

**ASSESSING POTENTIAL EFFECTS OF THE BIPOLE III  
TRANSMISSION PROJECT: A MAJOR RELIABILITY  
IMPROVEMENT INITIATIVE ON  
ABORIGINAL TRADITIONAL KNOWLEDGE (ATK)  
REPORT #1**



**Prepared for:  
Manitoba Hydro  
Submitted by:  
Northern Lights Heritage Services Inc.  
MMM Group Limited  
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# Acknowledgment

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<b>List of Acronyms</b>	
<b>ATK</b>	Aboriginal Traditional Knowledge
<b>CEAA</b>	Canadian Environmental Assessment Act
<b>CEAA</b>	Canadian Environmental Assessment Agency
<b>CEARC</b>	Canadian Environmental Assessment Research Council
<b>DPM</b>	Digital Pocket Memo
<b>DSSS</b>	Digital Speech Standard
<b>EA</b>	Environmental Assessment
<b>EIS</b>	Environmental Impact Statement
<b>ESS</b>	Environmentally Sensitive Sites
<b>FLCN</b>	Fox Lake Cree Nation
<b>FPR</b>	Final Preferred Route
<b>GIS</b>	Geographical Information Systems
<b>IAIA</b>	International Association for Impact Assessment
<b>ICH</b>	Intangible Cultural Heritage
<b>IK</b>	Indigenous Knowledge
<b>IN</b>	Interview Identification Number
<b>IP</b>	Intellectual Property
<b>KPI</b>	Key Person Interview
<b>LPFN</b>	Long Plain First Nation
<b>MMF</b>	Manitoba Metis Federation
<b>NCH</b>	Express Scribe Transcription Software
<b>NLHS</b>	Northern Lights Heritage Services Inc.
<b>NTS</b>	National Topographic System
<b>OCN</b>	Opaskwayak Cree Nation
<b>PC</b>	Personal Computer
<b>PDF</b>	Portable Document Format
<b>PPR</b>	Preliminary Preferred Route
<b>QA</b>	Quality Assurance
<b>QC</b>	Quality Control
<b>QDA</b>	Qualitative Data Analysis
<b>RMA</b>	Resource Management Area
<b>RSM</b>	Route Selection Matrix
<b>SAAM</b>	Society for Applied Anthropology in Manitoba
<b>SD</b>	Secure Digital
<b>SSEA</b>	Site Selection and Environmental Assessment
<b>TCN</b>	Tataskweyak Cree Nation
<b>TEK</b>	Traditional Ecological Knowledge
<b>TK</b>	Traditional Knowledge
<b>UNESCO</b>	United Nations Environmental, Science and Cultural Organization
<b>VEC</b>	Valued Ecological Component
<b>WAV</b>	Waveform Audio File Format
<b>WIPO</b>	World Intellectual Property Organization

# Executive Summary

For the Bipole III Project Environmental Impact Statement (EIS), Aboriginal Traditional Knowledge (ATK) is used as the overarching term for the knowledge shared by First Nation, Metis and Northern Affairs<sup>1</sup> communities, though certain communities used such other terms as Traditional Knowledge (TK), Traditional Ecological Knowledge and Aboriginal Ecological Knowledge.

ATK was shared in two ways: through participation in the workshops and interviews conducted by the Manitoba Hydro ATK study team and, where communities indicated a desire to conduct their own ATK study, through self-directed studies.

Both methods provided an invaluable source of traditional knowledge that was incorporated into the selection process of the Final Preferred Route (FPR). All of the gathered ATK observations were qualitatively and quantitatively scrutinized by using cultural indicators of change to illuminate recurrent community themes of concern for inclusion in the Environmentally Sensitive Sites (ESS) tables which quantified potential constraints.

Regions of constraint were then identified within the Bipole III Project study area and were utilized with the ESS tables to identify common and unique potential environmental effects of the Project. Common community effects were expressed by all the ATK participating and self-directed communities and unique community effects were expressed through the use of universal cultural indicators allowing each community to cite the concerns that represent them.

ATK was evaluated for its own important contribution as a stand-alone document; but it was also incorporated into the various study team disciplines to more effectively describe the long-term observations that the participating communities so generously shared.

What we learned is that the traditional knowledge that is held within each community deals with every aspect of life; it is gestalt, or whole in its approach. We learned the philosophy of *miyopimatisiwin*<sup>2</sup>, which means “....that a person is able to pursue those activities associated with hunting and bush living: eating the right foods, keeping warm, and maintaining the viability of the group through sharing with those in need” (Tanner 2002). The way we learned was not unlike the timeless tradition of narration, we used our ears to listen and our mouths to ask

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<sup>1</sup> Northern Affairs Communities are identified by Manitoba Aboriginal and Northern Affairs ([http://www.gov.mb.ca/ana/community\\_profiles/index.html](http://www.gov.mb.ca/ana/community_profiles/index.html))

<sup>2</sup> *miyupimaatisiwin* (Mistassini Cree dialect) (Tanner 2002), *miyopimatisiwin* (Plains Cree dialect) (Wolvengrey 2001) and *mino bimaadiiwin* (Ojibwa) (Ningwance 2007)]

questions; only we used modern technology to help us remember the important lessons that were shared. We learned that people genuinely love the land on which they live, and on which their ancestors made a living. We learned of the concerns for the health of the land and the people who routinely rely on the resources for sustenance (both physical and spiritual).

ATK plays a vital role in Aboriginal culture; Aboriginal people view the land on which they live as all encompassing, a way of life, where relationships with the land reinforce and contribute to the cultural experience culture. To be denied the opportunity to maintain this relationship results in the loss of one's culture. The results of the study suggest that effects of the Bipole III Transmission Project on presently known ATK may cause subtle changes to culture because of changes to the cultural landscape which remove mnemonic cues associated with memory mapping. This runs the risk of disrupting the continuity of cultural expression and thought.



## 1.0 Introduction

Aboriginal Traditional Knowledge (ATK) is a knowledge system that integrates Indigenous and local worldviews, values, and experiences into a complex framework by which harmony and balance of humans and the natural environment are achieved (Inglis 1993). Careful scrutiny of ATK and the balanced relationships of a diverse set of cultural environments are necessary for effective sustainable development.

It has been said, “If the land is not healthy then how can we be?” (Tanner 2002:3). The systemic struggle is for *Miyopimatisowin* (Cree) *Miyobimaadizawin* (Ojibwa) –a good life, a healthy life or “being alive well (See Tanner 2002:98-111). ATK holds the key for being alive well in both a cultural and physical sense.

This document describes the ATK that was shared within the Bipole III Study area (Figure 1).

### 1.1 Purpose and Content of the ATK Report

The purpose of this report is to present, through the use of an ATK study, the potential effects of the proposed Bipole III transmission project on the cultural resources and traditional knowledge of participating ATK workshop communities. Please refer to the Bipole III Aboriginal Traditional Knowledge Report #2 for self-directed community studies within the Bipole III study area.

Within the scope of this document, which seeks to outline potential Project effects through the use of traditional knowledge, The Canadian Environmental Assessment Act defines ‘environmental effect’ and states that:

*“environmental effect” means, in respect of a project, (a) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the Species at Risk Act, (b) any effect of any change referred to in paragraph (a) on*  
*(i) health and socio-economic conditions,*  
*(ii) physical and cultural heritage,*  
*(iii) the current use of lands and resources for traditional purposes by aboriginal persons, or*  
*(iv) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or*  
*(c) any change to the project that may be caused by the environment, whether any such change or effect occurs within or outside Canada; (CEAA, 1992: 2-3)*

The ATK document #1 report does not presume to speak for those communities that chose not to participate in either the ATK workshops or self-directed studies nor does it presume to have gathered all ATK within the study area.

The contents of the ATK workshops and self-directed studies were also reviewed and utilized by the various sub-disciplines for incorporation into their studies.

The application of ATK began with its contribution into the selection of a final preferred route (FPR) at the outset of the community ATK workshops (Figure 1). Three preliminary routes had been proposed by Manitoba Hydro (Figure 2) and were utilized within the workshops as a focal point for community discussion of the cultural use of lands within the study area. It became clear from these community discussions that certain areas on the natural landscape appeared to be more vulnerable than others. The findings were disseminated and incorporated into the biophysical components (forestry, aquatics, mammals, birds, socioeconomics, etc.) of the Project by the various disciplines for cross-referencing purposes.

For the Manitoba Hydro Bipole III Transmission Project: A Major Reliability Improvement Initiative (Bipole III) ATK was obtained through 1) existing public sources where possible; 2) ATK workshops and interviews that were held at First Nation communities; by other municipal communities who agreed to participate in the Manitoba Hydro ATK process, and 3) by those First Nations and the MMF who conducted self-directed ATK studies. The report of the self-directed studies is entitled “Bipole III Aboriginal Traditional Knowledge Report #2.

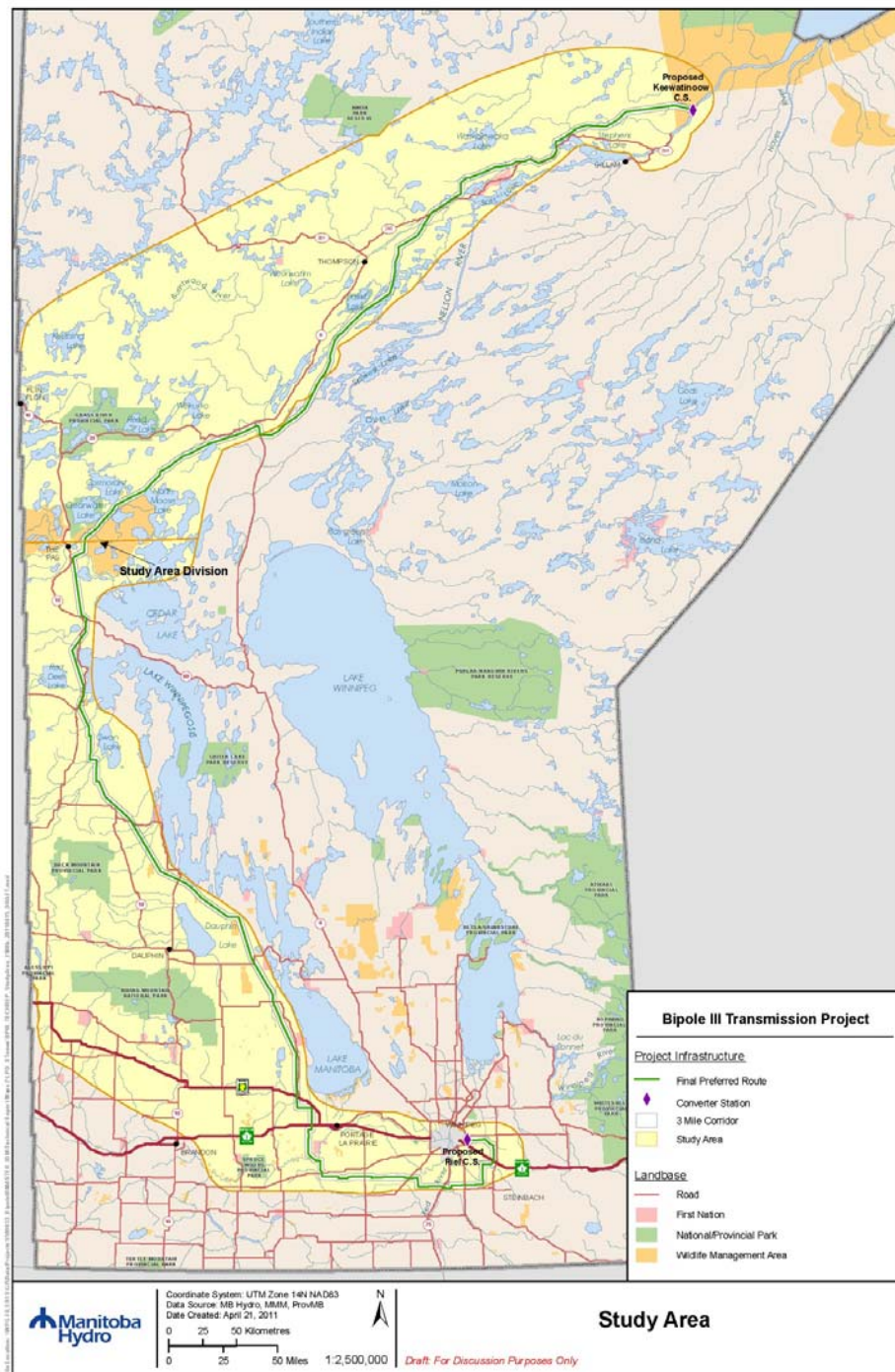


Figure 1. Bipole III Transmission Project Study Area.

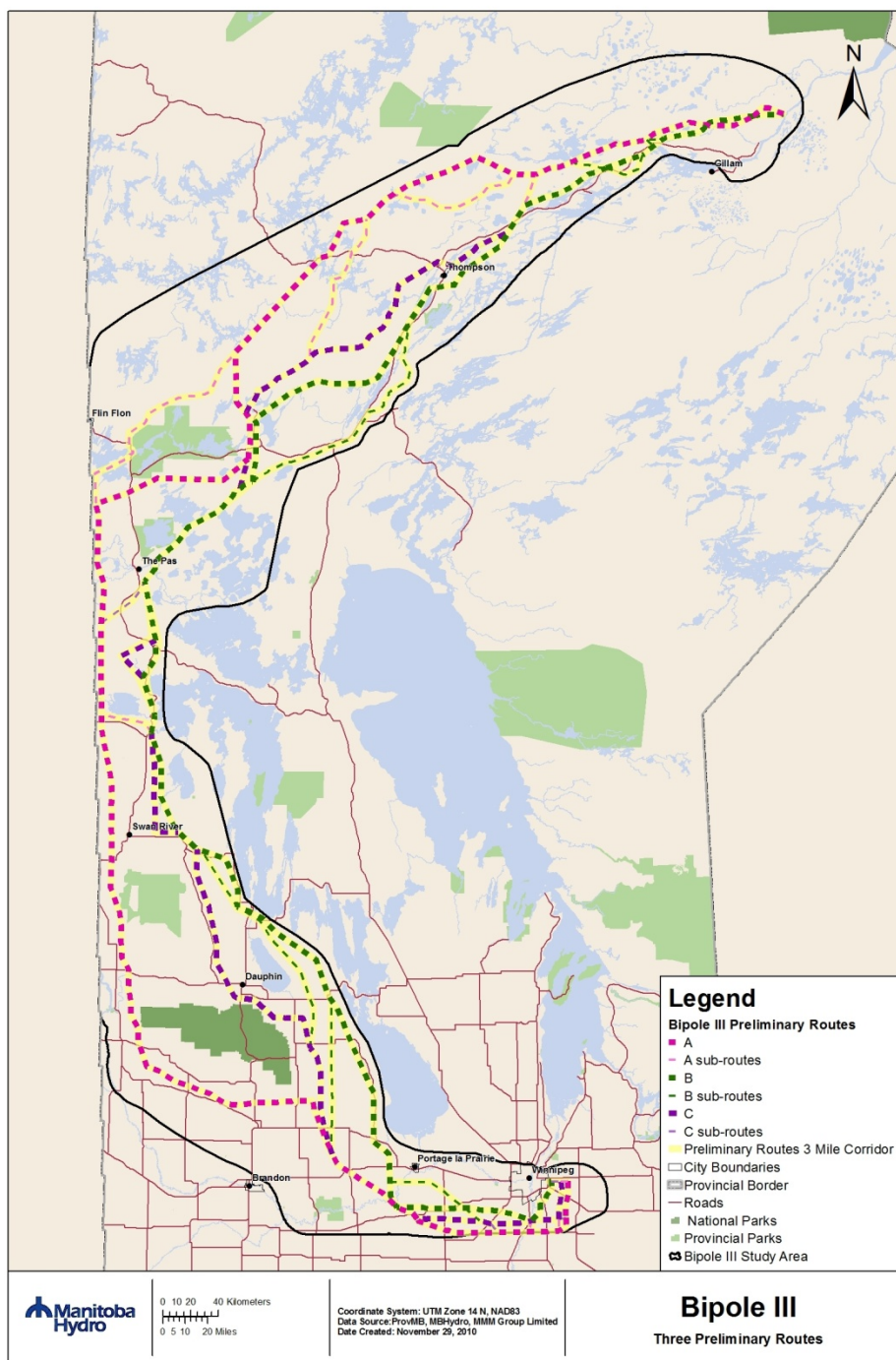


Figure 2. Bipole III Transmission Project Preliminary Routes.



### **ATK objectives for the Bipole III Project included:**

- Creation of a mutually respectful relationship with communities for incorporating ATK into the environmental assessment process and the EIS;
- Meaningful involvement of communities in the identification and use of ATK; and
- Integration of ATK throughout the SSEA and EIS, to the extent feasible (CEAA 1992).

The ATK that was gathered represents only a small portion of the vast tradition of knowledge that exists within each of the communities that participated, and which is also held by those communities that chose not to participate. The magnitude of the route forced a reliance on previous historic studies and documents which perhaps caused the data to look back rather than forward. No former baseline data was available for the entire Project study area at the outset of the ATK gathering process.

Of the 96 interviews conducted within the 19 participating communities by the MH ATK study team 68 were individual or key person interviews (KPI) and 28 were group interviews which ranged from 5-15 people per interview. A little over one hundred seven hours (107hrs 37mins 35 sec.) of interview recordings were completed with a total of 2584.5 hours dedicated to transcription, quality control, summary sheets, coding and code entry. Total staff days were 336.50 days.

In addition to the digitally recorded interviews, 90 NTS map sheets were produced, which illustrated the immediate geographic scope of knowledge. A decision was made by the ATK study team, in agreement with Manitoba Hydro legal counsel to not publish the map series of each participating community; rather a general Bipole III route map with approximate boundaries of community ATK only was produced. The reason for this decision was to protect the knowledge and intellectual property of the participating ATK communities.

The information obtained through the self-directed studies was also incorporated into this report.

This document explains the process of acquiring ATK and provides an explanation of how the First Nations, MMF and Northern Affairs communities participated, identified and evaluated their traditional knowledge. It also describes the results of a qualitative and quantitative study used by the ATK study team in assessing the preferred route, determining environmentally sensitive sites for the effects assessment and enumerating the effects of the Bipole III Project on holders of traditional knowledge who call this area home.

The *Canadian Environmental Assessment Act* achieved Royal Assent in 1992 by the Government of Canada which “...seeks to achieve sustainable development by conserving and enhancing environmental quality and by encouraging and promoting economic development that conserves and enhances environmental quality...” The Act therefore states that an “...environmental assessment provides an effective means of integrating

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*environmental factors into planning and decision-making processes in a manner that promotes sustainable development” (1992:1).*

The Act and therefore the Government of Canada is “...committed to facilitating public participation in the environmental assessment of projects to be carried out by or with the approval or assistance of the Government of Canada and providing access to the information on which those environmental assessments are based” (1992:1).

The Act defines ‘environmental assessments’ and states that:

*“environmental assessment” means, in respect of a project, an assessment of the environmental effects of the project that is conducted in accordance with this Act and the regulations;*  
(CEAA, 1992:2)

Additionally, The Act also defines ‘environment’ and states that:

*“environment” means the components of the Earth, and includes*  
*(a) land, water and air, including all layers of the atmosphere,*  
*(b) all organic and inorganic matter and living organisms, and*  
*(c) the interacting natural systems that include components referred to in paragraphs*  
*(a) and (b); (CEAA, 1992:2)*

## **1.2 Project Description**

The corridor of the Bipole III Project commences at its egress at the Keewatinow Converter Station in the north and continues southwesterly to the west side of the Province of Manitoba. The transmission line terminates at the new Riel Converter Station in the south. The preferred route is 1384 km in length and is routed through cultural and natural landscapes within the Bipole III study area where numerous traditional activities (subsistence and cash economies) continue to support distinctive ways of life (Manitoba Hydro (MH) 2011:5).

One of the key goals of this supporting volume was to ensure that gathering ATK was part of the assessment process regardless of the cultural affiliation of any of the participating communities. A wide range of multicultural groups celebrate their heritage and history within the vast project study area and encompasses, amongst others, backgrounds that include Cree, Ojibway and Siouan First Nations, Metis, and other global descendants who have made Manitoba their home within an atmosphere of multiculturalism. Aboriginal and non-Aboriginal communities participated in the assessment process and were approached with mutual respect and offered meaningful involvement.

### 1.3 Overview and Assessment Approach to ATK

For the assessment process the goal was to identify linkages and pathways between ATK and the Bipole III Project to determine potential Project effects. Community-based studies in the form of key person interviews (KPI) and group interviews along with memory mapping of land use and occupancy areas provided a base of ATK which addressed specific physical, biophysical and socio-economic headings including heritage (Figure 3).

ATK adds to the comprehensiveness of the environmental assessment process and meets international environmental assessment best practice guidelines.

#### BIPOLE III PROJECT COMPONENTS

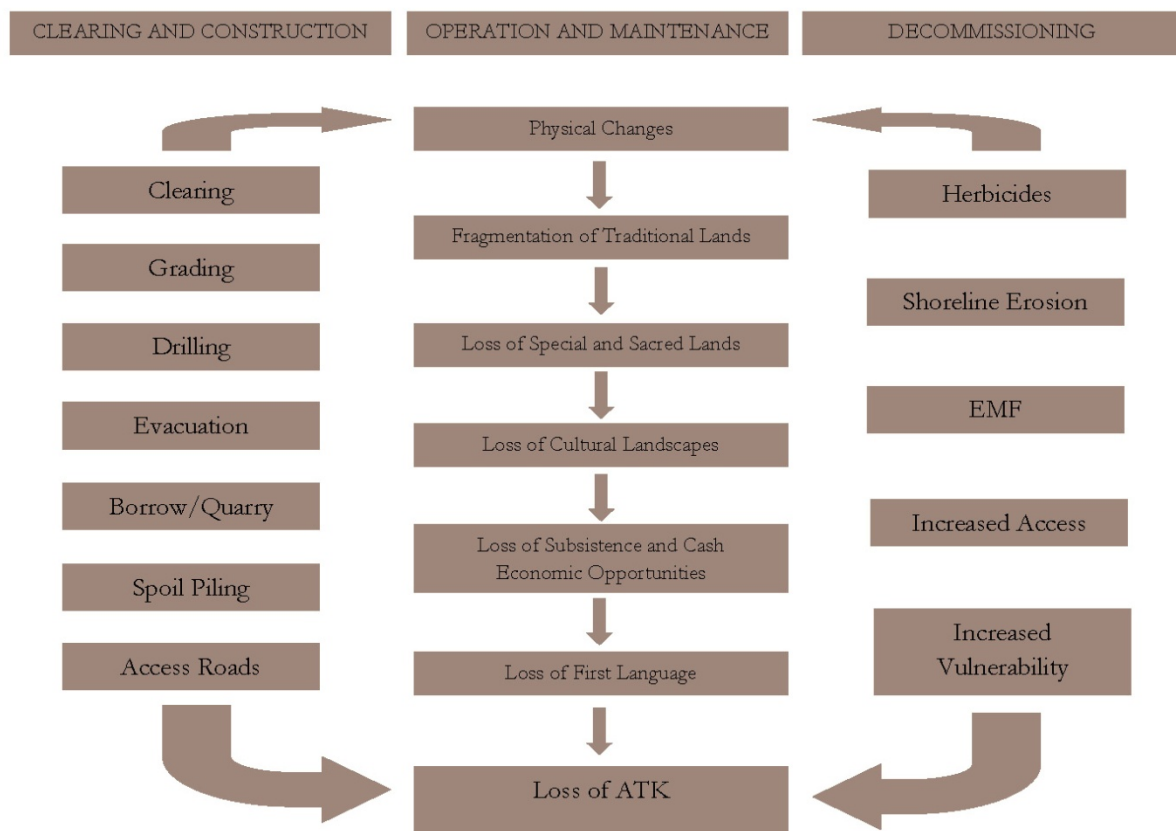


Figure 3. Potential Pathways of Effects for ATK.

Direction was also provided through the Bipole III Transmission Project Environmental Assessment Scoping Document where “current use of lands and resources for traditional purposes by Aboriginal persons and consideration of Aboriginal Traditional and local knowledge” were to be “...considered and incorporated into...” the following topics (MH 2010: 5) (Table 1).

The assessment approach was designed to ensure that the inclusion of ATK in the environmental assessment process:

- Met the requirements of the regulatory agencies and Manitoba Hydro;
- Was integrated throughout the Environmental Impact Statement (EIS); and
- Embraced its holistic nature.

Three aspects of integrating ATK were considered:

- **Equality:** ATK should be treated with the same respect and validity as western, scientific based knowledge. Furthermore, Indigenous and local peoples are to be treated with the same respect as other stakeholders.
- **Uniqueness:** Understanding that each group is unique and that they hold different forms of traditional knowledge is important to environmental assessment.
- **Communication:** It is essential to be aware of the participating, representing and decision-making models of each group.

This approach involved meeting with the leadership and members of participating communities as appropriate, explaining the proposed Project, and receiving comments and concerns for consideration in the Site Selection Environmental Assessment (SSEA) and Environmental Impact Statement (EIS).



**Table 1. Topics in which ATK was Considered.**

<ul style="list-style-type: none"> <li>➤ Atmosphere climate and climate changes</li> <li>➤ Air quality</li> <li>➤ Land (terrain, geology, soils)</li> <li>➤ Water (surface water, water quality)</li> <li>➤ Terrestrial ecosystems</li> <li>➤ Aquatic biota and habitat</li> <li>➤ Mammals and mammal habitat</li> <li>➤ Birds and bird habitat Amphibians and reptiles</li> <li>➤ Terrestrial invertebrates</li> <li>➤ Commercial resource use (forestry, mining, fishing etc.)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Agricultural land use</li> <li>➤ Traditional land and resource use</li> <li>➤ Recreation and tourism</li> <li>➤ Population and demographics</li> <li>➤ Employment and income</li> <li>➤ Human health and well-being</li> <li>➤ Infrastructure and services</li> <li>➤ Property ownership</li> <li>➤ Personal, family and community life</li> <li>➤ Economy</li> <li>➤ Heritage and cultural resources</li> </ul>

## 2.0 Context of ATK Study

Within the project study area, Manitoba Hydro facilitated an ATK study team in engaging community leaders and members at a local level to draw out ATK. Manitoba Hydro also funded a number of First Nations (Opaskwayak Cree Nation, Long Plain First Nation, Fox Lake Cree Nation, Tataskweyak Cree Nation, Swan Lake First Nation, and Wuskwi Sipihk First Nation) and the Manitoba Metis Federation (MMF) to prepare traditional knowledge studies relevant to the Project (Manitoba Hydro (MH) 2011:12).

## 2.1 Background of ATK

The following section traces the development of ATK or more generally, Traditional Knowledge (TK) as a distinct knowledge base that even after thousands of years has maintained a core philosophy for living, that is, a cognitive view of culture. ATK has been defined in many ways in an effort to capture the significant role tradition plays in the lives of Indigenous people around the world. UNESCO has provided a baseline for cultural studies that suggests that within our global village are local communities whose history of interaction with the natural environment is timeless. The product of this deep and intimate relationship is a cumulative body of knowledge that has served as the blueprint for survival. This however, did not happen

in isolation. The process of intra and inter cultural socialization also influences decisions regarding practices (see WalDRAM 2009: 56-79).

The study of ATK has its roots in anthropological methods and the social sciences. As anthropologists the goal of any study that entails human beings is for true ethnographic analysis. This requires participant observation over chronic studies, which means that studying and understanding other people's culture is not an event that can be captured in one or two days of interviewing. The process demands on-going and intimate interaction with the cultural group; and unless one is enculturated into a particular culture, the chance of understanding the intricacies and subtleties of that culture is limited. Moreover, ethnographic studies reflect the ethnographic present, a state referred to in anthropology by which a certain period of time in the lives of a certain cultural group is captured for that moment. ATK, on the other hand, is a living process rooted in the ancient past and adjusted over time to meet the needs of the cultural group.

The 1992 Convention on Biological Diversity through UNESCO confirmed the value of traditional knowledge as an integral part of the global knowledge-base. Article 8(j) of the Convention states that:

*Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices (Convention on Biological Diversity 1992).*

This Convention originally defined traditional knowledge as:

*... the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, and forestry (Convention on Biological Diversity 1992).*

Within the last ten years UNESCO has explored the meaning of traditional knowledge and has adopted the term Intangible Cultural Heritage (ICH) which acts as an umbrella to the many aspects of culture that are not often visible, but are the conduit through which culture is expressed. According to UNESCO

*The General Conference of UNESCO adopted in 2003, at its 32nd session, the Convention for the Safeguarding of Intangible Cultural Heritage. The adoption of promoting cultural diversity, since for the first time the international community had recognized the need to support the kind of cultural manifestations and expressions that until then had not benefited from such a large legal and programmatic framework*  
(<http://www.unesco.org/culture/ich/index.php?lg=en&pg=00006>).

UNESCO's published kit of the Convention for the Safeguarding of Intangible Cultural Heritage (which includes ATK) provided a standard for identifying and inventorying ATK:

*To be kept alive, intangible cultural heritage must be relevant to its community, continuously recreated and transmitted from one generation to another. There is a risk that certain elements of intangible cultural heritage could die out or disappear without help, but safeguarding does not mean fixing or freezing intangible cultural heritage in some pure or primordial form. Safeguarding intangible cultural heritage is about the transferring of knowledge, skills and meaning...therefore, to a large extent, any safeguarding measure refers to strengthening and reinforcing the diverse and varied circumstances, tangible and intangible, that are necessary for the continuous evolution and interpretation of intangible cultural heritage, as well as for its transmission to future generations* (Identifying and Inventorying ICH: pg 4;  
<http://www.unesco.org/culture/ich/?pg=00252>).

Intangible cultural heritage utilizes traditional knowledge as a conceptual tool for understanding the roots of cultural practices and is considered to be a living heritage since the past figures so prominently in the daily lives of indigenous people. Traditional knowledge thus is seen as integral in cultural studies since it is tradition that maintains the link between past and present.

Traditional knowledge is both cultural and spiritual. It is an all-encompassing term that underscores the integral relationship of those things that maintain the cultural status quo. Culture and spirituality are commonly celebrated through the oral tradition as traditional knowledge (TK) and are constantly being shaped and re-shaped through experience, information, knowledge and wisdom. The relationships between community members and their natural, cultural and spiritual world are dynamic and interactive.

## **2.2 Rationale for ATK Studies**

Manitoba Hydro's commitment for active inclusion of ATK in the EA process commenced at the outset of the Project. ATK community studies were seen as an important means of identifying and characterizing the natural and cultural landscapes related to each participating community. Further, it was anticipated that the studies would provide a deeper understanding of the intimate and complex relationship indigenous people have with their natural environment.

## **2.3 Communities**

Letters were sent to 49 communities in the study area, inviting them to participate in the ATK process for the Project (Appendix 3). This letter briefly explained the nature of the Project and invited communities to participate in the ATK process. A total of nineteen communities participated in workshops (see Table 2) despite only five communities initially indicating their interest in participating in the ATK program. Over the course of one year 14 additional communities elected to share their knowledge with the Bipole III ATK Study Team.

Six First Nation communities, Opaskwayak Cree Nation (OCN), Fox Lake Cree Nation (FLCN), Tataskweyak Cree Nation (TCN), Long Plain First Nation (LPFN), Wuskwi Sipihk First Nation (WSFN), Swan Lake First Nation (SLFN) and the Manitoba Metis Federation (MMF) elected to conduct their own workshops and mapping with technical instruction and on-going support from the Bipole III ATK team as requested.

**Table 2. List of Bipole III ATK Team-led Participating Communities**

<b>Participating Community</b>	<b>Location of Workshop</b>
Barrows	Barrows Community Hall
Barrows Area  Includes the communities of: Powell Westgate Red Deer River National Mills Baden	Barrows Community Hall
Camperville	Camperville Community Hall
Chemawawin First Nation	Easterville Community Centre
Cormorant	Cormorant Community Hall
Dakota Plains First Nation	Dakota Plains Band Office
Dakota Tipi First Nation	Dakota Tipi School
Dawson Bay	Dawson Bay Community Hall
Duck Bay	Duck Bay Community Hall
Herb Lake Landing	Herb Lake Landing Senior's Community Centre
Pelican Rapids	Pelican Rapids Community Hall
Pikwitonei	Pikwitonei School
Pine Creek First Nation	Pine Creek Band Office
Thicket Portage	Thicket Portage Community Hall
Waywayseecappo First Nation	Waywayseecappo Conference Centre

## 3.0 Overview of Methodologies and Methods

### 3.1 Background

As Berkes noted (1993) the earliest systematic studies of traditional knowledge were conducted by anthropologists as standard practice to ethnographic research. Early studies of the ecological

relationship between environment, cognitive patterns and perceptual interpretations revealed a systematic classification of "...objects, activities and events" (Hardesty 1977: 291).

One of the difficulties in conducting ATK studies is the task of keeping etic and emic details separate. This has become increasingly complicated since the dynamic nature of ATK allows, and in fact encourages, the incorporation of new knowledge into the cultural setting as the holder of the knowledge sees fit.

*Emic refers to the understanding of culture and experience from the viewpoint of the participant, not the observer.*

*Etic refers generally to the understanding of culture based on observed and scientific recordings of a particular cultural group as analyzed and interpreted from the observer's perspective. (See Harris 1987: 14)*

Pioneers to the development of traditional knowledge methodologies and methods in Canada, for example, Berkes, Stephenson, Tobias, and Usher set the stage for a wide range of traditional knowledge studies, including land use and occupancy, co-management, resource harvesting as well as more specific studies of Aboriginal taxonomies (Marle *et al.* 2000, Petch 2003), toponymies (place names) (NCN 2004) and historical narratives. Their methods continue to be refined as new experiences and research problems emerge.

The Bipole III Project presented a challenge to developing a set of methods that accommodated the range of interested parties since the transmission line passes through the areas of traditional land use of many First Nations, Metis and Northern Affairs communities. For this reason a set of methods that could accommodate the participating communities regardless of cultural affiliation was implemented.

### 3.2 ATK Planning Workshop

On September 2, 2009 a workshop entitled "*Incorporating ATK into the Bipole III Transmission Project: A Major Reliability Improvement Initiative*" was conducted for the Bipole III environmental study team and Manitoba Hydro staff assigned to the Project (Table 3). The purpose of the workshop was to:

- Update the Environmental Assessment Study Team on the inclusion of ATK into the Bipole III Project;
- Present integration of ATK into the environmental assessment process; and
- Discuss roles and responsibilities of the Environmental Assessment Study Team within the ATK framework.

**Table 3. Incorporating ATK into the Bipole III Transmission Project: Workshop Topics.**

Workshop:	Incorporating ATK into the Bipole III Transmission Project
Date:	September 2, 2009
Location:	Tache Room, Norwood Hotel, Winnipeg MB
Outline	Topics Discussed
Workshop Topics	
EA Process and Usher's Categories	
➤ Process Overview and Presentation	
➤ Ethnograph Overview and Case Study	
➤ Group Activity for Category Identification	
Interaction Matrix	
➤ Significance/Evaluation	
➤ Report Preparation	
Question Development	
➤ Summary of Questions	
➤ Question Development	
Workshop Feedback	
➤ Questionnaire	

The presentation discussed the definition of ATK as offered by the Canadian Environmental Assessment Agency (CEAA) along with several other definitions proposed by leading scholars (Berkes & Folke 1998, Usher 2000). After discussing the categories of the selected methodology, the levels of analysis were presented. This was followed by group discussion. *The Ethnograph*®, a social science computer program, was introduced as the content analysis tool. Nine cultural indicators developed by NLHS during earlier anthropological research were proposed for analysis of thematic detail recovered from participating community group and/or key person interviews (KPI). Discussion on evaluation of significance, report preparation and implementing long-term monitoring programs were also held.

The workshop ended with a group activity whereby each group developed ten ATK-related questions that could be asked of community workshop participants (See Appendix 12 for the complete power point presentation).

Upon completion of the workshop, request was made by the ATK team that discipline specialists formulate questions that would directly relate to their discipline. These would be



worked into the final questions to be used during the ATK interviewing process. Specialists provided feedback following the workshop on:

- Soils and Terrain (Jacques Whitford Stantec Axys Ltd.);
- Forestry (Plus4 Consulting);
- Aquatic Resources and Herptiles (North/South Consultants Inc.);
- Amphibians and Reptiles (North/South Consultants Inc.);
- Birds (Wildlife Resources Consulting Services);
- Mammals (Joro Consultants Inc.);
- Land and Resource Use (MMM Group Limited);
- Rare plants (Calyx Consulting);
- Heritage (Northern Lights Heritage Services Inc.); and
- Socio-economics (MMM Group Limited).

### **3.3 Methodology Discussion**

The effects assessment for the ATK component of the Bipole III Transmission Project employed a methodology of cultural ecology based on the relationship between humans and the natural environment that they inhabit. Cultural ecology can be defined, in part, as a process that “...sees the modes of production of societies around the world as adaptations to their local environments” (Berkes 2008: 62). Earlier, Frake defined cultural ecology to be “...the study of the role of culture as a dynamic component of any ecosystem of which man [sic] is a part” (1962: 53). Both definitions acknowledge the process of cultural evolution including the cognitive means of knowing and the perceptual means of understanding.

Both concepts are extremely important to the process of enculturation, or the way we, as members of a cultural group, are taught and learn within our cultural setting.

This approach is effective when working with Aboriginal and local peoples who historically and currently employ a mixed economy where subsistence and cash economies are intertwined to produce a distinct life way (Usher 1992). The product of this unique economy is a tradition of knowledge that acts as a blueprint for human sustainability. It is gen that has been given the label of ATK by social scientists; each cultural and linguistic group has its own title and definition for ATK. The process of accumulating and acting on ATK is not a static or rigid process; like any other part of culture it is dynamic and evolving, adaptive and resilient consisting of layers of knowledge, understanding and experience that are intergenerational and timeless. Aspects of ATK can be modified or adapted at any time by the holder, with the “old ways” being



incorporated into the narrative of past experience. Because ATK is both personal and collective certain individuals may be considered “specialists” while group knowledge may be more general in its application.

There are a number of reasons for examining ATK as a separate component for the effects assessment of the Bipole III project. Over the past twenty years in particular there has been a growing awareness of the value of perspectives other than scientific. The value of the long-term natural environment observations by Aboriginal and other people with close ties to the natural environment are viewed as a means of enhancing the shorter termed scientific studies, providing depth of the knowledge to and understanding of plant and animal behavior, among other things. Furthermore, the Aboriginal and local understanding of the complex web of relationships reminds us that the world is viewed in a holistic manner; what affects one component of the system has the ability to cause change elsewhere. In addition to an awareness of an alternative philosophical process there has also been political recognition of indigenous rights both nationally and internationally.

In 1992, the Convention on Biological Diversity underlined the urgent need to recognize the value of Aboriginal and local knowledge as it related to the natural and cultural environments. Since then UNESCO (2003) has issued ethical and methodological guidelines and principles for collecting ATK as the Convention for the Safeguarding of Intangible Cultural Heritage (ICH). Most institutions that work with human beings now engage in these guidelines and principles and/or have developed their own policies for ensuring that human rights, including ownership of knowledge are not violated and that the knowledge that is gathered is used appropriately. Coined *intellectual property* (IP), the knowledge that is shared with western scientists enjoys a certain degree of protection, although traditional medicines have suffered because of inflexible patent laws. Nevertheless, the continued publicity of ATK has benefitted Aboriginal and local groups by its inclusion in federal Environmental Impact Statement (EIS) guidelines. This process has helped Aboriginal and local groups in that it has:

- Made community members aware of the valuable knowledge that is held collectively;
- Contributed to increased self-identity and community empowerment and; and
- Has provided the communities with an opportunity to understand and effectively participate in the EIS process.

A direct consequence of awareness has been a significant increase in the number of ATK studies that have occurred. A growing body of archived and active ATK studies has contributed significantly to a greater appreciation of the value of the knowledge held by Aboriginal peoples especially with regard to the natural environment. Moreover, the collaborative efforts of indigenous people at the international level have ensured that copyright remains in the hands of the people who provide their knowledge to ATK studies. These collaborative efforts have also led to an increase in co-management practices and strategies whereby Aboriginal and local

people have a voice in decision-making with regard to the natural environment that they use and occupy. By these means community empowerment in the form of built capacity and self-identity is achieved.

The methods used in undertaking this theoretical approach are anthropological in nature. That is, the human perspective of the relationship to the natural world and how the natural world operates are considered paramount to understanding ATK itself. To this end a set of methods is described below that takes into account the knowledge, experience and understandings of Aboriginal and local people who continue to maintain an active and intimate relationship with the natural environment, which includes the lands, water, plants and animals and air.

The objective of designing a specific set of ATK methods was to ensure that the inclusion of ATK in the EIS met the rigors of best practices as set out in the objectives of the scoping document (MH 2010). While a number of methods of ATK gathering have been published (see Tobias 2000, 2010; Stephenson 1996, Berkes & Folke 1998), Usher (2000) provided the most practical means of effectively gathering ATK and organizing it into a manner that is easily understood. Usher identified four basic categories:

- 1) Factual/rational knowledge about the environment; this category includes an understanding of why things are the way they are.
- 2) Factual knowledge of use of the environment; this category provides a deeper understanding of one's "territory" in a broad sense and is based on patterns of land use & occupancy and harvesting levels.
- 3) Value of the environment; this category is utilized to describe the components of the environment which are considered important and valuable from a cultural perspective.
- 4) Cosmology/worldview system; this category describes the foundation of knowledge and the forces that drive culture.

The Venn diagram in Figure 4 below shows how these four categories worked together to better understand the complexity of ATK. These categories later became very important in mapping out the pathways of cultural indicators from recurrent themes of ATK that were documented within each interview back to these core categories.

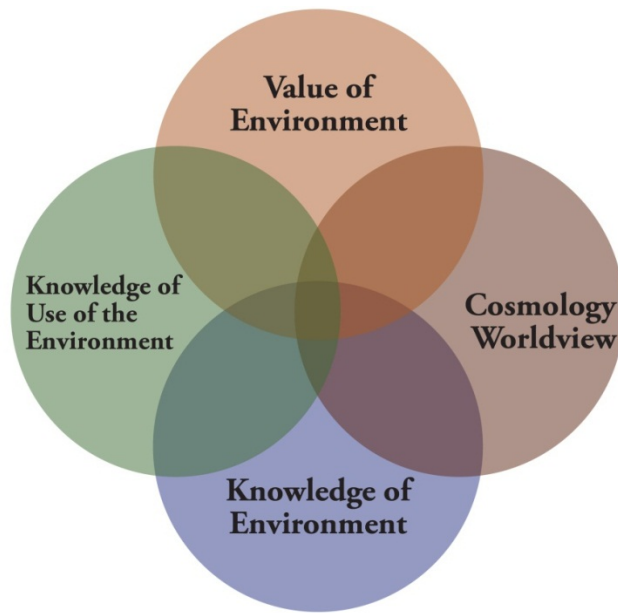


Figure 4. Venn diagram of Relationships of Categories of ATK (NLHS 2009 based on Usher 2000).

As Usher noted (Table 4) it is easy to weigh the benefits and drawbacks of categories 1 and 2. However, categories 3 and 4 are more difficult since they are culturally driven. While Usher hinted that these categories cannot be validated, there are techniques that have been designed to test and validate the record.

### 3.4 Methods for Gathering and Understanding ATK

Gathering and understanding ATK is not an easy task. How does someone outside a culture measure and evaluate the things that are based on a unique personal and collective history of experience, knowledge, exchange and observation? Ways that anthropologists have attempted to understand the cultural process include observation, participation and interviews. Using these simple methods provides some insight into the manner in which different cultures function. By employing interviewing techniques traditional knowledge of Aboriginal and other people within the Bipole III study area was collected that provided insight into the knowledge base driving life ways and understandings considered traditional. This body of knowledge was then placed in a format which allowed for recognizing certain repetitive themes. From these themes both quantitative measurements and qualitative descriptions became apparent.

Qualitative data are varieties of information that are gathered from sources such as interview transcripts, field notes, still and moving images, audio recordings, and written documents.

Qualitative Data Analysis (QDA) refers to certain descriptors that are based on specific qualities or characteristics and which are not measurable in their subjective state.

Qualitative Data Analysis has been developed and used by social scientists to provide a means of measuring culture change (Statistics New Zealand & New Zealand Ministry for Culture and Heritage 2006, NLHS in print). A range of analytical methods have been successfully developed that filter out subjectivity, placing qualitative on par with quantitative methods. Within the past twenty years improvements to computer programs have contributed to the increased success of QDA. While there has been some discussion concerning the “deconstruction” of the oral narrative through use of QDA, this method has provided the opportunity to understand the complex system that drives ATK.

Qualitative Data Analysis concerns the series of processes that are applied to a variety of collected data sources in order to form explanation, understanding and interpretation of, for example:

- Someone's interpretation of the world;
- Why they have that point of view;
- How they came to that view;
- What they have been doing ;
- How they conveyed their view of their situation; and
- How they identify or classify themselves and others in what they say (See Russell and Ryan 2010).

By a system of coding, particular components of a narrative may be transformed into another form of representation. The code word is therefore a rule for organizing primary information just as Cree, Anishinaabeg and other syllabics are codes for certain sounds and vowels that hold meaning. The frequency of code words and their subsets are then arranged according to emerging cultural themes that are deeply embedded in the value system of a cultural group. These themes then are expressed as measurable indicators that are considered to be representative of culture in general. A cultural indicator is a single measure that can be quantitatively expressed and which captures a key aspect of culture. As well, cultural indicators have an evaluative purpose and through this process they were ultimately assigned to the four categories of ATK assessment that were established by Usher (2000). The following chart traces the flow of raw data from the initial code word identifiers to the categories of ATK (Figure 5).

In order to move knowledge from its base state to an analyzable format different QDA programs have been developed over the years in order to minimize subjectivity and researcher bias. After careful review of several programs *The Ethnograph*© was considered to be most

relevant to this study. This program is an integrative tool that analyzes oral interview narration through the frequencies of attached code words. The resulting frequencies outlined recurrent themes that occurred during the oral interview narrations. The taxonomy of codes provided knowledge of the depth of understanding of a particular theme and allowed for the identification of possible gaps in the knowledge base. This approach also acted as a post-interview evaluative tool measuring the quality and success of questions. This is discussed further under ATK Analysis.

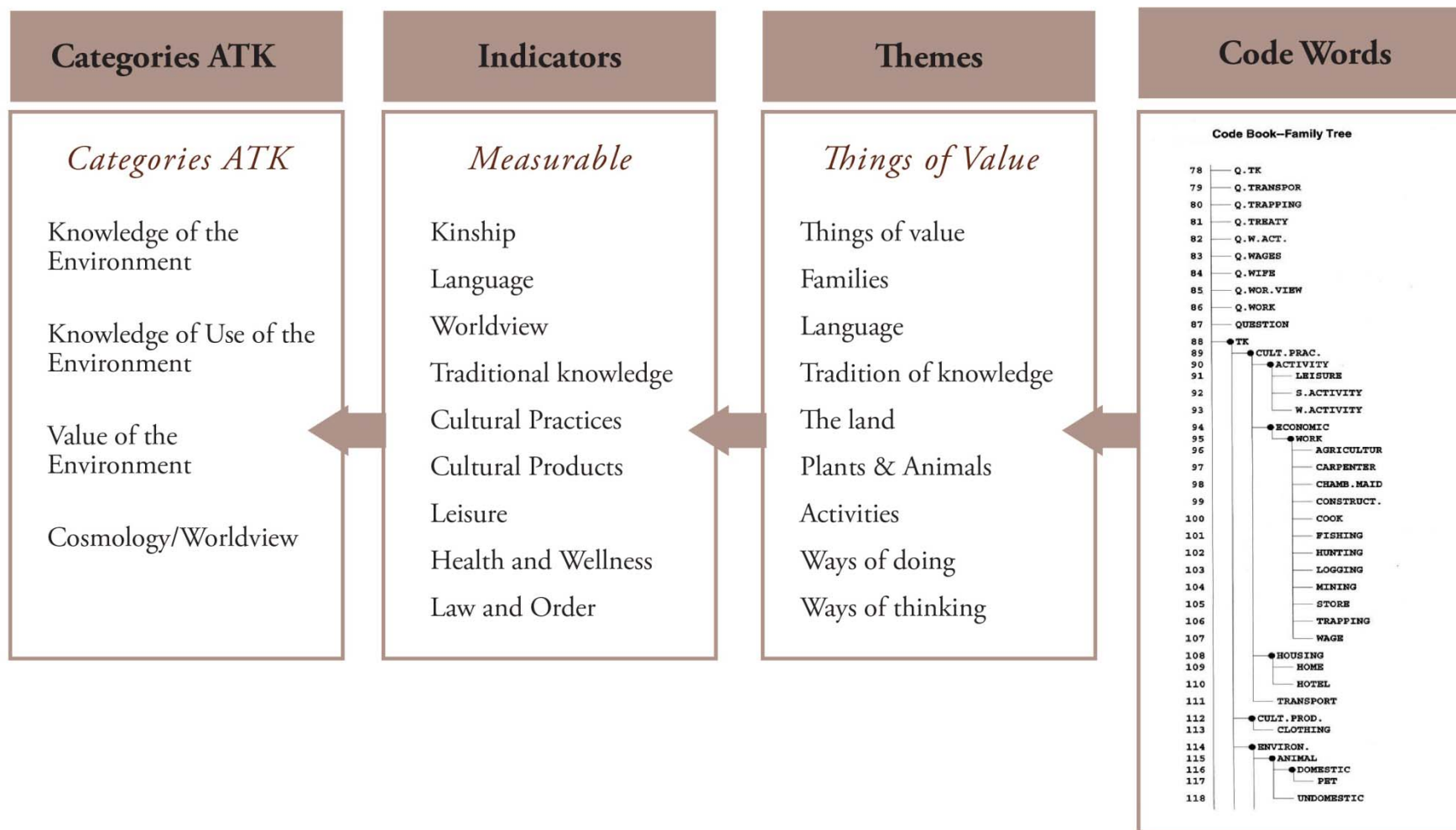


Figure 5. The transition of raw data from code words to categories.

## Interview Method

The semi-directed interview process was used for the Bipole III Project process for both the group interviews and the KPIs for ATK. This approach is a flexible and relaxed method of interviewing and allows for new questions to be raised as the interview proceeds. In this format there are generally a series of themes that need to be explored.

## Mapping

Part of the ATK gathering process was to capture areas of land use, occupancy and knowledge that could be impacted by the construction of the Bipole III transmission line. Traditional knowledge about topics such as plant and animal habitat, fish spawning areas, cultural activities, and so on was recorded on a series of maps, created a living history of an individual's experience and a group's collective knowledge. Initially the workshop mapping was conducted using well-established techniques that included indelible ink markers documenting a two dimensional (temporal-spatial) record of traditional knowledge on an acetate overlay atop 1:50,000 scale National Topographic System (NTS) map sheets. In later workshops, CapturX GIS pens and microdot NTS map sheets were used to record map data. The rationale for utilizing current technology was due to a significant increase in accuracy and efficiency in geo-referenced map production. ArcGIS software was used to generate a standard set of maps (Figure 6).



**Figure 6. Maps and digital recorders used in ATK Interviews.**

## **Transcription**

On completion of the digitally recorded interviews the corresponding files were downloaded to the PC computer, utilizing Philips Speech Exec Dictate©, and transcribed using NCH Express Scribe©, computer software programs designed for transcription. Each interview was transcribed using Microsoft Word© format and saved as a separate file. All transcriptions completed by the Bipole III study team were formatted in the same fashion.

## **Community Review of Information**

Once the interviews were transcribed and subject to quality control a copy of the interview transcriptions and maps were returned to the participating individuals for verification. For the Bipole III Project, no documents were returned to the study team for correction although attempts were undertaken to obtain feedback.

## **Summary Report**

Two types of summary reports were drafted: a summary of the visit to each community and interview summary of each interview. The former acted as a debriefing update for the ATK study team and Manitoba Hydro; the latter document provided a précis of each interview that was conducted.

The purpose of the interview summary was twofold: 1) it provided community leaders with an indication of the kinds of knowledge that had been shared and 2) acted as the front sheet of each interview providing a content review mechanism for the Bipole III study team.

## **ATK Content Analysis**

Qualitative Data Analysis, using *The Ethnograph*© provided an opportunity to maintain a high degree of objectivity. Personal bias was kept to a minimum by introducing a standardized analytic template.

Following verification of transcripts by the participating individuals the transcripts were coded and processed using *The Ethnograph*© software. Coding of the transcripts provided themes that appeared most often in the interviews. An established set of cultural indicators assisted in determining the most important elements within a cultural setting. The frequencies that were generated provided a quantifiable measure of knowledge and values.

Themes indicated what “code words” were important to communities and individuals. The frequency of specific code words and subsets served as a first measure for societal value. As themes proceeded to indicators they became important in determining what category of ATK was achieved. In addition to this, societal values were then used to measure adversity of an identified



concern. This was extremely valuable in later developing the ESS tables and in identifying areas of concern and potential project effects.

These high-level, summary measures of key issues or phenomena can be used to monitor positive or negative changes over time by reducing the large volume of available information to a small number of key measures that allow effects to be predicted in advance of a project with follow-up later confirming or negating the predictions and measuring change over time.

Thematic questions can be posed to recruit feedback for follow-up measures to address potential effects. If run over a period of time, one can measure the effectiveness of mitigation measures as well as whether or not the degrees of perceived effects have changed. Figure 7 is a visual representation of the relationship of Usher's categories to one another within the evaluative process.

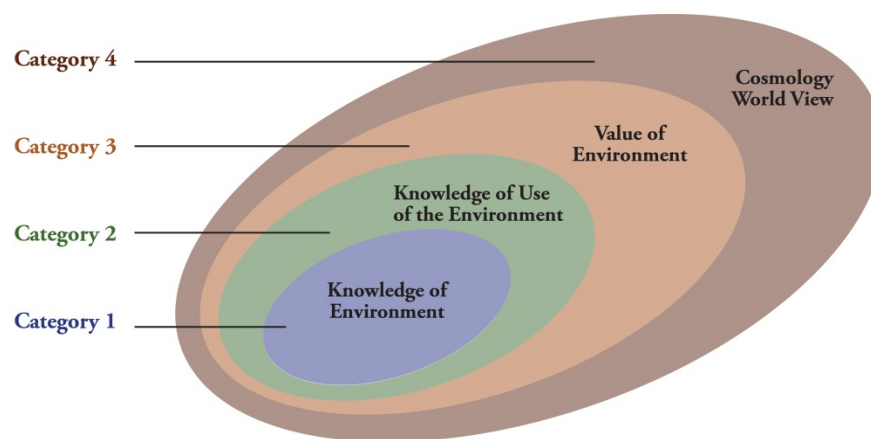


Figure 7. Usher's Categories within Berkes' model (Modified from Berkes 2008: 17)

## Category 1

*Knowledge of the Environment* is based on empirical observation and generalized collective and individual observation. These observations form a body of “raw data” that can be drawn on to suggest patterns and associations.

## Category 2

*Knowledge of Use of the Environment* identifies or indicates traditional use based on personal experience and narrative. This category can include compelling and detailed knowledge of specific areas such as Resource Management Areas (RMA) and Registered Trap Lines (RTL).

### **Category 3**

*Value of the Environment* is culturally driven and can be compared to VECs that are utilized within other major disciplines. Within this category statements about how things should be; what is fitting and what is proper provide the cultural impetus to ATK.

### **Category 4**

*Worldview* is derived from the cognitive and perceptual processes of internalizing information and organizing it to make sense of experiences and observations.

Themes identified can then be used as a basis for identifying societal value and the assessment of effects. Themes developed by coding analysis were placed into Usher's categorical scheme in order to facilitate integration into the environmental assessment, identify gaps in the knowledge base and to act as an evaluative tool measuring the quality and success of questions.

## **3.5 Community Workshop Procedures**

All participating community ATK workshops followed the same format as noted above in 3.4. The purpose of this was to maintain consistency with methods used. In addition to the participating communities, others requested to hold their own ATK workshops and analyze their community knowledge independent of the Bipole III study team. This process is discussed under Self-Directed ATK Process (Section 5). Due to the technical nature of the community workshop procedures detailed description is found in Appendix 2.

## **4.0 Effects of the Project on Culture**

This section is divided into two components which discuss the potential effects of the Bipole III Project on culture; the ATK Study Team-Led Workshops; and the Self-Directed Studies. The methods used for the ATK Workshops were the same for each community that participated in the ATK workshops. This is because an established anthropological approach using universal indicators was applied.

Self-directed studies used methods that were deemed appropriate to their individual communities. However, the themes that emerged from the ATK Workshop content analysis were applied to the self-directed studies where possible.

### **4.1 Effects derived from ATK Workshops**

This section discusses the potential effects of the project as derived from the ATK workshops that were conducted by the study team. The discussion follows the process of theme development, the

determination of environmentally sensitive ATK regions, and common and unique potential effects within the project study area. A discussion of the effects derived from the self-directed community studies will follow in section 5.0 of this report.

## **Themes**

Themes identified by cultural indicators were assigned to one of four categories as discussed by Usher. These categories were then used as a basis for understanding the deeper social values expressed by the participating communities in determining potential project effects on culture. (Table 4).

**Table 4. Assigning Indicators to Usher's categories.**

Category	Theme/Cultural Indicator	Rationale
Factual/rational knowledge about the environment	Traditional knowledge	Knowing where things are located and how they work.
Factual knowledge of use of the environment	Leisure Cultural Products Cultural Practice	This category provides a deeper understanding of one's "territory" in a broad sense and is based on patterns of land use & occupancy and harvesting levels.
Value of the environment	Health & Wellness Kinship/Family ties	This category is utilized to describe the components of the environment which are considered important and valuable from a cultural perspective.
Cosmology/worldview system	Worldview Language Law & Order/customary law	This category describes the foundation of knowledge and the forces that drive culture.

Once social values were assessed at the conceptual level, a comparative analysis was performed on code frequencies as part of the narrative analysis. Code frequencies assisted in clarifying themes within the textually transcribed contents of the audio recordings gained from workshops and interviews. Total code counts expressed as percentages in a file were determined as well as the relative percentage across all the other files within the project. Information trends based on the cultural indicators presented as percentages were then conceived as being significant within the topics of conversation and referred to as a "*Theme*" and was scrutinized for potential effects and the selection of environmentally sensitive sites (ESS) for further discussion.

The following is a graphic representation of the frequencies calculated from all the group interviews from the participating communities (Figure 8). (Individual community frequencies are not represented in order to preserve the ethical boundaries of the participating communities.)

The frequency charts suggest that dynamic cultural processes seem to be active in the project study area as illustrated by the diminished Cultural Products, Language, Law and Order and Leisure indicators. As an attempt to maintain social identity, family members are banding together, trying to hold on to the languages, traditional knowledge and cultural practices that have been passed on from previous generations. World view is diminished and could be a result of a series of social impacts resulting from historic government policies and the introduction of other worldview systems.

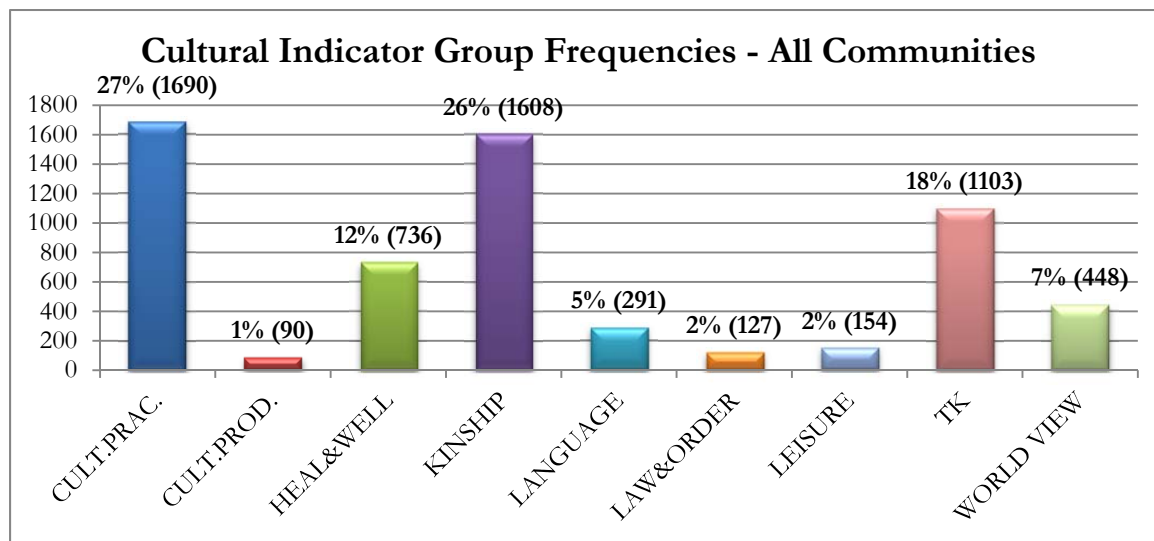


Figure 8. Indicator Frequencies- All Group Interviews/All Communities.

The following is a graphic representation of the frequencies calculated from all the key person interviews from the communities that participated in the workshops (Figure 9). Individual community frequencies are not represented in order to preserve the ethical boundaries of the communities that participated.

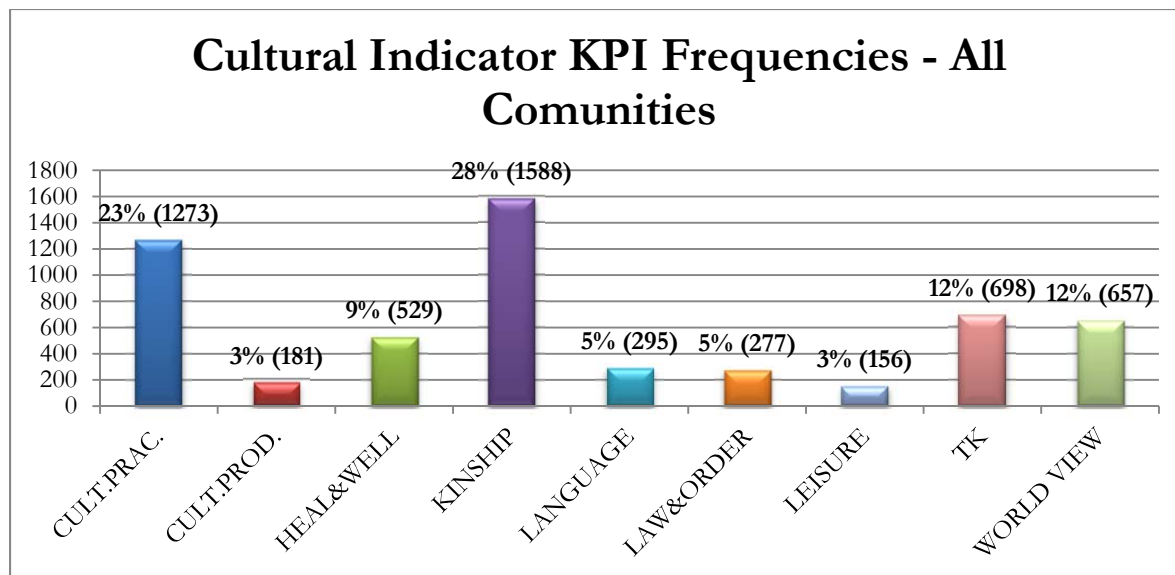


Figure 9. Indicator Frequencies - All Key Person Interviews/All Communities.

#### 4.1.1 Environmentally Sensitive Sites (ESS): ATK Regions

One hundred and fifty-six (156) sites along the entire proposed FPR were described by participating communities as being areas that were very important in consideration of the route for the Bipole III transmission project. The sensitive nature of these sites and the descriptions provided by participating community members contributed to a deeper understanding of historic and current cultural land use patterns and ultimately the determination of potential project effects on the cultural indicators of change.

Once a final route (FPR) was selected with the consideration of these sites they were regionally represented cartographically due to the vast geographical distance that the proposed transmission line will be potentially constructed upon for discussion purposes (Figure 10). A total of five (5) major ATK regions were determined from the information derived from participating communities as follows in Table 5.



Table 5. ATK Regions Defined for Analysis Purpose.

ATK Regions in the Bipole III Project Study Area	
Region	Community
1	Dakota Plains First Nation
	Dakota Tipi First Nation
	Long Plain First Nation ( <i>self-directed study</i> )
	Waywayseecappo First Nation
	Swan Lake First Nation ( <i>self-directed study</i> )
	Manitoba Metis Federation ( <i>self-directed study</i> )
2	Duck Bay
	Pine Creek FN
	Camperville
	Manitoba Metis Federation ( <i>self-directed study</i> )
3	Barrows
	Barrows Area ( <i>includes representation from the communities of Baden, Powell, Westgate, National Mills and Red Deer Lake</i> )
	Dawson Bay
	Pelican Rapids
	Wuskwi Sipihk First Nation ( <i>self-directed study</i> )
	Chemawawin First Nation
4	Opaskwayak Cree Nation ( <i>self-directed study</i> )
	Cormorant
	Herb Lake Landing
	Manitoba Metis Federation ( <i>self-directed study</i> )
5	Tataskweyak First Nation ( <i>self-directed study</i> )
	Fox Lake Cree Nation ( <i>self-directed study</i> )
	Pikwitonei
	Thicket Portage
	Manitoba Metis Federation ( <i>self-directed study</i> )

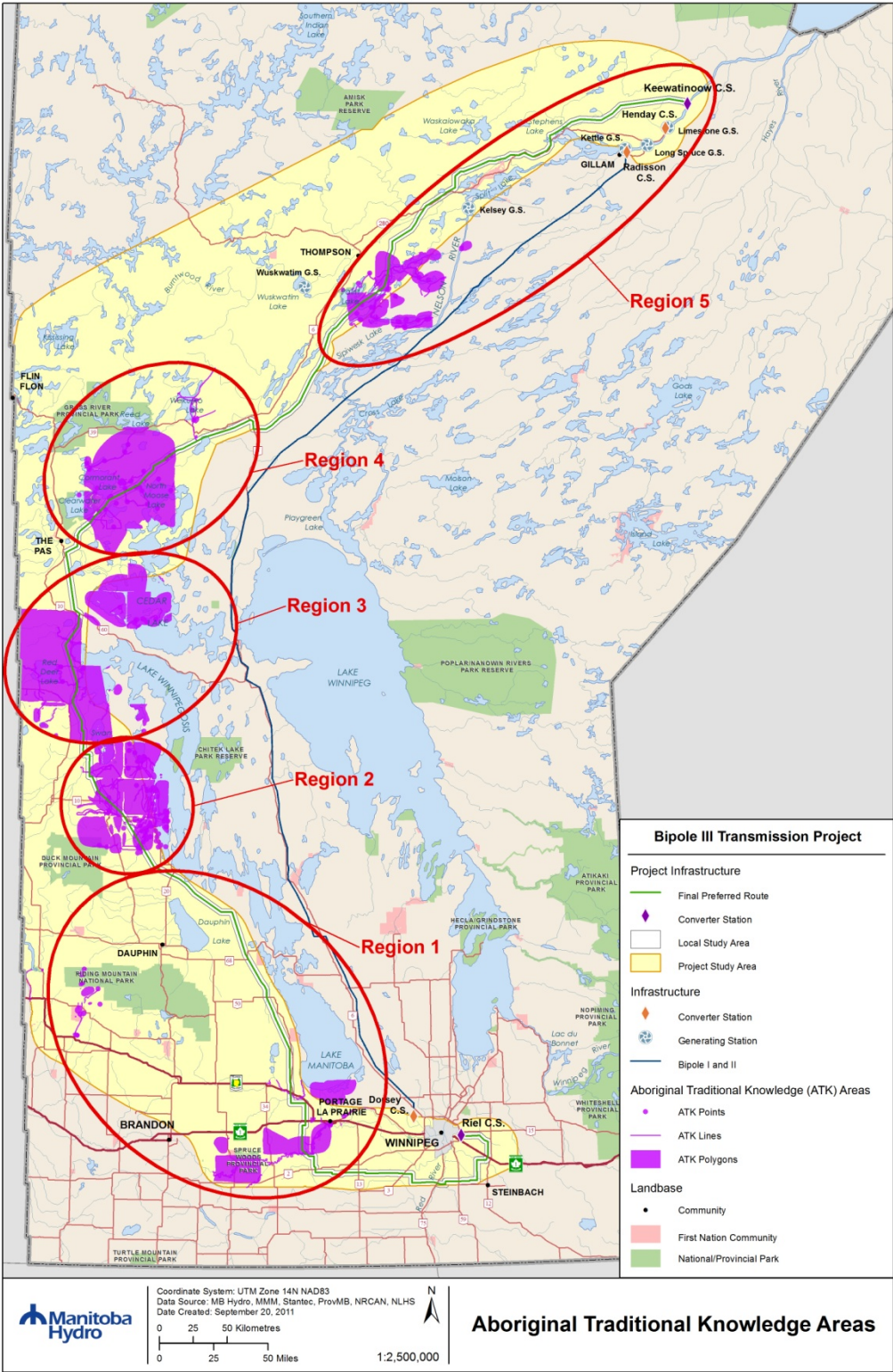


Figure 10. Map of ATK Areas Defined for Analytical Purposes.

The following project effects discussion focuses on:

- Potential effects common to all participating communities along the entire FPR.
- Crucial highlights of environmentally sensitive sites that illustrate the potential effects that would be unique to participating communities within the ATK regions.

Careful scrutiny of all ATK information shared by participating communities or through self-directed studies revealed common potential project effects derived from community concerns and the qualitative and quantitative consideration of recurrent themes as identified by cultural indicators of change.

These common effects are discussed within context of the phases of the project to which they apply, which includes the *Clearing and Construction Phase*, the *Operation and Maintenance Phase* and the *Decommissioning Phase*.

#### 4.1.2 Common Community Concerns With Respect to Potential Project Effects in the Bipole III Study Area

The following table outlines the issues of concern that were most commonly identified by communities in the study area and the potential project effects related to these concerns.

Common Community Concerns in the Bipole III Study Area	
Community Concern	Potential Effects Description
EMF	<ul style="list-style-type: none"> <li>➤ The placement of the proposed transmission line will have direct and indirect effects by the presence of Electromagnetic Fields (EMF) during the operation and maintenance and decommissioning phases of the project</li> <li>➤ A direct effect will be the potential abandonment of certain areas by some resource users in areas directly adjacent to the transmission line. This is especially true of those areas used traditionally for gathering plants and medicines. The common belief is that EMF's unnaturally alter the atmosphere and render the plants and medicines unusable by cultural practitioners. In other words the plants are contaminated and lose their power.</li> <li>➤ Indirect effects will be a perceived as negative alterations to human and animal health that comes with long-term contact with EMFs; therefore no <i>miyopimatisowin</i>.</li> <li>➤ Perceived negative effects may cause undue stress and potential traumas to community cultural resource users that may result in deterioration of worldview</li> </ul>
HERBICIDES AND SPRAYS	<ul style="list-style-type: none"> <li>➤ The use of chemical sprays such as herbicides utilized in the clearing and construction, operation and maintenance and decommissioning phases of the proposed transmission line will have a direct effect on the cultural resources surrounding the transmission line.</li> <li>➤ There will be a direct effect of sprays on plants and medicines harvested in areas that will now be located within the proposed FPR; as well the potential for sprays to contaminate adjacent to transmission line is increased.</li> <li>➤ The perceived negative effect of sprays will also directly affect the cultural usage of areas surrounding the transmission line; community resource users may abandon or alter cultural practices to avoid potential contact with unknown chemical sprays.</li> </ul>



Common Community Concernsin the Bipole III Study Area	
ACCESS	<ul style="list-style-type: none"> <li>➤ During clearing and construction, operation and maintenance and decommissioning phases of the project a common direct effect will be increased access to cultural resource areas</li> <li>➤ A direct negative effect will be increased opportunity for access by non-community members to cultural resource areas; this may result in increased overlap in certain areas as competition for diminishing cultural resources increases.</li> <li>➤ A direct positive effect will be increased access for community members into previously inaccessible areas, which may relieve the stress on more easily accessible resources</li> </ul>
FRAGMENTATION OF CUSTOMARY LANDS AND HABITAT	<ul style="list-style-type: none"> <li>➤ During clearing and construction, operation and maintenance and decommissioning phases of the project a common direct effect will be the potential fragmentation of traditional (customary) land boundaries and cultural landscapes.</li> <li>➤ The fragmentation of wildlife habitats will have an effect by potentially reducing the wildlife population available for domestic harvest as a supplementary source of country foods (dietary) or as a source of cultural products (economically or for traditional pursuits)</li> </ul>
EMPLOYMENT	<ul style="list-style-type: none"> <li>➤ During clearing and construction, operation and maintenance and decommissioning phases of the project a common direct effect will be the potential positive effect of project contributions to local economies through the creation of jobs.</li> </ul>
HISTORICAL RECORD	<ul style="list-style-type: none"> <li>➤ Breakdown due to the cumulative forces of historic events that are compounded by proposed changes to the landscape.</li> <li>➤ Cultural landscapes instill mnemonic<sup>3</sup> meanings and worldview concepts that are locked into language descriptors, if landscapes are altered, the transmission of certain aspects of traditional knowledge will also be altered or lost.</li> <li>➤ The self-directed studies underline the perception of participating communities that language is on the threshold of becoming irreversibly lost. If this should occur then all other components of culture will follow suit.</li> </ul>

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<sup>3</sup> A system such as a pattern of letters, ideas or associations which assists in remembering something (Oxford Dictionary)

### **4.1.3 Unique Community Effects in the Bipole III Study Area**

This unique community effects discussion utilized the same scrutiny of ATK information as the common effects discussion. The ATK information shared by participating communities or through self-directed studies revealed unique potential project effects derived from community concerns and the pathways and linkages they represent to the qualitative and quantitative consideration of recurrent themes as identified by cultural indicators of change.

The following table highlights the potential project effects that are differentiated by regions that are unique to the communities.

Unique Community Concerns in the Bipole III Study Area	
Critical Area of Community Concern	Potential Effects Description
Proposed Keewatinoow Converter Station	The proposed Keewatinoow Converter Station will potentially restrict the mobility of FLCN Band Members who will have to travel farther afield to practice subsistence activities. The recent discovery of possible ancient burials at the proposed Keewatinoow Converter Station by MH's Project Archaeologist has led to a heritage resource protection plan (HRPP). There is a potential for similar discoveries with the construction of the converter station. There also may be potential fragmentation of animal habitats with the effects of noise on animals resulting in profound effects on culture
Cormorant Area	For the Cormorant area there is a known petroform site that has deep spiritual connection for communities in the region and any disturbance could potentially have effects on worldview. There is also a potential fragmentation of resource habitats for trappers in the region and could have economic effects in addition to alteration of cultural practices.
Red Deer River Crossing	The Red Deer River crossing represents a bottleneck of highly valued cultural and heritage sites, that vary from resource access to leisure pursuits and cultural activities for multiple communities throughout regions 2 and 3 of the ATK areas. Fragmentation within this region would result in potential effects to the TK of known animal habitats in addition to alteration of cultural practices, fish spawning sites, kinship patterns associated with leisure activities and harvesting of country foods and medicinal plants.
Cowan/Briggs Spur Area	Cowan and Briggs Spur represents an area of existing and potentially high intensity cultural and economic resource activities for many of the local communities. Fragmentation within this region will effect economic returns for several communities that rely on berry harvesting as supplementary income. Fragmentation will also potentially effect known heritage resource, cultural and spiritual practices and a well known harvesting area for sensitive medicinal plants. An indirect effect of the placement of the FPR would likely cause harvesters to have to travel some distance to find similar plants, which becomes more complicated as many of the harvesters are elderly and simply cannot traverse the distance required or cannot afford the travel costs associated with the long distance travel required
Assiniboine River Crossing	The Assiniboine River Crossing, for many of the communities in the southern region of the project study area has high cultural value attached to the historic Yellowquill Trail. This trail represents a spiritual attachment to the landscape and cultural self identification. Fragmentation of this trail area would potentially affect the worldview of associated communities. Fragmentation of the landscape could also potentially affect an area with known burials and ceremonial sites.

Details of the critical regions are also presented to highlight the potential project effects that are differentiated by cultural indicators of change that are unique to the communities.

<b>Cultural Indicators Illustrating Unique Community Concerns in the Bipole III Study Area</b>	
<b>Cultural Indicator of Potential Effects</b>	<b>Potential Effects Description</b>
Language	<ul style="list-style-type: none"> <li>➤ Although there are no direct measurable effects from the proposed project on language, there is a strong potential for indirect effects. Participating communities generally perceive that some languages are on the threshold of being lost and unique issues within the communities may manifest due to the cumulative forces of historic events that are compounded by proposed changes to the landscape. Cultural landscapes instill mnemonic meanings and worldview concepts that are locked into language descriptors. If landscapes are altered, the transmission of certain aspects of traditional knowledge will also be altered or lost.</li> </ul>
Cultural Practices	<ul style="list-style-type: none"> <li>➤ The main concern for participating communities regarding changing landscapes and cultural practices is to the activity of trapping. One interviewee discussed the inquisitive nature of school age children superseding the interest of youth in the community, noting that a loss of trapping activity due to changes to the landscape would further affect the identity that could be linked to the children that would participate in this already waning activity.</li> </ul>

Traditional Knowledge	<ul style="list-style-type: none"> <li>➤ A direct potential effect of the project will be deterioration to the traditional knowledge surrounding the Kettle Hills region and the blueberry patches that were noted for their cultural, social and economic values due to fragmentation of the landscape.</li> <li>➤ Communities in Region 2 and 3 (Figure 31) noted that the blueberry patch was not only a means of economic benefit but that the traditional knowledge regarding the region was extremely important to social cohesion and is also directly linked by the indicators cultural practices and worldview. Several communities and individuals noted that ceremonies and weddings have taken place in the blueberry patch; and that in “the old days” people were buried here.</li> <li>➤ One unique illustration of the potential effect on the traditional knowledge of the Kettle Hills area discussed by communities in Regions 2 and 3 is the potential deterioration of detailed information regarding the types of soils that continue to support the best blueberry patches within the Kettle Hills blueberry area. Another illustration of a potential unique effect of the project in the Kettle Hills area is the deterioration of traditional knowledge regarding the physical location and sacred nature of concretions which are considered a spiritually connected aspect of the cultural landscape from which worldview is derived. The location of the Bipole III FPR will cross over the strip of land containing these natural features. A concretion on display in the City of Swan River was discovered 3.5 m below the surface and removed from the same region. These below surface features may present some challenge to construction where tower footing are to be constructed.</li> <li>➤ There is a concern that an increase in access roads associated with the Bipole III Project that are constructed near existing trails that lead to the Kettle Hills may cause an increase in use of the area, in particular the blueberry and other prominent berry patches within this area. As was noted on the ATK maps, this area is used consistently for subsistence hunting and trapping. Trails through this area (ATV and snow machine) are founded on historic trails that lead to fishing on Swan Lake</li> </ul>
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<p>Health and Wellness</p>	<ul style="list-style-type: none"> <li>➤ Unique project effects under the indicator <i>health and wellness</i> are mainly linked to potential changes in some aspect of traditional country food supplies. The Dakota Plains First Nation, found in region 1 described a unique potential effect as the increased access by non-community members into an area regarded as having a high cultural value for its hunting and fishing resources. The community described the resulting effect as a loss of fish habitat, a loss of traditional harvesting area and due to the cumulative historic fragmentation of the landscape by the provincial government for agricultural purposes, a loss of hunting areas as an alternative food source.</li> <li>➤ Communities located in regions 2 and 3 described a unique potential effect to the <i>health and wellness</i> indicator resulting from the potential fragmentation of various animal habitats hunted or trapped as alternative food sources. One habitat outlined was the Caribou population which is known to inhabit the area. The southern limit of the herd is at the Duck River and any fragmentation of caribou habitat would result in uncertainty by local resource users of the availability of ungulate populations and uncertainty of their migratory patterns.</li> <li>➤ Another similar unique effect described by communities in regions 2 and 3 is regarding the fragmentation of wild bison as a food source. Bison that have escaped from nearby ranches have established a large enough feral population that some resource users have begun to hunt them as a throwback addition to existing alternative food sources. Fragmentation to a new population of wild bison would result in uncertainty to a newly established habitat for the wild bison population.</li> <li>➤ Other animal populations outlined by region 2 and 3 communities that would be potentially affected are deer, moose, elk, bear, beaver and muskrat which are known to inhabit the area and are hunted and trapped. Local resource users emphasized that hunting and trapping areas around the Briggs Spur area would be potentially affected most, resulting in the loss of hunting and trapping areas used for alternative food sources and cultural products that cross the RoW.</li> </ul>
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<p>Health and Wellness (cont'd.)</p>	<ul style="list-style-type: none"> <li>➤ The communities of Camperville, Duck Bay, Pine Creek First Nation, Barrows, Barrows Area and Dawson Bay describe the unique potential effect of the loss of berry harvesting due to herbicide use. The potential impact of herbicide use described by the local communities also focuses on agricultural practices that affect the indicator <i>health and wellness</i>. Garden plots which are established near Pulp River on the RoW by retired community members as well as some community members currently growing potatoes in their gardens. Herbicide sprays would also potentially fragment traditional medicinal gathering sites across the RoW specifically mentioned as Seneca root, Labrador tea and mint gathering areas. A Sage gathering area north of the Overflowing River was also mentioned by these communities for the potential effect of the loss of plant habitat and the loss of cultural value associated with sage which is an important cleansing herb used in ceremonies.</li> <li>➤ For the community of Pelican Rapids, an artesian well with an underground flow was described as potentially being affected with regards to the <i>health and wellness</i> indicator due to potential groundwater contamination with the use of herbicide sprays. This is outlined by the communities' discussion of the use of a fresh water spring known locally as "Three Barrels". The spring has been used for many generations by people to access drinking water all year round. The potential effect of herbicides sprays is linked to the loss of a local reliable drinking water source for community members.</li> </ul>
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Worldview	<ul style="list-style-type: none"> <li>➤ Worldview encompasses the relationships and interconnectedness of the natural environment, people and spirituality as understood by a given community of people. That is, it is cognitive and perceptive and provides the ethics for living. The unique <i>worldview</i> effect described by Dakota Plains First Nation involves the historic trapping of Beaver and Muskrat along the Assiniboine River. Operation and Maintenance activities and the increased ease of access by non- community resource users to the ROW may potentially result in the loss of cultural value associated with historic trapping events that shape the worldview of Dakota Plains First Nation members.</li> <li>➤ Similarly, increased road access by non-residents into the culturally sensitive area of the Kettle Hills for communities in ATK regions 2 and 3 due to increased access by non-community members during the operation and maintenance of the RoW would potentially present the unique effect of the loss of traditional activity, cultural value and social cohesion associated with plant gathering and berry picking.</li> <li>➤ Road access into Kettle Hills may cause loss of cultural values associated with the Kettle Hills due to increased access by non-community members. Deterioration of spirituality and world view may occur due to interference in cultural practices associated by access roads and ROW construction.</li> <li>➤ Increased access by non-residents into culturally sensitive area may result in loss of traditional use for community members.</li> <li>➤ Loss of historic road due to construction of access road to RoW and activities associated with the RoW may cause a disconnect between cultural value and historic events</li> <li>➤ Sage areas north of Overflowing River may be lost. As noted by OCN clearing natural vegetation often causes an increase in root plants with loss of medicinal plant harvest. Similar concerns were also expressed by Swan Lake First Nation. Sage, for example is an important cleansing herb used in ceremonies. The inability to find “pure” areas may result in a decline in cultural ceremonies.</li> </ul>
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Kinship	<ul style="list-style-type: none"> <li>➤ Resource harvesting activities bring kin together. It is the <i>act of doing</i> that is as important as the act itself. For example to members of Dakota Plains, Swan Lake First Nation, Camperville, Duck Bay, Pine Creek and the Barrows area communities; fruit, berry, seasonal nuts (hawthorn, acorn) and traditional plant harvesting area are important not only for the resources, but equally important for strengthening the ties that bind and perpetuating traditional knowledge. Subconsciously, kinship obligations and roles help to maintain order and unwritten laws;</li> <li>➤ Loss of recreational activities for community members and potential shoreline damage due to construction activities and O&amp;M; North Pine River; Fishing - River crosses RoW.</li> <li>➤ Loss of cultural value associated with plant gathering and berry picking activities.</li> <li>➤ Sweet Grass; Loss of access to sweetgrass, resulting in loss of cultural practice and values associated with the practice.</li> <li>➤ Leisure Fishing; Red Deer River; Loss of recreational activities for community members.</li> <li>➤ Fishing; "Flat Rock Rapids" and "Second Rapids"; Domestic fishing area utilized by community members for personal use and leisure activity.</li> </ul>
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Leisure	<ul style="list-style-type: none"> <li>➤ Dakota Plains; Assiniboine River; Fishing - Current Leisure activity; Loss of recreational activities for community members and potential shoreline damage due to construction activities and O&amp;M. Camperville; North Pine River; Fishing - River crosses RoW; Loss of recreational activities for community members and potential shoreline damage due to construction activities and O&amp;M.</li> <li>➤ Duck Bay; Cultural camp; Area used for cultural celebrations, family reunions, weddings, youth education and summer camping were identified as activities by community members.; Loss of traditional activities and cultural values associated with these; Decline in community cohesion for the duration of disturbance; Increased access by non-community members into culturally sensitive area (Kettle Hills), resulting in conflict with community members.</li> <li>➤ Barrows; Fishing; Domestic fishing - Red Deer River; Loss of domestic fishery due to increased access by non-Community members along new access roads. Loss of cultural values associated with leisure, cultural practices,</li> <li>➤ Barrows2; Fishing; Sport fishing along Red Deer River; Loss of leisure; Loss of spawning area; Loss of recreational activities for community members ; Shoreline damage due to construction activities; Community camping area - On Red Deer R.; Potential disturbance to camping area due to construction and O&amp;M activity. Potential interruption of leisure activity.</li> <li>➤ Cormorant; Fishing; Deep water, pickerel - in summer; Domestic fishing area utilized by community members for personal use and leisure activity</li> <li>➤ Thicket Portage; Partridge Crop; Partridge Crop - Fish spawning; loss of fish spawning habitat. Loss of cultural values associated with cultural practices, leisure, health and wellbeing;</li> </ul>
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<p>Law and Order</p>	<ul style="list-style-type: none"> <li>➤ Dakota Plains; Whitemud River; Fishing - Domestic use; Increased access by non-community members into area of high cultural value for its fishing resources. Assiniboine R.; Trapping of Beaver, Muskrat and Mink along river and creeks in identified area for several generations. Increased access for others and potential for conflict with trap line holders- Potential fragmentation of trap line areas.</li> <li>➤ Camperville; North Pine River; Fishing - River crosses RoW; Increased access by non-community members into area. Loss of fish habitat. Loss of ATK and cultural practices. Loss of recreational activities for community members and potential shoreline damage due to construction activities and O&amp;M.; Blueberry Harvest area - Near Sinclair R. - 500m from RoW; Loss of berry patches due to access roads into the ROW; Increased access from non-residents;</li> <li>➤ Duck Bay; Road access into Kettle hills; Loss of cultural values associated with the Kettle Hills due to increased access by non-community members. Loss of spirituality and world view due to access roads and ROW construction; Resource Harvest - Area of intensive land use including plant harvest of Seneca root, sage, blueberry; Area also used for Hunting and Trapping - Increased access for others and potential for conflict with trap line holders and current traditional users - Potential fragmentation of trap line areas. - Increased access by non-community members into culturally sensitive area (Kettle Hills). - Loss of cultural value associated with plant gathering and berry picking activities</li> <li>➤ Duck Bay - Hunting; bison, (have escaped from ranch compound), deer, moose and bear are known to inhabit the area and are hunted. Fragmentation of ungulate habitat, resulting is loss of ungulate as a food source and cultural product. Increased access by non-community members into hunting areas. Resulting in conflict with existing users.(Also Blueberry/Trails; Community members use trails and harvest Blueberries in the area. Area intensively used for multiple activities.; Loss of traditional activity and cultural values associated with it- Increased access by non-community members into culturally sensitive area (Kettle Hills), resulting in conflict with community members.; community members identified sandy area for berry picking – also Briggs spur - blueberries and pincherries; hunting - used for 100+ years - Disruption of harvesting activity due to access from non-community members.;</li> <li>➤ Dawson Bay; Trapping/Hunting; Trapping and Hunting along Overflowing River; Increased access for others and potential for conflict with trap line holders- Potential fragmentation of trap line areas.</li> <li>➤ Cormorant; Trapping; Trapping area. Increased access for others and potential for conflict with trap line holders- Potential fragmentation.</li> </ul>
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Cultural Products	<ul style="list-style-type: none"> <li>➤ Barrows; Soapstone source (utilized by community for cultural products such as art). Loss of cultural practice and products, resulting in decline in cultural cohesion and associated economic value. Loss of recreational activities for community members and potential shoreline damage due to construction activities and O&amp;M</li> <li>➤ Dakota Plains; Plant Harvest; Fruit, berry and Traditional Plant Harvesting area; wild purple grapes, plums, saskatoons, chokecherries, cranberries and sage. Loss of domestic income- Increase in financial burden, resulting in a decline in quality of life</li> <li>➤ Camperville; Blueberry; Loss of berry patches due to access roads into the ROW.; Loss of economic activity and secondary income.; Medicine harvest; Loss of traditional activity and cultural value and social cohesion associated with plant gathering and berry picking- Loss of domestic income- Increase in financial burden, resulting in a decline in quality of life</li> <li>➤ Duck Bay; Timber Harvest spruce for fence posts; Loss of timber resources affecting harvest of spruce for fence posts.</li> <li>➤ Pine Creek; Briggs Spur; Camp area to sell harvest</li> <li>➤ Barrows; Sweet Grass; Sweet Grass - especially Egg Island along shoreline of Overflow Bay; Loss of access to sweetgrass, resulting in loss of domestic income and loss of cultural practice and values associated with the practice.</li> <li>➤ Pikwitonei; Local Wood Source; Loss of secondary income and fuel source due to construction of access road to ROW and associated activities. Loss of cultural value associated with fragmentation of access to woodlot</li> </ul>
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## 4.2 Self-Directed Studies

Aboriginal Traditional Knowledge (ATK) Workshops were offered to communities within the study area by Manitoba Hydro however, some communities indicated a desire to conduct their own Traditional Knowledge studies. Manitoba Hydro provided funding for the following communities to undertake self-directed studies: Fox Lake Cree Nation (FLCN), Long Plain First Nation (LPFN), Opaskwayak Cree Nation (OCN), Swan Lake First Nation (SLFN), Tataskweyak Cree Nation (TCN), and Wuskwi Sipihk First Nation (WSFN). In addition, the Manitoba Metis Federation (MMF) was provided funding to conduct a self-directed study of Metis peoples within the vast study area.

The self-directed studies were conducted separately from the ATK workshop process. Some assistance regarding research methods and study topics was provided by the Bipole III ATK study team to those who requested it. The knowledge contained in the self-directed reports was incorporated into this report in the same fashion that the ATK workshop knowledge was integrated into the collective thematic report structure and was used in the analysis of this report. For additional details on the self-directed studies, please refer to the Bipole III Aboriginal Traditional Knowledge Report #2.

## 5.0 Incorporation of Aboriginal Traditional Knowledge

The incorporation of ATK into the environmental assessment process commenced once scope, project and environment descriptions were finalized and added to the development, identification and assessment of potential environmental effects.

The aim of this section of the study was to identify potential project effects, measure the societal values placed on these potential effects and present a summary of identified environmentally sensitive sites (ESS). In addition, the study provided Bipole III sub disciplines with traditional accounts of specific knowledge. The maps and interviews were made available to all disciplines for inclusion where appropriate, into the reports.

Traditional knowledge was integrated through the Route Selection Matrix (RSM). The RSM considered the project study area and divided it into 13 sections. The 13 sections contained portions of the alternative routes. Within each section, all route segments were reviewed to determine potential overlap with points, lines or polygons identified during an ATK workshop. Criteria used to determine the preferred route was based on feedback from the project disciplines, as well as research and public feedback from the first three rounds of consultation (see MH Preferred Route Selection Process Document, June 2010 for detailed description). Topics included in the Route Selection Matrix are as follows:

### Biophysical

1. Vegetation
2. Forestry
3. Birds
4. Mammals
5. Caribou
6. Core Communities
7. Fragmentation – Wildlife
8. Soil-Terrain (Local)
9. Aquatics
10. Amphibians and Reptiles

### Socio-Economic

11. Population Density
12. Culture-Heritage
13. Resource Use
14. Recreation-Tourism

### Land Use

15. Land Use
16. PAI-ASI
17. Treaty Land Entitlement
18. Agriculture

### Technical

19. Foundations
20. Angle Towers
21. Construction Access
22. Separation
23. Line Length

### Stakeholder Response

24. Aboriginal Communities
25. Municipalities
26. Stakeholder Groups
27. General Public

The objective of the RSM was to choose segments with the least amount of constraints, and measurable parameters for the topics were determined from specialists with feedback. The evaluation method of each subject was a quantitative or qualitative measure determined through analysis of the measurable parameters. Finally, a ranking of Low, Moderate, or High was assigned to the topic for each segment. ATK was incorporated by increasing the ranking of applicable topics depending on what the feature was indicating.

The table below includes communities with TK studies, either self-directed or led by Manitoba Hydro. The table indicates coverage areas for TK inclusion based on location of the community and historical areas of land use for traditional activities (Table 6).

As details of specific ATK came available through the MH ATK study and the self-directed studies these were provided to the route selection team. As noted by the self-directed studies several geographical landscapes were identified as being of concern. In addition to this analysis of the ATK interviews identified environmentally sensitive sites; of these 156 were considered to be of concern given their frequency of discussion in the ATK interviewing process.

**Table 6 Traditional Knowledge Coverage Areas for RSM Incorporation**

<b>Bipole III ATK Areas of Interest</b>	<b>Map Section</b>												
<b>Community</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>
Fox Lake First Nation	x												
Tataskweyak Cree Nation		x	x										
Herb Lake Landing Community Council				x									
Pikwitonei Community Council				x									
Thicket Portage Community Council				x									
Cormorant Community Council					x								
Opaskwayak Cree Nation					x								
Baden Community Council						x	x						
Barrows Community Council						x							
Chemawawin First Nation						x							
Dawson Bay Community Council						x							
Easterville Community Council						x							
National Mills Community Council						x	x						
Pelican Rapids Community Council						x							
Powell Community Council						x	x						
Red Deer Lake Community Council						x	x						
Westgate Community Council						x	x						
Camperville Community Council							x	x					
Duck Bay Community Council							x	x					
Pine Creek First Nation							x	x					
Wuskwi Sipihk First Nation							x						
Swan Lake First Nation								x	x				
Waywayseecappo First Nation								x					
Dakota Plains First Nation									x				
Dakota Tipi First Nation										x			
Long Plain First Nation										x			

## 5.1 Cultural Indicators, Themes and Community Concerns

Project concerns were identified from the interview products of participating community ATK workshops. These concerns were based on individuals' and communities' experiences and understandings.

Group and individual interviews were the primary method of gathering and organizing ATK. Concurrent with the workshop group and key person interviews (KPI) was the preparation of group and individual 1:50,000 scale National Topographic System (NTS) maps that assisted in illustrating

the life experiences and knowledge of interviewees. The methods utilized for managing community knowledge involved the qualitative and quantitative descriptions and analyses of a suite of cultural indicators that addressed key aspects of ATK and which were identified as persistent and common themes throughout the interviews.

The methodological approach used content analysis to generate environmental impact statements related to ATK. This approach, used in anthropological analyses was designed to impart an understanding of the interrelated processes involved within the tangible and intangible elements of ATK. Elliot Mishler in his discussion of coherence within interviews suggested that “Referential meaning – that is, content – expressed through ‘themes’ and their relations to each other is fundamental to analysis and interpretation.” (1986:87). It is the themal coherence, “...or how utterances express a speaker’s recurrent assumptions, beliefs, and goals, or ‘cognitive world’ (Mishler, 1986: 89), that was the focus of determining community concerns within this study. Mishler also identifies that the aim and product of this type of analysis is “...simultaneously an explication of the text and a presentation of a specific portion of the speaker’s cognitive world...” (1986: 89).

Since qualitative research methods tend to investigate the perceptual aspects of decision-making (the ‘how’s and why’s’ as well as the ‘what’s, where’s and when’s’), smaller sample sizes and the quantitative method of frequency analysis were chosen for the study to support the findings and achieve a more detailed understanding of community concerns. In their discussion of qualitative research methods Denzin and Lincoln (2005) described the conceptual difference between qualitative and quantitative research in the social sciences

*The word qualitative implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry. Such researchers emphasize the value-laden nature of inquiry. They seek answers to questions that stress how social experience is created and given meaning. In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes (Denzin and Lincoln (2005:10).*

The **qualitative** research conducted for this project entailed the use of cultural indicators which relied on the interview content analysis of a core of thematic descriptions derived from primary interviews. Qualitative observations of communities were presented together with quantitative information to provide a holistic view of discussions presented by the communities involved.

Oral history interviews provided a “within living memory” understanding of what people recalled from their own experience as well as what they remembered being told by other people in the past. By this means both the oral history (that which is experienced by the individual within three generations) and the oral tradition (that which is related as the experience of another beyond three



generations) was captured. Themes emerged once interviews were coded and sorted and reflected key issues within the community that are considered most important to the people interviewed.

**Quantitative** research methods for the project examined the cultural indicator frequencies within the interviews' texts that were presented as primary ATK. The quantitative portion of the analysis was also based on group and key person interviews conducted at the participating communities. As a means to understanding the relationships of people to their environmental setting, nine (9) overarching cultural indicators and a codebook had been developed from over 20 years of NLHS research and application of local and international cultural studies used in the process of coding narratives to provide levels of measurement that assisted in assessing the cultural values and potential project effects (NLHS 2011). H. Russell Bernard noted in his discussion of research methods in anthropology that *"Quantitative data processing depends crucially on having a useful codebook. A codebook for quantitative data spells out exactly how to transform observations into numbers that can be manipulated statistically and searched for patterns"* (1994: 393). Bernard's discussion recognized that:

*...text is data. Coding text is an act of data reduction – thinking about it, extracting meaning from it, developing hypotheses about the people described in it, boiling it down to a series of mnemonics. The mnemonics can be numbers...but those numbers are categories of nominal variables; the numbers contain no information about quantity. In content analysis, variables that are described in text are extracted and codified as numbers that do contain information about quantity (Bernard 1994: 394).*

The cultural indicators acted as mnemonic devices to generate frequencies and themes from coded texts and utilized *The Ethnograph*© software program for both qualitative and quantitative data analysis (QDA). The use of *The Ethnograph*© software for narrative content analysis and the transformation of ATK into thematic frequency values was important in determining placement of knowledge into categories.

## 5.2 Defining Cultural Indicators

Universal qualities considered important to living a good life (Pimatisowin) (FLCN 2011:4) were the basis for the development of cultural indicators since cultural values and traditions are commonly celebrated through the oral tradition as traditional knowledge.

ATK, as a component of ICH, draws from the past and is constantly being shaped and re-shaped through experience, information, knowledge and wisdom. **Indicators** are important for describing cultural groups and understanding cultural changes and concerns regarding potential environmental effects of the Bipole III project to ATK.

For the purpose of this study the following indicators, which are listed in no particular order, were considered to be fundamental to culture and to the identification of community concerns and ultimately the determination of potential project effects:

## Universal Cultural Indicators

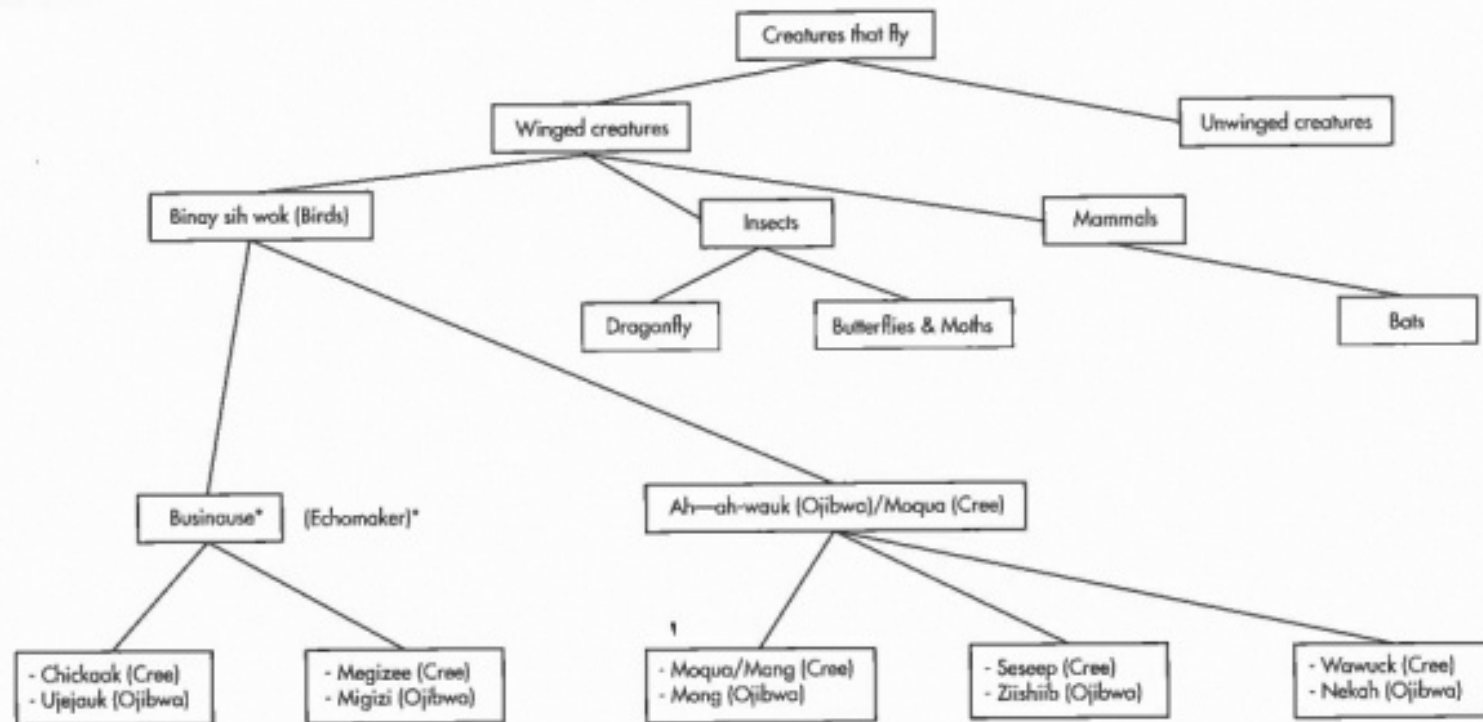
Language, traditional knowledge, cultural practices, health and wellness, worldview, kinship/family ties, leisure, law and order (including customary law) and cultural products.

### Language

Language is a vehicle for expression and can be spoken, written or signed; it is critical to the transmission of cultural knowledge and is the main tool of enculturation<sup>4</sup>. It provides insight into the daily use of language as a means of communication; it is instructive and dynamic. For example, within the Ojibwa language, taxonomies of plant and animal species were long established using specific physical qualities that are much different from those used by western science. These classifications are grounded in observations where similar behavioral characteristics are of importance. In both the Ojibwa and Cree cultures animals are identified as being two-legged, four-legged, legless and those with wings (Brown 1993:41). Further, those with wings could be said to belong to the “Order” called “Creatures that Fly” (Figure 11).

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<sup>4</sup> Enculturation is “The process by which individuals – usually children – acquire behavioural patterns and other aspects of their culture from others, through observation, instruction and reinforcement (Harris 1985:635)



Wapaw (Whooping Crane)  
Sawack (Sandhill Crane)  
Osawe Mooskawase  
(Great Blue Heron)

Heihewuck (Golden Eagle)  
Wapaw Estiquan (Bald Eagle)  
Eihineseu (Osprey)

Ounuchshechesquaseu (Northern Harrier)  
Sawuatowmaw (Rough-legged Hawk)  
Pepecusish (Merlin?)

Aihinue-Moqua (Common Loon)  
Asse-Moqua (Red-throated Loon)  
Mathe-Moqua (Pacific Loon)

Mimmenick ("Whistling" duck)  
Wawpewweway (Bufflehead)  
Assick (Red-breasted Merganser)  
Mish (Common Eider)  
Ethinie (Mallard)  
Apiste (Green-winged Teal)  
Atheikimaa (American Wigeon)  
Hahaway (Long-tailed Duck)

Wappawa (White goose)  
Ne(i)sco(a)ack (Grey goose, large)  
Apistiskish (Canada Goose)  
Kurskataw/Cathcatew (Blue goose)  
Wirthawappa (Brant)  
Sasasquepethesue ("Laughing" /  
Greater White-fronted Goose)

Figure11. Example of traditional taxonomy for birds (extracted from Petch (2003:57)).

### **Traditional Knowledge**

Traditional knowledge is generally understood to represent the customary knowledge; innovations and practices of Indigenous and local communities developed from experience gained over time and adapted to culture through environment, and are transmitted orally from generation to generation.

Traditional knowledge reflects the extent to which community members understand their own traditional practices as transmitted through oral narratives (oral traditions and oral history). This includes perspectives on what is considered “specialized knowledge” or “common knowledge” within the communities, and the fact that some knowledge will be held by specific individuals who are “qualified” to hold and transmit knowledge.

### **Cultural Practices**

Cultural Practices reflect the extent of traditional practices and cultural activities undertaken by communities and the modes of completion of activities that distinguish one cultural group from another. It entails a “way of doing”. Cultural practices or “what people within the communities do” is a dynamic process.

### **Health and Wellness**

Health and wellness includes the physical, emotional, mental and spiritual qualities of life that instill a sense of well-being and security.

For the participating communities, the health and wellness of members is contingent upon the availability of both western modes of health and wellness programming and traditional health and wellness practices. Western modes include nursing stations, visiting doctors, dentists, pharmacists, psychiatrists or psychologists. Traditional health and wellness practices include midwives, traditional medicines, such as plants, roots and herbs and shamanistic ritual.

### **Worldview**

Worldview is the way people see and interpret the world around them. It is living and being and can be considered gestalt or “whole”. It encompasses the relationships and interconnectedness of the natural environment and people forming the spirituality as understood by a given community. Collectively, it suggests organic unity which is based on the likeness of thought within any given cultural community.

## **Kinship (Family Ties)**

Kinship describes the social relations, both biological<sup>5</sup> and fictive<sup>6</sup>, based on culturally recognized ties by descent, marriage and alliance; that is, who's related to who and what are the obligations and roles of the relationship. Usher (2000) outlined the importance of kinship in resource harvesting. Likewise Tanner (1985) in his studies with the Mistassini Cree also noted the value of kinship in bringing home animals. For the participating communities kinship stood out as a most important relationship; the ties that bind were inter- and intra-community and a dynamic network across the study area underlined the importance of inter-community marriages and relationships.

## **Leisure**

Leisure as an indicator is formally defined as the recreation provided by the cessation of work or dutiful activities and is usually associated with enjoyment or pleasure. Leisure is an important aspect of all communities as it presents opportunities for intergenerational transmission of traditional knowledge. Activities such as gathering at a local swimming hole, fishing along a river or traversing a Trapline are important pathways for the transmission of TK that allow Elders and adults to interact with younger members of the communities to “show” how things are done. Leisure time and activities are also critical in understanding the transmission of gender roles and survival techniques while accessing natural and cultural resources.

## **Law and Order**

Law and order as an indicator illustrates the governance and structure by which social harmony and balance are maintained. Today, Law and Order are primarily determined by western laws that have been defined historically and currently by government agencies through legislation.. Traditional Law and Order were rooted in ancient customs and unspoken agreements that worked towards maintaining social order. Today many Aboriginal communities are attempting to re-introduce aspects of customary law as a means of conflict resolution, especially in the use of lands and resources where areas of use are overlapped by two or more communities.

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<sup>5</sup> Biological kinship is a term used to identify relationships of a consanguinal (by birth) or affinal (by marriage) nature.

<sup>6</sup> Fictive kinship is a term used to identify relationships such as god-parents, clan or other customary convention rather than consanguinal or affinal

## **Cultural Products**

Cultural products can be described as expressions of culture that represent the essence of self-identity. Included in this description are various forms of artistic endeavours (painting, music, literature-oral and written), crafts and cultural landscapes. Within the Bipole III Transmission Project, cultural products act as a physical manifestation of cultural practices and worldview and link an individuals' identity to the community. In essence, cultural products contextualize who a person is within society and culture at large.

### **5.3 What We Learned**

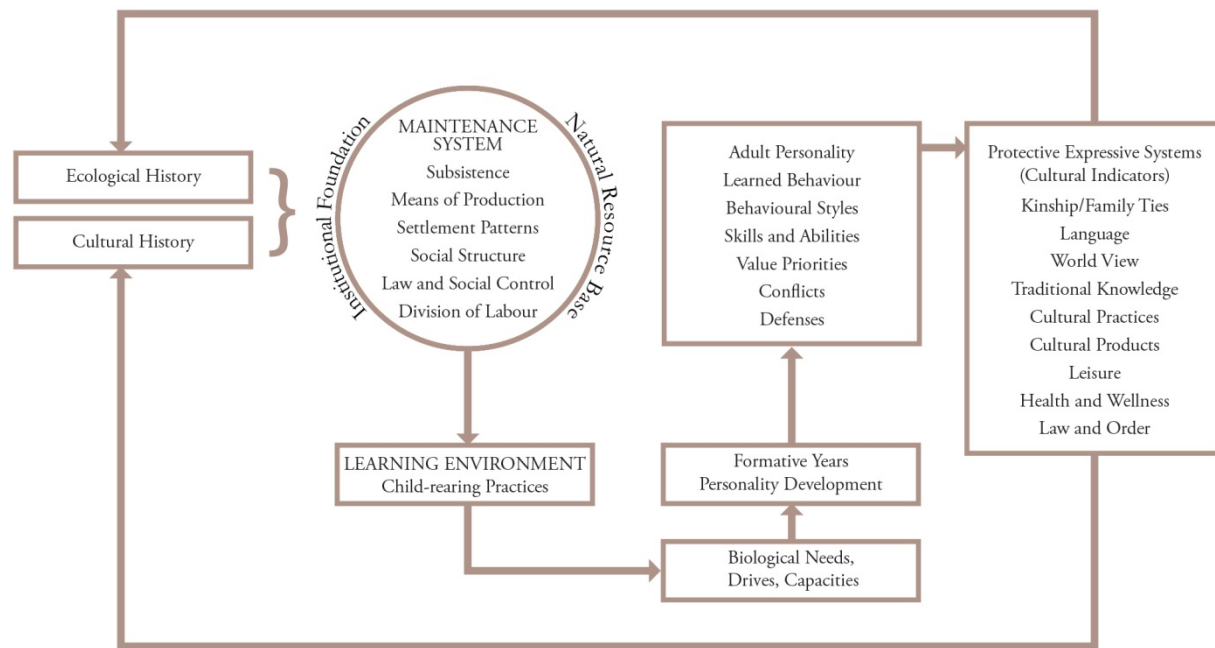
The ATK collected during the interviewing process was coded according to a code reference book developed by Northern Lights Heritage Services Inc. for cultural assessments. From the frequency of certain key code words a set of themes emerged that was representative of different aspects of knowledge. These important themes were then cross-checked against the list of cultural indicators noted above and key citations were extracted from the interview transcripts as representative of the specific indicators. The interview quotations were then assigned to one of the four categories: knowledge about the land; knowledge about use of the land; knowledge of value of the land; and, knowledge about world view. This lengthy process was followed up with careful comparison of the ATK maps with the preferred route map and areas flagged as environmentally sensitive sites.

Of note was the fact that the indicators, which were utilized as parent codes were attached to every section of text, derived from the ATK workshop interviews. Each parent code (indicator) within the code reference book also contained numerous, more descriptive child codes, also attached throughout the text, illustrating the parent codes and ultimately the predominant themes that the participating communities expressed. These themes contained community descriptions of the type and magnitude of concerns regarding the placement of the Bipole III Transmission Line. It is these concerns that provided the links and pathways to the determination of potential project effects.

A description of each indicator with ATK commentary is presented below. The holistic nature of ATK was again confirmed through the interrelationship of the indicators. As Petch (1999) indicates, it is the relationship of the natural and cultural environments that feeds the maintenance system (daily life activities, decisions and understandings) which in turn sets the stage for dynamic change (Figure 12).

## Systems Model Showing The Interrelationship Between The Ecological Setting and Cultural Maintenance

(based on Whiting and Whiting 1975) Petch 1999 ©



**Figure12. Pathway for incorporating ATK into daily life (Petch 1999).**

### Language

Development of perceptual (knowing) and cognitive (understanding) processes are instilled in humans from birth through their personal and socio-cultural interactions with members of their particular social group. Language is not only a means of communicating, but also of understanding the symbology and nuances of the culture. Language illuminates the transmission and understanding of the value of culture. Proficiency in language is key to successful cultural transmission and can be gauged through interactions with community members who are considered competent. This is based on fluency of first language, a mature vocabulary with complex grammatical structure, and an ability to carry out detailed conversation with ease and write the language in Roman orthography or syllabics.

Measuring this indicator within interviews includes language competency, that is, level of fluency, spoken, written or both.

Many of the interviewees expressed concern about the loss of their first language and their inability to master it late in life. Some people described the various processes that contributed to the loss of their first language.

*...See ...we've lost our Cree. Me growing up, I never ever spoke Cree, but I understand it... my mom always spoke Cree. My dad would only speak Cree back to her. He, he never used Cree speaking to us, he was always speaking English and my mom was always Cree...Then as, as we were growing up she mixed her Cree and English. My parents used to talk Cree but not us. Like, my dad would always speak English to us...And now, now, like now, there's not very much Cree anymore. It's just the elders that are speaking Cree...And not our kids. And I, uh, I don't even know if they teach it in school. But I know they have some, some classes, they make dream catchers, whatever. (Thicket Portage 2010).*

*I almost lost my culture even though...I used to speak, you know, I should be more fluent in my language and the way I used to. But I was ashamed even to be an Indian because the nuns and the priests told me that I was dirty savage, dirty. "If you speak Saulteaux, you're gonna go to hell", that's what they said to me. So I...said to myself..."Oh I guess maybe they're right", you know my mom. And even when we had them shows, we used to call them picture shows, you know, at the residential schools, like on, Sunday nights. You know, they used to be always cowboys and Indians and soldiers. Yeah, you know, actually as kids we used to cheer for the soldier instead of the Indians. And well usually the movies at the end the cowboy, you know is going to chase the Indians and we used to get up and clap, you know (clapping noise), for the cowboys and the soldiers. That's how we were brainwashed, you know? I realized that after a while and even when I grew up and had a chance to know, to connect with my dad one time parents, I went to them, to Swan River, at the Swan River Co-op and I stood there with them, this is how much I hated being an Indian, I was so ashamed of them I walked away. But I stopped and I...you're not an Indian anymore. It dirty to be an Indian so that's been troubling me all my life, about this connection. And also taking me away, you know, from my family, I lost a way of life, you know? I'm just starting to regain it, you know so I hunt, you know from time to time and, but I don't even fish, I don't even truly know my water, I don't even shoot geese or ducks, you know, because...I almost completely lost my way of life, cultural way of life, you know. But I'm slowly reconnecting again, like...our culture (Pine Creek 2010).*

Many children were forcibly sent away to residential schools (Figures 13 and 14). Some were as young as 3 years. Many children lost the ability to converse with parents and grandparents in their first language. The process of growing up in one's true home surrounded by the familiar and cultural caused the loss of many "libraries" of knowledge.



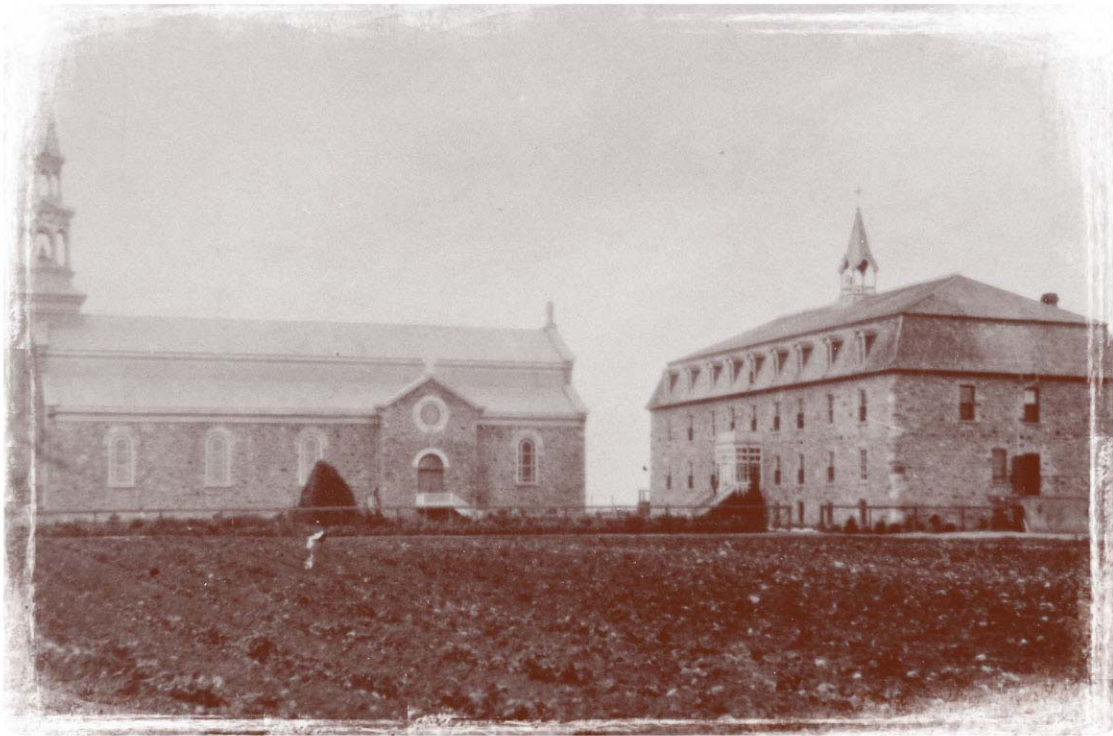


Figure 13. Camperville. church & residential (schools) (AM SV Historical Society Collection 11 n.d. N7690).

Some people made the direct connection between culture and language stating that without language, culture and cultural expression are meaningless.

*Our culture and our language because this is where our culture comes from, is [sic] from the language. And our language too has been has been forgotten and, so this is the kind of like myself, I've been working for about twenty years now trying to get my language back. Because it came to a point where nobody was talking about the Michif language.*

*We were speaking Salteaux there's...not quite a bit of people who speak Salteaux or Ojibwa here in this community. And there's not much...Michif that's spoken; the Cree is what's spoken from our language. The mixture of our language. So we...need to do more of that, we need to do more, and the school needs to it. We have to all get together. The school hasn't been doing that, too much of that either...and that's what...needs to be done too. Awareness of these kids because they're getting to a point where they all say they're Indian. They're leaving their traditional Metis heritage behind because they're not being taught the language and the culture and all that the culture comes from the language. We, our language is dying and ...there's a few of us in this community who speak the Michif language and we're trying to bring the language...back again and we're teaching people on the Michif language. (Camperville 2009).*



**Figure 14. Pine River and Camperville Residential School, Lake Winnipegosis (AM Pine River Collection Item 1\_c.1910).**

When asked about first language place names few of the communities could provide the First Language names of geographic features such as lakes and rivers. Place names, or toponymy can be considered as a gauge for understanding the connection between the cultural and natural landscapes. At this time it is not known whether the inability to identify geographic locations by the first language other than English is a result of language loss or the time constraints of the interviewing process. At this time lack of local toponymy is identified as a knowledge gap.

### **Traditional Knowledge**

As an indicator, the concept of traditional knowledge refers to the extent to which those who participated in the workshops understand and use their values, worldviews and traditional practices through oral tradition (oral narratives and oral history). Traditional knowledge is directly linked to language as an indicator and for this project was measured through map biographies. The use of maps helped illustrate both consistencies and variations within the communities' understanding of tradition.

The use of maps to document experience and knowledge provided an opportunity for those being interviewed to remember things such as events that they participated in and traditional use areas. Formal and informal settings provided and continue to provide the venue for preserving aspects of knowledge.

In the following quotes the process of transmitting knowledge is discussed. Both visual instruction and oral tradition are noted as being the main conduits for passing on experience and knowledge.

*...he's part of the family that trapped this area, and he was out there and him, myself [sic] and my dad went out. And...my dad was telling us these stories, eh, and...my buddy found it really interesting. Like he trapped there and hunted there for oh, maybe about ten, fifteen years now. And he said it was just so interesting. He said, "Man," he said, "the way your dad was talking there", he says, "Oh, it's good to know more, all this stuff," he said. He said, "To me it's just bush," he said, "I never knew about these things around this area." (Cormorant 2010)*

*...whenever I die I have these notes that I left behind for my boys, my, I teach my boys, I teach anybody that wants to learn this stuff... I was into medicines probably, well most of my life I've been smudging and, and that but I was into medicines really strongly ever since my grandma passed away. She was into them. She taught me a few things but that's where I kinda feel like she must of, after she died I feel like she must of contacted me or some way like... (Duck Bay 2010)*

### Special Places

In conjunction with the use of the appropriate NTS maps and acetate overlays a wealth of traditional knowledge was shared by several regional communities. In particular the history and knowledge of an area identified as the Kettle Hills blueberry patch was noted to be of great cultural importance to Duck Bay, Camperville and Pine Creek. Interviewees at these communities noted that Sapatowayak and Wuskwi Sipihk also used this area regularly.

Supporting the significance of this area, a small provincial park, Kettle Stones Provincial Park was set aside at the south end of Swan Lake in the Swan-Pelican Provincial Forest to protect the heritage stone kettle features that have developed over millions of years. Interviewees from the different communities agreed that there was a great sense of reverence for these features.

According to the Parks and Natural Areas website,

*... the Kettle Hills area are part of a formation that runs northeast to southwest. The park is the only known location of such concretions in Manitoba. They're concentrated in a 300-m (400-yard) strip that runs from northeast to southwest. Some are in meadows and others are amid the area's mixed forest. Some actually support fully grown trees. The stones range in size from 45 cm to 4.5 m (18 in. to 15 ft.) in diameter, with most between 2.5 and 3.5 m (8 to 12 ft.) in height. (<http://www.manitobaparks.com>).*

The location of the concretions is important to the Bipole III Project because the transmission line will cross over the strip of land containing these natural features. As indicated the concretion on display in Swan River was 3.5 m below surface. The below surface features may present some challenge to construction where tower footing are to be constructed.



D.B. Dowling and J.B. Tyrrell traversed this area in 1889 as part of the Geological Survey of Canada expedition. The Kettle Hills were of enough importance at that time to be identified on a map. In addition to Tyrrell documenting the geological feature, a pack trail from Lake Winnipegosis over the Kettle Hills to Swan River was noted (Figures 15 and 16). Years earlier, during his 1858 expedition Henry Youle Hind also noted that his “*Indian guide told...*” of a “*...pitching track*” that “*...extended for many days’ journey north and south of Dauphin...it has been the highway of the Indians passing from Lake Manitobah to the Assiniboine, through the valley of Te-wa-te-now-seebe or ‘the River that divides the hills’*” (Hind 1971 ii: 51)

*There’s a trail that runs all the way to Kettle Hills from here and runs through the back all the way to Kettle Hills and there’s medicines all the way there... there’s medicines all along that way...(Duck Bay 2010).*



Figure 15. Kettle Hills as viewed by Dawson and Tyrrell in 1889 (J. B. Tyrrell Geological Survey of Canada 1892).





During group and individual interviews and mapping exercises, members of the Aboriginal communities surrounding Swan Lake and the Kettle Hills continued to underline the cultural, social and economic importance of this area:

*well there's berries right from Cowan, right up, and that's where the blueberries start and they run all the way up...Saskatoons...that Lake has got blueberries too...so all this area here, I mean this is all blueberry country*

*well the blueberries right now for us is one of our...you say like a cash crop. It's what some people generate revenue...*

*I know, we used to camping at blueberry spots too, over. My dad would take all of us then camp, a week before school gonna start, we all come over and blueberry collected enough now, and my dad, we never had to come back. There were two houses right there. Everything is there. You didn't have to come back*

*blueberries would be one of the most important berries that we have going through this area right now. That's for revenue purposes, medicinal purposes. Oh I don't know, love potions I guess. (Group Interview Camperville 2009).*

*... people used to migrate by horse and buggy just to go over there and spend the summer over there (Group Interview B Duck Bay 2010).*

*Must have been a nice site here to live at one time you know, because there was Indians, real Indians all over...Because there's markings from here all over to Kettle Hills, like I tell you. They found arrowheads all over Kettle Hills...Well there's lots all over but that's the farmers that leave that.....you know they leave their places and there's lots along the highways...(Camperville 2009).*

The Kettle Hills and the blueberry patches were noted for their cultural, social and economic values. Interviewees noted that the blueberry patch was not only a means of economic benefit but that it was extremely important to social cohesion, cultural practices, worldview and traditional knowledge. Several people noted that ceremonies and weddings have taken place in the blueberry patch; and that in “the old days” people were buried here. There was also a good knowledge of the types of soils that supported the best blueberry patches within the Kettle Hills blueberry area. Interviewees identified the kinds of soil needed for blueberries during the mapping of berry patches...*it's not the right soils over on this side [near Duck Mountain] for berries...* (Group Interview A Camperville 2009). The soils required were identified as... *a brownish kind of sand... a loose sand* (Group Interview A Camperville 2009) and...*it's a fine sand, and it's kind of, uh, yellowish colour... that silica sand, it's really, really white.* (W. Beauchamp, Camperville 2009).

Knowledge of specific soils was expanded to the salinity of soils within the area known as the Manitoba Saline Waterbelt (Figure 17). The only uses noted for the saline soils recorded during the interviews were... *places they use for haying...and this is here more or less all cow pasture here... and... my grandpa, my mother and my grandfather used to make salt here* (Group A Camperville 2009).

Knowledge of aquifers and saline deposits within the Manitoba Lowland Saline Waterbelt was also shared.

*There's a couple springs, cold springs in the blueberry, uh behind Cowan area...freshwater that comes there... You just take a little dipper and you go in the clear water...(Group Interview B Duck Bay 2010). Some interviewees noted that there were... some hot springs here. They don't freeze in the winter time... (Group Interview B Duck Bay 2010).*

When asked if these were saline springs they replied no, the water was clear and not salty and the water ran all year.

Salt-making was an important industry in the early history of the area between Red Deer River and Neepawa. The early historical records indicate that there was a knowledge and use of the salt springs by Aboriginal people and this traditional knowledge along with new technologies brought over from Scotland and England by the indentured servants of the Hudson's Bay Company enabled a supply of salt to be shipped to the various posts *"A salt spring near the mouth of the Shoal River provided enough salt for this post and York Factory"* (Petch 1990).

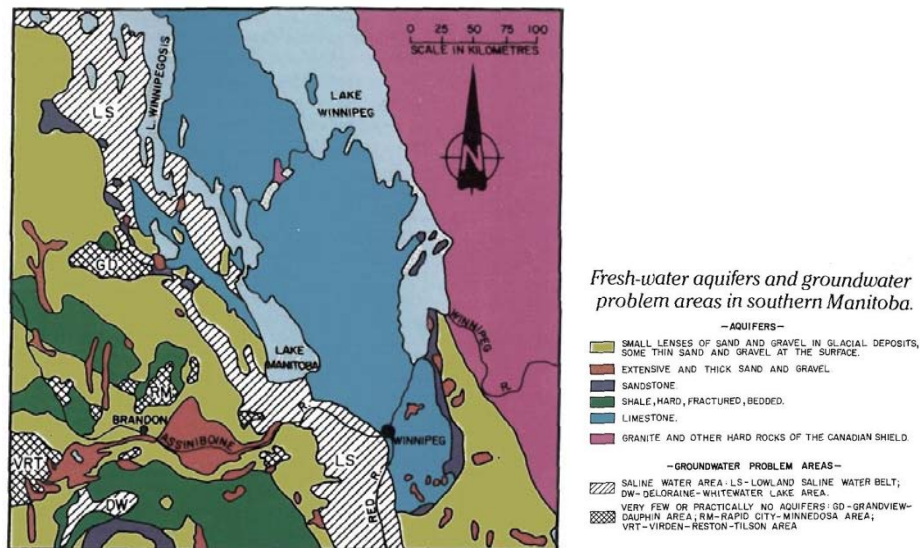


Figure 17. Manitoba Lowlands Saline Waterbelt (copied from Teller 1984).

At the beginning of the 19th century, entries in the Red Deer River (Swan River) post journal reiterated the importance of salt-making in the Swan River area.



**Figure 18.** Shoal River Fort at the outlet of Swan Lake. Salt was made at the nearby salt springs (Tyrrell 1889, Archives of Manitoba).

Around 1817 the Monkman family began making salt for the Red River Settlement, first at the Red Deer River and later on the Red Deer Peninsula north of the town of Winnipegosis (Figure 18 and 19). Several years later Father G. Belcourt, a Catholic missionary who established a mission at Duck Bay in 1839 noted that the production of salt was an important resource in the economy and it enabled the Saulteux (Ojibway) and Metis to live comfortably in a permanent setting. (Father Georges Belcourt 1840. Letters at the Archbishop's Archives of St. Boniface, 2961 and 3033).



**Figure 19.** J. Monkman ca 1889. (Courtesy of the Manitoba Archives).



In 1937, The Northern Salt Syndicate, led by L. J. McArdle of Swan River attempted to commercialize salt from the brine pools on the south side of the Red Deer River. The plan was to use the evaporative concentration method to produce salt from the brine (Figure 20). However, this venture failed for economic reasons (Petch 2006).



Figure 20. McArdle Salt Flats at the Red Deer River near Highway 10 (Photo courtesy of V. Petch 1985).

ATK gathered at Barrows confirmed the site of the Northern Salt Syndicate on the south side of the Red Deer River near the Highway 10 Bridge. The site was examined and recorded in 1985 (Petch 1990).

*Well there's a place up the Red Deer River they call the salt flats. Just up the river. You know, what they call the salt flats... There's two salt flats down the road here... Well, not now, but years ago they used to go and get salt and they used salt, the old people, eh? the animals like the moose and deer they depend lots on that. Yeah, they go to them (Barrows Group A 2010).*

Interestingly, fish caught in areas near the salt creeks that trickle into Lake Winnipegosis were stated to be of a higher quality than those caught elsewhere. The flesh was considered to be firmer and tastier (Camperville Group A 2009). Salt springs were historically known to be a place to hunt animals (James 1856). Salt springs were therefore considered to be a valuable resource for animals.

Long term observation of animal behavior was, and continues to be critical to resource harvesting and management. Any peculiar behavior was noted and monitored carefully.

*...they started getting that disease there. what they call mange. A lot of them died...like through the winter. Their fur was all gone...this lasted through quite a few years. And you know...timber wolves have that disease too, and they died out but now, the farmers are really complaining there's ...too much timber wolves. I guess a lot of them, killed like the younger calves like you know so, they want the trappers to go after them, but...very hard animal to kill. You really have to study them, you know.*

*It's just in the liver over the past few years I don't know how many years ago, they told us, saying that the liver is no good. But like uh, there are some people that take the liver regardless of that (Cormorant 2010).*

Determining changes in animal behavior is critical to the methods of resource harvesting and to potential economic returns from the resources. In the case of trapping, knowing if a fur bearing population was diseased contributed to economic return based on the quality of the furs being traded and sold at fur tables such as the one in The Pas (see figure 21)



Figure 21. Stan Johnson sorting furs, The Pas. (AM Herbert Stanley Johnson Collection\_Item 2 Jan 29 1915).

Interviewees noted that there were fewer birds seen around the community and in the bush than there used to be – those mentioned were orioles, robins, and kingfishers.



## Wood products

Most of the people interviewed noted the importance of wood products in the past and present. Historic and current economic production of forest and timber products has driven a large part of the economy in many of the participating communities. However, local use of wood products also plays a major role in supplement fuel costs, building product costs and is also used in the production of cultural products such as artwork or walking sticks.

*Our wood was cut down for our own houses. And how we build them with the wood around the area. And the mud came from the ground...that's how we kept those houses warm..So when those log houses were built they'd still have cracks they used to chink with moss, and then they would put mud (Group Interview Camperville 2009).*

*...they used to go and cut pulp in Pine River. That was a living... they used to make cord wood (Group Interview Camperville 2009).*

*Louisiana Pacific scooped that up... They're taking control, yeah...we start with the black poplar, cause that's really good firewood. You can't get a permit to because Louisiana Pacific is stripping...So the stakeholders seems to have the, first dibs...as homeowners here, we go, scrape whatever's left..We got, every family here is entitled to a timber...But we can't seem to access. Whenever we go and cut a tree down they charge... We can't build now because they won't let us cut timber down because these stakeholders have contracts come out for all this land. You look at Pelican Lake here, that's all timber. Tolko has already grabbed that up. So has Louisiana Pacific (Group Interview B Duck Bay 2010).*

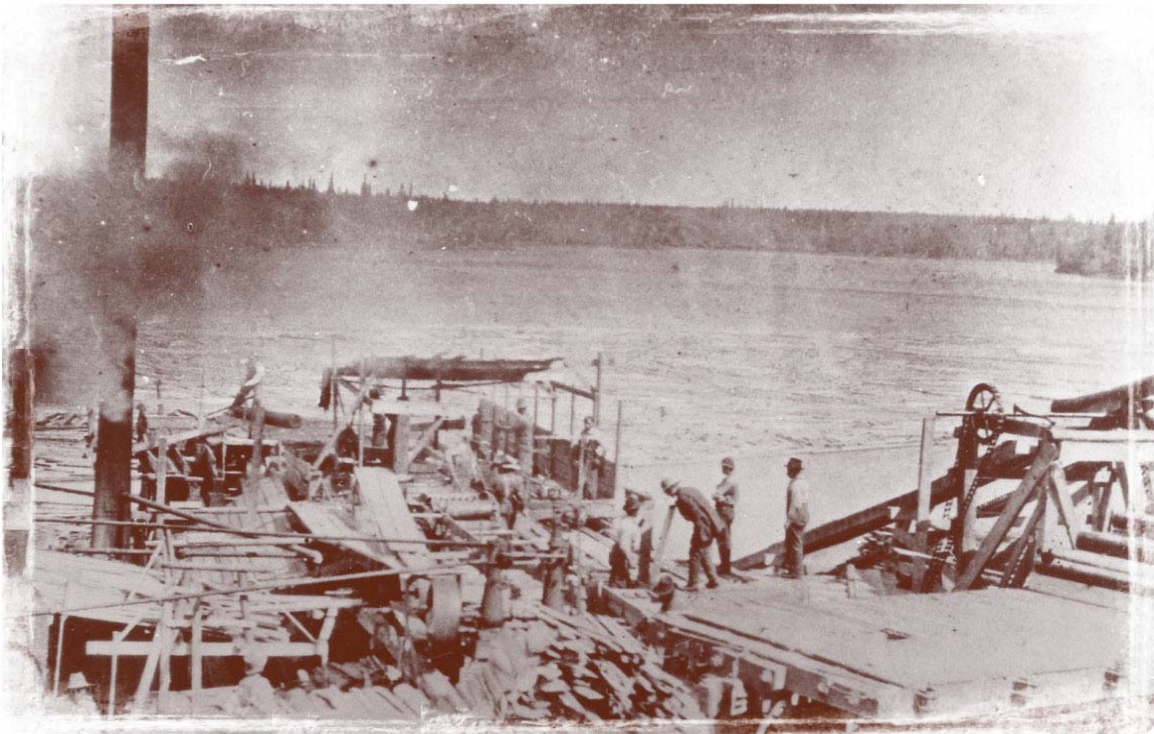


Figure 22. Cutting ties for HB Railway (AM Thicket Portage 1 ca.1918. N21807).



Figure 23. View of the Red Deer Mill and planer at Barrows, MB. (AM DFB 216. July 1918).

## Fishing

Both domestic and commercial fishing were discussed by the different communities. Domestic fishing provided a crucial component in the diet of many of the communities in addition to providing an economic benefit and leisure component for kinship groups.



Figure 24. French half-breed family (Naber) making fish boxes, Cormorant. (AM Dorothy Baker Collection Item 119 Sept 1936).



*...there's a...little creek that comes from that salty lake, and it goes right to the lake [Winnipegosis]. And you know that people catch those little fish, and it's coming from that salty lake... It's loaded with little fish... you try a pickerel from here, and you try a pickerel from Dauphin Lake, you'll find two different... (Group Interview Camperville 2009).*

*...And the river's also murky...Like, it's kinda brownish...And the river's also murky... But there's good fishing in there like for the pickerel... (Cormorant 2010).*

*they keep this lake [Red Deer Lake] for spawning summer...because it's a shallow lake and the fish come up from Lake Winnipegosis. They come up Red Deer River into this lake...and then they go into all the little streams going off Red Deer Lake and for spawning. So that's why [they Conservation?] shut it down for commercial fishing in the summer time...(Group Interview Barrows 2010).*

*It's where most of the livelihood is [Lake Winnipegosis], it's where we fish (Group Interview B Duck Bay 2010).*



Figure 25. Commercial fishing boats in Duck Bay, Manitoba (NLHS BIPOLEIII-10-159).

The intimate relationship communities have developed with the natural environment was the basis for many of the concerns expressed by communities with regards to potential obstacles that the project may cause for the proper stewardship of the land.

*Like I don't want ten cats bulldozing the line, pushing everything to the side and taking out maybe what, how long is this line here supposed to be? Thousand miles... so about a thousand miles, so you are looking at a thousand miles of dead, scarred land. and that's taking a lot away. and I am not just talking about us in general. I am talking about everybody from where the line starts and where it ends. And it's gonna affect a lot of people. a lot of different nationalities, too. a lot of different tribes, will be affected by this...some tribes might get...[compensation?])...as compared to about here, where we're in a kind of an open area, well the lines probably gonna go in the open area, already. Like there probably looking for farm land that they are gonna put this on already. But as for the wildlife, it's the water that I am worried about...the tributaries, the swamps, any places that water fowl can land for water is gonna affect them greatly.*

*Look what happened to Duck Mountain..I know these ones, the ones in number 6, they make a lot of noise, like this static, like errrrrrrrrrrrrrrrrrrrrr...the noise... will vary with the weather too (It's a constant hum. It will always be there... Towards the north like Dawson Bay, it's gonna be coming close to Dawson. Dawson Bay and that's where...a lot of guys go north to fish. North side of Lake Winnipegosis, and Dawson Bay, that line is running right beside it. (Group Interview B Duck Bay 2010).*

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*When our elders...we had a fish hatchery here. And apparently they were stocking...they wouldn't stocked our lake, when they were stocking Cedar Lake, Dauphin Lake. But the problem is they...stocked Lake Dauphin, Chitek Lake, all those little lakes around here. They stocked all of them...For years they were stocking them. They were taking out small fry and they were sending them to other lakes, and...I guess they musta been getting money for it I guess, I don't know. But apparently that's where all the, that's what I think happened to all that. They spent ten years doing fish hatchery, sending the fish to other, other country, might as well call it. Just according to the other lakes. You know and they stocked other lakes, but it didn't do any good for us. And now like, it means that some of what our elders did in the past, were kinda stupid I guess, but to say honestly. You know they didn't think of our, our future. Or my kids future to put pickerel back into our lake (Group Interview B Duck Bay 2010).*

*Well...right now the land, has always [been] very good habitat for moose and waterfowl and especially muskrats, but it seems the populations...the things that we used to take for granted that would always be there are, are not here so much anymore; especially the muskrat population. As we should be out there right now...there is nothing for muskrat population. Whereas a person who manages the resources would have a little bit for like what you call breeding stock. Like say one year we'll trap over here and leave that other side and it would all take care of itself, but it's been over ten years since there was any amount to harvest...it's not just for financial benefit, it's for food and a way of life (Cormorant 2010).*

*... [we] don't have too much wood ticks here. They're actually migrating. Our weather patterns are changing and they're, they're migrating into our area (Barrows 2010).*



Figure 26. Falls at Herb Lake end of Grass River. (AM John A. Campbell Series IV 15 n.d.).

Community interviews expressed the loss of traditional activity due to technology.

*Even myself, now I sit in front of a computer and play, play a lot of different, poker and stuff like that and, then you don't do the things you used to do. Like all spring, before I got married, fishing would be over at the end of March, we'd start muskrat trapping, we'd jump to beavers soon as the rivers opened we were in the boats. You were consistently on the go doing something, eh? Now, [expletive] when fishing's over you're sitting around on the computer or I go watch hockey now, I don't play it anymore. (Dawson Bay 2010)*

Communities also provided insight into the process of blending knowledge of traditional nature with modern practices

*I do lots of traveling and talk to different groups and actually that part of our culture was just about lost. You start talking to, going to trade shows, elders come up to you and they're very proud of me for what I'm doing. When I do a workshop or a tradeshow it's educational. I show people the plants. I tell them where they grow, how I pick it, what it's good for. So they're very proud of me for sharing my knowledge, what I learnt, and I try to encourage other people to use them. When you start looking at our medicines, there's so much side effects. I talked to this one man the other day for this one pill he has five pages of side effects. When you start looking at the Aboriginal or the natural medicines they're not like that because our pharmaceuticals are zeroing in on that one specific thing in that plant and just using that thing, where the whole plant, as a whole is better, better for a, a person. Um, I think the way our, our whole country is turning to more natural products. Instead of looking for uh, something to cure them, they're looking for prev-, preventive and eating healthy and living healthy. So, I think that lots of people are starting to focus in on that and what's available in their region. There's, lots of people want knowledge, want to learn about the plants. And through my business that's probably 75 percent of my business, travelling around showing people where the plant grows, how to harvest it, what to use it for. And...I actually took a course through uh, the university, the U.C.N. in The Pas. And when I grew up as a child, my mother always had the Labrador tea, the mint, and the wikis at home and I just took it for granted. Like all Aboriginal people, they figure if it, they could go pick it next in the, behind their door, it's got no value, but they don't have the bigger picture. So my mother always had those and I just took it for granted. Every household had them. It was just something common. And it never really hit me until I took this course. (Barrows 2010).*

*...another important fish is what we do it personally as a family, is netting whitefish. Because they're a more versatile fish and they were usually more abundant. Like we would smoke fifty whitefish at a time, and you can roast, bake them or um, fry them, boil them, so they were, and they're very high in uh, omega three... so they were always the healthiest alternative that was very much abundant (Cormorant 2010).*



## Cultural Practices

Cultural Practice as an indicator is measured by the activities within a community that defines its cultural identity. Cultural practices are illustrated within the narrative discussions provided by communities as a wide array of significant activities. Cultural practices do not include leisure activities and one example of this may include cultural ceremonies as a component of cultural practices. With this indicator, alteration of physical and cultural landscapes by project implementation can potentially affect cultural practices, either by adaptation, abandonment or relocation of activities.

*I'm a woman and I trap and fish, commercial fish. ...the kids in high school, even the younger ones have more questions than the high school students. I want to be a trapper like you. It sounds like fun, I tell them it's not fun...and they're surprised to see me as a small person and I do all this. But you know I don't do it all by myself. I have helpers (Thicket Portage).*

*They'd trap there in the winter, winter trapping. They had their own, it's almost like that map that was sitting there. All those zones that, that's where they trapped, eh? They had their own blocks where they trapped... and they'd make a living out of there...and they hunt the waterfowl in there too...in the fall, and they make sure they get enough, enough birds to last them through the winter, They put them up and they get all frozen. They didn't have no freezers at that time and then the moose, they killed a moose in the, in the fall too, when the moose are mating,,and they harvest the moose and they put up the meat and get dried, eh? They make, they make a rack. And they made a, a big smoke. They made a fire and they would just smoke that meat. And it's dry and it don't get spoiled. You can keep it for a long time. And ...and they pound the meat, you know...I went through Nelson House And there was an old man there, he gave me ...one of those shopping bags. He filled that with pound meat. And he says "here, you can take this home". I brought it home, I set it on a table when I got here. And then I thought I was gonna have some the next morning, but I got, had lots of kids. And the next morning it was gone! They eat it all up! (Laughs) They asked me where I got that. They wanted some more. I says I got it from the old man. They really liked that meat. But anyway this is what people used to...how they lived... (Chemawawin 2010)*



Figure 27. Man boiling birch sap for sugar (Chemahawin (*sic.*)). (AM Charles Hall Family Collection Item 99\_1908).



Figure 28. Cleaning sturgeon catch (Photo provided anonymously 1990's). (NLHS BIPOLEIII-10-97).

## Way of Life

Much of the discussion provided by participating communities regarding cultural practices was presented and understood as “matter of fact” daily life activities. This way of life defined by local participants described lifestyles that adapt to local environmental and economic conditions with the common goal of community health and wellbeing and continued stewardship of the land.

*...a lot of our people harvested for the summer like up in July 'til middle of August, the blueberry patch you call it, we talked about it yesterday. In the Kettle Hills and the creeks there, Drake River area ... for the summer and then back to school and then my dad would continue logging, fishing, and then, before the fishing season was over, he'd go trapping...*

*... We use our traditional territory there, the Duck Mountains for hunting, harvesting medicine. And the same thing with the Porcupines, some of us use that mostly Cree use that. And the Kettle Hills, Pelican Lake area, creeks Drake River area, and then on to Lake Winnipegosis. ... We used it for sustenance and making a living off it. Fishing, logging and some of it was for economic purposes and some was also for for culture values, for cultural sustenance and all that. So that's basically, how I am, you know? Our way of life from the time I was four years old. (Pine Creek – 2010).*

*... We kept moving there wherever we would find the best blueberry patch. That's Kettle Hills... My dad to sell blueberries... We went by wagon and there was sometimes forty boxes, sixty boxes at a time. He used to camp over night In Lenswood there and sell his berries to the little store...*

*I know how it is when people travel. That's why they say the nomadic lifestyle. I grew up living that. In the summer to Kettle Hills, in the fall to the mountains, cut your pulp, make your money. Pick, harvesting in the fall, come back, hunting... Dry meat for the winter. Ducks. Pick Seneca root, make a few dollars to sell it. Then come back again in the winter, then you go and do your fishing. Like I say I, know the north end of Lake Winnipegosis here, Easterville, Grand Rapids, like the back of my hand because I grew up there. I was six, seven years old...*

*...there's another road over here where the people use horses to go to Kettle Hills this way when they go hunting. There's a road here that goes straight down. ... Natural resources built a road here, that goes all the way to ... the north end of the community... it was a fire kill road they say. I don't know if anybody uses it, but I know there's an old wagon road this way. It's wagon trails from here you go Birch River ... through the bush. In the back area here in here right in Kettle Hills, I don't know, there's people that used to live there, year-round. ... People lived here... Yeah, live off the land. Up to a few years ago there used to be trapper's cabins here and people lived there all summer. Got blueberries in summertime, all these berries. (Duck Bay – 2010).*

*it was never a matter, a matter of becoming rich by trapping. It was just what we, what we did...(Cormorant 2010).*



Cultural practices that were described include a traditional ceremony (from a youth perspective);

*[Flower Day] is just where they go to pay respects to the people that have passed on. ... And then they have a little community gathering there and they put food out for the person that's passed away and they make a basket full of food and it's called a setting, and then you give the setting to say people that come by, visitors that come from far or short, even maybe his old friend or something like that. ... And then they'll just come and sit down by the grave, have a meal, talk, joke around. That's about it. ... And yeah, it was just pretty much everyone with their own little families...their own groups of families that had those Flower Days (Dakota Tipi 2010).*

Hunting, taboos;

*...the odd caribou comes down and they'll come inside here, sometimes they would get them. I know one year there, two years ago, I think we had about sixteen and we had a hard time skinning them. It's a lot of work, eh? ...was trying to help him. They said, "Don't you ever do that again. You know it's too hard to look after the meat." (Thicket Portage – 2010).*

Customs of respect; and

*...that's another thing yeah, a woman can't touch any of that stuff on their time, eh? Can't walk over it and (Thicket Portage 2010)*

Trapping as resource management;

*...You just go off your main trail into the creeks where the beaver are.....and trap beaver. Try and take as many as you can. I take a lot of beaver 'cause I use them in my marten and fisher traps. I've been trapping marten and fisher. ... I use the carcasses to feed the marten and fisher. ... You feed them, the fatter they are, the more kittens they'll have. ... It's a lot like farming. ... Like right now I'm starting to pull my marten traps because I'm picking up more females. ... So as soon as I get females, you pull your sets and then you just push the feed in there. Let them feed. And all they can eat. You can put a whole beaver in. They can't haul it away, so they have to come back and eat. And next year at first snow you come back, they'll already be back there looking for...some more. ... And then you put the, you put the bait in, put your traps and start harvesting again... 'til the females start showing up. Because the females, they won't feed with the males cause the males will kill the females.....when they're feeding. ...That's just for marten and fisher (ANON E – Barrows 2010).*

## Health and Wellness

Health and wellness as an indicator, identifies discussion by communities of dietary practices and the necessary connection to maintain spiritual wellbeing. Traditional harvest, agriculture or water quality issues are examples of Health and Wellness discussed by communities that connect them spiritually to the land. The extent of discussion was dependent on the availability of traditional health and wellness practices within the community and the availability of western modes of health and wellness programming. The general health of a community is connected to physical health and is a reflection of spiritual and emotional well-being. Communities with a better social cohesion internally will have less suicide and illness (see Kirmayer & Valaskakis 2009). Many aspects of health and wellness exist. Elders and resource gatherers were willing to share some of the basic remedies used for uncomplicated health issues.

## Flowers and Plants

The forests and wetlands within the Bipole III study area are a natural pharmacy for almost every ailment and sickness. Medicines range from simple teas to complex medicinal compounds, the knowledge of which has been transferred down through the ages. The value and knowledge of certain plants was freely shared with the ATK study team. Every community contributed to the list of plants that were still used traditionally for common health problems. The following text represents the variety of plants that are used locally.

*...[Kettle Hills] Crocus country...blue...and...purple...there's Lady Slippers...pink...yellow...yellow-white...A lot of use[s] are from roots, because if they don't use like the top, they take roots... There's paint brushes, Indian paint brushes...(Barrow, 2010).*

Calyx Consulting (pers.comm. 2011) reiterated that the root of the plant was picked. The “many fine threads on its roots were steeped in water to make a tea” and this is said to have a calming effect on nerves.

*Labrador tea is usually used, maybe I'll say 90 percent of the time, as a tea. And it's real high in vitamin C and good for headaches... it's good for your immune system. I also harvest all the different kinds of other plants. People use mint tea around here ... it likes kind of wetlands (Barrows 2010).*

Labrador tea was also noted by FLCN plant gatherers as a powerful medicine used to cleanse the blood. It also is used as a tea (FLCN 2011:16). In addition, leaves and roots of other plants such as mint, blueberry and strawberry were used separately and in combination with other ingredients to create specialized teas for certain ailments. All these plants are known throughout the northern hemisphere for their medicinal qualities.

Keen observation of the effects of weather on berries was shown to have a bearing on the timing of gathering.

*it depends on the weather, if it's warm weather in the spring then so many berries in May, June. You can go pick berries, blueberries, strawberries. June, July but here it wasn't. In the fall, my husband went and checked them [cranberries] out he says they were small. And he said even though people were picking cranberries they were very small. Nowadays they start coming out about...September, because of the weather. It wasn't a hot summer, not until about...September it started getting warm and that....affected the blueberries... Everything, even saskatoons. It affects all the berries and depending on the weather. We went out camping [for] saskatoons. And they weren't ready. Even we have a choke cherry tree in our yard, they were late. Some of them formed before they ripened, because of the weather.*

*Picking cranberries while they're frozen [in winter time]... my grandmother used that for making jelly. ...And this bush here (See map) I used to, pick...cranberries. I used to pick about five pails while there [out trapping along Assiniboine River] (Dakota Plain 2011).*

Cranberries (*Wesageminah*) were noted by FLCN berry pickers to be an important medicine for bladder infections (FLCN 2009:17).

*Sage is used in traditional ceremonies...so is sweet grass...as aboriginal people would have a lot to trade...and...you can find people that actually take part in these ceremonies...they harvested the sage for these ceremonies ...and...take them to pow-wows and they use that there...Or they use that in sacred ceremonial things where they put in the air...They use them in traditional ceremonies...In sweats, they have like you know, they use them to cleanse the body before they go into the sweat lodge.(Group Interview Camperville 2009).*

People who gathered medicinal plants stated that they did not sell the medicines; they gave them to those who asked. Respect for other people gathering medicinal plants was also discussed. Plant gatherers did not infringe on another's gathering area. Plants were also prepared ahead of time in anticipation of different types of common ailments.

*...when I find the medicines that I can, that I use ...I collect it. And I don't sell any of it. I give it away if people need it... Like I know there's only a few little spots here and there. But when I recognize where it is, where it grows then you look for it. (Cormorant 2010).*

*...what I notice about picking medicines, when I see somebody in an area, I don't go there. I don't, pick in their area... because a lot of them are elders and I don't need them going farther, you know, I'm young. I could go...this old man used to pick sweet grass and I had miles of it, fields I used to walk around, I used to walk through there but I wouldn't pick any because he's an elder, eh?... I don't wanna cut him off... Another elder passed away, he picked weekay and I, I don't go into his grounds either, eh? Like, like they don't own this land but in, in my eyes they have more right than anybody else...picking on those soils because they, they've been doing it fifty years... (Duck Bay 2010).*

*...Because every medicine I pick I make a prayer for it and...I pray that it's gonna help the one that for. Or I don't even know some of them, I don't even know who I'm praying for half the time because they come see me because I always try to have them on hand, you know...(Duck Bay 2010).*

*[Cranberry bark] it's good for a woman on her back pain...and it's a body booster, makes you kinda slow down (Duck Bay 2010).*

Plant gatherers tried to gather most of the plants they used close to their communities. However, they were familiar with other areas which required them to travel for specific plants.

## **World View**

World View as an indicator illustrates the relationships and interconnectedness of the natural environment, people and spirituality as understood by communities. Dramatic changes to the indicator traditional knowledge have direct correlation to World View. The incremental loss or decrease in the understanding of spiritual connections to the land can affect community organization. World view components such as traditional values, political understandings and education affect leadership qualities which are necessary for a holistic understanding of past, current and future needs of the community through cultural organization.

During the interview process it became apparent that there were certain plants and animals that were held in high esteem and thus considered special or sacred. Certain birds were not hunted, for example, Cranes and eagles (Group interview Camperville 2009)

Worldview was also expressed as respect for sacred and culturally sensitive sites and through old stories;



*...the only place I know for sacred is the grave yard ... there's one out of the town here...They don't even stop you from walking in through them...not like old days when you go to a sacred ground you couldn't step in them...You'd get scalped (Louis C. Camperville 2009)*

*There's some, some old Indian burial graves there. (Group Interview Cormorant 2010)*

*They even got married there last year[Kettle Hills]...they had a big wedding...just by Indian Birch...It was a big celebration there. there's a lot of communities that its history, you grow up going there and...see guys from Sapotawayak they told me they have some sacred grounds in there, that you guys will probably be talking to them up in Sapotawayak...they have some sacred ground in here, these lands and they don't want anybody going in there at all...in the bush right by the lake (Group Interview B Duck Bay 2010).*

*The other thing that I noticed is respect. When you used to go out, like when you were doing the commercial fishing or for consumption, when they used to fish, when you landed on the dock or the harbor, wherever, you just left all your stuff there. All your gear that you had in your boat, you just left it there. Nobody would touch it. Now it's different. Now you leave something outside for a minute and you walk out and it's gone. That's how much that has changed. Malcolm T. (Translated by Robert Walker) Chemawawin 2010)*

*...what I notice about picking medicines, when I see somebody in an area, I don't go there. I don't, pick in their area... because a lot of them are elders and I don't need them going farther, you know, I'm young. I could go...this old man used to pick sweet grass and I had miles of it, fields I used to walk around, I used to walk through there but I wouldn't pick any because he's an elder, eh?... I don't wanna cut him off... Another elder passed away, he picked weekay and I, I don't go into his grounds either, eh? Like, like they don't own this land but in, in my eyes they have more right than anybody else...picking on those soils because they, they've been doing it fifty years... (Duck Bay 2010).*

## **Kinship (Family Ties)**

Kinship, also known as “family ties”, refers to inter and intra community relationships and the manner in which they determine social organization within and between communities. Examples of this could include nuclear family relationships, traditional extended family relationships, intercommunity marriages or fictive kinship. Kinship relationships assist in determining the status of individuals in and between communities. Kinship is at the core of cultural practices since the interactions between family members is determined by rules of obligation and status. This contributes to the division of labor, or who does what in the case of resource and land use practices.



*We spend a lot of time out there. Each one of my children been there since they were at least three months old. So when it was time for them to go to school, it was, they didn't know too much about that. I'd have to sit in the classroom with them for around two weeks at the time...(Cormorant 2010)*

*And I used to help uh, my brother-in-laws and uh, the, my in-laws. They are my in-laws now, they weren't back then, but I used help them trap like quite a bit in this area in here. (Cormorant 2010)*

Sharing of resources such as family time and fishing are critical components of kinship;

*Lots of rabbit. There's lots of...one time I seen a, a guy who used to fish with my dad, in the winter fishing, eh? He used to go out after fishing, he used to go out and he set snares. And then uh, and then the next day when they were finished fishing and he'd go for his snares, and he doesn't come home right away, he'd go and check his snares. And then he, probably maybe six, seven rabbits. And get, put, he made a rack and then he put 'em up there. And they're all frozen in the wintertime. And then when he comes home, yeah, he had a, maybe twenty, thirty rabbits he brought home. And we shared 'em with people. That's how they did these things. We didn't eat very much from the store (Chemawawin 2010)*

*If one catches four or five then they'll share it, you know. But we...usually when we go hunting like that we split what we kill eh? ... That's the way it works (Camperville 2009).*

*Fishing...is...very important for fishing for us. And, and that's the whole community it's not only me that...there's a lot of boats up there in the summer time. it's sort of a, we go up there to fish. We take a frying pan and uh, we go and have our fish fries up there... families we'll go up, we go out there camping sometimes on the islands. (Cormorant 2010).*

*Oh, I wouldn't say a large part of the diet but if somebody can get one [Moose] they throw it in the freezer and they tend to spread 'em around...so just kind of hand out to everybody. A quarter here, a quarter there, you know, they're not greedy and keep it all. ... I know a friend of mine, he's got his Metis harvester's card and he gets deer once in a while and he gives it to my neighbor who's got seven kids. And it doesn't take her long to go through a deer. ... With seven kids. ... But they're related. They're cousins. (Barrows 2010).*

*But there's one guy there that caught one big sturgeon...about, say about 30 pounds, 40 pounds. That's a big fish! ... And that fish that that old man caught, he shared it all...Everybody ate it. ... Yeah, everything they got, ... they shared before. As soon as they get to the, to the shore, they take the meat out and give it out...from the boat. ... It used to be easy for living. (Chemawawin 2010).*



Figure 29. John Bittern's horse drawn sled on route to winter fishing camp\_1957 (NLHS BIPOLEIII-10-94)



Figure 30. Waywayseccappo Reserve (Lizard Point) (AM Indians\_106\_1912\_N12156).

## Leisure

Leisure as an indicator describes the types of activities community members undertake with relaxation or enjoyment provided during their time free from work or duties. Leisure time is an additional mechanism used for cultural transmission of Oral Narratives (Oral Traditions and Oral Histories) and social interaction; it also contributes to community spiritual wellbeing. Leisure time offers occasion to share stories of the past, discussions of the present, and plans for the future.

*That's where we used to...spend our school holidays. In the bush. That was our holidays. (Group Interview Camperville 2009)*



Figure 31. Waywayseecappo Reserve (Lizard Point) (AM Indians\_107\_1912\_N12155).

## Law & Order

As an indicator, Law and Order outlines the ways of governance within the community setting that provide order to the community. It can entail provincial and federal laws that citizens are subject to as well as customary laws understood at the local level between communities that subtly guide conflict resolution. Not having control over decisions that affect their lives...translates into personal lives – disconnect between community leadership and community adds to frustration and adversely affects law and order in a community.

The following discussion reflects the mood of understanding regarding the ownership of lands. The six inches refers to the depth of a plow, which was originally explained at Treaty as being the amount of land that the settlers would use for farming.

*You know what, I was gonna tell you, what about if we had minerals in our yards? In our village?...You'd be rich! I'd be rich? not me, the government would be rich! we don't own. I pay for my taxes and things like that, and still, six inches? six inches! that's all I have...from the bottom you don't, nothing...whatever is at the bottom there is all the governments (Group Interview Camperville 2009).*

*German Lake,...well around there somewhere...it was Prisoners of War camp (Barrows 2010).* During WWII, more than 34,000 German prisoners of war were in detention camps across the country. German Lake in Manitoba was one of such camps (Madsen and Henderson 1993: 1).



## Cultural Products

Cultural products refer to the range of cultural goods that community members produce or create. Cultural products are not only affected by changes in the environment but also by the social and economic situation.

Different types of cultural products were discussed:

*...they do beadwork uh, leather.. a lot of them buy their own leather, leather though, like it's almost becoming a lost art uh, doing your own tanning... I don't know how to do it myself. But like my mother does and we were supposed to like 'cause she's getting uh, she's been kinda sick for the last few years and she's been trying to...we were talking about all this time, she supposed to teach us how to do it. 'Cause she used to do that quite a bit. She used to get me to keep the moose hides for her and then whatever I can get I've sent to her. And they would do it as projects. Like well she's uh, what they can consider an elder. And she was teaching the younger ones at the places that she lived. And here and here now though we have people that can make their own, set out their own beaver carvings. Like, like there is it's not only the diamond willow they use. There's balsam, there's a certain kind of willow they'll use, they use uh, birch. Different type of, types of things...And then like years ago, we used to, I remember we used to just take the birch bark and like we make our own moose calling, moose horns...It's not so much as buttons and whatnot...a lot of people I know use..[antler] for... handles for knives, axes...(Cormorant 2010).*

*...because there was no such things as welfare, there was no such thing as family allowance... My mom's cellar used to be just full with cans, home canned fruits and vegetables, ...that time you had to have them. today they got it made (Group Interview Camperville 2009).*

*...you cut out soles from a birch, white, you know birch? You cut soles out from that bark, you line it inside your shoes, you, it's for sore feet... All the stuff I hear from elders. (Duck Bay 2010).*

## 5.4 Environmentally Sensitive Sites and Community Reflections

A major goal of the ATK study process was to assist in the determination of a final preferred route (FPR) and to minimize environmental, cultural and heritage impacts. This was achieved in part by an ongoing consideration of community information by Manitoba Hydro during the study resulting from workshop interviews. The community interview process and memory mapping offered unique insight into an emic understanding of potential effects of the Bipole III transmission project within the project study area. Community group discussions and key person interviews not only provided a narrative record of the intimate knowledge of traditionally and currently used cultural landscapes, but also illuminated with great accuracy, the geographical placement of these environmentally sensitive regions, thus maximizing the geographical range and depth of information gathered from participating communities and providing direct and indirect links to project effect statements.

Once the FPR had been determined, scrutinizing the content of textual and geographical information system (GIS) formats of information was crucial in the determination of environmentally sensitive sites (ESS) that offer these linkages and pathways to potential project effects.

Within the larger context of the projects' ATK study, thematic details of community reflections regarding the potential effects of the Project were evidenced during the interviews and particulars were also recorded on the appropriate 1:50 000 NTS map sheets. All of the thematic details that fell within a corridor of a total of three miles from the centre of the sixty-six (66) metre FPR right-of-way (ROW) were flagged and evaluated to determine the level of environmental sensitivity as described by the interviews.

In order to facilitate the determination of environmentally sensitive sites an ESS table was developed (Appendix 12) to link the geographical position of the ESS to the narrative descriptions captured by the interviews; and in some cases mitigative measures were suggested within the interviews.

A total of one hundred and fifty six (156) ATK ESSs were determined to fall within the total length of the FPR corridor. Environmentally sensitive sites were expressed and sub-categorized through GIS as points, lines or polygons with a total of one hundred and twenty two (122) ESS polygons, twenty eight (28) ESS lines and six (6) ESS points.

Polygons generally reflected community identification and description of typical regional use by groups and individuals, with an emphasis on cultural landscapes along the FPR.

Lines generally reflected community identification and description of the trails, transportation routes and waterways utilized by the communities; this was derived from group and key person discussions, of cultural landscapes along the FPR,

Points reflected specific historic and personally utilized sites, and again this knowledge was acquired during group and key person discussions and specifically related to cultural landscapes along the FPR.

Once these ESSs were plotted on an FPR map using GIS, cultural "clusters" became apparent along the FPR. These ESS clusters were also independently identified by the self-directed community studies as areas of concern. In some cases mitigative suggestions were offered by communities during interviews and these were incorporated into the ESS table of points, lines and polygons. The concerns identified in the self-directed studies were also independently taken into account.

As a result of the ESS clustering, which was based on the ATK interviews and self-directed studies, areas of constraint were noticeably present. The following table (Table 7) identifies areas of bottleneck and concern to the communities.

Table 7. Table of Constraints.

Participating Community	Physical Location of ATK Concern	Concern	Requirement	Constraint
<b>ATK Workshops</b>				
Barrows	Red Deer River Crossing	River bank erosion, fish spawning area, waterfowl habitat, EMF, ROW	Community requires more information on EMF and EnvPP	Crossing is in an area of high density of land and resource use. Archaeological sites west side of bridge both sides of river.
Barrows Area	Red Deer River Crossing	Use of chemical sprays on waterways, increased access	Community requires more information on chemicals, Limit access, EnvPP	Crossing is in an area of high density of land and resource use. Archaeological sites west side of bridge both sides of river.
Camperville	Cowan/Briggs Spur and Kettle Hills (and blueberry patch)	Effects on economic sustainability	Avoidance, limit access roads. EnvPP	Geological concretions run from bottom of Swan Lake to town of Swan River. Some are deeply buried but may pose constraint to tower footing construction.
Chemawawin	Summerberry Marsh & Old Post (Cedar Lake)	Concern that Bipole III may interfere with wildlife	Avoidance. EnvPP	May be outside FPR.
Cormorant	Area east of community Dyce Lake to Mawdsley Lake	Petroform on east side of Wuskwatim TL. Area a high use area for resource use. Outfitters have concerns of interference with local economy	Petroform must be avoided. Review alternatives for routing. Other forms of mitigation.	Limited opportunity. Line will run parallel to Wuskwatim TL. Protect site with chain link fence (may have been done for Wuskwatim TL.
Dakota Plain	Traditional lands	Profound cultural effects. Cumulative history of effects to land use	Address concerns offered by FN	Treaty 1 and Aboriginal Rights may constrain route.

Participating Community	Physical Location of ATK Concern	Concern	Requirement	Constraint
Dakota Tipi	Traditional lands	Effect of EMF on animals, plants & humans. Burials Profound cultural effects. Cumulative history of effects to land use	Community requires more information on EMF. Address concerns offered by FN	Treaty 1 and Aboriginal Rights may constrain route.
Dawson Bay	Red Deer River Crossing	Effect of herbicide on animals and plants. Displacement of animals.	Limit chemicals	Crossing is in an area of high density of land and resource use. Archaeological sites west side of bridge both sides of river.
Duck Bay	Cowan/Briggs Spur and Kettle Hills & blueberry patch to Hwy 10. to Cowan and east to Camperville	Effect of ROW clearing. Effect of contaminants on water. Effect of line noise & EMF on plants & animals. Effects on local economy.	Avoidance, limit access roads. EnvPP. Avoidance of traditional medicinal picking areas.	Geological concretions run from bottom of Swan Lake to town of Swan River. Some are deeply buried but may pose constraint to tower footing construction.
Herb Lake Landing	None noted	None noted	None noted	No constraints
Pelican Rapids	Porcupine Hills	Destruction of plant habitat. EMT	EnvPP. Community requires more information on EMF	.Out of preferred route area
Pikwitonei	Area north and west of Pikwitonei	Effect of chemicals on plants, fish spawning. ROW. Effect of increased access	Hand-clearing. Limit access EnvPP	May be some constraints
Pine Creek	Cowan/Briggs Spur and Kettle Hills & blueberry patch	Effect of ROW clearing. Effect of contaminants on water. Effect of line noise & EMF on plants & animals. Effects on local economy.	Avoidance, limit access roads. EnvPP. Avoidance of traditional medicinal picking areas.	Geological concretions run from bottom of Swan Lake to town of Swan River. Some are deeply buried but may pose constraint to tower footing construction.
Thicket Portage	Area north and west of Thicket Portage	Effect of placement of TL may impact animals	Avoid active traplines EnvPP	May be some constraints



Participating Community	Physical Location of ATK Concern	Concern	Requirement	Constraint
Waywayseecappo	Riding Mountain area	Out of preferred route	Out of preferred route	Out of preferred route
<b>Self-Directed ATK Studies</b>				
Fox Lake Cree Nation	Keewatinoow Converter Stn, Ground Electrode, Construction Power	Fragmentation of animal habitat. Effects of noise on animals. Profound effect on culture	Mitigation of ATK Heritage Resources EnvPP	Constraints to Converter Station facility configuration, ingress and egress.
Long Plain First Nation	West side of traditional lands	Profound cultural effects. Cumulative history of effects to land use	Address concerns offered by FN. EnvPP	Treaty 1 and Aboriginal Rights may constrain route.
Manitoba Metis Federation	Porcupine and Duck Mountains identified for intensive use – also elk calving areas.. Dauphin area – elk habitat. Stephens Lake area – barren land caribou occasionally seen on north side (MMF 2011:41).	Metis rights and interests may be impacted. (MMF 2011:1)	Not identified by report	Aboriginal Rights -Section 35
Opaskwayak Cree Nation	The Elk Zone and Ravensnest Zone RTLs (OCN 2011:18)	The Elk Zone is identified as a “youth line” which acts as an outdoor classroom for students of OCN. This area has recently been disturbed by the Wuskwatim Transmission Line, especially in regard to a potential decrease in marten and fisher.  The Ravensnest Zone - important spawning grounds; important habitat for declining caribou herds.	The FPR will intersect subsistence, medicinal and cultural use areas. Partnerships with OCN. Compensation for Elk Zone. Mitigation, EnvPP. ROW Monitoring. Timber allocation. No burning of debris (OCN 2011:25)	Treaty 5 and Aboriginal Rights. RTLs

Participating Community	Physical Location of ATK Concern	Concern	Requirement	Constraint
		Cultural and heritage (OCN 2011:24).		
Swan Lake First Nation	Legal Description s 35-9-9W1 to 26-9-9W1; 8-9-9W1 to 15-9-8W1; 24-9-9W1, 22-9-8W1, 30-9-8W1, 13-9-9W1, 14-9-9W1; Assiniboine River crossing; Yellow Quill Trail.	Burials, sacred and culturally sensitive sites, medicinal plant areas	On-site observer during construction Avoid Round Plain Indian Garden (SLFN 2011:8)	Treaty 1 and Aboriginal Rights. Indian Gardens unextinguished rights
Tataskweyak Cree Nation	West side of traditional lands	Profound cultural effects. Fragmentation of traditional lands. Cumulative effect of Keeyask and Bipole III	Mitigation of ATK Heritage Resources EnvPP	Keep line as close to PR280 as possible
Wuskwi Sipihk First Nation	Cowan/Briggs Spur and Kettle Hills & blueberry patch	Not identified	Not identified	Not identified

## 6.0 Summary and Conclusions

The team led ATK interview process and the self—directed studies provided the means for understanding how the lands within the project study area are used and why from a local perspective. Through the use of cultural indicators frequency patterns emerged as persistent themes of concern providing insight into the potential effects resulting from the development of the proposed Bipole III Transmission Project.

A table of Environmental Constraints was produced which was based on the frequency of recurring themes within the interviews. As the results of the ATK studies became available they were fed into a fluid Environmentally Sensitive Sites evaluation process and as new ATK became available it was added to the evaluation and influenced the corridor of the final preferred route (FPR).

Five areas of critical concern were identified: the proposed Keewatinoow Converter Station, the Cormorant region (Dyce Lake to Mawdsley Lake), the Red Deer River Crossing, the Cowan and Briggs Spur region (Kettle Hills) and the Assiniboine River Crossing area. From these constraints, and by using the cultural indicators as themes, common and unique community environmental effects were identified.

Common community effects that were identified resulted from community concerns regarding EMFs, the use of herbicides and sprays, increased access into certain areas, fragmentation of the cultural landscape and wildlife habitat, employment potential and the historical record with regard to its continuity into the future and were generally expressed by all the ATK participating and self-directed communities. Unique community effects were expressed in terms of the themes that arose from the frequency of cultural indicators for each of the ATK participating and self-directed communities.

The message gained from the ATK studies is that the participating and self-directed studies communities have long and intimate cultural ties with the land and seek to ensure that they, their children and future generations will enjoy the good life.

ATK plays a vital role in Aboriginal culture; Aboriginal people view the land on which they live as all encompassing, a way of life, where relationships with the land reinforce and contribute to the cultural experience culture. To be denied the opportunity to maintain this relationship results in the loss of one's culture. The results of the study suggest that effects of the Bipole III Transmission Project on presently known ATK may cause subtle changes to culture because of changes to the cultural landscape which remove mnemonic cues associated with memory mapping. This runs the risk of disrupting the continuity of cultural expression and thought.

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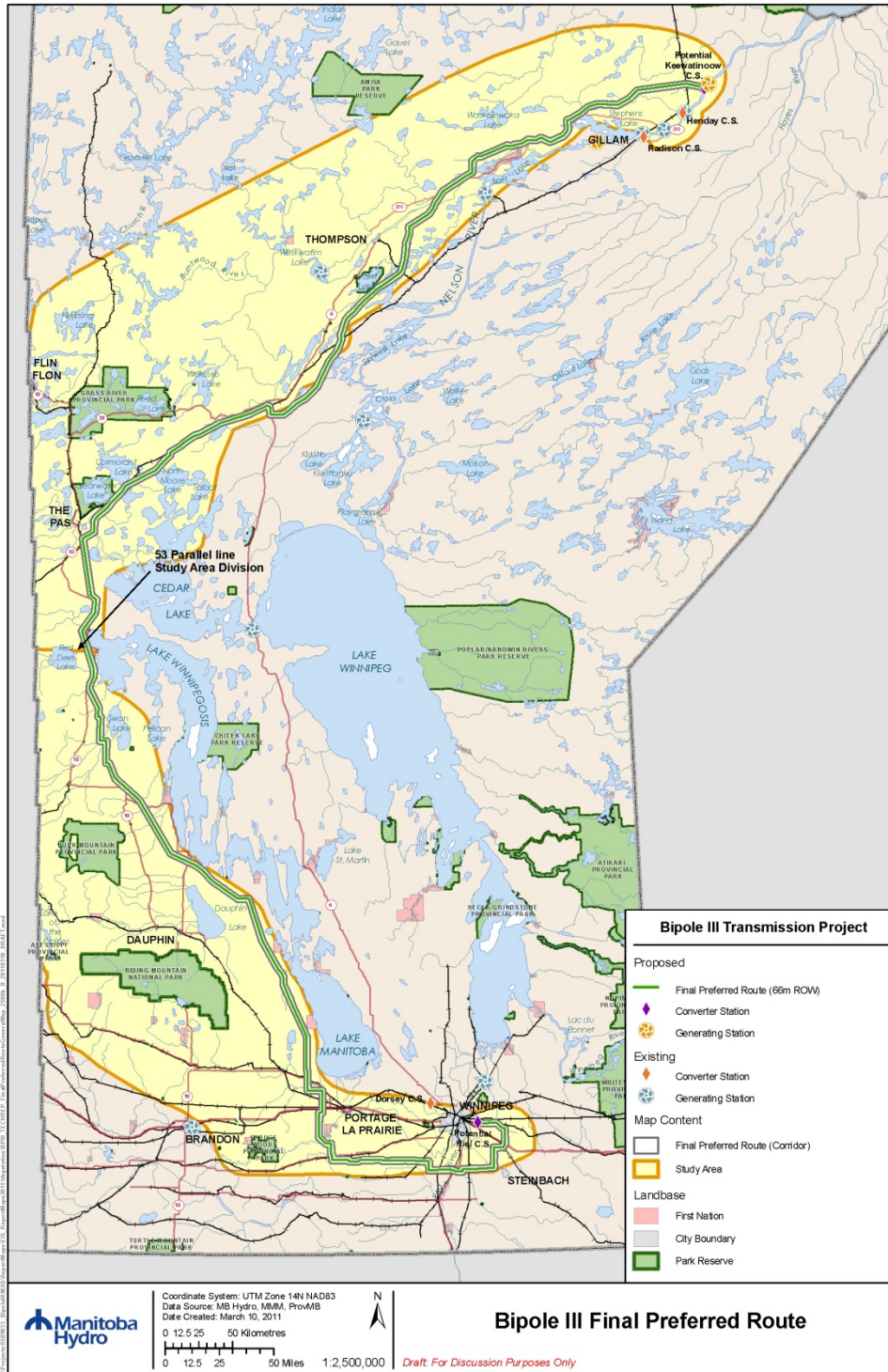
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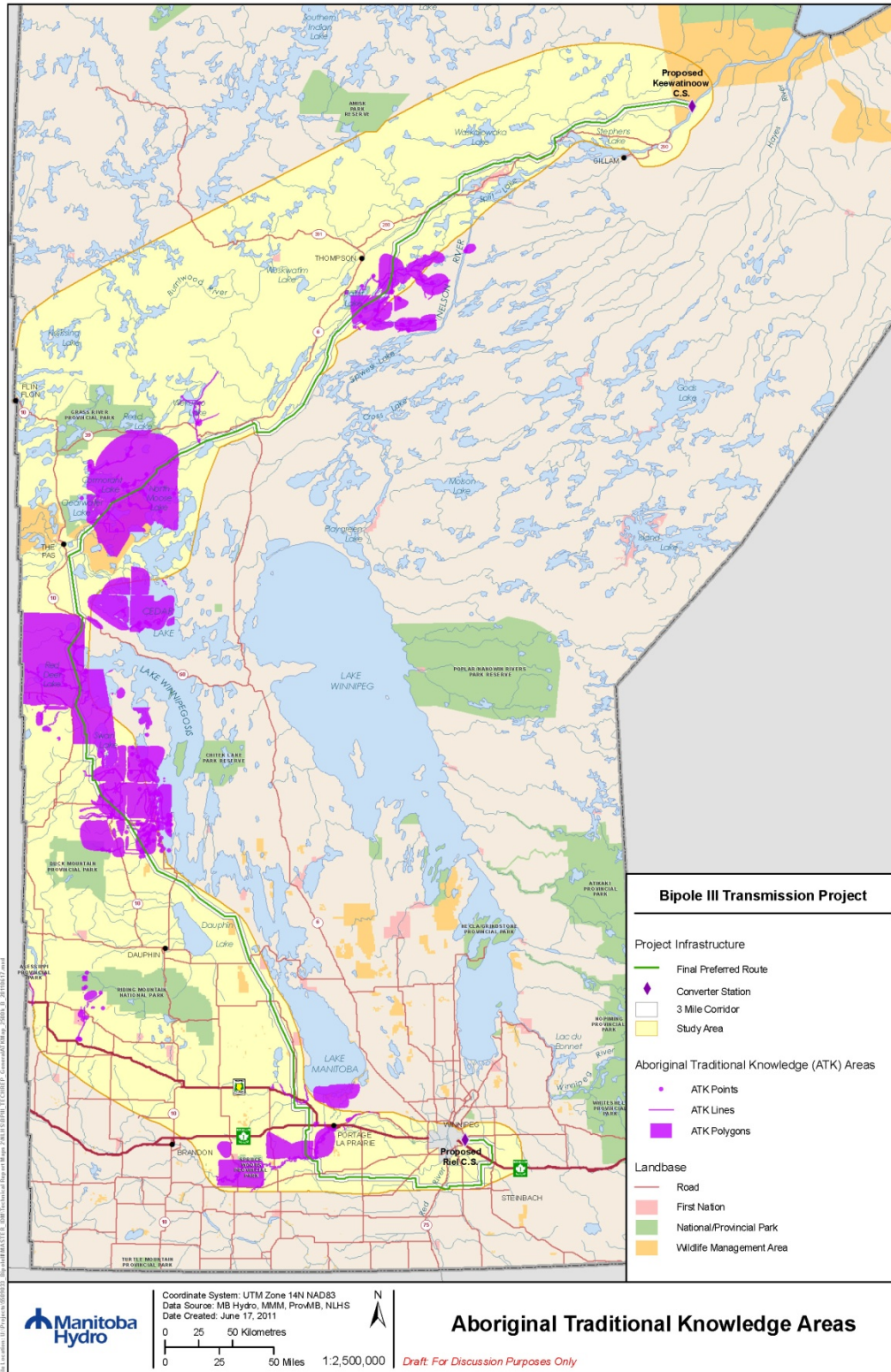
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## APPENDICES

## APPENDIX 1. REFERENCED MAPS



Map 1. Map of the Final Preferred route of the Bipole III Transmission Line



Map 2. Aboriginal Traditional Knowledge Areas.

## **APPENDIX 2. COMMUNITY WORKSHOP PROCEDURES**

### **Workshop Components**

#### **Agenda**

For each ATK Workshop conducted, an agenda was created to outline the activities scheduled for the workshop (Appendix 5). Agendas were distributed to the community contact person prior to the workshop. The workshops took place over two days. The agenda included:

##### **Day 1 Activities:**

- Introductions by ATK Team
- Overview of the Bipole III Transmission Project and Environmental Assessment Process (Manitoba Hydro)
- Introduction to Discussion Topics and Workshop Process:
  - General knowledge of the land,
  - Historic knowledge and use of the land,
  - Important values of the land to the people,
  - Bipole III and its potential effects on traditional views,
- Confidentiality, Informed Consent Forms, and Intellectual Property Rights overview.
- Group oral history interviews and mapping activity.

##### **Day 2 Activities:**

Scheduled Key Person Interviews and mapping were conducted on the second day.

#### **Introductory Presentation**

The workshops began with a power point presentation by MH representatives during which time the project was described and community members had the opportunity to ask questions related to the construction and operation of the Bipole III transmission line. This was followed by a short presentation and description of the contribution ATK would make to the Project and the process that would take place over the course of the two days.



## **Consent Form Overview**

An informed consent form that was designed for the interviewing process was discussed in detail at the outset of the presentation so that each individual understood the nature of the interview and their intellectual property rights (Appendix 7). Each person who agreed to be interviewed by digital recording was required to sign the informed consent form once its contents were explained fully to the interviewees. If a person wished to remain anonymous their name appeared only on the consent form and interview list. All other lists and documents referred to the individual “Interview ID Number” (IN). The transcribed interview, map overlays and summary referred only to the IN.

## **Interviewing**

Two types of interviews were used: group and individual key person (KPI) interviews. Group interviews ranged from 1-3 hours in length while KPIs lasted between one half hour to one hour. Group interviews provided an understanding of the kinds of ATK that are held collectively by the group. Key persons were selected from the group interview based on their level of knowledge presented during the group interview and these individuals provided further detail to specific topics that emerged out of the group interview process. All interviews were recorded using digital recording equipment that is described in Appendix 10. Memory mapping was carried out for both the group and key persons using 1:40,000, 1:50,000, 1:65,000 and 1:80,000 National Topographic System (NTS) map sheets.

## **Interviewers**

The interviewers were Virginia Petch, Ph. D., RPA, EP, Hani Khalidi, M.A. and Emily Linnemann, B.A. (Advanced). A short professional biography of each interviewer is noted below

Dr. Virginia Petch is an applied anthropologist who has worked extensively with First Nations in Manitoba, Nunavut, North-western Ontario and Saskatchewan. She is a recipient of the Prix Manitoba Award – Heritage in Education and Communication and the University of Manitoba Outreach Award. Her manual on conducting oral history interviews has been used across Canada as a teaching tool. Her own extensive research and practice in Manitoba and other Canadian regions has served in her development of key cultural indicators of change integral to understanding historic and present changes within cultural communities.

Hani Khalidi trained primarily in cultural anthropology, specializing in ethnographic studies using oral history and videography. He has assisted and facilitated oral history workshops, conducted oral history interviews in First Nation communities across Manitoba and Saskatchewan, produced a video documentary and provides cultural analyses for environmental assessments using computerized content analysis methods.

Emily Linnemann trained as an archaeologist with a historical focus. She has assisted in conducting ATK interviews and memory mapping using a CapturX GIS pen. She has provided great assistance



to preliminary historical research for the ATK communities and in completing the transcriptions and hand-coding preparation for content analysis.

## **Format of Interviews**

Consistency in data gathering is imperative if it is to be analyzable, quantifiable and comparable to scientific data gathering methods. As such a set of standardized guideline questions was developed as part of the overall methods to meet this requirement (Appendix 6). The study team specialists contributed their expertise in developing the initial set of thematic questionnaires. These were later modified in order to be translatable into the first language of the participating communities if the need arose. Questions were submitted to local community representatives for review to ensure readability.

## **Equipment Specifications**

### **CapturX GIS Pen**

Two Adapx CapturX pens were used in the ATK workshops to digitally record the mapping activities in the group and key person interviews for map production using the ArcGIS software. Each pen uses a sensor, image processor, and internal memory to digitally transcribe the knowledge collected on ArcGIS maps produced at a 1:50 000 scales on microdot paper. For more detailed specifications, see appendix (10).

### **Philips 9370 Digital Pocket Memo**

Two Philips 9370 Digital Pocket Memo (DPM) devices were used in the ATK workshops to record the group and key person interviews. Each DPM recorded the audio to a 10 gigabyte SD card in digital speech standard (DSS) format. For more detailed specifications, see appendix (10).

### **Philips 9173 Tie Clip Microphone**

One Philips 9173 tie clip microphone was used in the ATK workshops. This discreet model of microphone was designed to provide excellent recording quality and is fully compatible with Phillips DPMs and is powered through the microphone jack on the recorder. For more detailed specifications, see appendix (10).

### **CM909/909S Conference Microphones**

Two CM909 and one CM909S conference microphones were used in the ATK workshops. They were designed to capture voice in both one-on-one and group settings. The CM909 model was powered through the microphone jack on the digital recorder. The CM909S model was powered by a LR44 lithium battery. For more detailed specifications, see appendix (10).

### **Philips SpeechExec Dictate v5.0**

SpeechExec Dictate is the software program that the ATK study team used to upload the interview audio recordings from the DPMs. This software was included with the Philips 9370 DPM recorders. For more detailed specifications, see appendix (10).

### **NCH Software Express Scribe v5.06**

The ATK study team used NCH Express Scribe, an audio and video transcription software program, to transcribe the workshop interviews. This program was designed to facilitate rapid transcription since playback options are controlled through use of foot pedals or hot keys. The program is also fully compatible with Microsoft Word. For more detailed specifications, see appendix (10).

### **VEC Infinity IN-USB-2/IN-USB-1 Foot Control Pedals**

Two VEC Infinity IN-USB-2 and one IN-USB-1 foot control pedals were used by ATK study team staff to aid in the transcription process. These light-weight pedals were designed for use with transcription software programs to make audio playback options relatively hands-free. For more detailed specifications, see appendix (10).

### **Sony MDR-XD100 Stereo Headphones**

Three sets of Sony MDR-XD100 stereo headphones were used in the transcription process. These headphones were designed for use with an array of audio-visual equipment. For more detailed specifications, see appendix (10).

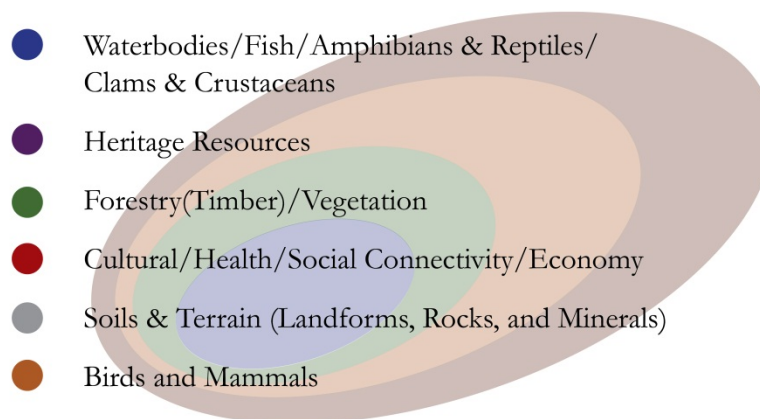
### **The Ethnograph**

The ATK study team utilized version 6.0.1.0 of The Ethnograph software. This beta version was re-adapted and updated by Qualis Research at the request of Northern Lights Heritage Services Inc. to facilitate the specialized needs of the project. The Ethnograph software was used to identify effects and societal values that were used to analyze potential effects as presented by communities. The Ethnograph is a computer program that was designed to facilitate the analysis of data collected during research. It allows for subjective data to be measured in objective format through the development of descriptive codes (see appendix 11 for screen shots).

## Workshop Mapping

### Acetate Overlays

During the first five workshops, map data were recorded in indelible ink marker on individual acetate placed overtop NTS maps. The acetate overlays were prepared prior to each workshop (corners and relevant NTS map data marked. During the workshop, the maps and acetate overlays were secured to the table with masking tape. The corners of each map sheet were drawn on the acetate overlay using black pen and a ruler and a north arrow was drawn on each sheet. Question topics were assigned different colours and as data were gathered, they were marked on the acetate overlay with coloured pens. A colour-code legend label was placed on each acetate overlay that was used.



All mapping data were marked as points, lines and polygons. In the first workshops, numeric codes were assigned to each point, line and polygon. Based on feedback from the MH and consultant GIS departments this was changed to alphanumeric codes and each interview within a workshop was given a different letter designation. Numbers were assigned in sequential order, dependent on the amount of features drawn in any given interview. The alphanumeric code was written next to the associated point, line or polygon on the acetate overlay. The code was re-written on the side of the acetate overlay and concise and detailed information about the feature was then written next to the alphanumeric code so it was known what each feature represented.

A new acetate overlay was used for each map referred to during the interview. Each overlay was then labeled with biographical information including name of interviewee, date of interview, place of interview, name of interviewer, map sheet number and project name. After the completion of each workshop, map overlay data and a spreadsheet of points, lines and polygons was submitted to MMM Group for incorporation into the project maps.

<b>Bi-Pole III Transmission Project</b> <b>ATK Workshop Interviews</b> <b>Community Name Here</b>
NTS MAP SHEET: DATE: INTERVIEWER(S): INTERVIEWEE(S): LOCATION:

## GIS Pen Process

CapturX GIS pens and microdot maps were supplied by ATK GIS coordinator for each workshop. A legend specifically designed for use with the pen was contained on the side of the map. This legend had options for corrections, notes and index as well as options for ATK locations (points), ATK trails (lines) and ATK areas (polygons). The locations, lines and areas were subdivided into categories based on the types of questions asked during an ATK interview (e.g. birds and mammals, heritage resources). These categories were assigned specific colour codes. Before data was drawn on the map, an ATK location, line or area was selected by “tapping” the corresponding type of location/line/area in the legend. When the tip of the pen was pushed down to write, a small camera on the pen read the microdots on the maps and stored the data within the pen.

When an image was being drawn on the map, the pen operator ensured the pen was not lifted off the map until the feature was complete. Lifting the pen would cause the image to stop recording and the feature would have to be re-drawn and corrections noted. When a specific location was drawn, the first place the pen was put on the paper was where the data was recorded on the map. When a polygon was drawn a small gap was left between the beginning and end of the shape. The software in the pen automatically connected the start and end point, closing off the shape. If the pen began to vibrate while drawing a feature on the map, it was understood that the pen may not have recorded the data. If this occurred, the pen operator simply re-drew the feature. If this problem persisted it indicated a potential flaw in the microdot print quality on the maps: however, while the pen may not have recorded the data digitally within the pen, the data were still captured physically in ink on the hard copies of the maps. These data were redrawn on the maps on return to the office so that they were able to be included in the GIS data.

Immediately after a feature was drawn, an alphanumeric code was assigned to each location, line and area. Prior to each interview, the interviewers coordinated which letters would be assigned to each interview. Numbers were assigned in sequential order and were dependent on the amount of features drawn in any given interview. Alphanumeric codes were continued in sequence from map sheet to map sheet and were not to be duplicated. The alphanumeric code was written next to the associated point, line or polygon on the map sheet itself. The code was re-written on the bottom of the map and concise and detailed information about the feature was then written next to the alphanumeric code so it was known what each feature represented.

After each interview was complete the interview mapping data was downloaded from the GIS pen to a Bluetooth-enabled device (e.g. a Blackberry) using the CapturX Mobile Software. In areas where there was cell service, the mapping data was emailed via cell phone to the ATK Coordinator's office. If no cell reception was available at a workshop site, the data was stored on the phone until an area of coverage was reached and then transmitted. Labels were put on the hard copies of the maps that were used in each interview, detailing the project name, location of the interview, interviewer name, interviewee name, map sheet number and date of interview (Figure 4, above). These maps were then rolled up and set aside so they were not used in another interview. A new set of map sheets were available for each interview.

### **Post Interview Process**

After each workshop was completed, all consent forms, audio recordings and maps were processed. Consent forms were scanned and portable document format (PDF) copies of the forms were made and archived. Electronic and hard copies of the consent forms were archived. Based on information from the consent forms, a Microsoft Excel spreadsheet was generated for each community detailing which workshop participants had requested copies of transcripts. An interview list was also created for each workshop, providing detailed information about each interview, including interviewee, interviewer, date of interview, interview letter assigned, consent form status and restrictions (e.g. anonymity). All lists were archived for the record.

Audio interview files were uploaded from the digital pocket memo (DPM) recording equipment using Philips SpeechExec Dictate© software. The audio files were uploaded in digital speech standard (DSS) format and were subsequently converted to waveform audio file format (WAV) for use with NCH Express Scribe© transcription software. Prior to erasing the audio recordings from the DPMs, the audio files were backed up on office server, an external hard drive and designated USB jump drive. Audio compact discs were created for each participant who requested a copy of their interview. These discs were labeled clearly and provided to the ATK Coordinator for distribution.

The acetate overlays and maps created during the workshops were used by interviewing staff to generate a Microsoft Excel spreadsheet that was compatible with GIS software and contained all relevant data for each map. This spreadsheet was adapted within the first few workshops by the ATK consultants until a final format was decided upon. Once the format was finalized, all mapping spreadsheets for previous workshops were edited for consistency. Data on the spreadsheet included interview an alpha-numeric interview ID, type, map sheet number, notes; whether it was a point/line/polygon, the location of interview, date of interview, name of interviewee and interviewer and who was also present. The spreadsheet and maps for each community were provided to the ATK mapping coordinator to produce the final maps.

Workshop summary reports for each community were generated and submitted to the ATK Coordinator after the conclusion of the workshops. These reports described in brief the events and comments made during the interview process (Appendix 9).

All audio recordings were transcribed into Microsoft Word© documents by members of the ATK consulting team using NCH Express Scribe© software, VEC Infinity IN-USB-1 and IN-USB-2 foot pedals and Sony MDR-XD100 stereo headphones. These transcriptions were peer reviewed as part of the quality control process. After the transcriptions for a workshop were reviewed, they were sent to the ATK Coordinator for distribution to those in the community who requested copies of the interview materials.

After transcripts for a community were complete, concise interview summaries were written (Appendix 10.5). A summary was created for each group and KPI that took place within a given workshop. The summaries provided brief details about the topics that were discussed and any concerns that the participant(s) expressed during their interview. Upon completion, interview summary sheets were provided to the ATK coordinator. These sheets were a valuable tool to the study team specialists who requested information of particular topics of interest to their discipline.

As part of the coding process, project folders were created in The Ethnograph© for each workshop. Transcription files were uploaded into their corresponding community folders in The Ethnograph© and were formatted. Paper copies with numbered lines for each transcript were printed out through The Ethnograph©. Subsequently, each interview was hand-coded using the NLHS© code book specifically adapted for the Bipole III ATK project. Upon completion, the hand-coded interviews were peer-reviewed as part of the quality control process and codes were entered into The Ethnograph©.

## **Community Review Process**

The community review process was designed to allow participants to verify accuracy of knowledge gathered during the interviews. Review packages were prepared for community leadership and community members who participated in interviews and requested a copy of interview materials. Following completion of the transcription, map production and interview summary sheet Qualitative Analysis (QA)/Qualitative Control (QC) process, review packages were developed for



review by participating community members which requested copies of the materials. Items reviewed by interview participants (group and key person interview if applicable) were:

- Digital Audio File(s);
- Interview Transcript(s); and
- All maps created by the interview(s).

Items reviewed by community leaderships were:

- Interview summary sheet(s) for all group interviews; and
- An overall coverage map with all group interview knowledge and each 1:50 000 map tile used.

The materials produced for review were compiled into mail-out packages by the ATK study team. The group and KPI-completed packages contained the audio files, transcripts, maps, a map reference sheet, and cover letter (Appendix 4). Leadership-review packages contained the interview summary sheets, summary maps and cover letter (Appendix 4). The mail-out packages allowed for one month for review by leadership and participants. All materials sent were via Canada Post Express Post and required a signature upon receipt of the packages. During the review process, a request was made that any errors or omissions related to the transcription and the map details be identified. The cover letters indicated the contact for any changes or further comments to be directed to Manitoba Hydro's Community Consultation Coordinator.

All maps produced for distribution were prepared by the ATK study team as were transcripts, interview summary sheets and audio files.

Transcripts were prepared by the ATK study team in Microsoft Word format. Transcripts identified the interviewer, interviewees, other people present, the date of the interview and the location. Upon completion of the transcription, all materials underwent a QA/QC process for accuracy. Transcripts produced for review included a cover sheet that indicated the Group ID, date of interview and community name.

Interview summary sheets indicated the key topics discussed during the interviews. The summaries were one to two pages in length and produced in Microsoft Word format. Group interview summary sheets were distributed to community leadership as a general outline of discussions in group interviews.

Audio files were prepared in .wav format and included in group and key person interview review packages. The audio files were burned onto CDs.

All maps produced during interviews were included with the corresponding interview review packages. The maps produced for leadership and group/key person interviews varied slightly. The leadership map review packages included:

- One overall map (E Size) which included the knowledge gathered in group interviews. The map legend included all symbology/topics from the interviews.
- The overall map (E Sized) contained all points, lines and polygons. Each object was assigned an ID number, a type (corresponding legend topic), and notes (brief description of map object).
- The subsequent 1:50 000 map tiles were produced in Arch D size and listed all points, lines, and polygons from all group interviews in the same format as the overall E sized map.

The group and key person interview participant review maps were produced as:

- One overall map (E size) which indicated all points, lines and polygons drawn during the group/key person interview. The map legend included all symbology/topics from the interviews.
- The overall map (E sized) contained a table that listed all objects on the map including the Group ID, object ID, Type (corresponding legend topic), and notes (brief description of map object).
- Each subsequent 1:50 000 map tile was produced in Arch D size and listed all points, lines and polygons identified on that map sheet during the interview.

## APPENDIX 3. SAMPLE LETTERS

## Initial ATK Introduction



P.O. Box 7950 Stn Main, 820 Taylor Avenue • Winnipeg Manitoba Canada • R3C 2P4  
Telephone / N° de téléphone : (204) 474-3454 • Fax / N° de télécopieur : (204) 474-3734  
cbjohnson@hydro.mb.ca

2009 05 26

*Leadership Address*

Dear *Leadership*:

**RE: Bipole III Site Selection and Environmental Assessment Process – Inclusion of  
Aboriginal Traditional Knowledge.**

Dear *Leadership*:

Manitoba Hydro is seeking your community's input and perspective into project planning and routing of the new Bipole III transmission line. As a follow-up to our Bipole III Leadership meetings and Community Open Houses held throughout most of the communities in the conceptual area we would like to have another opportunity to meet and share dialogue on how we can work together. During previous meetings, we presented information on the purpose and planning process for the Bipole III Transmission Line Project.

Manitoba Hydro is close to completing community and regional open houses in the Conceptual Area and are now entering a planning phase where we are identifying alternative routes for the new transmission line on the west side of the Province. Manitoba Hydro recognizes the value of Aboriginal Traditional Knowledge and that we must respectfully consider this knowledge in the Site Selection and Environmental Assessment Process. There are many factors to take into account when determining these alternative routes that include environmental (wildlife, fisheries, forests, soils, etc.), socio-economic, technical, and cost considerations.

It would be greatly appreciated if you can get back to me so that we can plan a date and place to meet. I am including the Bipole III newsletters 1 & 2 for your reference. You may also visit the Manitoba Hydro web site at <http://www.hydro.mb.ca/projects/bipoleIII/index.html> for more information on the Bipole III Transmission Line Project.

I thank you in advance for your response to this letter. I can be reached by letter, phone or e-mail at the coordinates below.

Respectfully,

A handwritten signature in blue ink that reads 'Carl Johnson'.

Carl Johnson  
Community Consultation Coordinator  
Licensing & Environmental Assessment Department  
Transmission Planning & Design Division  
820 Taylor Ave  
Winnipeg, MB R3C 2P4  
Telephone (204)474-3454  
Email: cbjohnson@hydro.mb.ca

c.c. Bipole III file

Att.

## Follow-Up Letters



P.O. Box 7950 Stn Main, 820 Taylor Avenue • Winnipeg, Manitoba, Canada • R3C 2P4  
Telephone / N° de téléphone : (204) 360-3454 • Fax / N° de télécopieur : (204) 360-3734  
[cbjohnson@hydro.mb.ca](mailto:cbjohnson@hydro.mb.ca)

*Date of Interview*

*Participant Address*

Dear Participant,

**RE: Bipole III Transmission Project Aboriginal Traditional Knowledge (ATK) Interview Map and Transcript Review**

On behalf of Manitoba Hydro and the ATK Team, thank you for your participation in the workshop on *Date of Interview*. Please find enclosed the following:

- One copy of the interview audio recording, maps and transcript from your Group Interview X
- One copy of the interview audio recording and transcript from your Key Person Interview X

I would appreciate your review of the transcripts and maps to verify the accuracy of the knowledge that was gathered and recorded during your interview. Please use the attached reference sheet to help guide you through the categories and map colour codes.

On behalf of the ATK team, thank you once again for your generous hospitality and the valuable knowledge that you have provided. If you decide that changes are to be made to the maps, please contact me at (204)360-3454 or [cbjohnson@hydro.mb.ca](mailto:cbjohnson@hydro.mb.ca) prior to *Date for Review (1 month from mail-out)* and we will be happy to assist you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Carl Johnson'.

Carl Johnson  
Community Consultation Coordinator  
Licensing & Environmental Assessment Department  
Transmission Planning & Design Division  
820 Taylor Ave  
Winnipeg, MB R3C 2P4  
Telephone (204)-360-3454  
Email: [cbjohnson@hydro.mb.ca](mailto:cbjohnson@hydro.mb.ca)

## Review Package Letters



P.O. Box 7950 Stn Main, 820 Taylor Avenue • Winnipeg Manitoba Canada • R3C 2P4  
Telephone / N° de téléphone : (204) 360-3454 • Fax / N° de télécopieur : (204) 360-3734  
[cbjohnson@hydro.mb.ca](mailto:cbjohnson@hydro.mb.ca)

*Date of Interview*

*Participant Address*

Dear *Participant*,

**RE: Bipole III Transmission Project Aboriginal Traditional Knowledge (ATK) Interview Map and Transcript Review**

On behalf of Manitoba Hydro and the ATK Team, thank you for your participation in the workshop on *Date of Interview*. Please find enclosed the following:

- One copy of the interview audio recording, maps and transcript from your Group Interview X
- One copy of the interview audio recording and transcript from your Key Person Interview X

I would appreciate your review of the transcripts and maps to verify the accuracy of the knowledge that was gathered and recorded during your interview. Please use the attached reference sheet to help guide you through the categories and map colour codes.

On behalf of the ATK team, thank you once again for your generous hospitality and the valuable knowledge that you have provided. If you decide that changes are to be made to the maps, please contact me at (204)360-3454 or [cbjohnson@hydro.mb.ca](mailto:cbjohnson@hydro.mb.ca) prior to *Date for Review (1 month from mail-out)* and we will be happy to assist you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Carl Johnson'.

Carl Johnson  
Community Consultation Coordinator  
Licensing & Environmental Assessment Department  
Transmission Planning & Design Division  
820 Taylor Ave  
Winnipeg, MB R3C 2P4  
Telephone (204)-360-3454  
Email: [cbjohnson@hydro.mb.ca](mailto:cbjohnson@hydro.mb.ca)



## APPENDIX 4. BIPOLE III ATK WORKSHOP AGENDA

### **Bipole III Transmission Project: A Major Reliability Improvement Initiative**

#### **Aboriginal Traditional Knowledge Workshop**

#### *Community Participating*

#### *Date of Workshop*

---

#### **Proposed Agenda – Day 1**

##### **10:00am – 12:00pm**

- Introductions
- Overview of the Bipole III Transmission Project
- Overview of the Environmental Assessment Process
- Overview of Aboriginal Traditional Knowledge Requirements
- Introduction to Discussion Topics
  - General knowledge of the land
  - Historic knowledge and use of the land
  - Important values of the land to the people
  - Bipole III and its effects on Traditional values
- General introduction to format of workshop and interview process
- Confidentiality, Informed Consent Forms, and Intellectual Property Rights

##### **12:00pm – 1:00pm**

Lunch Break

##### **1:00pm – 4:00pm**

- Oral history Group Interviews and mapping activity

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#### **Proposed Agenda – Day 2**

##### **10:00am – 12:00pm**

- Key Person Interviews and mapping activity

##### **12:00pm – 1:00pm**

Lunch Break

##### **1:00pm – 4:00pm**

Key Person Interviews and mapping activity

## APPENDIX 5. BIPOLE III ATK WORKSHOP QUESTIONS

### GUIDELINE

#### **Bipole III ATK Workshop Question Guideline**

The following categories contain questions that will act as guides to understanding ATK that is held by the community. Other sub-category questions may arise during the group session. We will deal with one category at a time, understanding that there may be overlap in the knowledge from one category to another. This knowledge will be mapped on 1:50,000 NTS maps.

#### **Waterbodies/Fish**

1. What waterbodies do you consider to be most important within your traditional lands?
2. What makes them so important?
3. How would you describe the water?
4. What types of fish are most abundant in these waterbodies?
5. Do they differ between rivers and lakes?
6. What do fish depend on to survive?
7. Where are the most important areas for fish? Are there important areas for fish near the routes?
8. What times of the year are fish more abundant? Does it differ from fish to fish type?
9. Which areas used for domestic fishing? Commercial fishing?
10. Who goes to these areas and how often?
11. How do you travel to these areas?
12. What do you do when you go to these areas? Can you describe what kinds of activities occur in these areas?
13. Are there other activities that you do at the same time?
14. How long would these activities take?
15. What do you think are the best ways to protect waterbodies during the project?

#### **Amphibians & Reptiles**

16. What types of amphibians (frogs, salamanders) and reptiles (turtles, snakes, lizards) do you consider most important within your area?
17. What time of the year are they most plentiful? Where?
18. How important are amphibians and reptiles to the environment? What makes them important?
19. Are there any amphibians and reptiles that should be protected?
20. Are there any places that amphibians and reptiles should be avoided?

### **Clams and Crustaceans**

21. Have you ever seen clams or crayfish in the water bodies that you are familiar with?
22. Where have you noted these shellfish?
23. How important are they to animals, fish and birds?
24. What other kinds of shellfish have you noticed?
25. Are there certain times of the year that these are more abundant?
26. What kinds of changes have you noticed over the years to shellfish populations?

### **Effects**

27. What do you think fishing would be like in the future without the project?
28. Will this change with the project?
29. Are there any fish that should be protected?

### **Soils and Terrain**

#### **Landforms**

30. What are the most outstanding landforms within your traditional lands? (Eskers, moraines, beach ridges, cliffs, caves)
31. How often do you travel/visit these?
32. What kinds of changes to landforms have you noticed?
33. How were these used in the past?
34. How are these used today?
35. Where are gravel pits found in this area? Are these still used?
36. Why are these landforms important to you?

### **Rocks and Minerals**

37. What are the most common rocks and/minerals that can be found within your traditional lands?
38. What kinds of mining activities (exploration, staking, mineral extraction) have occurred within your traditional lands? What is the status of these operations? Abandoned? Active?
39. What kinds of unusual rocks/minerals have you noted while out on the land?
40. What did you do when you found unusual rocks/minerals?
41. Where are quarries or mines found in this area?

## **Soils**

42. How would you generally describe the soils in your traditional lands? (Arable, saline, immature)
43. How are areas of peat used?
44. How is this different from the way your parents/grandparents used the soil?
45. Do people in your community have gardens? Where are these located? Are these individual family gardens or community gardens?
46. How long have these areas been used for gardens?
47. Where is the best pasture land in your area? What are some of the problems with finding good pasture land?
48. What kinds of problems do saline soils pose to you? How did people deal with this in the past?

## **Effects**

49. How will a transmission line affect the quality of landforms, rocks and minerals, and soils?
50. Based on your experience and knowledge of landforms, rocks and minerals, and soils what kinds of measures would be important to think about and put into practice?

## **Forestry (timber)**

51. Where are good places to get wood?
52. How far would you travel to get wood?
53. How are these different from the areas your parents and grandparents/great grandparents got wood?
54. How much wood is cut for firewood?
55. What else do you use wood for?
56. How have people in your community used the forest for wood supply (timber resources) in the past and how are you using them now?
57. What kinds of trees are available?
58. In your lifetime what kinds of changes have you noticed in the types and quality of trees?
59. Has this changed since your parents, grandparents and great grandparents used the forest?
60. How has your timber practices changed in your lifetime?
61. Has anyone from your community had any timber allocations from the Province of Manitoba?
  - i. How is timber managed commercially?
62. What role has fire played in your use of the forest?
63. What kinds of changes have you noticed with regard to diseases and insects?

- i. Where have these diseases and insects occurred? How fast have they moved through the forest?
  - ii. What kinds of warning signs did you notice that the trees were in distress?
- 64. How have these infestations affected your use of the forest?
- 65. What other kinds of things affect the health of the trees?
- 66. How will the activities of the project affect forest resources for your community?

### **Effects**

- 67. Note: timber resources are defined as wood products usually derived from the trunk of the tree for building, pulp or heating purposes. It may also include large diameter branches of hardwoods (e.g. poplar).
- 68. What do you consider to be important in keeping the forest healthy?
- 69. Are there some parts of the forest that are more important to you than others? Can you explain why?
- 70. What are some of the ways you have passed on your knowledge of the forest and its products to the younger generation?
- 71. Are there areas in the forests surrounding your community that are used by the elders/resource-users and others to teach traditional forest use/practices? If so, please indicate on the map.
- 72. Do community members use the forest for crafts?
- 73. Where are the best areas for gathering the resources for these crafts?
- 74. What kinds of protection are in place for your forest area?

## **Birds**

### **Importance (General)**

75. What are the most abundant and common types of birds in your communities' traditional area?
76. What birds are rarely seen? Why?
77. What birds are special? Why? (hint: ceremonial bald eagle feathers, goose down for clothing)

### **Hunting**

78. Do you or someone you know participate in bird hunting in your traditional area?
79. What areas are used for bird harvesting in your traditional area? Where are they on the map?
80. Does everyone share the same hunting areas or is it individual? Can you show me on the map where these areas are?
81. What kinds of birds are hunted?
82. What is done with the birds when they are harvested?
83. Are all birds that are harvested used for the same purpose? What are they used for?
84. Has there been a change in number of hunters in your lifetime?
85. Has there been a change in the amount of birds that are harvested?
86. Has this changed since your parents', grandparents' or great grandparents' time?
87. Are all the bird-harvesting areas used at the same time?
88. What time of year are birds harvested? (hint: spring for waterfowl, fall for ruffed grouse, winter for ptarmigan)



### **Bird Populations and Habitat**

89. What areas are important for the birds? Why? Where are they on the map?
90. What birds are here all year round? (Hint: birds that migrate from the south to this region are geese and ducks. Birds that migrate from the north are arctic owls)
91. Which birds leave? When do they come back?
92. Have there been any changes in bird migration in your lifetime?
93. How about since the time of your parents, grandparents and great grandparents? Why do you think this has happened?

### **Access**

94. Do people hunt alone or with other people?
95. How do people from the community get to their traditional bird hunting areas? Can you show me these routes on the map? (hint: road access, boat, ATV)

### **Effects**

96. What do you think bird hunting be like in the future without the project?
97. Will this change with the project?
98. Are there any birds that should be protected?

### **Vegetation**

99. What kinds of plants do people in the community use on a regular basis?
100. How are they used?
101. Where are these located? Can you show me on the map?
102. What kinds of changes to these locations have you noticed over the years?
103. Are some used for medicines? Which ones?
104. Is wild rice gathered? Is this plant sown?
105. Which plants have economic value for people in the community?
106. Is Seneca root collected? Is this plant common in the area?
107. Are there different plants or parts of the plants/trees that are more important for your personal use?
108. How different is this from the way your parents, grandparents used them?
109. Are there special places or important areas to gather plants?
110. When is the best time to pick or gather these plants?
111. Who goes out during these activities?
112. Have you noticed the kinds of plant growth under transmission lines?
113. Are these plants any different from those away from the transmission line?
114. What plants do you consider to be rare or special to your area?
115. What kinds of purposes do these plants serve?

116. Are there plants that are used in ceremonies? Which ones?
117. Are there other values concerning plants that we haven't mentioned?
118. Are there any plants that should be protected?
119. How do you think these plants could be protected?

### **Mammals**

120. What fur-bearing and non-fur-bearing animals are important to you and the community within your traditional areas?
121. Are there any animals in your communities' traditional area that are considered special? Why?
122. Are these the same kinds of animals that are hunted and trapped? If not then which ones are hunted and trapped?
123. Are any animals used for traditional or ceremonial purposes?
124. What animals are hunted or trapped for food?
125. For Commercial purposes, as a business?
126. What are the important areas your community uses for hunting and trapping? Can you show me on the map?
127. Are there any areas that are never used for hunting and trapping? Why?
128. Other than the hunting and trapping areas used by the community, what areas are important for the animals? Are these areas used to hunt and trap? Have these areas ever changed?
129. Are all the animals around all of the year?
130. Has the amount of animals ever changed in your traditional territory? Which animals? Why?
131. How healthy are animals in your traditional area
132. Are there any animals that should be protected and how?
133. What are the seasons that you or others in your community hunt and trap? How long do these activities take?
134. How many hunters and trappers are there in your community?
135. Do resource users from your community hunt and trap alone or with others?
136. Do hunters and trappers have camps in your traditional area?
137. How often do people go out hunting and trapping?
138. How are these animals used?
139. Has this changed in your lifetime? How has it changed since the time of your parents, grandparent and great grandparents?
140. How do people travel when they go to hunt and trap?
141. Does the community have to travel further to hunt and trap animals than they did before?
142. How did your parents, grandparents and great grandparents hunt and trap in their lifetimes?

## Heritage Resources

143. Do you know of any historic sites?
  - a. European settlements
  - b. Trading posts
  - c. Aboriginal settlements
144. Have you ever found or heard of someone finding \_\_\_\_\_?
  - i. Artifacts such as:
    1. Ceramics
    2. Arrow heads
    3. Clay pots
    4. Musket/cannon balls
    5. Camps/tent frames
    6. Gun parts
145. Do you know the location of any old, or fallen down cabins?
  - i. (Date and mark the location cabin site, single or multiple)
  - ii. In what state of decomposition is the cabin?
  - iii. Is it an outline or partial structure?
  - iv. Was this a permanent area or was it a seasonal camp?
  - v. What was it used for?
  - vi. Are there traces remaining of things like equipment, tools, canoes, toboggans or sleds?
146. What old trails do you know about?
  - i. What are their names?
  - ii. Where are they?
147. Have you heard any stories of where your parents, grandparents or great grandparents used to hunt, trap or plant gather a long time ago?
148. Do you know where any people are buried?
149. Do you know the location of any sacred areas and why they are sacred?
150. What were the major waterways that Elders and others in the past used for water travel?
151. Have you heard of, or found anything that shows how people used to travel a long time ago?
152. Where else would your ancestors go throughout the year/seasons?
153. Besides living in seasonal camps or permanent settlements, what other purpose did your parents, grandparents, or great grandparents use the area for? Things such as:
  1. Work
  2. Treaty payments
  3. Annual gatherings
  4. Ceremonies
  5. Attending church/missionaries

**Cultural**

- 154. What kinds of changes to your culture have you noticed over time?
- 155. Do your family originate here or somewhere else? Where?
- 156. To what geographical extent do your community's activities take place? Please indicate on map.
- 157. What ceremonies or cultural practices do you see essential to the autonomy of your community and heritage?
- 158. How is the land/environment perceived by your community? How is use of the land viewed by your community?
- 159. What method of funeral ceremony is common in your community?

**Health**

- 160. How has the overall health of your community changed over time?
- 161. What are the key health concerns of your community?
- 162. What traditional methods are used to improve health?
- 163. How does the community as a whole respond to health issues?
- 164. How has development of any kind impacted the overall health of your community?

**Social Connectivity**

- 165. What activities does your community participate in that promotes cohesiveness and cultural awareness?
- 166. Corresponding to a specific activity, what setting, time and location do these activities take place?
- 167. What segment of your community's population participates in which activities (women, children, men)?

**Income/Economy**

- 168. What are the key sources of income for your community?
- 169. What communities initiatives have occurred in the past that you feel contribute to overall well-being of the community?
- 170. How have sources of income changed over time?
- 171. What in your view are the environmental issues or concerns associated with the Bipole III Project?
- 172. What in your view are the social issues associated with the Bipole III Project?
- 173. What in your view are the economic issues associated with the Bipole III Project?
- 174. What in your view are the benefits associated with the Bipole III Project?

## APPENDIX 6. BIPOLE III ATK WORKSHOP INTERVIEW CONSENT FORM

### BIPOLE III Transmission Project: A Major Reliability Improvement Initiative

#### CONSENT TO INTERVIEW FORM

Name of the Interviewee \_\_\_\_\_  
Name of the Interviewer \_\_\_\_\_  
Date of the Interview \_\_\_\_\_  
Place of Interview \_\_\_\_\_

I, \_\_\_\_\_, consent to be interviewed by \_\_\_\_\_. I understand that the purpose of this project is to assist Manitoba Hydro in the Environmental Assessment process for the Bipole III Transmission Project by providing my Aboriginal Traditional Knowledge of lands and resources within my experience.

I also understand that I do not have to divulge any information that I consider to be sensitive or sacred; I can also end the interview at any time.

Manitoba Hydro and the interviewer will not use the recordings, the translations or transcriptions for any other purpose other than that stated above unless with the consent of the interviewee.

I wish to remain anonymous \* ☐  
I wish to have a copy of the recorded interview ☐

\*If anonymity is preferred, the interviewee's name will not appear on any documents or recording labels *other* than the recording list which will be a restricted document.

I agree to the use of the information  
I have provided according to the  
conditions stated above.

I agree to use information  
according to the terms  
outlined above.

\_\_\_\_\_  
Signature of Interviewee

\_\_\_\_\_  
Signature of Interviewer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

Bipole III Transmission Project:  
Interview Consent Form  
2010



## APPENDIX 7. INTERVIEW SUMMARY SHEETS

### Interview Summary Sheet

---

Name of Interviewee:

Name of Interviewer:

Date:

Location:

---

This interview discusses ....



## APPENDIX 8. WORKSHOP SUMMARIES

### BiPole III ATK [Enter Community Name] Summary Report

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Workshop held at [enter community name]  
[Enter workshop dates and times]

Present at Workshop: [list NLHS interviewers, MMM Group representatives, MB Hydro representatives, other representatives]

#### **[Enter Workshop Dates]**

- ATK team [list team members, discuss where the team departed from, where they went, where they went after the workshop was over]
- [Insert number of people interviewed] community members participated in the group workshop. The interviews were successfully conducted.
- Group and KPI interviews utilized the maps, with a mixture of historic, heritage and current lands and resource data points, descriptive of the range of questions asked.
- [Provide general description of the feelings of the community members with regard to the ATK workshop]

#### **Day 1 – [Enter Date]**

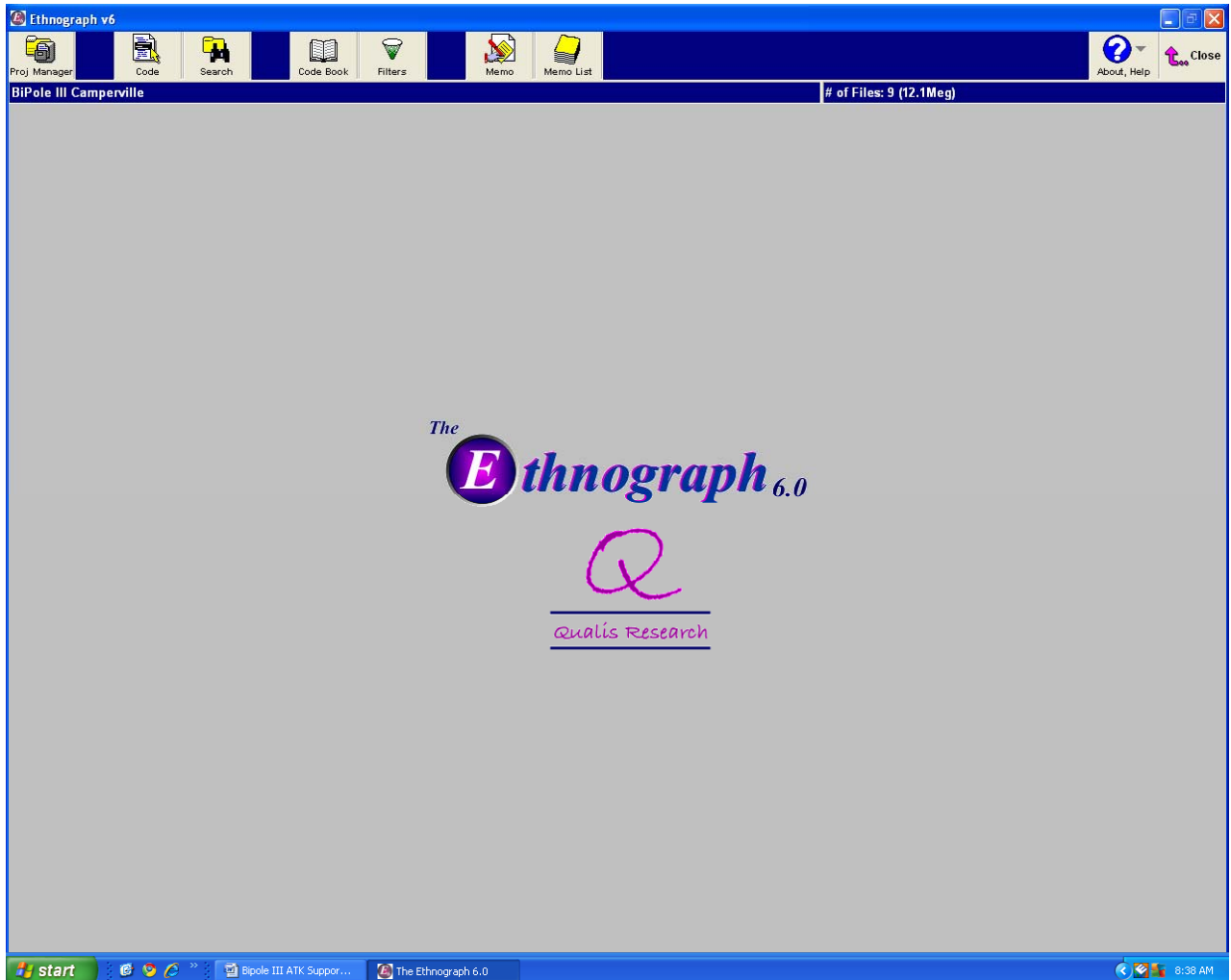
- ATK Team departs [list where departed from and where workshop took place]
- Met with [list any MB Hydro and/or other representatives that attended]
- Setup and preparation for workshop presentation with [enter name of MB Hydro/MMM Group representative that was co-presenter]
- [If any issues arose during the workshop, mention them]
- [mention if any community leadership was present]
- [mention whether tobacco was offered]
- Workshop presentation proceeds with Team Introductions
- [List MB Hydro/MMM Group representative] providing overview of Transmission Reliability Improvement Project followed by ATK Interview overview by [list NLHS team member]
- [Enter number of] total participants
- Participants were asked to self divide into two separate groups [if applicable]
- Group Interviews are conducted by [list NLHS interviewers]
- Lunch Break was taken at noon and provided by the community
- Group interviews are resumed and completed
- KPI's are determined and scheduled for [enter the day KPIs take place – if applicable]
- Honorariums are distributed and workshop equipment and maps are packed

**Day 2 – [Enter the date]**

- ATK Team departs [list where departed from and where workshop took place]
- [note what MB Hydro and/or other representatives were present/missing]
- [Enter number of] KPI's were scheduled and were completed successfully.
- The participants scheduled for KPI's were chosen based on depth of knowledge of the current and historical land use and traditional practices of the community displayed during the previous days' Group Interviews.
- Knowledge of the community's history, language and traditional practices by Elder participants and resource users was rich and detailed, and provided excellent "within living memory" and oral tradition accounts of the community.
- [briefly make notation of any culturally sensitive information – e.g. burials, ceremonial grounds that were mentioned]
- Lunch Break was taken at noon and provided by the community
- KPI's were resumed and completed
- Honorariums were distributed and workshop equipment and maps packed.

## APPENDIX 9.THE ETHNOGRAPH© SCREEN SHOTS

### The Ethnograph© Start-Up Screen



# The Ethnograph® Coding Screen

The screenshot displays the 'Coding Data File, Project - BiPole III Camperville' window. The interface includes a menu bar (Memo, Memo List, Memos in File, Code List, Code Tree, Popup Segs, Print, Tools, Counts/List), a toolbar with navigation buttons (First, Prev, Next, Last), and a status bar at the bottom showing the Windows taskbar with the start button and system clock (8:37 AM).

The main window is divided into three sections:

- Left Panel (Text List):** A list of interview transcripts with line numbers.
  - 0055 there, and Cowan is there. People
  - 0056 were talking about the area between
  - 0057 Cowan and Kettle, the Kettles.
  - 0059 Speaker: Yeah
  - 0061 Virginia: The Kettles is an area that
  - 0062 has been used a lot for berry
  - 0063 picking?
  - 0065 Speaker: Uh hum
  - 0067 Virginia: So, does this map take in
  - 0068 that area that you are berry
  - 0069 picking?
  - 0071 Speaker: Uh hum, yep.
  - 0073 Virginia: Yeah? So which one? Which
  - 0074 green square?
  - 0076 Speaker: Right from Kettle Hills to
  - 0077 Cowan, that's the area.
  - 0079 Speaker: All berries.
  - 0081 Speaker: Uh, well there's berries right
  - 0082 from Cowan, right up, and that's
  - 0083 where the blueberries start and they
  - 0084 run all the way up.
  - 0086 Speaker: Saskatoons
  - 0088 Speaker: Like uh, cause I know that
  - 0089 Lake has got blueberries too, right.
  - 0090 So they run up all the way I am
  - 0091 pretty sure. Mafeking's got
  - 0092 blueberries. Um, so all this area
  - 0093 here, I mean this is all blueberry
  - 0094 country.
  - 0096 Virginia: Ok, do the blueberries
  - 0097 extend further over on to this side?
  - 0098 Or is this the most important side?
  - 0100 Speaker: I think that would be the most
  - 0101 important side would be...
  - 0103 Speaker: Where this area is...
  - 0105 Speaker: Yes, on this side.
  - 0107 Virginia: So would it be better for us
  - 0108 to look at the maps of this area,
  - 0109 and talk about blueberries and other
- Central Panel (Coding Area):** A large area with colored brackets and codes.
  - Red bracket: ;Q.ACTIVITY; ;Q.PLANT; ;Q.KIN.ORIG;
  - Green bracket: ;PLANT; ;ACTIVITY;
  - Green bracket: ;Q.MAP;
  - Green bracket: ;KIN.ORIGIN;
  - Green bracket: ;Q.PLANT; ;Q.MAP;
  - Green bracket: ;MAP;
  - Green bracket: ;Q.ACTIVITY; ;Q.MAP; ;Q.PLANT;
- Right Panel (Code List Dialog):** A dialog box titled 'Code List' with a 'Code Word' field, 'OK', 'Close', 'Clear CW', 'Start', 'Stop', and 'Clear Lines' buttons. Below is a list of 'Code Words' including CREE, CULT.LANDSCAPE, CULT.PRAC., CULT.PROD., DAMS, DAUGHTER, DENE, DIET, DOMESTIC, ECONOMIC, EDUCATION, ENGLISH, ENVIRON., F.ACTIVITY, FATHER, FEATURE, FISHING, FLOODING, FOSSIL, FRENCH, G.CHILDREN, G.DAUGHTER, G.FATHER, and G.MOTHER.

# The Ethnograph© Code Search Screen

Search Options, Project = YFCN CBS

Single Code(s) Search Linked Codes Search Identifiers as Codes Search Search FS IS ID Files Memo Memo List Help Close

**Linked Codes Table** Clear Table Print Table Row Edit Sequence Proximity 0 Big Picture Small Picture

	Code 1(+ only)	Code 2(+/-)	Code 3(+/-)	Code 4(+/-) /	Code 5(+/-)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

**Select Code Words from List** Default Link + And - Not

- ACTIVITY
- AGRICULTUR
- ALCOHOL
- ANIMAL
- ANIMAL DAM
- AUN
- BAND/COMM
- BROTHER
- CARPENTER
- CHAMB.MAID
- CHILDREN
- CHIPEWYAN
- CLOTHING
- CONFLICT
- CONSTRUCT.
- COOK
- COUSIN
- CR
- CREE
- CULT.PRAC.
- CULT.PROD.
- DAMS
- DAUGHTER
- DENE
- DIET
- DOMESTIC
- ECONOMIC
- EDUCATION
- ENGLISH

**Select Code Words from Groups** Code Groups: No Kids With Kids (\*)

- CR
- CULT.PRAC.
- CULT.PROD.
- G
- HEAL&WELL
- INT.CONTEX
- INT.ID
- KIN
- KINSHIP
- LANGUAGE
- LAW&ORDER
- LEISURE
- O.ACTIVITY
- O.AGRICULT
- O.ALCOHOL
- O.ANIMAL
- O.BAND/COM
- O.CHILDREN
- O.CHIPEWYA
- O.CLOTHING
- O.CONFLICT
- O.CREE
- O.CUL.PRAC
- O.CUL.PROD.
- O.DAMS
- O.DIET
- O.EDUCATE
- O.ENGLISH
- O.ENVIRON.
- O.F.ACT.

**Saved Linked Codes Tables** Save Copy Delete Clear

Linked Codes Tables

Find Code:

start Bipole III ATK Support... The Ethnograph 6.0 8:36 AM

## APPENDIX 10. BIPOLE III ATK SPECIALIST WORKSHOP POWERPOINT PRESENTATION



### Incorporating ATK into the Bipole III Reliability Improvement Project

September 2<sup>nd</sup> 2009

Murdoch Hydro

1

### Purpose of Workshop

- To update the Environmental Study Team on the progress of the ATK component
- To present a plan for integrating ATK into the Environmental Assessment Process
- To discuss roles, responsibilities, and the way forward

September 2<sup>nd</sup> 2009

Murdoch Hydro

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### Definition of ATK (CEAA)

- "knowledge that is held by, and unique to, Aboriginal peoples, is cumulative and dynamic, building upon the historic experiences of a people..."
- *and adapts to social, economic, environmental, spiritual and political change".*

September 2<sup>nd</sup> 2009

Murdoch Hydro

3

### Definition of EA - CEAA

- Environmental assessment is a process to predict the environmental effects of proposed initiatives before they are carried out.
- An environmental assessment:
  - identifies possible environmental effects
  - proposes measures to mitigate adverse effects
  - predicts whether there will be significant adverse environmental effects, even after the mitigation is implemented

September 2<sup>nd</sup> 2009

Murdoch Hydro

4

### Guiding Principles – EA (IAIA)

• Purposive	• Adaptive
• Rigorous	• Participative
• Practical	• Interdisciplinary
• Relevant	• Credible
• Cost-effective	• Integrated
• Efficient	• Transparent
• Focused	• Systematic

September 2<sup>nd</sup> 2009

Murdoch Hydro

5

### Guiding Principles - ATK

- Respect for ATK
- Establish Protocols
- Flexibility in study design
- Active, meaningful engagement
- Informed consent
- Participatory action by Aboriginal Communities
- Intellectual Property Rights

September 2<sup>nd</sup> 2009

Murdoch Hydro

6



## Intellectual Property Rights

- Legal protections given to persons over their creative endeavors
  - usually give the creator an exclusive right over the use of his/her creation or discovery for a certain period of time (Hansen and Van Fleet 2003).
- Traditional knowledge is tradition-based and relates to the manner in which the knowledge was created, preserved and disseminated.

September 2<sup>nd</sup>, 2009



7

## Intellectual Property Rights (cont'd)

- ATK is collective in nature and hence;
  - property of a community rather than a single individual;
  - IPR should extend to the whole community as they are the means of maintaining group identity.
- Problems arise in attempting to protect ATK under existing legislation because ATK does not satisfy requirements for intellectual protections of ATK



8

## Informed Consent

- Process by which researchers obtain in advance permission from persons who they will interview.
- Depends on nature of project
- Dynamic and continuous process
  - should be initiated in the project design and continue through implementation by way of dialogue and negotiation with those studied. (Briefing Paper on Informed Consent AAA Committee on Ethics, 2000)

September 2<sup>nd</sup>, 2009



9

## Development of ATK Plan

- Key goal is to ensure ATK is part of the process:
  - Adds to the comprehensiveness of the EA process
  - Meets all international Environmental Assessment Best Practice Principles

September 2<sup>nd</sup>, 2009



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## ATK Plan

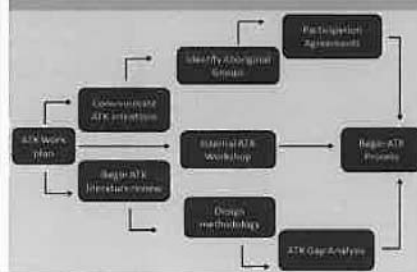
- Designed to ensure that the inclusion of ATK in the EA process meets the requirements of the regulatory agencies and MH, and:
  - Embraces the holistic nature of ATK
  - Is realistic in terms of required level of effort
  - Provides clarity of purpose and needs to Aboriginal people
  - Meets scheduled milestones
  - Recognizes the geographical scope of the assessment process

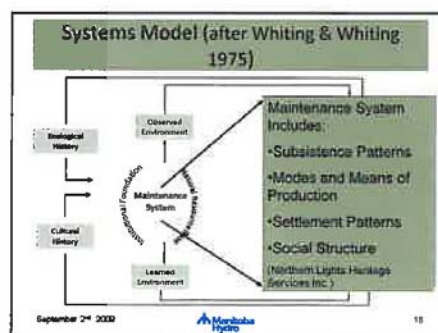
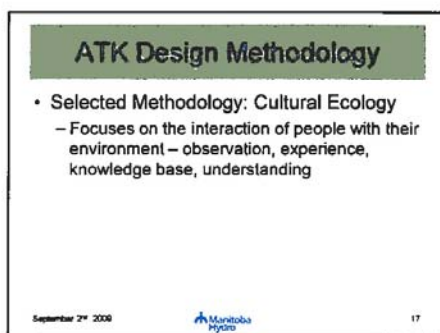
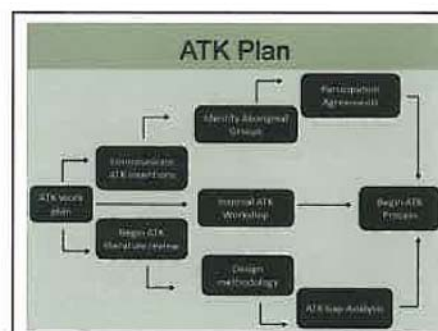
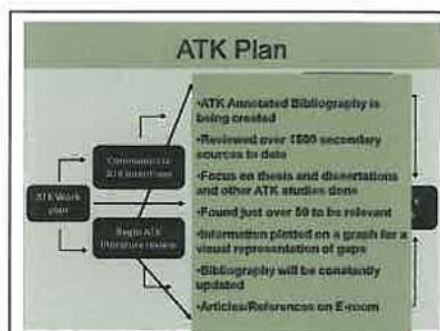
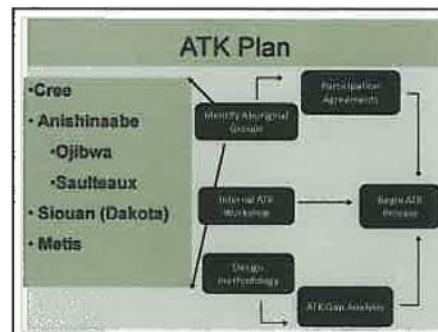
September 2<sup>nd</sup>, 2009

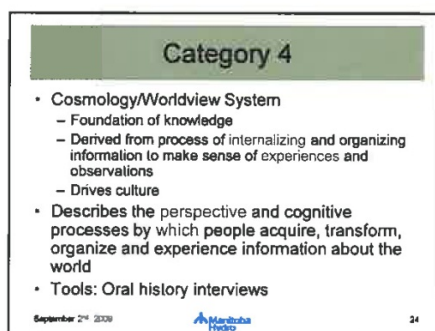
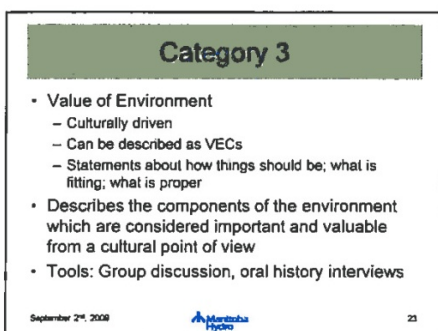
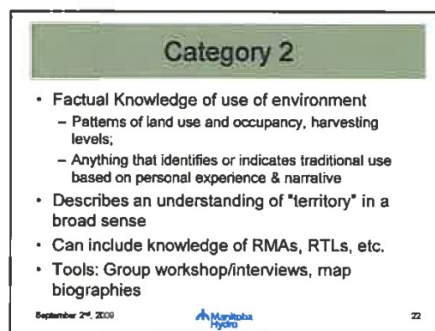
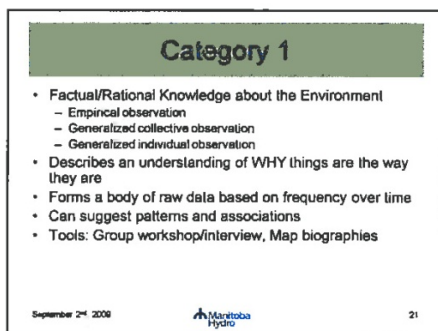
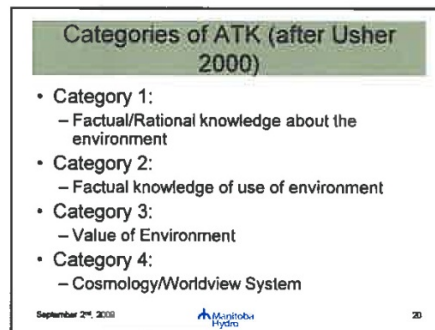
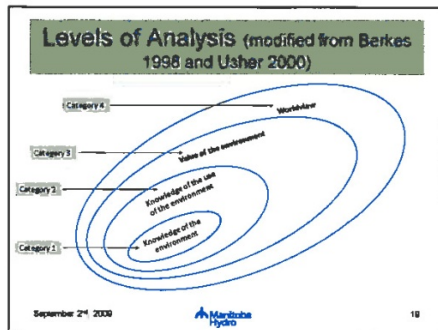


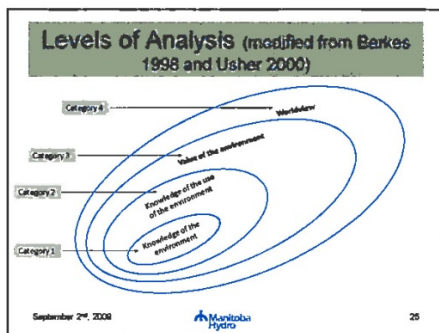
11

## ATK Plan

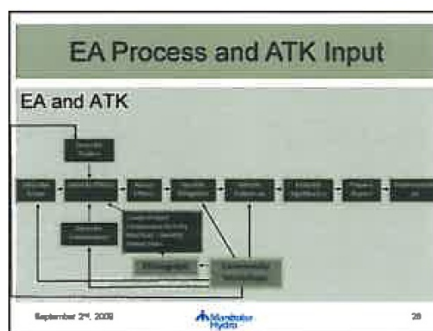
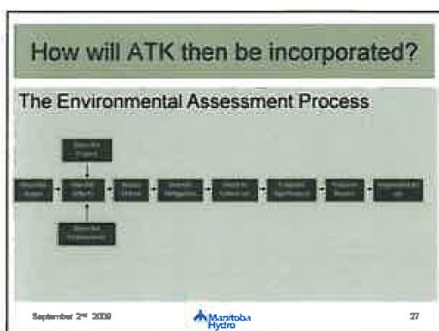








- ### Collecting Data - ATK Community Workshops
- Workshops will:
    - Be held in communities that have responded to the request
    - Recorded group workshop/interview
    - Aided by translator
    - Transcription of recorded interview
    - Conduct key person interviews
- September 2<sup>nd</sup>, 2008
- Manitoba Hydro
- 26



### EA and ATK

Usher's classification of ATK provides 4 categories for separating out the various components for EA purposes

September 2<sup>nd</sup>, 2008

Manitoba Hydro

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- ### Group Activity
- Using Usher's Criteria, identify which category can be used in each of the Environmental Assessment stages.
- September 2<sup>nd</sup>, 2008
- Manitoba Hydro
- 30

- Identifies issues which can be identified as VEC's
  - Category 2 – past & current use of land
  - Category 3 – identifies key values/areas from an Aboriginal perspective that may be adversely affected
  - Category 4- provides cultural perspective on WHAT is of value and WHY

September 2<sup>nd</sup>, 2009

- Category 1 – provides baseline information
- Category 2 – provides historic & current knowledge of land – occupation
- Category 4 – knowledge of how things work

September 2nd 2009



- What information will be collected at the workshops to facilitate this?
- Category 1 – knowledge of existing environment
- Category 2 – knowledge of historic environment

September 2<sup>nd</sup>, 2006

- Category 3 – key values for both physical and socio-economic environments
- Based on the feedback received from community workshops, important themes will be identified. For example, matrix setup based on initial meeting shows...

September 2<sup>nd</sup>, 2006

COMPONENT	Steel	Concrete	Concrete	Steelwork	Hardware	Finish	Other	Total
<b>COUNCILING</b>								
LAND BASE								
TITLE								1
FILE								1
FILE	X							1
3rd Party		X				X		2
<b>SOFTWARE</b>								
A/P Workbooks		X		X		X		3
POB	X							1
Chemical Spilling								1
Compensation						X		1
Employment	X							1
<b>RESOURCES</b>								
Building								1
Outfitting								1
Outfitting				X				1
Fishing								1
<b>INFRASTRUCTURE</b>						X		2
Structure								1
Boat				X				1
Boat								1
Total	2	3	10	1	1	4		21

- Use Ethnograph® to thematically sort data
- Will use information from all four categories but will focus on the first two
- Analyze adversity (Beneficial, Negligible, Low, Moderate, High), using several sub criteria (duration, temporal/geographic scale, magnitude, reversibility etc).

September 2<sup>nd</sup> 2009

### Step 6 – Identify Mitigation

- Category 1 – based on existing knowledge
- Category 2 – the historic experience
- Category 3 – value-based, ethical statements
- Category 4 – relationships of all things

September 2nd 2008

Munich Hydro

### Step 7 – Identify Follow-up

- Category 1 – useful in monitoring stage

September 2nd 2008

Munich Hydro

### Ethnograph©

- Can be used to identify effects, identify proposed mitigation measures and societal values
  - These can then be used to analyze effects and measure adversity
- A computer program designed to augment and facilitate the process of Quantitative Data Analysis (QDA).
- QDA almost always involves:
  - Noticing
  - Collecting
  - Thinking

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### Ethnograph© (cont'd)

- This program is designed to facilitate the analysis of data collected during research by the following processes:
  - Noticing interesting things within your data.
  - Marking those things with code words.
  - Retrieving those things for further analysis.

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### Ethnograph© (cont'd)

- Helps to develop an analytic method for noticing things in the data and assists in data components that are of interest to the particular research concern.
- Allow for subjective data to be measured in objective format through the development of descriptive codes to "notice" themes.
  - Personal bias is kept to a minimum by introducing a standardized analytic template

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### Ethnograph© – Cultural Indicators

- "...high-level, summary measures of key issues or phenomena that are used to monitor positive or negative changes over time" (New Zealand Ministry for Culture and Heritage 2006:3).
- Reduces the large volume of statistical information available to a small number of key measures that allow trends to be monitored" (New Zealand 2006:3).

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### Cultural Indicators

- Over the past 10 years a set of cultural variables have been developed that could act as proxy indicators for change and assist in determining the most important elements within a cultural setting (NLHS 2003).
- Other indicators: CEAA, Pembina Institute

### Ethnograph® – Code Book

- Coding, or “flagging” words and sections of transcribed texts for content analysis of raw or primary data, both qualitatively and quantitatively
- Use cultural indicators to develop code word definitions and a code book

### Types of Codes

- Three types of codes:
  - Reference Codes
  - Question Codes
  - Data Codes

### Reference Codes

- Used to flag contextual details within the transcribed texts of the interview process itself such as words or portions of the text that needed translation or simply a description of where the interviews were conducted and who was present.
- Example: Location, date, time of interview and participant details

### Question Codes

- Questions asked during interviews are also coded as part of the text to check for consistency across all interviews within and across communities
- Serves as a tool for adaptive management in case any inconsistencies are identified

### Data Codes

- Represent details (data) within the main portion of the transcribed text used in the development and discussion of thematic topics.
- Examples: While cultural practice is an indicator, several codes flow from this; hunting, fishing, logging, trapping etc.

### Coding Process

- Verbal recordings are transcribed into a word document (the data file)
- Data files are then scrutinized line by line and assigned codes based on the topics of discussion.
- Codes become "nested" within each other during this process as topics of discussion invariably overlap one another.
- This "nesting" provides the correlations necessary for further analysis.
- Coding is peer reviewed

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Hydro

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### Themes

- Once all the transcribed texts are fully coded and entered into *The Ethnograph* it is possible to generate a frequency printout which contains total code counts for each code word and percentage frequencies across files and within files.
- All zero (0) code counts, reference codes and question codes are eliminated to produce an aggregate of data codes which could then be further sorted into code parent groups or cultural indicator categories which then could be further developed into dominant theme topics for discussion.

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### Making Sense of Themes

- Themes indicate what "issues" are of concern to communities and how they are ranked.
- These issues become VECs, and the relative frequency can serve as a measure for societal value.
- Societal value can then be used to measure adversity of an identified effect

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### Making Sense of Themes (Cont'd)

- Questions can be posed to recruit feedback for mitigation measures – allowing themes to identify these
- If run over a period of time, one can measure the effectiveness of mitigation measures (has degree of perceived effect changed?)
  - Could be used for environmental monitoring

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### Ethnograph©

- Program has been used:
  - War Lake First Nation (completed)
    - Community Oral History and Education Curriculum
  - Barren Land First Nation (completed)
    - Specific Claim
  - York Factory First Nation (ongoing)
    - Keeyask
  - Cumberland House First Nation (ongoing)
    - Traditional Land Use and Occupancy Mapping

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### Case Study for Ethnograph©

The screenshot displays the Ethnograph software interface. It shows a list of codes on the left and a detailed frequency printout on the right. The printout includes columns for code counts, percentages, and other statistical data across different files and within files.

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### Step 8 – Evaluate Significance

- Themes identified can be used as a basis for societal value and effects assessed accordingly.
- Use CEEA's criteria for measuring significance of residual effects; magnitude, reversibility, duration, temporal scale, geographical scale, societal value, legislative value etc.

September 2nd 2009



### Step 9 – Report Preparation

- The format for integration can be:
  - Embedded – sometimes difficult to distinguish shift from ATK to science
  - Parallel – allows for two expressions to be evaluated simultaneously
  - Separate Chapter – runs risk of being viewed as an "add-on" and not part of process
  - Others?

September 2nd 2009



### Step 10 – Implementation

- A long term environmental monitoring program can be developed which includes environmental coordinators from various communities. More discussion required
- Categories 1 & 2 understanding that categories 3 & 4 influence the way observations are perceived and internalized

September 2nd 2009



### Group Activity

- Develop a list of 10 Questions that you would like to ask at community workshops

September 2nd 2009



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### Summary of Group Activity

Questions provided by each group will be considered for the workshops



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### Seriously...Schedule!

Task	2009												2010											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Desktop Studies																								
Internal Workshop																								
Gap Analysis																								
Negotiate Agreements																								
Community Workshops																								
Analysis and Reporting																								
Submission of Report																								

September 2nd 2009



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September 24, 2009



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## Discussion



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## APPENDIX 11. BIPOLE III ATK WORKSHOP INTRODUCTORY POWERPOINT PRESENTATION

25/04/2011

### Aboriginal Traditional Knowledge (ATK)

Aboriginal Traditional Knowledge (ATK) is valued for the contribution it makes to providing a complementary source of knowledge about the environment and people

## Why?

- We are seeking your input and perspective regarding project planning and routing of the proposed transmission line
- We recognize the value of ATK and that we must respectfully consider this knowledge in the Site Selection and Environmental Assessment Process

## How? ATK Process

- Participants will be divided into smaller groups
- Discussions will be recorded using digital recorders
- Participants will be required to sign informed Consent Forms

[illegible]

## Missing Anything?

- The group interview process provides a wealth of community knowledge, but did everyone get a chance to share in the discussion?
- We would like the opportunity to follow up with some of you one-on-one tomorrow
- To allow time to “think about things” and discuss further knowledge

## ATK Process – Cont'd

- Recordings will be transcribed into MS Word and sent back to the community for verification
- Maps will be used to trace out important areas throughout the interview process
- Final ATK report and maps will be sent to community for verification

25/04/2011

#### ATK Questions - Categories

- Waterbodies/Fish
- Amphibians & Reptiles
- Soils and Terrain  
(Landforms, Rocks &  
Minerals, Soils, Timber)
- Birds (hunting,  
importance  
populations)
- Vegetation (medicinal  
plants, berries etc)
- Hunting & trapping
- Heritage resources
- Culture, health, diet
- Income
- Community activities



APPENDIX 12. BIPOLE III ATK ESS TABLES

Table Listing All ESS Points from the Bipole III ATK Team-led Participating Communities

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Point	69	Camperville	G Ballentine General Store <b>Ref: Camperville - KPI D - Lines - 1490 - 1516</b>	Cultural - General Store	Potential loss of heritage resource due to access roads into the ROW
Point	99	Camperville	Blueberry <b>Ref: Camperville - KPI C - Lines - 1141 - 1275</b>	Blueberry Harvest area - Near Sinclair R. - 500m from RoW	Loss of berry patches due to access roads into the ROW. Loss of berry harvest due to herbicide use. Loss of economic activity and secondary income. Increased access from non-residents..
Point	147	Cormorant	Cabins <b>Ref: Cormorant - Group A - Lines - 1322 - 1367</b>	Cabin on RoW	Loss of camp due to access roads and related activities, construction and O&M activity. Loss of heritage resources
Point	155	Cormorant	Cabins <b>Ref: Cormorant - KPI E - Lines - 809 - 883</b>	Cabins (trapline) - Dyce L.	Loss of camp use due to construction and O&M activity. Loss of resources due to fragmentation of resource area
Point	156	Cormorant	Cabins <b>Ref: Cormorant - KPI E - Lines - 809 - 883</b>	Cabins (trapline) - Dyce L.	Loss of camp use due to construction and O&M activity. Loss of resources due to fragmentation of resource area
Point	178	Thicket Portage	Hunting/Trapping/Fishing <b>Ref: Thicket Portage - Group A - Lines - 1839 - 2024</b>	Camp	Loss of camp use due to construction and O&M activity. Loss of resources due to fragmentation of resource area

Table Listing All ESS Lines from the Bipole III ATK Team-led Participating Communities

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Line	4	Camperville	North Pine River	Fishing - River crosses RoW <b>Ref: Camperville - KPI D - Lines 469 - 538</b>	Increased access by non-community members into area. Loss of fish habitat. Loss of ATK and cultural practices. Loss of recreational activities for community members and potential shoreline damage due to construction activities and O&M.
Line	30	Herb Lake	Freighting	Historic road <b>Ref: Herb Lake - Group A - Lines 439 - 490</b>	Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events
Line	39	Dawson Bay	Fish Spawning	Major Fish spawning area - Red Deer River <b>Ref: Dawson Bay - Group B - Lines 99 - 128; 796 - 823</b>	Loss of fish spawning habitat due to river bank disturbance.
Line	45	Dawson Bay	Fish spawning	Overflowing River <b>Ref: Dawson Bay - Group B - Lines 191 -287</b>	Loss of fish spawning habitat due to river bank disturbance.
Line	46	Dawson Bay	Fish spawning	Overflowing River <b>Ref: Dawson Bay - Group A - Lines 122 -188</b>	Loss of fish spawning habitat due to river bank disturbance.
Line	50	Dawson Bay	Plant Harvest	Sage areas - North of Overflowing River <b>Ref: Dawson Bay - KPI D - Lines 667 -704</b>	Loss of plant habitat. Loss of cultural value associated with sage (this is an important cleansing herb used in ceremonies).
Line	67	Barrows	Fishing	Domestic fishing - Red Deer River <b>Ref: Barrows - Group B - Lines 1815 -1936</b>	Loss of domestic fishery due to increased access by non-Community members along new access roads. Loss of cultural values associated with leisure, cultural practices,
Line	85	Pine Creek	Wagon Road	Wagon Road used to access harvesting area <b>Ref: Pine Creek - KPI E - Lines 1240 -1312</b>	Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events
Line	87	Pine Creek	Access Route	Main access to blueberry areas <b>Ref: Pine Creek - KPI C - Lines 334 -442</b>	Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events
Line	88	Pine Creek	Access Route	Wagon Road used to access land <b>Ref: Pine Creek - KPI E - Lines 1156 -1241</b>	Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Line	89	Pine Creek	Access Route	Trails to access land <b>Ref: Pine Creek - KPI E - Lines 1378 -1420</b>	Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events
Line	90	Pine Creek	Access Route	Trapline trails used to access trapping area - (fur bearing) <b>Ref: Pine Creek - KPI C - Lines 739 -901</b>	Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events
Line	91	Pelican Rapids	Beaver	Beaver hunting on the Overflow R. <b>Ref: Pelican Rapids - Group A - Lines 235 -341</b>	Loss of beaver habitat with resulting loss of income due to construction of access road and ROW. Loss of cultural practices and ATK.
Line	97	Pikwitonei	Domestic Fishing	Grass River <b>Ref: Pikwitonei - Group B - Lines 1308 -1400</b>	Increased access by non-community members into culturally used area. Potential loss of resource area.
Line	98	Pikwitonei	Grass River	Grass River Waterway - Transportation, Fishing, Hunting, Trapping <b>Ref: Pikwitonei - Group B - Lines 417 -560</b>	Loss of resources due to construction of access road to ROW and associated activities. Loss of cultural value associated with fragmentation of trapping areas
Line	103	Pikwitonei	Local Wood Source	Crosses RoW <b>Ref: Pikwitonei - KPI E - Lines 1750 -1871</b>	Loss of heritage resources at river crossing due to river bank disturbances. Loss of secondary income and fuel source due to construction of access road to ROW and associated activities. Loss of cultural value associated with fragmentation of access to woodlot
Line	117	Cormorant	Trapping	Trapping area - Fox, coyote, beaver, fisher, lynx, wolverine <b>Ref: Cormorant - Group B - Lines 244 -336</b>	Loss of resource use by community members causing stress on resource. Fragmentation of resource area. Loss of cultural values associated with traditional activities
Line	125	Cormorant	Water Transport Route	Transport via water - Frog Creek, North Moose Lake and Little Muddy Creek <b>Ref: Cormorant - KPI D - Lines 556 -668</b>	Loss of resources due river bank disturbances associated with construction of access road to ROW and associated activities. Loss of cultural value associated with fragmentation of trapping areas
Line	128	Cormorant	Bird Hunting	Spring Goose hunting - Frog Creek <b>Ref: Cormorant - KPI F - Lines 992 -1046</b>	Loss of seasonal resource use and traditional foods procurement due to transmission line crossing. Loss of cultural values and ATK associated with resource activities

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Line	159	Thicket Portage	Partridge Crop	Partridge Crop - Fish spawning <b>Ref: Thicket Portage - Group B - Lines 944 -1009</b>	Loss of fish spawning habitat. Loss of cultural values associated with cultural practices, leisure, health and wellbeing
Line	165	Thicket Portage	Winter Route	Between Thicket and Paint Lake <b>Ref: Thicket Portage - Group B - Lines 2713 -2775</b>	Loss of cultural and heritage resources. Fragmentation of access routes due to access road construction and ROW activities..
Line	175	Thicket Portage	Water Route	Transport - Grassy River - RoW <b>Ref: Thicket Portage - KPI D - Lines 997 -1098</b>	Loss of historic record and aesthetic values due to ROW
Line	182	Barrows2	Fishing	Sport fishing along Red Deer River <b>Ref: Barrows2 - Group B - Lines 138 - 174</b>	Increased access by non-community members into culturally used and highly valued area. Loss of resource area and economic activities. Loss of leisure
Line	205	Duck Bay	access Route	Road access into Kettle hills <b>Ref: Duck Bay - KPI D - Lines 1110 - 1136</b>	Loss of cultural values associated with the Kettle Hills due to increased access by non-community members. Loss of spirituality and world view due to access roads and ROW construction
Line	208	Duck Bay	Access Route	Old trail/road - North to Kettle Hills access for picking <b>Ref: Duck Bay - KPI I- Lines 507 - 559</b>	Loss of cultural values associated with the Kettle Hills due to increased access by non-community members. Loss of spirituality and world view due to access roads and ROW construction
Line	220	Dakota Plains	Assiniboine R.	Fishing - Current Leisure activity <b>Ref: Dakota Plains - Group A - Lines 255 - 405</b>	Loss of recreational activities for community members and potential shoreline damage due to construction activities and O&M.
Line	224	Dakota Plains	Assiniboine R.	Trapping - Beaver and Muskrat along river - Past Activity <b>Ref: Dakota Plains - KPI D - Lines 308 - 436</b>	Loss of ATK and local historical record due to access road construction and ROW activities.
Line	227	Dakota Plains	Whitemud River	Fishing - Domestic use - Pickerel, Jack, Sucker Perch, Catfish, Carp <b>Ref: Dakota Plains - Group B - Lines 814 - 1075</b>	Increased access by non-community members into area of high cultural value for its fishing resources. Loss of fish habitat. Loss of ATK and cultural practices.

Table Listing All ESS Polygons from the Bipole III ATK Team-led Participating Communities

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	10	Camperville	Gardening	Garden plot established near Pulp River on RoW by community member now retired. Some community members currently growing potatoes in garden.	Potential impact on agricultural practice, health & wellness and economic activity; <b>Ref: Camperville Group B - Lines 4608 - 4687</b>
Polygon	12	Camperville	Plant Harvest	Blueberry and Medicine harvest	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with plant gathering and berry picking - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Camperville KPI H - Lines 1044 - 1137</b>
Polygon	13	Camperville	Spence Lake	Swampy marshy shoreline (1600m from edge of ROW) with potential for heritage resources on the shoreline. Site also identified by Pine Creek as a heritage resource area containing historic wagon trails. Site lies within bird migratory corridor identified by Duck Bay ATK.	loss of heritage resources ; <b>Ref: Camperville Group A - Lines 1451 - 1538</b>
Polygon	14	Camperville	Blueberry	Blueberry Patches	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with berry picking - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Camperville KPI G - Lines 739 - 816</b>
Polygon	15	Camperville	Blueberry	Blueberry Patches	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with berry picking - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Camperville KPI G - Lines 788 - 1160</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	41	Herb Lake	Snake Pit	Garter Snakes are known to be present in the area near Mitishto River (snake den)	Potential damage to snake den if RoW moved north and crosses snake den; - Ref: <b>Herb Lake Group A - Lines 1459 - 1519</b>
Polygon	42	Herb Lake	School	School site on RoW near community of Wekusko	Potential for presence of important architectual heritage resources; Ref: <b>Herb Lake Group A - Lines 6602 -6612</b>
Polygon	69	Dawson Bay	Landscape features	Artesian wells (underground flow) and salt flats. Salt flat area contains building remains of old salt mine. Community identifiedpre-contact usage for salt resource. This was confirmed through archaeological records in 1985. "Pipes" that were once used are still present at site. Water flows all year round.	Potential Groundwater contamination due to herbicide use; - loss of Heritage resources; <b>Ref: Dawson Bay Group A - Lines 1225 - 1365</b>
Polygon	70	Dawson Bay	Sweet Grass	Sweet Grass (Salt Flats)	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with plant gathering - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Dawson Bay KPI I - Lines 1690 - 1740</b>
Polygon	71	Dawson Bay	Cranberries	Cranberries	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with berry picking - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Dawson Bay KPI G - Lines 477 - 529</b>
Polygon	72	Dawson Bay	Osprey Nesting	Osprey Nesting on Tx Line	TBD <b>Ref: Dawson Bay KPI G - Lines 91 - 162</b>
Polygon	73	Dawson Bay	burials	Burials found washed out along Red Deer River in past	Loss of Heritage resources <b>Ref: Dawson Bay KPI J - Lines 1477 - 1558</b>
Polygon	75	Dawson Bay	Salt mine	Historic salt Mine	Loss of Heritage resources <b>Ref: Dawson Bay KPI C - Lines 603 - 802</b>
Polygon	76	Dawson Bay	Snake Pit	Garter snakes are known to be present in the area along PTH 10	Loss of snake habitat; <b>Ref: Dawson Bay Group B(2) - Lines 2561 - 2946</b>



Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	77	Dawson Bay	Sweet Grass	Sweet Grass - Red Deer River	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with plant gathering - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Dawson Bay KPI I - Lines 1007 - 1107</b>
Polygon	78	Dawson Bay	Red Deer River	Trapping - Fisher, Marten, coyote, wolves, lynx	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Dawson Bay KPI I - Lines 1265 - 1304</b>
Polygon	79	Dawson Bay	Salt mine	Historic salt mine (McArdle Salt Works - investigated 1930's) identified by community members, may have potential for heritage structures within the area identified. Site is currently undisturbed. Additional heritage resource sites in vicinity.	Loss of heritage resource; <b>Dawson Bay Group B(2) - Lines 4850 - 5188 and 6625 - 6647.</b>
Polygon	80	Dawson Bay	Sweet Grass	Sweet Grass	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with plant gathering - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Dawson Bay KPI I - Lines 1690 - 1774</b>
Polygon	87	Dawson Bay	Caribou	Identified by community members as important habitat for Caribou and Birds	Fragmentation of caribou habitat, leading to loss of Caribou as a source of food and cultural products; and loss of bird habitat <b>Ref: Dawson Bay Group A - Lines 2786 - 2934.</b>
Polygon	115	Dawson Bay	Sweet Grass	Sweet grass harvesting on the West shores of Overflow Bay was identified by community members	Loss of access to sweetgrass, resulting in loss of domestic income and loss of cultural practice and values associated with the practice. <b>Dawson Bay Group B(1) - Lines 4023 - 4236</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	116	Dawson Bay	Plant Harvest	Red Willow, Ginger Root, Labrador Tea, Sage - west Shore Overflow Bay	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with plant gathering and berry picking - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Dawson Bay KPI D - Lines 93 - 347</b>
Polygon	120	Dawson Bay	Plant Harvest	Cranberry Bark	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with berry picking - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Dawson Bay KPI D - Lines 679 - 743</b>
Polygon	121	Dawson Bay	Trapping/Hunting	Trapping and Hunting along Overflowing R.	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Dawson Bay KPI I - Lines 335 - 375</b>
Polygon	122	Dawson Bay	Sweet Grass	Sweet Grass - Overflow Bay	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with plant gathering - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Dawson Bay KPI I - Lines 1007 - 1040</b>
Polygon	123	Dawson Bay	Trapping/Hunting	Trapping and Hunting across RoW between Red Deer L and Dawson Bay	Fragmentation of caribou and moose habitat, leading to loss of both as a source of food and cultural products. -Fragmentation of trapline leading to loss of income. - Increased access by non-community members into hunting areas. <b>Ref: Dawson Bay KPI I - Lines 255 - 317</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	124	Dawson Bay	Bird Hunting	Hunting Geese and Ducks - Overflow Bay inland	Short-term loss of hunting if construction occurs during fall/spring hunts <b>Ref: Dawson Bay KPI I - Lines 1335 - 1477</b>
Polygon	126	Dawson Bay	Plant Harvest	Site which is currently being used for berry-picking and plant-gathering (site has been disturbed by other existing Hydro lines). Area also noted as important bird habitat	Loss of vegetation (which is currently used as a source of food and domestic income). - Loss of important bird habitat <b>Ref: Dawson Bay Group A - Lines 1968 - 2150</b>
Polygon	128	Dawson Bay	Trapping/Hunting	Trapping and Hunting	Fragmentation of trapline leading to loss of income. - Increased access by non-community members into hunting areas. <b>Ref: Dawson Bay KPI I - Lines 1993 - 2018</b>
Polygon	148	Barrows	Caribou	Identified by community members as important habitat for Caribou	Fragmentation of caribou habitat, leading to loss of Caribou as a source of food and cultural products. <b>Ref: Barrows Group A - Lines 1892 - 2017; and 2044 -2054</b>
Polygon	150	Barrows	Sweet Grass	Sweet Grass - especially Egg Island along shoreline of Overflow Bay	Loss of access to sweetgrass, resulting in loss of domestic income and loss of cultural practice and values associated with the practice. <b>Ref: Barrows KPI G - Lines 334 - 520</b>
Polygon	152	Barrows	Trapping/Hunting	Trapping and Hunting across ROW - Moose, elk, Deer, Bear, Beaver, Muskrat	Fragmentation of caribou,moose, deer, bear, beaver & muskrat habitat, leading to loss of both as a source of food and cultural products. -Fragmentation of trapline leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Barrows KPI C - Lines 1983 - 2123</b>
Polygon	197	Barrows	Seneca Root	Seneca Root	Fragmentation of seneca root gathering area. - Loss of plant habitat due to herbicide spray <b>Ref: Barrows KPI C - Lines 1962 - 1998</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	198	Barrows	Seneca Root	Seneca Root	Fragmentation of seneca root gathering area. - Loss of plant habitat due to herbicide spray <b>Ref: Barrows KPI E - Lines 2138 - 2298</b>
Polygon	199	Barrows	Salt mine	Historic salt mine identified by community members, may have potential for heritage structures within the area identified.	Potential loss of heritage resource and mineral access for wildlife. <b>Barrows Group A - Lines 950 - 1250; 1338 - 1343; and 1416 - 1827</b>
Polygon	200	Barrows	Snake Pit	Garter snakes are known to be present in the area	Loss of snake den if RoW moved west and crosses over snake den. <b>Barrows Group B - Lines 2969 - 3312</b>
Polygon	201	Barrows	Salt mine	Historic salt mine (McArdle Salt Works - investigated 1930's) identified by community members, may have potential for heritage structures within the area identified. Site is currently undisturbed. Additional heritage resource sites in vicinity.	Potential loss of heritage resource. <b>Barrows Group A - Lines 950 - 1250; 1338 -1343; and 1416 - 1827</b>
Polygon	202	Barrows	Plant Harvest	Labrador Tea, Mint	Loss of plant habitat and therefore loss of traditional medicinal gathering sites <b>Ref: Barrows KPI C - Lines 1136 - 1244</b>
Polygon	203	Barrows	Soapstone	Soapstone source (utilized by community for cultural products such as art) adjacent to the edge of the ROW	Loss of cultural practice and products, resulting in decline in cultural cohesion and associated economic value. - Ref: <b>Barrows Group A - Lines 2019 - 2040</b>
Polygon	204	Barrows	Sweet Grass/Salt Flats	Sweet Grass harvesting in area. Salt Flats are known to be present in area.	Loss of economic activity and loss of cultural practice and values associated with the practice. - Ref: <b>Barrows Group B - Lines 3943 - 4064</b>
Polygon	206	Barrows	Sweet Grass	Sweet Grass across RoW	Loss of access to sweetgrass, resulting in loss of domestic income and loss of cultural practice and values associated with the practice. <b>Ref: Barrows KPI G - Lines 334 - 520</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	261	Barrows	RTL Area	RTL Area transected by RoW	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Barrows Group B - Lines 523 - 1038</b>
Polygon	278	Barrows	RTL Area	RTL Area transected by RoW	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Barrows Group B - Lines 523 - 1038</b>
Polygon	279	Barrows	RTL Area	RTL Area transected by RoW	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Barrows Group B - Lines 523 - 1038</b>
Polygon	282	Barrows	RTL Area	RTL Area transected by RoW	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Barrows Group B - Lines 523 - 1038</b>
Polygon	283	Barrows	RTL Area	RTL Area transected by RoW	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Barrows Group B - Lines 523 - 1038</b>
Polygon	284	Barrows	RTL Area	RTL Area transected by RoW	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Barrows Group B - Lines 523 - 1038</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	316	Pine Creek	Buffalo	Herd of feral buffalo are known to be present in the area	Fragmentation of ungulate habitat resulting in loss of food source, availability as a cultural product and economic revenue. - Increased access for non-residents into hunting areas leading to conflict with community members <b>Ref: Pine Creek Group A - Lines - 667 -747</b>
Polygon	317	Pine Creek	Coal Mine	Historic Coal Mine identified by community	Potential loss of heritage resources. <b>Pine Creek Group A - Lines - 2562 - 2795</b>
Polygon	343	Pine Creek	Briggs Spur	Former residence - historic	Loss of extant historical structures <b>Ref: Pine Creek KPI C - Lines 713 - 814</b>
Polygon	344	Pine Creek	Briggs Spur	Camp area to sell harvest	Loss of extant historical structures <b>Ref: Pine Creek KPI E - Lines 1236 - 1328</b>
Polygon	346	Pine Creek	Berry Harvest	Area of intensive land use for berry harvesting.	Increased access by non-residents into culturally sensitive area resulting in loss of traditional use for community members. <b>Ref: Pine Creek Group A - Lines - 3997 - 4308 and 5799 - 6165</b>
Polygon	348	Pine Creek	Spence Lake	Swampy marshy shoreline (1600m from edge of ROW) with potential for heritage resources on the shoreline. Site lies within bird migratory corridor identified by Pine Creek. (also see polygon 13 Duck Bay)	Loss of heritage resources. <b>Ref: Pine Creek Group A - Lines - 5280 - 5690</b>
Polygon	349	Pine Creek	Trails	Historically established trails intensively used by community members for traditional activities.	Increased access to historic trails by non-community members. - Loss of heritage resources along trails. <b>Ref: Pine Creek Group A - Lines - 5280 - 5690</b>
Polygon	352	Pelican Rapids	Moose/Caribou	Identified by community members as important habitat for Caribou and Moose	Fragmentation of caribou and moose habitat, leading to loss of both as a source of food and cultural products. - Potential for increased access by non-community members into hunting areas. <b>Ref: Pelican Rapids Group A3 - Lines - 430 - 746</b>



Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	382	Pelican Rapids	Snake Pit	Garter snakes are known to be present in the area	Loss of snake den if ROW moved west and crosses snake den. <b>Ref: Pelican Rapids Group A2 - Lines - 30 - 109.</b>
Polygon	383	Pelican Rapids	Fresh water Spring	Fresh water spring (known locally as "Three Barrels" on local creek used by people to access drinking water all year round. Has been used for many generations.	Loss of local reliable drinking water source for community members - Loss of cultural value associated with the activity - Loss of traditional value associated by community members toavailability of clean water and well-being <b>Ref: Pelican Rapids Group A1 - Lines - 40 - 562.</b>
Polygon	384	Pelican Rapids	Wildlife Preserve area	Identified by community as Fishing and fish spawning area (Jackfish, Pickerel, suckers)	Potential for increased access to Wildlife Preserve Area from the ROW by resource users. <b>Ref: Pelican Rapids Group A2 - Lines - 974 - 1577.</b>
Polygon	385	Pelican Rapids	Wildlife Preserve area	Identified by community as a Trapping and Hunting area	Potential for increased access to Wildlife Preserve Area from the ROW by resource users. <b>Ref: Pelican Rapids Group A2 - Lines - 974 - 1577.</b>
Polygon	456	Cormorant	Trapping	Trapping area. Furs include fox, coyote, fisher, beaver, mink, marten, lynx	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Cormorant - Nabessj - Lines - 230 - 338</b>
Polygon	457	Cormorant	Logging	Commercial Logging area	Loss of timber harvest area resulting in loss of economic activity. <b>Ref: Cormorant - KPI B - Lines - 106 - 189</b>
Polygon	458	Cormorant	Logging	Commercial Logging of jack pine, black/white spruce by community member	Loss of timber harvest area resulting in loss of economic activity. <b>Ref: Cormorant - KPI B - Lines - 106 - 189</b>
Polygon	459	Cormorant	Camp	Trappers Camp adjacent to ROW noted by community member	Disturbance to existing camp due to construction and O&M activity. Interruption of leisure activitiy. <b>Ref: Cormorant - KPI B - Lines - 1593 - 1611</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	460	Cormorant	Hunting	Bear hunting areas used by community member for guiding/outfitting	Loss of economic activity of local community members due to fragmentation of bear habitat. Potential cumulative impact re: existing infrastrucutre. <b>Ref: Cormorant - KPI B - Lines - 1304 - 1352</b>
Polygon	471	Cormorant	Bear/Trails	Access trail from bear baits to camp	Loss of access to bear hunting ground Fragmentation of bear habitat - Decline in revenue for community members <b>Ref: Cormorant - KPI B - Lines - 2030 - 2034</b>
Polygon	475	Cormorant	Medicine gathering	Medicine gathering - on RoW	Loss of plant habitat and therefore loss of traditional medicinal gathering sites <b>Ref: Cormorant KPI C - Lines 713 - 814</b>
Polygon	476	Cormorant	Medicine gathering	Medicine gathering - on RoW	Loss of plant habitat and therefore loss of traditional medicinal gathering sites <b>Ref: Cormorant KPI C - Lines 690 - 760</b>
Polygon	483	Cormorant	Trapping	Trapping	Fragmentation of trapline leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Cormorant KPI C - Lines 632 - 688</b>
Polygon	486	Cormorant	Moose Hunting	Moose hunting	Fragmentation of moose habitat leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Cormorant KPI D - Lines 610 - 698</b>
Polygon	489	Cormorant	Logging	Logging area for jackpine and spruce	Loss of timber harvest area resulting in loss of economic activity. <b>Cormorant - KPI D - Lines 1250-1315</b>
Polygon	490	Cormorant	Moose Hunting	Moose hunting	Fragmentation of moose habitat leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Cormorant KPI E - Lines 79 - 215</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	493	Cormorant	Moose Hunting	Moose hunting	Fragmentation of moose habitat leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Cormorant KPI E - Lines 79 - 215</b>
Polygon	497	Cormorant	Hunting /Trapping	Goose, duck hunting; trapping fine fur	Short-term loss of hunting if construction occurs during fall/spring hunts Fragmentation of trapline leading to loss of income. Potential for incrfeased access by non-community members into hunting areas. <b>Ref: Cormorant KPI E - Lines 1145 - 1206</b>
Polygon	498	Cormorant	Fishing	"Flat Rock Rapids" and "Second Rapids"	Domestic fishing area utilized by community members for personal use and leisure activity <b>Ref: Cormorant KPI E - Lines 1503 - 1706</b>
Polygon	499	Cormorant	Fishing	Deep water, pickerel - in summer	Domestic fishing area utilized by community members for personal use and leisure activity <b>Ref: Cormorant KPI E - Lines 1628 - 1712</b>
Polygon	500	Cormorant	Fish Spawning	Jackfish and Pickerel	Formerly a commercial fishing area for local commercial fishermen. Fish stock depleted for commercial activity, area still spawning ground for Whitefish. <b>Ref: Cormorant KPI E - Lines 449 - 512</b>
Polygon	503	Cormorant	Trapping	Trapline - used year round	Fragmentation of trapline leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Cormorant KPI F - Lines 46 - 161</b>
Polygon	509	Cormorant	Moose Habitat	Important Moose habitat - blind creeks, Wuskwatim Transmission line crosses through this area	Fragmentation of moose habitat leading to loss of income. Increased access by non-community members into hunting areas. Bottleneck with Wuskwatim Transmission Line <b>Ref: Cormorant KPI E - Lines 293 - 360</b>
Polygon	514	Cormorant	Snake Pit	Snake Pit on ROW	Loss of snake den if ROW moved west and crosses snake den. <b>Ref: Cormorant KPI G - Lines 987 - 1038</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	515	Cormorant	Caribou	Caribou Calving Grounds	Potential fragmentation and siturbance to Caribou calving grounds. May effect caribou habitat and population. <b>Ref: Cormorant KPI G - Lines 1751 - 1848</b>
Polygon	516	Cormorant	Caribou	Caribou are known to inhabit the area.	Fragmentation of caribou habitat, leading to loss of Caribou as a source of food and cultural products <b>Ref: Cormorant - Group A - Lines - 6665 - 6905</b>
Polygon	521	Cormorant	Snake Pit	Current Snake Pit on ROW	Loss of snake den <b>Ref: Cormorant - Group A - Lines - 1506 - 1607</b>
Polygon	523	Cormorant	Owls	Night Owls	<b>Ref: Cormorant - Group A - Lines - 1817 - 2302</b>
Polygon	524	Cormorant	Osprey Nesting	Osprey nest on distiribution line.	<b>Ref: Cormorant - Group A - Lines - 2329 - 2364</b>
Polygon	538	Cormorant	Muskrat Trapping	Muskrat Trapping, potential community trapline or individual RTL	Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Cormorant - Group A - Lines - 3814 - 3874</b>
Polygon	541	Cormorant	Caribou	Caribou	Potential fragmenttation of migratory Caribou Herd. May affect population and Hunting conducted by residents <b>Ref: Cormorant KPI C - Lines 1052 - 1135</b>
Polygon	565	Cormorant	Caribou	Woodland Caribou	Potential fragmentation or disturbance of Calving Area's. Islands in the region are additionally used for Calving. <b>Ref: Cormorant KPI F - Lines 1318 - 1512</b>
Polygon	570	Cormorant	Trapline	Trapline	Fragmentation of trapline leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Cormorant KPI G - Lines 1815 - 1873</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	571	Cormorant	Hunting/Trapping/Fishing	Dyce Lake	Fragmentation of trapline leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Cormorant KPI G - Lines 282 - 376</b>
Polygon	684	Thicket Portage	Fish spawning	Walleye, Jackfish, whitefish, sturgeon in past - Winter use of river by community members	Loss of fish spawning area if ROW moved further east. <b>Ref: Thicket Portage Group A - Lines 31 - 756</b>
Polygon	764	Thicket Portage	Trapline Area	On ROW	Fragmentation of trapline leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Thicket Portage KPI J - Lines 550 - 675</b>
Polygon	766	Thicket Portage	Trapline	On ROW	Fragmentation of trapline leading to loss of income. Potential for increased access by non-community members into hunting areas. <b>Ref: Thicket Portage KPI J - Lines 36 - 336</b>
Polygon	787	Barrows2	Leisure Fishing	Red Deer River - Pickerel, Jackfish, Perch, Suckers and Spawning area	Loss of spawning area - Loss of recreational activities for community members - Shoreline damage due to construction activities <b>Ref: Barrows2 - Group A (pt 1) - Lines - 272 -346 and 900 - 928</b>
Polygon	807	Barrows2	Caribou	Caribou are known to inhabit the area .	Fragmentation of caribou habitat as identified by community members. Caribou used as a food source and cultural products. - Increased access by non-community members into hunting areas. <b>Ref: Barrows2 - Group B - Lines - 2360 - 2424</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	814	Barrows2	Sweet Grass	Sweet grass is known to be present in the area and is harvested along Red Deer River.	Loss of access to sweetgrass, resulting in loss of domestic income and loss of cultural practice and values associated with the practice <b>Ref: Barrows2 - Group B - Lines - 216 - 327</b>
Polygon	816	Barrows2	Lady Slippers	Lady Slippers identified by community as a rare flower at quarry (Pink) and along highway (yellow)	Loss of endangered species of plant. <b>Ref: Barrows2 - Group B - Lines - 1499 - 1568</b>
Polygon	821	Barrows2	Bird and game Hunting	Bird and Game are known to be present in the area and are hunted by community members along Red Deer R.	Fragmentation of habitat. Birds and game used as a food source and cultural products. - Potential for increased access by non-community members into hunting areas. <b>Ref: Barrows2 - Group B - Lines - 2722 - 2768</b>
Polygon	822	Barrows2	Ducks Unlimited Habitat	Modified marshy area located within the Wildlife Management Area.	Increased access to Wildlife Preserve Area from the ROW by resource users. <b>Ref: Barrows2 - Group B - Lines - 2975 - 3014</b>
Polygon	825	Barrows2	Camping area	Community camping area - On Red Deer R.	Potential disturbance to camping area due to construction and O&M activity. Potential interruption of leisure activitiy. <b>Ref: Barrows2 - Group B - Lines - 4292 - 4468</b>
Polygon	828	Barrows2	Timber	Timber area - Tamarack harvested for firewood by communities	Loss of timber resources affecting future firewood use. - Increase in financial burden due to need for going further away to get timber for use. <b>Ref: Barrows2 - Group B - Lines - 4908 - 5067</b>
Polygon	842	Barrows2	Garter Snakes	Garter snakes are known to be present in the area along PTH 10	Loss of snake habitat <b>Ref: Barrows2 - Group B - Lines - 3045 - 3283</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	855	Duck Bay	Resource Harvest	Area of intensive land use including plant harvest of seneca root, sage, blueberry; Area also used for Hunting and Trapping	Increased access for others and potential for conflict with trapline holders and current traditional users - Potential fragmentation of trap line areas. - Increased access by non-community members into culturally sensitive area (Kettle Hills). - Loss of cultural value associated with plant gathering and berry picking activities <b>Ref: Duck Bay - Group A - Lines - 2310 - 2746</b>
Polygon	856	Duck Bay	Resource Harvest	Area of intensive land use including plant harvest of seneca root, blueberry, medicine, sweet grass, ginger root; Area used for hunting Elk, moose and deer	Increased access for others and potential for conflict with trapline holders and current traditional users - Potential fragmentation of trap line areas. - Increased access by non-community members into culturally sensitive area (Kettle Hills). - Loss of cultural value associated with plant gathering and berry picking activities <b>Ref: Duck Bay - Group A - Lines - 2310 - 2746</b>
Polygon	857	Duck Bay	Caribou	Caribou are known to inhabit the area. The southern limit of the herd is at the Duck River.	Potential for increased access by non-community members into caribou habitat - Fragmentation of caribou habitat. Resulting in loss of Caribou as a food source and cultural products. <b>Ref: Duck Bay - Group A - Lines - 2950 - 3079</b>



Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	865	Duck Bay	Hunting	Wild Bison (have escaped from ranch compound), deer, moose and bear are known to inhabit the area and are hunted.	Fragmentation of ungulate habitat, resulting is loss of ungulate as a food source and cultural product. - Increased access by non-community members into hunting areas. Resulting in conflict with existing users. <b>Ref: Duck Bay - Group A - Lines - 811 - 837 and 1418 - 1492</b>
Polygon	866	Duck Bay	Hunting	Hunting area - Moose, Elk are known to inhabit the area and are hunted.	Fragmentation of ungulate habitat, resulting is loss of ungulate as a food source and cultural product. - Increased access by non-community members into hunting areas. Resulting in conflict with existing users. <b>Ref: Duck Bay - Group A - Lines - 1963 - 2251</b>
Polygon	871	Duck Bay	Blueberry/Trails	Community members use trails and harvest Blueberries in the area. Area intensively used for multiple activities. (see polygons 872, 874)	Loss of traditional activity and cultural values associated with it - Increased access by non-community members into culturally sensitive area (Kettle Hills), resulting in conflict with community members. <b>Ref: Duck Bay - Group B - Lines - 2346 - 2357; 3676 - 3704 and 3787 - 3866; and 6565 - 6716</b>
Polygon	872	Duck Bay	Cultural camp	Area used for cultural celebrations, family reunions, weddings, youth education and summer camping were identified as activities by community members. (see polygon 871)	Loss of traditional activities and cultural values associated with these - Decline in community cohesion for the duration of disturbance - Increased access by non-community members into culturally sensitive area (Kettle Hills), resulting in conflict with community members. <b>Ref: Duck Bay - Group B - Lines 3915 - 4003</b>
Polygon	874	Duck Bay	Hunting	Caribou hunting area identified by community members. (see polygon 871)	Potential for increased access by non-community members into culturally sensitive area - Fragmentation of Caribou habitat <b>Ref: Duck Bay - Group B - Lines 6098 - 6371</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	875	Duck Bay	Berry Harvest and hunting	community members identified sandy area for berry picking - blueberries and pincherries; hunting - used for 100+ years	Loss of berry patch due to herbicide use; - loss of traditional harvesting area; - Disruption of of harvesting activity due to access from non-community members. <b>Ref: Duck Bay - Group B - Lines 2119 - 2210; 1865 - 2236; and 3787 - 3866</b>
Polygon	876	Duck Bay	Berry Harvest	Identified by community members an an Important area for people to access berry harvesting as it provides easy access for community	Decline in accessibility of berry patch resulting is loss of traditional activity and cultural value associated with the activity <b>Ref: Duck Bay - Group B - Lines 3676 - 3704</b>
Polygon	877	Duck Bay	Bird Migration	Bird migration route for ducks and geese identified by community members	Change in bird migration route due to transmission line. <b>Ref: Duck Bay - Group B - Lines 3676 - 3704</b>
Polygon	878	Duck Bay	Bird Migration	Bird migration route for ducks and geese identified by community members	Change in bird migration route due to transmission line. <b>Ref: Duck Bay - Group B - Lines 3676 - 3704</b>
Polygon	888	Duck Bay	Hunting and Trapping	Moose, Deer, Fox, Lynx and beaver	Fragmentation of identified species' habitat if ROW moved north/ northeast. <b>Ref: Duck Bay - Group B - Lines - 5511 - 5614</b>
Polygon	895	Duck Bay	Timber	Harvest spruce for fence posts	Loss of timber resources affecting harvest of spruce for fenceposts. <b>Ref: Duck Bay Group B - Lines - 3342 - 3366</b>
Polygon	901	Duck Bay	Hunting	Hunting area around Briggs Spur area	Fragmentation and loss of hunting areas and alternative food source <b>Ref: Duck Bay KPI G - Lines - 1174 - 1192</b>
Polygon	902	Duck Bay	Blueberry	Blueberry picking area around Briggs spur area	Increased access by non-residents into culturally sensitive area resulting in loss of traditional use for community members. Also potential loss of economic activity from plant harvest <b>Ref: Duck Bay KPI G - Lines - 1180 - 1204</b>

Shape	Object_ID	Com_Location	ESS_Name	ESS_Dsc	Env_Eff
Polygon	933	Duck Bay	arrowheads/Spearheads	Arrowhead and spearheads	Loss of heritage resources due to inadvertent disturbance of sites <b>Ref: Duck Bay Group I - Lines - 1664 - 1752</b>
Polygon	949	Dakota Plains	Assiniboine R.	Trapping of Beaver, Muskrat and Mink along river and creeks in identified area for several generations. Potential for presence of heritage resouces	Loss of potential heritage resources. Increased access for others and potential for conflict with trapline holders - Potential fragmentation of trap line areas. <b>Ref: Dakota Plains - Group B - Lines - 377 - 401 and 168 - 380</b>
Polygon	953	Dakota Plains	Turtle Breeding	Spring Meltwater Ponds - Thousands of baby turtles are known to be present in the area	Loss of turtle breeding area if ROW moved north and crosses turtle breeding ponds. <b>Ref: Dakota Plains - Group B - Lines - 2049 -2869</b>
Polygon	955	Dakota Plains	Plant Harvest	Fruit, berry and Traditional Plant Harvesting area; wild purple grapes, plums, saskatoons, chokecherries, cranberries and sage.	Loss of traditional harvesting area - Loss of traditional activity and cultural value and social cohesion associated with plant gathering and berry picking - Loss of domestic income - Increase in financial burden, resulting in a decline in quality of life <b>Ref: Dakota Plains - Group B - Lines - 4626 - 4634 and 4846 - 5116</b>
Polygon	969	Dakota Plains	Hunting	Prairie Chickens, Partridges, Rabbits - Current and Past	Fragmentation and loss of hunting areas and alternative food source <b>Ref: Dakota Plains Group D - Lines - 154 - 314</b>
Polygon	995	Dakota Tipi	Skinks & Salamanders	Dry sandy soils habitat for skinks and salamanders.	Loss of habitat causing decline in species population. <b>Ref: Dakota Tipi - Group A - Lines 1995 -2388</b>

APPENDIX 13. ATTRIBUTES OF USHER’S CATEGORIES

Category	Benefits	Drawbacks
1. Knowledge of environment	<ul style="list-style-type: none"><li>➤ Precise, good recall</li><li>➤ Can confirm inference &amp; association</li><li>➤ Time machine- living memory to collective past</li><li>➤ Baseline is dynamic – continuum</li><li>➤ Provides outcome of what people think will happen &amp; why</li><li>➤ Based on long-term experience</li><li>➤ Can be validated</li><li>➤ Chronologies ground ATK temporally</li><li>➤ Maps ground ATK spatially</li></ul>	<ul style="list-style-type: none"><li>➤ Localized</li><li>➤ Based on personal incidental observation</li><li>➤ May be sporadic reporting</li><li>➤ Difficult to determine “normal” condition</li></ul>
2. Knowledge of use of environment	<ul style="list-style-type: none"><li>➤ Provides detail about patterned land use in general</li><li>➤ Establishes current use</li><li>➤ Can be validated (by semi-directed interview)</li></ul>	<ul style="list-style-type: none"><li>➤ Data may not be readily available</li><li>➤ Question of intellectual property may arise</li></ul>
3. Value of environment	<ul style="list-style-type: none"><li>➤ Provides detail and flags areas of key issues, places and process</li><li>➤ Usually conducted by Aboriginal community</li><li>➤ May form oral testimony at hearings</li></ul>	<ul style="list-style-type: none"><li>➤ Expensive and time consuming</li><li>➤ Cannot be easily validated since it is culturally driven*</li></ul>
4. Cosmology/world view	<ul style="list-style-type: none"><li>➤ Provides cultural perspective of ecosystem and complexity of relationships</li></ul>	<ul style="list-style-type: none"><li>➤ Hard to identify VECs</li><li>➤ Expensive and time consuming</li><li>➤ Requires long-term studies</li><li>➤ Validated by anthropological analysis AND community feedback</li></ul>