



PO Box 7950 Stn Main • Winnipeg, Manitoba Canada • R3C 0J1
(204) 360-4394 • sjohnson@hydro.mb.ca

July 31st, 2012

Mr. Terry Sargeant
Chair, Clean Environment Commission
305-155 Carlton St.
Winnipeg, MB R3C 3H8

Dear Mr. Sargeant,

RE: Bipole III Transmission Project – Supplemental Material

Please find attached supplemental materials to the Bipole III Environmental Impact Statement. The document contains supplemental socio-economic existing environment information and supplemental assessment in support of the original Bipole III EIS. An errata section for the EIS and Technical Reports is also included.

Manitoba Hydro will be providing 15 CD copies of the material to the Commission shortly. The document will also be posted on our website at www.hydro.mb.ca/projects/bipoleIII/eis.shtml.

Should you have any questions or require further information please contact myself at 360-4394.

Regards,

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

Shannon Johnson
Manager Licensing and Environmental Assessment Department
820 Taylor Ave (3)
Winnipeg, Manitoba
R3M 3T1

cc: Tracey Braun, Director, Environmental Approvals Branch, Manitoba Conservation and Water Stewardship

Attachments: 1

sj/tk

BIPOLE III PROJECT

**ENVIRONMENTAL IMPACT
STATEMENT – SUPPLEMENTAL
MATERIAL**

1.0 INTRODUCTION

Manitoba Hydro filed the Bipole III EIS with Manitoba Conservation December 2, 2011.

Since filing the Bipole III EIS with Manitoba Conservation, Manitoba Hydro has received comments from the public as part of the TAC review process as well as specific comments from TAC. These comments were responded to June 22, 2012. Manitoba Hydro has also since filing received interrogatories from the CEC regarding the filing. The first five batches of questions have been responded to as of July 31, 2012.

This supplemental material has focused on providing updates based on new information available to Manitoba Hydro since December 2011. In particular, the Keeyask EIS was filed with the regulator July 6, 2012 and specific supplementary information to the socio-economic effects assessment provided herein is based on updated information included in that filing. The information is provided to enhance and update the Bipole III EIS with additional information developed for the Keeyask Generation Project that is applicable to the Bipole III Project. This results in consistency between this document and the Keeyask Generation Project EIS which paid particular attention to Gillam and FLCN due to overlap of Bipole III Project components being built in the vicinity of Gillam, particularly the Keewatinoow Converter Station.

Supplemental information to the December 2, 2011 EIS document is provided in the following separate tabs:

- **Tab 1 – Overview** – provides overview to July 31, 2012 Supplemental Material.
- **Tab 2 – Errata** – indicates identified errors in the December 2, 2011 filing and updates to provide corrections.
- **Tab 3 – Socio-Economic Supplemental Filing** – provides in five separate attachments relevant baseline information, analysis and proposed mitigation consistent with the Keeyask EIS filed July 6, 2012. This information is focused on updates, addressing gaps and refining effects assessment regarding community services, public safety and worker interaction focused in particular on Gillam and FLCN.

BIPOLE III PROJECT
ENVIRONMENTAL IMPACT
STATEMENT
ERRATA

4.1 SCOPE OF ERRATA SUPPLEMENTAL FILING

The errata corrects or clarifies errors that were in the Bipole III Transmission Project EIS filed December 2, 2011. Corrections include typographical errors as well as clarifications and corrections regarding specific information contained in the EIS Main Volume and Technical Reports.

4.2 MAIN VOLUME

Chapter	Page	Current Text	Corrected Text/Clarification
Executive Summary	page iv	"the HVdc line route was divided into 13 sections ..."	"the HVdc line route was divided into 17 sections ..."
Chapter 1	Page 1-2, footnote 3	"...there will be insignificant voltage carried from the Riel Converter Station or the Keewatinoow Converter Stations through their respective feeder line connections and ground electrodes. The primary purpose of the feeder lines and ground electrodes is to ensure that during emergency events an alternative "circuit" will exist for the dc electricity to flow.	"...there will be insignificant current carried from the Riel Converter Station or the Keewatinoow Converter Stations through their respective feeder line connections and ground electrodes. The primary purpose of the feeder lines and ground electrodes is to ensure that during emergency events an alternative "circuit" will exist for the dc current to flow."
Chapter 1	Page 1-8	"Delivery of electricity to US markets is facilitated by membership in Mid-West Reliability Organization (MRO)."	Replace with; <u>"The export of surplus electricity to U.S. purchasers is facilitated by the organized energy markets operated by the Midwest Independent Transmission System Operator, Inc. ("MISO"), a U.S. regional transmission organization encompassing 11 states."</u>
Chapter 4	Page 4-10	"Songbirds and other birds (olive-sided flycatcher, loggerhead shrike, Sprague's pipit, golden-winged warbler, Canada warbler, rusty blackbird)"	"Songbirds and other birds (<u>Common nighthawk, whip-poor-will</u> , olive-sided flycatcher, loggerhead shrike, Sprague's pipit, golden-winged warbler, Canada

Chapter	Page	Current Text	Corrected Text/Clarification
			warbler, rusty blackbird)."
Chapter 4	Page 4-11	Resource Use	Add " wild rice harvesting " to list of VECs under Resource Use.
Chapter 4	Page 4-36 Fig. 4.2-2		A box in the chart for Long-term duration chart was not shaded. The corrected figure and explanation is attached.
Chapter 6	Map 6-2200-04	"Ruffed Grouse Distribution"	" Ruffed Grouse Distribution."
Chapter 6	Page 6-197	" approximately 487% of homes in Project Study Area ..."	"approximately 47.8% of homes in Project Study Area ..."
Chapter 8	Page 8-138	"songbirds and other birds – common nighthawk, olive-sided flycatcher, loggerhead shrike, Sprague's pipit, golden-winged warbler, Canada warbler, rusty blackbird."	"songbirds and other birds – common nighthawk, whip-poor-will , olive-sided flycatcher, loggerhead shrike, Sprague's pipit, golden-winged warbler, Canada warbler, rusty blackbird."

4.3 TECHNICAL REPORTS

Volume	Technical Report	Page/Reference	Corrected Text/Clarification
All Technical Reports			Index maps for map series in the technical reports have incorrectly indicated the scale of the tiles. The legend for Index maps should indicate that where there are 17 tiles the scale should be 1:250,000 not 1:50,000.
			Many map series have starting map numbers that do not start at 1 (e.g. Map 200-15 is first map in series). The second number after the map series number (e.g. 15) refers to the 1:250,000 scale tile number. If there is no data to present for a particular tile there is no map.
Volume 1	Aquatics	Appendix 6	Watercourse Crossing Assessment Booklets for sites 55 and 73 missing. Booklets attached.
Volume 2	Birds	Map Series 200 Map Series 300	No maps 200-01 to 200-14. No maps 300-01 to 300-06.

Volume	Technical Report	Page/Reference	Corrected Text/Clarification
		Map Series 500	No maps 500-01 to 500-03.
		Map Series 600	<u>Maps 600-02 to 600-16 are attached.</u>
		Map Series 700	No maps 700-02 to 700-10. <u>Map 700-01 attached.</u>
		Map Series 800	No maps 800-01 to 800-07.
		Map Series 900	No maps 900-01 to 900-14. <u>Map 900-15 attached.</u>
Volume 2	Birds	Map Series 1400	No map 1400-01.
		Map Series 1900	No maps 1900-01 to 1900-12.
		Map Series 2100	No maps 2100-01 to 2100-14.
		Map Series 2200	No maps 2200-01 to 2200-15.
		Map Series 2500	No maps 2500-01 to 2500-09.
		Map Series 2600	No maps 2600-01 to 2600-09.
		Map Series 2800	No maps 2800-01 to 2800-10.
		Map Series 2900	No maps 2900-01 to 2900-07 .
		Map Series 2900	No maps 2900-09 & 2900-10.
		Map Series 3000	No maps 3000-01 to 3000-09.
		Map Series 3100	No maps 3100-01 to 3100-06 and 3100-15.
		Map Series 3200	No maps 3200-14 & 3200-16.
Volume 3	Caribou	Map Series 400	No map 400-01.
		Map Series 500	No map 500-01.
		Map Series 600	No map 600-01.
		Map Series 700	No map 700-01.
		Map Series 800	No map 800-01.
	Mammals	Map 100-01	Should be <u>Map 400-01.</u>
		Map Series 500	No map 500-01.
		Map Series 600	No maps 600-01 to 600-09.
		Map Series 800	No maps 800-01 to 800-09.
		Map Series 1300	No maps 1300-01 to 1300-07.
Volume 4	Forestry	Map Series 100	No maps 100-01 to 100-03.
		Map Series 200	No maps 200-01 to 200-10.
		Map Series 300	No maps 300-01 to 300-03.
Volume 5	Terrain and Soils	Map Series 500	No maps 500-01 to 500-09.
		Map Series 600	No maps 600-03 to 600-07, 600-11 & 600-12.

Volume	Technical Report	Page/Reference	Corrected Text/Clarification
Volume 6	Terrestrial Ecosystems and Vegetation	Table of Contents	Appendices on pages 168 to 475 are not numbered in the Table of Contents.
		Page 266-283	Page numbering error. No pages are missing.
Volume 9	Environmental Assessment Public Consultation	Appendix C Master Stakeholder List (page 140)	<ul style="list-style-type: none"> Stakeholder 248 Fox Lake Cree Nation under Meeting Notes, add "<u>22/02/10</u>". Stakeholder 255 Tataskweyak Cree Nation under Meeting Notes, add "<u>23/03/10</u>" and "<u>06/03/10</u>". Stakeholder 257 York Factory Cree Nation under Meeting Notes, add "<u>05/06/10</u>". Mosakahiken Cree Nation under Letters add "<u>11/05/10</u>".
		Appendix F Meeting Notes	Add attached meeting notes for: <ul style="list-style-type: none"> Fox Lake Cree Nation, <u>22/02/10</u>. Tataskweyak Cree Nation, <u>23/03/10</u> and <u>06/03/10</u>. York Factory Cree Nation <u>05/06/10</u>.
Volume 10	Resource Use	page 19	Remove " <u>San Gold Corporation, Tantalum Mining Corporation of Canada, Ltd.</u> " These companies are not in the Project Study Area.
		4.3.5 Summary of Effects (page 39)	Replace "Summary of Effects" with "Summary of <u>Potential</u> Effects."

Attachment1 : Figure 4.2-2 (revised)

Section 4.2.10 of the Bipole III Transmission EIS describes residual effects significance evaluation. To help describe how “potentially significant” and “significant” effects are considered, a figure was included. The original version of Figure 4.2-2 provided in the November 2011 EIS is provided below.

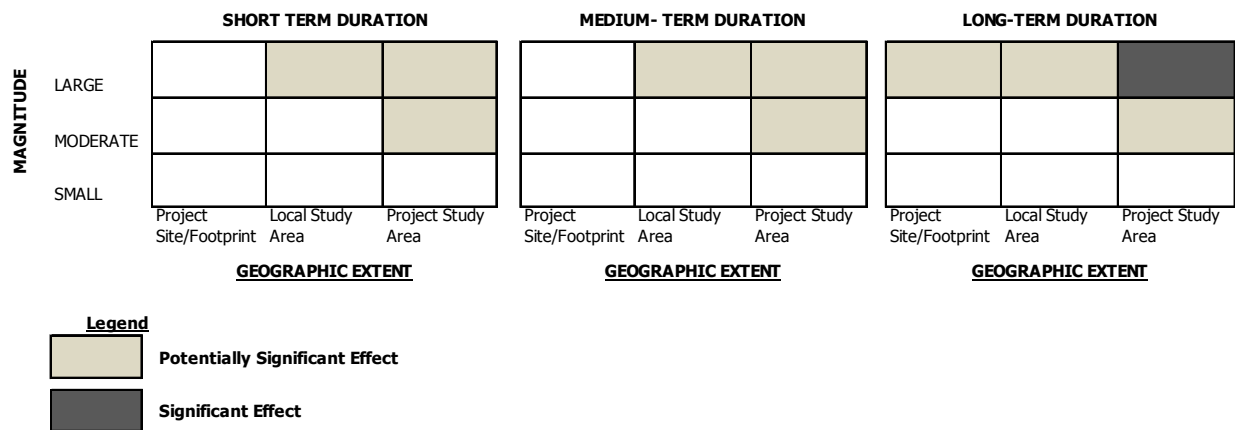


Figure 4.2-2: Potentially Significant and Significant Effects of the Project on VECs

To be consistent with the text, the figure should have been shaded to reflect that adverse effects of moderate geographical extent, moderate magnitude and long-term duration were considered “potentially significant”.

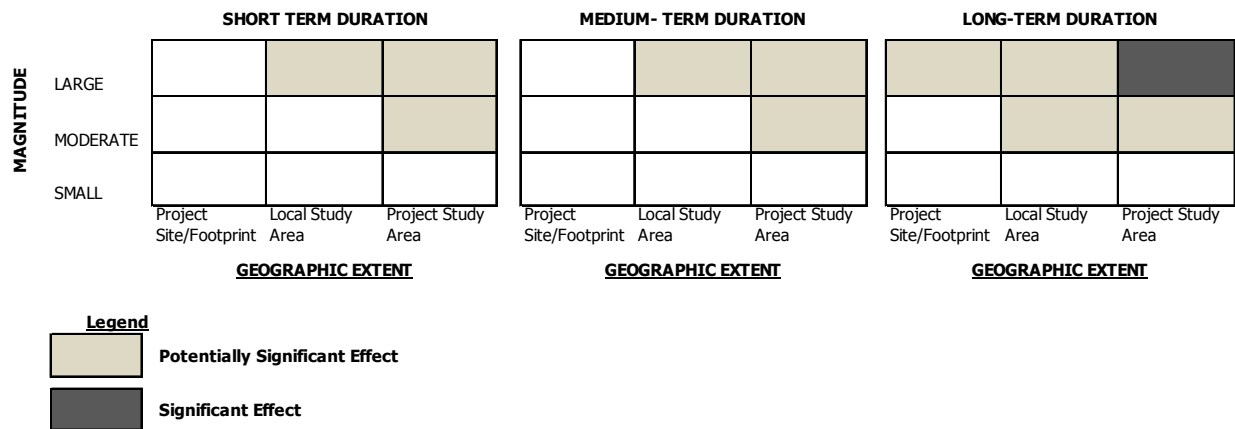


Figure 4.2-2 (revised): Potentially Significant and Significant Effects of the Project on VECs

Site 55

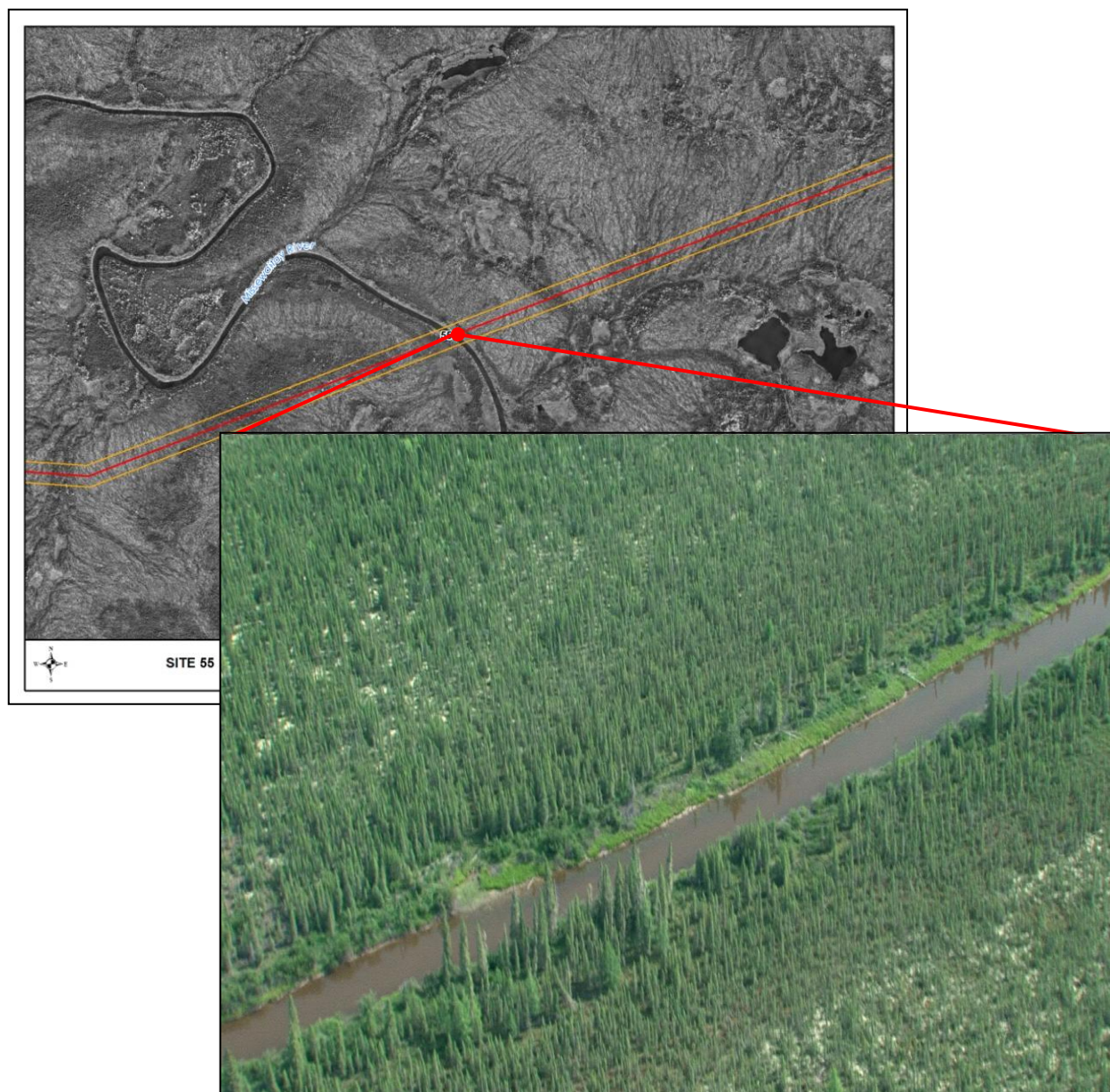
Missewaitay River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 650348
Northing: 6240910
Data Source: DOI. Video. Site Visit

General Morphology

Stream/Lake: Stream
Pattern: IM
Confinement: UN
Stage: Moderate
Flow Regime: Perennial
Morphology: LC
U/S Drainage: 432.7 km²
Distance to Receiving Water: Hunting River
2.46 km



Site Conditions

+ Physical Data

Survey Date: 13 October 2010

Stage: High

Transect

	1	2	3	4	5
Distance from Crossing (m)	0	33 US	33 DS	150 US	150 DS

Channel Profile

Channel and Flow

Channel Width (m)	~12.0	-	-	-	-
Wetted Width (m)	~12.0	-	-	-	-

Water Depths (m)

25%	0.5	-	-	-	-
50%	-	-	-	-	-
75%	-	-	-	-	-
Max	-	-	-	-	-

Banks

Right Bank Stability (%)	100	-	-	-	-
Left Bank Stability (%)	80	-	-	-	-
Right Bank Slope (°)	-	-	-	-	-
Left Bank Slope (°)	~15.0	-	-	-	-

Riparian

Floodplain Distance (m)

Right Bank	-	-	-	-	-
Left Bank	-	-	-	-	-

Riparian Distance (m)

Right Bank	~6	-	-	-	-
Left Bank	6.0	-	-	-	-

Riparian Vegetation Type (Y/N)

None	-	-	-	-	-
Grasses/sedges	Y	-	-	-	-
Shrubs	Y	-	-	-	-
Conifers	-	-	-	-	-
Deciduous	-	-	-	-	-
Mixed Forest	-	-	-	-	-

Canopy Cover (%)	0	-	-	-	-
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Substrate

Substrate Type (%)

Fines	100	-	-	-	-
Small Gravel	-	-	-	-	-
Large Gravel	-	-	-	-	-
Cobble	-	-	-	-	-
Boulder	-	-	-	-	-

Habitat Type

Habitat Composition (%)

Pool	-	-	-	-	-
Run	100	-	-	-	-
Riffle	-	-	-	-	-

Cover Types

Total Cover Available (%)	US	DS
Cover Composition (% of Total)	15	15
Large Woody Debris	10	10
Overhanging Vegetation	40	40
Instream Vegetation	50	50
Pool	-	-
Boulder	-	-
Undercut Bank	-	-





Overhead view of site 55.



Upstream view at site 55.



Downstream view at site 55.



Left bank to right bank view at site 55.

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present	Yes
DFO Manitoba Agricultural Watershed Classification:	-
Fish Habitat Classification:	Important

Fish Presence: N/A

Comments:

The Missewaitay River provides high habitat diversity for indicator and forage fish including habitat for spawning, rearing, feeding, overwintering and migration. Various species and life stages of fish are expected at this site. The site assessment was conducted 192m upstream of the actual site; however from orthophotos the conditions appear similar at the crossing.

+ Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

Exposed bank soil is susceptible to erosion and sedimentation of the river during construction.

Site 73

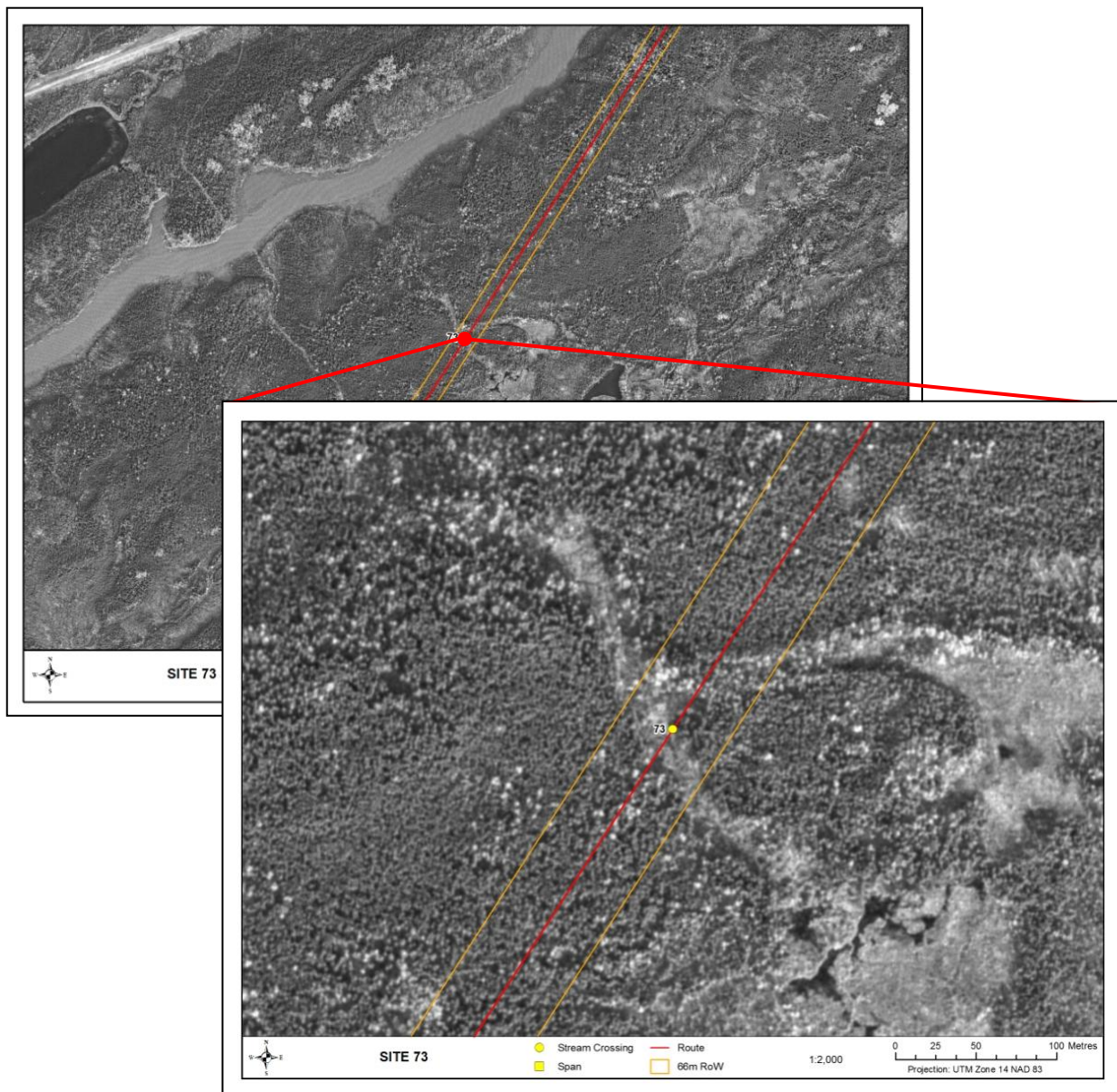
Unnamed Tributary of Odei River

Location

Datum: NAD 83
UTM: Zone: 14N
Easting: 619439
Northing: 6211546
Data Source: DOI

General Morphology

Stream/Lake: Stream
Pattern: SI
Confinement: UN
Stage: Low
Flow Regime: Ephemeral
Morphology: LC
U/S Drainage: 1.0 km²
Distance to Receiving Water: Odei River
0.5km



Site Conditions

+ Physical Data

Channel Profile

Channel and Flow

Wetted Width (m)	19.0
Channel Width (m)	19.0

Banks (%)

Right Bank Stability	100
Left Bank Stability	100

Riparian

Floodplain Distance (m)

Right Bank	9.6
Left Bank	10.2

Riparian Distance (m)

Right Bank	16.7
Left Bank	14.9

Riparian Vegetation Type (Y/N)

None	-
Grasses/sedges	Y
Shrubs	Y
Conifers	Y
Deciduous	-
Mixed Forest	-

Canopy Cover (%)

	-
--	---

Substrate

Substrate Type (%)

Fines	-
Small Gravel	-
Large Gravel	-
Cobble	-
Boulder	-

Cover Types

Total Cover Available (%)

-

Cover Composition (% of Total)

Large Woody Debris	-
Overhanging Vegetation	-
Instream Vegetation	-
Pool	-
Boulder	-
Undercut Bank	-
Surface Turbulence	-
Turbidity	-

Habitat Type

Habitat Composition

Pool	-
Run	-
Flat	-
Riffle	-
Rapid	-

Fish Habitat Classification and Sensitivity

+ Fish Habitat

Fish Habitat Present

Yes

DFO Manitoba Agricultural Watershed Classification:

-

Fish Habitat Classification:

Marginal

Fish Presence: N/A

Comments:

The RoW crosses this unknown tributary of the Odei River approximately 0.5 km from the Odei River. The tributary is an ephemeral stream with low habitat diversity. Forage fish may be found at this crossing.

+ Habitat Sensitivity

Sensitivity Rating: Low

Comments:

Poor fish habitat and abundant instream vegetation results in a low sensitivity rating.

Bipole III Transmission Project

Project Infrastructure

- Final Preferred Route
- Converter Station Site
- Local Study Area

Infrastructure

- Converter Station
- Generating Station
- Bipole I and II
- Transmission Line

Colonial Waterbirds

NAME

- Bald Eagle
- Black Tern
- Bonaparte's Gull
- Common Tern
- Double-Crested Cormorant
- Franklin's Gull
- Great Blue Heron
- Ring-billed Gull
- Ring-necked Duck
- Unidentified Gull
- Western Grebe

Landbase

- Community
- City / Town
- Rural Municipality
- First Nation
- National/Provincial Park
- Provincial Forest

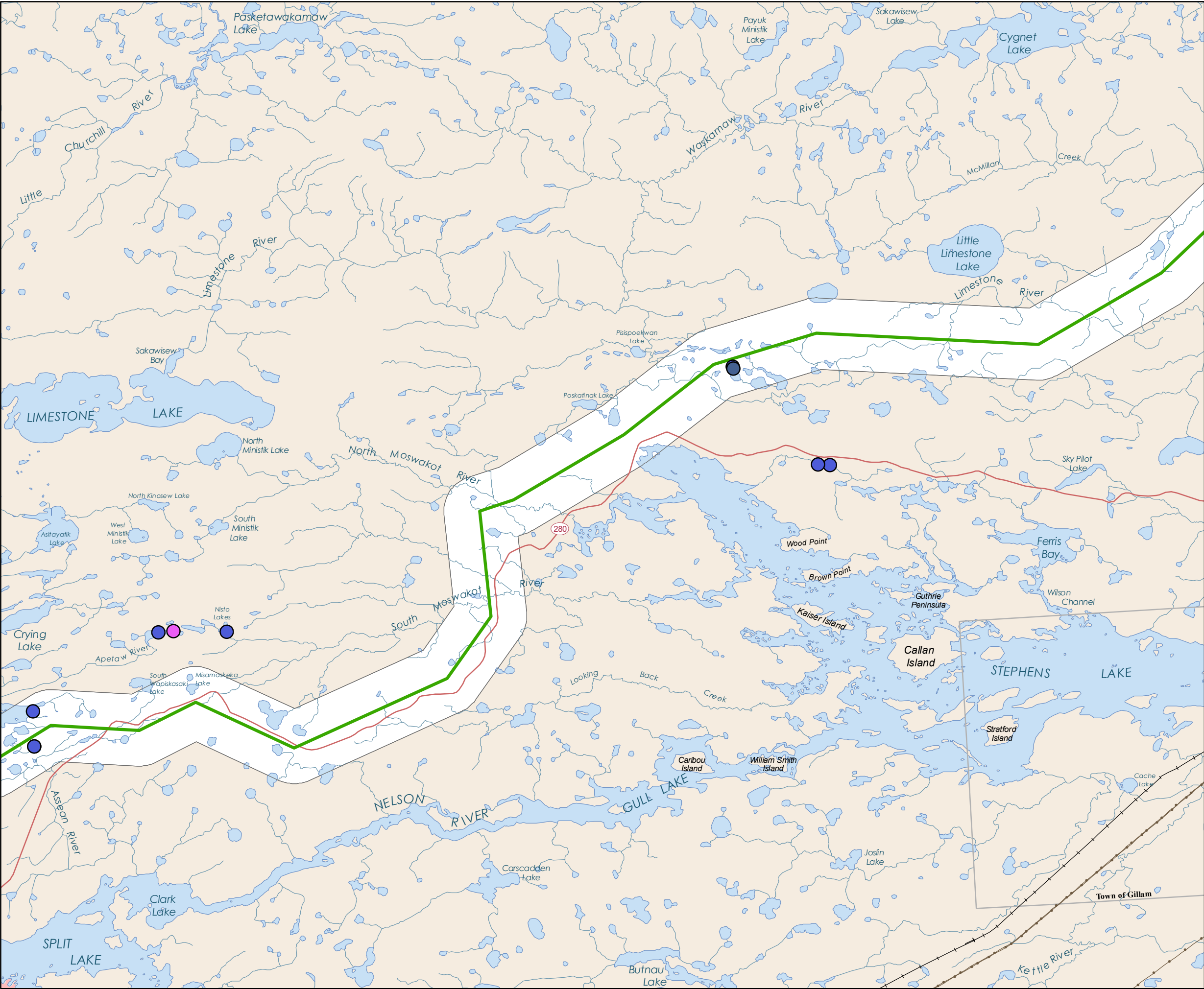
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Date Created: August 13, 2011

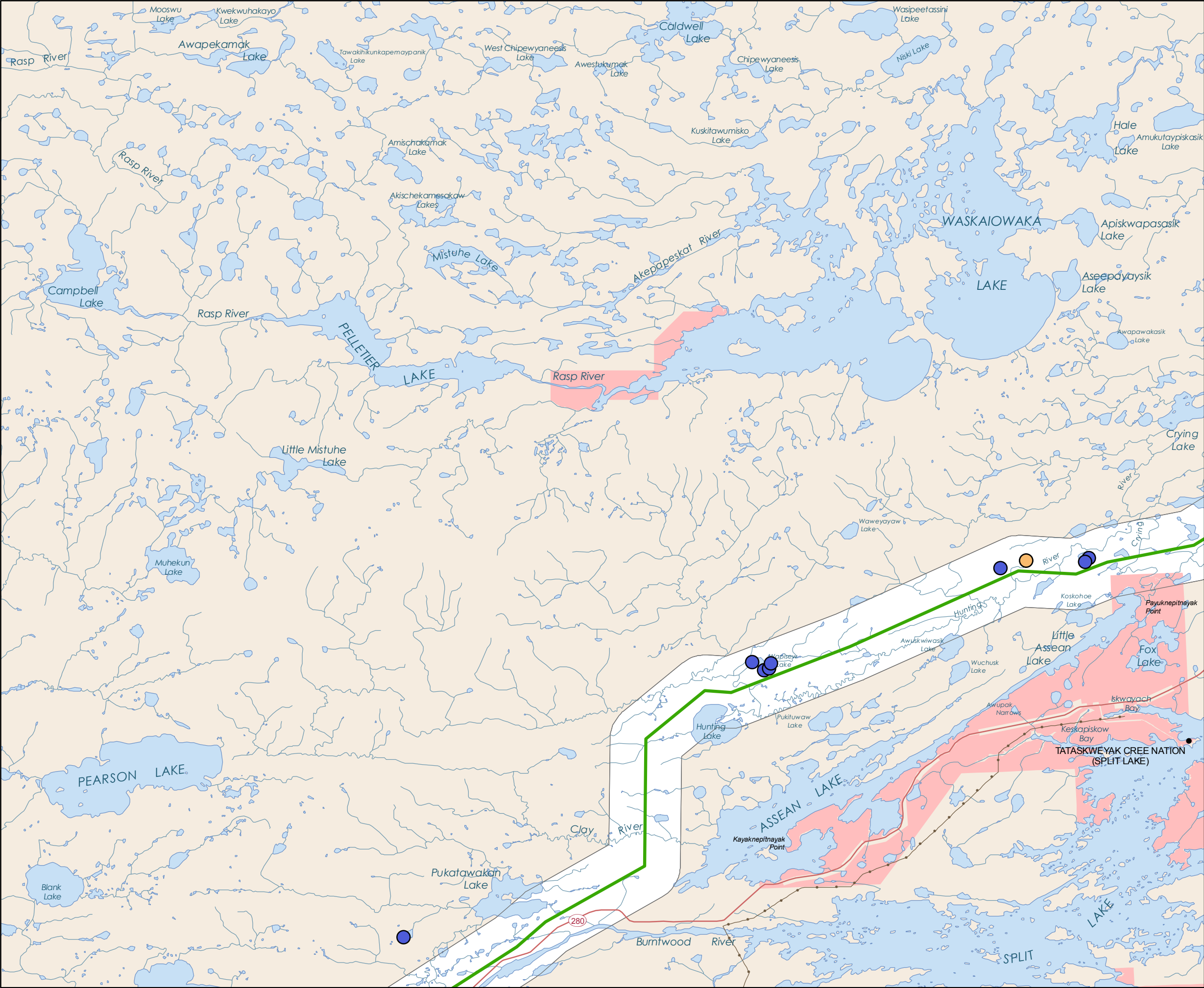


0 5 10 Kilometres
0 3 6 Miles

1:250,000

Colonial Waterbird Nests By Species





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**Colonial Waterbird
Nests By Species**

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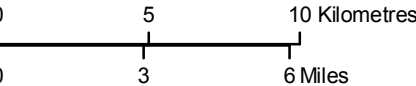
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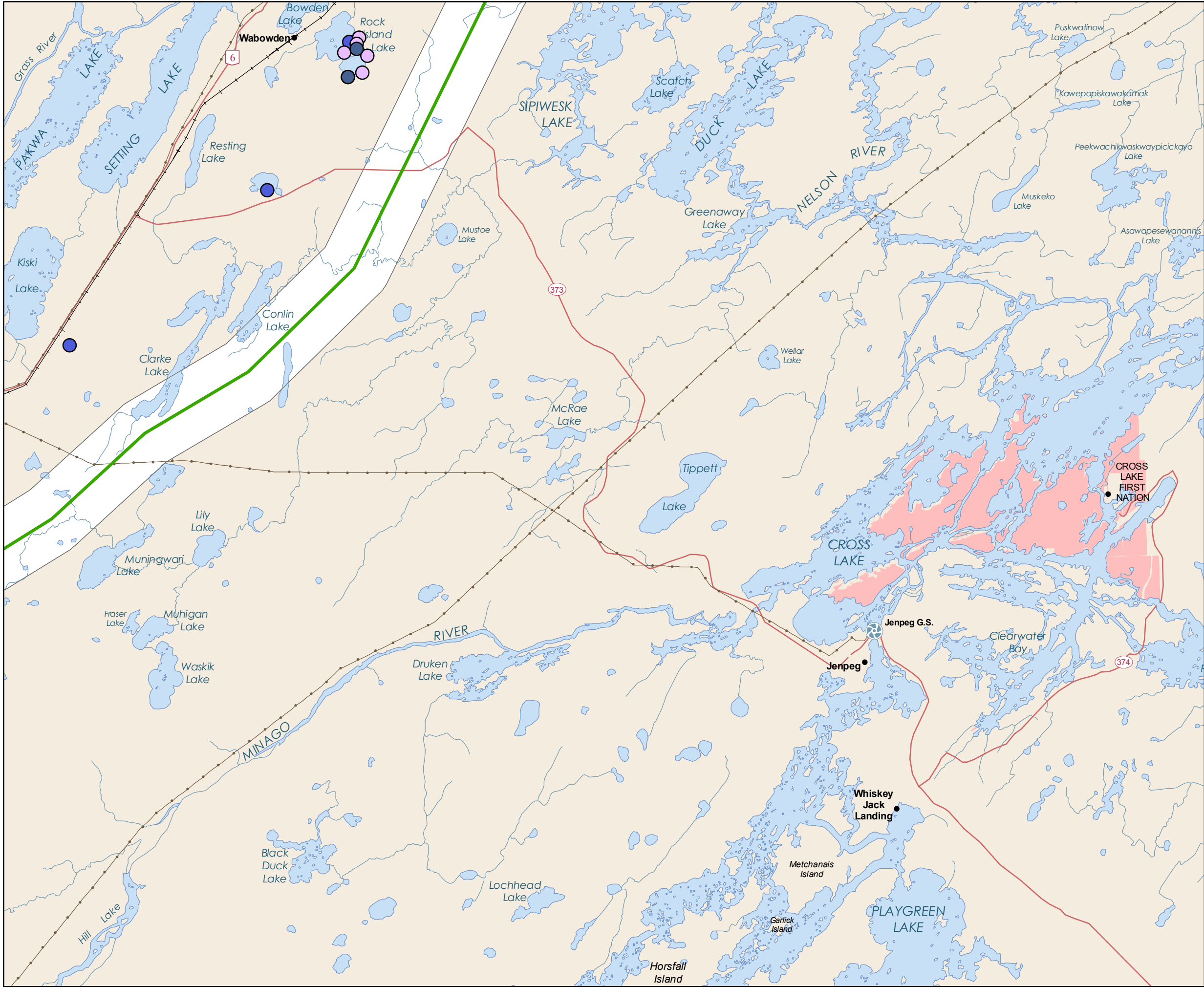
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Colonial Waterbird Nests By Species







Bipole III Transmission Project

Project Infrastructure





-  Final Preferred Route
-  Converter Station Site
-  Local Study Area

Infrastructure







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-  Transmission Line

Colonial Waterbirds

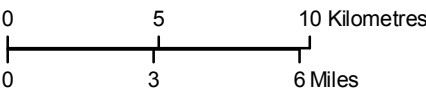
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**Colonial Waterbird
Nests By Species**

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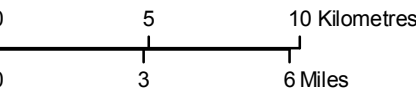
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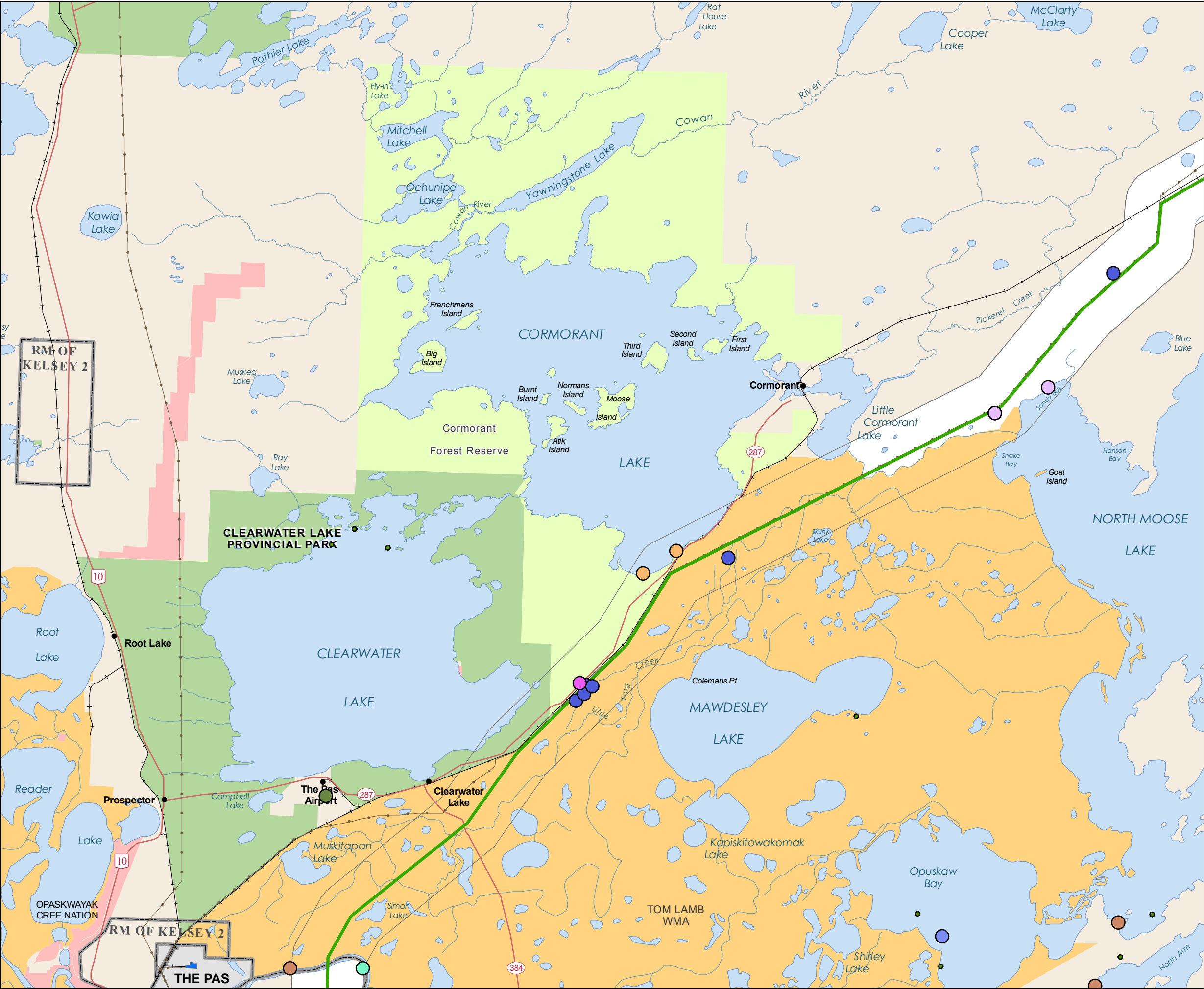
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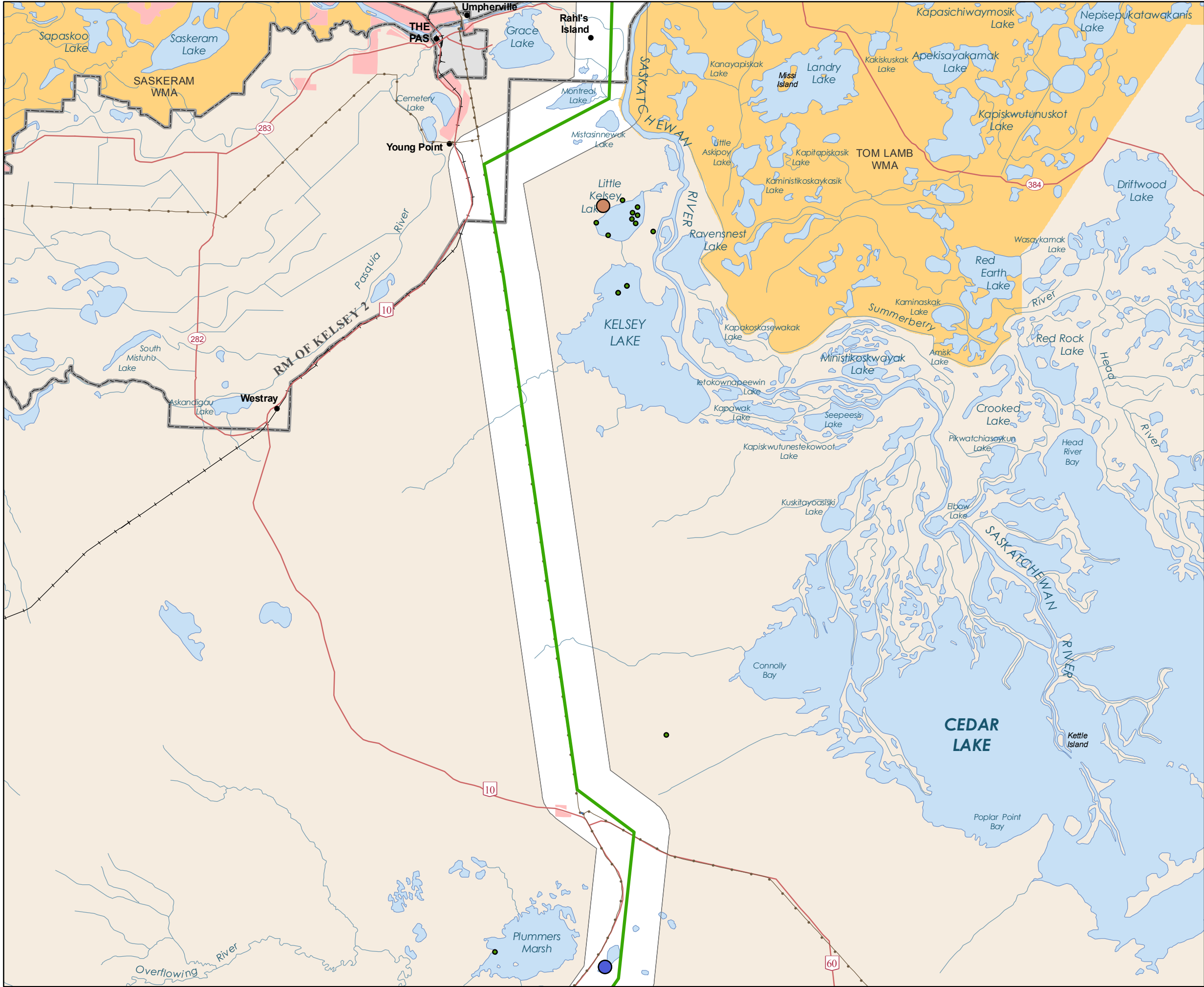
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Colonial Waterbird Nests By Species





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**Colonial Waterbird
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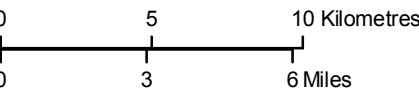
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Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011



1:250,000

Colonial Waterbird Nests By Species

Bipole III Transmission Project

Project Infrastructure

- Final Preferred Route
- Converter Station Site
- Local Study Area

Infrastructure

- Converter Station
- Generating Station
- Bipole I and II
- Transmission Line

Colonial Waterbirds

NAME

- Bald Eagle
- Black Tern
- Bonaparte's Gull
- Common Tern
- Double-Crested Cormorant
- Franklin's Gull
- Great Blue Heron
- Ring-billed Gull
- Ring-necked Duck
- Unidentified Gull
- Western Grebe

Landbase

- Community
- City / Town
- Rural Municipality
- First Nation
- National/Provincial Park
- Provincial Forest

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011

0 5 10 Kilometres
0 3 6 Miles

1:250,000

Colonial Waterbird Nests By Species

Bipole III Transmission Project

Project Infrastructure

- Final Preferred Route
- Converter Station Site
- Local Study Area

Infrastructure

- Converter Station
- Generating Station
- Bipole I and II
- Transmission Line

Colonial Waterbirds

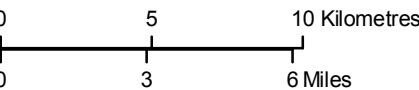
NAME

- Bald Eagle
- Black Tern
- Bonaparte's Gull
- Common Tern
- Double-Crested Cormorant
- Franklin's Gull
- Great Blue Heron
- Ring-billed Gull
- Ring-necked Duck
- Unidentified Gull
- Western Grebe

Landbase

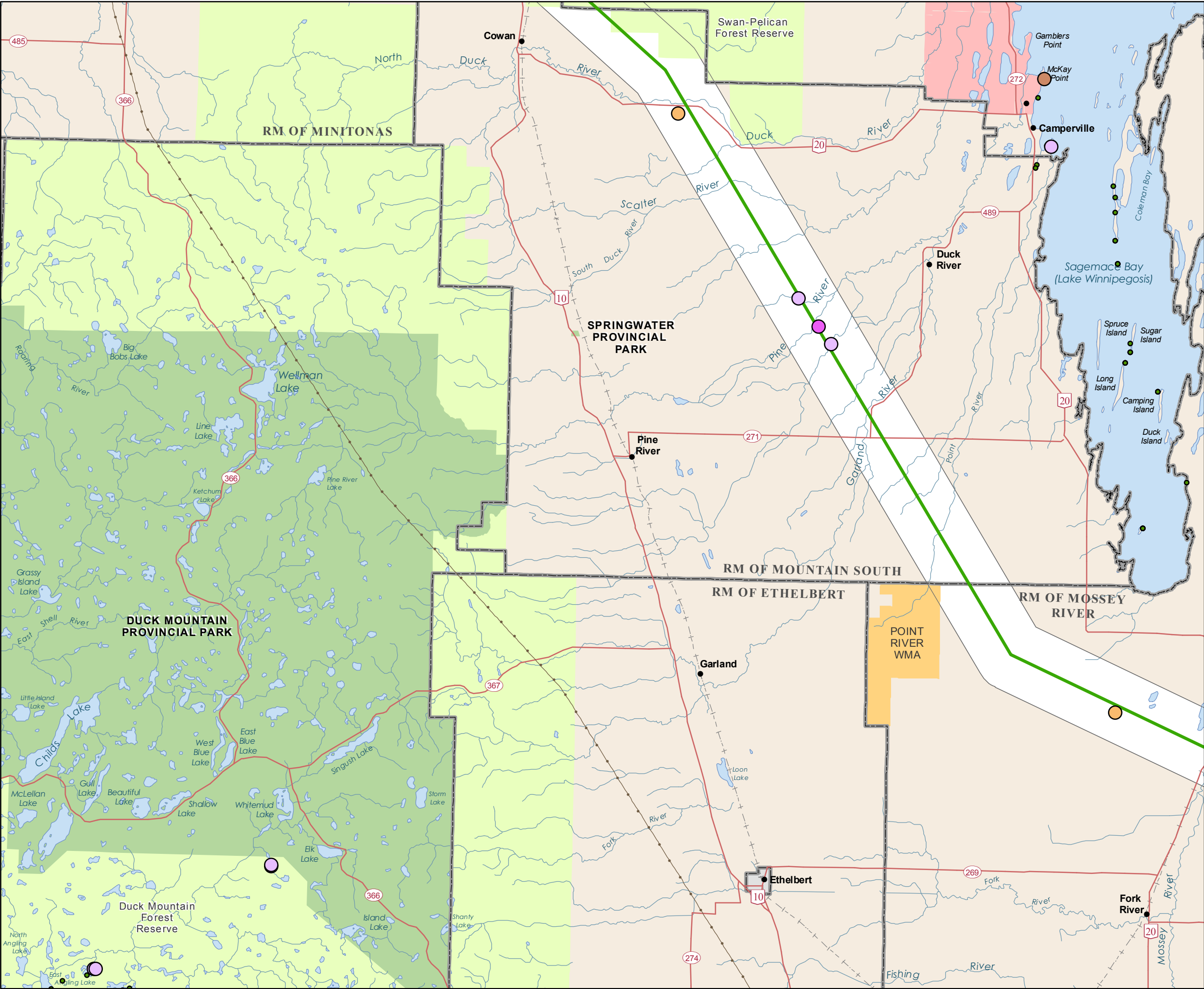
- Community
- City / Town
- Rural Municipality
- First Nation
- National/Provincial Park
- Provincial Forest

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011



1:250,000

Colonial Waterbird Nests By Species



Bipole III Transmission Project

Project Infrastructure

- Final Preferred Route
- Converter Station Site
- Local Study Area

Infrastructure

- Converter Station
- Generating Station
- Bipole I and II
- Transmission Line

Colonial Waterbirds

NAME

- Bald Eagle
- Black Tern
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- Great Blue Heron
- Ring-billed Gull
- Ring-necked Duck
- Unidentified Gull
- Western Grebe

Landbase

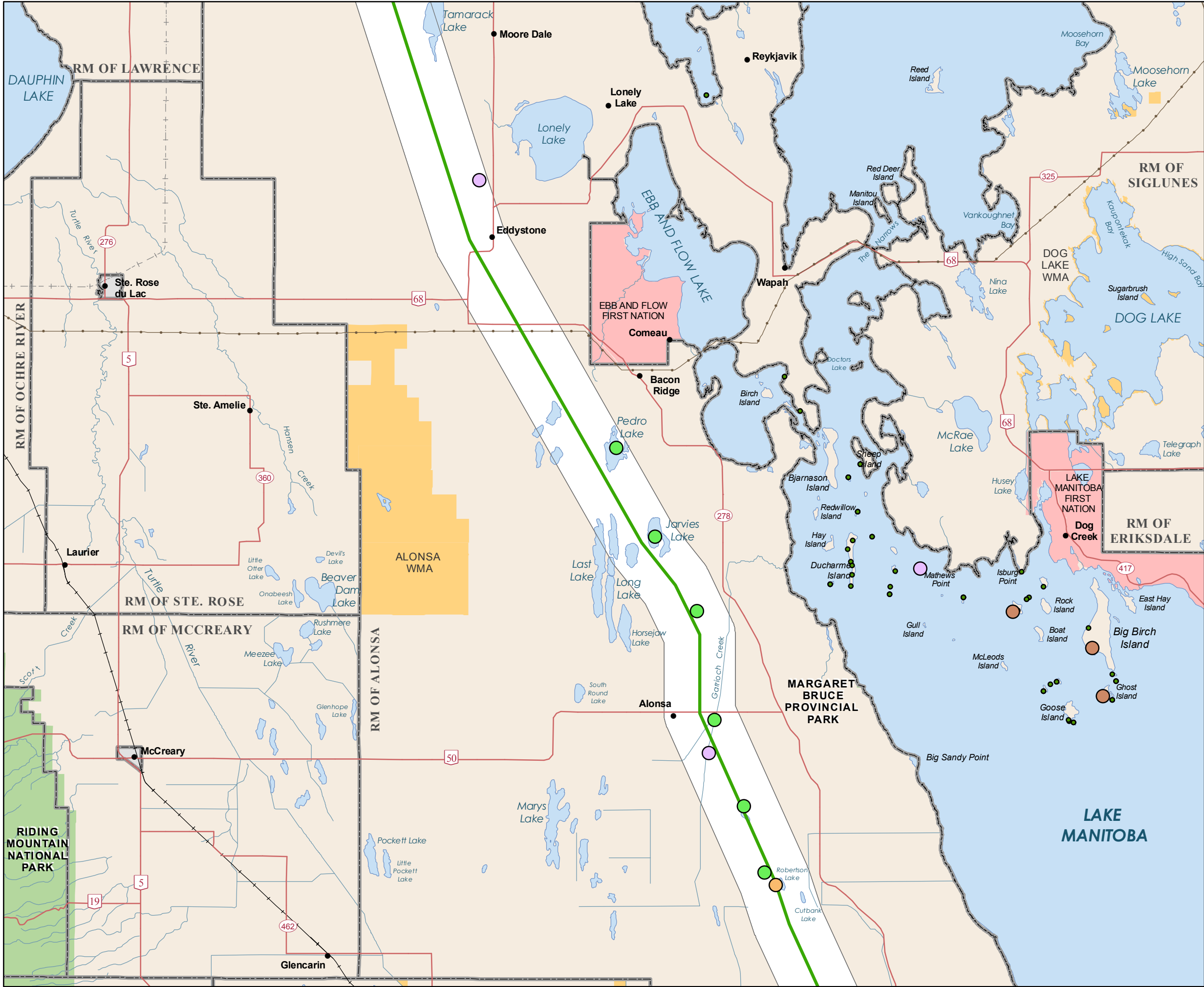
- Community
- City / Town
- Rural Municipality
- First Nation
- National/Provincial Park
- Provincial Forest

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011

0 5 10 Kilometres
0 3 6 Miles

1:250,000

Colonial Waterbird Nests By Species



Bipole III Transmission Project

Project Infrastructure

- Final Preferred Route
- Converter Station Site
- Local Study Area

Infrastructure

- Converter Station
- Generating Station
- Bipole I and II
- Transmission Line

Colonial Waterbirds

NAME

- Bald Eagle
- Black Tern
- Bonaparte's Gull
- Common Tern
- Double-Crested Cormorant
- Franklin's Gull
- Great Blue Heron
- Ring-billed Gull
- Ring-necked Duck
- Unidentified Gull
- Western Grebe

Landbase

- Community
- City / Town
- Rural Municipality
- First Nation
- National/Provincial Park
- Provincial Forest

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011

0 5 10 Kilometres
0 3 6 Miles

1:250,000

Colonial Waterbird Nests By Species

Bipole III Transmission Project

Project Infrastructure

- Final Preferred Route
- Converter Station Site
- Local Study Area

Infrastructure

- Converter Station
- Generating Station
- Bipole I and II
- Transmission Line

Colonial Waterbirds

NAME

- Bald Eagle
- Black Tern
- Bonaparte's Gull
- Common Tern
- Double-Crested Cormorant
- Franklin's Gull
- Great Blue Heron
- Ring-billed Gull
- Ring-necked Duck
- Unidentified Gull
- Western Grebe

Landbase

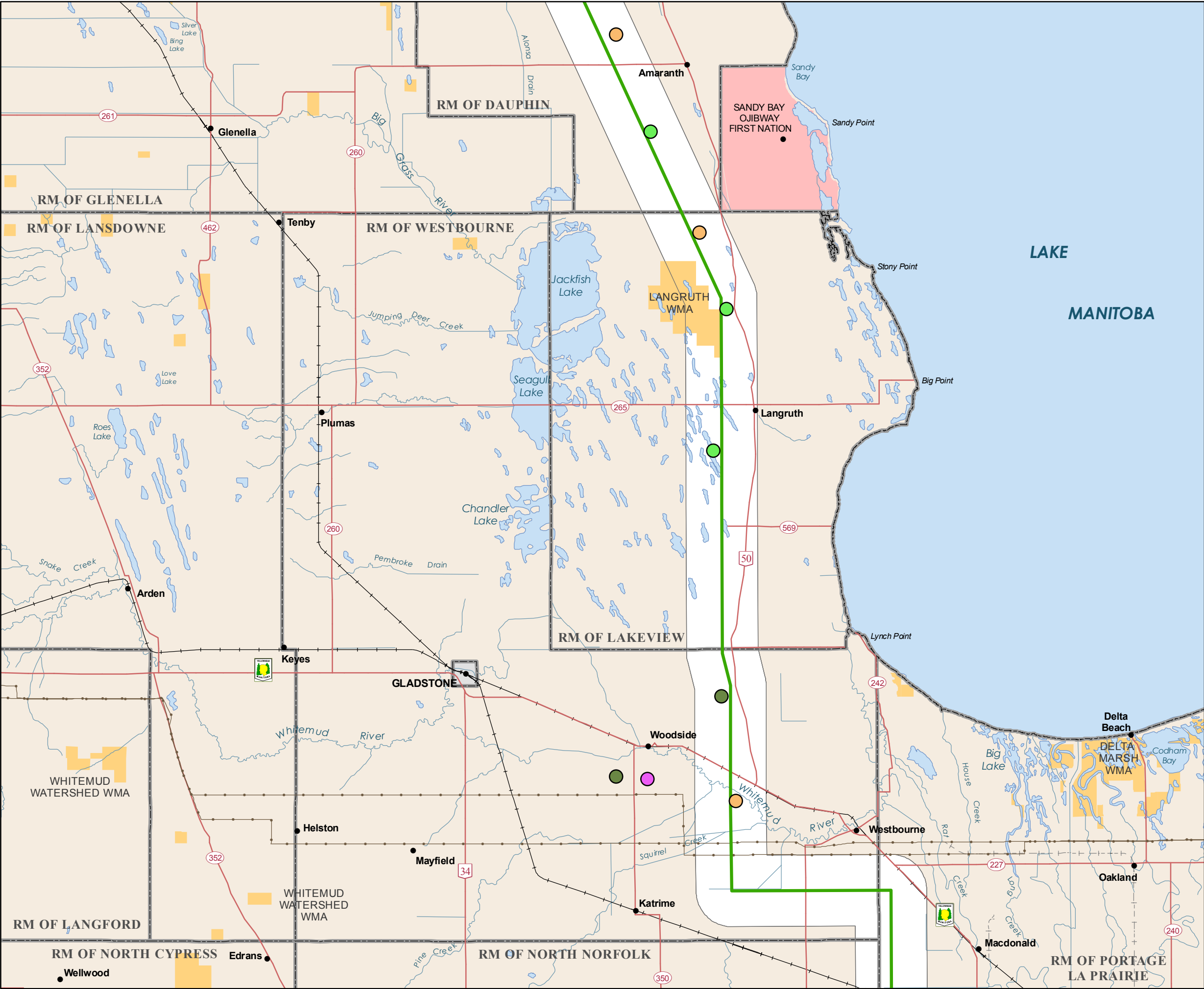
- Community
- City / Town
- Rural Municipality
- First Nation
- National/Provincial Park
- Provincial Forest

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011

0 5 10 Kilometres
0 3 6 Miles

1:250,000

Colonial Waterbird Nests By Species



Bipole III Transmission Project

Project Infrastructure

- Final Preferred Route
- Converter Station Site
- Local Study Area

Infrastructure

- Converter Station
- Generating Station
- Bipole I and II
- Transmission Line

Colonial Waterbirds

NAME

- Bald Eagle
- Black Tern
- Bonaparte's Gull
- Common Tern
- Double-Crested Cormorant
- Franklin's Gull
- Great Blue Heron
- Ring-billed Gull
- Ring-necked Duck
- Unidentified Gull
- Western Grebe

Landbase

- Community
- City / Town
- Rural Municipality
- First Nation
- National/Provincial Park
- Provincial Forest

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011

0 5 10 Kilometres
0 3 6 Miles

1:250,000

Colonial Waterbird Nests By Species

Bipole III Transmission Project

Project Infrastructure

- Final Preferred Route
- Converter Station Site
- AC Collector Line
- Ground Electrode Line
- Ground Electrode Site
- Construction Camp Site
- Local Study Area

Infrastructure

- Converter Station
- Generating Station
- Bipole I and II
- Transmission Line

Colonial Waterbirds

- Nest Site

Landbase

- Community
- City / Town
- Rural Municipality
- First Nation
- National/Provincial Park
- Provincial Forest
- Wildlife Management Area

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011

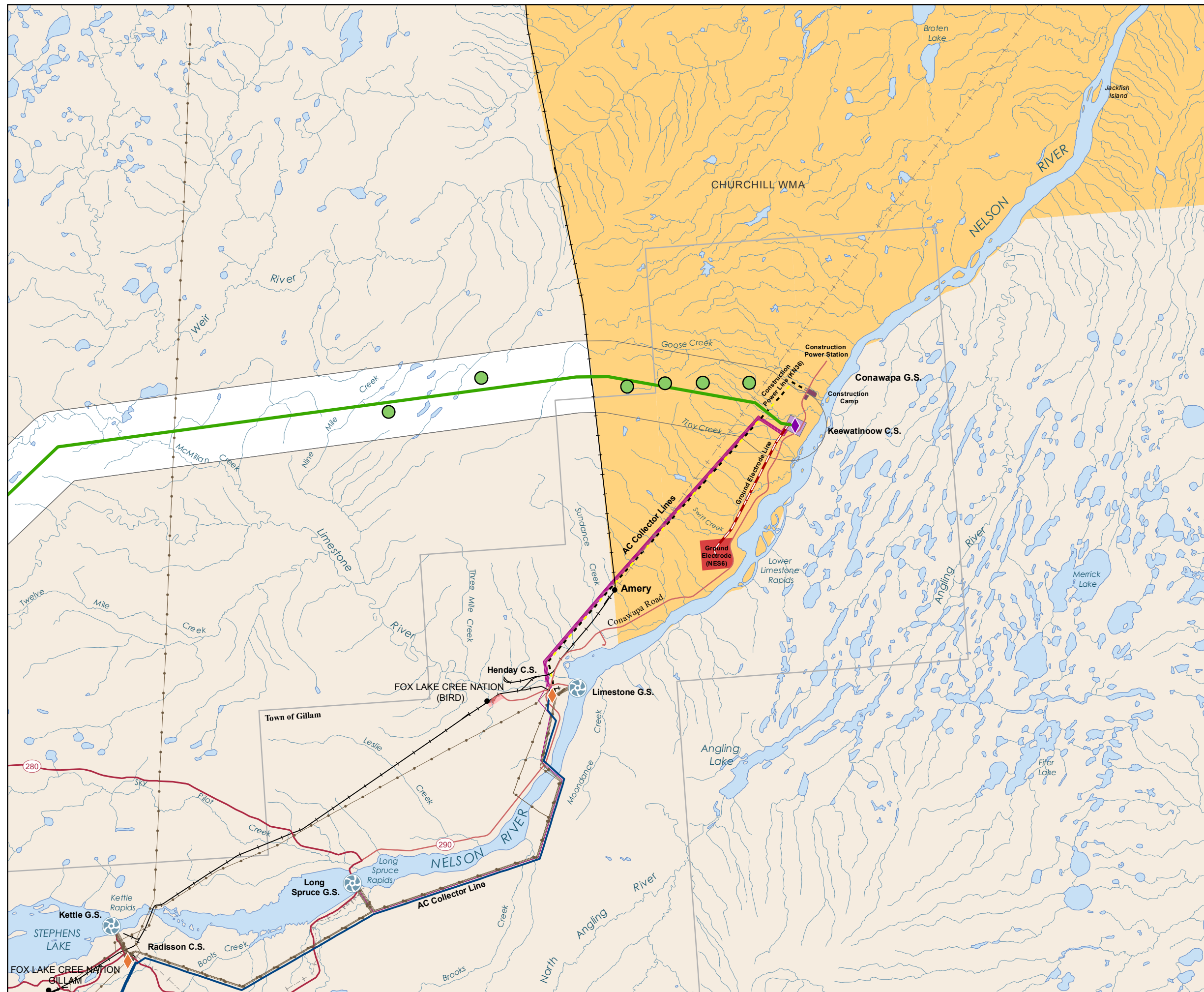


0 5 10 Kilometres
0 3 6 Miles

1:250,000

Locations of Colonial Waterbird Nests and Colonies Observed in 2009 and 2010

Map 700-01



Bipole III Transmission Project

- Project Infrastructure
- Final Preferred Route
 - Converter Station Site
 - AC Collector Line
 - Ground Electrode Line
 - Ground Electrode Site
 - Construction Power (KN36)
 - Construction Power Site
 - Construction Camp Site
 - Local Study Area

- Infrastructure
- Converter Station
 - Generating Station
 - Bipole I and II
 - Transmission Line
 - Electrical Station

- Raptor Concentration
- High Raptor Concentrations
 - Potential for High Raptor Concentrations

- Landbase
- Community
 - City / Town
 - Rural Municipality
 - First Nation
 - National/Provincial Park
 - Provincial Forest
 - Wildlife Management Area

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, MMM, Stantec, ProvMB, NRCAN, WRCS
Date Created: August 13, 2011

0 5 10 Kilometres
0 3 6 Miles

1:250,000

Areas of High Raptor Concentration from the 2010 Waterfowl Survey

RECORD OF MEETING

Title: Bipole III – Community Open House for Fox Lake Cree Nation

Date of Meeting: February 22, 2010

Time: 3:00 - 7:00 pm

Location: Gillam Recreation Centre

In Attendance: Fox Lake Cree Nation: 3 attendees
Manitoba Hydro: Carl Johnson, Duane Hatley, and Vince Kuzdak (Eagle Vision Resources)

Item	Description	Action By
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There was general discussion on a number of items as follows:

- 1 Attendees discussed east versus west for Bipole III.

Recorded By: Vince Kuzdak / Lindsay Thompson

Name of recorder

RECORD OF MEETING

Title:	Bipole III – Orientation session with Tataskwayak Cree Nation (TCN)
Date of Meeting:	Tuesday, March 23, 2010
Time:	1:30 pm
Location:	Manitoba Hydro - 820 Taylor
In Attendance:	Tataskweyak Cree Nation: Gordon Spence, John Garson, Justin Rak-Banville, Martha, Ron Lowe, and Victor Spence Manitoba Hydro: Carl Johnson, Duane Hatley, Brett McGurk, Regan Windsor, Lindsay Thompson, Somia Sadiq (MMM Group), Vince Kuzdak (Eagle Vision Resources), John Dyck (Plus4 Consulting) and Doug Schindler (Joro Consultants)

Item	Description	Action By
	Introductions were made and C. Johnson thanked those in attendance for the opportunity to discuss the Bipole III Project. Manitoba Hydro representatives gave PowerPoint presentations on the need for Bipole III for transmission system reliability, the SSEA process, timelines and regulatory requirements, the Aboriginal Traditional Knowledge (ATK) process, and biophysical studies for the project.	
1	During and after the presentation there were discussions and questions as follows: Will each alternative route have its own environmental assessment? Manitoba Hydro representatives indicated that the part of the SSEA is a narrowing down process. Once the preferred route has been selected, Manitoba Hydro will draft the Environmental Impact Statement (EIS).	
2	What has been the general feedback from Rounds 1 and 2? Manitoba Hydro representatives indicated that business and employment opportunities and east versus west were issues that were often raised at open houses and meetings. Manitoba Hydro representatives indicated that the Round 3 newsletter outlines some of the issues that were discussed in Round 1 and 2.	
3	Are the meetings and open houses almost complete for Round 3? Manitoba Hydro representatives stated that the meetings were mostly complete and there are eight remaining community open houses.	
4	Why are there only two tower designs in the presentation but three in other publications? Manitoba Hydro representatives stated that the third tower is the angle tower and it was omitted from the presentation to avoid confusion. Which tower will be used in the Split Lake Resource Management Area (SLRMA)? The guy suspension lattice steel tower and angle tower would be used in the SLRMA. What is the span for the towers? Approximately 1200 - 1400 feet. How wide is the ROW? Approximately 62 - 64 metres.	
5	What are intellectual property rights? Community members may have information that they do not want shared with Manitoba Hydro. Manitoba Hydro has to ensure that they are transparent and do not misuse information.	
6	Is ATK taken into account when doing site selection? Manitoba Hydro has included information to date in the process although there may be areas where Manitoba Hydro does not have ATK. Tataskweyak Cree Nation representatives mentioned that they are unsure about how the OWL process will be included in the Project EIS.	

Item	Description	Action By
7	In the Split Lake and Gull Lake areas, there has been sightings of caribou, which herd would that be? Manitoba Hydro representatives stated that they were unsure as it may be one of three herds.	
8	Has there been research on potential impacts on caribou caused by Bipole I and II? Manitoba Hydro representatives stated that only now have they had the capability to monitor the impacts. The monitoring for Wuskwatim will assist with determining the impact of transmission lines on caribou.	
9	How does caribou being a threatened species impact the EIS? Manitoba Hydro representatives indicated that they are working in a collaborative process with Manitoba Conservation to address any potential impacts on caribou. Potential impacts on caribou can be addressed by routing considerations.	
10	Manitoba Hydro representatives indicated that they would like to have a Bipole III Community Open House. Last week, TCN held two days of workshops on Bipole III based on their work plan.	
11	Tataskweyak Cree Nation representatives shared their concerns about potential impacts on animals caused by the ROW clearing and an increase in poachers.	
12	Tataskweyak Cree Nation representatives discussed the importance of working closely together with Manitoba Hydro on Bipole III.	
13	Could Tataskweyak Cree Nation have access to the data that was used to determine the alternative routes? Manitoba Hydro representatives will follow up with a response. Tataskweyak Cree Nation representatives will contact Manitoba Hydro by email tomorrow to discuss how TCN can receive additional project information. Manitoba Hydro representatives indicated that the caribou information from the PowerPoint presentation is available to the public. Manitoba Hydro representatives stated that they had to sign confidentiality agreements for some of their data sets and they would not be able to share that information.	Manitoba Hydro

Recorded By: Lindsay Thompson

Name of recorder

RECORD OF MEETING

Title: Bipole III – Meeting with Tataskweyak Cree Nation (TCN)

Date of Meeting: Thursday, June 3, 2010

Time: 2:00 pm

Location: Manitoba Hydro Boardroom

In Attendance: NCN: 8 attendees

Item	Description	Action By
	There was general discussion on a number of items as follows:	
1	TCN is requesting access to the database that was used in the selection process for the alternative routes as well as any associated studies that have been completed. Manitoba Hydro indicated that technical studies on the alternative routes are currently being prepared, and once completed there is a possibility that they could be shared with TCN. TCN requested that the data and studies are sent along with a letter. Manitoba Hydro indicated that they will have to verify whether some of the layers could be shared as some of the layers have data agreements. The data that could not be shared would have to be stripped from the database. TCN questioned whether Manitoba Hydro could indicate which layers were stripped and Manitoba Hydro responded that they would indicate which layers are missing. TCN representatives questioned whether there is a GIS data layer for the Protected Areas Initiative. Manitoba Hydro representatives indicated that they would verify whether there is a layer and provide a response to TCN. TCN representatives questioned the timeline for the data sharing agreements and stressed that they require the data to prepare for their June 30th submission to Manitoba Hydro.	Manitoba Hydro
2	TCN representatives indicated that they would prefer that the preferred ROW follow the PR280. Manitoba Hydro representatives indicated that there may not be enough room in the PR280 road allowance to accommodate Bipole III as there is already a road and a fiber optics line. Manitoba Hydro indicated that they appreciate any feedback on routing.	Manitoba Hydro

Recorded By: Lindsay Thompson

Name of recorder

Action Item List

Item	Description	Action By
1	Determine whether Manitoba Hydro could share their routing database with TCN	Manitoba Hydro
2	Assess which layers from the database could be shared with TCN	Manitoba Hydro
3	Indicate whether any of the layers from the database are missing	Manitoba Hydro
4	Determine if the technical report could be shared with TCN	Manitoba Hydro
5	Once completed and if deemed acceptable, share the technical report with TCN	Manitoba Hydro
6	Prepare a letter to accompany the data and the technical report, if possible	Manitoba Hydro
7	Determine whether there is a GIS data layer for the Protected Areas Initiative	Manitoba Hydro
8	Provide a response to TCN on whether there is a GIS data layer for the Protected Areas Initiative	Manitoba Hydro
9	Assess whether the preferred ROW could follow the PR280	Manitoba Hydro

BIPOLE III PROJECT
ENVIRONMENTAL IMPACT
STATEMENT
SOCIO-ECONOMIC
SUPPLEMENTAL FILING

SCOPE OF SOCIO-ECONOMIC SUPPLEMENTAL FILING

SOCIO-ECONOMIC ENVIRONMENT

The following supplemental filing includes five tabs on the following topics including linkages to the filed Bipole III EIS:

- Tab 3.1 – supplemental existing environment information on housing and temporary accommodations in Gillam replaces the housing and temporary accommodations paragraphs in Section 6.3.4.2 Community Services of the Bipole III EIS (pages 6-197 and 6-198). Additional information on housing in Fox Lake (Bird) and for FLCN Members living in Gillam follows the Gillam section.
- Tab 3.2 – supplemental existing environment information regarding the populations of Gillam and Fox Lake Cree Nation (FLCN). This text should follow Section 6.3.6.3 under the Personal Family and Community Life section (page 6-212).
- Tab 3.3 – supplemental existing environment information regarding public safety and worker interaction as it relates to Gillam and FLCN. This text should follow Section 6.3.6.3 under the Personal Family and Community Life section (page 6-212).
- Tab 3.4 – supplemental effects assessment on community services (operation phase) has been taken from the Keeyask Generation Project EIS. This text should be added to the existing text on page 8-302.
- Tab 3.5 – supplemental effects assessment on public safety and worker interaction (construction and operation phases). This replaces Section 8.3.5.3 Environmental Effects Assessment and Mitigation, Public Safety, Construction, Worker Interaction (pages 8-325 to 8-330¹); and adds to the section on Operation (page 8-331).

The supplemental socio-economic information is provided to have consistency in information, analysis and proposed mitigation with what is contained in the Keeyask Generation Project EIS submitted for regulatory review on July 6, 2012. In addition, the supplemental filing updates baseline information that was developed for the Keeyask Generation Project and is applicable to the Bipole III Project; and updates, fills gaps and refines the effects assessment regarding community services and public safety and worker interaction.

¹ The section on Gang and Drug Activities remains unchanged.

TAB 3.1

SUPPLEMENTAL INFORMATION

EXISTING ENVIRONMENT

**HOUSING AND TEMPORARY
ACCOMMODATIONS**

The following text in Tab 3.1 follows the numbering of the original Bipole III EIS in order to facilitate the reader in understanding where the updated information fits into the original document. For example, this Tab 3.1 is focused on the existing environment (which is Chapter 6, Section 6.3 for the Socio-Economic Environment). The original numbering system has therefore been adopted.

6.0 EXISTING ENVIRONMENT

6.3 SOCIO-ECONOMIC ENVIRONMENT

6.3.4 Services

6.3.4.2 Community Services

The following is supplementary information on housing and temporary accommodations in Gillam and FLCN. The information related to Gillam replaces the paragraphs in Section 6.3.4.2 Community Services of the Bipole III EIS (pages 6-197 and 6-198). Additional information on Fox Lake (Bird) and FLCN members living in Gillam follows the Gillam section. The information is provided to enhance and update the Bipole III EIS with additional information developed for the Keeyask Generation Project that is applicable to the Bipole III Project. This results in consistency between this volume and the Keeyask Generation Project EIS which paid particular attention to Gillam and FLCN due to the overlap of Bipole III Project components being built in the vicinity of Gillam; particularly the Keewatinoow Converter Station.

Housing

Gillam

According to the 2006 Census, Gillam had a total of 435 occupied private dwellings of which approximately 74% were rental units. A recent study, however, determined that there were approximately 534 housing units in the Town of Gillam (see Table S 6.3-1), the majority which are owned by Manitoba Hydro and rented to employees stationed in the town. Manitoba Hydro homes accounted for approximately 322 units that ranged in size (600 to 1,650 square feet) and type (e.g., apartment, trailer, townhouse and single family dwellings). The majority of Manitoba Hydro and other institutional units were single-family and duplex homes. Only 37 units were apartments (HTFC 2008). Improvements are being made to many units, including the addition of screened porches, plumbed basements and attached garages; Manitoba Hydro homes are considered more desirable than other homes in Gillam (Keeyask Generation Project FLCN KPI Program 2009-2011).

Manitoba Hydro employees are eligible for a corporate housing subsidy as part of their compensation/benefit package (HTFC 2008). There is a shortage of housing in Gillam and there are currently 40 people on a waiting list for Manitoba Hydro housing. Housing units are being built to match the expanding needs of Manitoba Hydro in the region and in order to accommodate growth. Manitoba Hydro has plans to build a minimum of 200 houses in Gillam over the next 10 years for staff employed as a result of upcoming projects in the region (Keeyask Generation Project Gillam KPI Program 2009-2010). Manitoba Hydro has recently developed six to eight single-family lots (MMM Group Limited 2011) and a fourplex is under construction.

The Town of Gillam is currently looking into developing three new housing subdivisions. These subdivisions would consist of approximately 400 lots (MMM Group Limited 2011).

Gillam Services is responsible for maintaining corporate housing and other corporate facilities in the community (Keeyask Generation Project Gillam KPI Program 2009-2010).

Table S 6.3-1: Housing Ownership in Gillam

Owner	Number of Units
Manitoba Hydro	322*
Trailer Court	123
FLCN (units on Kettle Crescent and on Hudson Bay Railway land)	36
Frontier School Division	14
Town of Gillam	10
Her Majesty the Queen (HMQ), Canada (RCMP)	10
Private	8
Manitoba Housing Authority	7
Manitoba Telecom Services (MTS)	3
Canadian Mortgage and Housing Corporation (CMHC)	1
Total	534

Source: HTFC 2008.

Note:

*Includes 13 units in the Trailer Court Park.

In addition to Manitoba Hydro, other organizations that own homes in Gillam identified in Table S 6.3-1 include the Frontier School Division, Town of Gillam, Her Majesty the Queen (HMQ) Canada (RCMP), Manitoba Housing Authority, MTS, Canada Mortgage and Housing Corporation (CMHC) and a few private individuals. Most privately owned housing in the town is in the Gillam Trailer Park and along the rail line. This housing consists of factory built homes and trailers of varying quality and condition. Home ownership in Gillam is restricted by the limited availability of serviced land and high development costs owing to remoteness and soil conditions that require the construction of costly foundations. As a result, trailer homes on surface foundations are the most available and affordable home ownership options in Gillam (HTFC 2008).

Gillam's new Development Plan recommends developing a multi-stakeholder affordable housing strategy for non-Hydro employees to access a range of housing and living options (Dillon Consulting 2012). Manitoba Hydro recently established an alternative housing program, which will help to address home ownership in Gillam, by providing employees with options to purchase their home or to rent accommodation (Manitoba Hydro, *pers. comm.* 2012).

Temporary Accommodations - Gillam

Temporary accommodations can be found at two long-standing businesses in Gillam: the Aurora Gardens Motel (21 original rooms and 14 recently added rooms) and the Gillam Motor Inn (36 rooms). In addition to accommodations, the Aurora Gardens restaurant, Mile 326, (operated by a FLCN/Sodexo partnership) provides buffet-style meals and recently began catering services. The Gillam Motor Inn has a restaurant, a lounge (Lucky's Tavern) and vendor. Throughout the year, both businesses often have no vacancies and the expectation is that this situation will continue into the foreseeable future. Both businesses note that the recruitment and retention of staff is currently challenging, and is expected to remain so into the future (Keeyask Generation Project Gillam KPI Program 2009-2010). In 2010, Manitoba Hydro purchased modular units to accommodate up to 60 people. This facility, to be operated as a FLCN/Sodexo partnership, has been targeted to house workers on the Kettle Generating Station upgrade (stator replacement) and for future capacity in Gillam, including use by workers on future Gillam-area Manitoba Hydro projects.

Fox Lake Cree Nation

Information regarding FLCN has been updated to be consistent with the Keeyask Generation Project EIS. The information has been reviewed by FLCN as part of their review of the Keeyask EIS and reflects the current understanding of the housing situation in Fox Lake (Bird) and for FLCN members living in Gillam.

FLCN Members live on-reserve at Fox Lake (Bird), on-reserve at the A Kwis Ki Mahka Reserve in Gillam and also off-reserve in Gillam, Thompson, Winnipeg and other centres. According to the 2006 Census, there were 40 occupied private dwellings, either detached or semi-detached, in the reserve community of Fox Lake (Bird). The 2006 Census indicates that on average there were 2.6 people per household (Statistics Canada 2007). This number should be interpreted with caution, however, as the previous Census indicated an average household size of 3.6 people per household (Statistics Canada 2002), and the community-based research program suggested an average of four persons per household in Fox Lake (Bird) and three persons per household in Gillam. In 2009, data supplied by FLCN noted there were 265 Members living within the Town of Gillam (including the Gillam Trailer Park and the new urban reserve) (Keeyask Generation Project FLCN KPI Program 2009-2011). As of 2011, local estimates put the population of FLCN members living in Gillam at 500 (FLCN *pers. comm.* 2011).

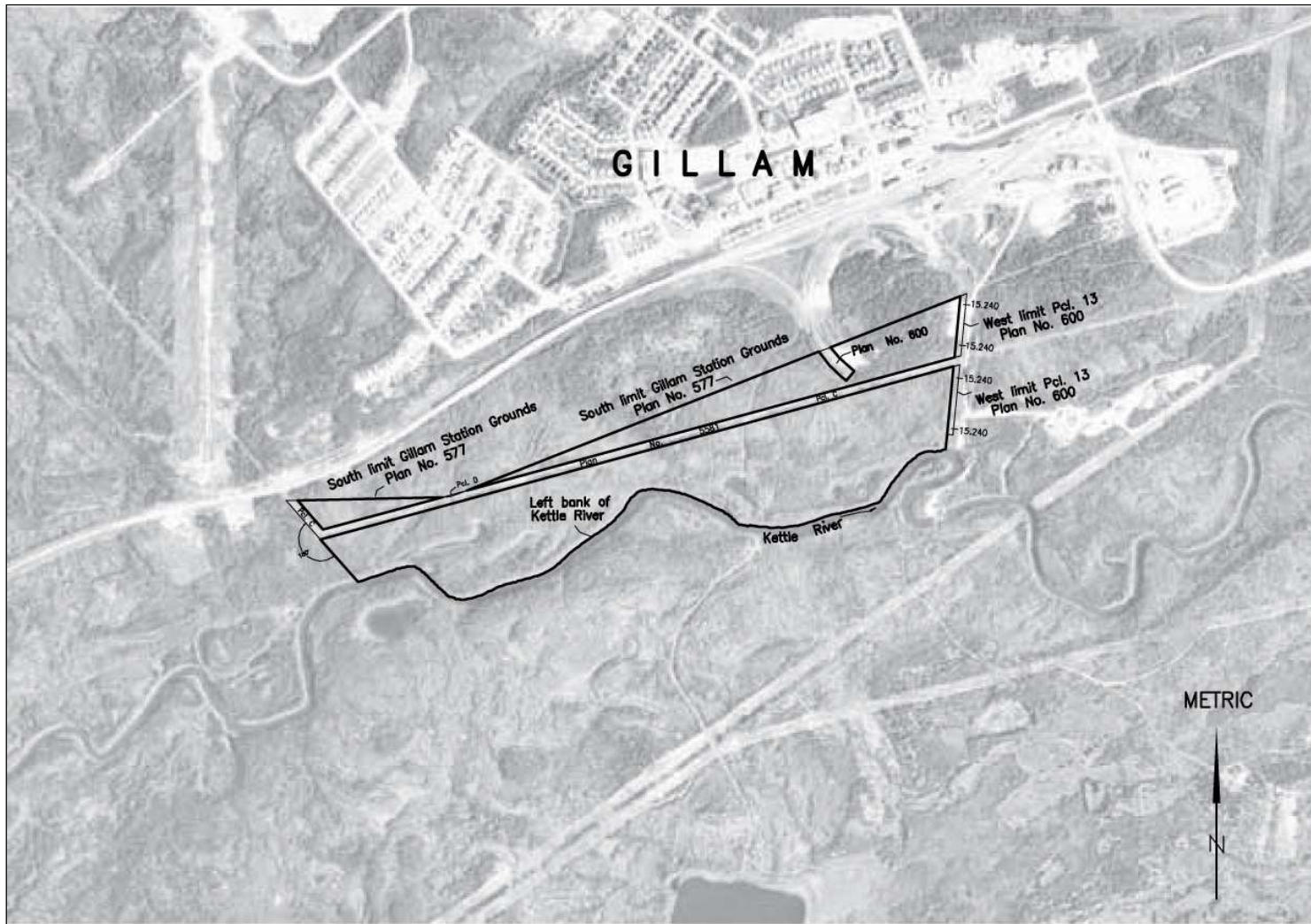
A FLCN housing committee allocates First Nation-owned homes to Members based on priority needs. However, like many First Nation communities in Manitoba, there is a shortage of housing in Fox Lake (Bird) (Keeyask Generation Project FLCN KPI Program 2009-2011). The quality of housing at Fox Lake (Bird) is generally considered to range from good to poor. Poor air circulation is believed to be a primary factor contributing to the presence of mould in some of the housing units (HTFC 2008; Keeyask Generation Project FLCN KPI Program 2009-2011). Many FLCN homes are older with the exception of a six-unit modern Elder's complex in Gillam (HTFC 2008).

Many units have multiple families living in them, and over the last 5-10 years the number of FLCN Members waiting for housing has substantially increased. At the time of writing, there were 86 people on the combined housing waiting list for both Fox Lake (Bird) and Gillam, and demand for housing is expected to exceed supply into the foreseeable future (Keeyask Generation Project FLCN KPI Program 2009-2011).

On September 9, 2009, the Government of Canada transferred 1.29 ha of land in Gillam in the area known as Kettle Crescent to FLCN to create the A Kwis Ki Mahka Reserve. In 2010, FLCN had 27 First Nation-owned housing units on Kettle Crescent and approximately 12 units on Hudson Bay Railway-owned land. Many FLCN Members also reside in the Gillam Trailer Court. There is limited land available for housing expansion on Kettle Crescent; however, the First Nation plans to purchase 25 trailers for their Members in Gillam. These homes could be placed on empty lots or replace older trailers located in the Gillam Trailer Court (Keeyask Generation Project FLCN KPI Program 2009-2011).

FLCN has requested the transfer of 80 acres of land along the Kettle River to the south of the town from INAC to FLCN for the purposes of reserve land, as a partial fulfillment of their outstanding TLE selections (FLCN, *et al.* 2004). The area is called the Kettle River Site (Figure S 6.3-1). FLCN is also interested in housing ownership related to units in the Gillam Trailer Court noted above, as well as Crown land within the Town boundaries, such as the Limestone Construction Camp and Sundance sites (Grahame McLeod and Associates 2007). A report on the setting aside of lands for FLCN reserve land in Gillam recommended that FLCN prepare a comprehensive proposal on FLCN land requirements in and around Gillam (Grahame McLeod and Associates 2007). No decisions have been made by INAC on additional transfer of Crown land (beyond the A Kwis Ki Mahka Reserve).

FLCN also faces challenges in adding to the housing stock at Fox Lake (Bird). Approximately half of the 98 acres of Fox Lake reserve land at Fox Lake (Bird) is presently used for housing or other purposes. Although FLCN wishes to build more housing units in the community with a focus on three- to four-bedroom units and one- to two-bedroom duplexes, the land available is not suitable for housing due to the high water table and poor soil conditions. There is no unused land suitable for housing in the community (FLCN 1997; Keeyask Generation Project FLCN KPI Program 2009-2011).



Source: FLCN *et al.* 2004. Cropped by InterGroup Consultants Ltd.

Figure S 6.3-1: Kettle River Site

TAB 3.2

SUPPLEMENTAL INFORMATION

EXISTING ENVIRONMENT

POPULATION

The following text in Tab 3.2 follows the numbering of the original Bipole III EIS in order to facilitate the reader in understanding where the updated information fits into the original document. For example, this Tab 3.2 is focused on the existing environment (which is Chapter 6, Section 6.3 for the Socio-Economic Environment). The original numbering system has therefore been adopted.

6.0 EXISTING ENVIRONMENT

6.3 SOCIO-ECONOMIC ENVIRONMENT

6.3.6 Personal, Family and Community Life

6.3.6.4 Gillam and Fox Lake Cree Nation

The following sections are supplemental baseline information regarding the populations of Gillam and Fox Lake Cree Nation (FLCN) and should follow Section 6.3.6.3 under the Personal Family and Community Life section of the Bipole III EIS (November 2011). The information is provided to enhance and update the Bipole III EIS with additional information developed for the Keeyask Generation Project that is applicable to the Bipole III Project. This results in consistency between this volume and the Keeyask Generation Project EIS which paid particular attention to Gillam and FLCN due to the overlap of Bipole III Project components being built in the vicinity of Gillam. The Bipole III Project components in the vicinity of Gillam are as follows:

- Section N1 of the Bipole III transmission line;
- The Keewatinoow Converter Station and associated infrastructure;
- Expansion of the Henday AIS 230 kV switchyard; and
- Upgrading of the Long Spruce switchyard.

This additional baseline population information does not materially change the assessment or conclusions originally presented in the Bipole III EIS.

The following sections include an overview of the population of the Town of Gillam, the community of Fox Lake (formerly known as the community of Bird) and FLCN. Current and historic population, population growth and population projections are provided. The information below is a consolidation of baseline information available from the Keeyask Generation Project EIS, Socio-Economic Environment, Resource Use and Heritage Resources Supporting Volume (June 2012) for these populations. Population data are supplemented with population projections outlining migration assumptions for the operation

phase of the Bipole III Project. Constraints on population growth in the communities of Gillam and Fox Lake (Bird) place population projections in context, while additional information related to the experience of the Wuskwatim Project is also included.

Gillam Population

Although the people of FLCN historically occupied the territory surrounding Gillam as part of their seasonal round of resource use, the first settlement in the area began in 1912-1913 at Mile 330 of the railway. A population of approximately 350 people settled in this area, consisting largely of railway workers and their families, along with some Members of YFFN (whose Members became part of FLCN in subsequent years). Construction of the railway over Kettle Rapids was interrupted by World War I, and the railway was not completed until 1929. “The present Town of Gillam at Mile 326 began after the railway gangs moved on from Mile 330. The Fox Lake people settled on the hill “south switch” [of the railway] and the Split Lake peoples settled on the north side of the tracks” (Town of Gillam 2010).

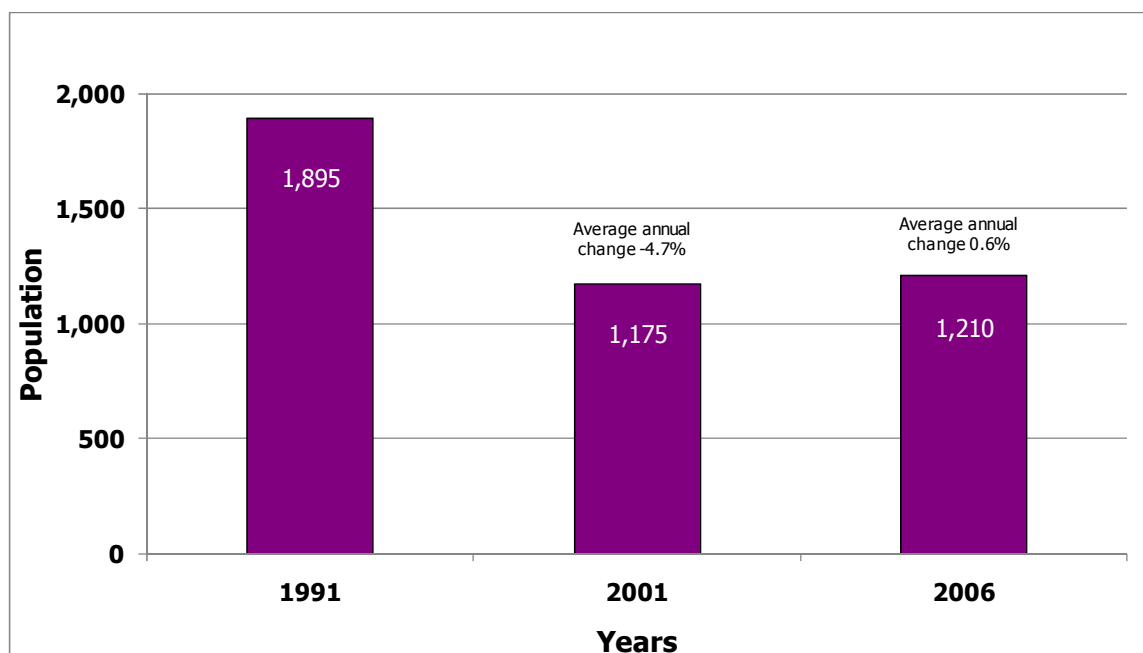
Since the 1960s, the population of the Gillam area has been closely linked to the development of Manitoba Hydro’s generation and transmission facilities. For example, between 1966 and 1979¹, during the period of construction of the Kettle and Long Spruce Generating Stations, a population boom occurred, with an estimated peak of 3,000 at the start of the Kettle Generating Station construction (Town of Gillam 2010). The population increased by over 400% during the Census years of 1966 and 1971, an additional 48% between 1971 and 1976, and almost 50% between 1976 and 1981 (HTFC 2009).

The Town of Gillam had a population of approximately 1,200 residents in 2006, of which 580 self-identified as Aboriginal (Statistics Canada 2007)². This population included a sizeable number of FLCN Members.

- The Keeyask EIS notes that current estimates of the population of FLCN members in Gillam are uncertain and projections could not be developed (*i.e.*, FLCN members separate from, but living in the Town of Gillam). However, it is likely that overall population trends for FLCN Members residing in Gillam would be similar to that of the general FLCN population.
- In 2009, FLCN estimated that there were 265 FLCN Members living within the Town of Gillam (Keeyask Generation Project FLCN KPI Program 2009-2011). As of 2011, approximately 500 FLCN Members were estimated to reside in Gillam (Keeyask Generation Project FLCN KPI Program 2009-2011), some of whom are located in the Trailer Court and on the A Kwis Ki Mahka urban reserve.

¹ Construction of the Kettle Generating Station occurred between 1966 and 1973. Construction of the Long Spruce Generating Station occurred between 1971 and 1979.

² 2006 Census date from Statistics Canada was used as the full set of census data from the 2011 Census was not available at the time of preparing the EIS.



Sources: Statistics Canada 1992, 2002, 2007.

Notes:

- 1991, 2001 and 2006 population data consist of 100% of the census population.
- Statistics Canada data represent the population during the Census of Canada on June 4, 1991, May 15, 2001 and May 16, 2006.
- Statistics Canada data are subject to random rounding procedure; population totals and individual cells are rounded.
- Average annual population change was calculated by InterGroup Consultants based on Statistics Canada 1991, 2001 and 2006 data.

Figure S 6.3-1: Change in Gillam Population (1991, 2001, 2006)

The population of Gillam declined noticeably in the 1990s as Manitoba Hydro employment in the community fell. Since 2001, the population has slowly increased (about 0.6% per year), in conjunction with rising Manitoba Hydro employment. The growth in the community's Aboriginal population¹ was also a factor in the increase (see Figure S 6.3-1).

The age structure of the Gillam population (see Table S 6.3-1) had characteristics closer to the Northern Manitoba comparison population than Manitoba as a whole in 2006.

- The median age of the Gillam Aboriginal population was 23 years, compared to 26 years for Northern Manitoba and 39 years for Manitoba.
- The overall Gillam population was fairly young, with about 35% under the age of 20; about 46% of the Aboriginal portion of the population was under the age of 20.

¹ Forty-five percent of Gillam's population self-identified as Aboriginal in the 2006 Census. According to Statistics Canada, this included identifying as North American Indian, Metis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the Indian Act of Canada, and/or those who reported they were members of an Indian Band or First Nation.

What is most notable about Gillam's population is the overall lack of an older generation.

- Only about 2% of the total and Aboriginal populations were over the age of 65, which was lower than Northern Manitoba (about 6%) and the province as a whole (about 17%).
- This may be the result of Manitoba Hydro employees retiring and going to other communities to live once their employment ends and housing is no longer provided (Keeyask Generation Project Gillam KPI Program 2009-2010), and because many FLCN Elders preferred to live in Fox Lake (Bird) (Keeyask Generation Project FLCN KPI Program, 2009-2010).

Table S 6.3-1: Age Distribution of the Gillam Population and Comparison Populations (2006)

	Gillam (Total)	Gillam Aboriginal Population	Comparison Populations	
			Northern Manitoba ⁴	Manitoba
Total Population ^{1,2,3}	1,210	580	84,600	1,148,400
0-4 Years – # and %	105	50	8,615	68,100
	8.7%	8.6%	10.2%	5.9%
5-19 Years – # and % ⁵	315	220	26,045	157,075
	26.0%	37.9%	30.8%	13.7%
20-64 Years – # and % ⁶	770	295	45,165	761,350
	63.6%	50.9%	53.4%	66.3%
65 years and over – # and % ⁷	25	10	4,750	198,710
	2.1%	1.7%	5.6%	17.3%
Median age ⁸	29	23	26	39

Source: Statistics Canada 2007; Statistics Canada 2011.

Notes:

1. 2006 population data consist of 100% of the census population.
2. Statistics Canada data represent the population during the Census of Canada on May 16, 2006.
3. Statistics Canada data are subject to random rounding procedure; population totals and individual cells are rounded.
4. Northern Manitoba region defined by Statistics Canada as census divisions 19, 21, 22 and 23.
5. Age category 5-19 years calculated by InterGroup Consultants as the total of Statistics Canada age categories 5-9, 10-14, and 15-19 years.
6. Age category 20-64 years calculated by InterGroup Consultants as the total of Statistics Canada age categories 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, and 60-64.
7. Age category 65 years and over calculated by InterGroup Consultants as the total of Statistics Canada age categories 65-69, 70-74, 75-79, 80-84, and 85 years or older.
8. Median ages were calculated by InterGroup Consultants; assumes equal distribution of population within age groups.

Gillam Population Projection

The population of Gillam today and in the near-term continues to be linked primarily to the availability of employment with Manitoba Hydro and associated housing. The lack of available housing stock in Gillam (described in Tab 4.2 Housing) limits community growth.

While the total population of the community remains fairly stable, regular turnover among Manitoba Hydro staff moving in and out of the community means that the local population is in a state of flux. The regular turnover among staff occurs for various reasons, including access to other employment opportunities with Manitoba Hydro elsewhere in the province, and from people relocating to provide family members and/or their children with further education and employment opportunities. In addition, as noted above, the population of Gillam has a notable lack of an older generation. For these reasons, the cohort component population model¹ could not be applied to project the future population of the Town of Gillam. Instead, an approach based on the relationship between population and the number of Manitoba Hydro employees in the community was used.

Projected population growth in Gillam without the effect of major projects in the area is estimated to be between 30 and 75 people over the next 5 to 10 years. This includes an estimated 14 to 25 new positions with Manitoba Hydro over the next 10 years. It is likely that overall population trends for FLCN members residing in Gillam would be similar to that of the general FLCN population, and a growth rate between 2.3% and 2.9% of FLCN Members living in Gillam may be expected (see FLCN section below).

Manitoba Hydro's northern operations based in Gillam are planning for growth over the next five to ten years. During this period the population of Gillam is forecast to almost double to between 2,300 and 2,800 residents, assuming that several major Manitoba Hydro projects move forward (Dillon Consulting 2012). This forecast includes growth associated with operation staff of the Keeyask Generation Project, this Bipole III Transmission Project (and associated converter station) and the potential Conawapa Generation Project. It is assumed this also includes other Manitoba Hydro related staff growth, retail and services growth, and FLCN population growth (all of which may include families). In addition to Bipole III Transmission Project operation personnel stationed in Gillam, the following assumptions apply:

- The Keeyask Generating Station will require technical support positions based in Gillam.
- Work is anticipated at the Kettle, Long Spruce and Limestone Generating Stations. These positions are based in Gillam, with employees commuting to their respective work sites on a daily basis.
- The potential Conawapa Generation Project (a future project set to begin within Manitoba Hydro's ten-year planning horizon) could also add to the Manitoba Hydro operation workforce in Gillam in the future.

¹ A cohort--component-based approach was used to project First Nation population projections for the Keeyask Generation Project (see the FLCN section that follows the Gillam section where a description of the cohort-component approach is provided).

- Growth in Manitoba Hydro's northern-based technical services department and in Gillam Services is expected in relation to current and planned growth within Manitoba Hydro's system.
- A small number of additional professional jobs (likely in the school and the hospital) may be created as a result of increased population.
- Operation jobs will be ongoing and it is assumed that some individuals would move their families with them. The average Manitoba family is 3.0 persons (Statistics Canada 2007), which was used as a multiplier.
- At the low end of the anticipated range of population growth (*i.e.*, 30 people and 14 new Manitoba Hydro positions), it is assumed that four of the future positions would be filled locally and the remainder would be filled by people who would migrate into the community; at the upper end of the range (*i.e.*, 75 people and 25 new Manitoba Hydro positions), it is assumed that all positions would be filled by people from elsewhere.

The Bipole III Transmission Project EIS indicates that during the operation phase, an estimated 42 Manitoba Hydro staff will be employed for the Keewatinoow Converter Station with perhaps 30 on-site on a daily basis. It is also stated that there will be perhaps 30 contractor staff present during station maintenance periods. With respect to the portion of the Bipole III transmission line in proximity to the Keewatinoow Converter Station, the EIS indicates that Manitoba Hydro conducts inspections on transmission lines annually during operation and maintenance, either by ground or air.

Bipole III Transmission Project operation jobs will be ongoing and operation workers can be expected to reside with their families in Gillam. If these jobs are filled by outsiders, this will lead to increased growth in the Gillam population. If filled by local residents, the community's population will not be affected. Contractor staff are not expected to relocate with their families to Gillam and, as such, will not add to the community's permanent population. Their jobs are expected to be of sufficiently short duration that outsiders filling these jobs will live in temporary accommodations and not move permanently to the community with their families.

Using the same population estimation methodology as for the Keeyask Generation Project, the 42 Bipole III operation jobs based in Gillam will lead to the addition of 110 to 140 people in Gillam. The upper level estimate of 140 people is based on the assumption that all of the 42 jobs would be filled from outside and that an additional four indirect (professional) jobs would be created. The lower level estimate of 110 people assumes that 7 would be filled locally and that an additional two indirect (professional) jobs would be created.

Although it is possible that some positions would be filled by people already residing in Gillam, it is likely that many of the positions would be filled by people from outside of the community. Jobs filled by outsiders could include FLCN members living outside of Gillam who return to the community to fill operation jobs, as well as FLCN members moving back

to Fox Lake (Bird). A specific estimate of returning FLCN members has not been developed as many factors influence the migration of band members back to the Gillam area.

In the experience of the Wuskwatim Generation Project, population data suggests that there has been little to no net effect of in-migration from Nisichawayasihk Cree Nation (NCN) members seeking employment with the construction of the project (Wuskwatim Power Limited Partnership 2011).

Fox Lake Cree Nation – Population

The area traditionally inhabited by FLCN was considerable and centred on the Nelson River system and its tributaries. FLCN's current primary reserve communities are located at Gillam and the community of Fox Lake (Bird), which are surrounded by the Split Lake Resource Management Area (SLRMA).

The Fox Lake people historically inhabited the camps around Gillam and Fox Lake (Bird). Prior to the creation of a new Band in 1947, the Fox Lake people were part of YFFN and signatories to the 1910 Treaty 5 adhesion. Much of FLCN early history is shared with that of YFFN. The onset of the railway settlement at Gillam in the early 1900s and events and patterns of change since this time have resulted in experiences unique to FLCN.

Although the people of FLCN historically occupied the territory surrounding Gillam as part of their seasonal round of resource use, the first settlement in the area began in 1912-1913 at Mile 330 of the railway. The following provides a brief history of settlement in the Gillam area, including FLCN.

- A population of approximately 350 people settled in this area, consisting largely of railway workers and their families, along with some Members of FLCN.
- Construction of the railway over Kettle Rapids was interrupted by World War 1, and the railway was not completed until 1929. "The present Town of Gillam at Mile 326 began after the railway gangs moved on from Mile 330. The Fox Lake people settled on the hill "south switch"[of the railway] and the Split Lake peoples settled on the north side of the tracks"(Town of Gillam 2010).
- Since the 1960s, the population of the Gillam area has been closely linked to the development of Manitoba Hydro's generation and transmission facilities.
- Between 1966 and 1979, during the period of construction of the Kettle and Long Spruce Generating Stations, a population boom occurred, with an estimated peak of 3,000 at the start of the Kettle Generating Station construction (Town of Gillam 2010).
- The population increased over 400% during the Census years of 1966 and 1971, an additional 48% between 1971 and 1976, and almost 50% between 1976 and 1981 (HTFC 2009).

At present, FLCN Members live on-reserve at Fox Lake (Bird), on-reserve at the A Kwis Ki Mahka urban reserve in Gillam, and off-reserve in Gillam, Thompson, Winnipeg and other centres.

- As Table S 6.3-2 demonstrates, FLCN's population was approximately 1,020 people in 2006, with just over 270 living on-reserve or on Crown land at Fox Lake (Bird), and over 73% of the community living off-reserve (INAC 2006¹).
- Members living off-reserve were located in communities across Manitoba (Keeyask Generation Project FLCN KPI Program 2009-2011).

Table S 6.3-2: Fox Lake Cree Nation Population (2006)

Source	Location of Population Covered	2006 Population
Statistics Canada ^{1,2,3}	Community of Bird	105
Indian and Northern Affairs Canada ^{4,5}	Entire First Nation	1,019
	On-Reserve and Crown Land	273
	Off-Reserve	746
Health Canada ^{6,7}	Entire First Nation	1,005
	On-Reserve and Crown Land	271
	Off-Reserve	734

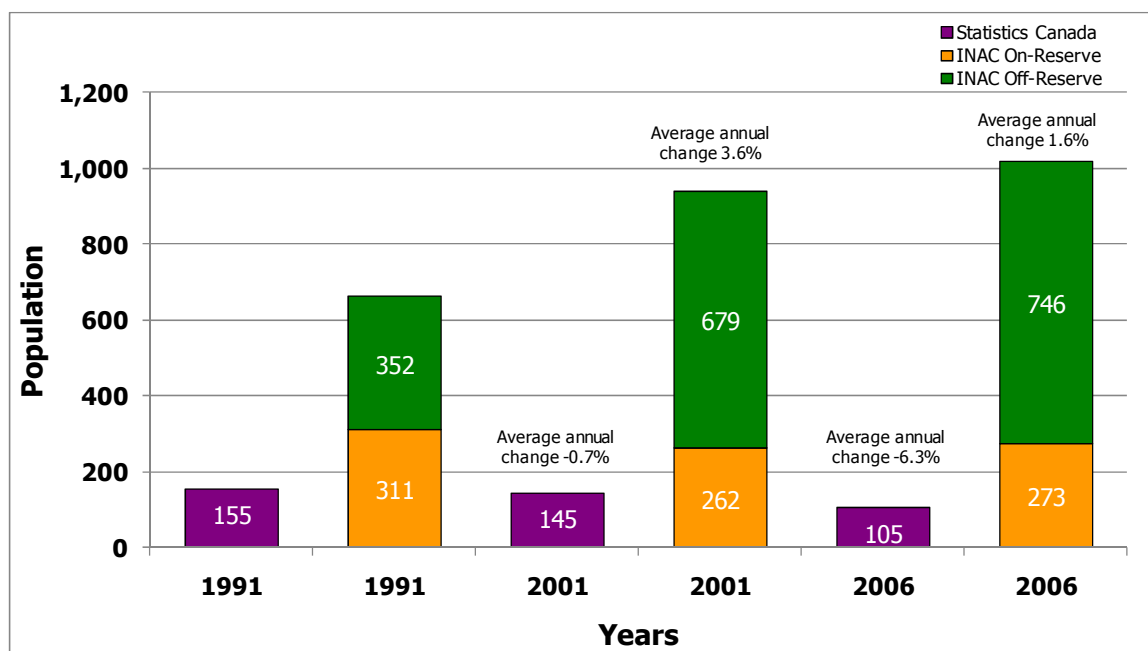
Sources: Data from Statistics Canada 2006 Census of Canada 2008; Indian and Northern Affairs (INAC) First Nations Population Profiles 2006; Health Canada, First Nations & Inuit Health Branch Population Totals Report 2006.

Notes:

1. Statistics Canada refers to FLCN as Bird/Fox Lake 2.
2. Statistics Canada data represent the population during the Census of Canada on May 16, 2006.
3. Statistics Canada data are subject to random rounding procedure; population totals and individual cells are rounded.
4. INAC refers to FLCN as Fox Lake Cree Nation.
5. INAC data represent the population as of December 31, 2006.
6. Health Canada refers to FLCN as Fox Lake.
7. Health Canada data represent the population as of June 2006.

Figure S 6.3-2 indicates that population growth rates off-reserve were higher than those on-reserve, which may in part be due to the lack of on-reserve housing restricting growth, and the choice of some Members to live in Gillam.

¹ Starting May 18, 2011 Aboriginal Affairs and Northern Development Canada replaced the name INAC.



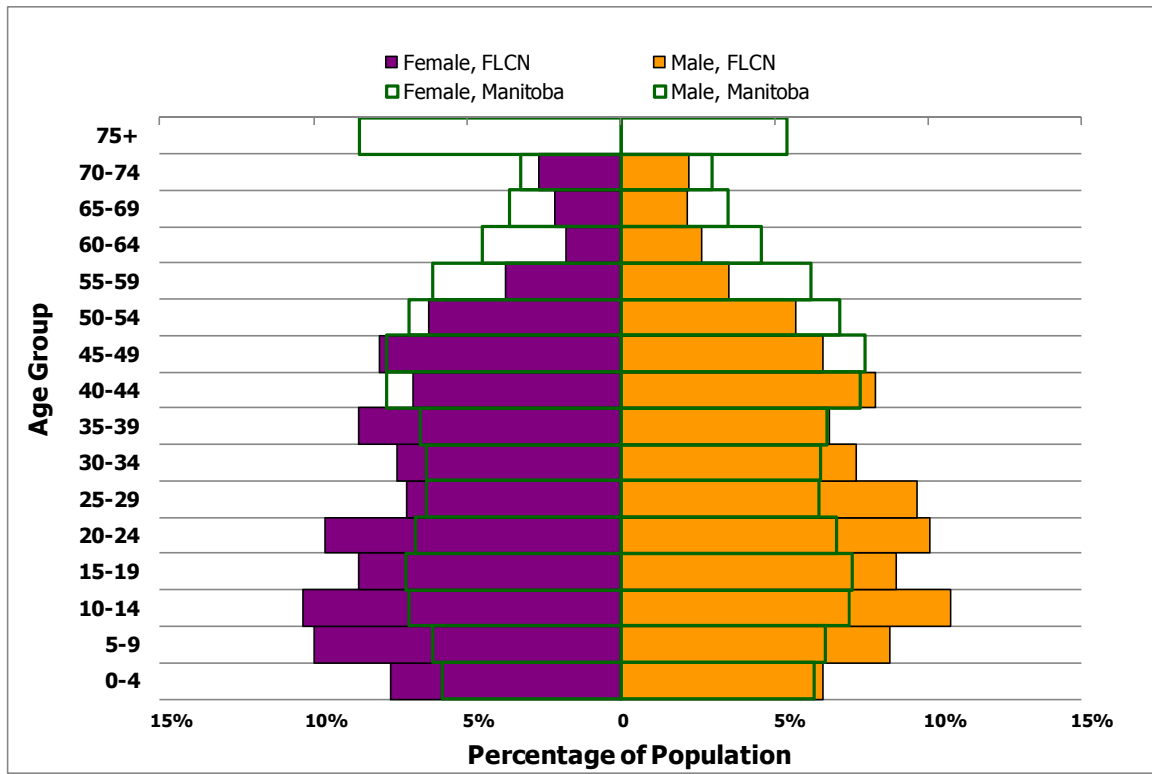
Sources: Data from Statistics Canada 2006 Census of Canada 2008; Indian and Northern Affairs (INAC) First Nations Population Profiles 2006; Health Canada, First Nations & Inuit Health Branch Population Totals Report 2006.

Notes:

1. Statistics Canada refers to FLCN as Bird/Fox Lake 2.
2. Statistics Canada data represent the population during the Census of Canada on May 16, 2006.
3. Statistics Canada data are subject to random rounding procedure; population totals and individual cells are rounded.
4. INAC refers to FLCN as Fox Lake Cree Nation.
5. INAC data represent the population as of December 31, 2006.
6. Health Canada refers to FLCN as Fox Lake.
7. Health Canada data represent the population as of June 2006.

Figure S 6.3-2: Change in Fox Lake Cree Nation Population (1991, 2001, 2006)

Figure S 6.3-3 shows that over 36% of the 2006 FLCN population was under the age of 20 years in 2006, with approximately 70% of the population in the 15-64 age category.



Source: Manitoba Health Population Reports 2006, Indian and Northern Affairs (INAC) First Nations Population Profiles 2006.

Notes:

1. INAC refers to FLCN as Fox Lake First Nation.
2. INAC data provided by INAC.
3. INAC data represent the population as of December 31, 2006.
4. Manitoba Health data represent the population as of June 1, 2006.
5. FLCN population breakout by gender for age group 65-69 was prorated based on total population gender breakout.
6. The 70-74 population range of FLCN includes age groups 75-79, 80-84 and 85 years or older in INAC data.

Figure S 6.3-3: Age and Gender Population Distribution of Fox Lake Cree Nation

According to May 2012 data available from the AANDC website¹, FLCN currently has a registered population of 1,115, with 138 (12.4%) living on reserve and 977 living off-reserve (including at other First Nation reserves or non-Band Crown land). Approximately 265 Members were reported to live in Gillam in 2009, with as many as 500 reported to live in Gillam in 2011 (Keeyask Generation Project FLCN KPI Program 2009-2011).

¹ <http://www.aadnc-aandc.gc.ca>

Fox Lake Cree Nation – Population Projection

Population projections were undertaken for the Keeyask Cree Nation communities for the Keeyask Generation Project EIS. The following information is taken directly from the Keeyask EIS as the population projections prepared for FLCN are applicable to the Bipole III EIS. The methodology used in preparing population projections is explained, followed by the population projection for FLCN.

Given the unique characteristics of the Keeyask Cree Nations' (KCNs) communities, including FLCN, methods were devised to reflect factors that shape the population in each community for the Keeyask Generation Project. The current population structure of the KCNs' communities will play an important role in determining population levels for these First Nations in the near future.

- A demographically based approach was used for projecting population growth.
- KCNs population projections were developed using a cohort-component-based approach.
- Projections were also developed for each of the KCNs' communities. Low, medium and high population projections were modelled and the medium projection is presented. Low and high projections for FLCN are attached as Attachment 1 to this Tab.

Under this approach, each component of population change is factored into the projection as expressed in the demographic equation below.

$$\text{Population}_{t+1} = \text{Population}_t + (\text{Birth} - \text{Death}) + \text{Net Migration}$$

Where:

Population_{t+1} is population at time "t+1"

Population_t is population at time "t"

Birth is number of births between time "t" and "t+1"

Death is number of deaths between time "t" and "t+1"

Net Migration is the number of people moving into the community between time "t" and "t+1" less the number of people moving out of the community in the same period of time.

The model projects population growth for the KCNs communities for a 15-year timeframe, with 2008¹ acting as the base year for projections through to 2023. This period encompasses the construction phase and the early years of the operation phase of the Keeyask Generation Project. High, medium and low growth scenarios considered fertility rates, mortality rates and net migration.

¹ 2008 was used for the KCNs projections as this is the year of most recent data available from Aboriginal Affairs and Northern Development Canada.

The medium growth scenario used the following assumptions:

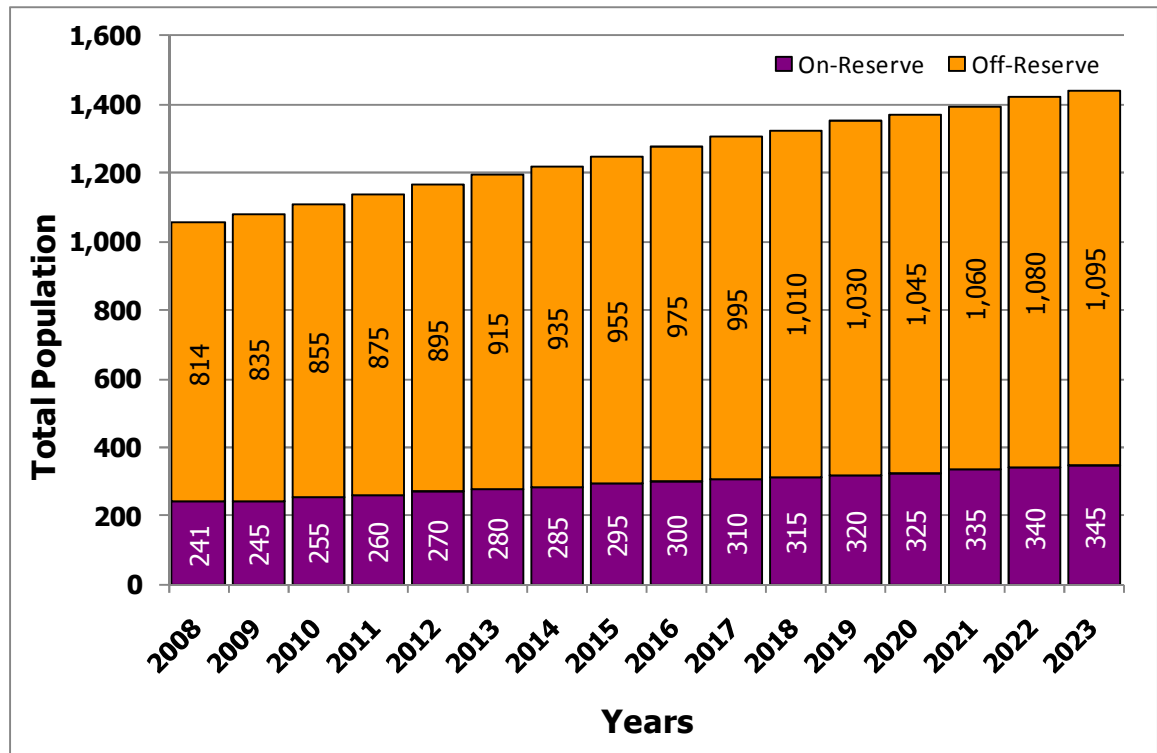
- **Fertility:**
 - Women between the ages of 15-49 would be giving birth;
 - Age specific fertility rates were applied;
 - 105:100 sex ratio¹ (boys to girls born); and
 - Annual moderate decline (-0.84%) fertility coefficient.
- **Mortality:**
 - Age specific mortality ratios (*e.g.*, a ratio for each age) that reflect a gradual improvement to life expectancy;
 - All people in the specific age group are subject to mortality; and
 - The model assumes the same mortality rate for people 85 years of age and older.
- **Net Migration:**
 - 0.5% net migration applied to the on-reserve population;
 - The number of net migrants on-reserve is subtracted from the off-reserve population at each age level and by sex;
 - In the model, migration effects are not applied to age cohorts over 60 years of age²; and
 - Migration effects do not apply to newborn babies since their migration effects are captured by their mother.

Population projections should be interpreted with some caution and it is unlikely that the exact predicted population would result.

Figure S 6.3-4 presents FLCN's population projection for the medium growth scenario, indicating that their off-reserve population is expected to grow 2.3% annually, while its on-reserve population is anticipated to grow by almost 2.9% annually.

¹ Sex ratio: the ratio of males to females in a given population, expressed as the number of males per 100 females. Per Statistics Canada, the sex ratio for Canada for 0-14 year age group equals 105:100.

² It is recognized that out-migration could occur for health related reasons since on-reserve facilities and services are often inadequate for certain chronic diseases. However, given the small size of the over 60 age cohort, out-migration numbers are likely too small to make a statistical difference in the model.



Source: Analysis prepared by InterGroup Consultants based on Indian and Northern Affairs (INAC) Indian Register Data for Fox Lake (2008) and Manitoba Health Fox Lake Cree Nations Population data (2008)

Notes:

- FLCN data are based on INAC data with a base year of 2008.
- INAC total population as of December 31, 2008.
- INAC data provided by INAC from Indian Registry System.
- "On-Reserve" includes individuals living on Crown Land, on other Reserves, and on other lands affiliated with First Nations operating under Self-Government Agreements.
- INAC data "On-Reserve" population breakout by gender for all age groups, except 10-14 and 15-19, was prorated based on total "On-Reserve" population (excluding age groups 10-14 and 15-19) gender breakout.
- INAC data "On-Reserve" population for age groups above 60 assume Manitoba Health FLCN Population data for the same age groups. Population data for age groups above 75 corrected to make reconcile to total population.
- Total population gender breakout for age groups above 65 was prorated based on total population gender breakout.
- Off-Reserve population numbers are derived as follows: Total population minus "On-Reserve" (note 4 above) population.
- For the Projections, InterGroup used fertility and mortality ratios derived from INAC's "The Registered Indian Demography - Population, Household and Family Projections, 2004-2029."
- The population projection model rounds the calculated totals from the component equation to the nearest five.

Figure S 6.3-4: Fox Lake Cree Nation Population Projection (2008-2023 Medium Growth Scenario)

As noted above, the Bipole III Transmission Project EIS does not estimate the number and associated impact of FLCN members who return to Gillam to secure operational employment opportunities. Similarly, the Keeyask Generation Project EIS makes no effort to assess likely in-migration or the number of operation jobs that would be filled by First Nation members.

The Keeyask Generation Project EIS identifies the following considerations of relevance to this topic for the Bipole III Project:

- Schedule 12-8 of the JKDA presents a framework to enhance participation in operational jobs. Given that Gillam is the centre of Manitoba Hydro's northern-based operation and that FLCN has a reserve in Gillam, there is potential that FLCN members currently living in other locations may wish to relocate to Gillam to access operation jobs.
- For FLCN members wishing to return to the Gillam area for employment reasons, Gillam would offer more services and amenities than the community in Fox Lake (Bird), making it a more attractive location for some members. For Project employees, this would include availability of Manitoba Hydro housing. For those in some types of new indirect service or public sector jobs, this would not be the case.
- The new urban reserve in Gillam may allow for improvements to existing housing and limited additional housing to be created for FLCN members in the community. FLCN's long-term plans to pursue additional reserve land in and around Gillam may also serve this purpose. While the reserve community of Fox Lake (Bird) would be within commuting distance of operation jobs in Gillam, the limited housing capacity may deter return migration.

The latter two considerations would apply also to operation of the Keewatinoow Converter Station. In terms of construction of the Keewatinoow Converter Station, a similar rationale regarding the services and amenities outlined in the second bullet above in Gillam versus Fox Lake (Bird) was made in the Bipole III EIS although Fox Lake (Bird) is closer to the station than Gillam.

Although some in-migration of FLCN Members to Gillam and Fox Lake (Bird) is possible, it should be noted that the Wuskwatim Generation Project environmental assessment predicted a moderate amount of immigration and emigration at Nelson House associated with construction of the project, including in-migration of NCN members associated with the lure of well-paying construction jobs and community-based training opportunities. However, data from AANDC suggests that the population of Nelson House has remained stable since the beginning of construction on Wuskwatim. Average annual growth rates in Nelson House since the start of construction have been approximately 1.8 percent compared to the average annual growth rate of 2.4 percent in Nelson House between 2000 and 2004 (Wuskwatim Power Limited Partnership 2011).

ATTACHMENT 1 TO TAB 3.2 POPULATION PROJECTIONS

LIST OF FIGURES

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POPULATION PROJECTIONS

FOX LAKE CREE NATION

METHODOLOGY

The population projection model used for the Keeyask Generation Project is a cohort-component based approach. Each component of population change is factored into the projection as expressed in the demographic equation below.

$$\text{Population}_{t+1} = \text{Population}_t + (\text{Birth} - \text{Death}) + \text{Net Migration}$$

Where:

- *Population_{t+1}* is population at time “t+1”;
- *Population_t* is population at time “t”;
- *Birth* is number of births between time “t” and “t+1”;
- *Death* is number of deaths between time “t” and “t+1”; and
- *Net Migration* is number of people moving into the community between time “t” and “t+1” less number of people moving out of the community in the same period of time.

Key points:

- The model projects population growth for the FLCN community for a 15-year time-frame.
- The base year for the population projection is 2008 through to and including 2023.
- Three population projection scenarios (High, Medium and Low) were produced for FLCN.
- The model rounds calculations resulting from the component equation to the nearest integer.

The following provides information on the assumptions and key points of the components of population change that influence the projections.

Fertility

Fertility rates were informed by INAC’s The Registered Indian Demography - Population, Household and Family Projections, 2004-2029 (2009).

- An Age-Specific Fertility Rate (ASFR) for each age was used instead of the Total Fertility Rate (TFR) to produce more accurate fertility projections in each age cohort for women during their reproductive years.
- The model assumes women between the ages of 15-49 will be giving birth.
- The model assumes a 105:100 sex ratio (boys to girls born) which is a standard assumption if data are unavailable for births by sex.

- All variables in the model will be held constant (*e.g.*, rates of change) except for fertility rates that will be the driving factor for the different population growth scenarios.
- Three population projection scenarios will be produced using low, medium and high fertility coefficients annually:
 - Slow decline: 0.32%;
 - Moderate decline: 0.84%;
 - Rapid decline: 1.47%; and
 - Overall fertility assumption: A moderate long-term decline in fertility (applicable to the medium growth scenario) that will continue to converge to the rate for the general Canadian population which currently fluctuates around 1.5 births per female.

Mortality

- Age-Specific Survival was informed by INAC's The Registered Indian Demography - Population, Household and Family Projections, 2004-2029 (2009).
- All people in the specific age group are subject to mortality (*e.g.*, 0 to 85+ year of age X Age-Specific Survival Ratio).
- The model assumes the same mortality rate for people 85 years of age and older.

Net Migration

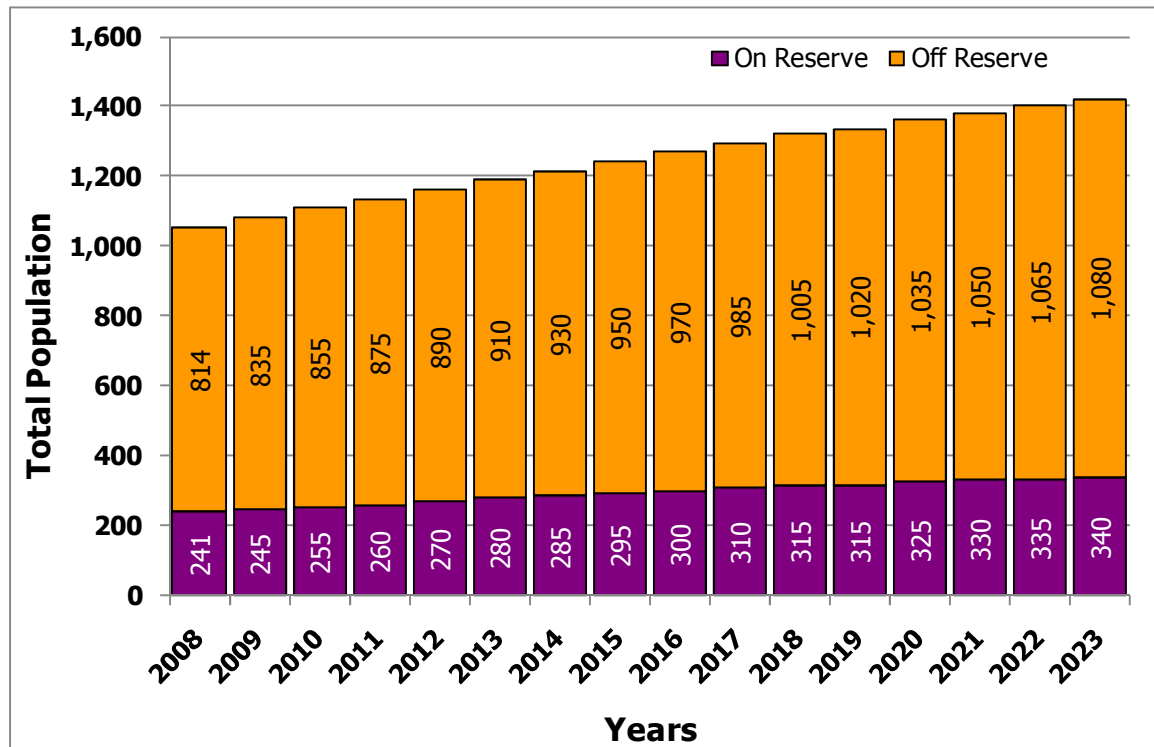
- Assumption that 0.5% net migration is applied to the on-reserve population; the number of net migrants to on-reserve is then subtracted from the off-reserve population at each age level and by sex.
- The overall trend is that people are moving back to their respective reserves, especially the younger generations (*pers. comm.*, Stewart Clatworthy, Dec 19, 2009).
- Assumes migration effects do not apply to people age 60 and older or to newborn babies as their migration effects are the same as their mothers¹.

¹ It is assumed that most people age 60 and older will not move for employment reasons; and that the small number of people who might relocate for medical or family reasons will not affect the results.

POPULATION PROJECTION RESULTS

The medium-growth scenario from the FLCN population projection model is presented in Tab 3.1 of the document. The high and low growth scenarios for FLCN are presented below.

FOX LAKE CREE NATION

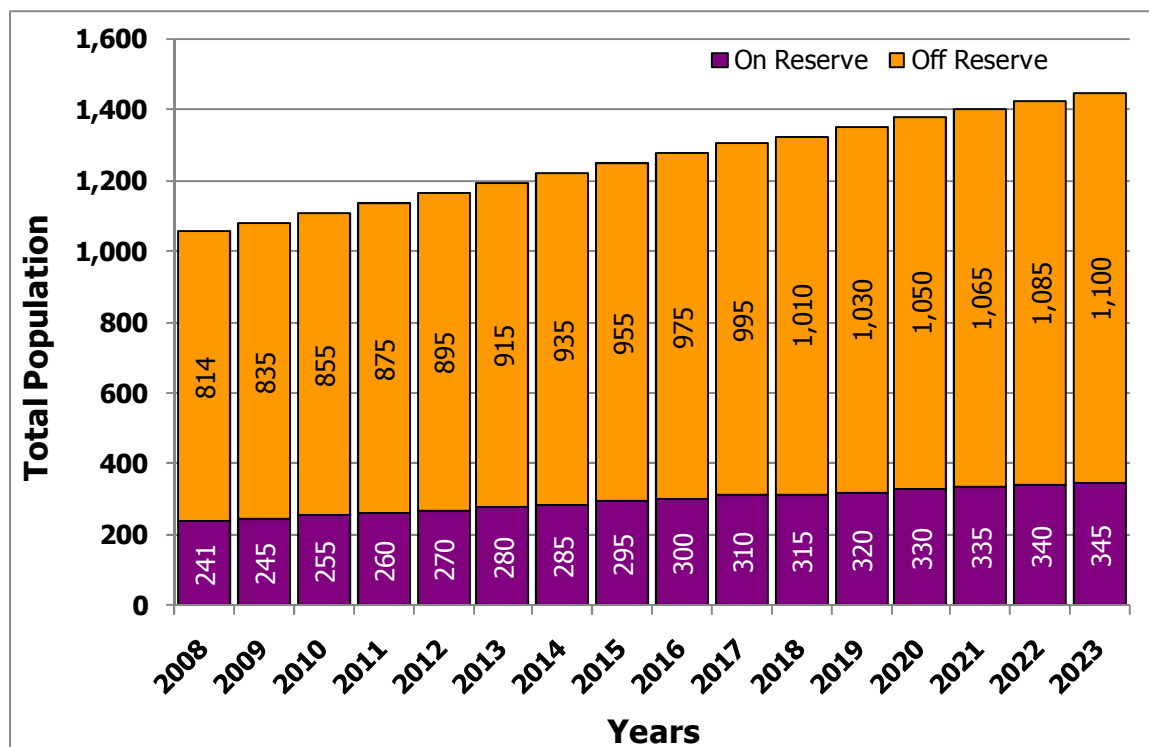


Source: Analysis prepared by InterGroup Consultants based on Indian and Northern Affairs (INAC) Indian Register Data for Fox Lake, 2008 and Manitoba Health Fox Lake Cree Nations Population data, 2008.

Notes:

- FLCN data are based on INAC data with a base year of 2008.
- INAC total population as of December 31, 2008.
- INAC data provided by INAC from Indian Registry System.
- "On-Reserve" includes individuals living on Crown Land, on other Reserves, and on other lands affiliated with First Nations operating under Self-Government Agreements.
- INAC data "On-Reserve" population breakout by gender for all age groups, except 10-14 and 15-19, was prorated based on total "On-Reserve" population (excluding age groups 10-14 and 15-19) gender breakout.
- INAC data "On-Reserve" population for age groups above 60 assume Manitoba Health FLCN Population data for the same age groups. Population data for age groups above 75 corrected to make reconcile to total population.
- Total population gender breakout for age groups above 65 was prorated based on total population gender breakout.
- Off-Reserve population numbers are derived as follows: Total population minus "On-Reserve" (note 4 above) population.
- For the Projections, InterGroup used fertility and mortality ratios derived from INAC "The Registered Indian Demography - Population, Household and Family Projections, 2004-2029."
- The population projection model rounds the calculated totals from the component equation to the nearest five.

Figure 3.2 A-1: Fox Lake Cree Nation Population Projections On- and Off-Reserve (2008-2023 Low-growth Scenario)



Source: Analysis prepared by InterGroup Consultants based on Indian and Northern Affairs (INAC) Indian Register Data for Fox Lake, 2008 and Manitoba Health Fox Lake Cree Nations Population data, 2008.

Notes:

- FLCN data are based on INAC data with a base year of 2008.
- INAC total population as of December 31, 2008.
- INAC data provided by INAC from Indian Registry System.
- "On-Reserve" includes individuals living on Crown Land, on other Reserves, and on other lands affiliated with First Nations operating under Self-Government Agreements.
- INAC data "On-Reserve" population breakout by gender for all age groups, except 10-14 and 15-19, was prorated based on total "On-Reserve" population (excluding age groups 10-14 and 15-19) gender breakout.
- INAC data "On-Reserve" population for age groups above 60 assume Manitoba Health FLCN Population data for the same age groups. Population data for age groups above 75 corrected to make reconcile to total population.
- Total population gender breakout for age groups above 65 was prorated based on total population gender breakout.
- Off-Reserve population numbers are derived as follows: Total population minus "On-Reserve" (note 4 above) population.
- For the Projections, InterGroup used fertility and mortality ratios derived from INAC "The Registered Indian Demography - Population, Household and Family Projections, 2004-2029."
- The population projection model rounds the calculated totals from the component equation to the nearest five.

Figure 3.2 A-2: Fox Lake Cree Nation Population Projections On- and Off-Reserve (2008-2023 High-growth Scenario)

TAB 3.3

SUPPLEMENTAL INFORMATION

EXISTING ENVIRONMENT

PUBLIC SAFETY

The following text in Tab 3.3 follows the numbering of the original Bipole III EIS in order to facilitate the reader in understanding where the updated information fits into the original document. For example, this Tab 3.3 is focused on the existing environment (which is Chapter 6, Section 6.3 for the Socio-Economic Environment). The original numbering system has therefore been adopted.

6.0 EXISTING ENVIRONMENT

6.3 SOCIO-ECONOMIC ENVIRONMENT

6.3.6 Personal, Family and Community Life

6.3.6.4 Gillam and Fox Lake Cree Nation

The following section is supplemental baseline information regarding public safety and worker interaction and should follow Section 6.3.6.3 under the Personal Family and Community Life section of the Bipole III EIS (November 2011). The information is provided to enhance and update the Bipole III EIS with additional information developed for the Keeyask Generation Project that is applicable to the Bipole III Project. This results in consistency between this volume and the Keeyask Generation Project EIS which paid particular attention to Gillam and FLCN due to the overlap of Bipole III Project components being built in the vicinity of Gillam. This additional baseline public safety information does not materially change the assessment or conclusions originally presented in the Bipole III EIS.

Public Safety and Worker Interaction

Public safety and worker interaction was identified as a key VEC by FLCN related to Manitoba Hydro projects in the vicinity of Gillam. The following information has been extracted from the Keeyask Generation Project EIS to provide baseline information on the topic as it relates to Gillam and FLCN.

Public safety refers to the overall prevention and protection of people from issues that affect their personal and collective safety and security (*e.g.*, acts/activities that may cause harm) (Public Safety Canada 2009). “Security is a fundamental component of well-being that involves safety and protection from harm. It also involves individual and community perceptions of safety, which can be just as important to well-being as the experience of threats or harm” (Human Resources and Skills Development Canada 2011). In the context of the Project, effects related to public safety would mainly be attributable to an influx of workers into nearby communities and spending of new income associated with Project

employment. Public safety as a VEC does not include safety concerns related to the actual construction or operation of the Project, which Manitoba Hydro is required to address under regular workplace safety standards.

This section addresses the following topics:

- A review of the public safety concerns experienced with past hydroelectric projects in the Gillam area, including worker interaction and alcohol related issues; and
- A description of the public safety enforcement infrastructure and programs available in each community as well as issues, concerns and gaps identified during *key-person* interviews conducted for the Keeyask Generation Project.

Public Safety Issues from Past Hydroelectric Projects

The community of Gillam and FLCN Members in particular have witnessed the development of multiple hydroelectric projects on the Nelson River system. This has resulted in a variety of experiences with a non-local workforce, some positive and some negative; although the latter are more likely to be identified in relation to the Project. These past experiences have resulted in fears associated with negative interaction with non-local workers at the construction camp (*e.g.*, racism), negative interaction with non-local workers who go into Thompson or Gillam during their “off” time, and finally the potential for non-local workers to visit the Gillam and Fox Lake (Bird) and the potential for disruptive behaviour to ensue. The concerns about effects on public safety related to an influx of non-local workers are most frequently raised by and cause anxiety for FLCN as their key socio-economic concern related to Manitoba Hydro projects in the vicinity of Gillam. Tataskweyak Cree Nation (TCN) has raised similar concerns about worker interaction in their community of Split Lake based on past experience of their members (CNP, *pers. comm.* 2012).

The Town of Gillam’s history in particular includes periods of large influxes of transient construction workers primarily associated with hydroelectric development. During these periods, Gillam was known to become a rowdier community, with higher rates of alcohol-related incidents (Keeyask Generation Project Gillam KPI Program 2009-2010). During the construction of the Limestone Generating Station a separate RCMP detachment was created in the temporary community of Sundance to deal with the influx of non-local construction workers to the area, and with potential worker interaction issues with the local community (FLCN 2009 Draft).

Because of their residence in Gillam and in close proximity to the town, FLCN has a long history of interaction with hydro development construction workers, beginning with the development of the Kettle Generating Station. When Manitoba Hydro began construction of the Kettle Generating station in 1966 the population of Gillam was approximately 350 people. By 1969, there were approximately 1,800 people living in Gillam, and an additional 1,500 living at the construction camp (Manitoba Department of Industry and Commerce

1969, 1978). FLCN describes this transition in saying “within months, the demographic of Gillam changed from being predominately Cree families to predominately non-Aboriginal men” (FLCN 2009 Draft). One member of the community described this in saying, “Before Hydro came we always thought we were one people. After Hydro there was a lot of friction and discrimination” (FLCN 1997).

Alcohol often fuelled the negative experiences that FLCN members remember. One description of the bar at the Kettle construction camp stated “the male-only bar quickly became the centre for many workers, and drinking became one of the most popular leisure activities in the camps” (FLCN 2009 Draft). “The quiet town (FLCN) once knew was transformed almost overnight into a place where street parties, brawls and violence were commonplace” (FLCN 2009 Draft). One Elder described this in the draft Fox Lake Ninan: The story of the Fox Lake Cree saying, “I can’t say how many thousands of men there were – but there were a lot of men and all the women around here were ours. Ours, unfortunately” (FLCN 2009 Draft).

In recent years the members of FLCN have spoken candidly of their past experiences with hydroelectric development. There are numerous stories associated with rampant alcohol use in combination with the influx of non-local male construction workers. FLCN’s Ninan describes the results of the “party” atmosphere that existed with past projects including stories of fights, assaults, sexual assaults, pregnancy, and a hit-and-run incident involving drunk driving that resulted in the death of a community member (FLCN 2009 Draft). Among the issues identified by the community were harassment, racist comments, enticement to alcohol and drug use, sale of drugs, physical abuse, violence, infidelity, pregnancy, and paternal abandonment (Keeyask Generation Project FLCN KPI Program 2009-2011). FLCN has reported that interaction incidents during past hydroelectric projects have left psychological and emotional scars with their victims that have lasted for many years, and in some cases, a lifetime. The consequences of these incidents, such as depressive-like behaviour, have not only affected the victims of these incidents, but also their families and friends.

The use of alcohol was not limited to the construction crews who arrived in the area to work on projects. Alcohol also became readily available to the members of FLCN, in particular those who found employment on the project. Fox Lake’s Ninan provides numerous accounts of members finding employment on projects and spending their earnings on alcohol. The document also notes that alcohol abuse could be attributed to a range of other factors that include coping with residential school experiences and with changes to the social environment in Gillam.

Public Safety Support and Programs

This section provides a discussion of the existing public safety support and programs for Gillam and Fox Lake (Bird). This section includes a discussion of issues, concerns and gaps identified during key-person interviews as well as future plans for public safety programs and

infrastructure (where available). There are two main entities responsible for policing: the RCMP with a detachment in Gillam; and Band constables hired by FLCN. The band constables are hired under a program run by Aboriginal Affairs and Northern Development Canada (AANDC) to provide basic on-reserve policing services. Band constables work in cooperation with the RCMP detachment as necessary.

Gillam

The Gillam detachment of the RCMP is responsible for policing the communities of Gillam, Bird, Ilford and WLFN. The detachment has six constables and one sergeant (with one of the constables being a supplement or temporary employee, providing additional support during periods of turnover).

Keeyask key-person interviews generally indicated that Gillam is a safe community to live in, due in part to the small population that resides there. Several people suggested the fact that “everyone knows everyone” makes it quite easy to keep track of what is going on, where people are, and what people are doing (in particular children and youth). Most of the interviewees felt that compared to other towns and urban centers, Gillam is a safe place (Keeyask Generation Project Gillam KPI Program 2009-2010). The Gillam RCMP confirmed that the community is a safe place to live, with the highest number of complaints received associated with alcohol-related incidents limited to a small number of residents in the community. The Gillam RCMP are involved in several public safety programs in Gillam and in Fox Lake including:

- Crime Prevention
 - KARE – Kids Are the Responsibility of Everyone;
 - DARE – Drug Abuse Resistance Education; and
 - School Liaison – An RCMP officer is attached to each of the schools in the detachment.
- Restorative and Alternative Justice
 - Restorative Justice – Detachment members participate in forums related to minor offences to identify alternative solutions. This includes coordination with the National Native Alcohol and Drug Abuse Program for FLCN; and
 - Community and Youth Corrections – Involves a probation officer who travels on a monthly basis from Thompson. Information on various clients is shared and participants are kept up to date on activities/progress (Keeyask Generation Project Gillam KPI Program 2009-2010).

With the designation of Kettle Crescent as reserve land, there is potential that the Band constable program may extend its reach into Gillam, however, no official plans have been confirmed to date.

Fox Lake (Bird)

The FLCN Band constable is responsible for policing the reserve in Bird. The Band constable works with the RCMP in Gillam and both parties indicate they have a good working relationship (Keeyask Generation Project Gillam KPI Program 2009-2010 and FLCN KPI Program 2009-2011). Typically, the types and numbers of incidents in Bird do not require assistance from the RCMP, and consist of things such as traffic offenses, the occasional breaking and entering into homes/businesses, and illegal drugs and alcohol being brought onto the reserve (Bird is a dry reserve) (Keeyask Generation Project FLCN KPI Program 2009-2011).

During key-person interviews, FLCN Members generally stated that both Fox Lake (Bird) and Gillam are safe communities in which to live, due in part to the small size of the community. However, FLCN Members also noted the following public safety related concerns:

- The use of alcohol and drugs on-reserve;
- Use of alcohol by Community Members while they are in Gillam where alcohol is more readily available;
- A lack of opportunities for youth (*e.g.*, recreation) who are at times prone to mischief;
- The lack of a female Band constable to address issues related to female Members of FLCN; and
- A certain level of mistrust with the current RCMP due to a range of factors including their historical relationship with the Band, and regular turnover of the local RCMP complement.

TAB 3.4

SUPPLEMENTAL INFORMATION

EFFECTS ASSESSMENT

COMMUNITY SERVICES

The following text in Tab 3.4 follows the numbering of the original Bipole III EIS in order to facilitate the reader in understanding where the updated information fits into the original document. For example, this Tab 3.4 is focused on the effects assessment (which is Chapter 8, Section 8.3 for the Socio-Economic Environment). The original numbering system has therefore been adopted.

8.0 EFFECTS ASSESSMENT AND MITIGATION

8.3 SOCIO-ECONOMIC EFFECTS ASSESSMENT

8.3.4 Services

8.3.4.3 Environmental Effects Assessment and Mitigation

The Bipole III EIS focused largely on construction-related effects of the Project. Anticipated changes associated with operation employment driven population increases were not included. The following provides supplementary information taken from the Keeyask Generation Project EIS for community facilities and services (including housing) during the operation phase. This information is supplemental to the existing text on page 8-302 to update the Bipole III EIS with information developed for the Keeyask Generation Project that is applicable to the Bipole III Project. This results in consistency with the Keeyask Generation EIS. The focus is on the Keewatinoow Converter Station and associated facilities being built in the vicinity of Gillam, including FLCN members living in Gillam and Fox Lake (Bird). The additional analysis below supports the conclusion in the Bipole III EIS of adverse effects on community services of small magnitude, within the Project Study Area and medium-term in duration (page 8-303).

Keewatinoow Converter Station and Associated Facilities

Community Services

Operation

As noted in the Bipole III EIS, it is estimated that 42 Manitoba Hydro staff will be employed at the Keewatinoow Converter Station with about 30 on-site on a daily basis. In addition, there will be about 30 contractor staff present during station maintenance periods. Operation of the Keewatinoow Converter Station will result in growth in the community of Gillam by approximately 110 to 140 people. This includes consideration of families relocating to Gillam to access employment opportunities, potential FLCN members returning to Gillam, and associated growth in community services. Housing and services will be required for these individuals and families.

Housing

Housing for operation phase workers will be provided by Manitoba Hydro. As noted in Chapter 6, upgrades to existing housing and planning new development in order to meet the needs of Manitoba Hydro's current workforce are already underway. Future housing development is likely to continue in a similar pattern to current development, which includes refurbishment of existing housing, development of single family and development of multi-family dwellings, such as duplexes and fourplexes.

Ongoing planning for additional housing to meet the needs of the future workforce is currently underway and involves Manitoba Hydro in coordination with the Town of Gillam and FLCN, who also have interests in developing additional housing in Gillam, particularly if additional reserve lands are acquired (Keeyask Generation Project FLCN KPI Program 2009-2011). As a result of the Gillam Land Use Planning process, as well as the HGD process¹, it is anticipated that Manitoba Hydro will be able to pursue the development of additional residential units on a timely basis and in a way that does not conflict with FLCN's interests. FLCN's interests are also recognized by the Town of Gillam and have been acknowledged in planning processes (Keeyask Generation Project Gillam KPI Program 2009-2010; Dillon Consulting 2012). FLCN's long-term housing interests include the addition of trailers and the potential development of a small apartment complex in Gillam (Keeyask Generation Project FLCN KPI Program 2009-2011).

Some FLCN members may return to Fox Lake (Bird) in order to access operation phase jobs, although the number of such members cannot be predicted with accuracy. While the community at Fox Lake (Bird) has limited capacity to accommodate an increase in housing (thus deterring in-migration), FLCN members hired as operation staff will be provided housing in Gillam by Manitoba Hydro. For other FLCN members who wish to return to Gillam to access jobs indirectly related to the Project, there may be an opportunity for them to access housing in Gillam, particularly with FLCN's recent establishment of an urban reserve and ongoing efforts to establish more reserve land in the community.

Infrastructure and Services

The Town of Gillam has evolved from a community established to serve the Bay Line railway, to a community shaped by Manitoba Hydro development, and is currently working to become a community that recognizes the interests of all stakeholders, including FLCN, Manitoba Hydro and the Town. The HGD process has promoted community dialogue and cooperation amongst stakeholders. In addition, the Town of Gillam has updated its Development Plan to guide development of the community over the next 20 years. The new plan's vision for the future sees Gillam as being "a safe, family orientated, close-knit community where residents and visitors enjoy a vibrant historic full service town, unique natural beauty, and outdoor adventure" (Dillon Consulting 2012).

¹ The HGD process is an existing forum for the Town, FLCN and Manitoba Hydro to discuss issues of concern as the community moves forward in its community planning and long-term development.

Numerous services are shared by the Town of Gillam with FLCN Members living in Gillam and those living in Fox Lake (Bird). Among the facilities and services shared by FLCN and residents of Gillam are the Gillam Hospital and associated services, social services (Awasis), day care (available only in Gillam), the Gillam School (K-12 education, with grade 9-12 only available in Gillam and not in the community of Fox Lake (Bird)), water and waste management (on a fee basis) and emergency services (police, fire, ambulance). Since these are shared services, effects are discussed in the Gillam section below.

Community renewal in Gillam would occur within the broader context of changes resulting from development activities in the surrounding region, although the following section identifies the specific anticipated changes resulting from the Project. Infrastructure and services already experiencing capacity challenges may be placed under additional stress as a result of growth associated with operation of the Project; however, in other areas, infrastructure and services would be able to accommodate growth. Infrastructure and services that may need to be bolstered are discussed below.

Water and Waste Management

The Bipole III EIS indicated that water and wastewater infrastructure will need to be expanded to accommodate community growth in Gillam. Information based on a community study in 2008 indicates that water and waste water services for the Town of Gillam have the capacity to handle the Project-related increase in population since both were designed to meet the needs of a population of 3,000-3,500 (HTFC 2008). Some issues with water treatment were identified (specifically the intake and method of treatment); however, both these issues can be reconciled with the addition of new treatment cells to the existing facility and addressing the intake issue; and can be accommodated within Manitoba Hydro's long-term infrastructure planning (Manitoba Hydro, *pers. comm.* May 18, 2012).

The town's landfill can likely accommodate current levels of waste disposal for another 20 years, although programs are being implemented to divert more waste through recycling. This may extend its capacity (Keeyask Generation Project Gillam KPI Program 2009-2010). It is likely that a new landfill or expansions to the existing landfill would be required to accommodate the community's long-term anticipated growth.

Emergency Services

Gillam emergency services such as fire and ambulance are unlikely to face capacity challenges resulting from the increased population, since Manitoba Hydro often provides support to these services through staffing and equipment at existing generating stations (Keeyask Generation Project Gillam KPI Program 2009-2010).

Similarly, the RCMP is adequately staffed to provide services to the existing population. If Gillam experiences any material population growth resulting in an increased demand for services from the RCMP a bigger detachment station and additional officers may be required. Manitoba Hydro's northern operation regularly dialogues with service providers. For example, in July 2012, discussions took place with the Gillam RCMP, Gillam Chamber of Commerce, Gillam Hospital (Northern RHA) and Gillam Co-op on the potential cumulative workforce requirements for

future Manitoba Hydro projects in the vicinity of Gillam (Manitoba Hydro, *pers. comm.* July 19, 2012). These types of discussions will continue to keep the RCMP and other service providers informed of Project plans.

Community Facilities and Services

The Bipole III EIS focused largely on construction-related strains on the Gillam Hospital. Anticipated changes associated with operation employment driven population increases were not included. The following supplementary information comes from the Keeyask Generation Project EIS for community facilities and services; and supports the conclusion in the Bipole III EIS regarding adverse effects.

The Keeyask Generation Project EIS identified operation employment population growth as having the potential to place strain on health services. This would be the same situation for population growth related to operation employment for the Keewatinoow Converter Station living in Gillam.

At present the Gillam Hospital and services adequately meet the needs of the population, although recruiting and retaining qualified professionals is challenging. Manitoba Hydro subsidizes services that a remote community might otherwise not have on a regular basis, such as massage therapy, physiotherapy, and eye and dental care. It is expected that additional staff may be required to accommodate changes associated with an increased population (*e.g.*, an additional physician may be required). However, between current plans to hire additional staff, existing hiring practices that attempt to cross-train individuals to enhance local capacity and financial support from Manitoba Hydro to bring in specialists (*e.g.*, massage therapists), the level of service currently provided can likely be maintained with new Project-related population. It is anticipated that the main issue associated with population growth would be timely response with physician coverage (*i.e.*, successfully recruiting an additional physician to avoid potential future shortages as the population of the community grows). The present hospital facility can accommodate a modest increase in population, however office space is limited and the hospital is looking at some redevelopment in order to provide more functional space, potentially including a walk-in clinic (Keeyask Generation Project Gillam KPI Program 2009-2010). Timely communication by Manitoba Hydro with health service providers will allow for effective planning of service delivery. This is particularly relevant to government service providers who provide funding on a per capita basis.

The Gillam School is currently operating close to capacity and, based on trends over the last five to ten years, it is expected that enrolment would increase even without the Project. Of the 110-140 people projected to move into the community, 35-45 would be school-aged children. Depending on distribution of the school-aged children, these additional students will likely result in the school being at over-capacity levels. According to the Keeyask Generation Project EIS, Manitoba Hydro, along with the Frontier School Division, is examining the feasibility of expanding the current infrastructure or building a new facility.

Although there is already a shortage of childcare options in the community, the Gillam childcare facility has responded to increased demand. A new childcare facility is being constructed with

expanded capacity for approximately 75 children; the facility should be completed in 2012 (Manitoba Hydro, *pers. comm.* May 2012). The Keeyask Generation Project EIS also identifies the development of additional childcare facilities (*e.g.*, private home-based care) as an entrepreneurial opportunity for FLCN members living in Gillam. Given that existing capacity concerns are already being addressed, it is anticipated that any community growth associated with Keewatinoow operation employment could be handled by the expanded facility.

Awasis is the provider of social services in the community. Although the agency has sufficient human resources to address community needs, as well as the potential to expand the number of staff required to meet increased demand, there is a lack of programming space available. NNADAP and Mental Health workers share office space in Gillam, which results in some lack of privacy for clients accessing services. If adequate space can be found or created to meet the needs of the Project-related population, Awasis is likely to be able to accommodate the community's increase in population (Keeyask Hydropower Limited Partnership 2012).

While many of the aforementioned facilities and services are funded on a per capita basis, it is important to note that Manitoba Hydro supports and subsidizes service delivery in the community and would continue to do so. Subsidized services include massage therapy, chiropractic services, optometry, physiotherapy and dental services (Keeyask Generation Project Gillam KPI Program 2009-2010). In addition, Manitoba Hydro is working with the Town of Gillam and FLCN on long-term planning needs of the community; this is a forum to proactively identify future concerns related to service provision.

Effects on community services from the operation of the Keewatinoow Converter Station and associated facilities are considered negative, small in magnitude, Project Study Area in geographic extent, medium-term in duration and therefore not significant.

TAB 3.5

SUPPLEMENTAL INFORMATION

EFFECTS ASSESSMENT

**PUBLIC SAFETY AND WORKER
INTERACTION**

The following text in Tab 3.5 follows the numbering of the original Bipole III EIS in order to facilitate the reader in understanding where the updated information fits into the original document. For example, this Tab 3.5 is focused on the effects assessment (which is Chapter 8, Section 8.3 for the Socio-Economic Environment). The original numbering system has therefore been adopted.

8.0 EFFECTS ASSESSMENT AND MITIGATION

8.3 SOCIO-ECONOMIC EFFECTS ASSESSMENT

8.3.5 Personal Family and Community Life

8.3.5.3 Environmental Effects Assessment and Mitigation

This section updates the effects and mitigation assessment of potential adverse effects of construction worker interaction with people residing in the Gillam area. It replaces Personal Family and Community Life, Section 8.3.5.3: Environmental Effects Assessment and Mitigation, Public Safety, Construction, Worker Interaction (only) (pages 8-325 to 8-330¹); and adds to the section on Operation (page 8-331) of the Bipole III EIS. It should be noted that the first paragraph under Worker Interaction (pg. 8-325) of the Bipole III EIS has been reiterated below to provide context to the remaining text.

- The assessment has been updated to include all of the Bipole III Project components that are being built in the Gillam area including:
 - Clearing and construction of Section N1 of the Bipole III transmission line;
 - Construction of the Keewatinoow Construction (138kV) KN 36 extension;
 - Construction of the five Keewatinoow AC collector lines (230 kV);
 - Construction of the electrode line;
 - Expansion of the Henday AIS 230 kV switchyard;
 - Upgrading of the Long Spruce switchyard;
 - Construction of the Keewatinoow construction power station; and
 - Construction of the Keewatinoow converter station.

The initial submission focused on the construction workforce of the Keewatinoow Converter Station, the component with the longest duration of construction and by far the largest

¹ The section on Gang and Drug Activities remains unchanged.

construction workforce. The other components have been included to ensure completeness in the assessment of worker interaction effects. The Keewatinoow workforce estimates have also been updated.

The following updated section is consistent with the analytical approach and proposed mitigation in the Keeyask Generation Project EIS which Manitoba Hydro submitted for regulatory review on July 6, 2012. The Keeyask Generation Project EIS provides a more refined approach to analysis of worker interaction effects. This has been incorporated into this supplemental filing. Manitoba Hydro's approach to mitigation of worker interaction effects has evolved since the submission of the Bipole III EIS to recognize that a coordinated approach is needed among all Manitoba Hydro projects being built in the Gillam area. This is reflected in the updated mitigation section.

The updated effects and mitigation assessment does not alter the significance determination for this VEC from the original EIS filing –“ based on mitigative measures, ongoing monitoring and adaptive management planning which recognizes potential negative effects, it is expected that the residual adverse effects will not be significant, as this term is defined in Chapter 4 for the purposes of this environmental assessment”.

Keewatinoow Converter Station and Associated Facilities

Construction Effects and Mitigation

Local First Nation communities have witnessed the development of multiple hydroelectric projects on the Nelson River. This has resulted in a variety of experiences with a non-local workforce, some positive and some negative. These past experiences have resulted in fears associated with negative interaction with non-local workers at the construction camp (*e.g.*, racism), negative interaction with non-local workers who go into Thompson or Gillam during their “off” time, and finally the potential for non-local workers to visit the local First Nation home communities and the potential for disruptive behaviour to ensue. The Town of Gillam's history in particular includes periods of large influxes of transient construction workers primarily associated with hydroelectric development. During these periods, Gillam was known to become a rowdier community, with higher rates of alcohol-related incidents (Gillam KPI Program 2009-2010).

Fox Lake Cree Nation (FLCN) Members have identified the potential adverse effects from construction worker interaction with community members, in particular women and youth, as their greatest concern associated with new major projects being built in their traditional territory. The community's concern is based on their knowledge of what happened during construction of other major projects in the area in the past. Construction workers from previous projects often visited Gillam during their leisure time and would come in contact with FLCN Members who were living in or visiting Gillam, on the streets, in the bar, at public facilities and in homes. Although most of the past contacts between construction workers and FLCN Members were benign, some were problematic resulting in unwanted and/or undesirable social consequences.

Fox Lake Cree Nation Members continue to experience pain from the consequences of past interaction incidents.

Considerations in Evaluating Effects to Public Safety

The principle sources of concern for potential adverse effects to public safety from worker interactions relate to Project construction workers who travel to Gillam during their leisure hours to socialize at the bar, restaurants, community events or in residents' homes. In order to assess the potential for adverse effects it is important to understand:

- The number, timing and location of construction workers; and
- Factors that affect where workers choose to spend leisure time and the social context of the potentially affected communities. These include:
 - Working hours;
 - Leisure amenities at camps; and
 - Travel distances and amenities of nearby communities.

The Number, Timing and Location of Construction Workers

Throughout the seven year period, from 2012 to 2018, construction workers involved in building components of the Bipole III Project will be based in the Gillam area. During this period, workers will be brought in to the area to build the following components of the Project:

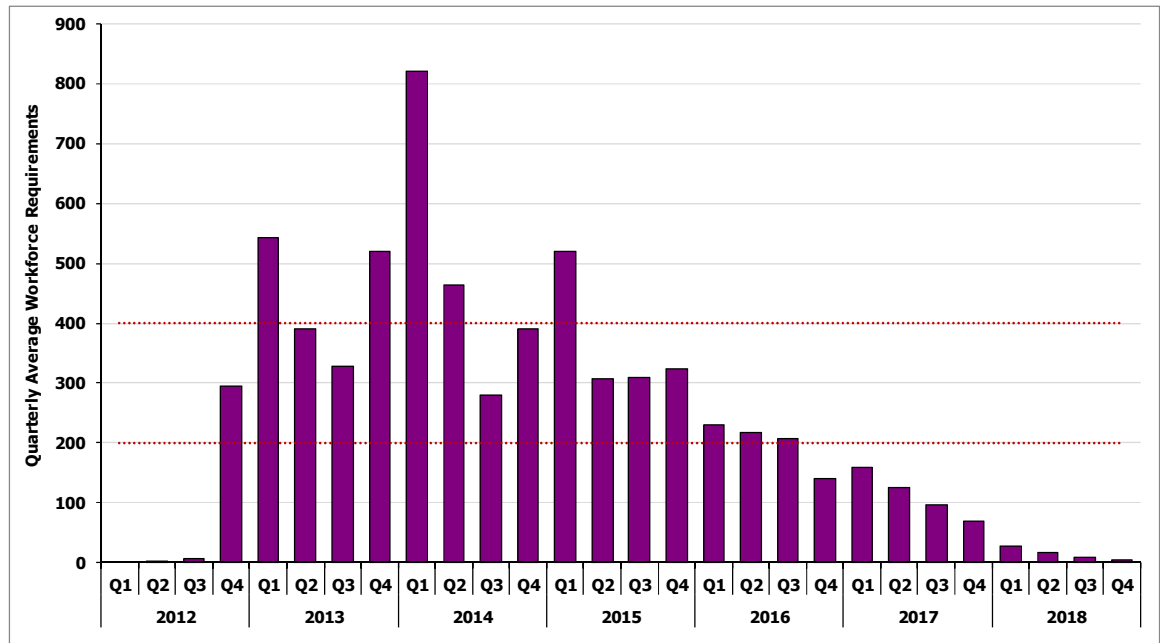
- Section N1 of the Bipole III transmission line;
- The Keewatinoow Construction power transmission line extension;
- Keewatinoow construction power station;
- The Keewatinoow AC collector lines;
- The Northern ground electrode and line;
- The Henday AIS 230 kV switchyard expansion;
- The Long Spruce GIS switchyard upgrades; and
- The Keewatinoow Converter Station.

Of the components identified above, construction of the Keewatinoow Converter Station will require the largest workforce and will be in the area for the longest overall period. Most of the construction of the Project will take place over about five and half years from the late fall of 2012 to the spring of 2018 with small workforce requirements needed at the start (*i.e.*, in the summer of 2012), and at the finish (*i.e.*, summer and fall of 2018)¹. Large numbers of workers will also be needed for building Section N1 of the Bipole III transmission line whose construction will largely be concentrated into two winter seasons - the winters of 2013 and 2014.

¹ Note: the Project start date cannot be definitively determined until regulatory approvals are in place.

Figure S 8.3-1 illustrates the quarterly average workforce that will be required in the Gillam area for all of the Bipole III components being built in the Gillam area. As shown in Figure S 8.3-1:

- The number of construction workers will vary from an average of two workers in early 2012 to an average quarterly workforce of 820 workers in the first quarter of 2014, when high levels of construction are occurring on Section 1 of the Bipole III transmission line, the Keewatinoow AC transmission line and Keewatinoow Converter Station.
- A quarterly average of at least 200 construction workers will be based in the Gillam area for 17 consecutive quarters from the last quarter of 2012 to the third quarter of 2016, with about 400 workers during four quarters in 2013 to 2015.



Notes:

- Derived from data provided by Manitoba Hydro (June 4, 2012).
- The numbers include average quarterly workforce requirements for Section N1 - Clearing, Section N1 - Construction, Keewatinoow Construction power (138 kV) KN 36 Extension, Keewatinoow AC Collector Lines (230 kV), Northern Electrode Line, Henday AIS 230 kV Switchyard Expansion, Long Spruce GIS Switchyard upgrades, Keewatinoow Construction Power Station and Keewatinoow Converter Station.

Figure S 8.3-1: Bipole III Construction Quarterly Average Workforce Requirements in the Gillam Area

Virtually all of these construction workers are expected to live in construction camps. Each Project component will have its own camp arrangements. The largest and longest duration construction camp will be located near the Keewatinoow Converter Station site.

- From late 2012 to early to mid 2014, this will be a start-up camp that can accommodate 350 workers.
- Subsequently, it will become a fully serviced camp capable of accommodating up to 550 workers (including room for turnover).

Other smaller camps will also be used for other Project components.

Very few of the construction workers will choose to live in Gillam because of the availability of free room and board at the camp, the short time they will be spending in the area and the lack of rental accommodation in Gillam.

It is likely that some workers will leave Project camps for leisure time visits to communities with amenities including bars, liquor vendors, hotels and restaurants. Gillam is the nearest community with such amenities as Fox Lake (Bird) (the closest community) does not have these amenities.

Factors Influencing Leisure Time Decisions

Familiarity with construction of previous northern hydroelectric projects and professional judgement suggests that the decision by workers to travel in their off hours will depend on a number of factors. Some factors will encourage them to remain in the camp, while others will serve to push them away from the camp towards a nearby community. Where workers decide to go will also depend on how much time off they have (*e.g.*, evening off vs. day off), the location of the amenities they seek and the distance they have to travel.

- **Working hours:** Construction workers at remote sites will typically work 10 to 12 hour days, six days a week and have one day off, typically Sunday, although the exact working hours will vary among contractors. The long working day and working week wlimits the amount of leisure time workers have available to make offsite trips. Such trips are most likely to occur on the evening before their day off and the following day when they are not working. End of day shift visits for leisure amenities outside the main construction camp are less likely due to the long work days and the distances from the camp to the nearest communities. Although such trips may occur, it is not possible to quantify the number of trips.
- **Leisure amenities at camps:** The fully serviced main construction camp will have a lounge and high quality recreational facilities and programming on site. It will also provide free meals for workers. These factors are expected to result in a large portion of workers who reside at the camp choosing to remain at the camp during off-hours rather than going offsite for leisure amenities, particularly during their daily shifts. The situation is different with the start up camp and smaller component-specific camps. While these camps will provide meals to workers, they are unlikely to have a lounge and recreational facilities, making them less attractive places to spend leisure time. The absence of these facilities can be expected to increase the likelihood of workers living in these camps making trips to nearby communities to take advantage of their recreation and leisure amenities. Once the full service camp is available in early 2014, it is expected to house the vast majority of Bipole III related construction workers in the area. In the two years prior to that, all workers will be housed in less than fully serviced camps.
- **Travel distances and amenities of nearby communities:** It is anticipated that Gillam would be their preferred location to visit because it is the closest community with the types of amenities that they would be seeking — including shopping, bars, a beer vendor, a liquor store, hotels, restaurants, and recreational facilities. Most workers could reach Gillam in an hour or less, making evening visits a possibility. In 2009, Gillam had one bar, one beer vendor, one liquor store, two hotels, two restaurants, and one multi-purpose recreation complex. It is likely that this range of amenities would continue to be available in the community during the construction of the Bipole III Project. Fox Lake (Bird) is the closest community to Keewatinoow; however, given lack of visitor amenities, construction workers are unlikely to have much interest in visiting Fox Lake (Bird). Only workers with family or friends in Fox Lake (Bird) are likely to choose Fox Lake (Bird) as an amenity destination.

The next closest community with relevant amenities is Thompson, which is considerably larger than Gillam and offers substantially more of the amenities that would be sought by workers. The trip to Thompson is much longer however (an estimated 325 km from the work camp), taking about 3 hours one-way and 6 hours round trip. Therefore, Thompson is considered too far from the work camp for an evening trip and represents a substantial distance for a day trip or an evening plus day trip, which would require staying at a hotel. As such, Gillam would be the most likely choice for evening trips and a more likely choice for day trips. On occasion, workers could choose to travel to Thompson, but trips to Gillam would be much more frequent.

The community of Split Lake is en route to Thompson, and includes the amenities of a gas station, northern store and fast food outlet. Visits to Split Lake would likely be limited to workers with family and friends living there since Split Lake lacks the amenities that workers would seek.

Factors influencing number of visits by construction workers

While construction workers would likely visit Gillam, the number of visits that would be made cannot be predicted. No empirical evidence is available to derive an estimate of the proportion of construction workers who would make such visits. In spite of this limitation, the following perspectives can be provided about the level and timing of visits to Gillam:

- The number of visits would likely vary with the size of the construction workforce. Based on construction workforce estimates, visits would likely increase substantially during the fourth quarter of 2012, reaching noticeable levels in 2013, peaking early in 2014, and remaining at noticeable levels until 2016.
- The frequency of visits made by individual construction workers would likely be higher during the early years of construction when the start-up camp is operating than in later years when the fully serviced main camp would be in place. The start-up camp would offer fewer on-site amenities than the main camp, making it a less attractive place to stay during leisure time.
- The presence of a lounge and recreational facilities at the main camp would likely reduce the number of visits to Gillam by making available leisure opportunities at the camp site. Nevertheless, some workers may choose to go elsewhere for entertainment when they have time off.
- Many of the workers will be from outside of the region and arrive by plane or bus. They will not have access to a personal vehicle for trips outside of the camp to Gillam.

Worker interactions and increased alcohol and drug use both present a potential risk to the safety of individuals, families, and communities as a whole. Public safety effects resulting from negative worker-interactions are particularly relevant to those communities in closest proximity to the Project, namely Gillam, whose population consists of a substantial number of FLCN Members, Fox Lake (Bird) and Split Lake.

It is anticipated that most visits by construction workers would be benign and/or positive. However, a small proportion of the visits could still result in some worker interaction problems, such as harassment, racist comments, enticement to alcohol and drug use, sale of drugs, physical abuse, violence, infidelity, unplanned pregnancy, paternal abandonment and other adverse social effects, some of which could leave psychological and emotional scars with their victims that last for many years (Keeyask Generation Project FLCN KPI Program 2009-2011).

Due to their history of worker interaction issues associated with past hydroelectric development, FLCN is considered to be particularly sensitive to this issue. FLCN Members have identified potential adverse effects of construction worker interaction with community Members, in particular women and youth, as their greatest concern associated with new major projects being developed in their traditional territory. YFFN has noted that many of their youth attend high school in Thompson and there is the potential for adverse interactions with construction workers visiting Thompson. TCN has expressed concerns that non-local workers will visit Split Lake while workers are en route to Thompson. The communities' concerns are based on direct experience with the construction of previous hydroelectric generation projects, with FLCN's experience centred in the Gillam area (Keeyask Hydropower Limited Partnership 2012). Encounters with construction workers (whether adverse or benign) are not limited to FLCN Members. These interactions could extend to other Aboriginal and non-Aboriginal residents of Gillam, including family members of Manitoba Hydro employees living in the community.

Beyond the number of visits by construction workers, the extent of problematic interactions will be influenced by the attitudes of visiting workers and the ability of community members to avoid or respond to potentially adverse encounters. Because of the uncertainty and complexity of factors involved and lack of empirical studies on this topic, it is not possible to estimate the proportion of visits by construction workers that could result in adverse interactions or to determine the degree of seriousness of the problems that occur. As such, the extent and nature of potential problematic worker interactions is unpredictable and uncertain. However, experience of FLCN from previous major construction projects in the Gillam area indicates that such interactions could occur.

Mitigation measures include preventative measures at the camp, mechanisms to assist people in coping should negative effects arise as well as overall coordination and discussion across all projects involving Manitoba Hydro in the vicinity of Gillam to address worker interaction issues. Mitigation measures are targeted toward the workforce, as well as the community in Gillam including FLCN Members.

Preventative measures focused on construction workers at the Project site include the following:

- cross-cultural training for all construction workers including expectations for appropriate behaviour when visiting communities;
- a lounge and recreational facilities at the main camp to encourage workers to stay on site during their leisure hours;

- restriction of unauthorized public visits to the construction camp and associated facilities;
- discouraging non-northern workers from bringing their personal vehicles to site;
- restriction of the use of company vehicles for personal use;
- staffed security gate to monitor access to the site and prevent unauthorized access;
- operation of a shuttle to transfer incoming and outgoing workers between Gillam and Thompson airports and the site; and
- establishment of a camp committee to oversee implementation of consequences of inappropriate behaviour by workers in camp (part of Camp Rules).

Measures addressing prevention and coping are focused primarily on Gillam and FLCN. Considerable uncertainty exists concerning the expected number of visits by non-local construction workers in Gillam and the expected number and types of adverse occurrences. Discussions will begin prior to the start of construction among Manitoba Hydro, the Town of Gillam, and FLCN to determine the best mechanism for tracking and addressing worker interaction issues and concerns across all of Manitoba Hydro's proposed projects in the vicinity of Gillam. Ongoing dialogue between Manitoba Hydro and the Gillam RCMP during the construction phase will also assist in identifying whether worker interaction is an issue. It is anticipated that local justice and social agencies will be involved in these discussions, where appropriate, to gather data and to participate in the development of suitable mitigation measures. In addition, steps are being taken to address the issue of worker interaction with relevant stakeholders across all of Manitoba Hydro's proposed projects and activities in the vicinity of Gillam, rather than on a project by project basis. This coordinated approach provides greater certainty that the issue will be addressed in an effective and timely manner.

Residual Effects

In terms of construction of the Keewatinoow Converter Station and associated facilities, effects on public safety and worker interaction are anticipated to be negative, moderate in magnitude, Project Study Area in geographic extent, medium-term in duration and potentially significant.

The main concern with respect to public safety and worker interaction is infrequent but moderate worker interaction during construction beyond both the construction site and Local Study Area. The analysis undertaken respecting public safety and worker interaction has considered the effects of past hydroelectric development, the dynamics between the local population and non-local workers, as well as the current understanding and expectations of future interactions. Given the uncertainty that such Project effects can be completely mitigated, Manitoba Hydro will undertake socio-economic monitoring to assess whether additional measures will be necessary to address problems. Further, the analysis has taken into consideration the involvement of the population who could be considered 'vulnerable' as noted in Chapter 4, in determining mitigation measures, as well as their involvement in tracking and monitoring the issue. FLCN, the Town of Gillam representatives and Manitoba Hydro will work

together, as well as with local service providers, to address worker interaction issues across all Manitoba Hydro projects (*i.e.*, not just for the Bipole III Project).

There is a moderate degree of certainty in the assessment of the VEC since considerable effort was undertaken to understand the nature of past effects of hydroelectric development on the Gillam and FLCN communities, and information provided by FLCN in particular on the severity of past effects has been incorporated into the analysis. As noted above, a coordinated approach to worker interaction across all Manitoba Hydro's proposed projects and activities in the vicinity of Gillam provides greater certainty that the issue will be addressed in an effective and timely manner. Based on these steps and other forms of mitigation, as well as ongoing monitoring, it is expected that the residual negative effects will not be significant, as this term is defined in Chapter 4 for the purposes of this environmental assessment.

Operation Effects and Mitigation

The following paragraphs are in addition to operation effects noted on page 8-331 of the Bipole III EIS which focused on public safety at the Keewatinooow Converter Station site.

Effects to public safety are associated largely with the influx of non-local construction workers. Since operation employment is expected to be permanent and long-term, there is limited anticipated effect to public safety since the number of workers involved in the operational workforce is small, workers may be a combination of FLCN Members as well as non-local people, and workers will be living in Gillam long-term resulting in a higher degree of involvement in the community and thus accountability regarding personal behaviour. These factors will assist in minimizing the potential for adverse worker interactions. As noted, a coordinated approach to addressing issues related to worker interaction across all Manitoba Hydro projects in the vicinity of Gillam is planned. Any related processes and measures implemented during the construction phase could be extended into the operation phase if required.

Given the above information, and using the criteria established in Chapter 4 for the purposes of this environmental assessment, effects on public safety and worker interaction during the operation phase are anticipated to be negative, small in magnitude, Project Study Area in geographic extent, medium-term in duration and considered not significant.

The residual environmental effects summary table (Table 8.3-16 on page 8-342) has been revised to reflect this information. The revised Table S 8.3-16 is provided below.

Table S 8.3-1: Residual Environmental Effects Summary – Personal, Family and Community Life

VEC	Project Component	Phase	Residual Effect	Assessment ¹
Public Safety	HVdc Transmission Line	Construction & Operations	Construction site risks; ROW dangers of high voltage line	Direction – Negative Magnitude – Small Geographic Extent – Project Site/Footprint Duration – Short to Medium-Term Overall – Not Significant
			Worker interaction with local community; Construction site risks	Direction – Negative Magnitude – Moderate Geographic Extent – Project Study Area Duration – Medium-Term Overall – Potentially Significant
	Keewatinoow Converter Station & Associated Facilities ²	Construction	Construction site risks	Frequency – Infrequent Reversibility – Reversible Overall – Not Significant
			Worker interaction with local community; Risks related to high voltage power at site	Direction – Negative Magnitude – Small Geographic Extent – Project Study Area Duration – Medium-Term Overall – Not Significant
	Riel Converter Station & Associated Facilities	Construction & Operations	Construction site risks; Risks related to high voltage power at site	Direction – Negative Magnitude – Small Geographic Extent – Project Site/Footprint Duration – Short to Medium-Term Overall – Not Significant
Human Health	HVdc Transmission Line; Keewatinoow and Riel Converter Stations & Associated Facilities	Construction & Operations	Noise, vibration, dust & other disturbance effects	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Short to Medium-Term Overall – Not Significant

VEC	Project Component	Phase	Residual Effect	Assessment ¹
Aesthetics	HVdc Transmission Line	Operations	Physical presence of the line	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant
	Keewatinoow Converter Station & Associated Facilities	Operations	Physical presence of the facilities	Direction – Negative Magnitude – Moderate Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant
	Riel Converter Station & Associated Facilities	Operations	Physical Presence of the facilities	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant

Notes:

1. Expected residual effects (i.e., effects after mitigation) of the Project on each VEC are assessed using the regulatory significance evaluation approach and methods defined in Chapter 4, Section 4.2.10. Where feasible, regulatory significance is assessed for each non-negligible expected residual effect based on its expected direction, magnitude, geographic extent and duration (as each term is defined in Section 4.2.10); if an adverse residual effect is evaluated to be potentially significant, other factors are also considered (frequency, reversibility, ecological importance and societal importance). Scientific uncertainty is noted where it may materially affect the assessment.
2. The concern is infrequent but moderate worker interaction during construction beyond the construction site and beyond the Local Study Area. Based on mitigative measures, ongoing monitoring and adaptive management planning recognizing the potential negative effects, it is expected that the residual adverse effects will not be significant as this term is defined in Chapter 4 for the purpose of this environmental assessment.

BIPOLE III PROJECT

ENVIRONMENTAL IMPACT

STATEMENT – SUPPLEMENTAL

1.0 INTRODUCTION

Manitoba Hydro recently completed the documentation of supplemental information in support of the Bipole III Transmission Project EIS. The supplemental socio-economic information is provided to have consistency in information, analysis and proposed mitigation with what is contained in the Keeyask Generation Project EIS submitted for regulatory review on July 6, 2012. In addition, the supplemental filing updates baseline information that was developed for the Keeyask Generation Project and is applicable to the Bipole III Project; and updates, fills gaps and refines the effects assessment regarding community services and public safety and worker interaction.

Tab 3.5 provides supplemental effects assessment on public safety and worker interaction (construction and operation phases). This replaces Section 8.3.5.3 Environmental Effects Assessment and Mitigation, Public Safety, Construction, Worker Interaction (pages 8-325 to 8-330¹); and adds to the section on Operation (page 8-331). The residual environmental effects summary table (Table 8.3-16 on page 8-342) has been revised to reflect this information.

The original Table 8.3-16 and the revised Table S 8.3-16 that follows are provided. The only differences between the original and revised tables are the following:

- Added operation effects assessment for Public Safety – Keewatinoow Converter Station to the revised table; and
- Changed the duration assessment for Public Safety – Keewatinoow Converter Station to medium-term for both construction and operation phases for consistency with residual effects assessment for the Keeyask Generation Project.

¹ The section on Gang and Drug Activities remains unchanged.

Table 8.3-16: Residual Environmental Effects Summary – Personal, Family and Community Life

VEC	Project Component	Phase	Residual Effect	Assessment ¹
Public Safety	HVdc Transmission Line	Construction & Operations	Construction site risks; ROW dangers of high voltage line	Direction – Negative Magnitude – Small Geographic Extent – Project Site/Footprint Duration – Short to Medium-Term Overall – Not Significant
	Keewatinoow Converter Station & Associated Facilities ²	Construction	Worker interaction with local community; Construction site risks	Direction – Negative Magnitude – Moderate Geographic Extent – Project Study Area Duration – Short to Medium-Term Overall – Potentially Significant Frequency – Infrequent Reversibility – Reversible Overall– Not Significant
		Operations	Risks related to high voltage power at site	Direction – Negative Magnitude – Small Geographic Extent – Project Study Area Duration – Medium-Term Overall– Not Significant
	Riel Converter Station & Associated Facilities	Construction & Operations	Construction site risks; Risks related to high voltage power at site	Direction – Negative Magnitude – Small Geographic Extent – Project Site/Footprint Duration – Short to Medium-Term Overall– Not Significant
Human Health	HVdc Transmission Line; Keewatinoow and Riel Converter Stations & Associated Facilities	Construction & Operations	Noise, vibration, dust & other disturbance effects	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Short to Medium-Term Overall – Not Significant

VEC	Project Component	Phase	Residual Effect	Assessment ¹
Aesthetics	HVdc Transmission Line	Operations	Physical presence of the line	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant
	Keewatinoow Converter Station & Associated Facilities	Operations	Physical presence of the facilities	Direction – Negative Magnitude – Moderate Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant
	Riel Converter Station & Associated Facilities	Operations	Physical Presence of the facilities	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant

Notes:

1. Expected residual effects (i.e., effects after mitigation) of the Project on each VEC are assessed using the regulatory significance evaluation approach and methods defined in Chapter 4, Section 4.2.10. Where feasible, regulatory significance is assessed for each non-negligible expected residual effect based on its expected direction, magnitude, geographic extent and duration (as each term is defined in Section 4.2.10); if an adverse residual effect is evaluated to be potentially significant, other factors are also considered (frequency, reversibility, ecological importance and societal importance). Scientific uncertainty is noted where it may materially affect the assessment.
2. The concern is infrequent but moderate worker interaction during construction beyond the construction site and beyond the Local Study Area. Based on mitigative measures, ongoing monitoring and adaptive management planning recognizing the potential negative effects, it is expected that the residual adverse effects will not be significant as this term is defined in Chapter 4 for the purpose of this environmental assessment.

Table S 8.3-16: Residual Environmental Effects Summary – Personal, Family and Community Life

VEC	Project Component	Phase	Residual Effect	Assessment ¹
Public Safety	HVdc Transmission Line	Construction & Operations	Construction site risks; ROW dangers of high voltage line	Direction – Negative Magnitude – Small Geographic Extent – Project Site/Footprint Duration – Short to Medium-Term Overall – Not Significant
			Worker interaction with local community; Construction site risks	Direction – Negative Magnitude – Moderate Geographic Extent – Project Study Area Duration – Medium-Term Overall – Potentially Significant Frequency – Infrequent Reversibility – Reversible Overall – Not Significant
	Keewatinoow Converter Station & Associated Facilities ²	Construction & Operations	Worker interaction with local community; Construction site risks	Direction – Negative Magnitude – Small Geographic Extent – Project Study Area Duration – Medium-Term Overall – Not Significant
			Worker interaction with local community; Risks related to high voltage power at site	Direction – Negative Magnitude – Small Geographic Extent – Project Study Area Duration – Medium-Term Overall – Not Significant
	Riel Converter Station & Associated Facilities	Construction & Operations	Construction site risks; Risks related to high voltage power at site	Direction – Negative Magnitude – Small Geographic Extent – Project Site/Footprint Duration – Short to Medium-Term Overall – Not Significant
Human Health	HVdc Transmission Line; Keewatinoow and Riel Converter Stations & Associated Facilities	Construction & Operations	Noise, vibration, dust & other disturbance effects	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Short to Medium-Term Overall – Not Significant

VEC	Project Component	Phase	Residual Effect	Assessment ¹
Aesthetics	HVdc Transmission Line	Operations	Physical presence of the line	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant
	Keewatinoow Converter Station & Associated Facilities	Operations	Physical presence of the facilities	Direction – Negative Magnitude – Moderate Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant
	Riel Converter Station & Associated Facilities	Operations	Physical Presence of the facilities	Direction – Negative Magnitude – Small Geographic Extent – Local Study Area Duration – Medium-Term Overall – Not Significant

Notes:

1. Expected residual effects (i.e., effects after mitigation) of the Project on each VEC are assessed using the regulatory significance evaluation approach and methods defined in Chapter 4, Section 4.2.10. Where feasible, regulatory significance is assessed for each non-negligible expected residual effect based on its expected direction, magnitude, geographic extent and duration (as each term is defined in Section 4.2.10); if an adverse residual effect is evaluated to be potentially significant, other factors are also considered (frequency, reversibility, ecological importance and societal importance). Scientific uncertainty is noted where it may materially affect the assessment.
2. The concern is infrequent but moderate worker interaction during construction beyond the construction site and beyond the Local Study Area. Based on mitigative measures, ongoing monitoring and adaptive management planning recognizing the potential negative effects, it is expected that the residual adverse effects will not be significant as this term is defined in Chapter 4 for the purpose of this environmental assessment.

RECORD OF MEETING

Title: Meeting with York Factory First Nation

Date of Meeting: May 6, 2010

Time: 10:00 – 11:00 am

Location: 360 Portage

In Attendance: York Factory First Nation: Chief Louisa Constant, Jimmy Beardy, Councillor Roddy Ouskan and Cory Lang (HMA)
Manitoba Hydro: Carl Johnson, Lindsay Thompson, Blair Burdett, Michel Morin, and Kelly Houston

Item	Description	Action By
	There was a brief presentation on the Bipole III project. There was general discussion on a number of items as follows:	
1	Manitoba Hydro representatives indicated that there is an opportunity for a leadership meeting and community open house to discuss the project further. It was indicated that the leadership meeting could either occur in York Factory or in Winnipeg.	
2	There was a discussion regarding the potential for employment opportunities with the project.	
3	It was questioned whether the meeting was considered consultation and it was clarified that the meeting did not constitute consultation as required of the crown under Section 35.	

Recorded By: Lindsay Thompson

Name of recorder (Recorded on February 28, 2012)