

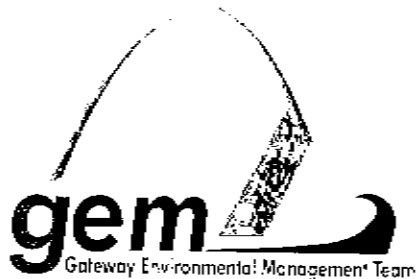
Enbridge Gateway Pipelines Project

TRADITIONAL KNOWLEDGE COMMUNITY REPORT: ALEXANDER FIRST NATION

*THIS REPORT HAS BEEN PREPARED FOR THE GATEWAY PIPELINES PROJECT APPLICATION.
ANY OTHER USE IN WHOLE OR IN PART REQUIRES THE WRITTEN CONSENT OF ALEXANDER
FIRST NATION.*

Prepared for:
Enbridge Gateway Pipelines Inc.
Calgary, Alberta

Prepared by:



April 2007

Authorship

TK Study Lead Facilitator: Natalie Bourbonnais-Spear

TK Study Assistant: Ave Dersch

GIS Mapping: Bobbie Christink

Kathrin Janssen

Report Authors: Natalie Bourbonnais-Spear

Annette McCullough

Keely Winnitoy

Ave Dersch

Senior Reviewer: Edward J. McCullough

Executive Summary

This Traditional Knowledge study for Alexander First Nation (AFN) and the preliminary draft report have been reviewed by Alexander First Nation Elders and Traditional Knowledge Program staff. A complete summary of interests and issues related to the Enbridge Gateway Pipelines Project identified by Alexander First Nation appears in Table 1.

Table 1 Alexander First Nation, Summary of Interests and Issues

Issue Type	Issue Description	AFN Recommendation	Gateway Response
Multi-Use Cultural Areas and Harvesting Locomes	<p>██████████ Sacred area actively being protected by AFN.</p>	<ul style="list-style-type: none"> Avoid ██████████ area. 	
	<p>██████████ Early AFN settlement; waterways are used for cultural activities.</p>	<ul style="list-style-type: none"> Ensure that ██████████ area is not subject to disturbance. 	
	<p>Contemporary Settlement (Alexander Reserve 134). Two AFN families live on Alexander Reserve 134 near the RoW.</p>	<ul style="list-style-type: none"> AFN Elders request that this site not be disturbed. 	
	<p>Fox Creek Reserve (Alexander Reserve 134A). Areas highly valued by the community on this Reserve include freshwater springs, a wetland area, and a salt lick. A community campsite, a settlement area and a ceremonial area are also present. There are commercial sites and a designated research area on this Reserve.</p> <p>There are differing opinions within AFN regarding the preferred routing for the pipeline.</p>	<ul style="list-style-type: none"> Avoid any disturbance to the wetland area and mineral lick near the RoW, and actively involve AFN Elders in the planning process. Have hydrologists map freshwater springs on Fox Creek Reserve and ensure that the Project (in all phases of construction, operation and abandonment) does not interfere with the waters or with their source. Ensure that the ceremonial site is not disturbed by pipeline construction or operations by confining disturbance to the RoW only. Ensure that the development does not affect any habitation sites (cabins/camps) both during construction and operations. Avoid the commercial sites and research areas. Sponsor an opportunity for AFN Elders and Band members to become familiar with corridor lands within Fox Creek Reserve in order to support a community decision related to routing the pipeline through AFN Fox Creek Reserve. 	

Table 1 Alexander First Nation, Summary of Interests and Issues (cont'd)

Issue Type	Issue Description	AFN Recommendation	Gateway Response
Multi-Use Cultural Areas and Harvesting Locales (cont'd)	<p>TLE Lands. These lands, adjacent to Alexander Reserve 134, are in the process of being repatriated by AFN. These TLE Lands include the Deadman Lake Settlement area (with cultural use areas, [redacted] (archaeological) sites) and contemporary settlement areas.</p>	<ul style="list-style-type: none"> • The repatriation of AFN surrendered lands is very important to AFN. Any development within the TLE lands area will require further consultation. • AFN requests that the Project be routed around Deadman Lake. If a reroute is not possible, a comprehensive GIS Traditional Land Use and Occupancy research study will be required to identify and record all burials, use areas and Elders' stories. • AFN wants to be involved in all Project related archaeological studies within AFN Reserves and Traditional Territory. If sites [redacted] and [redacted] are subject to potential disturbance by the Project, further investigation is expected. • AFN Elders request that the contemporary settlement areas on TLE Lands not be disturbed. 	
	<p>Other Cultural Use Areas. These include the [redacted] community campsite, and [redacted] community campsite.</p>	<ul style="list-style-type: none"> • Protect [redacted] area by impact avoidance. • Minimize disturbance to the [redacted] area and protect the muskegs in the area from disturbance. • Protect [redacted] community campsite area by avoidance. 	
	<p>Hunting. A further decrease in hunting areas is of concern to AFN Elders.</p>	<ul style="list-style-type: none"> • Avoid mineral lick locations during construction. 	
	<p>Medicines. AFN Elders are concerned about the disturbance of spiritually important plants and medicines within AFN Reserves and Traditional Territory.</p>	<ul style="list-style-type: none"> • Develop and implement a protection/mitigation plan for gathering areas throughout AFN Reserves and Traditional Territory with AFN Elders. 	

Table 1 Alexander First Nation, Summary of Interests and Issues (cont'd)

Issue Type	Issue Description	AFN Recommendation	Gateway Response
<p>Design</p>	<p>Access Roads/Service Lines. AFN Elders expressed concern that the Project will result in access restrictions to AFN members.</p> <p>AFN wants to know how much new access will be created by the Project, where these access points will be located and how much land will be taken up.</p>	<ul style="list-style-type: none"> AFN wants to be involved in decisions related to where access locations will be situated. AFN is also interested in discussing the potential for improving and maintaining existing AFN access to Reserves and Traditional Territory. 	
	<p>Access. Development projects which have opened up the land (oil and gas roads) to non-Band members are problematic and AFN is worried that the situation will worsen with the Project.</p>	<ul style="list-style-type: none"> AFN wants to be involved in plans to restrict land access to non-Band members. 	
	<p>Set-back Restrictions. AFN Elders want to know what restrictions will be put in place for the RoW, which transects important community cultural use areas and could restrict the use of those lands.</p>	<ul style="list-style-type: none"> AFN wants project personnel to meet with the community to discuss these matters prior to finalizing project design. 	
	<p>Redesign/Reroute. AFN has commercial development plans for lands transected by the Project on Fox Creek Reserve, which might be affected by the Project.</p>	<ul style="list-style-type: none"> AFN wants to meet with Gateway technical personnel to discuss questions about how the Project might affect the Nation's planned commercial venture development on Fox Creek Reserve. Should modifications to the Project be required to allow commercial development to proceed, AFN asks that the costs be assumed by Gateway. 	

Table 1 Alexander First Nation, Summary of Interests and Issues (cont'd)

Issue Type	Issue Description	AFN Recommendation	Gateway Response
EIA Baseline Assessment Studies	AFN would like information regarding EIA baseline assessment studies performed for the Project.	<ul style="list-style-type: none"> • AFN wants to be involved in all aspects of the baseline environmental studies related to the environment and geology within AFN Reserves and Traditional Territory. AFN also wants information regarding environmental studies for the overall Project. 	
Safety	AFN Elders are concerned about the safety of the Project (particularly accidental spills and leaks) and consequent impacts on future generations, animals, plants, water, air and ultimately on the community's well being.	<ul style="list-style-type: none"> • AFN requests that Gateway meet with the AFN Elders and Band members to discuss safety issues, pipeline maintenance measures and emergency response plans. AFN expects Gateway to assume responsibility for dealing with any accidental releases and related impacts and to ensure that compensation is sufficient for damages that might be incurred. • AFN Elders want information on compensation and procedures in place in case of an accidental release of hydrocarbons. 	
Construction	AFN Elders are concerned about the disturbance of spiritually important plants along the project RoW within AFN Reserves and Traditional Territory.	<ul style="list-style-type: none"> • AFN recommends that a process be developed whereby AFN Elders can offer prayers for spiritually important plants that will be affected by construction activities and RoW clearing. • AFN recommends that the community have the opportunity to transplant culturally important species resulting from RoW clearing on Reserve lands. • AFN recommends that logs resulting from RoW clearing be salvaged for community use. 	

Table 1 Alexander First Nation, Summary of Interests and Issues (cont'd)

Issue Type	Issue Description	AFN Recommendation	Gateway Response
Construction (cont'd)		<ul style="list-style-type: none"> AFN Elders want assurances that equipment operators will stay within the RoW corridor and approved access areas during construction. 	
Operations	Monitoring. AFN Elders want to know what the regulatory requirements for environmental monitoring are.	<ul style="list-style-type: none"> AFN recommends that a process be developed whereby the community is involved in ongoing monitoring of the Project within AFN Reserves and Traditional Territory. 	
Reclamation	RoW Maintenance. AFN is concerned about the contamination of traditional foods, medicines, and agricultural food crops resulting from pesticide and herbicide use.	<ul style="list-style-type: none"> AFN does not want herbicides and pesticides to be used in maintenance of the RoW within AFN Reserves and Traditional Territory. 	
Reclamation	AFN is concerned about reclamation methods and the level of their involvement in reclamation planning.	<ul style="list-style-type: none"> AFN wants to be involved in the reclamation plans for their Reserves and Traditional Territory transected by the Project. AFN Elders want to visit the Alliance Pipeline corridor and on that basis determine what they would like Gateway to do. 	
Reclamation	AFN is concerned about debris resulting from construction.	<ul style="list-style-type: none"> AFN Elders expect that the RoW will be cleared of debris and garbage at the conclusion of construction. AFN Elders also request that the pipeline be taken out after the Project is completed. 	
Traditional Foods	Concerns about existing and potential new sources of contamination as a result of the Project were raised.	<ul style="list-style-type: none"> AFN does not want herbicides and pesticides to be used in maintenance of the RoW within AFN Reserves and Traditional Territory. 	
Traplines	One registered trapline owned by an AFN member is situated close to the Project corridor.	<ul style="list-style-type: none"> No specific recommendations were expressed by AFN Elders. 	

Table 1 Alexander First Nation, Summary of Interests and Issues (cont'd)

Issue Type	Issue Description	AFN Recommendation	Gateway Response
Travel	An historic trail to [redacted] and [redacted] and a trail network in current use by AFN [redacted] [redacted] are transected/close to the RoW.	<ul style="list-style-type: none"> • AFN requests minimal disturbance to both current and historic trail transect locations. 	
Ancestral Sites (Archaeology)	AFN has interests in all ancestral (archaeological) sites within AFN Reserves and Traditional Territory.	<ul style="list-style-type: none"> • AFN wants to be involved in all archaeological assessments within AFN Reserves and Traditional Territory and to be notified if artifacts are unearthed. 	
Ecological Health	Many concerns were expressed about the potential effects of the Project on general ecological health.	<ul style="list-style-type: none"> • Minimize disruption to wildlife and plant habitats, as well as water sources. 	
Ecological Features/ Areas	Muskegs, springs, streams, and lakes are integral to AFN Traditional values and activities, as well as being ecologically important, and were identified as needing to be protected from disturbance by project activity.	<ul style="list-style-type: none"> • Avoid/minimize disturbance to all streams, springs, water bodies and muskegs within AFN Reserves and Traditional Territory. Further consultation is required for waterway crossings on AFN Reserve lands. 	
Loss of Enjoyment of the Land	AFN has seen a lot of development within their Reserves and Traditional Territory and AFN Elders expressed concerns about the impact of another pipeline project on their use of the land.	<ul style="list-style-type: none"> • AFN requests further consultation with Gateway. 	
Livelihood/Economic Benefits	<p>AFN Elders are interested in employment opportunities, service contracts, and training opportunities for long-term jobs for Band members.</p> <p>Compensation for lands being taken up was discussed and the idea of AFN purchasing a small share of the pipeline was mentioned.</p>	<ul style="list-style-type: none"> • AFN wants to discuss these matters further with Gateway. 	

Table of Contents

1	Introduction to Alexander First Nation.....	1-1
1.1	The Community	1-1
1.1.1	Traditional Territory.....	1-1
1.1.2	Reserve Lands.....	1-4
1.1.3	Land Claims	1-4
2	Spatial and Temporal Boundaries.....	2-1
2.1	Spatial Parameters	2-1
2.2	Temporal Parameters	2-1
3	Study Methodology.....	3-1
3.1	Literature Review	3-1
3.2	Initial Scoping Process.....	3-1
3.3	Community Meeting.....	3-1
3.4	Group Interviews.....	3-2
3.5	Field Visits	3-2
3.6	Report Review	3-2
4	Baseline and Traditional Environmental Observations.....	4-1
4.1	Water and Air.....	4-1
4.2	Climate Change	4-3
4.3	Wildlife	4-3
4.3.1	Ungulates.....	4-3
4.3.2	Other Mammals.....	4-4
4.3.3	Birds.....	4-5
4.3.4	Fish	4-5
4.4	Vegetation.....	4-6
4.5	Cultural Values and Lifeways.....	4-11
4.5.1	Family Settlements and Community Camps	4-11
4.5.1.1	Alexander Reserve 134	4-11
4.5.1.2	TLE Lands	4-16
4.5.1.3	.....	4-19
4.5.1.4	.....	4-19
4.5.1.5	Fox Creek Reserve.....	4-19
4.5.1.6	.....	4-19
4.5.1.7	Other Areas	4-22
4.5.2	Community Well Being.....	4-22
4.5.3	Traditional Cultural Education	4-22
4.5.4	Travel.....	4-23
4.5.5	.....	4-25
4.5.6	Spirituality	4-25
4.5.6.1	.....	4-25
4.5.6.2	.....	4-26
4.5.6.3	Fox Creek Reserve (Alexander Reserve 134A).....	4-26
4.5.6.4	.....	4-27
4.5.6.5	.....	4-28

4.5.7	Health and Well Being	4-28
4.5.8	Livelihood.....	4-29
5	Interests and Concerns	5-1
5.1	Traditional Use Areas and Sites	5-1
5.1.1	Multi-Use Cultural Areas	5-1
5.1.1.1	Alexander Reserve 134.....	5-1
5.1.1.2	.....	5-1
5.1.1.3	.....	5-1
5.1.1.4	Contemporary Settlement (Alexander Reserve 134).....	5-1
5.1.1.5	Fox Creek Reserve (Alexander Reserve 134A)	5-2
5.1.1.6	TLE Lands (North of Alexander Reserve 134).....	5-3
5.1.1.7	Other Cultural Use Areas	5-4
5.1.2	Harvesting Locales	5-5
5.1.2.1	Hunting.....	5-5
5.1.2.2	Medicines.....	5-5
5.2	Other Project Specific Interests and Concerns	5-6
5.2.1	Design.....	5-6
5.2.1.1	Access Roads/Service Lines.....	5-6
5.2.1.2	Access	5-6
5.2.1.3	Set-back Restrictions	5-6
5.2.1.4	Redesign/Reroute	5-6
5.2.2	EIA Baseline Assessment Studies	5-7
5.2.3	Safety.....	5-7
5.2.4	Construction.....	5-8
5.2.5	Operations	5-9
5.2.5.1	Monitoring	5-9
5.2.5.2	RoW Maintenance.....	5-9
5.2.6	Reclamation.....	5-9
5.2.7	Traditional Foods	5-10
5.2.8	Traplines	5-10
5.2.9	Travel.....	5-10
5.2.10	Ancestral Sites (Archaeology).....	5-10
5.2.11	Ecological Health.....	5-11
5.2.12	Ecological Features and Areas	5-11
5.2.13	Loss of Enjoyment of the Land.....	5-11
5.2.14	Livelihood and Economic Benefits	5-11
5.3	Cumulative Impacts.....	5-12
5.4	Consultation Process.....	5-12
6	References	6-1
6.1	Literature Cited	6-1
6.2	Internet Sites	6-1
Appendix A	Participants List.....	A-1

List of Tables

Table 1	Alexander First Nation, Summary of Interests and Issues	v
---------	---	---

List of Figures

Figure 1-1	Alexander First Nation Reserves	1-2
Figure 1-2	Regional Assessment Area	1-3
Figure 1-3	Alexander First Nation Prescribed Purchase Area (PPA)	1-5
Figure 2-1	Project Development Area.....	2-3
Figure 3-1	Alexander First Nation Cultural Use Areas, Alexander Reserve 134 and Adjoining TLE Lands	3-3
Figure 3-2	Alexander First Nation Cultural Use Areas, Alexander Reserve 134A and [REDACTED]	3-5
Figure 4-1	Alexander First Nation Trappers' Fur Management Areas.....	4-8
Figure 4-2	Alexander First Nation Cultural Use Areas, [REDACTED]	4-9
Figure 4-3	Historic Trails.....	4-24

List of Plates

Plate 4-1	Freshwater Spring on Alexander Reserve 134A.....	4-2
Plate 4-2	Freshwater Spring on Alexander 134A	4-3
Plate 4-3	Wetland Area on Alexander Reserve 134A	4-5
Plate 4-4	[REDACTED]	4-7
Plate 4-5	[REDACTED]	4-12
Plate 4-6	[REDACTED]	4-13
Plate 4-7	[REDACTED]	4-14
Plate 4-8	[REDACTED]	4-15
Plate 4-9	[REDACTED]	4-15
Plate 4-10	[REDACTED]	4-16
Plate 4-11	[REDACTED]	4-17
Plate 4-12	[REDACTED]	4-17
Plate 4-13	[REDACTED]	4-18
Plate 4-14	[REDACTED]	4-18
Plate 4-15	[REDACTED]	4-20
Plate 4-16	[REDACTED]	4-20
Plate 4-17	[REDACTED]	4-21
Plate 4-18	[REDACTED]	4-21
Plate 4-19	[REDACTED]	4-23
Plate 4-20	Alexander Reserve 134A (Fox Creek Reserve).....	4-26
Plate 4-21	[REDACTED]	4-27
Plate 4-22	[REDACTED]	4-28
Plate 4-23	[REDACTED]	4-29

Abbreviations and Acronyms

AAND	Alberta Aboriginal Affairs and Northern Development
AFN	Alexander First Nation
ATV	all-terrain vehicle
INAC	Indian and Northern Affairs Canada
NEB	National Energy Board
NTS	National Topographic System
PDA	project development area
PPA	prescribed purchase area
RAA	regional assessment area
RoW	right-of-way
TEK	Traditional Environmental Knowledge
TK	Traditional Knowledge
TLE	Treaty Land Entitlement
TLU	Traditional Land Use

1 Introduction to Alexander First Nation

1.1 The Community

Alexander First Nation (AFN) Indian Reserve 134, the main Reserve and location of the Nation's administrative offices, is located 55 km northwest of Edmonton, near the town of Morinville (Figure 1-1). AFN has two other reserves, 134A and 134B, located farther northwest of Edmonton (INAC 2005, <http://sdiprod2.inac.gc.ca/FNProfiles/>). There are currently approximately 1,800 members of AFN; over 70 percent are younger than 25 years of age (Arcand 2006) and the membership of AFN is primarily Cree. The Nation takes its name after Chief Katstaweskum, whose baptismal name was Alexandre, the first Chief of Alexander First Nation (Leduc et al. 1992).

1.1.1 Traditional Territory

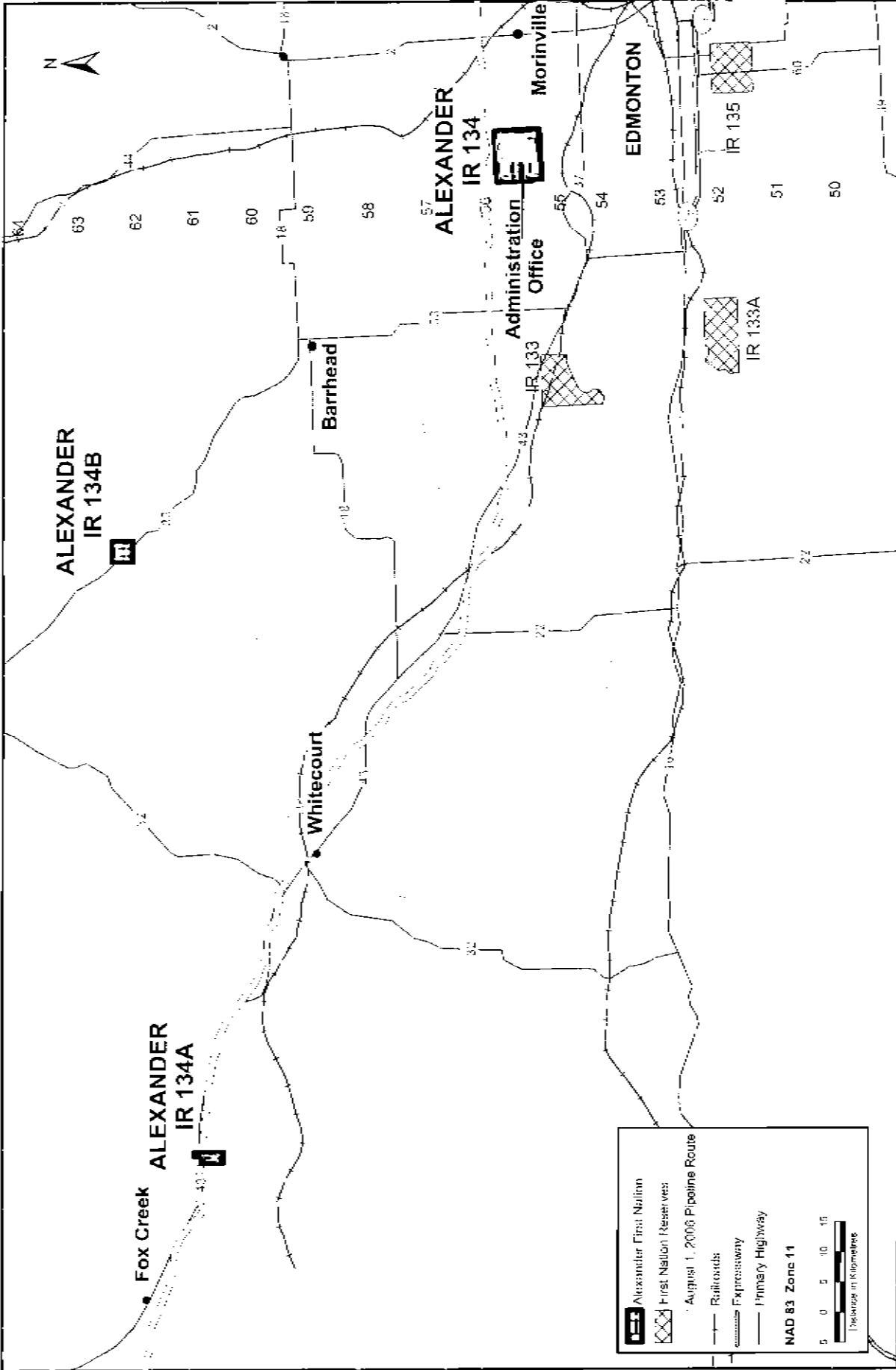
The presence of Cree peoples throughout the Parkland and Plains regions (of what is now the Province of Alberta) prior to 1763 has been well documented (Ray 1974; McCullough 1982; Fedirchuk and McCullough 1992). AFN Elders do not delineate the Nation's territorial boundaries because there were none before European settlement. "Cree people always moved around" [REDACTED] "The Creator made sure we would move around by spreading the resources" [REDACTED]. "Our Traditional Territory goes from the Atlantic to the Pacific. Our forefathers traveled this country freely" [REDACTED]

In AFN Elder's accounts, commonly named geographical reference points included: [REDACTED]

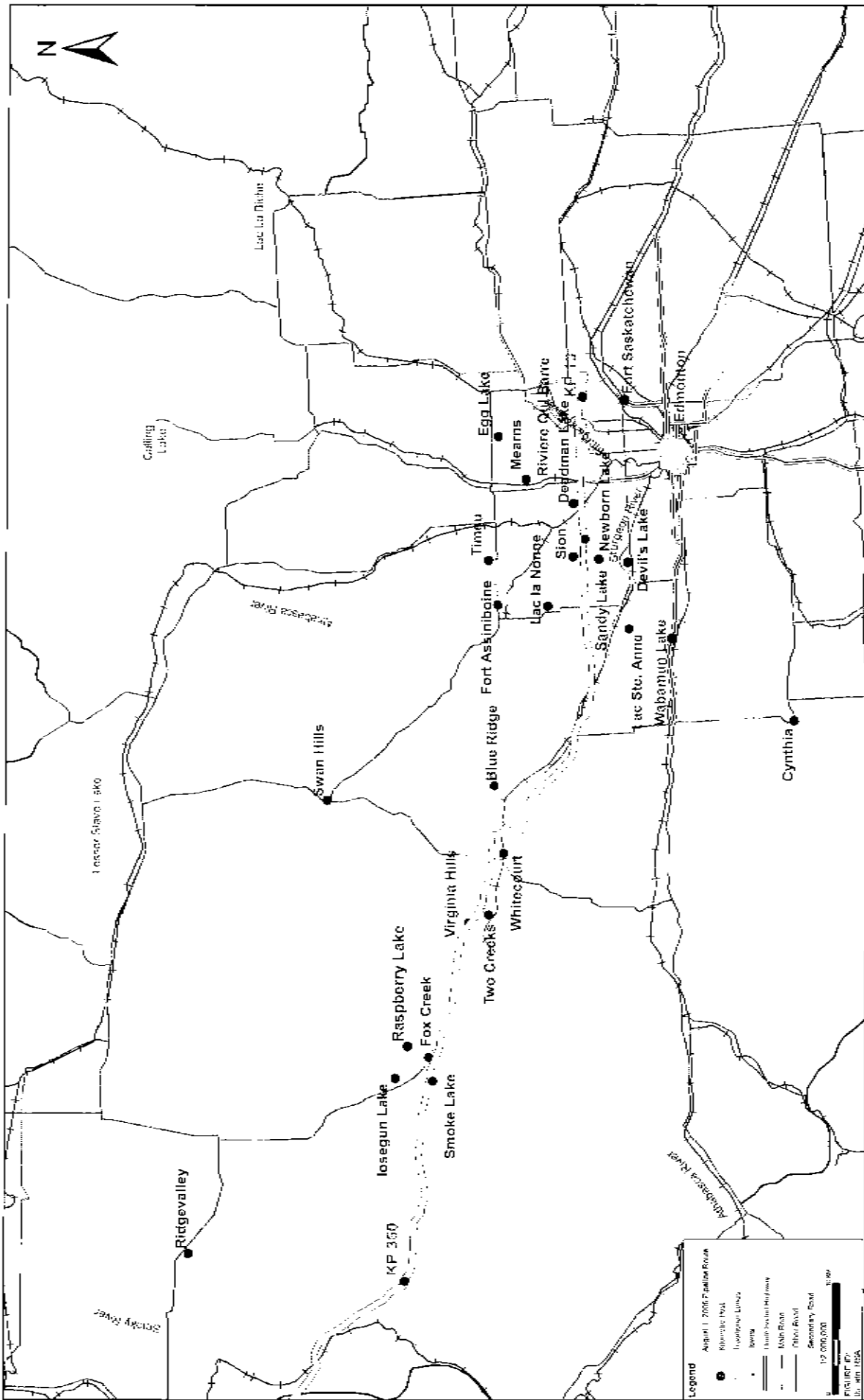
Figure 1-2 shows the geographical area covered during interviews and/or field visits with AFN Elders for the Enbridge Gateway Pipelines Project (the Project) Traditional Knowledge (TK) study.


In the 1800s, AFN families lived in the area of [REDACTED]

[REDACTED] with abundant opportunities for hunting, fishing, and trapping and gathering (Leduc et al. 1992).



	ENBRIDGE GATEWAY PROJECT	
	Alexander First Nation Reserves	
	1-1	
FIGURE NO		
DRAFT DATE	25/August/2006	
REVISION DATE	18/January/2007	
PREPARED FOR		ENBRIDGE



	REFERENCE: ESRI Canada	DATE: 11/10/2005 REVISION DATE: 11/11/2007 PROJECT NO.:	ENBRIDGE GATEWAY PROJECT <h2 style="text-align: center;">Regional Assessment Area</h2>	1-2
PROJECT NO.:		ERINDONTON		ERINDONTON

1.1.2 Reserve Lands

AFN is signatory to Treaty Six. Chief Katstaweskum ("That the Echo of His Walk Resounds Like the Thunder We Hear Far Away") and his headmen, Koosah-wanaskayo, Pahs-pahs chase, Tha-Kootch and other chiefs from the Edmonton area signed an adhesion to Treaty 6 at Fort Edmonton on August 21, 1877. Two years later a Reserve was selected from the following three locations initially suggested by government officials: Lac La Nonne (the existing settlement area); Lac Ste. Anne (valued as a good fishing site and the location of a Catholic mission); and Sandy Lake (valued for good farming soil). On strong suggestion by government officials, the Sandy Lake area was chosen for its farming potential, and 25,240 acres of land were set aside (Leduc et al. 1992). This area is now known as Alexander Reserve 134 and is referred to as such throughout the text (Figure 1-1).

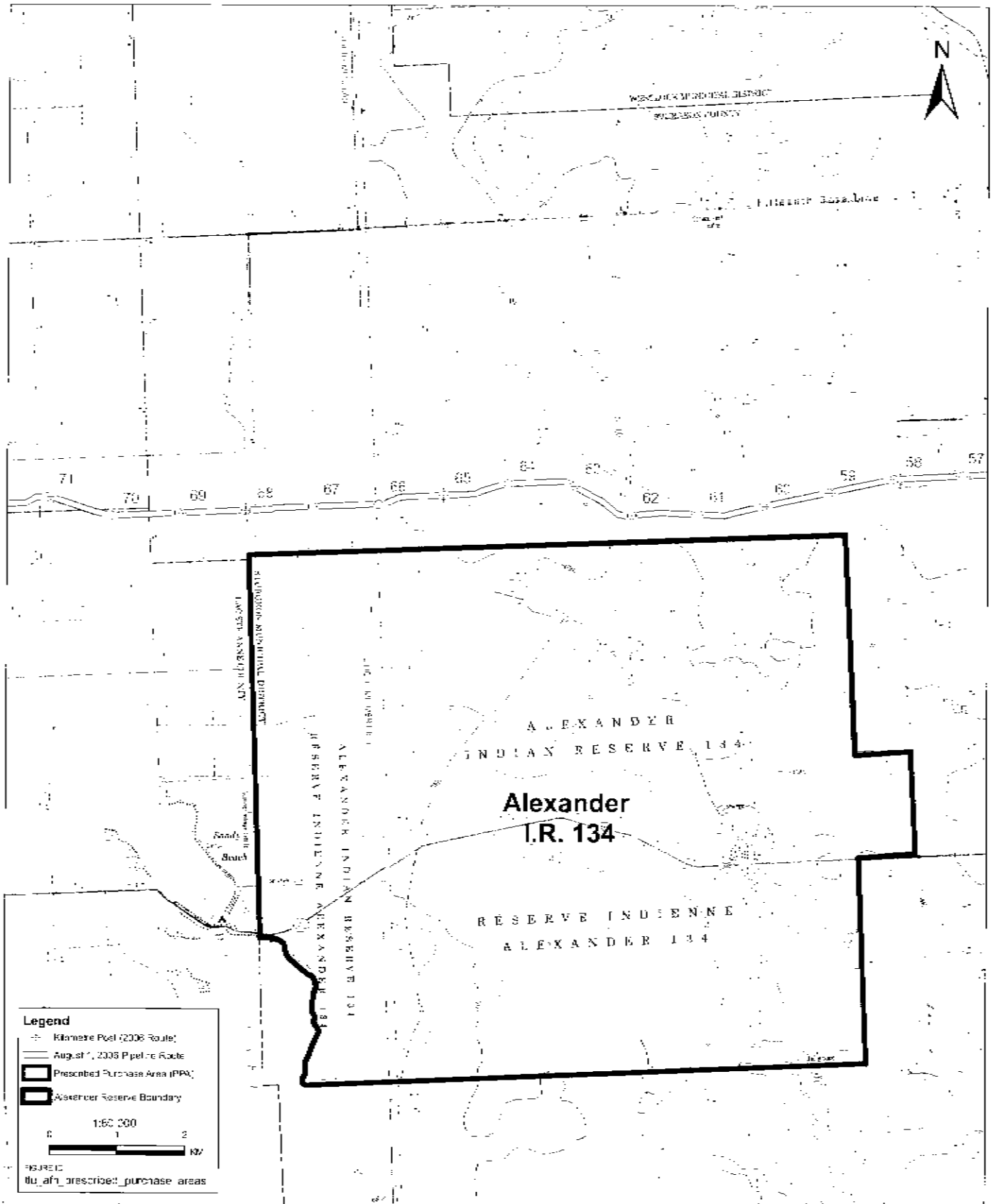
These Reserve lands were surveyed in 1880. Between 1881 and 1883, most AFN families moved from Lac La Nonne to the new Reserve at Sandy Lake where the Federal Government supported the establishment of a farm, and provided a farming instructor, basic implements, and some livestock (Leduc et al. 1992). Some members of AFN still refer to Reserve 134 as *'Kipohtakaw'* ("enclosed" or "protected by trees"), which is the way it looked before much of the land was cleared for farming (AFN15).

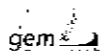
In addition to this main Reserve, AFN has two Reserves which were established following various Indian Land Claim settlements (see Section 1.1.3: Land Claims). They are Alexander No. 134A ('Fox Creek' - 2,083.8 ha) and Alexander No. 134B ('Fort Assiniboine' - 3.4 ha), located 25 km southeast of Fox Creek and 36 km northwest of Barrhead, respectively (INAC 2005, <http://sdiprod2.inac.gc.ca/FNProfiles/>) (Figure 1-1).

1.1.3 Land Claims

AFN initiated claims with the Federal Government to resolve a number of historical grievances including a questionable surrender of 9,518 acres (3,852 ha) of Reserve 134 in 1905, the mismanagement of Trust Fund Relief and Medical Assistance from 1905 to 1950, and an alleged Treaty Land Entitlement (TLE) shortfall of land under Treaty 6 (INAC 2006, http://www.ainc-inac.gc.ca/ps/clm/pis_e.pdf). In 1998, the TLE claim was settled and AFN received 15,140 acres (6,127 ha) of land and compensation from the Federal and Provincial governments (AAND 2000, <http://www.aand.gov.ab.ca/PDFs/Treaty%20Land%20Entitlement%20Claims-2003.pdf>; INAC 2004, http://www.ainc-inac.gc.ca/pr/pub/atr/index_e.html). In addition, a claim was settled in 2002 with the Federal Government resulting in compensation and the repatriation of the 9,518 acres (3,852 ha) surrendered in 1905 (INAC 2002, http://www.ainc-inac.gc.ca/nr/prs/m-a2002/2-02167_e.html).

At the time Alexander Reserve lands were first surveyed in 1880, Reserve 134 extended north to the Fifteenth Base Line (AFN2). As part of the claim settlements, an agreement was reached whereby some of these lands would be included in a Prescribed Purchase Area (PPA) and claims compensation monies were used to purchase back original Reserve lands. AFN is actively engaged in repatriating these surrendered lands, generally referred to as "TLE Lands" (Figure 1-3).



	REFERENCES	DATE 27/September/2006
	ENBRIDGE GATEWAY PROJECT	REVISION DATE 02/February/2007
FIGURE NO 1-3	Alexander First Nation Prescribed Purchase Area (PPA)	PREPARED FOR ENBRIDGE

2 Spatial and Temporal Boundaries

In order to set geographic boundaries for identifying the potential effects of the Project on a community and their traditional lands, assessment areas were established based on "the perspectives and concerns of the Aboriginal community" (Kavik-AXYS Inc. 2005:31). Temporal boundaries are "best identified by the Aboriginal group, [as] the date at which they see major changes beginning to occur in traditional use and/or surrounding environmental conditions" (ibid.:32). This boundary provided a baseline against which incremental changes were evaluated.

2.1 Spatial Parameters

For the Alexander First Nation TK study, a Regional Assessment Area (RAA) was determined in conjunction with AFN Traditional Knowledge Program managers and AFN Elders. The RAA includes the Project Development Area (PDA) (see below) and surrounding lands discussed by AFN study participants in reference to the Project. On the August 1, 2006 pipeline route (map dated 17/08/2006), the RAA spans KP 10 to KP 360, and extends up to 75 km from the RoW (Figure 1-2). During the study process, AFN Elders stated that the Nation's Traditional Territory exceeds this area.

The PDA is defined as the RoW (40 m for construction and 25 m for operations) and ancillary facilities (power lines, pump stations, camps, and access roads) on the August 1, 2006 route. Because route revisions occurred during the AFN TK study, two RoWs were assessed. Project routes discussed with AFN are indicated in Figure 2-1. The PDA has been presented in Figures 2-1, 3-1, 3-2 and 4-2 to demonstrate the relationship between the Project and AFN's traditional lands.

2.2 Temporal Parameters

This study considered AFN's current use of traditional land and resources, use in the past (since time immemorial) as well as future use. Future use pertains to the opportunities for generations of AFN descendants to practice traditional ways (in modern form) and maintain traditional cultural and spiritual values.

In this study, the temporal boundary against which incremental changes are compared is the 1950s-1960s. This time frame marks the end of active trapping as a viable economic pursuit (Leduc et al. 1992) and the transition from small scale mixed farming to larger scale mechanized operations. This date was a common point of reference used by the Traditional Knowledge holders who participated in the TK Study.

3 Study Methodology

AFN representatives and the GEM team carried out a six-phase TK Study for the Project. In its entirety, the study consisted of a literature review, an initial scoping process, a community meeting, group interviews, field visits, and a draft report review.

3.1 Literature Review

The literature review included historical and ethnographic literature, AFN's published history (Leduc et al. 1992), public land claim documents, internet searches and environmental impact assessment studies conducted within the defined spatial boundaries.

The final report for the Alliance Pipeline Ecological and Cultural Resources Project–Mainline and Fox Creek Lateral (Alexander First Nation and Alliance Pipeline Ltd. 1999) was also reviewed.

3.2 Initial Scoping Process

This process included a preliminary field reconnaissance (by vehicle) with AFN Traditional Knowledge Program staff members to review major sections of the RoW within Alexander Reserves 134 and 134A. This field visit was followed by a meeting to discuss the TK Study requirements for the Project.

The preliminary field reconnaissance took place on November 1-2, 2005. Representatives from the AFN Traditional Knowledge Program, AFN Band members, and GEM TK Study team members visited selected areas on Alexander Reserve 134 and 134A which would be transected by the pipeline RoW (as described on pipeline route version August 9, 2005, map dated 30/11/2005). The purpose of these visits was to permit a representative group from AFN to do a preliminary field review of the RoW in anticipation of interviews with Traditional Knowledge Holders. It also provided AFN Traditional Knowledge Program staff with information that would help facilitate the study process within the community.

A subsequent scoping meeting was held on January 30, 2006 at the AFN Administration Office. AFN Traditional Knowledge Program staff members, AFN staff members and GEM TK Study team members convened in order to determine the specifics of the TK Study which would be carried out with AFN (for a list of meeting participants, see Appendix A).

3.3 Community Meeting

The community meeting was held on January 31, 2006 at the AFN Community Center with 39 AFN Elders and interested AFN Councillors, management staff, Band members, and GEM TK Study team members (Appendix A). Pipeline route version August 9, 2005, map dated 30/11/2005 was used to introduce participating Band members to the Project and TK Study process.

3.4 Group Interviews

Group interviews with AFN Elders were conducted on February 1-3, 2006 (Appendix A), which created an opportunity for AFN Elders to share Traditional Land Use (TLU) information and Traditional Environmental Knowledge (TEK) relevant to the Project and to explore and clarify AFN's interests and concerns. Three groups of 10 to 15 men and women were interviewed. Recommendations made by AFN participants in the course of these interviews were recorded on pipeline route version August 9, 2005, map dated 30/11/2005 (which was also used as the basis of these discussions).

Following the last group interview on February 3, 2006, a brief meeting was held with AFN Traditional Knowledge Program managers to review the issues raised and to finalize planning for the field visits.

3.5 Field Visits

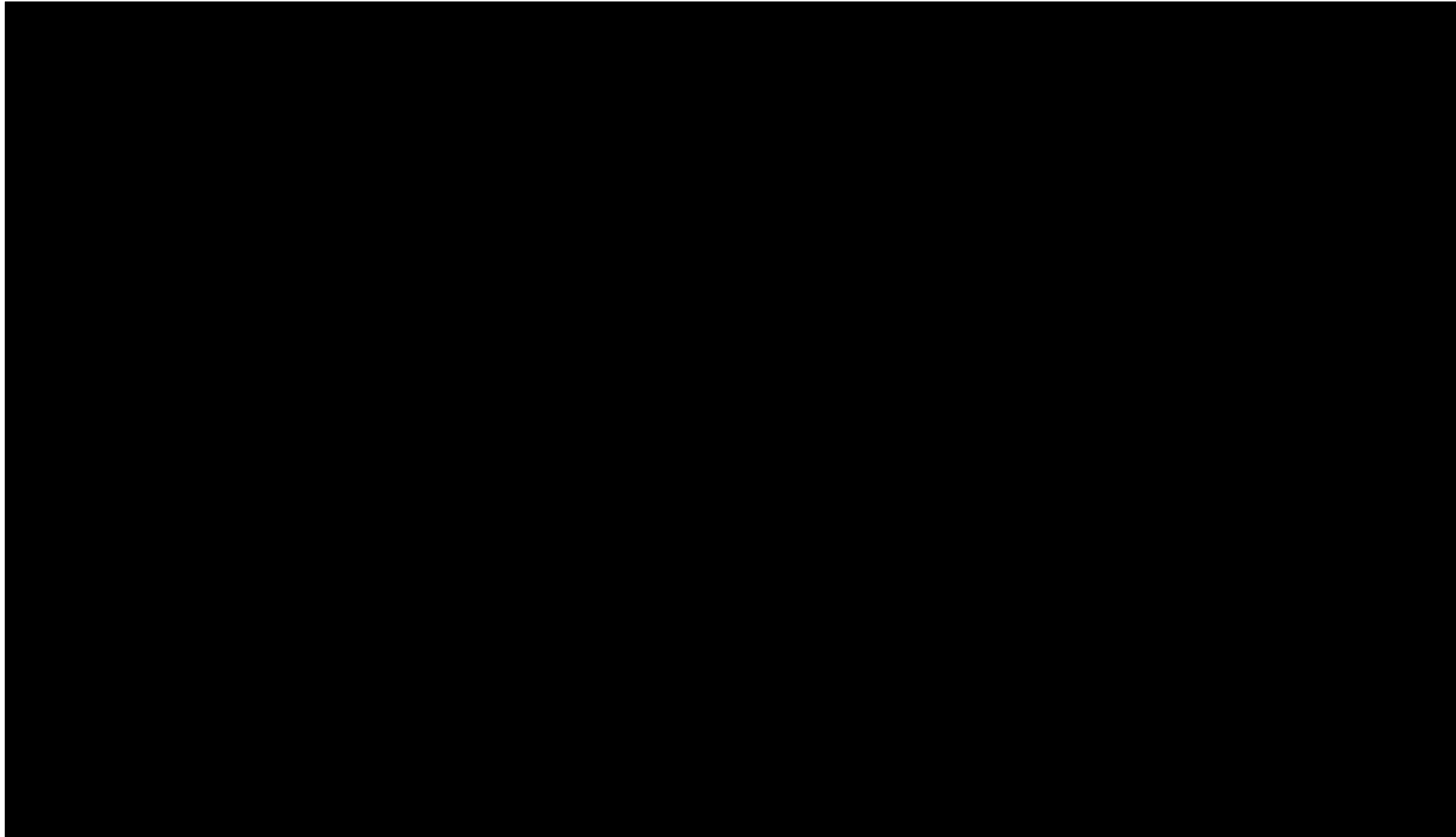
Field visits to areas of the RoW selected by AFN members were carried out on May 16-19, 2006, using mainly road access, providing AFN Elders with an opportunity to see first-hand the relationship between the RoW and areas important to the community. Pipeline route version April 1, 2006, map dated 06/04/2006 was used. The field visits were made accessible to both men and women, following a recommendation made during the group interviews. The areas visited included lands within Alexander Reserve 134 and adjoining TLE lands to the north [REDACTED] Alexander Reserve 134A (Fox Creek Reserve) [REDACTED]. Participants included Traditional Knowledge staff, Elders, and GEM TK Study team members (Appendix A).

On completion of the field visits, a brief meeting was held with the AFN Traditional Knowledge Program managers to review the information gathered and to clarify matters raised by AFN TK Study participants.

3.6 Report Review

Preliminary draft reports were reviewed by AFN Traditional Knowledge Program managers on August 28, 2006 and on September 26, 2006.

A community meeting with AFN Elders and Band members who participated in the study (Appendix A) was held on October 26-27, 2007 to review the draft report for accuracy and suitability for release as a public document.



ENBRIDGE GATEWAY PROJECT

DRAFT DATE
19 September 2006

REVISION DATE
15 April 2007

FIGURE NO
3-1

**Alexander First Nation Cultural Use Areas,
Alexander Reserve 134 and Adjoining TLE Lands**

PREPARED FOR
ENBRIDGE



FIGURE

3-2

ENBRIDGE GATEWAY PROJECT

Alexander First Nation Cultural Use Areas,
Alexander Reserve 134A [REDACTED]

DRAFT DATE

19 September 2006

REVISION DATE

16 April 2007

PREPARED FOR

ENBRIDGE

4 Baseline and Traditional Environmental Observations

4.1 Water and Air

AFN Elders are concerned about water and air quality. Some remember a time when "you could dig a hole in the muskeg or slough and get clean water" [REDACTED]. "Now the water is polluted" and water levels are much lower than in the past, even compared to 10 years ago [REDACTED]. [REDACTED] used to drink out of creeks on Alexander Reserve 134 but now the water is "dirty". [REDACTED] would haul water from [REDACTED] but chooses not to now because of pollution. [REDACTED] is also reported to be "polluted" [REDACTED]. Trappers never used to have to carry water with them, whereas now trapping activities are limited in part due to the lack of available drinking water [REDACTED].

Chemicals used by farmers, oil and gas, industrial development and burning of garbage were named as some of the causes of declining water quality, a process that started in the 1950s [REDACTED]. AFN Elders report that used oil has sometimes been dumped into rivers, which has also added to the deterioration of water quality [REDACTED]. [REDACTED] stated that the water is "salty".

There is a general feeling among the AFN Elders that the air quality is "not very good" on lands near Edmonton and close to refineries, although it was also mentioned that the air is "less dirty" now because of the use of natural gas [REDACTED].

Two freshwater springs are situated north of the RoW ([REDACTED] Plates 4-1 and 4-2). "The water [from these springs] has been tested at the University of Alberta and it's 'pure' [not contaminated]. It's important to make sure it stays that way" [REDACTED].



Plate 4-1 **Freshwater Spring on Alexander Reserve 134A**



Plate 4-2 Freshwater Spring on Alexander 134A

4.2 Climate Change

AFN Elders noted that it has been much drier in the last 10 years and that the muskegs, rivers and creeks are drying up [REDACTED] [REDACTED] commented that the weather is hotter than in the past, lacking regular cold spells.

4.3 Wildlife

Current hunting areas include [REDACTED] Alexander Reserve 134, [REDACTED] Smoke Lake, Iosegun Lake, Whitecourt, Fox Creek, east of the Fox Creek Reserve, Cynthia and Virginia Hills areas (Figures 1-2, 3-1 and 3-2).

4.3.1 Ungulates

There has been a decline in the number of moose (*Alces alces*) within AFN Reserves and Traditional Territory since the 1940s-1950s and hunters now have to go farther to find moose [REDACTED]. One explanation offered for these population declines is increases in human population density and farming [REDACTED]. It was also stated that the moose population around the Alexander Reserve 134 is starting to return to the area [REDACTED]. Some Elders think that the increase they have witnessed may be a false perception resulting from a more dispersed

moose population. [REDACTED] reported that the moose may be getting scared and scattering rather than staying in one area as they did in the past [REDACTED].

Moose wintering habitat was identified on Fox Creek Reserve. There is also "an important salt lick" on the Reserve just south of the RoW [REDACTED]. [REDACTED] noted that there are elk (*Cervus elaphus*) and moose trails throughout the Fox Creek Reserve, and that this area is good land for moose and deer (*Odocoileus* sp.). According to [REDACTED] moose on Fox Creek Reserve are "healthy."

[REDACTED] commented that Alexander Reserve 134 is also good habitat for moose and deer. Generally, there are fewer moose around Alexander Reserve 134 compared to Fox Creek Reserve, because the land has been cultivated. According to [REDACTED] when there are moose on Alexander Reserve 134 they are quickly killed for food [REDACTED]. AFN members currently hunt [REDACTED] on this reserve. AFN Elders commented that deer are abundant: "There's still a lot of deer around", and reported a noticeable increase of the number of deer on Alexander Reserve 134 [REDACTED].

4.3.2 Other Mammals

AFN Elders stated that there are no bears (*Ursus* sp.) on Alexander Reserve 134 [REDACTED] but there are now wolves (*Canis lupus*) near Sandy Lake [REDACTED]. Porcupines (*Erethizon dorsatum*) are found within AFN Traditional Territory and are "healthy" [REDACTED]. Rabbits (species unidentified) are present in areas along the west side of the Alexander Reserve 134 [REDACTED]. AFN Elders described a decrease in the number of rabbits, which they attribute to decreases in forest and bush cover [REDACTED]. It was noted, however, that rabbit numbers fluctuate [REDACTED] in seven-year cycles [REDACTED]. [REDACTED] commented that Alexander Reserve 134 is good habitat for rabbit.

Muskrats (*Ondatra zibethicus*) and beavers (*Castor canadensis*) are found in waterways on Alexander Reserve 134, [REDACTED]. According to [REDACTED], "There's everything in there..." Beaver and muskrat are also present in an important wetland area identified near the RoW ([REDACTED] Plate 4-3) [REDACTED], and near Newborn Lake [REDACTED]. Since beavers and muskrats are dependent on water and water levels, AFN Elders noted that their populations are declining with the decreasing water levels in the region [REDACTED]. [REDACTED] stated that there used to be many fur-bearers at Sandy Lake, but not anymore: "You can't make a living trapping now because there is not enough water" for fur-bearing animals to survive [REDACTED].



Plate 4-3 Wetland Area on Alexander Reserve 134A

4.3.3 Birds

AFN Elders indicated that the number of ducks and 'wild chicken' (spruce grouse - *Falcipennis canadensis*, pheasants - *Phasianus* sp.) has declined [REDACTED]. [REDACTED] commented that chicken, ducks, and geese are not as "pure" as in the past because of sewage and oil spills. Concerns about the risk of bird flu were also expressed [REDACTED]. As well, black ducks (species unidentified) are increasingly difficult to find [REDACTED]. Geese and ducks are found along the west side of the Alexander Reserve 134 [REDACTED]. The area identified as a key wetland on the Fox Creek Reserve by AFN Elders is an important moulting and nesting area for ducks [REDACTED]; ducks are also present on Alexander Reserve 134 water bodies [REDACTED]. Bald eagles (*Haliaeetus leucocephalus*) have been sighted on Fox Creek Reserve [REDACTED].

4.3.4 Fish

Current fishing areas include Sturgeon River, Lac Ste-Anne, Devil's Lake (Matchayaw Lake on NTS maps), Smoky River, Iosegun Lake, Athabasca River, Smoke Lake, rivers and creeks west of Fox Creek and towards the Fox Creek Reserve (134A) (Figure 1-2).

AFN Elders report that fish populations in the region have decreased dramatically in the last 20 years and that wild mink (*Mustela vison*) now eat muskrat because

of the low fish stocks [REDACTED] [REDACTED] was recognized as an important fish habitat, with suckers (species unspecified) and perch (*Perca* sp.) present. There also used to be jackfish (*Esox lucius*) in this river [REDACTED]. According to [REDACTED] [REDACTED] is the only creek with fish in the area". [REDACTED] recounted the use of dams as a fishing technique.

Spawning sites for whitefish (species unidentified) and jackfish were identified by the AFN Elders on the northwest side of Iosegun Lake, in Smoke Lake, and in streams between Raspberry Lake, Iosegun Lake and Smoke Lake [REDACTED]. Whitefish, jackfish and pickerel (*Stizostedion vitreum*) are found in Smoke Lake, while Wabamun Lake and Lac Ste. Anne have whitefish and pickerel [REDACTED].

Fish populations within Alexander Reserve 134 are reported to be on the decline. Pollution and lack of oxygen were named as possible causes [REDACTED]. Deadman Lake fish populations are also declining, and dead fish have been observed around the lake [REDACTED]. It was also stated that there used to be jackfish in this lake but that there are none now [REDACTED]. According to [REDACTED], fish used to spawn in Deadman Lake, but beavers and beaver dams have changed the habitat.

Although there used to be whitefish and jackfish in Sandy Lake, now there are only small perch [REDACTED]. Dead fish have also been found around Sandy Lake [REDACTED]. AFN11 commented that the water levels in Sandy Lake are low and that there are "no fish" in that lake. [REDACTED] commented that there used to be fish at Sandy Lake, but that there are none now because the lake is "polluted." Fish are currently being reintroduced into this lake [REDACTED].

4.4 Vegetation

Current plant harvesting locations include areas on the Fox Creek Reserve, [REDACTED]
[REDACTED]

AFN Elders noted a general decrease in the abundance of berries, particularly saskatoon berries (*Amelanchier sinifolia*), raspberries (*Rubus idaeus*), and strawberries (*Fragaria* sp.). These decreases are attributed to forest fires and overly wet or dry weather conditions [REDACTED]. In addition, farmers and oil companies are cutting trees down and many trees (such as poplar) are dying, possibly from "pollution" [REDACTED]. [REDACTED] also commented that the number of red willows (i.e., red-osier dogwood; *Cornus solonifera*) is decreasing.

AFN Elders identified the [REDACTED] Plate 4-4) as having good berry patches (saskatoon berries, strawberries, raspberries, chokecherries (*Prunus virginiana*), pin cherries (*Prunus pensylvanica*), gooseberries (*Ribes oxycanthoides*), blueberries (*Vaccinium myrtilloides*), and high-bush cranberries (*Viburnum opulus*)). Wild onions (*Allium* spp.) and beaked hazelnuts (*Corylus cornuta*) are also present in this area [REDACTED]. [REDACTED] commented that there used to be more berries in the area, and that they have declined because of agriculture and pasturing. [REDACTED] recounted that before farmers came to the area people made a living by trapping, hunting and gathering. In the 1950s, farmers moved into the area, and the region became pastureland; the resulting tree clearing and grazing destroyed much of the area [REDACTED]. [REDACTED] commented, "in the 1960s there was still lots

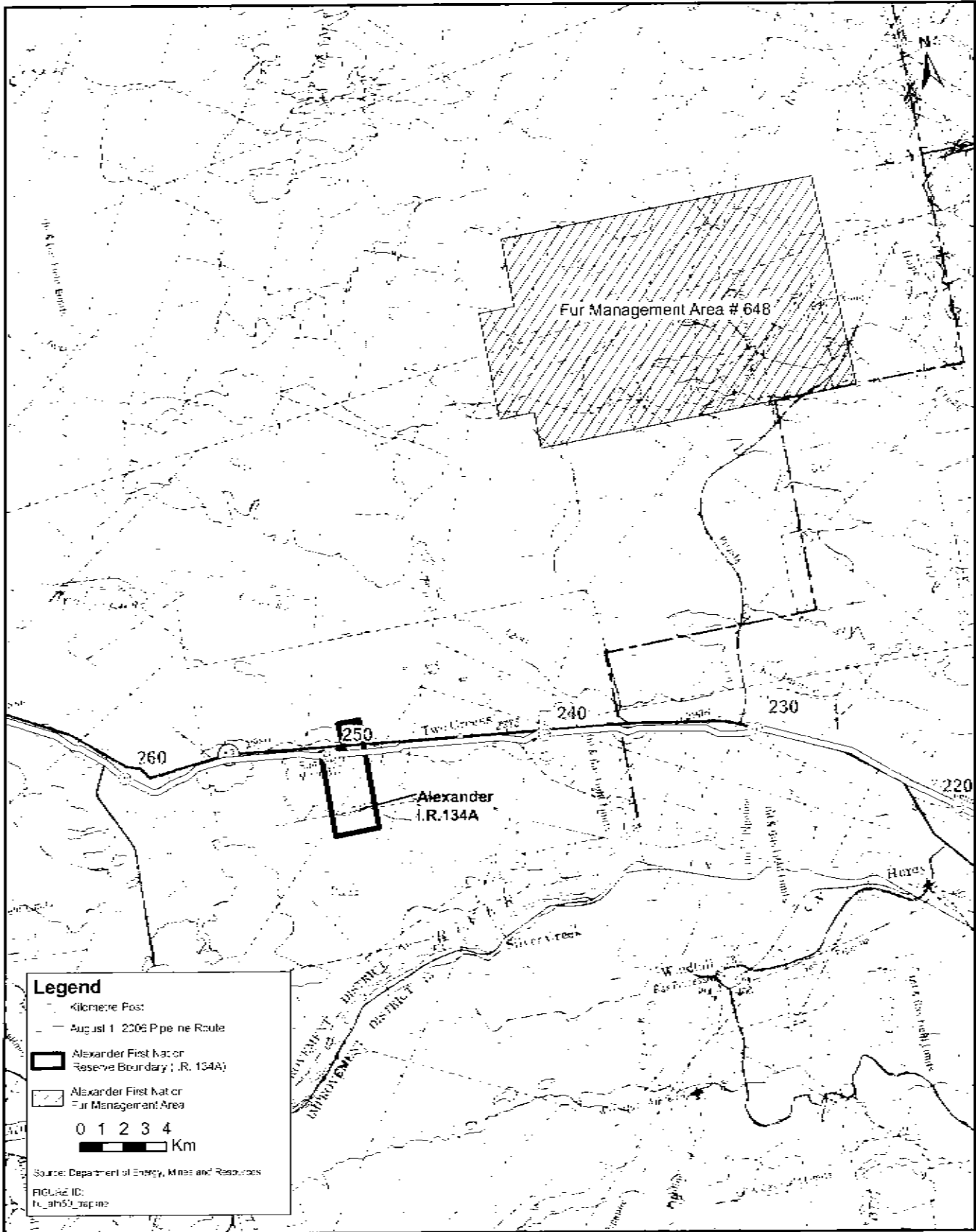
of bush around." The decline in blueberries (*Vaccinium myrtilloides*) was specifically related to cattle eating the shrub roots [REDACTED]. "But [REDACTED] being protected now, so things are slowly coming back" [REDACTED]

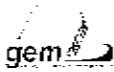


Plate 4-4

[REDACTED] stated that there are high-bush and low-bush cranberries (*Viburnum* sp.) on Fox Creek Reserve and blueberries near trapline #648 (Figure 4-1). [REDACTED] and [REDACTED] also commented that there are blueberries in the south and southwestern section of Fox Creek Reserve. The Sandy Lake, [REDACTED] and Blue Ridge areas were identified as good areas for berries (AFN13).

[REDACTED] mentioned that "there used to be lots of nice flowers in the region, but not anymore". Plants used as medicines are discussed in Section 4.5.6: Spirituality.



	ENBRIDGE GATEWAY PROJECT	DRAFT DATE 19/September/2006 REVISION DATE 11/April/2007
4-1	Alexander First Nation Trappers' Fur Management Areas	PREPARED FOR ENBRIDGE