

# Community Profile

## ***Fort McPherson***



Prepared by: Ecology North  
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## Community Profile

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Fort McPherson or 'Teetl'it zheh' (at the head of the waters) is located on the east bank of the Peel River just upstream of the confluence with the Mackenzie River. Fort McPherson is the home of the Teetl'it Gwich'in ("people of the head waters or people in the middle"). The community of 800 people is linked to Inuvik and Dawson by the Dempster Highway, although the rivers were the traditional transportation artery. The Mackenzie Mountains are located to the west and were traditionally an important hunting and trapping area for the Tetlit Gwich'in people.

Fort McPherson was incorporated on November 1<sup>st</sup>, 1986, but has a history dating back to the 1848 when a Hudson Bay Trading Post was built on the site of the community. In the 1860's Roman Catholic and Anglican Missions were built and Gwich'in people moved to the site of the community. Today Fort McPherson is the largest of the four Gwich'in communities in the NWT.

Under the Gwich'in Comprehensive Land Claim Agreement signed in 1992, the Gwich'in Tribal Council was granted ownership of 16,264 square kilometres of land in parcels located throughout the GSA and Yukon. The Gwich'in Settlement Area (GSA) is approximately 56,935 km<sup>2</sup>.

### **Geography**

Fort McPherson is located on the Peel River at 67°26'N latitude, and 134°53'W longitude. Fort McPherson is 121 km south of Inuvik by road. The community has an airport and is accessible by all-weather road (Dempster Highway).

Fort McPherson is located in the Northern Great Bear Plains High Subarctic Ecoregion of the Taiga Plains. The area around the community is dominated by broad lowlands and plateaus divided by major rivers. The area is underlain by level to gently sloping horizontal sedimentary rock. Polygonal peat plateaus are common in this ecoregion with widespread continuous permafrost at a depth of 30 centimeters below the surface. The characteristic forest type is widely spaced stunted white and black spruce trees.

### **Demographics**

Population (2009): 791

- Male: 420
- Female: 371
- Aboriginal: 738
- Non-aboriginal: 53

Population aged 15 and older: 75.1%

Population declined 13.5% from 1996 to 2009

## **Language**

Aboriginals that speak an Aboriginal language (2009): 18.1%

## **Employment and Economy**

Average personal income in 2007: \$34,020

Average Family Income 2006: \$61,348

Unemployment rate (2009): 45.6%

Persons 15 years of age and older involved in harvesting activities (2008)

- Trapping: 11.6%
- Hunting or fishing: 46.6%
- Consuming country food (half or more): 76.5%

## **Cost of Living**

2009 Living Cost Diff. (Edmonton = 100): 157.5

2004 Food Price Index (Yellowknife = 100): 163.1

## **Weather**

There is no weather station in Fort McPherson but it is assumed Inuvik has similar weather patterns. Data is from Inuvik A climate normals 1971-2000. Fort McPherson has a cold dry climate, with a short but warm summer and a long cold winter. The coldest recorded temperature in Inuvik is -56.7°C in 1968, the hottest recorded temperature is 32.8°C in 1999. The majority of the precipitation comes in the summer as rain and in the fall as snow. Prevailing winds are from the east but the Mackenzie Valley is not considered windy. More information on Inuvik weather can be found at

[http://www.climate.weatheroffice.ec.gc.ca/climate\\_normals](http://www.climate.weatheroffice.ec.gc.ca/climate_normals)

## **Educational Infrastructure**

School: High School to Grade 12

Community Learning Centre: Yes

High School diploma: 43% (2006)

## **Health Infrastructure**

Health Centre: 4 Nurses and monthly doctor visits at Health Centre

## **Governance:**

Designated Gwich'in Organization: Tetlit Gwich'in Council

Staff: 14 full-time, 4 part-time

Total budget: \$3.2 million (2009 / 2010)

## **Transportation Infrastructure**

Fort McPherson is located on the Dempster Highway which is an all weather gravel highway completed in 1979. The Dempster connects Fort McPherson to Dawson City and the Alaska Highway to the south, and Inuvik to the North. During the spring and fall the community is isolated by road when ferries across the Mackenzie to the east and Peel to the south are disrupted. The Abraham Francis Ferry at km 74 operates on the Peel River and has a ten year average opening of June 1<sup>st</sup> and closing of Oct 24<sup>th</sup>. The Louis Cardinal Ferry runs on a demand schedule at km 143 of the NWT portion of the Dempster Highway where it crosses the Mackenzie River by the community of Tsiigehtchic and has a ten-year average opening of June 2<sup>nd</sup> and closing of Oct 24<sup>th</sup>.

The ice bridge across the Peel opens on a ten-year average date of November 11<sup>th</sup>, and closes on May 5<sup>th</sup>. The ice bridge across the Mackenzie at Tsiigehtchic has a ten-year average opening date of November 21<sup>st</sup> to May 3<sup>rd</sup>. This leaves the community isolated for approximately a month during both break-up and freeze-up.

Fort McPherson has an airport located 3.7 km south of town, which is operational year round. There are daily scheduled flights into the community from Inuvik.

## **Municipal Infrastructure**

Sanitation: Trucked

Waste Disposal: Solid/Sewage

Distributed Energy System: Limited to the downtown core

Fire Hall: Yes

Community Energy Plan: Yes

Land Use Plan: Yes

Forest Resource Assessment: No

## **Judicial and Emergency Infrastructure**

Number of police officers: 6

Emergency Services: Fire

Number of police officers: 6

Emergency Services: Fire

Emergency Plan: Updated 2006

## **Housing Infrastructure** (All statistics for 2009)

Total private dwellings (2009): 268

- Average number of persons per household: 2.9
- Number of owned dwellings: 120
- Number of rented dwellings: 148
- Number of public housing units: 120
- Number of private market houses: 16
- Number of staff houses: 13
- Houses needing major repairs: 14.9%
- Houses with housing problems: 32.8%
- Percentage of homes with internet access: 30.8%

## **Potential Cost Impacts for Adaptation of Foundations of Buildings**

(from: Potential Cost Impacts for Adaptation of Building Foundations in the Northwest Territories, EIC Climate Change Technology 2006)

NWT Geographic Construction Index (Yellowknife=1.00): 1.35

Sensitivity Parameters to Climate Change (2006)

- Thermal: 2.43
- Physical: 4.33
- Weighted: 3.38

Sensitivity Factor(1=worst/0=best): 0.94

“Best Guess” Estimated Climate Change Foundation Adaptation Costs (2006)

Residential: \$4,277,736

Institutional/Commercial: \$4,635,520

“Worst Case” Estimated Climate Change Foundation Adaptation Costs (2006)

Residential: \$4,574,030

Institutional/Commercial: \$7,434,893

## **Electricity Infrastructure**

Type of Electricity Supply: Diesel

Supplier of Electricity: NTPC

There is a limited residual heat distribution from the NTPC generator waste heat within the core commercial buildings downtown.

## Water

Fort McPherson has a water licence which is submitted to the Gwich'in Land and Water Board. The community trucks water from Deep Water Lake. Fort McPherson has 85% of the community on trucked service to the wastewater lagoon. The other 15% is collected through a piped system, which is gravity fed into Sewage Lake "part of lagoon system". The wastewater lagoon is released annually in late fall and travels through a wetland system and eventually to the Peel River. There are no reported issues with water or wastewater quality.

- Water Source: Deep Water Lake
- Volume of Water/Wastewater (2006) 34,306 m<sup>3</sup>/year
- Type of Treatment Plant: Lagoon and wetland system
- Bacteriological Testing: Yes
- Chemical Testing: Annually
- Last Boil Water Advisory: N/A

## Food/Plants/Animals

Households consuming most/all country foods (meat, fish, gathered berries and plants, 2008):  
46.6%

Community Garden/Composting: No (no mention of Fort McPherson in Small-Scale Food Program Report 2008).

**Species at Risk:** (NWT Species at Risk in NWT 2008 – Animal species in the Gwich'in region)

Grizzly Bear (northwestern population)	Sensitive
Wolverine (Western population)	Sensitive
Harlequin Duck (Western population)	May be at Risk
Grey Headed Chickadee	May be at Risk
Olive-Sided Flycatcher	Sensitive
Peregrine Falcon	Sensitive
Rusty Blackbird	May be at Risk
Short Eared Owl	Sensitive

**Invasive Species:** species which have been noted in the community but are not necessarily invasive include:

Polar bears  
Grizzly Bears  
Blue heron  
Magpies

Turkey Vulture  
Woodpeckers  
Coyote  
Thistles

### **Community Concerns**

Effects of climate change are being noticed: warmer weather, melting ice, dry land, later freeze-up and earlier break-up, plants/animals less healthy

Permafrost degradation affecting buildings, houses

Forest fire potential

Caribou are changing their migration routes

Weather is changing

Drainage around community

Peel River is getting shallower

Landslides and cut banks are affecting tributary streams and rivers

## **Sources:**

Department of Industry, Tourism and Investment, GNWT. "2008/2009 Canada/Northwest Territories Framework Agreement – Small Scale Foods Program." 1-15.

Department of Natural Resources, GNWT. 2008. "Ecological Regions of the Northwest Territories: Taiga Plains (Environment and Natural Resources Canada)."

Department of Transportation, GNWT. Ferry and Road Information.  
(<http://www.dot.gov.nt.ca/live/pages/wpPages/home.aspx>)

Dillon Consulting Ltd. Synopsis of Municipal Wastewater Treatment and Discharge in the NWT. 2007

Environment and Natural Resources – NWT Species at Risk  
([http://www.enr.gov.nt.ca/live/pages/wpPages/Species\\_at\\_Risk.aspx](http://www.enr.gov.nt.ca/live/pages/wpPages/Species_at_Risk.aspx))

Environment Canada – National Climate Data and Information Archive  
(<http://climate.weatheroffice.ec.gc.ca/>)

Fort McPherson Hamlet. 2010. Integrated Community Sustainability Plan.

Fort McPherson Website ([www.fortmcperson.ca](http://www.fortmcperson.ca))

Global Invasive Species Database (<http://www.invasivespecies.net>)

Government of the Northwest Territories – Municipal and Community Affairs  
(<http://www.maca.gov.nt.ca>)

Government of the Northwest Territories – NWT Stats. NWT Community Survey Housing Component 2009. [http://www.stats.gov.nt.ca/Housing/housing-conditions/2009\\_Housing.pdf](http://www.stats.gov.nt.ca/Housing/housing-conditions/2009_Housing.pdf)

Gwich'in Tribal Council Website. ([www.gwichin.nt.ca](http://www.gwichin.nt.ca)) Accessed August 2010

Gwich'in Social and Cultural Institute Website: ([www.gwichin.ca/TheGwichin/ft.mcperson.html](http://www.gwichin.ca/TheGwichin/ft.mcperson.html))  
Accessed August 2010

Hoeve, T.E., Zhou, Fuqun and Aining Zhang. 10-12 May 2006. "Potential Cost Impacts for Adaptation of Building Foundations in the Northwest Territories", *EIC Climate Change Technology, 2006 IEEE*. 1-9.

NWT Community Profiles (<http://www.stats.gov.nt.ca/Profile/Profile.html>)

NWT Infrastructure Profiles (<http://www.stats.gov.nt.ca/community-data/Profile%20PDF/Fort%20McPherson.pdf>)

*T:Stat - NWT Bureau of Statistics* (<http://www.stats.gov.nt.ca/>)