Location: 67°00'N, 130°10'W

Size: 992 km^2

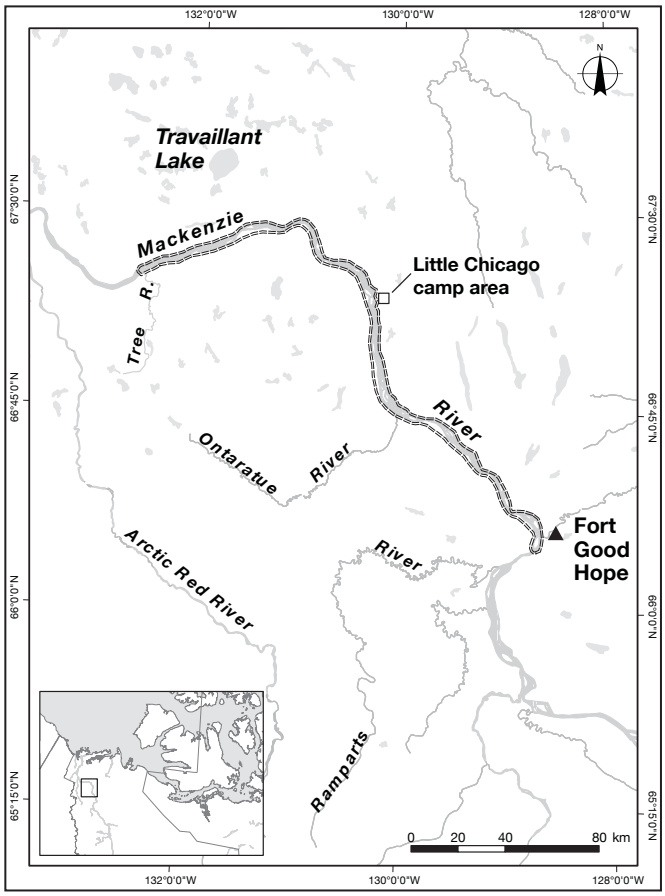
Description: This area includes the islands along 270 km of the Mackenzie River between Fort Good Hope and Tree River. Numerous alluvial deposits, ranging from exposed sandbars to forested islands, occur along the Mackenzie River. The islands and adjacent floodplains are composed of sediments overlying Devonian-aged bedrock. The lower parts of many of these low-lying islands are flooded each spring. As a result, higher central areas support mature stands of white spruce and balsam poplar, whereas willows predominate in wetter peripheral areas. Broad muddy or sandy shorelines border parts of many of the islands.

Biological value: The Mackenzie River is a major spring migration corridor for waterfowl, particularly Lesser Snow Geese. It is probable that the entire Western Arctic Population of Lesser Snow Geese (approximately 570 000 breeding birds and >10% of the Canadian breeding population in recent years; Kerbes et al. 1999; F.D. Caswell and K.M. Meeres, unpubl. data) migrates down the Mackenzie Valley. The islands between Tulita (formerly Fort Norman) and Tree River, particularly around Little Chicago and Norman Wells, are traditional spring stopover points (Barry 1967; Campbell and Shepard 1973; Salter et al. 1974). When the geese arrive in early or mid-May, they congregate on islands in the river where open water and accompanying exposed shorelines provide the only habitat for feeding during migration (Barry 1967; Boothroyd 1985, 1986). The duration of stay at the islands is generally short and is dependent on weather and snow conditions farther north.

In 1973, 13 800 Snow Geese were seen in the Little Chicago area during an aerial survey on 14 May (Salter et al. 1974). In 1972, 61 413 Snow Geese were observed on 20 May, and 63 916 were noted on 25 May in the same area (Campbell and Shepard 1973). In general, the number of Snow Geese varies from year to year (Boothroyd 1985, 1986).

On 14 May 1973, 1061 Tundra Swans were observed between Norman Wells and Tree River (Salter et al. 1974). In 1972, 3255 swans were noted on 20 May, and 1936 were recorded on 25 May (Campbell and Shepard 1973). The 1973 season was earlier than the 1972 season, and apparently fewer swans and geese staged in this area prior to dispersing to breeding areas. The number of Tundra Swans using the key site would have exceeded 1% of the Eastern Population in the 1970s.

Many thousands of other waterfowl also migrate down the Mackenzie River during spring. In 1972, there was a peak of 112 836 waterfowl along the river on 25 May, but this had decreased to 10 000 by 29 May (Campbell and Shepard 1973). Use of the islands is apparently intensive but of short duration. During 1973 aerial surveys between Ten Mile Island and Tree River, Salter et al. (1974) counted 26 027 waterfowl on 14 May but only 1348 one week later. These islands may also be used in the fall by geese forced south prematurely by poor weather (Barry 1967).



The lower Mackenzie River islands are used heavily by moose in the winter. The combination of poplar stands for cover and abundant willow for browse provides ideal winter habitat (Ruttan 1974).

Sensitivities: Staging waterfowl are sensitive to both aircraft and ground-based disturbance. Pollution of the river and major fluctuations in water levels could also have detrimental effects on the waterfowl and their habitats. Lowland habitats and permafrost environments are susceptible to terrain disturbance and degradation.

Potential conflicts: A Mackenzie Valley pipeline and related facilities and activities could have a major impact on migratory birds. The Mackenzie River is also heavily used by barge traffic.

Status: This key site is an Important Bird Area in Canada (NT080; IBA Canada 2004).

Location: 65°15'N, 125°10'W

Size: 1069 km^2

Description: The Brackett Lake area is located immediately north of the confluence of the Great Bear and Brackett rivers and is 5 km northeast of the community of Tulita (formerly Fort Norman). The wetlands and lakes surrounding Brackett Lake are on a low-lying, postglacial lakebed. Black spruce bogs, ericaceous shrubs, and extensive raised peatlands are the dominant vegetation features. The shores of lakes and ponds are bordered by sedge meadows.

Biological value: A relatively high density of ducks breeds in the Brackett Lake area (31 birds/km^2 in 1972, Davis 1974; 21 pairs of ducks/km^2 in the mid-1990s, Ducks Unlimited, unpubl. data). Some of the abundant species of waterfowl and other waterbirds reported for the area include scaup, Mallard, American Wigeon, Surf Scoter, Northern Pintail, Bufflehead, and Green-winged Teal (MacDonald et al. 2001; Dufour et al. 2002).

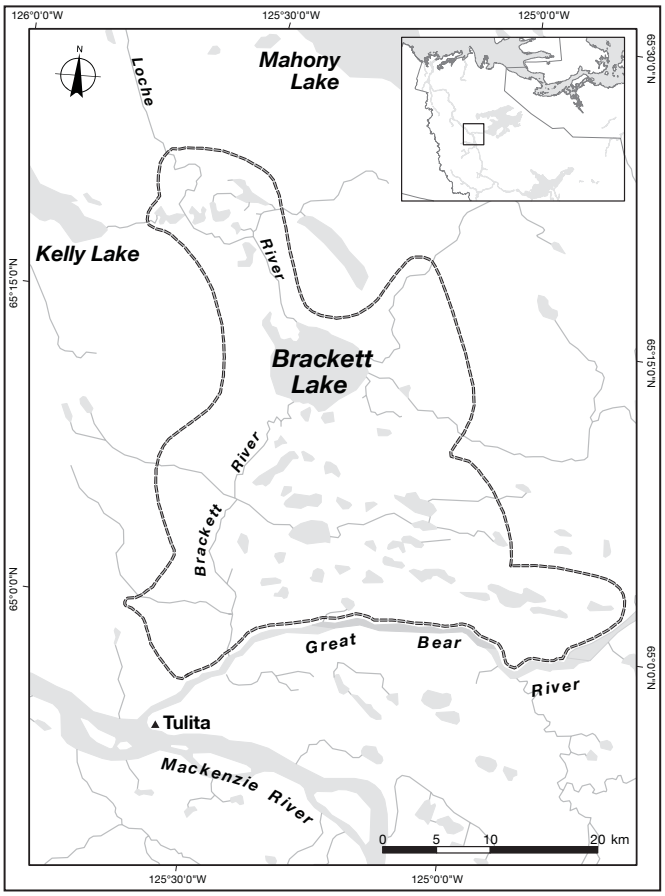
Brackett Lake is heavily utilized by spring and fall staging waterfowl. More than 6100 Lesser Snow Geese were observed at the site in May 1984 (Boothroyd 1985); presumably, equally high numbers are present in other years as well. This would have made up more than 1% of the Western Arctic Population of Lesser Snow Geese in 1984. Over 5000 Greater White-fronted Geese (probably well over 1% of the Canadian population at the time) and an estimated 12 000 ducks have been recorded on the north and east shores of the lake and at the mouth of the Loche River in early September (Barry 1958). Flocks of up to 500 Greater White-fronted Geese and 1500 Tundra Swans (>1.5% of the current Eastern Population) were observed during fall migration in 1972 (Salter 1974), and surveys in 2000 and 2001 indicate that as many as 2500 Tundra Swans were present in fall (MacDonald et al. 2001; Dufour et al. 2002). The preceding data are from counts taken on 1 day — undoubtedly, much larger numbers of individuals occur in the area over the fall migration period.

Shorebirds (such as Long-billed Dowitchers, Pectoral Sandpipers, and Lesser Yellowlegs) stage at Brackett Lake during autumn migration (Salter 1974), but the actual numbers using the site have not been determined.

Moose, black bear, muskrat, and beaver are common in this area. River otters also inhabit the Loche and Brackett river area.

Sensitivities: Waterfowl and other migratory birds are sensitive to disturbance during the nesting, brood-rearing, moulting, and migration periods. Low-lying habitats are susceptible to terrain disturbance through the disruption of natural drainage patterns and the melting of permafrost.

Potential conflicts: Seismic exploration has occurred in the key site and surrounding area. This area is considered to be of at least moderate petroleum potential. An expired petroleum exploration lease covered part of the site and more recently leases have been let nearby.



Status: This key site is an Important Bird Area in Canada (NT082; IBA Canada 2004).

Location: 64°53'N, 125°35'W

Size: 1091 km^2

Description: This area includes the islands along 250 km of the Mackenzie River from Redstone River to Patricia Island. The communities of Tulita (formerly Fort Norman) and Norman Wells are located along this segment of the river.

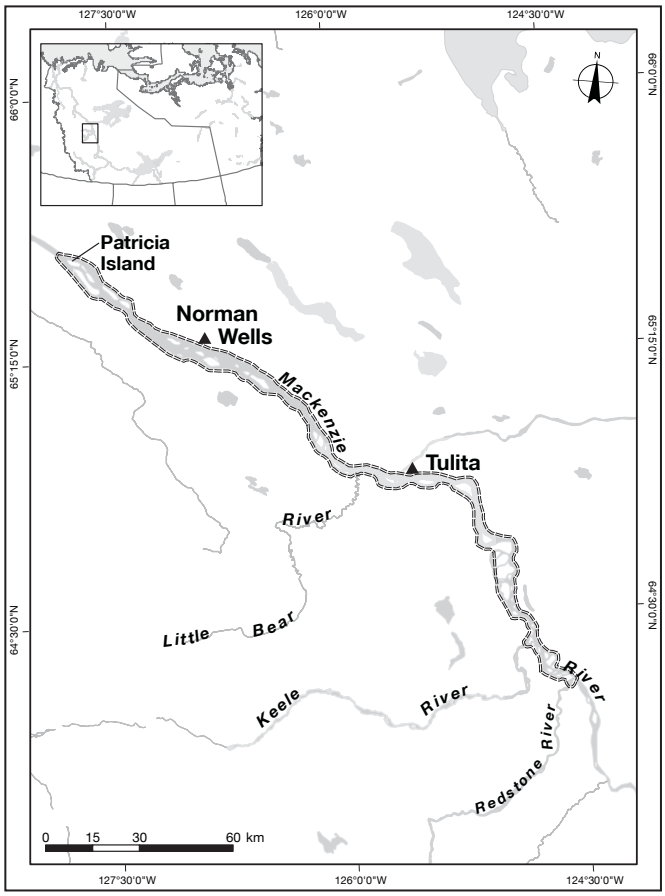
The Mackenzie River is bordered on the east by the Franklin Mountains and on the west by the Mackenzie Mountains. The river has numerous islands, including some that are quite large and non-alluvial. Near Norman Wells, the Mackenzie River has a broad, shallow riverbed; recent fine-grained alluvium borders many of the low-lying alluvial islands and point bars (Geddes and McCourt 1982).

White spruce and balsam poplar predominate on alluvial flats, with white birch on upper terraces and levees. Willow and horsetail are common on the low-lying alluvial flats and along island margins. Pondweed and emergents such as horsetail and sedges are found in the shallow ponds and along old channels (Geddes and McCourt 1982).

Biological value: The Mackenzie River is a major migration corridor for waterfowl. Virtually the entire Western Arctic Population of Lesser Snow Geese (approximately 570 000 breeding birds, >10% of the Canadian population; Kerbes et al. 1999; F.D. Caswell and K.M. Meeres, unpubl. data) may migrate down the Mackenzie River valley. The islands from Tulita to Tree River, particularly around Little Chicago and Norman Wells, are traditional spring stopover points (Barry 1967; Campbell and Shepard 1973; Salter et al. 1974). The geese arrive in early or mid-May and congregate on river islands where open water and exposed shorelines provide the only habitat for feeding during migration (Barry 1967; Boothroyd 1985, 1986). Their duration of stay is generally short but is dependent on weather and snow conditions farther north.

In 1972, an estimated 95 000 Lesser Snow Geese used the Mackenzie River. The maximum daily count around Norman Wells was approximately 28 600 geese on 25 May (Campbell and Shepard 1973). In 1973, the peak goose migration past Norman Wells occurred on 9 May (estimated 14 590 geese; Salter et al. 1974). In 1980, RWESL (1980) counted 25 975 Snow Geese on islands south of Norman Wells on 9 May and 21 635 north of Norman Wells on 15 May. Fewer geese used the area in 1981 and 1982 (RWESL 1983). Numbers of all geese declined once the river ice cleared and the islands became flooded (RWESL 1980).

Greater White-fronted Geese, Canada Geese, Tundra Swans, and a variety of ducks also use the open water around the islands during spring migration. Dabbling ducks are the first to arrive, followed by dark geese, Snow Geese, swans, and, lastly, diving ducks. The birds feed extensively on horsetail and willow catkins. Dabbling ducks also use the islands for courtship on their way to breeding areas farther north (Campbell and Shepard 1973; RWESL 1980).



The islands provide prime winter moose habitat. Moose usually move to the islands in December and return to the mainland in March and April (Ruttan 1974).

Sensitivities: Staging waterfowl are sensitive to both aircraft and ground-based disturbance. Pollution of riverine areas and major fluctuations in water levels could also have detrimental effects on the waterfowl and their habitats. Lowland habitats and permafrost environments are susceptible to terrain disturbance and degradation.

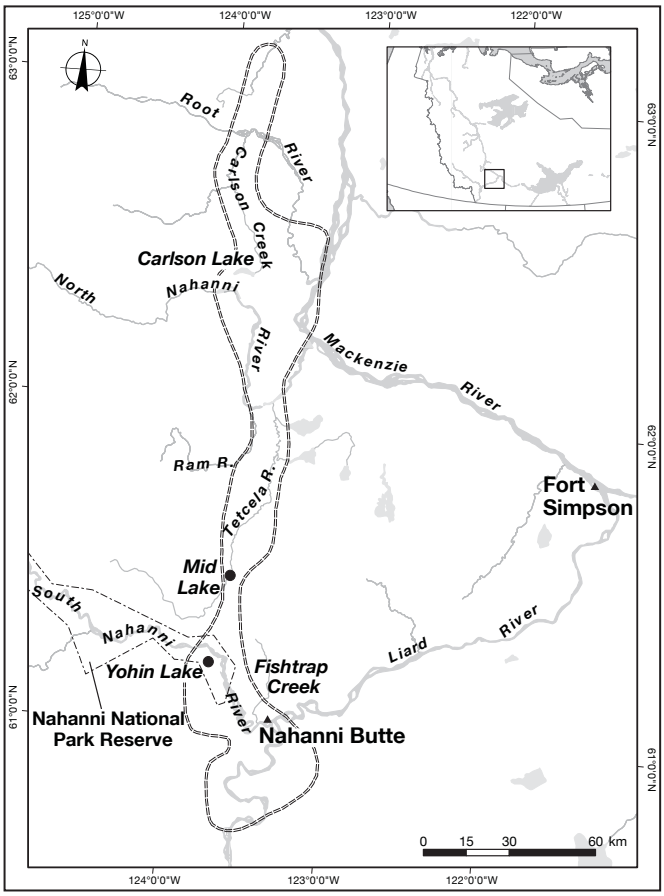
Potential conflicts: A Mackenzie Valley pipeline and related facilities and activities could have a major impact on migratory birds. The Mackenzie River is also heavily used by barges.

Status: This key site is an Important Bird Area in Canada (NT081; IBA Canada 2004).

Location: 61°40'N, 123°30'W

Size: 5515 km^2

Description: This area contains wetland complexes associated with the Liard River, South Nahanni River, Ram River, Carlson Creek, Root River, Tetcela River, and Fishtrap Creek. The latter two areas feature the most extensive wetlands in all the southeastern Mackenzie Mountains. There are also well-developed wetlands around Yohin Lake, Carlson Lake, and Mid Lake. All wetlands are characterized by extensive emergent vegetation. Typical species include cattail, bogrush, horsetail, and waterlily. In addition, the floodplains that occur between the Nahanni and Camsell ranges along the east edge of the Mackenzie Mountains provide considerable wetland habitat. Coniferous forests are the predominant vegetation; alpine tundra is common at the higher altitudes.



Biological value: Approximately 8% of the Canadian breeding population of Trumpeter Swans nests in the wetlands adjacent to the rivers, creeks, and lakes of this area. The number of adults steadily increased in the 1980s and early 1990s. More recent surveys indicated a continuation of this trend, with the number of adults increasing between 1995 (161) and 2000 (196) (Caithamer 1996, 2001; Hawkings et al. 2002) and 2005 (400) (Beyersbergen 2006). The Trumpeter Swan was formerly listed as endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) but was delisted around 1995 because of the increasing populations across North America. However, this species is still of management concern to wildlife agencies in Canada and the United States.

Dall's sheep are found in some of the alpine tundra areas. Woodland caribou frequent both alpine and forested areas, while moose are found along river valleys. Grizzly and black bears also inhabit the area (Cairns et al. 1978).

Sensitivities: Breeding swans are vulnerable to disturbance, and their lowland habitat is sensitive to terrain disturbance.

Potential conflicts: Mineral exploration and extraction in the area could be a source of disturbance and terrain degradation. Seismic exploration has occurred in nearby areas, and the area has moderate to high oil and gas potential.

Status: Some of this site receives a high level of protection due to its occurrence within the Nahanni National Park Reserve.

Location: 61°25'N, 118°15'W

Size: 381 km^2

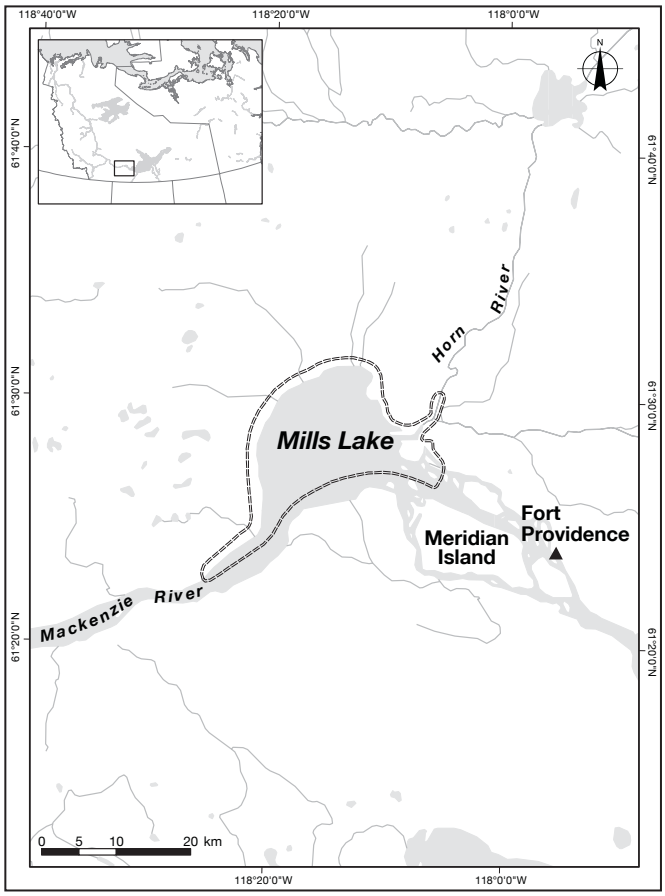
Description: Mills Lake is a large widening of the Mackenzie River at the mouth of the Horn River and 15 km downstream from Fort Providence. Upper Devonian shales and limestone underlie surficial glacial deposits. Soils in this area, predominantly luvisols, are the result of poorly drained till and glaciolacustrine deposits. Well-developed emergent and submergent vegetation communities and floating sedge mats ring much of the shoreline of the lake (Trottier and Kemper 1974) . During periods of low water in the Mackenzie River, sandbars and mudflats occur mainly along the western shore of the lake.

Biological value: Thousands of waterfowl stage at Mills Lake during migration. The emergent sedge zone on the northern and eastern shores, the marsh around the mouth of the Horn River, the shallows near Meridian Island, and the shallow beds of aquatic vegetation around the juncture between the lake and the Mackenzie River are most frequently used as resting and feeding sites. Peak numbers per day between 14 and 26 September 1972 included 9860 Greater White-fronted Geese, 2190 Tundra Swans, nearly 4000 Lesser Snow Geese, 1390 Canada and Cackling geese, and approximately 27 000 ducks (mostly American Wigeon, Northern Pintail, Mallard, and Canvasback) (Salter 1974).

Latour (2003) reported peak spring numbers of 10 700 Greater White-fronted Geese, 47 450 Lesser Snow Geese, and 10 000 Tundra Swans and peak fall numbers of 10 722 Greater White-fronted Geese, 7400 Lesser Snow Geese, and 10 070 Tundra Swans in surveys during 1994–1997, indicating that Mills Lake retains its importance as a spring and fall staging wetland. Peak numbers of birds observed during all surveys represent as much as 14% of the Western Mid-continent Greater White-fronted Geese, 10% of the Western Arctic Lesser Snow Geese, and 12% of the Eastern Population of Tundra Swans. These data do not take into account any turnover of birds; therefore, the actual number of birds staging at Mills Lake is considerably higher than that observed during surveys. Most geese are present from early to late September; ducks and swans may remain in the area until mid-October.

In some years, several thousand American Coots feed among the pond weeds (*Potamogeton* spp.) on Mills Lake (S. Alexander, pers. obs.). As well, the lake supports thousands of moult migrant diving ducks such as scoters and scaup in late July and August, and it is probably at the extreme northern limit of the breeding range of the Ruddy Duck (Brua 2001; P. Latour, pers. obs.). A large Black Tern colony is located at Mills Lake.

Wood bison, a species listed as threatened by COSEWIC, frequent the wetlands around Mills Lake (EBA and CWS, 2006).



Sensitivities: Staging waterfowl are sensitive to disturbance. Pollution of the lake water or alteration of its levels could result in degradation of aquatic and shoreline habitat.

Potential conflicts: Dredging of the river channel for improved barge transportation could be a source of disturbance if conducted during migration periods. Any activity that alters water levels in the Mackenzie River in turn affects water levels in Mills Lake and its attractiveness each spring and fall to migrating waterfowl (Latour 2003).

Status: Mills Lake is an Important Bird Area in Canada (NT083; IBA Canada 2004) and an International Biological Programme Site (Site 49A; Bekel 1975). Mills Lake is currently part of a larger area being considered through the Northwest Territories Protected Areas Strategy for designation as a protected area under the *Canada Wildlife Act*.

Location: 61°07'N, 117°08'W

Size: 445 km^2

Description: Beaver Lake is a widening of the Mackenzie River at the outlet of Great Slave Lake. It is approximately 15 km upriver from the community of Fort Providence. The surrounding low-lying region is part of the Great Slave Lake Plain Ecoregion and is underlain by Upper Devonian shales and limestone (Douglas 1959).

The north shores of both channels around Big Island are low with extensive sedge–grass marsh along alluvial flats. The south shores have a narrower margin of marsh before the transition to spruce–poplar forest. The islands at the outlet of the North Channel are low and marshy, whereas those in the South Channel are higher and more forested.

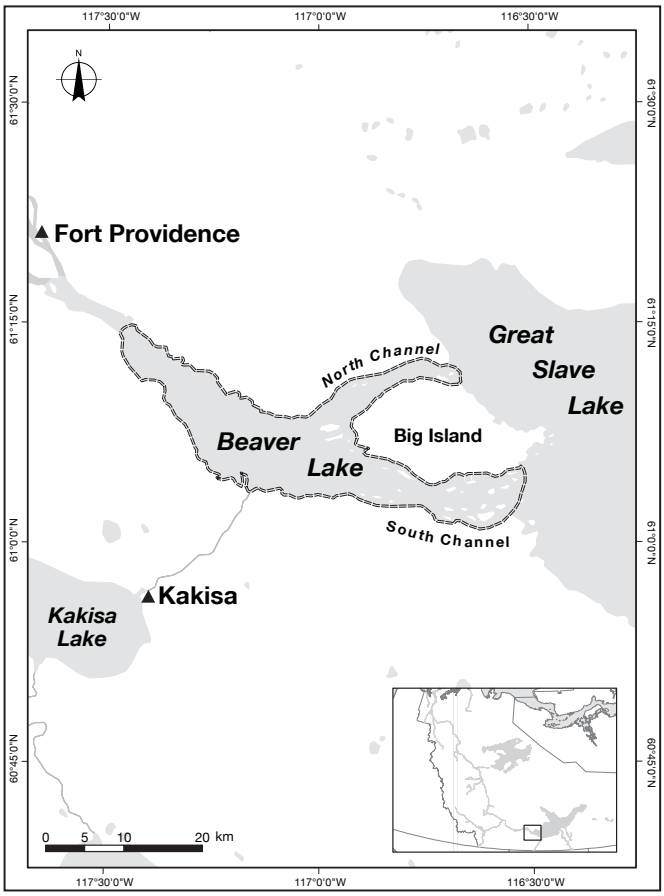
Biological value: The South Channel islands and the North Channel are favoured resting and feeding sites for migrant Tundra Swans and ducks during spring and fall. In the spring of 1973, peak numbers of 1175 swans and over 5000 ducks were recorded on a 17 May survey (Salter et al. 1974). Over 10 000 ducks (mostly American Wigeon, scaup, and Mallards) and 4470 Tundra Swans, 3% of the Canadian population, were recorded on 22 September 1972 (Salter 1974). Up to 8000 Canvasbacks have been observed in the North Channel (T. Barry, pers. commun.). Waterfowl pass through the area in May and again in September and October.

Wood bison, a species listed as threatened by COSEWIC, frequent the wetlands along the northern shore of Beaver Lake. Moose frequent the wooded areas adjacent to Beaver Lake, especially around Big Island.

Sensitivities: Staging waterfowl are sensitive to disturbance. Pollution of the lake water or alteration of its levels could result in degradation of aquatic and shoreline habitat.

Potential conflicts: Dredging of the river channel for improved barge transportation could be a source of disturbance if conducted during migration. Any activity that alters water levels in the Mackenzie River in turn affects water levels in Beaver Lake and its attractiveness each spring and fall to migrating waterfowl.

Status: This key site is an Important Bird Area in Canada (NT084; IBA Canada 2004).



Location: 62°19'N, 114°23'W

Size: 1486 km^2

Description: This site comprises the myriad of islands, numerous shallow bays, and extensive wetlands along the northeastern shore of the North Arm of Great Slave Lake, between Frank Channel and François Bay. It includes the Beaulieu River north to Watta Lake. Yellowknife is located 15 km north of the centre of the key site.

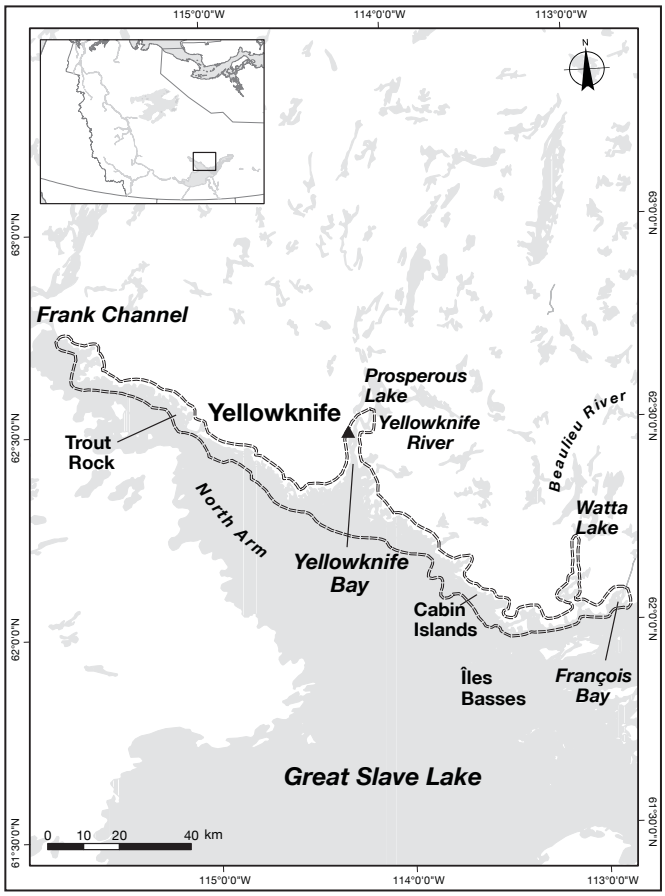
The North Arm occurs at the interface of the Canadian Shield and the Interior Plains (Bostock 1970). The area is part of the Precambrian Edge: a narrow strip extending along the western edge of the Canadian Shield from Great Bear Lake to Lake Athabasca. The Precambrian Edge provides good northern boreal forest waterfowl habitat and has substantially greater densities of breeding ducks than either the open forest of the Canadian Shield to the northeast or the closed forest of the Mackenzie Lowlands (Interior Plains) to the southwest (Murdy 1964).

Biological value: The North Arm is a key site for both Tundra Swans and Canada and Cackling geese during spring migration. Aerial surveys in May between Yellowknife Bay and François Bay recorded peak numbers of 584 swans in 1986, 1382 in 1987, and 1653 in 1988. The latter value represented approximately 2% of the Eastern Population of this species. Turnover of birds has not been taken into account in the surveys; therefore, the number of swans using the area is likely higher than indicated. The main concentrations of swans in all three years were at the Beaulieu River and open-water areas of Great Slave Lake from the Cabin Islands to François Bay (Sirois 1987; Sirois and McCormick 1987; Sirois and Cameron 1989). In addition, similar open-water habitat northwest of Yellowknife Bay is suspected to support similar numbers of migrating swans (Sirois and Cameron 1989). More than 35 000 Canada Geese (about 10% of the midwinter population index of Short-grass Prairie Canada and Cackling geese) staged on the North Arm in 1990 (Sirois 1993).

The islands of the North Arm provide habitat for 1% of the Canadian and 27% of the Northwest Territories breeding population of Caspian Terns. In 1986 and 1987, 77 pairs were found between Frank Channel and Îles Basses, 49 of which nested at one colony near Trout Rock (McCormick and Sirois 1988; Sirois et al. 1989, 1995).

A large number and variety of other waterfowl and waterbirds, primarily ducks, also regularly use the site. In May 1988, at least 19 000 birds (uncorrected for visibility bias) from about 30 species staged between Yellowknife and François Bay (Sirois and Cameron 1989). Irregular visits suggest that similar numbers of migrating waterbirds stage between Yellowknife and Frank Channel.

Approximately 1300 pairs of gulls (Herring, California, Ring-billed, Mew, and Bonaparte's) and 700 pairs of terns (Arctic and Common) were recorded on the site in 1986 and 1987 (McCormick and Sirois 1988; Sirois et al. 1989, 1995). In June 1989, three Black Tern nests were found by a small lake near Trout Rock, the first breeding record north of



Great Slave Lake. Several other probable breeding sites have also been reported (Sirois et al. 1995). Numerous waterfowl nest on the islands of the North Arm (M. Fournier and J.E. Hines, unpubl. data), and large flocks of flightless Common Mergansers and Lesser Scaup use the area during late summer.

The North Arm of Great Slave Lake is an important fall staging area for waterfowl (M. Fournier and J.E. Hines, unpubl. data). At least 10 000 ducks are present in the western half of the key site during the peak of fall migration. More than 1000 Tundra Swans (>1% of the Eastern Population) stage in the area in fall as well.

Sensitivities: Staging, nesting, moulting, and brood-rearing waterfowl and larids are sensitive to disturbance and pollution.

Potential conflicts: Growth of the city of Yellowknife, increased recreational activity on Great Slave Lake, and human-induced increases in populations of egg and brood predators such as Common Ravens and Herring Gulls could have negative impacts on other species of birds. Use of the southwestern portion of the site by recreational boaters may cause disturbance to nesting larids. Litter, such as plastics and abandoned fishing lines and nets, could prove hazardous to waterbirds.

Status: This key site is an Important Bird Area in Canada (NT086; IBA Canada 2004).

Location: 61°43'N, 115°30'W

Size: 1 km^2

Description: This site is a small, exposed islet 2 km south of Northwest Point on the west shore of Great Slave Lake, approximately 100 km southwest of Yellowknife. The island rises 2–3 m above water level and is composed of boulders, rock rubble, and gravel. It has thin soil and sparse vegetation.

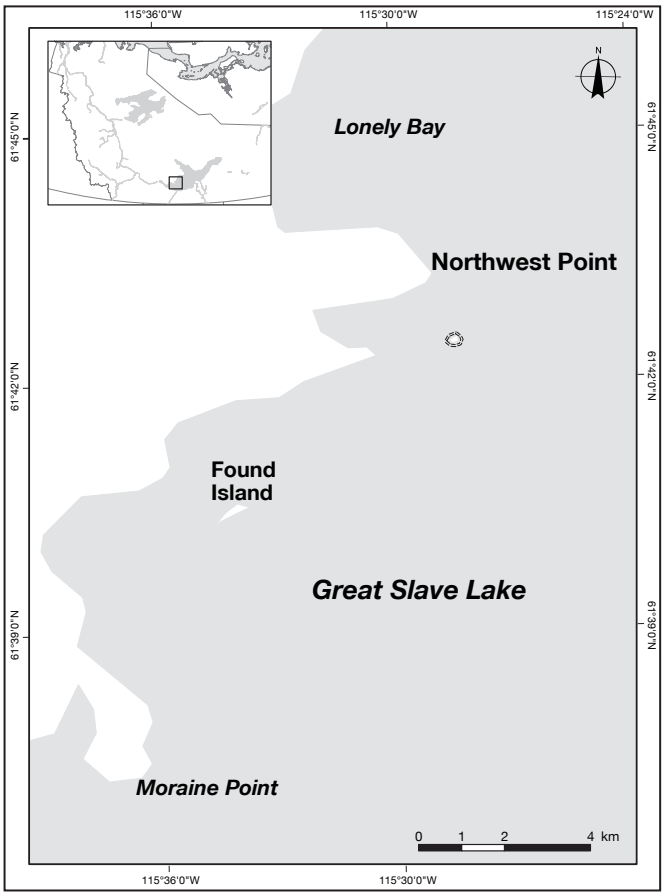
Biological value: This islet is the location of the largest known colony of Caspian Terns in the Northwest Territories, comprising 110 tightly packed pairs of nesting birds in 1989 (Sirois et al. 1995). This total represents over 1% of the Canadian population (Martin 1978) and nearly 40% of the known Northwest Territories breeding population. Caspian Terns arrive on Great Slave Lake in May and begin incubating eggs in early June. Eggs hatch in early July, and the young birds fledge in mid- to late August.

Also nesting on the islet in 1989 were 12 pairs of Herring Gulls and 35 pairs of California Gulls. At nearby Found Island, there is a colony of 299 pairs of California Gulls and 70 pairs of Herring Gulls. Found Island is one of the largest gulleries on Great Slave Lake. Small numbers of Greater Scaup, Red-breasted Mergansers, Mew Gulls, Ring-billed Gulls, and Common Terns also nest on these islands (Sirois et al. 1995).

Sensitivities: Caspian Terns and other colonial birds are very sensitive to disturbance during the nesting season. The presence of so many gulls on or near the island renders the eggs and young of Caspian Terns highly vulnerable to predation if the adults are disturbed and flush from their nests. Pollution in Great Slave Lake could be hazardous to terns.

Potential conflicts: The islet is very small, remote, and seldom visited by people. Occasional visits are made to the Found Island gullery. A similar rate of visitation would probably be detrimental to the colony of terns near Northwest Point.

Status: None.



Location: 61°15'N, 113°40'W

Size: 554 km^2

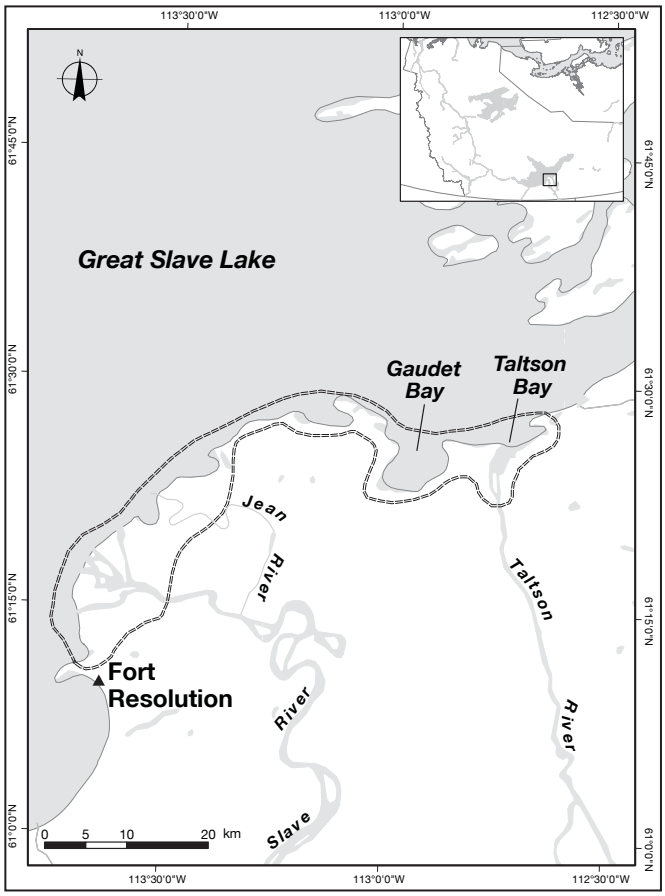
Description: This area includes the south shore of Great Slave Lake from the Slave River delta to the Taltson River. The area is characterized by extensive alluvial deposits and channels bordered by high levees. There are several shallow bays between the Slave and Taltson rivers. Much of the vegetation in the outer Slave River delta is early successional, consisting of horsetails and sedges, and is maintained by natural flooding and sedimentation. On less frequently flooded areas, willows predominate, whereas balsam poplar and spruce grow on drier ground. The community of Fort Resolution is adjacent to the extreme west end of the key site.

Biological value: Shoreline wetlands from the Slave River to the Taltson River provide habitat for thousands of staging waterbirds in spring and fall. Spring migration data are available from 1979 and 1983 (entire key site: Thompson et al. 1979; Dickson et al. 2002) and 1984 (Slave River delta: EMA 1984). Migration occurs from early May to early June, depending on weather and ice breakup. On 25 May 1979, 21 000 waterfowl were seen: 5400 Tundra Swans, 10 260 geese, and 5320 ducks (uncorrected for visibility bias). On 25 May 1983, approximately 80 000 waterfowl were seen, including 5000 Tundra Swans, 40 000 dark geese (assumed by Alexander et al. [1991] to be mainly Canada Geese), 20 000 white geese (presumably Lesser Snow Geese), and >13 000 ducks (Dickson et al. 2002). At the time, these values represented >5% of the Eastern Population of Tundra Swans, >20% of the Short-grass Prairie Population of Canada and Cackling geese, and >5% of the Western Arctic Population of Lesser Snow Geese.

Fall migration data are available from 1979 (entire key site: Thompson et al. 1979) and from 1980, 1983, and 1984 (Slave River delta: MML 1982; EMA 1985). Migration occurs from early August to mid-October. On 16 September 1979, 17 080 waterfowl were seen (55% were east of the Slave River delta): 7700 Tundra Swans (80% east of the delta), 4370 dark geese (mostly Canada Geese), 350 Snow Geese, and 4660 ducks. Similar numbers were seen for the Slave River delta in 1980, but fewer birds were seen in 1983 and 1984. These values represented about 10% of the Eastern Population of Tundra Swans and >2% of the Short-grass Prairie Population of Canada Geese. Shorebirds are among the earliest but least known migrants (EMA 1985); in 1979, over 3000 were seen in the Slave River delta on 11 September, but surveys were not conducted in early August, when numbers may have been higher.

The Slave River delta wetlands are also important to nesting birds. In 1978, about 5200 pairs of ducks (mostly Lesser Scaup, Mallard, American Wigeon, Bufflehead, Blue-winged Teal) bred on the Slave River delta, a low year according to people from Fort Resolution (Thompson et al. 1979). In years of prairie drought, the delta and vicinity likely harbour many more pairs of breeding ducks.

Moose, muskrat, and beaver are common in this area.



Sensitivities: Waterfowl are sensitive to disturbance and pollution. Delta habitats are susceptible to degradation through alteration of the water regime; deltas are dependent on an influx of sediments, and the maintenance of early-succession plant species and suspended ponds is dependent on spring flooding.

Potential conflicts: Dams on the Peace River in British Columbia have reduced annual fluctuations in water level in Great Slave Lake (Environment Canada, unpubl. data), but the effect on habitat near the Slave River is not known. The Slave River has been identified as a possible site for hydro development in the past (MML 1982). Such development could further alter flooding in the delta, which could cause the drying of productive marshes and ponds, replacing waterfowl food plants with unpalatable shrubs, and generally reduce the quality of bird habitat in the area (HAL 1982). Effluent from pulp mills on the Peace and Athabasca rivers could affect the health of the entire delta.

Status: This key site is an Important Bird Area in Canada (NT087; IBA Canada 2004).

Location: 60°20'N, 113°15'W

Size: 17 614 km^2

Description: The eastern boundary of this site lies approximately 90 km west of the community of Fort Smith and includes the entire drainages of the Nyarling, Sass, and Little Buffalo rivers. Approximately 85% of the site lies within Wood Buffalo National Park.

The area is a complex of marshes, shallow ponds, streams, lakes, and bogs occurring near the northern extent of the boreal forest and west of the Canadian Shield. Grass–sedge meadows, black spruce – tamarack woods, and small areas of muskeg are common. A shallow overburden of till covers limestone bedrock. Part of the site lies within the Salt River alkali flats. The flats are sparsely vegetated, and plants with saline affinities are found on deposits of salt left by outwash from brine springs. Sinkholes and other features of karst topography are common.

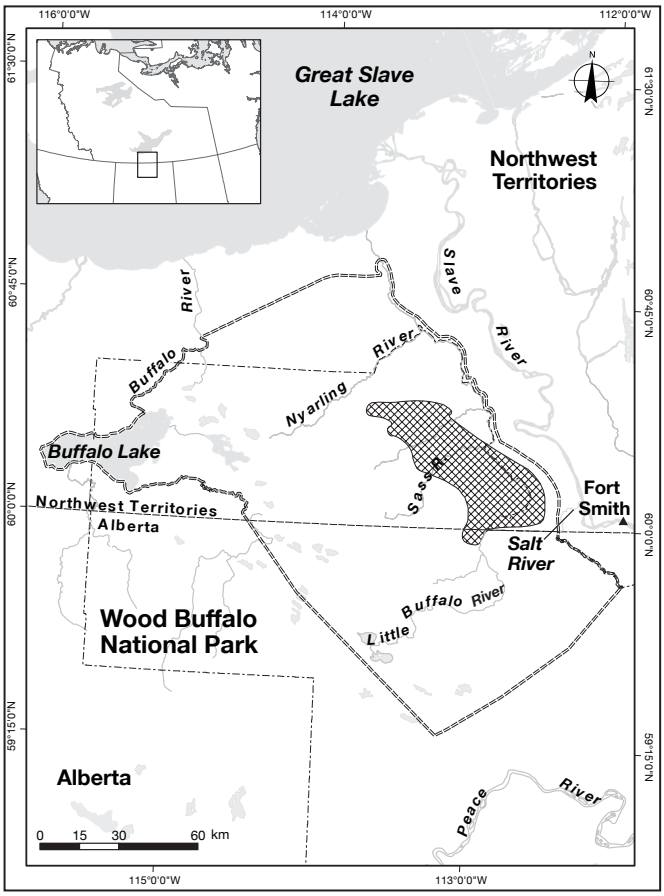
Biological value: The Whooping Crane is considered a species at risk in Canada and is listed as "endangered" by COSEWIC. This site is the only known breeding locality of the Whooping Crane in the wild, although an introduced population breeds in Florida. In 1954, a total of 21 Whooping Cranes existed in the world and occupied this area. In 2003, the spring flight consisted of 183 birds, and 61 pairs nested in the area (B. Johns, pers. commun.). Preferred nesting habitat is on shallow ponds and lakes, where the dominant emergent vegetation is bulrush, sedge, and cattail (Kuyt 1981). Whooping Cranes arrive at their breeding grounds around the last week of April and leave towards the end of September.

Waterfowl use lakes in the area as fall staging sites. Over 2400 Canada and Cackling geese and lesser numbers of Tundra Swans and Greater White-fronted Geese were observed on a partial survey of Buffalo Lake on 16 September 1972 (Salter 1974).

The threatened wood bison (COSEWIC) occurs throughout much of the site. The salt flats are a preferred winter range, with the upland prairies being utilized in the summer (Reynolds and Hawley 1987).

Sensitivities: Disruption or alteration of drainage patterns in the nesting area could cause the drying of shallow nesting ponds. Drought associated with global climate change is a serious concern for the long-term security of the nesting habitat. Increased ground traffic and low-flying aircraft would also disturb the nesting birds. (Park regulations restrict ground access to nesting sites in the nesting area between 15 April and 31 October.)

Potential conflicts: Any increase in industrial activities could augment existing hazards. Potential threats include the development of transmission corridors (with power lines and transmission towers), increased traffic along the highway that runs through the nesting site, and lowered water levels in nesting ponds.



Status: Most of this site is legally protected due to its occurrence within Wood Buffalo National Park. Much of this site is also a Ramsar site (Wetland of International Importance) (Ramsar 2005), a UNESCO World Heritage Site (UNESCO 2005), an Important Bird Area in Canada (NT002; IBA Canada 2004), and an International Biological Programme Site (Site 13; Beckel 1975).