

ENVIRONMENTAL IMPACT STATEMENT
for the
MACKENZIE GAS PROJECT

Volume 4: Part B

Socio-Economic Baseline

**Dene Tha' First Nation
Community Report**

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1 INTRODUCTION

1.1 Background and Purpose

The purpose of this report on the Dene Tha' First Nation (DTFN) is to present the response to the Joint Review Panel (JRP) request for a community-specific organization of the environmental impact statement (EIS) socio-economic baseline data. For consistency and ease of use, the document is similar in structure to, and has been assembled largely on the basis of, the regional-level material contained in the existing Volume 4 of the EIS and in the document entitled, *EIS Supplemental Information: Northern Alberta*. This report (hereinafter referred to as Volume 4B) presents a community focus on a stand-alone basis with the intent of meeting the needs of, and facilitating review by, each community without substantial reference to other EIS documentation. A corresponding document, Volume 6C, has been prepared to present the effects assessment on a community-specific basis.

The Mackenzie Gas Project includes development of three onshore natural gas fields (anchor fields) in the Mackenzie Delta, Northwest Territories, and construction and operation of pipelines to transport natural gas and natural gas liquids (NGLs) to market. The Mackenzie Gas Project will terminate just south of the Northwest Territories–Alberta boundary and is regulated by the National Energy Board (NEB). In Alberta, NOVA Gas Transmission Ltd. (NGTL) will extend and expand its NGTL pipeline system between the terminus of the Mackenzie Gas Project and the existing NGTL Thunder Creek compressor station. For this report, the NGTL activities are referred to as the NGTL ancillary project or the NGTL project. The NGTL facilities are regulated by the Alberta Energy Utilities Board.

For this report, the term *project* refers to the Mackenzie Gas Project and does not include NGTL activities. The term *projects* refers to both the Mackenzie Gas Project and the NGTL ancillary project. The term *project proponents* refers to the companies undertaking the Mackenzie Gas Project.

1.2 How to Use this Report

Typical socio-economic material is presented in this report as follows:

- Section 2 – People and the Economy
- Section 3 – Infrastructure and Community Services
- Section 4 – Individual, Family and Community Wellness
- Section 5 – Traditional Culture

This volume also contains the following discussions:

- Section 6 – Nontraditional Land and Resource Use
- Section 7 – Heritage Resources

In order to help the reader locate content which may be of particular interest and to allow linkages for a given topic between the baseline information in Volume 4B and the effects assessment in Volume 6C, the existing Volumes 4 and 6 of the EIS, and the document entitled *EIS Supplemental Information: Northern Alberta*, the following concordance table provides cross-references for the topics in each volume (see Table 1-1). Note that although the titles of sections match those found in the existing EIS Volumes 4 and 6, the numbering has changed in Volume 6C to accommodate new sections.

Table 1-1: Environmental Impact Statement Topic Areas

| Topic | EIS, Volume 4 | Volume 4B | EIS, Volumes 6A and 6B | Volume 6C | Supplemental Information: Northern Alberta |
|--|--|-----------|------------------------------|-----------|---|
| Introduction | 1.0 | 1.0 | 1.0 | 1.0 | 1 |
| Geographic Area of Interest | – | – | – | 2.0 | – |
| Public Participation | – | – | – | 3.0 | 12 |
| Project Expenditures | – | – | 2.0 | – | – |
| National Economic Effects | – | – | 3.2 | – | – |
| Population Composition and Dynamics (Demography) | 2.2.1, 2.3.1, 2.4.1, 2.5.1, 2.6.1, 2.7.1, 2.8.1, 2.9.1 | 2.2 | 3.3 | 4.2 | – |
| Economic Activity | 2.2.2, 2.3.2, 2.4.2, 2.5.2, 2.6.2, 2.7.2, 2.8.2, 2.9.2 | 2.3 | 3.1 | 4.1 | 11 |
| Labour Force | 2.2.3, 2.3.3, 2.4.3, 2.5.3, 2.6.3, 2.7.3, 2.8.3, 2.9.3 | 2.4 | | | |
| Income Sources and Amounts | 2.2.4, 2.3.4, 2.4.4, 2.5.4, 2.6.4, 2.7.4, 2.8.4, 2.9.4 | 2.5 | | | |
| Cost of Living | 2.2.5, 2.3.5, 2.4.5, 2.5.5, 2.6.5, 2.7.5, 2.8.5, 2.9.5 | 2.6 | | | |

Table 1-1: Environmental Impact Statement Topic Areas (cont'd)

| Topic | EIS, Volume 4 | Volume 4B | EIS, Volumes 6A and 6B | Volume 6C | Supplemental Information: Northern Alberta |
|--|---|-----------|------------------------------|-----------|---|
| Transportation Infrastructure | 3.2.1, 3.3.1, 3.4.1, 3.5.1, 3.6.1, 3.7.1, 3.8.1, 3.9.1 | 3.3 | 4.1 | 5.2 | 11 |
| Utilities, Energy and Communications | 3.2.2, 3.3.2, 3.4.2, 3.5.2, 3.6.2, 3.7.2, 3.8.2, 3.9.2 | 3.4 | 4.2 | 5.3 | – |
| Housing | 3.2.3, 3.3.3, 3.4.3, 3.5.3, 3.6.3, 3.7.3, 3.8.3, 3.9.3 | 3.5 | 4.3 | 5.4 | – |
| Recreation | 3.2.3, 3.3.3, 3.4.3, 3.5.3, 3.6.3, 3.7.3, 3.8.3, 3.9.3 | | 4.4 | 5.5 | – |
| Governance | 3.2.4, 3.3.4, 3.4.4, 3.5.4, 3.6.4, 3.7.4, 3.8.4, 3.9.4 | 3.2 | 4.5 | 5.1 | – |
| Health Conditions | 4.2.1, 4.3.1, 4.4.1, 4.5.1, 4.6.1, 4.7.1, 4.8.1, 4.9.1 | 4.2 | 5.3 | 6.2 | – |
| Health Care Facilities and Services | 4.2.2, 4.3.2, 4.4.2, 4.5.2, 4.6.2, 4.7.2, 4.8.2, 4.9.2 | 4.3 | 5.2 | 6.1 | – |
| Family and Community Conditions (Community Well-Being) | 4.2.3, 4.3.3, 4.4.3, 4.5.3, 4.6.3, 4.7.3, 4.8.3, 4.9.3 | 4.4 | | | – |
| Human Health Risks | – | – | 5.4 | 6.3 | – |
| Accidents and Malfunctions | – | – | – | 6.4 | – |
| Social and Protection Facilities and Services | 4.2.4, 4.3.4, 4.4.4, 4.5.4, 4.6.4, 4.7.4, 4.8.4, 4.9.4 | 4.5 | 5.5 | 6.5 | – |
| Education and Training | 4.2.5, 4.3.5, 4.4.5, 4.5.5, 4.6.5, 4.7.5, 4.8.5, 4.9.5 | 4.6 | 5.6 | 6.6 | – |

Table 1-1: Environmental Impact Statement Topic Areas (cont'd)

| Topic | EIS, Volume 4 | Volume 4B | EIS, Volumes 6A and 6B | Volume 6C | Supplemental Information: Northern Alberta |
|---|---|-----------|------------------------------|-----------|---|
| Traditional Harvesting | 5.2.1, 5.3.1, 5.4.1, 5.5.1, 5.6.1, 5.7.1, 5.8.1, 5.9.1 | 5.2 | 6.2 | 7.1 | – |
| Trapping | 5.2.2, 5.3.2, 5.4.2, 5.5.2, 5.6.2, 5.7.2, 5.8.2, 5.9.2 | 5.3 | | | – |
| Aboriginal Language | 5.2.3, 5.3.3, 5.4.3, 5.5.3, 5.6.3, 5.7.3, 5.8.3, 5.9.3 | 5.4 | 6.3 | 7.2 | – |
| Nontraditional Land and Resource Use | 6.0 | 6.0 | 7.0 | 8.0 | 11 |
| Heritage Resources | 7.0 | 7.0 | 8.0 | 9.0 | – |
| Cumulative Effects | – | – | 9.0 | – | 13 |
| Monitoring and Follow-Up | – | – | 10.0 | 10.0 | – |
| References, Glossary | end | end | end | end | end |
| NOTE: – = not included, or not discussed | | | | | |

1.3 Study Area

The socio-economic study area includes all of the communities in the Northwest Territories in which the direct or indirect effects of gas production and pipeline construction may affect permanent residents.

The socio-economic study area also includes northwestern Alberta, where, in an ancillary project, NGTL is proposing to construct the Northwest Mainline (Dickins Lake and Vardie River Sections) and the NGTL interconnect facility.

Figure 1-1 illustrates the study area communities.

The nontraditional land and resource use, and heritage resources portions of the socio-economic impact assessment (SEIA) identify specific local study areas (LSAs) and regional study areas (RSAs) in relation to project component locations and activities.

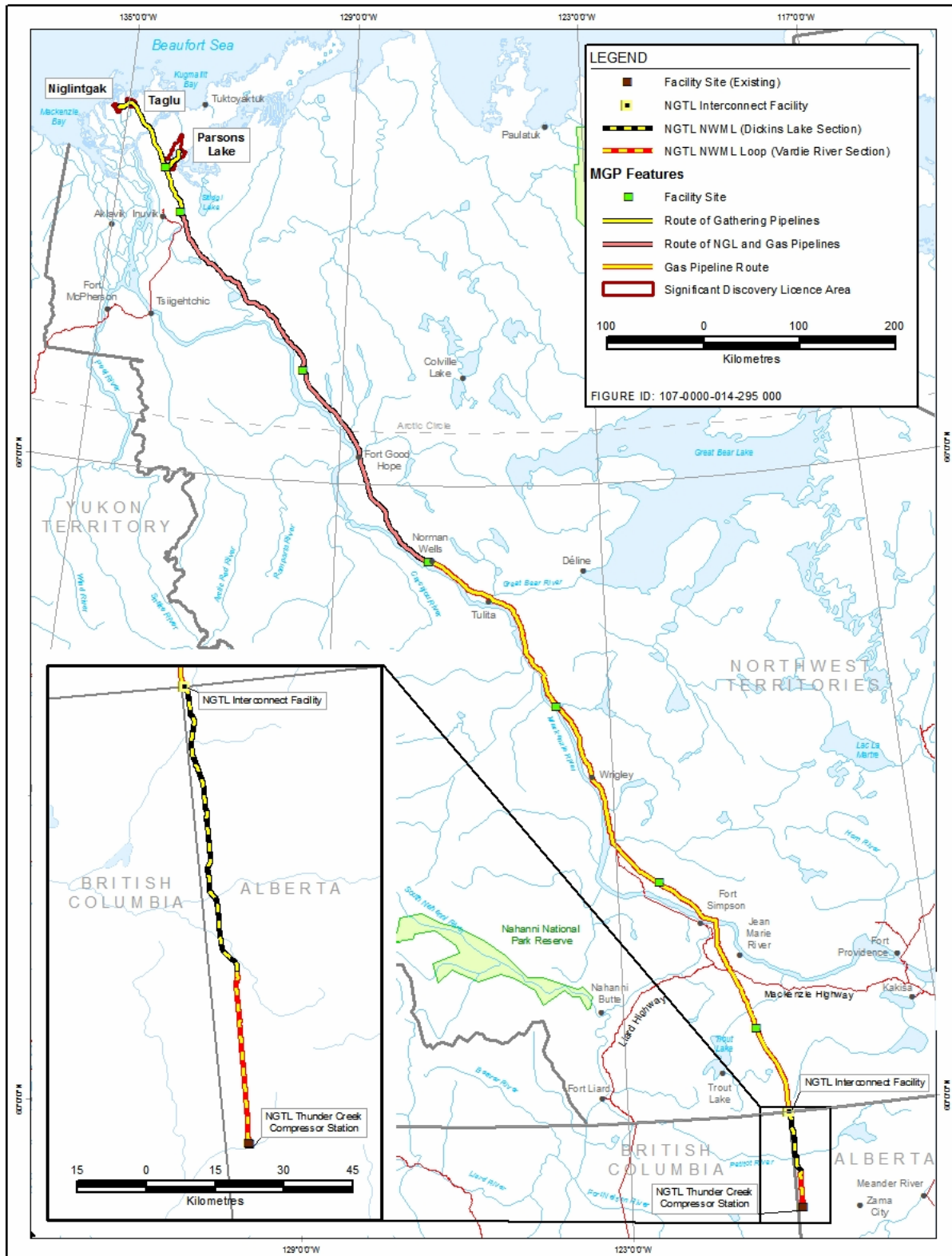


Figure 1-1: Study Area Communities

1.4 Summary of the Socio-Economic Baseline for the Dene Tha' First Nation

The DTFN population inhabits three predominantly Aboriginal reserves in northwestern Alberta: Chateh, Meander River and Bushe River. The combined population is about 2,358 persons. The DTFN communities' economies are rooted in mineral extraction and hydrocarbon-related industries. The Aboriginal Council governs the DTFN.

The dominant occupations in the communities are trades and transport, sales and service, and social service. In 2001, the DTFN had low labour force participation rates and high unemployment.

In terms of utilities, the DTFN reserves are generally comparable to most Canadian communities of similar size. Data on housing conditions is not available, but DTFN residents indicate that a majority of the houses are in need of repair. Recreation facilities are limited. A nursing station and health centre deliver health care to the DTFN, and hospitalization is available in High River. There is no statistical information related to health conditions amongst the DTFN.

High school and post-secondary attainment levels are low for the DTFN communities. There is a kindergarten to Grade 12 school in Chateh and a kindergarten to Grade 9 school in Meander River. Children in Bushe River are bussed to High Level to attend a kindergarten to Grade 12 school operated by the Fort Vermillion School Division. Post-secondary education is available via video-conferencing through Fairview College.

Traditional culture is very important to the DTFN communities. Most DTFN residents are involved in the dual-economy: trapping or hunting, and working in the oil and gas industry, depending on the season, the market or both. This trend is indicative of the communities' commitments to culture, while at the same time adapting to the needs of contemporary industry. The majority of community residents speak one of three dialects of Athapascan Dene.

Although early settlements have been identified in archaeological investigations in northwestern Alberta, very little prehistory is known about the area currently inhabited by the DTFN.

1.5 Approach

This SEIA is designed to focus on how the projects may affect the wellness of a community. Wellness is often the most highly valued aspect of community life, and depends on the well-being of individuals, families and the community as a whole. Community wellness may be significantly enhanced by benefits from the projects, and be vulnerable to adverse effects.

The effects assessment is focused on addressing community concerns, with the aim of designing and implementing the projects using procedures that optimize beneficial effects and reduce effects the communities believe to be undesirable.

A community-driven approach requires:

- knowledge about the characteristics of the communities that may be affected
- understanding of the interests and concerns of these communities

Knowledge of community characteristics has been obtained by collecting information from administrative data and residents who are informed about a particular circumstance. Information on interests and concerns was gained in the meetings and community consultations held with residents of the DTFN communities in northwestern Alberta.

1.5.1 Why the Baseline is Important

The baseline conditions provide the context for assessing the potential effects of the project. The data presented in this report allows an assessment of the capacity of the people, institutions, corporations and governments to respond to the project. Communities experience socio-economic effects in accordance with two primary interactions:

- physical, social or economic interaction between project component activities or personnel, and community residents and their economic, social or cultural resources and pursuits
- supplying workers or business services to the project, which generates income for firms and individuals. The spending or investment of this income will have both positive and negative effects.

1.6 Information Needed to Support the Effects Assessment

1.6.1 Background

The initial approach to collecting baseline information resulted in more than 440 tables of social and economic data with possible relevance to project effects.

Creating a comprehensive yet readable document entailed synthesizing and analyzing this tabular data, whenever available, to describe the baseline conditions succinctly, and eventually predict and monitor project effects.

In this document, tabular information for the DTFN communities is bolded to make it stand out from the other, usually regional-based, presentations.

1.6.2 Specific Sources

1.6.2.1 People and the Economy

Information in Section 2, People and the Economy includes:

- labour force activity:
 - participation
 - employment and unemployment rates
 - jobs currently held
- labour force education and training achievements

Also relevant is information on the sizes of various sectors of the economy, as they are possible sources for the goods and services that might be needed.

1.6.2.2 Infrastructure and Community Services

Section 3, Infrastructure and Community Services contains detailed, community-specific information on infrastructure facilities, including descriptions of:

- water supply
- disposal of liquid and solid waste
- power supply and fuels used
- air, land, rail and water transport arrangements and frequencies
- communication facilities and services
- housing conditions and recreation facilities

This section also includes a discussion of governance.

1.6.2.3 Individual, Family and Community Wellness

Section 4, Individual, Family and Community Wellness describes individual, family and community wellness. Much of the information relates to wellness aspects and influence, including:

- physical, mental and emotional health
- family relationships
- community behaviours

Most of the data on wellness is negative, e.g., rates of illness, family violence and crimes, rather than positive, i.e., healthfulness, family solidarity or good citizenship, because official data is not often collected or reported publicly on positive indicators.

This section describes the following influences that affect wellness:

- individual, e.g., substance abuse, and the problems it causes
- institutional, e.g., levels of problem conditions reported by protective and helping agencies, health and social service professionals, and police

Section 4 also provides information on agencies and programs, and relevant statistics related to those influences.

1.6.2.4 Traditional Culture

Section 5, Traditional Culture provides available information on traditional culture, which includes the knowledge, skills, disciplines, beliefs and values of the Aboriginal people. Traditional culture is important to them because it is:

- their principal source of pride, worth, distinctiveness and identity
- the basis for harvesting the benefits and meeting the challenges of survival on the land they respect and love
- their primary defence against the prejudice and discrimination sometimes experienced from Euro-Canadians

Indicator data for beliefs and values is currently unavailable for the DTFN communities.

Three cultural indicators, based on people's activities, are currently available for the DTFN communities:

- involvement in traditional harvesting
- the amount of country food consumed
- the ability to speak a traditional language

Traditional harvesting has an important physical and psychological influence on wellness in Aboriginal communities. Wild fish, game, plants and berries are nutritionally superior to processed food and are sources of natural medicine (Usher 1976). Furthermore, country foods are shared within a community, thereby enhancing community solidarity. Preserving traditional language has an important psychological influence on wellness by helping to establish feelings of identity and purpose.

1.6.2.5 Nontraditional Land and Resource Use

Section 6, Nontraditional Land and Resource Use describes existing land and resource uses for nontraditional users, including residents and nonresidents within northwestern Alberta. The focus is on the land or resource uses that the projects could affect, including:

- granular resources
- timber resources
- mineral resources
- oil and gas activities
- nontraditional resource harvesting, including hunting and fishing
- tourism and recreation
- other commercial activities
- environmentally protected areas
- visual and aesthetic resources

In addition to discussions of these valued components, a description of land ownership in the DTFN area is also provided.

1.6.2.6 Heritage Resources

The objective of Section 7, Heritage Resources is to provide a synopsis of the prehistoric and historic culture of the DTFN area, to:

- determine the relative heritage resource potential of component areas of the projects
- interpret and evaluate the heritage resources encountered during the 2002 and 2003 field work program
- formulate recommendations to manage effects of the projects on heritage resources

1.6.3 Information Collection and Verification

Collecting data for this volume involved:

- collecting quantitative and qualitative data
- verifying data in the community

Quantitative data was obtained from:

- 1996 and 2001 censuses of Canada

- special surveys conducted by the Government of Canada and the Government of the Northwest Territories (GNWT)
- GNWT Health and Social Services (HSS)
- Royal Canadian Mounted Police (RCMP) administrative records

Relevant information was also obtained from literature reviews. In addition, government agencies were helpful in providing several special tabulations.

Government agencies and nongovernmental organizations (NGOs) provided details on staffing, resources, policies, training and other programs.

Qualitative data was obtained during interviews with community and territorial officials and other knowledgeable people during visits to all the study area communities that may be affected by the projects. Many of these visits were to:

- collect baseline information
- review it with local knowledgeable people
- seek corrections, qualifications and valuable additional information

In the broader context of public participation in the EIS, two rounds of community meetings and regional workshops were held to:

- share Mackenzie Gas Project information
- gather community feedback on the Mackenzie Gas Project description
- identify and verify key issues and concerns
- identify potential effects and suitable mitigation measures

The meetings provided valuable qualitative information, based on local experience and insights.

To protect the identity of individuals, information obtained during interviews has usually been attributed to an organization, rather than citing an individual's name. In other cases, names and dates have been cited in the text and the information about the personal communication provided in the list of references.

For further information on the public participation process, see Volume 1, Section 4, Public Participation of the EIS.

1.7 Data Limitations

To the extent possible, information contained in the EIS has been supplemented by data and information available at the community level. For Volume 4B, in order that regional and community presentations are internally consistent and comparable, only limited new data is presented. However, the report may include

data previously collected, but not presented in Volume 4 of the EIS or in *EIS Supplemental Information: Northern Alberta*. Many of the communities in northwestern Alberta and the Northwest Territories have a relatively small population, which means that data collected by Statistics Canada and other agencies, at the community level, is either suppressed or has limitations for reasons of maintaining confidentiality. This means that in several instances information and analysis is constrained to a regional level discussion.

Currently, predictions of the effects of the projects on northwestern Alberta residents are constrained because the requisite information is incomplete or lacking. Projecting the effects of development depends first on having a reasonably complete and accurate description of baseline conditions in the region or communities that might benefit or suffer from the effects of project activity. The available information on northwestern Alberta (see the EIS, Volume 4, Socio-Economic Baseline) is incomplete because the DTFN limited its participation to providing certain statistics and administrative data, pending a broader project agreement with the project proponents. Therefore, necessary public and key informant participation in the EIS was not possible. This limits the SEIA findings.

Given the broad similarities between the situations of the people in northwestern Alberta and some of the Deh Cho communities in the Northwest Territories, broad generalizations about expected residual effects of the projects can be made. These generalizations are based on:

- what is now known about the people in the affected communities
- ways in which the pipeline and associated facilities will probably be built
- the health and social services available in northwestern Alberta

These are included in the various relevant key question discussions.

Adequate data was obtained in the predominantly non-Aboriginal service centres of High Level, Rainbow Lake and Zama City. The assessed effects apply only to construction. Most employment numbers and opportunities generated by the projects will end once design and construction, associated cleanup, and site reclamation activities are complete. Few people in this region are likely to obtain employment on the projects during operations. The operations of NGTL facilities will be integrated into existing NGTL programs in the region. Accordingly, there will be no significant socio-economic effects induced by NGTL project operations in northwestern Alberta.

1.7.1 Context for Understanding the Data

In creating descriptions of baseline conditions, the analysts assessed and synthesized the qualitative and quantitative information collected. These descriptions are based on verified published data and reflect documented opinions

of regional and local public service delivery personnel. However, the evaluation of socio-economic conditions is subjective. Both groups and individuals, whether trained social scientists or not, have valid but varied opinions on the importance of individual issues and what these might mean with regard to community wellness.

The socio-economic baseline conditions set the stage for predicting the specific aspects of a community that may change because of project influences, either those that may benefit from project effects, e.g., employment and income, or those that may be adversely affected, e.g., health and wellness conditions.

1.7.2 Data and Indicators

Accurate descriptions of existing baseline conditions, and the eventual monitoring of possible project effects, depend on quantitative and qualitative indicators, which are vulnerable to several types of distortion:

- quantitative, statistical data include administrative statistics, e.g., health care treatments, police, child welfare and suicide, and data from the census and special surveys. Administrative data may vary because of:
 - changes in policies, e.g., health care, police, child welfare policies
 - how individual practitioners interpret or implement policy
 - the care with which data is recorded
- census and other survey data is flawed by under-enumeration. Particular difficulties occur in census taking in Aboriginal communities, including the DTFN, because many people leave communities to hunt, fish or visit. Attempts to reach them by telephone and repeated visits to small, outlying communities can fail.
- qualitative data refers essentially to generalizations about past and current conditions, and expected trends obtained from knowledgeable community residents. These include service delivery personnel, i.e., health, police, education and social services, personnel, and residents of local communities. Each group may not have previously shared their information with the other groups.

1.7.3 Limitations of Low-Frequency Data

Statistics Canada randomly rounds frequency data to zero or five. When such rounded and imprecise frequencies are converted to percentages, the totals of these percentages sometimes do not sum to 100%. When the rounded low-frequency data for very small populations is converted to percentages, the total is commonly higher or lower than 100%, depending on the distortions caused by the rounding.

For most of the small communities, creating community-specific socio-economic indicators based on statistical tabulations might not produce reliable results. In these situations, the qualitative data collected in interviews with knowledgeable individuals is often critical in clarifying the significance of available data and making valid interpretations. This situation applies to the DTFN communities.

Any problems associated with interpreting data for small community populations can be avoided by aggregating the data for such communities when they share similar characteristics. For example, Rainbow Lake, Zama City and the DTFN communities of Chateh, Meander River and Bushe River all have small populations. As a result, public agencies sometimes pool data for Rainbow Lake and Zama City, and sometimes for all five communities, reporting data only for the combined Census Division (CD) 17. Health data for northern Alberta communities is commonly reported only for all of the Rainbow Health Region.

2 PEOPLE AND THE ECONOMY

2.1 Introduction

This section describes the people of the Dene Tha' communities and their economy, including:

- population composition and dynamics
- economic activity
- labour force
- income sources and amounts
- cost of living

The economy has traditional and monetary components, with the monetary component increasingly dependent on mineral extraction and hydrocarbon-related resources. See Section 5, Traditional Culture for information on participation in the dual economy.

2.2 Population Composition and Dynamics

The DTFN population resides in three largely Aboriginal reserves at Chateh, Meander River and Bushe River in northwestern Alberta. Table 2-1 shows that the total on-reserve population in 2001 was 1,580. Each of the three reserves had a population increase between 1991 and 2001. However, the growth at Bushe River was 174%. As the most recently established Dene Tha' community and the one closest to High Level, it was also the most rapidly growing.

Table 2-1: Census Counts and Total Registered Populations in the Dene Tha' Communities

| Location | 1991 (No.) | 1996 (No.) | 2001 (No.) | Growth 1991–2001 (%) | Total Registered Population 2004 ¹ (No.) |
|---|---------------|---------------|---------------|----------------------------|---|
| DTFN total² | 1,222 | 1,340 | 1,580 | 29 | 2,358 |
| Chateh | 773 | 836 | 915 | 18 | – |
| Meander River | 333 | 338 | 347 | 4 | – |
| Bushe River | 116 | 166 | 318 | 174 | – |
| NOTES: | | | | | |
| – = data not available | | | | | |
| 1 From Indian and Northern Affairs Canada (INAC) (2004) | | | | | |
| 2 Including those both on and off reserves | | | | | |
| SOURCES: Statistics Canada (2001, 2003a), INAC (2004) | | | | | |

In Table 2-2, census data for 2001 shows that 94% of the combined populations of the three Dene Tha' communities was Aboriginal, almost exclusively Dene. In Chateh, only 3% of the population was non-Aboriginal, whereas in both Meander River and Bushe River this figure was 8%.

Table 2-2: Ethnicity in the Dene Tha' Communities (2001)

| Ethnic Origin | DTFN | | Chateh | | Meander River | | Bushe River | |
|---|--------------|------------|--------|-----|---------------|-----|-------------|-----|
| | No. | % | No. | % | No. | % | No. | % |
| Total Aboriginal and non-Aboriginal population (20% sample) ¹ | 1,545 | 100 | 915 | 100 | 345 | 100 | 315 | 100 |
| Aboriginal origins population ² | 1,455 | 94 | 885 | 97 | 335 | 90 | 285 | 90 |
| Non-Aboriginal population | 80 | 5 | 30 | 3 | 10 | 8 | 25 | 8 |
| NOTE: | | | | | | | | |
| 1 Based on data for a 20% sample of the total population | | | | | | | | |
| 2 Includes all First Nations, Inuit, Métis and multi-origin Aboriginal people | | | | | | | | |
| SOURCE: Statistics Canada (2002) | | | | | | | | |

Five-year mobility statistics for 2000 show that an average of 35% of residents on the three reserves moved to different residences during the previous five years. Only 11% moved from one community to another. Most of the movers and migrants lived in Bushe River, the newest of the three Dene Tha' communities (Statistics Canada 2001).

2.3 Economic Activity

Table 2-3 presents the distributions of male and female labour force members by standard occupational groupings for the Dene Tha' communities for 1991 and 2001. The few small Statistics Canada changes in occupational categories between 1991 and 2001 make little, if any, difference, given the level of aggregation in the table.

Table 2-3: Labour Force by Standard Occupational Categories in Census Division 17 and the Dene Tha' Communities

| Occupation | Gender | CD 17 | | DTFN | | Chateh | | Bushe River | | Meander River | |
|-------------------------|--------------|-------|--------|------------|------------|--------|------|-------------|------|---------------|------|
| | | 1991 | 2001 | 1991 | 2001 | 1991 | 2001 | 1991 | 2001 | 1991 | 2001 |
| Labour force, 15+ years | Total (No.) | – | 27,655 | 400 | 485 | 240 | 270 | 65 | 120 | 95 | 95 |
| | Male (No.) | – | 16,020 | 225 | 285 | 140 | 160 | 30 | 65 | 55 | 60 |
| | Female (No.) | – | 11,635 | 165 | 190 | 95 | 110 | 30 | 50 | 40 | 30 |
| All occupations | Total (No.) | – | 27,185 | 365 | 445 | 220 | 245 | 60 | 115 | 85 | 85 |
| | Male (No.) | – | 15,790 | 220 | 265 | 135 | 145 | 35 | 65 | 50 | 55 |
| | Female (No.) | – | 11,400 | 145 | 175 | 85 | 95 | 25 | 50 | 35 | 30 |

Table 2-3: Labour Force by Standard Occupational Categories in Census Division 17 and the Dene Tha' Communities (cont'd)

| Occupation | Gender | CD 17 | | DTFN | | Chateh | | Bushe River | | Meander River | |
|--|------------|-------|------|------|------|--------|------|-------------|------|---------------|------|
| | | 1991 | 2001 | 1991 | 2001 | 1991 | 2001 | 1991 | 2001 | 1991 | 2001 |
| Management, business, finance and administration occupations | Total (%) | – | 20 | 6 | 15 | 5 | 12 | 5 | 22 | 5 | 12 |
| | Male (%) | – | 9 | 5 | 4 | 7 | 7 | 0 | 20 | 0 | 0 |
| | Female (%) | – | 14 | 0 | 13 | 0 | 16 | 0 | 20 | 0 | 33 |
| Clerical occupations | Total (%) | – | 6 | 4 | 7 | 7 | 4 | 7 | 17 | 7 | 0 |
| | Male (%) | – | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Female (%) | – | 9 | 10 | 8 | 18 | 10 | 0 | 20 | 0 | 0 |
| Natural and applied sciences, and related occupations | Total (%) | – | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Male (%) | – | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Female (%) | – | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Health occupations | Total (%) | – | 2 | 3 | 4 | 5 | 0 | 5 | 9 | 5 | 12 |
| | Male (%) | – | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 18 |
| | Female (%) | – | 4 | 7 | 4 | 0 | 10 | 0.4 | 0 | 0.4 | 0 |
| Social services, education, government service and religious occupations | Total (%) | – | 8 | 12 | 15 | 11 | 12 | 11 | 17 | 11 | 18 |
| | Male (%) | – | 4 | 0 | 11 | 0 | 7 | 0 | 15 | 0 | 18 |
| | Female (%) | – | 10 | 28 | 17 | 24 | 26 | 40 | 20 | 40 | 33 |
| Art, culture, recreation and sport occupations | Total (%) | – | 1 | 3 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| | Male (%) | – | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Female (%) | – | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sales and service occupations | Total (%) | – | 19 | 30 | 26 | 25 | 26 | 25 | 26 | 25 | 24 |
| | Male (%) | – | 9 | 11 | 9 | 11 | 17 | 29 | 0 | 29 | 0 |
| | Female (%) | – | 24 | 52 | 28 | 47 | 42 | 60 | 40 | 60 | 50 |
| Trades, transport and equipment operators, and related occupations | Total (%) | – | 23 | 22 | 30 | 23 | 31 | 23 | 26 | 23 | 35 |
| | Male (%) | – | 36 | 32 | 47 | 33 | 48 | 29 | 46 | 29 | 46 |
| | Female (%) | – | 3 | 7 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| Occupations unique to the primary industry | Total (%) | – | 18 | 23 | 11 | 20 | 12 | 20 | 9 | 20 | 12 |
| | Male (%) | – | 25 | 36 | 17 | 33 | 17 | 29 | 15 | 29 | 18 |
| | Female (%) | – | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Occupations unique to the processing, manufacturing and utilities industries | Total (%) | – | 6 | 0 | 5 | 0 | 4 | 0 | 9 | 0 | 0 |
| | Male (%) | – | 9 | 0 | 8 | 0 | 7 | 0 | 15 | 0 | 0 |
| | Female (%) | – | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Occupations not classified elsewhere | Total (%) | – | – | – | – | – | – | – | – | – | – |
| | Male (%) | – | – | – | – | – | – | – | – | – | – |
| | Female (%) | – | – | – | – | – | – | – | – | – | – |

NOTES:

– = data not available

Number and percentage of population, aged 15 years and older

Because census data is independently randomly rounded (all numbers end in a 5 or 0), totals may not add to 100, especially in small communities (see Section 1.7.3, Limitations of Low-Frequency Data)

SOURCE: Statistics Canada (1991, 2001), prepared by GNWT Bureau of Statistics

As in the other regions, this data shows the most frequent occupational categories in the DTFN in 2001 were trades and transport, sales and service, and social service occupations, followed by primary industry, and management and business occupations. Compared to the CD 17 total labour force, the Dene Tha' labour force is under-represented in management and business, science, and primary industry occupations. This comparison shows that the DTFN labour force is over-represented in social service, sales and service, and trades and transport occupations.

Fewer people were in primary industry, and sales and service occupations in 1991 than in 2001, but more people were in trades and transport, and management and business occupations.

A gender comparison of the 2001 occupational grouping data for the DTFN shows that women were under-represented in trades and transport, primary industry, and processing and manufacturing occupations. Women were over-represented in management and business, clerical, government services, and sales and service occupations.

2.4 Labour Force

Labour force activity in the Dene Tha' communities was at a lower level than in the Northwest Territories regions. Table 2-4 shows that in 2001, the participation rate averaged 46%, the employment rate 37% and the unemployment rate 19%, with the employment rate higher and the unemployment rate substantially lower than in 1991. The male participation, employment and unemployment rates were higher than those for females in 2001. However, the female unemployment rate was only slightly lower than the male rate in 2001.

Table 2-4: Participation, Employment and Unemployment in the Dene Tha' Communities

| Location | Gender | 1991 | | | | 2001 | | | | Difference (2001 minus 1991) | | |
|------------------|---------------|---------------|--------------|--------------|----------------|---------------|--------------|--------------|----------------|---------------------------------|--------------|----------------|
| | | Pop. (No.) | Part. (%) | Empl. (%) | Unempl. (%) | Pop. (No.) | Part. (%) | Empl. (%) | Unempl. (%) | Part. (%) | Empl. (%) | Unempl. (%) |
| CD 17 | Total | – | – | – | – | 39,400 | 70 | 64 | 9 | – | – | – |
| | Male | – | – | – | – | – | – | – | – | – | – | – |
| | Female | – | – | – | – | – | – | – | – | – | – | – |
| DTFN | Total | 855 | 45 | 32 | 32 | 1,060 | 46 | 37 | 19 | 1 | 5 | -13 |
| | Male | 455 | 48 | 32 | 32 | 550 | 52 | 41 | 21 | 4 | 9 | -11 |
| | Female | 400 | 43 | 33 | 33 | 510 | 39 | 31 | 20 | -4 | -2 | -13 |
| Chateh | Total | 525 | 44 | 32 | 30 | 615 | 44 | 34 | 20 | 0 | 2 | -10 |
| | Male | 280 | 50 | 32 | 36 | 280 | 49 | 39 | 22 | -1 | 7 | -14 |
| | Female | 245 | 64 | 36 | 29 | 290 | 38 | 29 | 18 | -26 | -7 | -11 |
| Meander River | Total | 220 | 41 | 27 | 39 | 240 | 40 | 31 | 21 | -1 | 4 | -18 |
| | Male | 120 | 42 | 25 | 50 | 130 | 46 | 35 | 25 | 4 | 10 | -25 |
| | Female | 100 | 40 | 35 | 25 | 110 | 32 | 27 | 29 | -8 | -8 | 4 |

Table 2-5: Participation, Employment and Unemployment in the Dene Tha' Communities

| Location | Gender | 1991 | | | | 2001 | | | | Difference (2001 minus 1991) | | |
|-------------|--------|---------------|--------------|--------------|----------------|---------------|--------------|--------------|----------------|---------------------------------|--------------|----------------|
| | | Pop. (No.) | Part. (%) | Empl. (%) | Unempl. (%) | Pop. (No.) | Part. (%) | Empl. (%) | Unempl. (%) | Part. (%) | Empl. (%) | Unempl. (%) |
| Bushe River | Total | 110 | 59 | 41 | 31 | 205 | 57 | 50 | 13 | -2 | 9 | -18 |
| | Male | 55 | 55 | 46 | 33 | 95 | 68 | 58 | 15 | 13 | 12 | -18 |
| | Female | 55 | 64 | 36 | 29 | 110 | 50 | 41 | 18 | -14 | 5 | -11 |

NOTES:

– = data not available

Pop. = population

Part. = participation rate, which is the percentage of population, aged 15 years and older in the labour force

Empl. = employment rate, which is the percentage of population, aged 15 years and older employed during the week before the survey

Unempl. = unemployment rate, which is the percentage of the labour force that was unemployed during the week before the survey

Statistics for very small communities are uncertain and should be considered with caution

Because census data is independently randomly rounded (all numbers end in a 5 or 0), totals may not add to 100, especially in small communities (see Section 1.7.3, Limitations of Low-Frequency Data)

SOURCE: Statistics Canada (1991, 2001)

Labour force participation data for the Chateh, Bushe River and Meander River populations in 2001 shows the Dene Tha' participation rate for 2001, 46%, is only about two thirds as high as that for CD 17, in which these communities are located. Bushe River had the highest participation rate, 57%, and the lowest, only 40%, was found in Meander River. Employment rates followed similar trends. Unemployment rates were ranked in reverse order, with the highest rate, 21%, in Meander River and the lowest, 13%, in Bushe River.

2.5 Income Sources and Amounts

No information is available on corporate income for the DTFN.

Table 2-6 shows the available information on employment and total incomes for the Dene Tha' communities. Average employment income is higher than average total income, because some of the people included in the average total income category are unemployed or unable to work.

Table 2-6: Average Employment and Total Income for Census Division 17 and Dene Tha' Communities

| Year | Gender | CD 17 | | DTFN ¹ | | Chateh | | Meander River | | Bushe River | |
|------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | Empl. Income (\$) | Total Income (\$) | Empl. Income (\$) | Total Income (\$) | Empl. Income (\$) | Total Income (\$) | Empl. Income (\$) | Total Income (\$) | Empl. Income (\$) | Total Income (\$) |
| 1990 | Total | – | – | 12,605 | – | 13,480 | – | 10,653 | – | – | – |
| | Male | – | – | 11,994 | – | 12,753 | – | 10,010 | – | – | – |
| | Female | – | – | 13,704 | – | 14,765 | – | 11,884 | – | – | – |
| 2000 | Total | 27,771 | 25,062 | 18,582 | 13,888 | 18,794 | 13,454 | 15,331 | 11,636 | 21,722 | 17,528 |
| | Male | 34,626 | 32,466 | 21,885 | 15,649 | 20,639 | 14,359 | 16,745 | 12,290 | 29,686 | 21,903 |
| | Female | 18,713 | 17,119 | 15,769 | 12,175 | 16,238 | 12,436 | 12,974 | 10,883 | 19,251 | 13,654 |

NOTES:

– = data not available or held confidential because of low frequencies

Empl. = employment

¹ Excludes communities from DTFN total calculations for which data is unavailable

SOURCE: Statistics Canada (1991, 2001)

Between 1990 and 2000, the employment incomes of both men and women have increased, although men had greater increases. Sizable differences existed in the employment and total incomes among these communities in 2000. Bushe River had the highest incomes and Meander River the lowest.

Personal income levels among the registered Dene Tha' in 1995 were similar to those of the Northwest Territories Dene, but the earnings of the nonregistered Dene Tha' averaged almost twice that of the Northwest Territories Dene (Statistics Canada 1996).

For the Dene Tha' communities, information on income support is available only as a percentage of total income. Table 2-7 shows a 5% decline in this percentage between 1990 and 2000. In agreement with the employment data cited, in 2000 Bushe River had the lowest, and Meander River the highest, percentages of total income that could be ascribed to transfer payments.

Table 2-7: Transfer Income as a Percentage of Total Income in the Dene Tha' Communities

| Year | DTFN (%) | Chateh (%) | Meander River (%) | Bushe River (%) |
|------|-----------|------------|-------------------|-----------------|
| 1990 | 30 | 28 | 35 | – |
| 2000 | 25 | 26 | 32 | 16 |

NOTE:

– = data not available or frequency too small to be expressed

SOURCE: Statistics Canada (1991, 2001)

2.6 Cost of Living

Data on cost of living and food price differentials is not available for the Dene Tha' communities.

3 INFRASTRUCTURE AND COMMUNITY SERVICE

3.1 Introduction

This section describes the physical infrastructure, services and governance arrangements that affect the quality of life of people, families and the communities in which they live. Included are:

- transportation infrastructure
- utilities, i.e., water and waste disposal
- energy and communications
- housing
- local recreation facilities

A discussion of governance is also included in this section.

3.2 Transportation Infrastructure

All three Dene Tha' communities, Chateh, Meander River and Bushe River, have convenient highway access and railway access through High Level. Several flights connect High Level with Edmonton, Calgary, Peace River, Fort St. John and Fort Nelson. There is also air service between Rainbow Lake and Edmonton.

3.3 Utilities, Energy and Communications

Utilities in the Dene Tha' communities are similar to those available in other small communities in northern Alberta. Power is provided in all three communities, and Chateh and Bushe River use natural gas fuel from gas wells owned by the Dene Tha'. In Meander River, propane fuel is piped into homes from several large holding tanks.

Telephone lines, TV, radio and Internet service are available in all of the Dene Tha' communities.

3.4 Housing and Recreation

No statistical data is available on housing conditions in the Dene Tha' communities. According to DTFN residents interviewed in 2002, much substandard housing and overcrowding exist in all three communities.

The Dene Tha' communities are less well equipped with recreational facilities than the territorial communities and, in particular, facilities for children and young people are lacking. However, communal recreation facilities in High Level are easily accessible to residents of Bushe River.

3.5 Governance

The DTFN comprises seven reserves, of which three, i.e., Chateh, Meander River and Bushe River, are permanently inhabited. The total population of the Dene Tha' reserves in 2003 was 2,358 (Statistics Canada 2003a). The head office of the DTFN is in Chateh, Alberta. The administrative authority of the DTFN is the Aboriginal Council, composed of the chief and eight council members, all elected for four-year terms according to a community-based election system devised by the Dene Tha'.

4 INDIVIDUAL, FAMILY AND COMMUNITY WELLNESS

4.1 Introduction

This section describes community wellness in the study area, which refers to the physical, emotional, social and economic well-being of all components of a community, including individuals and families as a functioning whole.

Aboriginal people have long recognized the interaction and interdependence of physical, emotional, mental and social well-being. Viewing the spiritual as the centrally important component, some Aboriginal communities have formed healing circles to deal with family issues, sentencing and rehabilitation of offenders, and the debilitating problems of those who experienced various forms of abuse while attending residential schools.

The influence of these interrelated concerns is seen in this section on individual, family and community wellness, which deals with wellness-conserving facilities and services, and the conditions and activities of people to which these services must respond. Information is provided on:

- health conditions
- health care facilities and services
- family concerns and community conditions
- social service facilities and services
- education and training

4.2 Health Conditions

Presently there is no statistical data relating to health conditions and services among the DTFN.

Tobacco is widely used among the DTFN. People often start smoking at the young age of 14 years, and many who do not smoke, chew tobacco. The percentage of smokers is also high among the Elders (DTFN residents 2002, personal communication).

Health concerns in the DTFN include:

- diabetes, which has increased notably during the past decade
- various cancers
- hypertension
- heart disease

Heart disease might be associated with alcohol abuse. Substance abuse program meetings are held monthly in Meander River and Bushe River.

Although statistical data is not available, residents indicate that sexually transmitted infections (STIs) are not rare among Dene Tha' community residents (DTFN residents 2002, personal communication).

Common injuries include those associated with:

- alcohol-related fights
- falls on the ice
- snowmobile, all-terrain vehicle and bicycle accidents

Bushe River residents experience more traffic and highway-related injuries than those in the other two communities. Pedestrians are often injured while on the highway, walking between Bushe River and High Level (Meander River nurses 2004, personal communication).

Alcohol abuse is a contributing factor in many deaths in DTFN communities, and the incidence of alcohol-related deaths has risen during the last 10 to 20 years, often resulting from:

- exposure
- cold weather
- drowning
- automobile accident
- suicide

People less than 50 years of age are the most frequent victims (DTFN residents 2002, personal communication).

Mental wellness data is not currently available for the Dene Tha'. However, through the Assembly of First Nations, the DTFN participated in the Mental Health Working Group, which produced the *Mental Wellness Framework* (see the EIS, Volume 4, Section 4.7.1, Health Conditions [DTFN]). The publication states: *current responses to mental wellness among (Aboriginal people) are not working and that Aboriginal solutions to Aboriginal wellness are needed* (Mental Health Working Group et al. 2002: F5).

4.3 Health Care Facilities and Services

Table 4-1 shows the health care facilities available to the Dene Tha' communities. The large Chateh nursing station and the smaller Meander River health centre deliver health care to the Dene Tha'. A new, larger health centre is under construction, and it will replace these facilities. A nurse visits Bushe River once a week to deal with minor needs, but this community has easy access to nearby High Level. Hospitalization is available in High Level or, for serious conditions, in Edmonton.

Table 4-1: Health Care Facilities in the Dene Tha' Communities (2001)

| Location | Description of Facilities |
|---|---------------------------|
| Chateh | Nursing station |
| Meander River | Health centre |
| Bushe River | Nurse visits weekly |
| SOURCE: Chateh health care personnel, 2003, personal communication; Meander River health care personnel, 2003, personal communication | |

4.4 Family and Community Conditions

Formal Mackenzie Gas Project community consultation meetings have not occurred in the Dene Tha' communities. As a result, this section is based on informal conversations with local people and key leadership organizations, but without local verification and additional input from other DTFN residents.

No data is available on teenage mothers, but it was reported that teenage pregnancies are not common in the Dene Tha' communities. The 2001 census indicated that the percentage of lone parents for the DTFN was 35%, higher than the 28% reported for most of the Aboriginal communities in the Northwest Territories (Statistics Canada 2001).

Alcohol abuse occurs in the Dene Tha' communities and, as elsewhere, it is sometimes associated with family or community violence. Officers in the Assumption and High Level RCMP detachments identified a pattern common to some residents of the Dene Tha' communities in which the communities experience increased levels of alcohol abuse, violence and petty crimes when men return home from seasonal work. Some men returning from seasonal work with pay cheques may go to High Level to cash their cheques, consume alcohol and cause policing problems. Some may return to their home community with alcohol, and consume alcohol there. They may become violent in their family or community, or become involved in petty crimes (Assumption RCMP officers 2004, personal communication; High Level RCMP officers 2004, personal communication).

Generally, crime rates are high in the Dene Tha' communities. Chateh has the highest rate of criminal offences in Alberta (Assumption RCMP officers 2004, personal communication). Bushe River and Meander River also have above-average crime rates (High Level RCMP officers 2004, personal communication). Alcohol abuse is the main contributor to the high crime rates in all three communities (Assumption RCMP commanding officer 2004, personal communication; High Level RCMP commanding officer 2004, personal communication). Breaking-and-entering, assault, impaired driving, and vandalism are the most common offences (DTFN residents 2002, personal communication). To deal with these problems, six of the seven RCMP officers in the Assumption

detachment are assigned to Chateh, and one is assigned to Rainbow Lake, although both have populations similar in size (Assumption RCMP officers 2004, personal communication).

Some of the information on child welfare conditions in the EIS, Volume 4, Section 4.8, Baseline Conditions (Industrial and Commercial Centres in Northwestern Alberta), is relevant because child protection services are delivered to the Dene Tha' from High Level.

4.5 Social and Protection Facilities and Services

The social service facilities on the Dene Tha' reserves include:

- a social services office and a group home in Chateh for troubled youth that delivers some basic schooling and teaches life skills
- a social services office in Meander River
- a social services office and the North Peace Tribal Council Office in Bushe River

The social service offices supply child welfare and social assistance services in each of the three communities. In addition, they deliver counselling and community wellness programs, and offer:

- youth services
- grievance and alcohol counselling
- substance abuse programs
- adult in-home care
- a family violence healing team

Child and family services are also provided in Bushe River at the North Peace Tribal Council Office.

Chateh has a local (Assumption) RCMP detachment. The High Level RCMP detachment, working with the North Peace Tribal Police Service, polices Meander River and Bushe River. Volunteer fire departments serve Chateh and Meander River. Chateh has new firefighting facilities. The North Peace Tribal Council provides a fire safety officer, who is responsible for:

- conducting fire inspections
- facilitating fire safety training programs
- training local firefighters
- investigating the causes of fires
- maintaining statistical information relating to fire losses

4.6 Education and Training

4.6.1 Levels of Education and Training

Table 4-2 shows that the percentage of DTFN residents who are high school graduates increased from 22% in 1991 to 27% in 2001, whereas those with post-secondary training increased from 18% to 22%.

Table 4-2: Education Attainment Levels of Dene Tha' Community Residents

| Location | High School Graduate | | Some Post-Secondary Education | | Some Trades or Technical Training | | Some College or University Education | |
|---|----------------------|-----------|-------------------------------|-----------|-----------------------------------|----------|--------------------------------------|-----------|
| | 1991 (%) | 2001 (%) | 1991 (%) | 2001 (%) | 1991 (%) | 2001 (%) | 1991 (%) | 2001 (%) |
| CD 17 | – | 51 | – | 41 | – | 14 | – | 27 |
| DTFN total | 22 | 27 | 18 | 22 | 13 | 8 | 5 | 14 |
| Chateh | 22 | 26 | 19 | 21 | 11 | 9 | 8 | 12 |
| Meander River | 16 | 12 | 11 | 8 | 11 | 0 | 0 | 8 |
| Bushe River | 29 | 57 | 19 | 43 | 19 | 17 | 0 | 26 |
| NOTES: – = indicates data not available Percentage of population, aged 15 years and older | | | | | | | | |
| SOURCE: Calculated from Statistics Canada (1991, 2001) | | | | | | | | |

In both 1991 and 2001, the highest rates of high school graduation were for Bushe River, which has the youngest population, and the lowest rates were for Meander River. In 1991, 19% of both the Chateh and Bushe River populations had some post-secondary training, and by 2001, those with some post-secondary education had increased to 21% in Chateh and 43% in Bushe River.

4.6.2 Education and Training Facilities

The Dene Tha' have schools that meet Alberta standards on the Chateh and Meander River reserves. Bushe River students attend school in High Level.

Table 4-3 provides information on DTFN schools. The Chateh Community School, opened in fall 2002, provides kindergarten to Grade 12 and a Head Start Program. This school accommodates up to 450 students, well over the current 250 to 350 enrollment numbers. The second school for Dene Tha' children, in Meander River, was built in 2000 and offers kindergarten to Grade 9. Some Dene Tha' children attend regional public schools, which offer kindergarten to Grade 12 classes. The Fort Vermillion School Division No. 52 operates the Meander River School and the regional public schools.

Table 4-3: School Profile Data in the Dene Tha' First Nation Area (2002)

| Location | School | Teachers (No.) | Grades Taught | School Capacity (No.) | School Enrollment (No.) |
|---|-------------------------|---------------------------|--------------------------|--------------------------------------|--|
| Chateh | Chateh Community School | – | K to 12 | 450 | 250–350 |
| Meander River | Upper Hay River School | 18 | K to 9 | about 280 | about 200 |
| Bushe River ¹ | – | – | – | – | – |
| <p>NOTE: – = data not available K = kindergarten 1 bussed to Hay River</p> | | | | | |
| <p>SOURCE: DTFN and Fort Vermillion School Division personnel (2002, personal communication)</p> | | | | | |

The Dene Tha' are seeking to attract Slavey-speaking teachers. Cultural programs in the Chateh and Meander River schools teach Dene.

The North Peace Tribal Council administers post-secondary education resources, in part making use of an interactive video-conferencing network that connects several of the reserve communities (DTFN residents 2002, personal communication). A variety of adult education and post-secondary options, including adult upgrading programs, are available in Chateh, Meander River and Bushe River. The Dene Tha' have a partnership with Fairview College for a variety of programs and courses.

5 TRADITIONAL CULTURE

5.1 Introduction

In common with all cultures, the Dene Tha' culture includes knowledge, skills, disciplines, beliefs and values. Of these, beliefs and values are the most important, because they inform what life is about and how it is to be lived. Knowledge, skills and disciplines make it possible for individuals to act on their beliefs and values, to be themselves and live a culturally determined good life.

Traditional culture is of prime importance to many Aboriginal people because it is their:

- principal source of pride, worth, distinctiveness and identity
- basis for harvesting the benefits of and meeting the challenges of surviving on the land they respect and love
- primary defence against the prejudice and discrimination sometimes shown by those from other cultures

Indicator data showing adherence to traditional beliefs and values and traditional harvesting is currently not available for the study area communities.

Indicators of culture can be seen in people's behaviour. Culture is reflected in activities that are shaped by beliefs and values, activities that make use of traditional knowledge, skills and disciplines. What people do and are able to do thus serve as indicators of their involvement in traditional culture. The following activity-based indicators are used in this section:

- involvement in traditional harvesting
- the amount of country food consumed
- the ability to speak a traditional language

In Volume 4 of the EIS, the section on historical background and political organization provides an overview of the historical backgrounds of the Dene people. Included is information on:

- the Dene Tha' culture
- contact with Euro-Canadians
- the changes induced by these many contacts over time on the Dene Tha' livelihood and culture

An inevitable result of these contacts is that some monetary income is now a necessity for Aboriginal people. Those who harvest wildlife are now active in a dual monetary and traditional in-kind economy.

Hunting and fishing, and consuming country food are discussed in the context of the dual economy, an important feature throughout most of the study area. Trapping is discussed because, by Euro-Canadian standards, it is lonely, hard and dangerous work. The trapper must have most of the same lore, skills and disciplines that were essential to the survival of forebearers in the pre-contact millennia. Language retention is taken as an indicator of cultural retention because appreciation of traditional, deeper, spiritual relationships can best be comprehended in traditional language terms.

The data presented in this section is from published statistical compilations. Additional information will be documented in ongoing traditional knowledge studies.

5.2 Participation in Traditional Harvesting

The Dene Tha' are actively involved in the dual economy. The whole First Nation has only 43 registered traplines and 43 accredited trappers. However, it is reported that enthusiasm for trapping is seen in the large number of young trappers, 247. This includes four women, and 50% of men aged 15 to 64 years. Dual economy participation is also reflected in DTFN trappers taking employment in the oil and gas industry if furbearers are scarce or the fur market is bad. Trappers are usually involved in seasonal work, such as slashing (Chateh residents 2004, personal communication).

The traditional component of the Dene Tha' dual economy is also seen in the importance of harvested game, bird, fish and plant foods. Moose is the most important game animal to the Dene Tha' and moose meat is a staple in their diet. In addition to moose, the Dene Tha' frequently hunt:

- caribou
- deer
- bear
- beaver
- rabbit
- grouse
- migratory birds during their migration stopovers

The Dene Tha' fish during the summer on local lakes, and ice fish in the winter on local rivers and lakes (DTFN residents 2002, personal communication). Most eat wild meat and plant foods. Delicacies include:

- beaver tail
- bone marrow
- eggs
- liver
- kidneys

Meat is shared among family and community members, particularly during feasts, tea dances, wakes and assemblies (DTFN residents 2002, personal communication).

Plant products consumed as food or medicine include (DTFN residents 2002, personal communication):

- mint
- Labrador tea
- juniper
- wild onions
- wild turnips
- wild radishes
- red willow bark

5.3 Trapping

Many active trappers reside in Chateh, Meander River and Bushe River, despite the economic unpredictability of the fur trade. However, no hunters' and trappers' organization has been established. The Dene Tha' trapping areas extend as far south as Paddle Prairie and extends beyond the Northwest Territories boundary to the north (DTFN residents 2002, personal communication).

Many Dene Tha' trappers still maintain their traplines during the winter, despite the current low fur prices. More Dene Tha' trappers would return to their traplines if prices were to rise, because this is a preferred way of life for many of them (DTFN 2002). Trapping for lynx, marten and fox takes place in January and February, and beaver and muskrat are trapped in the spring.

5.4 Aboriginal Language

Like the Dene in the Northwest Territories, the Dene Tha' people in Alberta speak Athapascan Dene. However, three different dialects are spoken:

- the Dene Tha' dialect, which is spoken in Chateh and by some in Bushe River
- the Meander dialect, which is spoken in Meander River and by some in Bushe River
- the Beaver dialect, which is spoken in the eastern areas of the DTFN territory and in northeastern British Columbia

Most people in Chateh speak Dene, as does half the population in Meander River. About 75% of parents speak Dene to their children. However, Bushe River is a relatively new community where the Dene language is less common because many residents are young people. The Dene language is taught in cultural programs in the reserve schools, but these are not available in the High Level schools attended by children from Bushe River. The locally operated radio station, which broadcasts in Dene, also contributes to language retention (DTFN 2002 and DTFN residents 2002, personal communication).

Table 5-1 shows that 70% of the total on-reserve Dene Tha' population spoke only Dene in 1996 and 67% of children aged 0 to 14 spoke only Dene in the same period, indicating that the more isolated a community, the more likely the home language will survive.

Table 5-1: Languages Spoken by the On-Reserve Dene Tha' (1996)

| Language | Registered Males 15+ | Registered Females 15+ | Registered Children (0-14) | Non-Registered | Percentage of Total Population |
|--|----------------------|------------------------|----------------------------|----------------|--------------------------------|
| Total population (No.) | 430 | 385 | 460 | 55 | 100 |
| Nonofficial languages (%) | 86 | 84 | 71 | 18 | 77 |
| Dene only (%) | 78 | 75 | 67 | 0 | 70 |
| Cree, South Slave only (%) | 8 | 8 | 2 | 0 | 5 |
| English and an Aboriginal language (%) | 5 | 5 | 4 | 0 | 5 |
| Total mother tongue is Aboriginal (%) | 91 | 90 | 75 | 18 | 82 |
| Total home language is Aboriginal (%) | 77 | 73 | 67 | 0 | 69 |
| SOURCE: Statistics Canada (1996) | | | | | |

6 NONTRADITIONAL LAND AND RESOURCE USE

6.1 Introduction

6.1.1 Setting

This section describes existing land and resource uses for nontraditional users within the study area. Nontraditional land and resource users include:

- non-Aboriginal residents
- nonresident hunters and anglers
- tourists
- government and industry representatives who travel north for business

This section does not include any information on traditional land use or traditional knowledge. Information on resource harvesting is limited to nontraditional harvesting only. See Section 5, Traditional Culture for more information on traditional land and resource use, and traditional knowledge.

6.1.2 Objectives

The objectives of the nontraditional land and resource use baseline study are to:

- collect the most recent available information for all valued components in the study area
- document the existing conditions for all valued components for each settlement region within the study area
- identify and describe all nontraditional land and resource use that could be affected by the projects

6.2 Methods

6.2.1 Baseline Information

Baseline information for each valued component was collected from available literature, maps and web sites, and through discussions with resource managers and other knowledgeable individuals living and working in the study area. Discussions were conducted via phone, e-mail and sometimes in person. Additional information was provided by a fixed-wing flight over the study area in September 2001 and fieldwork conducted by other disciplines, e.g., vegetation, wildlife and aquatics.

6.2.2 Study Area

Study area boundaries ensure that the land and resource uses potentially affected by the project are identified and assessed. The study area for the land and resource use baseline is defined by a 15-km-wide buffer around the three anchor fields, on each side of the gathering pipelines in the gathering system, and on each side of the gas pipeline right-of-way. This approach resulted in a study corridor about 30 km wide. Although many resource-related activities occur on lands within the study corridor, these lands are more frequently used to access activities outside the corridor.

6.2.3 Baseline Components

For nontraditional land and resource use, baseline components are defined as the valued components upon which the EIS is based. The valued components are land or resource uses, or in some cases, the available resources that the project could affect, including:

- land ownership
- granular resources
- timber resources
- mineral resources
- oil and gas activities
- nontraditional resource harvesting (hunting and fishing)
- tourism and recreation
- other commercial activities
- marine operations (ISR only)
- environmentally protected areas
- visual and aesthetic resources

In addition to these valued components, a description of the land ownership in each region is also provided. A brief general description of each of the land and resource use valued components in the study area follows.

6.2.3.1 Land Ownership

The lands traversed by the projects typically fall into five categories of ownership:

- federal Crown lands – federal lands administered by INAC (also referred to as territorial lands in the *Territorial Lands Act*)
- Commissioner's lands – federal lands administered by the territorial government
- private lands – administered by the land administration within the settlement region

- municipal lands – administered by the territorial government or the municipality
- provincial Crown lands – administered by the Alberta Public Lands Administration

Land ownership was chosen as a valued component because the projects will traverse both public and private lands, and permission to use the lands will be required. These lands might be zoned for uses contrary to the projects, particularly municipal lands, and this potential for zoning conflict is another reason why land ownership was chosen as a valued component.

6.2.3.2 Granular Resources

Granular resources refer to sand, gravel, clay, quarry materials and silt. Some of these resources will be required for construction. Granular resources were chosen as a valued component because industrial developments and local communities need these resources for construction and maintenance. These materials are sometimes difficult to obtain in the North.

6.2.3.3 Timber Resources

Although the anchor fields do not contain timber, other segments of the projects go through forested lands where timber is important for firewood, construction materials and other uses. The vegetation changes from tundra in the ISR to transitional forest near the ISR–GSA boundary. Farther south, from Travaillant River to northwestern Alberta, the study area is predominantly forested with a mixture of black and white spruce, birch, pine, aspen and tamarack. Land clearing during construction, and an increase in access to forested areas, has the potential to affect available timber resources.

6.2.3.4 Mineral Resources

Mineral resources were chosen as a valued component to assess potential impacts on future potential mineral development, i.e., areas where mineral potential has been found or where mineral leases are held.

6.2.3.5 Oil and Gas Activities

Oil and gas activities include exploration and development for oil and natural gas production outside the scope of the projects. Oil and gas activities were chosen as a valued component because of the strong potential for future oil and gas development in general, and specifically in the study area.

6.2.3.6 Nontraditional Resource Harvesting

Nontraditional resource harvesting includes hunting, fishing and trapping pursued by non-Aboriginal residents and nonresidents. These activities may be for domestic, sport or commercial purposes. Nontraditional resource harvesting was chosen as a valued component because of the high level of concern for potential impacts on these activities.

6.2.3.7 Tourism and Recreation

Tourism and recreation activities include ecotourism, guided outfitting, river tours, cultural tours or recreational activities, such as hiking or cross-country skiing. Construction and operation of the projects, and what exists after decommissioning, have the potential to affect the nature and levels of these activities.

6.2.3.8 Other Commercial Activities

Other commercial activities include commercial transportation and agriculture. These might occur near the study area. Directly or indirectly, project activities might affect these commercial activities.

6.2.3.9 Environmentally Protected Areas

The projects occur near or within areas with special designations that, through legislation or other means, are protected in some form, or are given special status. These areas include:

- the Kendall Island Bird Sanctuary, a migratory bird sanctuary
- Inuvialuit Community Conservation Plan category areas
- a potential heritage river, i.e., the Mackenzie River
- Gwich'in and Sahtu conservation zones and special management areas
- territorial parks
- proposed and existing protected areas
- International Biological Program sites
- national historic sites
- caribou protection areas
- recreation areas

6.2.3.10 Visual and Aesthetic Resources

Currently, there is little physical presence on the landscape that has an effect on the visual or aesthetic value within the study area. Installation of the components of the projects, particularly the facilities, has the potential to affect visual and aesthetic values.

6.3 Baseline Conditions

6.3.1 Land Ownership

Lands traversed by the projects in northwestern Alberta are all provincial Crown lands administered by Alberta Sustainable Resource Development (ASRD) (see Figure 6-1).

6.3.2 Granular Resources

There are no known borrow sites in the study area within northwestern Alberta (Lussier 2002, personal communication). ColtKBR (2002) did not identify any potential borrow sites within the study area in Alberta during summer 2002 fieldwork.

6.3.3 Timber Resources

All of the northwestern Alberta study area is within Forest Management Unit 20 (Alberta Environment 2000). There are no forest management agreements currently in place in this area (Alberta Energy 2002). Tolko Industries has a 25-year agreement to harvest conifers. Tolko's interests reach up to the south end of the Vardie River Section. Footner Forest Products has a 25-year agreement to harvest deciduous trees south of Bootis Hill, outside the study area (Gabourie 2002, personal communication).

6.3.4 Mineral Resources

No mines or areas of mineral exploration are located near the study area within northwestern Alberta (Alberta Energy 2002). There are currently no coal dispositions in this area (Boodle 2002, personal communication).

6.3.5 Oil and Gas Activities

Several existing oil and gas developments are located in the study area within Alberta (Alberta Energy 2002). Developments include seismic exploration, well sites and pipelines. The companies involved in these activities include Talisman Energy, Husky Oil Operations Ltd. and Archeon Energy Ltd. The Mackenzie Gas Project pipeline corridor deviates from the Enbridge Norman Wells pipeline north of the Alberta boundary. Just south of the Alberta boundary, the Mackenzie Gas Project terminates and will link to the proposed NGTL ancillary project. The Enbridge pipeline continues to its terminus at Zama City. Oil and gas dispositions within and near the study area in Alberta are not shown in Figure 6-2 as they are too numerous to map at this scale.

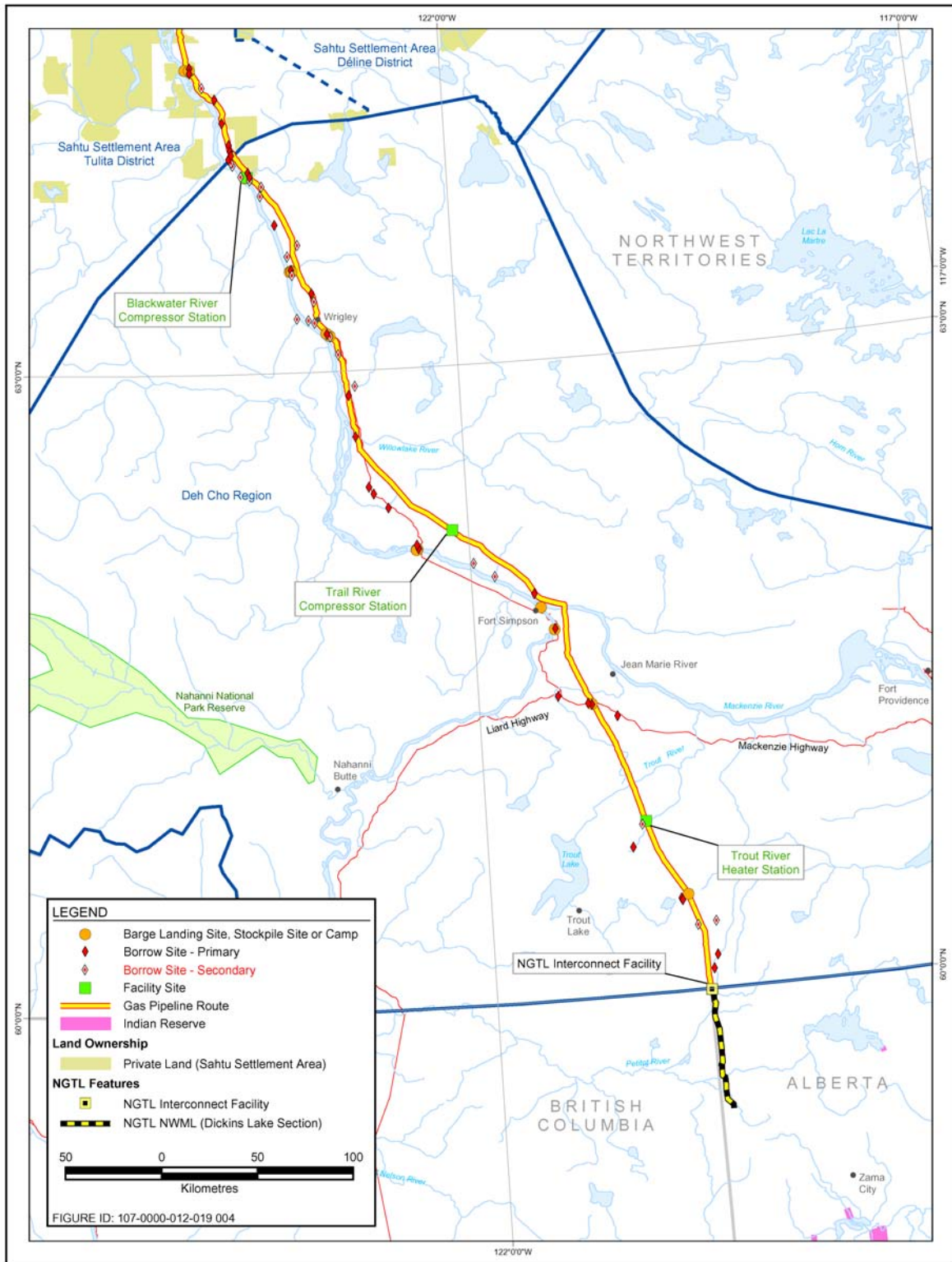


Figure 6-1: Land Ownership – Deh Cho Region and Northwestern Alberta

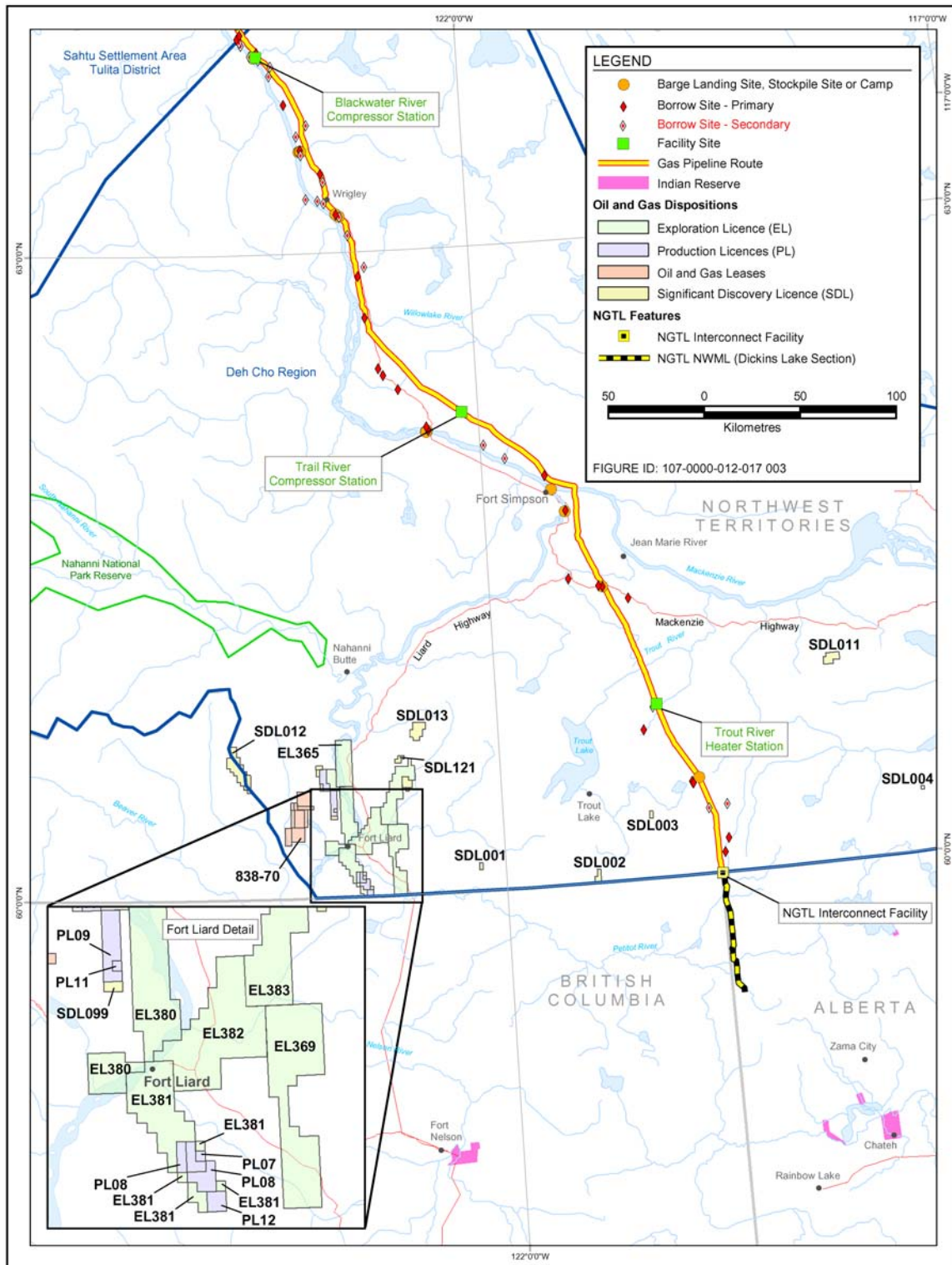


Figure 6-2: Oil and Gas Dispositions – Deh Cho Region and Northwestern Alberta

6.3.6 Nontraditional Resource Harvesting

Hunting in Alberta is regulated by ASRD. A licensed guide or a hunter host must accompany all nonresident hunters of big game, wolf or coyote. The study area is located within Wildlife Management Unit 539, where there are nine guide–outfitter licences issued (ASRD 2002a). It is unclear how much guided hunting occurs in or near the pipeline corridor, although all nine outfitters are authorized to hunt black bear or moose in this wildlife management unit (Brick 2002, personal communication).

The hunting season for white-tailed deer, mule deer, moose, spruce grouse, sharp-tailed grouse and ruffed grouse extends from early September to late November. The hunting season for black bear runs from early September to late November and from mid-April to early July. Duck, coot, common snipe, white-fronted goose, snow goose, Ross’ goose and ptarmigan can be hunted from early September to mid-December.

No domestic or commercial fishing currently occurs in the northwestern Alberta part of the study area (Gabourie 2002, personal communication). Sport fishing in Alberta is licensed by ASRD (2002b). The study area is located within Fish Management Zone NB3, in which the fishing season in rivers and streams extends from June 1 to October 31. Bistcho Lake, located east of the pipeline corridor, is popular for sport fishing. Sport fishing on the Petitot River is mainly incidental because of difficult access (Gabourie 2002, personal communication).

Sport fish species found in the study area in northwestern Alberta include (Mitchell 2001):

- Arctic grayling
- walleye
- burbot
- northern pike
- whitefish

Within northwestern Alberta, the study area traverses Registered Fur Management Areas 99 and 224 (Alberta Energy 2002, ASRD 2001).

6.3.7 Tourism and Recreation

The remoteness of the area limits recreational activities within the northwestern Alberta part of the study area.

6.3.8 Other Commercial Activities

No other commercial activities have been identified or are likely to be present because of the remote nature of the project area in northwestern Alberta.

6.3.9 Environmentally Protected Areas

In Alberta, the study area lies within a Caribou Protection Area (ASRD 2002c) (see Figure 6-3). The pipeline corridor does not traverse any other existing or proposed protected areas in Alberta (Alberta Environment 2001, Boyd PetroSearch Ltd. 2001).

6.3.10 Visual and Aesthetic Resources

From the air, forested areas criss-crossed with seismic lines characterize this region. There is a mix of upland and wet lowland areas, and thick forests.

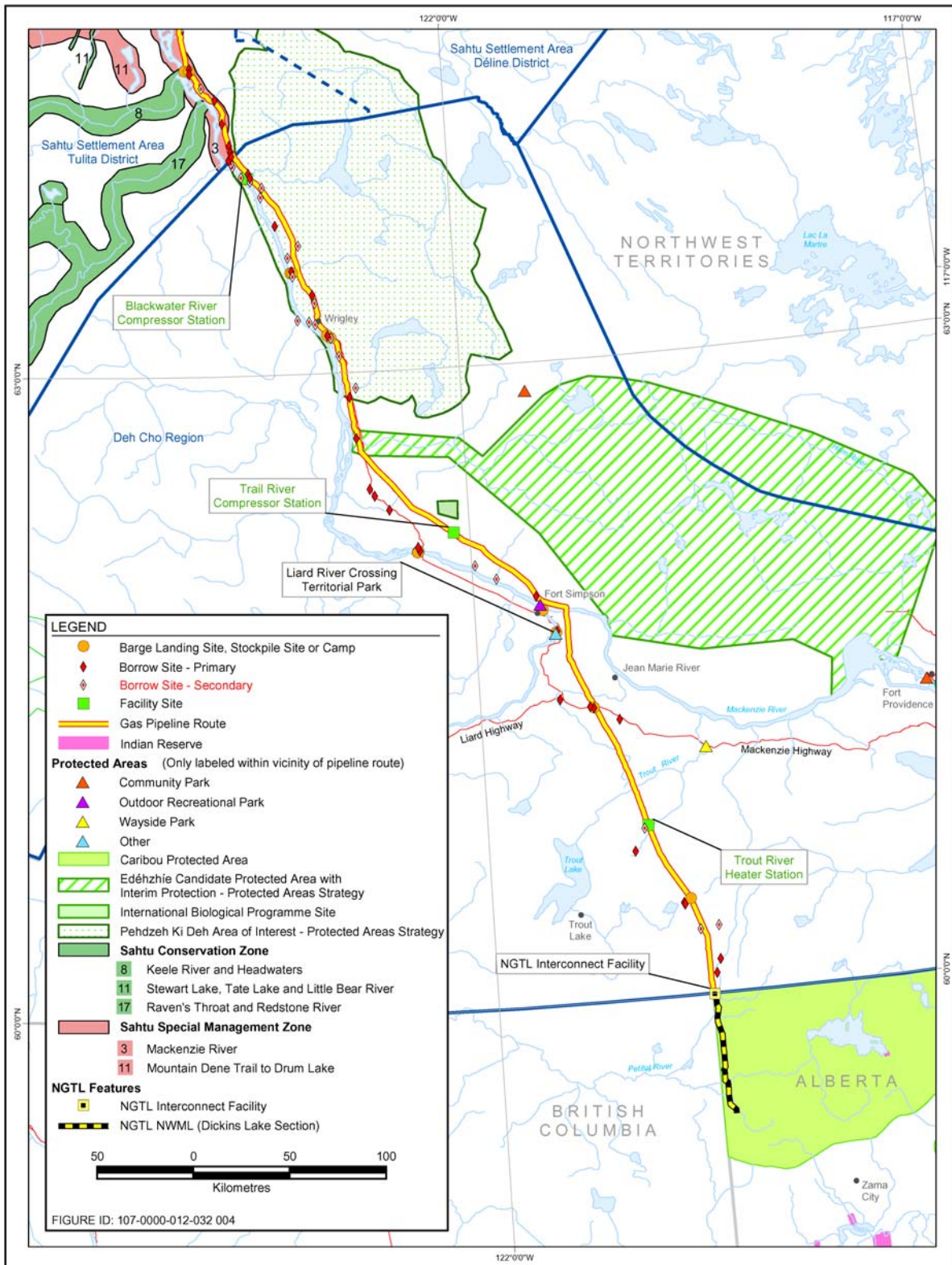


Figure 6-3: Protected Areas – Deh Cho Region and Northwestern Alberta

7 HERITAGE RESOURCES

7.1 Introduction

The baseline is discussed under the broad headings of prehistory and history because of the nature of the data. Relatively little specific data is available for the prehistoric context of the community areas. Therefore, the information was based, in part, on comparable data previously recorded in areas with similar subsistence strategies. This information applies to broader areas than the more specific historic data.

The cultural backgrounds of the people within the traditional areas are also presented in some detail, as this is a fundamental link for archaeologists as they find and understand the physical remains of cultures.

7.2 Overview of the Dene Tha' First Nation Area

7.2.1 Prehistory

The prehistory of the DTFN area is adapted from the EIS, Volume 4, Section 7.3.1.3, Northwestern Alberta Prehistory.

As with the Mackenzie Valley area, a relative paucity of previous archaeological investigations in northwestern Alberta leaves many questions unanswered concerning the exact nature of the prehistoric occupation of this region. The prehistoric sequences outlined for nearby areas, such as the lower Liard River Basin and northeastern corner of British Columbia, would appear to be relevant for the portion of northwestern Alberta through which the pipeline facilities will pass. In broad terms, the same major components outlined previously for Canadian boreal forest prehistory in the Gwich'in, Sahtu and Deh Cho areas might apply to northwestern Alberta.

Little information from the Early Prehistoric Period has been recovered in northern Alberta. Although Clovis is the first well-documented culture in North America (about 11,500 to 10,500 before present [BP]), so far there are no known Clovis sites in the region. However, evidence of this early occupation has been recovered from northeastern British Columbia near Fort St. John. Clovis groups colonized Alberta from the south and likely entered northwestern Alberta during later stages of deglaciation.

Early Prehistoric occupations in this region are not well defined, and usually occur in a disparate series of material expressions that lack a clear range of radiocarbon dates. Finds of toolkits that include bifacially flaked tools in their earliest expressions and later microblade technology, are thought to be early, and have been assigned as the Early Northwest Interior Culture.

Evidence of the Acasta Lake Complex, dating between 7,000 and 5,000 BP, has also been found nearby. Originating from earlier Northern Plano traditions in the North, this complex represents an adaptation to forest and barren land environments. Dating to about 3,990 BP, a series of Middle Prehistoric Period occupations have been identified in the Fort Liard region, belonging to the Julian Complex of the Northwest Microblade Tradition. These combine technological traits of the earlier Palaeo-Arctic Tradition of Alaska with lanceolate and notched projectile points that have a southerly stylistic origin.

In northern Alberta, the Middle Prehistoric Period also likely encompasses the Taltheilei Tradition, starting at 2,650 BP, which was defined for the barrenlands but can sometimes be found as far south as central Alberta. In its earliest expression, this tradition includes large lanceolate and stemmed points, and it is considered to represent Athapaskan-speaking people ancestral to the historic Dene.

Evidence of Late Prehistoric Period occupation in northern Alberta is dated as Late Taltheilei Phase. This occupation is characterized by the presence of small side-notched projectile points that might be termed prairie side-notched if they had been found on the Plains. These types likely represent the diffusion of bow-and-arrow technology into the region rather than a direct southern cultural presence.

7.2.2 History and Cultural Context

The history overview and cultural context of the DTFN area is adapted from the EIS, Volume 4, Section 7.3.2, History Overview and Section 7.4.5 Baseline Conditions – Northwestern Alberta.

A synopsis of the historic past is a big aspect of the baseline setting, as archaeologists are also responsible for recording Historic Period remains. Perhaps as early as the mid-eighteenth century, the Slavey of the Mackenzie Valley and northwestern Alberta were introduced, by Cree or Chipewyan middlemen, to a few European trade items, such as knives and hatchets. Initial contact between the Slavey and the Europeans occurred with Alexander Mackenzie's expedition in 1789. Although Mackenzie's expedition reached Inuvialuit territory, the first contact with the Inuvialuit occurred with the Franklin Expedition in 1826.

The first trading post in Slavey territory was Livingston's Fort, established by the North West Company about 1796, on the Mackenzie River downstream of Great Slave Lake (Asch 1981). With the North West Company fur trade posts on the Mackenzie River, the Dene were afforded direct access to Euro-Canadian goods (Innis 1962). Between 1800 and 1810, five short-lived posts were established along the Mackenzie and Liard rivers. By 1879, when Wrigley was established, the posts operating along the lower Mackenzie included Fort Norman (now Tulita), Wrigley, Fort Simpson and Fort Good Hope. The Inuvialuit traded with

the Dene at Fort Good Hope. Fort McPherson on the Peel River was also in operation.

By the end of the nineteenth century, Christian missionaries had been in contact with the people in the Mackenzie Valley. Euro-Canadian activities within the Mackenzie Valley encouraged regional concentration of the dispersed populations centred on trading posts and missions (Savishinsky and Hara 1981). These centres drew in people from several ethnic or dialectic groups, making communities more sedentary and redefining their identities in association with specific posts, thus creating bands with which treaties could be signed.

The Canadian government did little to assert its presence in Slavey and Hare Territory until its first treaty negotiations at Fort Resolution and Fort Vermilion brought segments of the Slavey into Treaty 8 in 1900. The Fort Nelson Slavey were added to Treaty 8 in 1911. Under the advisement of Bishop Breynat, the Gwich'in signed Treaty 11 in July 1921 (Heine et al. 2001). A treaty with the Gwich'in, the rest of the Slavey and the Hare was not signed until 1921 (1922 in Fort Liard) (Asch 1981). The terms of this treaty are still in dispute.

Competition between companies, followed by mergers, resulted in fur trade posts being closed and new ones being opened. However, by the 1930s, exploitation of mineral resources replaced the fur trade as the principal industry of the Northwest Territories. The World War II period was pivotal in this, with development of the oil reserves at Norman Wells and construction of the Canol pipeline. With these industrial developments, the Dene found temporary and permanent wage employment, further concentrating populations in established communities.

Through the first half of the twentieth century, the Dene life changed only gradually because of the influx of Euro-Canadian goods and influences. Subsistence still depended on traditional pursuits, self-reliance and mobility (Asch 1981). During the early and middle portion of the century, the high price of furs persuaded many Slavey to become seriously involved in trapping and in the market economy of the dominant culture. Coupled with an increasing reliance on government services, this has resulted in a more sedentary existence. With the recent collapse in the fur market, the supplementary income formerly provided by trapping has had to be replaced with wage work, where available (see Section 2, People and the Economy).

The Métis are the descendants of non-Aboriginal and Aboriginal parents, usually with Dene maternal and Euro-Canadian paternal ancestries. Since about 1850, the Métis in the Sahtu Settlement Area (SSA) have participated in traditional subsistence activities, working as interpreters, trappers and provisioners, and at trading posts. The Métis were most recognized for their role in transporting goods via canoe, York boats and steamboat (Slobodin 1981b). Today, the Métis live throughout the Mackenzie region, although they have a collective identity based on a shared heritage.

During the 1977 Berger inquiry into the Mackenzie Valley pipeline (Berger 1977), the Dene and Métis insisted that outstanding land claim issues be resolved before planning further development in the Mackenzie Valley. Negotiations to settle these claims began in October 1991, with the final agreement signed in 1994 (Simpson 2002).

The Slavey people also extend into northern Alberta, where they are known as the Acha'ottine, or woodland people. These Athapaskan-speaking people refer to themselves as the Dene Tha'. Although culturally and linguistically similar to the Slavey of the Northwest Territories, they are geographically located in the northwest corner of Alberta. The traditional lands of the Dene Tha' extend from northwestern Alberta into northeastern British Columbia and the southern regions of the Northwest Territories (Ross 2001). Although the Dene Tha' adhered to Treaty 8 in 1900, their reserves were not surveyed until 1946.

Concentrated settlement was part of a larger plan by the government to facilitate assimilation of Aboriginal people into non-Aboriginal society (Royal Commission on Aboriginal Peoples 1996). Construction of a residential school in Assumption (now Chateh) by the Catholic Church also encouraged settlement, as families wanted to live near their children. What resulted was development of three communities in northwestern Alberta where most of the Dene Tha' population live: Chateh, Bushe River and Meander River.

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GLOSSARY

| | |
|--------------------------------|--|
| abandonment | The act of permanently stopping operations, discontinuing service, removing facilities and restoring land to a productive state. |
| Aboriginal | Any Indian, Inuit or Métis person who was born in the Northwest Territories or who is descended from an Aboriginal person born in the Northwest Territories. |
| Aboriginal community | A community in which the majority of residents are Aboriginal. |
| anchor field | The three natural-gas fields, Taglu, Parsons Lake and Niglintgak, whose production will provide the initial volume of gas shipped in the Mackenzie Valley Pipeline. |
| archaeological site | A site where an archaeological artifact is found. |
| artifact | Any tangible evidence of human activity that is more than 50 years old, in respect of which an unbroken chain of possession cannot be demonstrated. |
| ASRD | The abbreviation for Alberta Sustainable Resource Development. |
| baseline conditions | Existing conditions in the communities and ethnic regions of the area before any project effects are experienced. |
| baseline information | The current state of the environment or environmental setting for a particular element. This information will help to determine potential environmental effects of a project by providing an environmental reference point for the element, with which to compare future environmental conditions and potential project effects. |
| BDR | The abbreviation for Beaufort Delta Region. |
| biophysical environment | The components of the earth including: <ul style="list-style-type: none">• land, water and air, including all layers of the atmosphere• all organic and inorganic matter and living organisms• the interacting natural systems that include components referred to in the previous bullets |

| | |
|-----------------------------|--|
| borrow site | An area that could be excavated to provide material, such as gravel or sand, to be used as fill elsewhere. |
| BP | The abbreviation for before present. |
| CD | The abbreviation for Census Division. |
| commercial harvest | Occupied with or engaged with harvest intended for commerce, i.e., buying and selling a product, including transportation from place to place. |
| Commissioner's lands | Federal lands administered by the territorial government. |
| compressor station | A facility containing equipment that is used to increase pressure to compress natural gas for transportation. |
| country food | Food traditionally harvested and eaten by local Aboriginal residents. |
| critical habitat | The habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species, according to the Species at Risk Act. |
| decommissioning | The act of taking a processing plant or facility out of service and isolating equipment, to prepare for routine maintenance work, suspending or abandoning. |
| devolution | Ongoing negotiations between the Government of Canada, the GNWT and the Aboriginal Summit that will transfer the current INAC control over land, water and resources to Aboriginal settlement area governments. |
| DTFN | The abbreviation for Dene Tha' First Nation. |
| EIS | The abbreviation for environmental impact statement. |
| employment rate | Percentage of population, aged 15 years and older employed during the week before the survey. |

| | |
|--|--|
| environmental effect | <p>For a project, any change that the project might cause in the environment, including any change it might cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as defined in the Species at Risk Act. Also, any effect of any project-induced change on:</p> <ul style="list-style-type: none">• health and socio-economic conditions• physical and cultural heritage• the current use of lands and resources for traditional purposes by aboriginal people• any structure, site or thing that is of historical, archaeological, palaeontological or architectural significance <p>Also, any change to the project that might be caused by the environment.</p> |
| environmentally protected areas | <p>Areas with special designations that, through legislation or other means, are protected in some form or are given special status.</p> |
| environmentally sensitive area | <p>An area designated in regional or local land use plans, or by a local, regional, provincial or federal government body as being sensitive to disturbance, or identified by an applicant as being sensitive for some reason.</p> |
| facilities | <p>Structures of the gathering and gas pipeline systems, including compressor and pump stations, block valves, pigging facilities, heater stations and meter stations.</p> |
| federal Crown lands | <p>Federal lands administered by INAC (also referred to as territorial lands in the Territorial Lands Act)</p> |
| five-year mobility status (migration) | <p>The relationship between a person's usual place of residence on May 14, 1996 compared to the previous five years.</p> |
| gas pipeline | <p>The pipeline that transports compressed natural gas from the Inuvik area facility to the southern terminus near the Northwest Territories–Alberta boundary.</p> |

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| gathering pipelines | Four pipelines, also known as laterals, that transport natural gas and NGLs from the anchor fields to the Inuvik area facility. These include the Niglintgak lateral, Taglu lateral, Parsons Lake lateral and Storm Hills lateral. |
| gathering system | A system of pipelines, compressor stations and other related facilities that gather natural gas and associated NGLs from the anchor fields and transport it to the gas pipeline system located at the Inuvik area facility. |
| GNWT | The abbreviation for Government of the Northwest Territories. |
| granular resources | Sand, gravel, clay, quarry materials and silt. |
| GSA | The abbreviation for Gwich'in Settlement Area. |
| heavy drinking | Consuming five or more drinks at one sitting. |
| heritage resources | Locations where events took place in the past, or all of the objects that they contain, including any contextual information that may be associated with them that will aid in their interpretation, including natural specimens and documents or verbal accounts. |
| heritage resources | Cultural, historic, archaeological and palaeontological resources are collectively known as heritage resources and can include pre-contact and post-contact features. |
| historic archaeological resources | Sites, artifacts, structures and documents that relate to the influx of Euro-Canadians in the region, and date to the last 250 years. |
| honey bag | A plastic liner used in non-flush toilets which is removed when full. |
| HSS | The abbreviation for Health and Social Services (GNWT Department). |
| human health | A state of complete physical, mental and social well-being, and the ability to adapt to the stresses of daily life. It is not merely the absence of disease or infirmity. |

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| human health assessment | Considers the effect of hazardous substances, environmental factors and exposure conditions on local and regional populations. It might consist of qualitative and quantitative assessments. |
| ICC | The abbreviation for industrial and commercial centre. |
| INAC | The abbreviation for Indian and Northern Affairs Canada (Government of Canada). |
| infrastructure | Basic facilities, such as transportation, communications, power supplies and buildings, which enable an organization, project or community to function. |
| Inuvik area facility | The gas and NGL processing facility for the Mackenzie Gas Project to be located near Inuvik. |
| ISR | The abbreviation for Inuvialuit Settlement Region. |
| JRP | The abbreviation for Joint Review Panel. |
| lateral | A pipe that branches away from the central and primary part of the system. |
| limiting factor | Anything that has a measurable controlling effect on a species' growth or expansion, or on a biophysical element's continued capability to support its ecosystem. |
| local study area | A 1-km-wide buffer or corridor around each of the three lease areas, gathering system right-of-way, facility infrastructure sites, pipeline right-of-way and borrow sites. |
| LSA | The abbreviation for local study area. |
| major repairs (housing) | Refers to such conditions as defective plumbing or electrical wiring, or structural repairs to walls, floors or ceilings. |
| Métis | A person with a mixture of Aboriginal and non-Aboriginal ancestry. |
| migrants | Individuals moving to a different community. |
| migratory bird | Any migratory bird as referred to in the Migratory Birds Convention Act, including the sperm, eggs, embryos, tissue cultures and parts of the bird. |

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| minor repairs (housing) | Refers to such conditions as missing or loose floor tiles, brick or shingles, or to defective steps, railing or siding. |
| mitigation | The elimination, reduction, or control of a project's adverse environmental effects, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or other means. |
| monitoring | Resolving specific outstanding environmental issues, observing the potential environmental effects of a project, assessing the effectiveness of mitigation measures undertaken, identifying unexpected environmental issues and determining the action required based on the result of these activities. |
| municipal lands | Lands administered by the territorial government or the municipality. |
| NGL | The abbreviation for natural gas liquid. |
| NGL pipeline | The pipeline connecting the Inuvik area facility with the Enbridge Pipeline facilities at Norman Wells. |
| NGO | The abbreviation for nongovernmental organization. |
| NGTL | The abbreviation for NOVA Gas Transmission Ltd. |
| NGTL interconnect facility | The northern terminus of the NGTL pipeline system to be located in northwestern Alberta that will directly connect the southern terminus of the Mackenzie Valley pipeline to the NGTL pipeline system. |
| Niglintgak | The anchor field to be developed by Shell. The field includes three well pads, one gas conditioning facility, flow lines and supporting infrastructure. The gas conditioning facility might be barge or land based. |
| Niglintgak lateral | The gathering pipeline connecting the Niglintgak gas conditioning facility to a connection point on the Taglu lateral at the outlet of the Taglu gas conditioning facility. |
| nonrenewable resources | Resources, such as fossil fuels (oil, gas, coal) and minerals that occur naturally but cannot be replaced once exploited. |

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| nonresident | An individual who resides outside the Northwest Territories. |
| nontraditional land use | Existing land and resource uses for nontraditional users, including residents and nonresidents within the study area. |
| nontraditional resource harvesting | Includes hunting, fishing and trapping pursued by non-Aboriginal residents. May be for domestic, sport or commercial purposes. |
| Operations Phase | The phase of a project during which the pipeline and associated facilities are operated. |
| palaeontological sites | Sites bearing evidence of multi-cellular invertebrate, vertebrate faunal remains and plant materials that have been fossilized or otherwise preserved. |
| Parsons Lake | The anchor field to be developed by ConocoPhillips and ExxonMobil. Initially, the field will consist of a north pad for the well sites and gas conditioning facility. A second well pad will be developed five to 10 years after the north pad. |
| Parsons Lake lateral | The gathering pipeline connecting the Parsons Lake gas conditioning facility to a connection point at the Storm Hills pigging facility. |
| participation rate | Percentage of population, aged 15 years and older in the labour force. |
| physical infrastructure | All of the physical facilities, roads, barge landings, airstrips and other infrastructure that may require maintenance or repair, or which may have a shortened lifespan as a result of project-related activities. |
| pipeline | A line used for transmitting oil, gas or any other commodity and that connects a province with any other province or provinces or extends beyond the limits of a province or the offshore area as defined in section 123 of the National Energy Board Act. |
| pipeline corridor | The 1 km-wide area that generally centres on the combined right-of-way for the NGL and gas pipelines, from the Inuvik area facility to the southern terminus. |

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| potential labour supply | People of working age who are unemployed and those not participating in the labour force who do want a job, less those who, because of disability, age, illiteracy, or lack of education, skills or training could be considered unemployable, according to the GNWT Bureau of Statistics definition. |
| prehistoric archaeological resources | Archaeological sites, objects and affiliated materials that represent occupation by Aboriginal peoples before the arrival of European goods, people and the historic records that characterize their culture (in North America). |
| private lands | Lands administered by the land administration within the settlement region. |
| production area | The area that encompasses all project components located north of the Inuvik area facility, including Niglintgak, Taglu and Parsons Lake, the gathering pipelines, facilities, infrastructure, and the 1 km-wide area surrounding each of these project components. |
| project proponents | The five organizations (Imperial, the APG, ConocoPhillips, Shell and ExxonMobil) that are undertaking the Mackenzie Gas Project. |
| project, the | The abbreviation for the Mackenzie Gas Project. |
| project-specific effect | An effect caused by the project. Such effects are sometimes referred to as direct effects as they only include the project's contribution to the effect (as opposed to cumulative effects, in which case other projects would contribute to the effect). |
| property crime | Breaking and entering, theft of motor vehicles, theft over \$5,000, theft \$5,000 and under, possession of stolen goods, and fraud. |
| provincial Crown lands | Lands administered by the Alberta Public Lands Administration. |
| RCMP | The abbreviation for Royal Canadian Mounted Police. |

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| reclamation | The process of re-establishing a disturbed site to a former or other productive use, not necessarily to the same condition that existed before disturbance. The land capability might be at a level different, i.e., lower or higher, than that which existed prior to the disturbance, depending on the goal of the process. Reclamation includes the management of a contaminated site and revegetation where necessary. Reclamation is not considered complete until the goals for reclamation have been achieved. |
| recovery strategy | A strategy for the recovery of a listed extirpated, endangered or threatened species prepared by the competent minister (as defined under the Species at Risk Act). If the recovery of the listed species is feasible, the recovery strategy must address the threats to the survival of the species identified by the Committee for the Status of Endangered Wildlife in Canada, including any loss of habitat. The recovery strategy and any amendments will be included in the public registry established under the Species at Risk Act. |
| regional study area | A 15-km-wide buffer around the three anchor fields, on either side of the gathering system right-of-way and on either side of the pipeline right-of-way. |
| regular maintenance (housing) | Refers to such conditions as requiring painting or furnace cleaning. |
| resident | A Canadian citizen or landed immigrant who has been living in the Northwest Territories for at least two years. |
| residual effects | Environmental or socio-economic effects that remain after mitigation. Effects that are present after mitigation is applied. |
| right-of-way | The strip of land a company has acquired, for which it has obtained the rights to construct and operate a pipeline. |
| RSA | The abbreviation for regional study area. |
| scrip | A document given by the Government of Canada to Métis who applied, promising either land or money, usually 140 acres or \$140, but increased to 240 acres or \$240 after 1885. |

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| SEIA | The abbreviation for socio-economic impact assessment. |
| social infrastructure | Health, social wellness and education services that may require enhancement or expansion as a result of project-related activities. |
| socio-economic effect | For a project, any effect on a social or economic element, including direct effects as well as effects resulting from a change in the environment. |
| species at risk | An extirpated, endangered or threatened species or a species of special concern, as defined in the Species at Risk Act. |
| species of special status | Species listed under provincial jurisdiction or of recognized local importance because they are vulnerable, threatened, endangered or extirpated. |
| SSA | The abbreviation for Sahtu Settlement Area. |
| STI | The abbreviation for sexually transmitted infection. |
| Storm Hills lateral | The gathering pipeline connecting the Storm Hills pigging facility to a connection point at the inlet of the Inuvik area facility. |
| study area | The area within the spatial boundaries of the scope of the environmental and socio-economic effects assessment. |
| subsistence harvest | The minimum harvest necessary to provide food to support families living within the communities. |
| Taglu | The anchor field to be developed by Imperial Oil Resources Limited. It consists of one site, which will include the drill sites, gas conditioning facility, flow lines and supporting infrastructure. |
| Taglu lateral | The gathering pipeline connecting the Taglu gas conditioning facility to a connection point at the Storm Hills pigging facility. |
| unemployment rate | Percentage of the labour force that was unemployed during the week before the survey. |

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| valued component | Characteristic or features that represent important environmental or socio-economic conditions identified by assessment specialists, communities or stakeholders. |
| violent crimes | Homicide, attempted murder, sexual assault, nonsexual assault, other sexual offences, abduction and robbery. |
| visual resources | Land, water, vegetation, animals and structures that are visible on the land. |
| waterbody | A body of water up to the high-water mark, including canals, reservoirs, oceans and wetlands, but not including sewage or waste treatment lagoons. |
| well-being | Everything that affects the experience of life, except physical and mental health, including the circumstances of physical existence, the quality of relationships and the threat of violence and crime. |
| wellness | Includes physical, emotional and mental health, and relationship well-being. |

