west up to the Thelon River (IQ-BLH 2009⁸). Beyond this area, the harvest declines sharply. Caribou hunting typically extends from Aberdeen Lake into Schultz Lake and north of Baker Lake near the Meadowbank access road.

⁷ IQ-Riewe 1992: *In the past, when caribou wintered in the Whitehills Lake and Tehek Lake areas, hunting and trapping was done from fall through spring near Whitehills Lake and around the northeast shore of Baker Lake in summer and fall.*

⁸ IQ-BLH 2009: *Baker Lake hunters said they don't go as far as they used to for caribou. While they used to travel large distances to harvest caribou, they now hunt close the community adding that they didn't need to go further than 40 miles, as caribou were "just there".*

4.3.2 Value and Harvest of Muskox

During the mid-1900s, the territorial government was concerned about muskox population decline and banned all muskox harvest. Elders and younger hunters in Baker Lake indicated that this restriction has influenced their current hunting patterns. Muskox harvest is currently managed by the GN through hunting quotas with tags issued by the NWMB (FEIS, Tier 2, Volume 6, Terrestrial Environment). During the NWMB harvest study, the annual muskox quota for Baker Lake was 19 animals, however only eight tags per year were used because hunters must travel further to harvest muskox (NWMB 2004). Muskoxen have recently returned to the near-historic levels from the early 1900s (FEIS, Tier 2, Volume 6, Appendix 6C Wildlife Baseline).

IQ and hunter harvest information support the conclusion that muskox is not a preferred meat source. Inuit generally do not harvest muskox because *the skin is not as good as caribou skin, the hair is of no use, and the meat is not eaten* (IQ-CI03 2009). Although little IQ has been gathered on muskox, it was noted that the areas west of Mallery Lake to the southwest of Aberdeen Lake were used for hunting muskox. *There was an important muskox hunting area southeast of Baker Lake near Gibson Lake* (IQ-Riewe 1992⁹). Occasionally, coastal communities would travel to Baker Lake to hunt muskox, but more recently, they have noticed herds closer to their communities. *Within the last four years, muskoxen have moved eastward from Pitz Lake, along the south side of Baker Lake, and are now in the Barbour Bay area of Chesterfield Inlet* (IQ-CI03 2009; IQ-CI06 2009). *Muskox used to be hunted west of Baker Lake, but are now hunted just inland from Chesterfield Inlet; and mostly by sport hunters* (IQ-CI01 2009).

4.3.3 Value and Harvest Areas for Fishing and Berry Picking

Historical fishing areas were common near Schultz and Aberdeen lakes in proximity to hunting areas and traditional camping locations. *One Elder noted that their diet was fish only, as caribou were scarce after moving to Baker Lake* (IQ-BL06 2008). During IQ interviews, fishing areas were identified near Huqliq Island, the mouths of the Prince River and Kazan River and the following lakes:

- Audra Lake
- Baker Lake
- Bissett Lake
- Caribou Lake
- Judge Sissons Lake
- Parker Lake

⁹ IQ-Riewe 1992: *The lands situated west and north of Gibson Lake were an important muskox hunting area for residents of Baker Lake.*

- Qamanaajuk Lake
- Quglungnil'naaq Lake
- Siamese Lake
- Sleek Lake
- Tehek Lake
- Whitehills Lake

As noted by Riewe (1992), “In the past, it was common for resident of Baker Lake to travel north to Whitehills Lake in the spring and summer to fishing camps. The area along the north shore of Baker Lake was heavily used all year for fishing, and local resident often occupied weekend and seasonal camps. Even though the south shore of Baker Lake was not easily accessible, fishing camps were still common. South of Baker Lake, around the Qamanirjuaq and Ferguson lakes, fishing was an important source of food for hunters and trappers during the winter, with intense fishing taking place in early spring and late fall.”

Though Baker Lake residents travel up the Thelon for fishing opportunities, fishing is most common south of the mouth of the Thelon River (EN-BL OH Nov 2010¹⁰). The Haqliq Island area was noted as an important fishing area for residents (IQ-BL06 2008; IQ-BL17 2008). Fishing areas throughout Audra Lake coincide with nearby camping areas. The residents of Baker Lake primarily harvest lake trout, white fish, arctic char, and arctic grayling (NWMB 2004).

Berries and plants were collected historically for bedding, insulation, fire starter, food and medicine, and they are still used today for both food and teas (IQ-Bennett and Rowley 2004; IQ-Mannik 1998¹¹). Although traditional cures are not used as much as in the past, the Inuit commonly gather cowberries, blueberries, cloudberry, ‘black’ berries and ‘red berries for food. Based on surveys conducted in Baker Lake, 40% of households collect plants, and almost 7% of households indicated that they had purchased wild berries in the past year (FEIS, Tier 3, Volume 8, Appendix 8A Ecological and Human Health Risk Assessment).

4.3.4 Value and Harvest of Waterfowl, Birds and Eggs

Migratory birds such as the lapland longspur and long-tailed duck are commonly in upland habitats and are observed foraging in near wetlands. These species are readily recognized by local land

¹⁰ EN-BL OH Nov 2010: *Fishing west end of Schultz Lake and further north*

¹¹ Mannik 1998: *People started using dried ground plants and leaves such as those from the cloudberry bush, after the introduction of tea by Europeans.*

users (FEIS, Tier 2, Volume 6, Wildlife Baseline). One Elder noted that there were not as many waterfowl around Baker Lake as there were in recent times (Mannik 1998).

The residents of Baker Lake most commonly harvest ptarmigan and geese for their meat, as well as the eggs from geese and seagulls (NWMB 2004). *Hunting birds continues to be important, as it contributes variety to diets* (IQ-RBHT 2009). During IQ interviews, swan and goose nesting areas were identified along Annigguq River, Mihaluk Lake, and the south shore of Baker Lake. Residents of Baker Lake will travel up the Thelon River to pick goose eggs. *Eggs are also gathered on Huqliq Island* (EN-BL CLC Feb 2008). *Harvesting ducks, geese, and eggs was occasionally done north of the Dubawnt River and Dubawnt delta* (IQ-Riewe 1992). Goose nesting areas were also identified south west of Baker Lake to the southeast of Audra Lake. *The mouth of the Kazan River, on the southern shore of Baker Lake is a goose harvesting area* (IQ-Riewe 1992). *Between Baker Lake and Beverly Lake (to the northwest of Baker Lake) many areas were used for goose hunting, duck hunting, and egg collection during the spring* (IQ-Freeman 1976). Traditionally, the Baker Lake annual harvest of geese and ptarmigan was approximately 400 and 2,800 (FEIS Tier 3, Volume 6, Appendix 6C Wildlife Baseline). Ptarmigan were harvested historically by residents of Baker Lake and are currently harvested; , household surveys indicate that ptarmigan account for 8% of their winter diet (FEIS, Tier 2, Volume 6, Wildlife Baseline).

4.3.5 Value and Harvest of Fur Bearers

4.3.5.1 Wolverine

Wolverine are widely dispersed across the landscape and are solitary animals. They are a profitable fur-bearing species, with approximately 12 trapped each year in Baker Lake (NWMB 2004). Although coastal hunters travel toward Baker Lake to harvest wolverine, it was noted during IQ interviews that they are infrequently observed around Baker Lake (FEIS Tier 3, Volume 6, Appendix 6C Wildlife Baseline). Elders indicated that wolverine hunting is best in the summer. The maintenance of the wolverine population is of importance to Baker Lake hunters and trappers.

4.3.5.2 Grizzly bear

Although the population of grizzly bears in the Kivalliq region is generally unknown, the populations northwest of the Kivalliq region are thought to be stable or increasing, and IQ suggests that grizzly bear population ranges have gradually moved eastward. During IQ interviews, it was noted that grizzly bears have been observed near Qikiqqtarjuaik (Sissons) Lake, near Schultz Lake, and north

of Baker Lake (FEIS Tier 3, Volume 6, Appendix 6C Wildlife Baseline). One Elder noted that they first observed a grizzly bear when they were a child near Princess Mary Lake. Hunters noted that grizzly bear were occasionally observed during the 1940s and 1950s; however, they are now seen every summer, which causes hunter concern for meat caches being raided (IQ-BLHT 2011; IQ-Cumberland 2005¹²). Meat caches are less common due to the grizzly and wolverine taking the meat. Baker Lake residents noted that the number of grizzly bear taken in the hunt has increased. Residents often hunt grizzly bear for food and the pelt. The annual quota for tundra grizzly is five animals, and the community typically harvests three bears per year (NWMB 2004).

4.3.5.3 Arctic Fox

The arctic fox is an important fur-bearing species for local hunters and trappers. Although the fox is not considered a food source, local Elders mentioned that they were eaten when caribou were scarce. Trapping of arctic fox has declined since the 1970s, possibly due to lower pelt prices or a smaller fox population in the Baker Lake area (FEIS, Tier 3, Volume 6, Appendix 6C Wildlife Baseline). During the NWMB study, the annual harvest was estimated at 122 animals; however, more pelts were purchased from hunters than were reported (NWMB 2004).

4.3.5.4 Arctic Wolf

Wolves typically travel in packs of two to three animals, and seldom interact with humans. Wolves are present throughout the Kivalliq due to caribou presence. Throughout the Thelon River area, caribou are the most common prey species for the wolf. Baker Lake Elders indicated that wolves are not frequently observed in the area, but coastal hunters will travel inland to Baker Lake to find wolves (FEIS, Tier 3, Volume 6, Appendix 6C Wildlife Baseline). Wolf hunting was conducted southeast of Baker Lake near Gibson Lake (IQ-Riewe 1992¹³), and the Elders noted that wolves are hunted in the Aberdeen and Schultz Lake areas during the winter (IQ-BLE 2011).

The arctic wolf is an important fur-bearing species that can be sold at a high price. The average harvest of wolves for Baker Lake is 91 animals annually; however, the estimate should be closer to 150 animals per year (NWMB 2004). *Hunters will travel the same route along the proposed Kiggavik winter road to go hunting, and will go wolf hunting in the Siamese and Skinny Lake areas* (EN-BL OH Nov 2013). The household survey conducted by AREVA estimated a larger number of wolves

¹² IQ-Cumberland 2005: *Baker Lake Elders have commented on thinning ice; decreased snowfall; longer summers; shorter winters; spring break-ups are earlier; the abundance and diversity of flora has increased; increased unpredictability and variability of the weather; shifting caribou migrations; and caribou, grizzly, and polar bear range and habitat changes.*

¹³ IQ-Riewe 1992: *Trapping and wolf hunting was conducted in the area northwest of Rankin Inlet extending to Gibson Lake.*

harvested by Baker Lake residents, with 211 animals taken from 2009 to 2010. Residents indicated that the wolf harvest in the Meadowbank area has increased in recent years (FEIS, Tier 3, Volume 6, Appendix 6C Wildlife Baseline).

4.3.6 Travel Routes and Camping Areas

The Judge Sissons Lake area was occasionally used as a travel route westward toward Aberdeen Lake. The Inuit travelled predominantly by canoe during the summer and by dog team in the winter.

Cabins are often located along frequently travelled pathways, and hunters travel along these known routes for added safety. The people of Baker Lake often hunt from home or nearby cabins as their family, health, employment, and costs are all considerations. Coastal communities such as Chesterfield Inlet occasionally travel to Baker Lake for hunting opportunities (FEIS, Tier 3, Volume 6, Terrestrial Environment, Appendix 6C Wildlife Baseline). *In the fall, people from Chesterfield Inlet moved back from the shores to hunt caribou further inland* (IQ-Freeman 1976). The lakes within the Baker Lake area, Christopher Island on the east end of Baker Lake, and the area surrounding the Kazan Falls south of Baker Lake are preferred hunting areas for the Baker Lake Inuit. During interviews with the Inuit of Baker Lake, it was noted that the range of their snowmobiles generally dictate the boundaries of their hunting, fishing, and trapping areas, and the younger generations travel further distances to hunt (IQ-BLHT 2011¹⁴). Travel routes and camping areas are closely related to the fishing areas and migration pathways.

4.4 Baker Lake – Relative Importance

Information on Inuit land use was compiled by AREVA to develop maps of the relative importance of the Baker Lake local area, using the methodology described in Section 2. Two different relative importance maps were developed:

- Land use based only on IQ interviews with all aspects weighted equally (Figure 4.4-1)
- Land use based on IQ interviews with the caribou layer expanded to be the outer boundary of caribou harvest areas identified in AREVA IQ interviews, the Baker Lake Harvest Study, and NWMB Harvest Study (see Figure 4.5-1). All aspects are weighted equally. (Figure 4.4-2)

¹⁴ IQ-BLHT 2011: *Hunting occurs in a 50 mile radius around Baker. Sometimes you travel until you find caribou, but you are limited by fuel.*

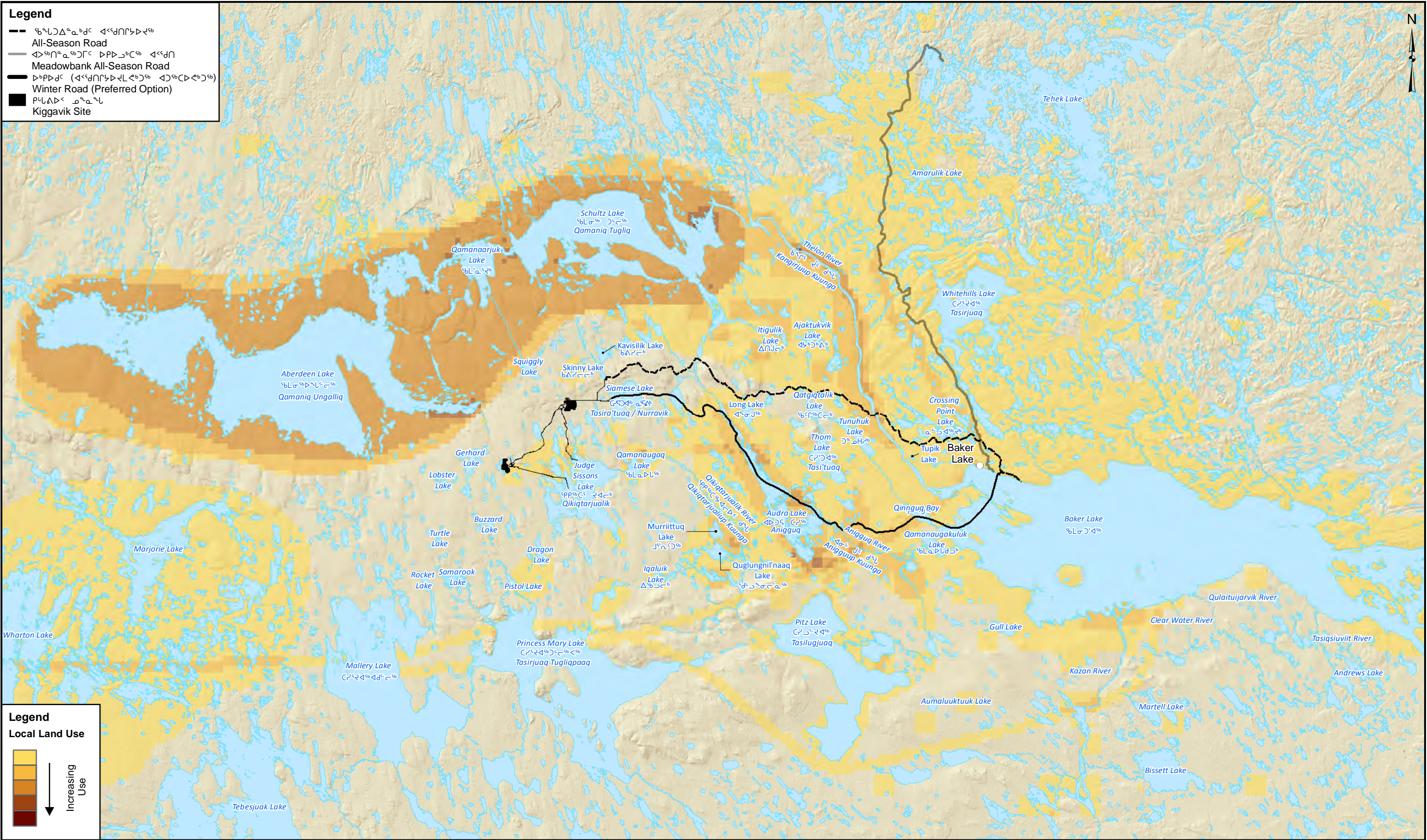
The two maps of relative importance are shown in Figure 4.4-1 and 4.4-2. Both show similar intensities of land use.

Inuit primarily harvest around the lakes and river systems of the Baker Lake region, which include cultural and spiritual sites located near traditional hunting and camping locations which are largely associated with the caribou migration routes. These migrations routes were also identified as wolf and caribou hunting areas during IQ interviews. As identified through archaeological surveys, Homeland Visits, and IQ interviews, Inuit have traditionally congregated throughout the lakes of the Thelon River watershed extending from Beverly Lake, to Aberdeen Lake, and Schultz Lake into the Thelon River. They historically and currently use small lakes for camping areas and travel routes. Meat caches were located near harvest areas for use in the winter near Qamanaarjuk Lake, Schultz Lake, and Audra Lake. Land use activities are common near the Kazan and Thelon Rivers which are valued travel routes.

Harvest patterns around Baker Lake have changed throughout time with the relocation to Baker Lake and with improved accessibility from the Meadowbank access road. Although some hunters continue to hunt in their traditional hunting grounds, a number prefer easier access near their home in Baker Lake, near cabins and along established travel paths. As indicated during the hunter harvest study, less than 1% of the harvest remains in the Kiggavik area west of the Thelon River. Currently a number of Baker Lake residents travel regularly along the eastern bank of the Thelon River and near the Meadowbank access road for easier harvest access around Whitehills Lake. They also travel to Audra Lake and Long Lake for seasonal harvest activities, and regularly fish in Baker Lake, primarily near Haqliq Island and south of the outlet of the Thelon River. Harvest activities are also common on the southern shore of Baker Lake near the outlet of the Kazan River.

Based on the relative importance maps for Inuit land use, both IQ and other information suggest that the proposed Kiggavik mine site is in an area less intensively used than the areas east and north of the proposed Project site. The greatest intensity of land uses occurs to the north and east of the proposed Kiggavik mine site. The highest intensity of land use is along the Qamanaarjuk (Aberdeen and Shultz) Lake. Anigguq (Audra) Lake and Tasirjuaq (Whitehills) Lake also support a number of different land uses, as does the corridor along the Thelon River between Baker Lake and Qamanaarjuk Lake.

The proposed winter access road does cross through the Anigguq Lake which supports a moderate to high intensity of Inuit land uses. In contrast, the optional all-season access road tends to border and occasionally cross areas with low intensities of Inuit use.



4.4.1 Relative Importance or Harvest Density Comparison

Relative importance areas and harvest densities for the Kiggavik area have been generated by three sources, 1-AREVA collected IQ-land use and values (Tier 2 Volume 3), 2-Kivalliq Inuit Association, and 3- The Inuit Land Use and Occupancy Project (Riewe 1992). Although not identical, all three figures of harvest density are similar, validating areas of relative importance near the Kiggavik site.

5 Local Context - Coastal and Chesterfield Inlet

5.1 Historical Resource and Land Use and Cultural Sites

5.1.1 Pre 1950's

Inuit ancestors, the Thule, were largely nomadic as they spanned the Nunavut landscape throughout the seasons, but they congregated along the coastlines during the spring and summer to harvest the diverse marine species. Prior to 1954, Inuit wintered on the ice to hunt seals and moved to the shores during the spring and summer months to fish and hunt marine mammals. During the winter, they lived mainly on meat that had been cached in the fall. They would travel inland to hunt caribou during the summer months when the hides were thin (IQ-RBE 2009; IQ-RBHT 2009). A complete discussion of the cultural setting starting at 8,000 Before Present (BP) is provided in Tier 3 Technical Appendix 9B.

5.1.1 1950 to Recent

The community of Chesterfield Inlet served as a primary travel route between Baker Lake and Hudson Bay. Following break-up, the people from Chesterfield Inlet travel one to three miles along the shoreline towards the islands in both directions. If necessary, the Inuit travel up the inlet to Cross Bay to find caribou (IQ-CIHT 2011). There are various important harbours, one of which is Robert's Harbour. These harbours are important not only because they are good current hunt locations but also the added importance of historical use by ancestors (FEIS Tier 3, Volume 3, Appendix 3B, Inuit Qaujimajatuqangit Documentation Section 2.10.2).

Cultural sites include camps along the coast and the Inlet to the east end of Baker Lake (FEIS Tier 2, Volume 3, Section 4.3.9). Inuit ancestors used stone weirs to catch fish, which were accessible as they travelled the coast and the Inlet (IQ-CI07 2009¹⁵). *Should the inland caribou hunt be unsuccessful, the stone weirs were beneficial for the Inuit to ensure they would have food to take back to their community. In the past, camps were located along the coast and primarily occupied in fall, spring, and summer. Some camps along the coast were used during winter for polar bear and caribou hunting* (IQ-Riewe 1992)(Figure 5.1-1). *Baker Lake and Arviat Elders traditionally hunted*

¹⁵ IQ-CI07 2009: *The stone weirs that people used at Barbour Bay, Steepbank Bay and Saqvaquaq Lake are still visible.*

along Chesterfield Inlet and further south, but the areas north of Chesterfield Inlet were less intensely used (IQ-Kendrick and Manseau 2008).

Since the 1950s, inland people have settled along the coast where they have learned to hunt marine mammals from the coastal people. *One Elder recounted movement into Chesterfield Inlet in 1949 due to starvation on the land, and there were no caribou in Chesterfield at the time (IQ-CI06 2009).* Elders indicate that, even after settlement, the Inuit would travel great distances inland to hunt and fish for many months. Some recount that great travel distances were common until children attended the first residential school in Chesterfield Inlet when people ventured out on the land less. Hunters say they generally do not travel as far as in the past (FEIS, Tier 3, Volume 9, Appendix 9A Socio-economic Baseline).

5.2 Contemporary Land Use

Marine resource use is an important feature of Inuit culture across the six Kivalliq coastal communities that span the shores of Hudson Bay. People communicated a preference to hunt near their home because of family ties, comfort, health and safety, employment and transport costs (Tier 3, Volume 9, Technical Appendix 9A Socio-economic Baseline). However, longer trips still occur, including the occasional trip to Walrus Island near Southampton Island (Tier 2, Volume 3, Section 4.3). Marine mammals are harvested across a broad area (Figure 5.2-2). During the summer, Inuit travel 12 to 20 miles by boat to hunt marine mammals near town and in the Chesterfield Inlet channel (IQ-CIHT 2011; EN-CI OH Nov 2013). *Inuit travel to the floe edge in the winter and by boat wherever the breakup extends (IQ-WCCR 2011¹⁶).*

Inuit regularly fish and hunt marine mammals on both sides of the Inlet and along the north and south shores extending from Chesterfield Inlet. *Gill nets are now used instead of the traditional stone weirs, but weirs were important as they represent activities of Inuit ancestors (IQ-CIE 2009).* *While residents of Baker Lake rarely hunt marine mammals, a few hunters said they travel down Chesterfield Inlet to hunt marine mammals (IQ-BLH 2009).*

¹⁶ IQ-WCCR 2011: *People travel everywhere along the floe edge in winter. After breakup starts, people travel wherever the last breakup is. The inlets are the last for break-up. We often travel to inlets and points and go to Marble Island for walrus.*