

Bipole III Transmission Project: A Major Reliability Initiative

Clean Environment Commission Public Hearings
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Aboriginal Traditional Knowledge & Effects
Assessment

Culture & Heritage & Effects Assessment

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Presentation Outline

- **Aboriginal Traditional Knowledge & Heritage Resources**
 - Purpose and objectives
 - Definitions
 - Scope of ATK/Heritage Resources
 - Approach (methods)
 - Existing Environment
 - Route selection process
 - Effects Assessment
 - Mitigation
 - Residual Effects

Purpose & Objectives

- The main role of the investigation of ATK within Environmental Assessment and EIS processes was to inform Manitoba Hydro of the ATK within the Bipole III study area.
Objectives 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 (by other disciplines) of ATK throughout the Site Selection Environmental Assessment and EIS, to the extent feasible.
- Where possible the project sought to link evaluation of effects of the project on culture through the cultural effects assessment.

Definition

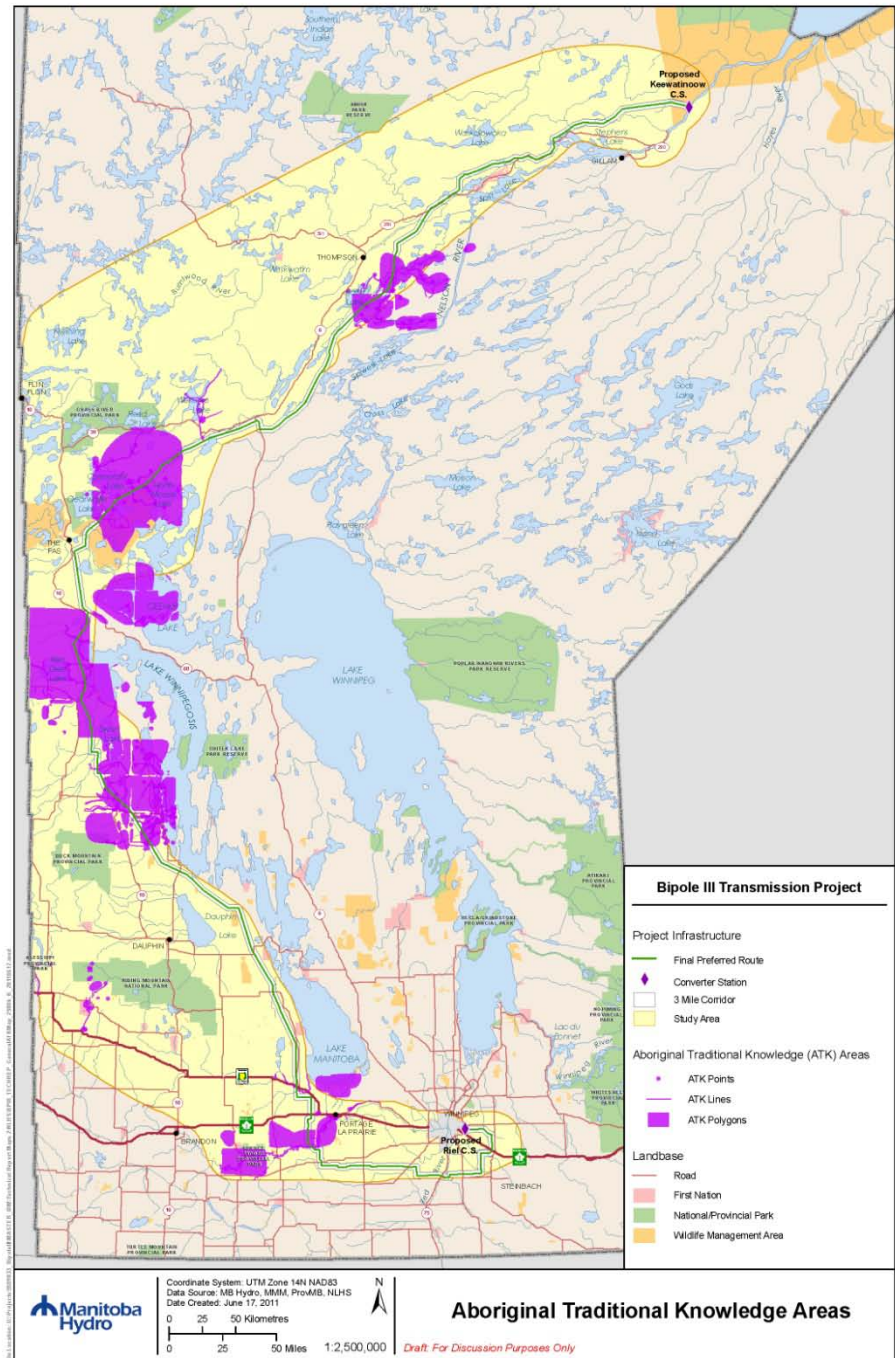
- *Aboriginal Traditional Knowledge (ATK)* is a knowledge system that integrates indigenous and local worldviews, values, and experiences into a complex framework by which harmony and balance of humans and the natural environment are sought. It is based on a tradition of past knowledge but is not static. It is both evolving and current (Usher 2000:186).

Scope of the ATK Studies

49 invitations were sent out by Manitoba Hydro to First Nations and Northern Affairs communities

19 chose to participate in the ATK Workshop process

7 (including the MMF) preferred to conduct self-directed studies

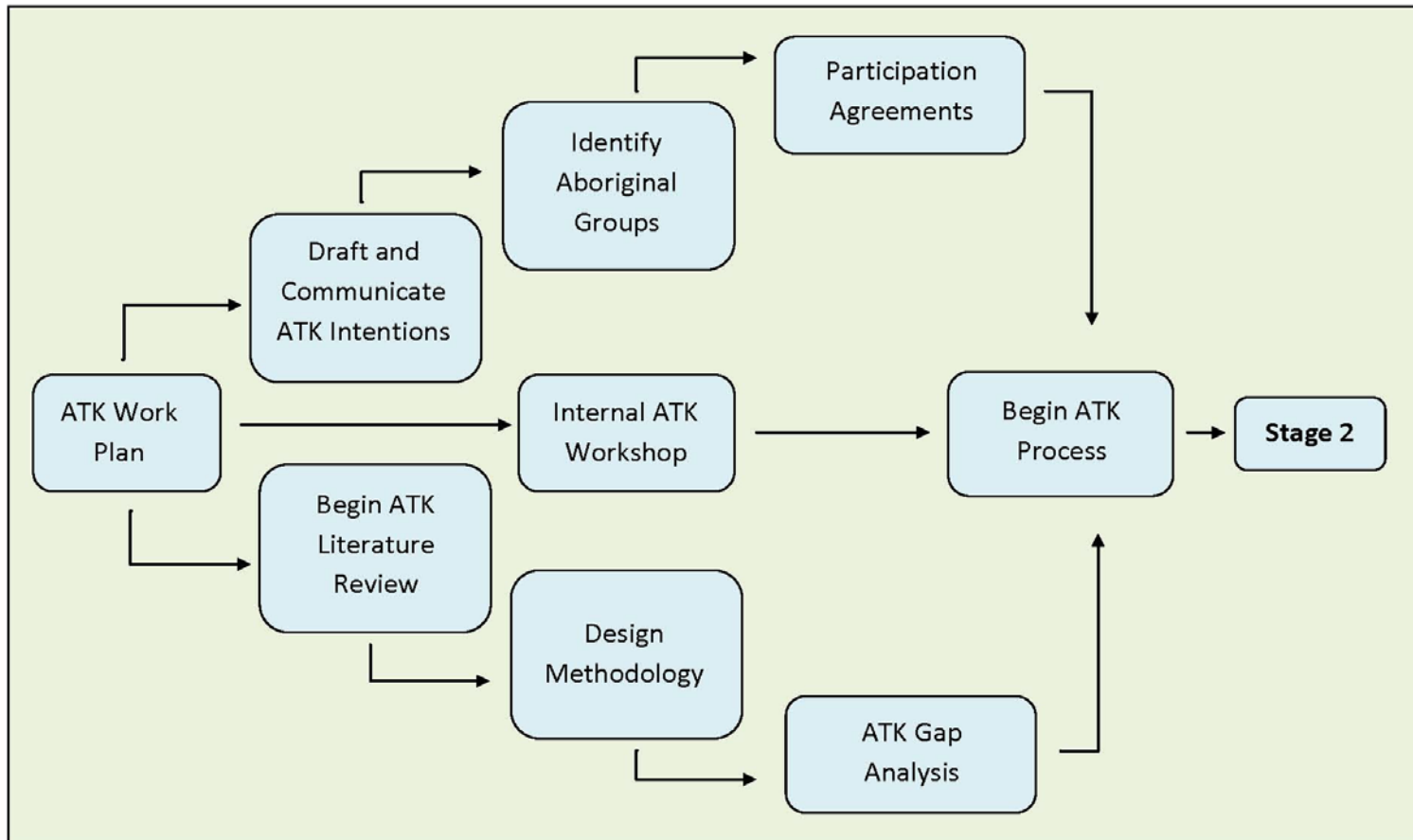


Scope of ATK Workshop

- 96 interviews were conducted
- 107 hrs. 37 mins. 35 secs. of interview recording
- 2584.5 hrs of transcription, quality control, summary sheets, coding and code entry were completed
- 5869 pages of transcript were produced
- Staff days for the above totalled 336.50 days
- 90 - 1:50,000 NTS maps were digitized and replicated for interview purposes

BIPOLE III ATK RESEARCH STRATEGY

Stage 1: ATK Process Development



Categories ATK

Categories ATK

Knowledge of the Environment

Knowledge of Use of the Environment

Value of the Environment

Cosmology/Worldview

Indicators

Measurable

Kinship

Language

Worldview

Traditional knowledge

Cultural Practices

Cultural Products

Leisure

Health and Wellness

Law and Order

Themes

Things of Value

Things of value

Families

Language

Tradition of knowledge

The land

Plants & Animals

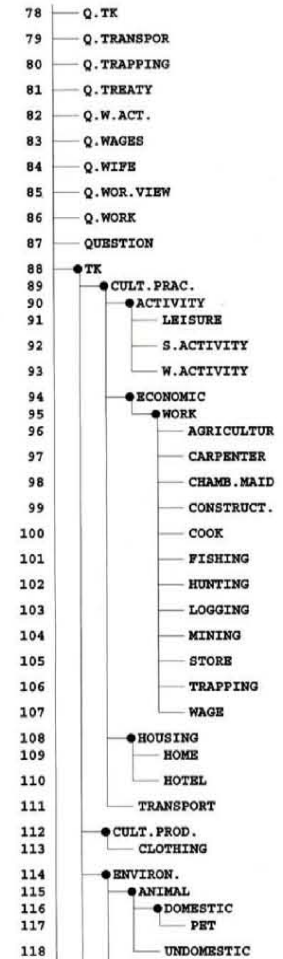
Activities

Ways of doing

Ways of thinking

Code Words

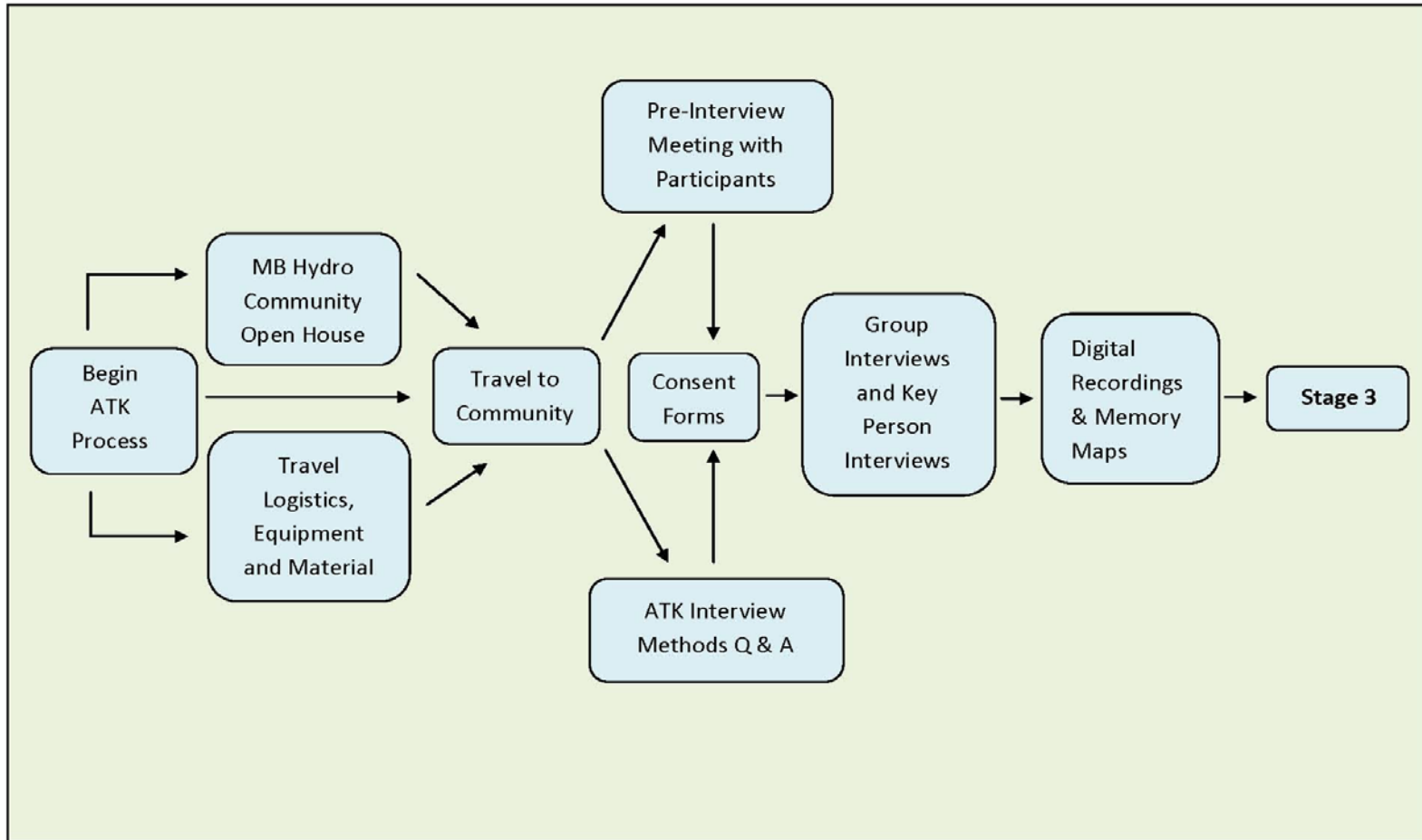
Code Book—Family Tree





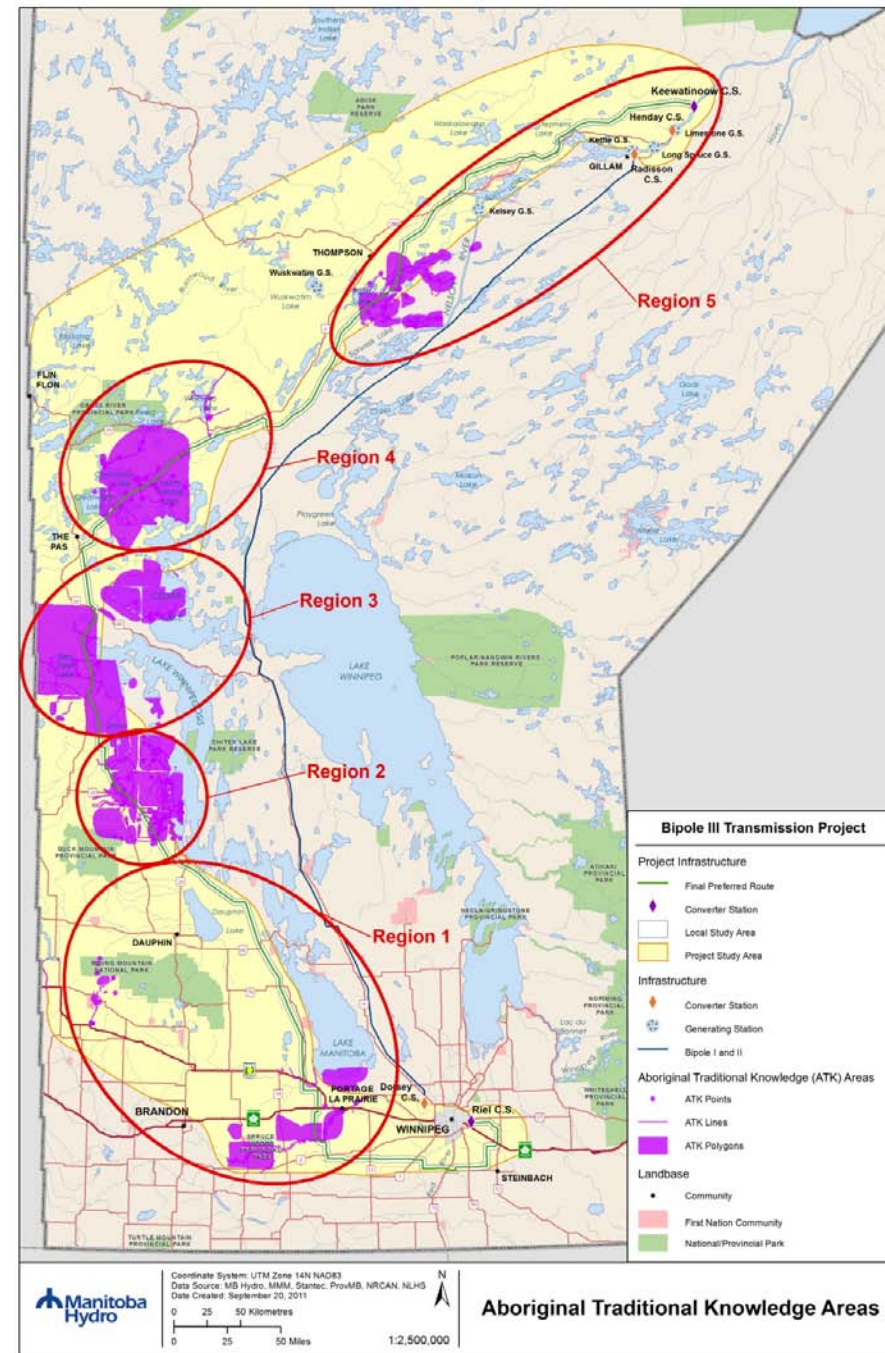
BIPOLE III ATK RESEARCH STRATEGY

Stage 2: ATK Data Collection



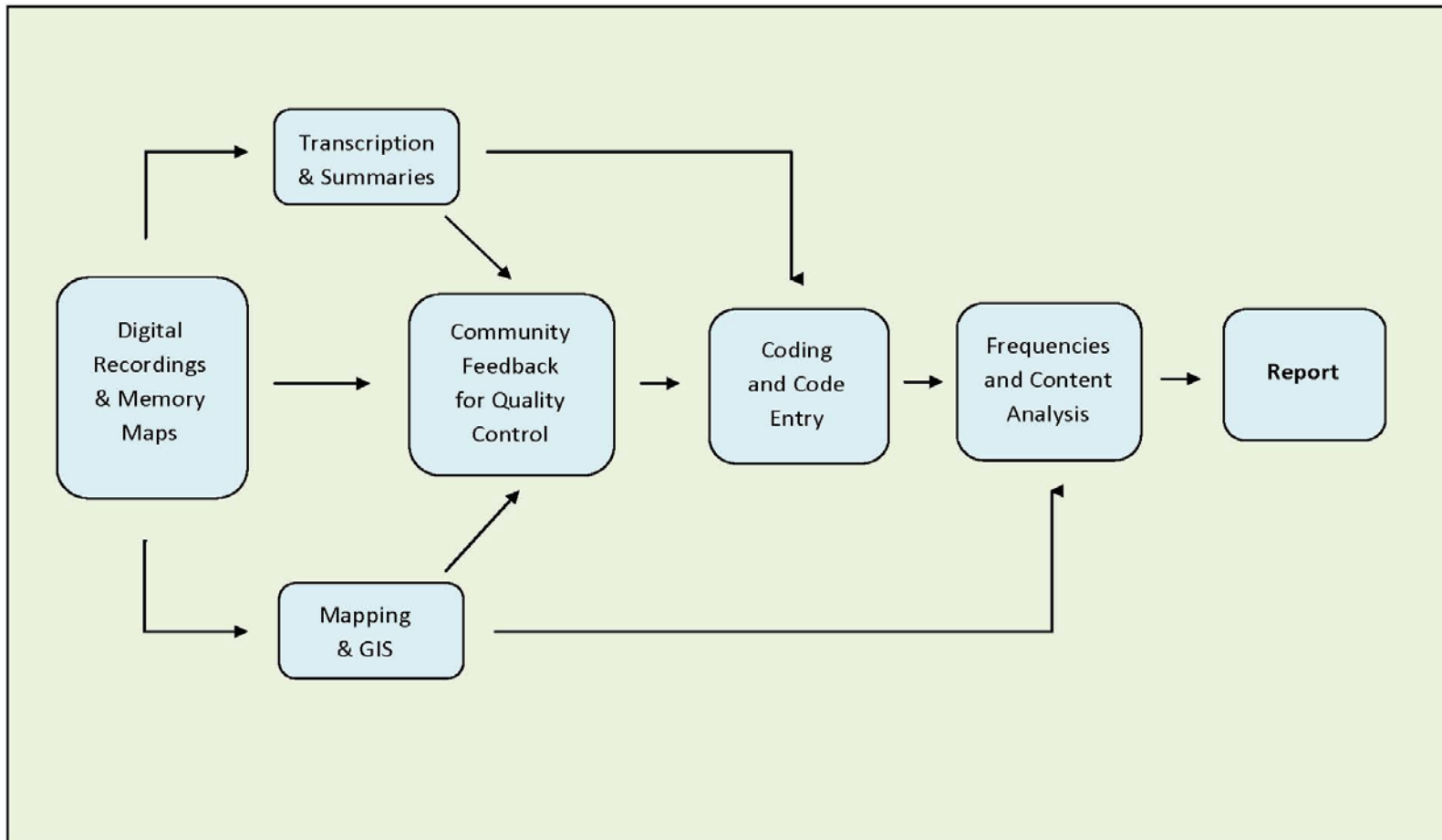
ATK Regions in the Bipole III Project Study Area

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 Sipiik First Nation (<i>self directed study</i>) Chemawawin First Nation Manitoba Metis Federation (<i>self directed study</i>)
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>)



BIPOLE III ATK RESEARCH STRATEGY

Stage 3: ATK Data Management



Areas of Concern Identified

- Keewatinoow Converter Station – subsistence activities; heritage resources
- Cormorant – subsistence activities; heritage resources
- Red Deer River Crossing – subsistence and leisure activities; heritage resources
- Cowan/Briggs Spur – Kettle Hills Blueberry Patch – a commons used by many local Aboriginal communities; includes sacred and ceremonial sites, heritage resources and burial sites
- Assiniboine River Crossing – important ceremonial and sacred sites, medicines; heritage resources and burials

ATK Input into the FPR

- One hundred and fifty-six (156) occurrences of ATK along the proposed FPR were included in the list of Environmentally Sensitive Sites (ESS) for mitigation.

ATK Input cont'd

- As the ATK transcripts and analysis were completed the locations of points, lines and polygons representing the ATK were forwarded to Manitoba Hydro for incorporation into the ESS table.
- As Self-Directed Studies were completed they were reviewed through *The Ethnograph* and summaries of community concerns were highlighted to Manitoba Hydro.

Valued Environmental Components (VEC) – Application to Culture

- Culture was identified as a single VEC for the Bipole III Project.
- Culture is a repertoire of behaviors and themes that define the identity of a social group; it is the medium by which groups of people collectively know, understand and express their natural and social experience.

Effects Assessment

- Using Culture as a VEC, content analysis of the nine (9) indicators identified certain community cultural concerns which were entered into the table of Environmentally Sensitive sites (ESS).

Community-derived Potential Effects

This is what we heard:

- Loss of **language** due to altered cultural landscapes and the mnemonic meanings associated with them.
- **Deterioration of traditional knowledge** and spirituality associated with the Kettle hills region.
- Changes to the cultural landscape and the negative impact on the **cultural practice** of trapping
- **Health and Wellness** of communities potentially impacted by potential changes to aspects of traditional country food supplies and potential fragmentation of animal habitats that are hunted or trapped as alternative subsistence and traditional food source. Use of herbicides and ground water contamination. **Potential for conflict with non-community resource users** because of increased general access.
- Increased access by non-residents into culturally sensitive areas that form **worldviews** may result in loss of traditional use for community members
- Changing cultural landscapes and the potential effects on **kinship** and **leisure** wherein the act of resource harvesting brings kin together
- **Loss of the ability to engage in activities related to cultural products**, such as creating works of arts and crafts, economically benefitting from the gathering of berries, gathering uncontaminated medicinal plants and to locate areas of alternative fuel sources

Effects on Culture

- Construction activities such as excavation and clearing cause changes to the physical environment which could potentially affect any of the indicators which were selected to represent culture. Potential effects include:
 - excavation of soils;
 - EMFs and contaminants/herbicides
 - Permanent loss of cultural landscapes
- Operations have the potential to cause ongoing and/or inadvertent disturbance to cultural processes and the associated historic record as it has been identified through the Bipole III ATK workshops and self-directed studies.

ATK and Culture

- Aboriginal and other people with cultural ties with the land seek to ensure that they, their children and future generations will continue to enjoy a good life.
- There are strong cultural ties to the land.
- ATK is inherent to Aboriginal and other people.

Mitigation Measures

- EnvPPs for the construction and operation of the Project will include mitigation measures to minimize potential cultural effects. Further liaison with communities that have identified cultural concerns will occur to assist in identifying additional mitigation measures to be included in the EnvPPs. In addition, Manitoba Hydro anticipates opportunities for employing local people to assist in monitoring Project construction.
- The EnvPPs will contain heritage protection measures which will be developed in collaboration with Aboriginal and local interested parties for Project components that will ensure protection of Aboriginal and non-Aboriginal cultural interests.

Mitigation Measures

- The Bipole III ATK process brought to light the traditional knowledge that exists within Aboriginal and other communities. In addition, through this process communities identified concerns and issues important to them regarding the Project.
- Manitoba Hydro will continue to liaise with Aboriginal and other communities to review concerns that arise about the Project and opportunities for cultural preservation occasioned by the Project. Manitoba Hydro anticipates that in the case of some First Nations and the MMF, the ongoing liaison and communications will occur through existing forums and protocols.

Mitigation Measures

- Concerns regarding the effect of EMF on the natural environment and on humans were expressed through the Bipole III ATK process and the EACP (Chapter 5). Manitoba Hydro is exploring ways to share information about EMF in a meaningful way.
- The loss of the ability to conduct traditional activities such as trapping, hunting and fishing was noted in the ATK workshops and self-directed studies as potentially impacting culture. It must be understood however, that culture goes beyond these subsistence activities. As far as is practicable and in accordance with established laws and regulations overseen by Manitoba Conservation, Manitoba Hydro will respect and abide by local hunting protocols

Table 8.3-21 Residual Environmental Effects Summary – Culture

Culture	HVdc Transmission Line	Construction	Impairment of Aboriginal Culture	Direction – Negative Magnitude – Small Geographic Extent – Project Study Area Duration – Short-Term Overall – Not Significant
		Operations	Impairment of Aboriginal Culture	Direction – Negative Magnitude – Small Geographic Extent – Project Study Area Duration – Medium-Term Overall – Not Significant
	Keewatinoow Converter Station & Associated Facilities	Construction	Impairment of Aboriginal Culture	Direction – Negative Magnitude – Small Geographic Extent – Project Study Area Duration – Short-Term Overall – Not Significant
		Operations	Impairment of Aboriginal Culture	Direction – Negative Magnitude – Small Geographic Extent – Project Study Area Duration – Medium-Term Overall – Not Significant

Heritage Resources

Purpose

- The main role of the investigation of heritage resources within Environmental Assessment and EIS processes is to:
 - identify the presence of heritage resources within the study area,
 - determine the effects the project may have on the heritage resources, and
 - offer recommendations for mitigation of resources that may be affected by a project.

Provincial Legislation & Policy

- Manitoba's Heritage Resources Act (1986) (*The Act*) is the legislation that governs the management and protection of heritage resources.
 - All heritage resources are protected under *The Act* regardless of their cultural affiliation. *The Act* ensures that any heritage resources, known or unknown, are protected in some manner from the effects of impact caused by development.
- Manitoba's Policy Concerning the Reporting Exhumation and Reburial of Found Human Remains (1987) establishes the process by which human remains are managed.

What are Heritage Resources?

- Heritage Resources are defined by *The Act* as:
 - i) A heritage site,
 - ii) A heritage object, and
 - iii) Any work or assembly of works of nature or of human endeavour that is of value for its archaeological, palaeontological, pre-historic, historic, cultural, natural, scientific or aesthetic features, and may be in the form of sites or objects or a combination thereof. (p.3)

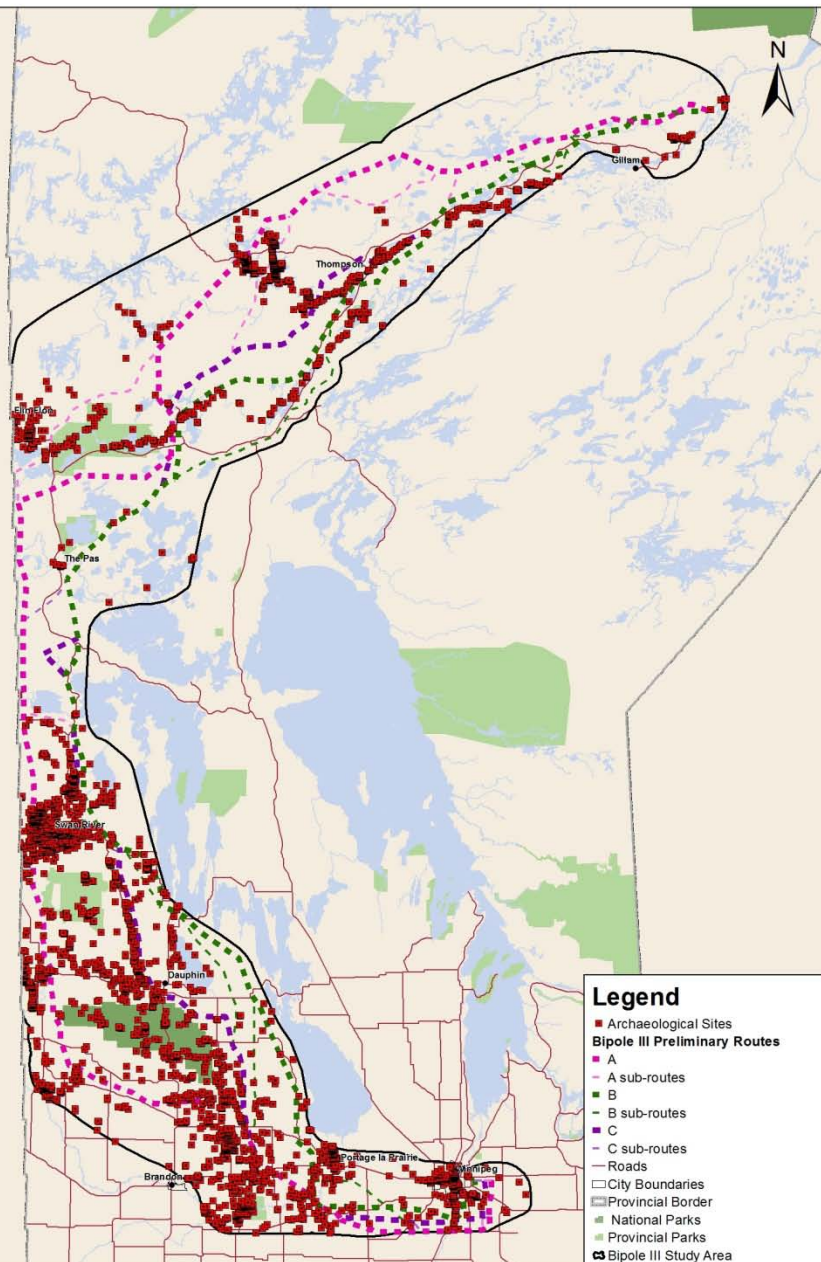
What are Human Remains?

- Remains of human bodies that in the opinion of the minister have heritage significance and that are situated or discovered outside a recognized cemetery or burial ground in respect of which there is some manner of identifying the persons buried therein; (*The Act* 1986 Section 43 (1)).

Further...

- ALL heritage resources are owned by Manitoba for the benefit of all Manitobans.
- Heritage resources MAY be held in custody by the finder/or land owner. Heritage resources cannot be sold or mutilated.
- Heritage resources are considered a valued environmental component (VEC) as they are non-renewable resources and are the physical evidence of past activities.

- The geographic scope of the Bipole III Project is a crescent-shaped area from the Keewatinooow Converter Station north of Fox Lake Cree Nation to the Riel Converter Station east of Winnipeg.
- The temporal scope of the Bipole III Project spans a record of human history beginning *ca.* 11,000-8,000 years ago in the south and *ca.* 8,000-6,000 years ago in the north.



Legend

- Archaeological Sites
- Bipole III Preliminary Routes
- A
- A sub-routes
- B
- B sub-routes
- C
- C sub-routes
- Roads
- City Boundaries
- Provincial Border
- National Parks
- Provincial Parks
- Bipole III Study Area

Areas of Investigation

- Transmission line corridor and AC Collector Lines
- Keewatinoow Converter Station
- Riel Converter Station
- North & South Ground Electrodes, Collector Lines Connections to the Northern Collector System
- **Preferred Route Access Roads were not investigated**

Approach

Desktop Study

- Literature Review
- Acquisition of digital files and supporting data from the Historic Resources Branch
- High level cultural characterization of the Study Area

Application of ATK

- Incorporation of ATK into the digital files and heritage resource inventory of locations requiring field investigation.

Predictive Modeling

- Ten physical variables or characteristics were chosen: proximity to potable water, soil types, slope, vista, aspect, geographic features, water systems, water body convergence, proximity to documented heritage sites, elevation
- Using weighted ranking value, identified areas of high, medium and low potential for site location
- Tested the model during field investigations

Field Investigations

- Initial aerial over flight
- Pedestrian survey with transects and shovel testing
- Test excavation at Keewatinoow Converter Station

Route Selection Process

- Three alternative routes were assessed by desk top study
- All heritage resources outside the 3-mile buffer of the alternative routes were eliminated, leaving 599 registered heritage sites. These were categorized into five types of interactions or categories based on provincial descriptions
 - Archaeological Sites;
 - Centennial Farms;
 - Commemorative Plaques;
 - Municipally Designated Sites, and;
 - Provincially Designated Sites.

- Archaeological sites - Any site or object that shows evidence of human endeavour. The Historic Resources Branch has identified 26 site types based on different human activities and time periods. Isolated burials, abandoned cemeteries (e.g. homestead) and found human remains are also contained within this category.
- Centennial Farm - Any active farm that is 100 years old and has been held by the same family. This is a provincial designation.
- Plaques – Across the province events and historic occasions are marked with cairns & plaques to commemorate the significance of a particular event.
- Municipally designated heritage sites – Sites that are considered to be of municipal significance and which are acknowledged for the contribution they have made at the municipal level.
- Provincially designated heritage sites – Sites that are considered to be of provincial significance in that they reflect an event or happening that is important to the development of the province.

- A weighted value was assigned to each category; within the archaeological category weighted values differed depending on the site type.
- Preliminary preferred route was initially based on weighted value of known heritage resources
- Once ATK was added some areas were considered to be of greater heritage value because of the cultural values ascribed by participating communities

Contribution of ATK to the Route Selection

- Knowledge from both ATK workshops and self-directed studies was equally important. Heritage sites identified by ATK were mapped as polygons rather than points in order to protect the location of the sites.
- Once heritage resources were identified through the ATK Workshops they were plotted on the GIS maps and were included in the ESS table. Knowledge of 30 areas of heritage resources, including trails, homesteads, industry, burials, culturally sensitive sites and general areas of artifact deposits were identified through this process.
- These sites along with the existing record and those identified by the predictive model, were placed in the table of Environmentally Sensitive Sites.

Field Investigations

- Heritage Resources Impact Assessment (HRIA)(Section 12 (2))
 - Purpose of the HRIA is to identify the presence or absence of heritage resources within a study area, to determine the effects the project may have on heritage resources and recommend mitigation measures in order to protect the resources.

Field Investigations continued

- Preliminary Overflight
- PPR only - Six separate investigations along the PPR between Keewatinoow and Riel converter stations
 - Two new heritage resources were identified in the northern part of the route
 - Many areas in the north were inaccessible because of poor drainage patterns, wetlands and dense vegetation
 - Most areas in the south were inaccessible because of private land constraints

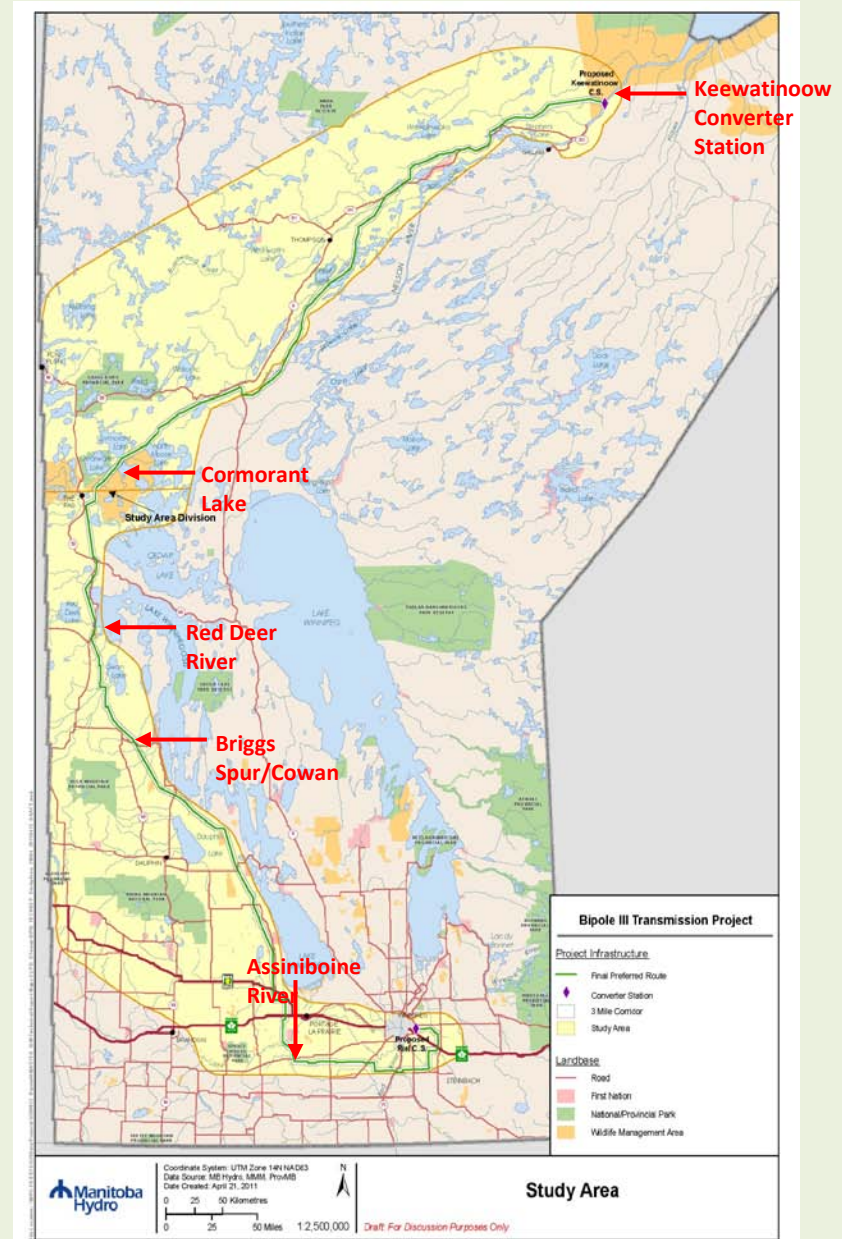
Field Investigations continued

- The Keewatinoow Converter Station footprint
- Associated camp structures, lagoons and borrow areas
- The northern and southern ground electrode sites
- Construction and collector lines were all investigated.

Existing Heritage Resources Environment

Based on the ATK and/or archaeological records five areas of concern were identified:

- Keewatinoow Converter Station;
- Cormorant Petroform;
- Red Deer River Crossing;
- Briggs Spur/Cowan, and
- Assiniboine River crossing.



Areas of Concern Identified by Archaeological and ATK Records

Table 8.3-18: Five Main Areas of Concern along the Final Preferred Route for the Bipole III Line as Identified by Archaeological & ATK records

Area of Concern	Identified by	Site Type
Keewatinooow Converter Station region	Archaeological Survey	Pre-European contact burials; work stations, campsite
Cormorant Bottleneck	Archaeological Survey	Petroform
Red Deer River Bottleneck	Archaeological Inventory & ATK	Historic Salt Works
Cowan-Briggs Spur	ATK	Burials
Assiniboine River	Archaeological Inventory & ATK (self-directed & workshops)	Yellow Quill Trail, burials, archaeological sites

Keewatinoow Converter Station

Table 8.3-19: Culturally Affiliated Sites and Archaeological Sites within the Keewatinoow Converter Station Site

Borden #	Archaeological Survey	Cultural Affiliation	Site Type	Artifacts Recovered Features Noted
HdKI-01	Pedestrian Survey Shovel testing	Palaeo-Inuit (Pre-European Contact) Potential burials	Work station; possible burials	Microblade projectile point; Lithic scraper; Biface; flakes Stone features
HdKI-02	Pedestrian Survey Controlled surface collection	Undetermined Pre-European Contact	Campsite	Lithic flakes; tepee rings



Cormorant Petroform

- The Cormorant Petroform discovered in 2003 during the Wuskwatim Transmission Line HRIA is now within the right of way of the Bipole III Transmission Line.

Cormorant Petroform



Red Deer River Crossing

- The Red Deer River Crossing is located east of the historic salt flats. Field investigations indicate that this and other heritage resources sites are outside the transmission line right of way.

Red Deer River



Cowan/Briggs Spur Area

- The Elders at several communities indicated that there are burials and archaeological sites located in this area.
- No investigation was possible due to private ownership restrictions.
- There is a known archaeological record for the area.

Assiniboine River and Crossing Area

- Elders and resource users have identified an area of cultural significance to the local Aboriginal people.
- On-going discussions have identified the sacred nature of a particular area through which the transmission line will traverse.
- An existing archaeological record is known for this area.

Assiniboine River Crossing



Results of Investigations

- 94 registered heritage resources sites, 30 ATK locations and 194 other ESS were located within the 3 mile buffer of the FPR . All sites were entered into the ESS table.

Effects on Heritage Resources

- There is potential for the Project to disturb heritage resources, sensitive sites/ burial sites, known and unknown.
- Construction activities can cause irreparable changes to the physical landscape resulting in disturbance or destruction of known and unknown heritage resources.
- Many communities expressed concerns about the potential for the project to disturb sensitive sites/ burial sites.

Mitigation Measures

- Manitoba Hydro will deal with all heritage resources in accordance with the *Heritage Resources Act* and will ensure that all sensitive sites are identified in its Environmental Protection Plans.
- **Compliance with the *Heritage Resources Act***
 - *Avoidance, protection, removal*
- **Heritage Resources Protection Plan (HRPP)**
 - *Guidelines for the field personnel (MH and contractors)*
- **Heritage Resources Monitoring**
 - *Hiring of an Environmental Officer to monitor construction activities and report to project archaeologist as needed*
- **On-going Discussions**
 - *Addressing community concerns*

Table 8.3-21 Residual Environmental Effects Summary – Heritage Resources

VEC	Project Component	Phase	Residual Effect	Assessment ¹
Heritage Resources	HVdc Transmission Line	Construction	Potential discovery of unknown heritage resources	Direction – Negative Magnitude – Small Geographic Extent – Project Site/Footprint Duration – Short-Term Overall – Not Significant
		Operations	Potential discovery of unknown heritage resources	Direction – Negative Magnitude – Small Geographic Extent – Project Site/Footprint Duration – Medium-Term Overall – Not Significant
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The End

