# BIPOLE III TRANSMISSION PROJECT CONSTRUCTION ENVIRONMENTAL PROTECTION PLAN - SECTION C1

Mapbook

PART 2

Manitoba Hydro

**Aboriginal Traditional Knowledge**

Manitoba Hydro recognizes the unique relationship Aboriginal communities have with their areas of use and is appreciative to all the communities who took time to share information about their history and culture as well as their valued knowledge and perspectives with regards to the Bipole III study area and Project. The ATK that has been shared assisted Manitoba Hydro in: developing a greater understanding of the study area; identifying potential Project effects; planning and designing the Project; developing potential mitigation measures, some of which can be found throughout this document.

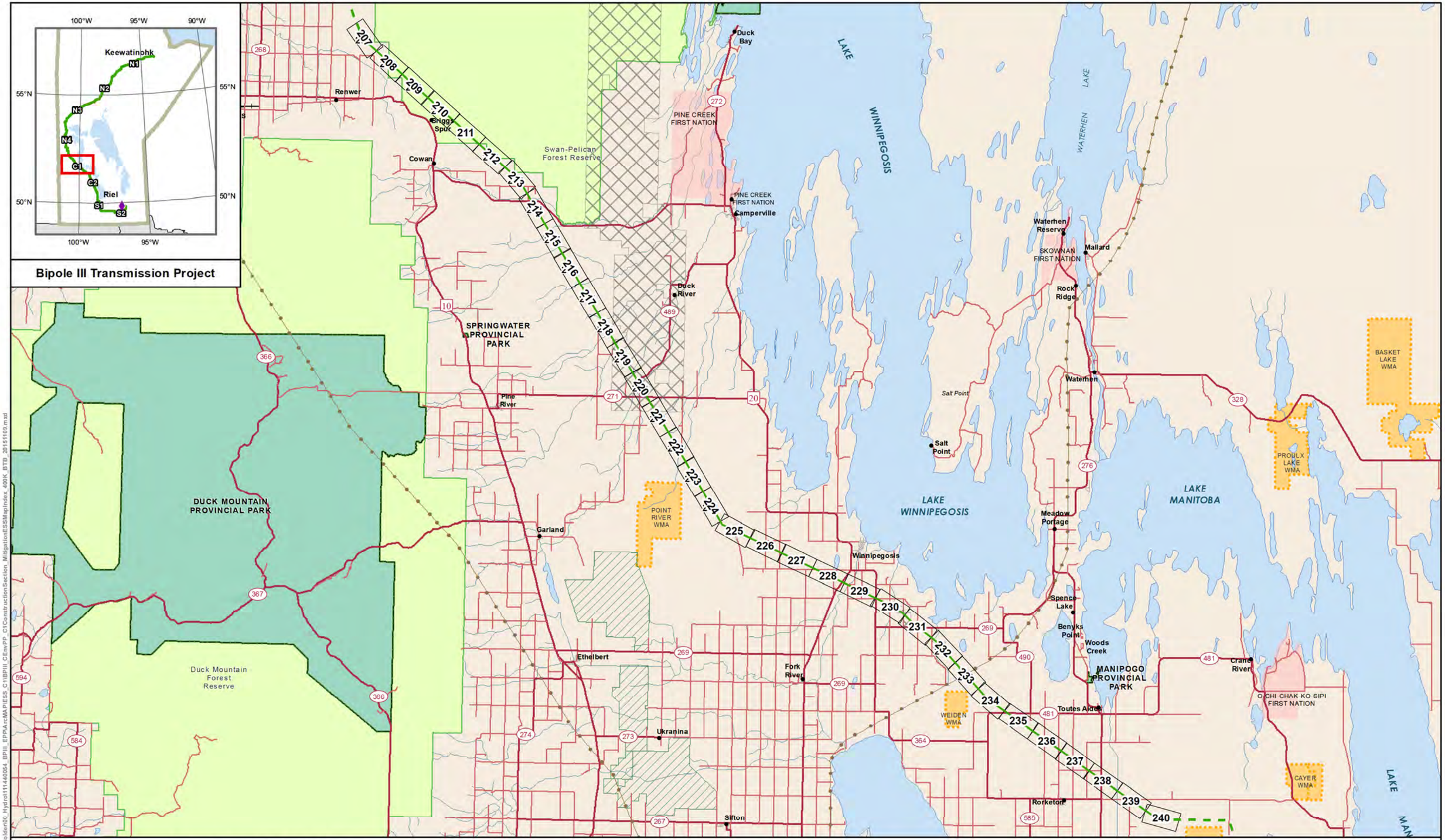
Document Owner:
Licensing and Environmental Assessment Department
Transmission Planning and Design Division
Transmission Business Unit
Manitoba Hydro

Final 4.0

List of Revisions- BPIII Environmental Protection Plan C1 Section

| Number | Nature of Revision | Page/Map # | Revised By | Date |
|---|---|---|---|---|
| Final 1.01 | Addition of a Archaeological Sensitive Site 300m off of the ROW (bottom right of map) | Map # 210 | Kris Watts | 20141008 |
| Final 2.01 | Due a computer scripting error when the mapbooks were initially produced, Stream Crossing Habitat Classification wasn't populated in the tables. That information has now been added into the mitigation tables where applicable<br>The additional information presented here is considered an addendum to the mapbook, as each stream crossing requires the same mitigation measures regardless of its classification. | Any page that has a stream crossing and that info was available | Kris Watts | 20141210 |
| Final 2.02 | Stream Crossing Habitat Classification information missing in previous version due to computer scripting error are now populated in this update | Any page that has a stream crossing and that info was available | Kris Watts | 2015-03-05 |
| Final 3.00 | Sensitive sites will now be symbolized in grey with white Halos for better visibility | All maps with SS | Stantec | 2015-03-20 |
| Final 3.01 | Removed Mitigation measure that referred to DFO operational statement as Fisheries and Oceans Canada no longer uses operational statements but rather "Measures to Avoid Causing Harm to Fish and Fish Habitat" These measures are reflected in the text of the CEnvPP | Any mitigation text for stream crossings or water bodies | Kris Watts | 2015-03-27 |
| Final 3.02 | To help prevent confusion with access trails, recreational trails will be renamed, for example<br>ALL Accss features will now be called RecUse<br>eg "N4-Accss-100" will now be "N4-RecUse-100" | Maps 207,210,211,220 and 229 | Manitoba Hydro | Oct 6 2015 |
| Final 3.03 | C1-Wild-100 and C1-Wild-101 removed large polygons after 3 years of study and AMEC found the area not needing bird diverters so they were removed | Maps 210-213 | Manitoba Hydro | Oct 6 2015 |
| Final 3.04 | Updates to Access trails as well as the addition of Bypass utilized during construction | Any associated map | Manitoba Hydro | Oct 6 2015 |

| | | | | |
|---|---|---|---|---|
| Final 3.03 | Removed the Bird Sensitive timing window mitigation measure statement that indicates a timing window as this is observed throughout the project not just at that specific ESS and indicated in the appendix of the text CEnvPP document | Any map with ESS Group: Birds and Habitat on it | Manitoba Hydro | Oct 6 2015 |
| Final 3.06 | Removed Bird Sensitivity Area Line features that were used to indicate locations of intended bird diverter installations. This will be indicated to the contractor through engineer drawings | Removed from any associated map | Manitoba Hydro | Oct 6 2015 |
| Final 3.07 | Removed labels from major stream crossings, rail crossing and transmission line crossings, and access route points. Labels for access routes remain. | Any associated Map | Manitoba Hydro | 20151103 |
| Final 3.08 | Incorporation of additional access routes from the 2014 construction season | Any associated Map | Stantec | 20151112 |
| Final 3.09 | Mitigation for Moose (C1-Wild-200 and C1-Wild-201) have been updated to refer to a more comprehensive document. The "Moose and Caribou Sensitive Range Delineation and Mitigation Plans" document | Maps 211-213, 215-217 | Manitoba Hydro | 20151204 |
| Final 3.10 | Added C1-Hert-129 after field investigation | Map/Page 229 | Manitoba Hydro | 20160112 |
| Final 3.11 | Mitigation measures for Aqua points have included a timing window statement that considered fall spawning fish "No instream works or fording from September to…" These fish are unlikely to occur in streams and therefore aren't a concern in stream crossings. This statement will be updated in subsequent versions to read "No instream works or fording from April 1 - July 15" | Map/Page 214-216, 218-222, 229-232, 238 | Manitoba Hydro | 20160120 |
| Final 3.12 | Reinstated heritage ESS C1-Hert-106 and C1-Hert-124 | Maps 216 & 231 | Stantec | 20160414 |
| Final 4.0 | Addition of Access Route 145A | Page 225 | Manitoba Hydro | 20161102 |
| Final 4.0 | Addition of Annotation of Rural Road Layer | Any associated Map | Stantec | 20161102 |




Manitoba Hydro

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**Legend**

- Final Preferred Route
- C1
- Map Index Grid (1:10,000)
- Transmission Line
- Mineral Rights
- Provincial Park
- First Nation
- Provincial Forest
- Wildlife Management Area
- Community Pasture

# Bipole III Transmission Line Project
# Construction Environmental Protection Plan

## C1 Construction Section
## Key Map Index

File Location: G:_GIS_Project_Folder\06_Hydro\111440054_BPIII_EPPA\mxd\MAPIESS_C1\BPIII_CEnvPP_C1ConstructionSection_MitigationESSMapIndex_400K_BTB_20151108.mxd

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**Land Base**
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- Mining
- Provincial Park

**Project Infrastructure**
- Angle Tower Locations
- BPIII Final Preferred Route
- 66 m Right of Way

**Points of Access***
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Proposed Access Route

*Labels correspond to BPIII Access Management Database

**ESS Features**
**Heritage**
- Archaeological

**Wildlife**
- Birds and Habitat

**Soils and Terrain**
- Permafrost

**Water**
- Water Crossing

# Bipole III Transmission Project
# Construction Environmental Protection Plan
## Construction Section N2
## Environmentally Sensitive Site Locations

Map 61

DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPP\ARCMAP\ESS_N2\BPIII_CENVPP_N1N2N3N4C1SECTIONBASEMAP_MAPBOOK_BTB_STANTEC_20131201.MXD

## SAMPLE MITIGATION TABLE (see adjacent KEY for additional information)

**MAP NUMBER :** 61 [1]

**ESS Group :** Permafrost [2]

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| N2-S01 | N2-Soils-100 | Permafrost | Site: 1 to 2 | E- 615921<br>N- 6206328 | E- 615882<br>N- 6206242 | 14N | 95 m |
| N2-S01 | N2-Soils-102 | Permafrost | Site: 13 to 14 | E- 614820<br>N- 6203884 | E- 614309<br>N- 6202749 | 14N | 1244 m |

3

**Potential Effects:** [4]

*Melting or loss of permafrost due to disturbance of the active layer*

**Specific Mitigation:** [5]

- Carry out construction activities on frozen ground to minimize surface damage and rutting
- Use existing trails, roads or cut lines whenever possible as access routes

**ESS Group :** Water Crossing

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| N2-S01 | N2-Aqua-100 | Unnamed tributary of Burntwood River | Site: 15 to 16 | E- 614778<br>N- 6203790 | E- 614707<br>N- 6203634 | 14N | 171 m |

**Potential Effects:** [4]

*Increased erosion and sedimentation, rutting of floodplains, loss of riparian vegetation*

**Specific Mitigation:** [5]

- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements. Use existing trails, roads or cut lines whenever possible as access routes

**ESS Group :** Birds and Habitat

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| N2-S01 | N2-Wild-100 | Waterfowl Sensitivity Area | Site: L1 to L2 | E- 614763<br>N-6203757 | E-614708<br>N-6203636 | 14N | 132 m |

**Potential Effects:** [4]

*Higher risk of wire collision, disturbance during breeding and nesting, risk of wire collision is localized to the right-of-way while construction disturbance can effect colonies up to 400 meters away*

**Specific Mitigation:** [5]

- Adhere to reduced risk timing windows for protection of birds (August 1- April 30)
- Maintain applicable setback during nesting and breeding timing window
- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
- Install bird diverters or other measures at high priority sites

***Mitigation shown includes only a sample of actual mitigation for the ESS features listed; refer to the Construction Environmental Protection plan for all specific mitigation measures recommended***

## KEY to SAMPLE MITIGATION TABLE

**1** Map on which ESS listed in the ESS Location Summary tables are illustrated

**2** ESS Group classification of ESS shown on the map

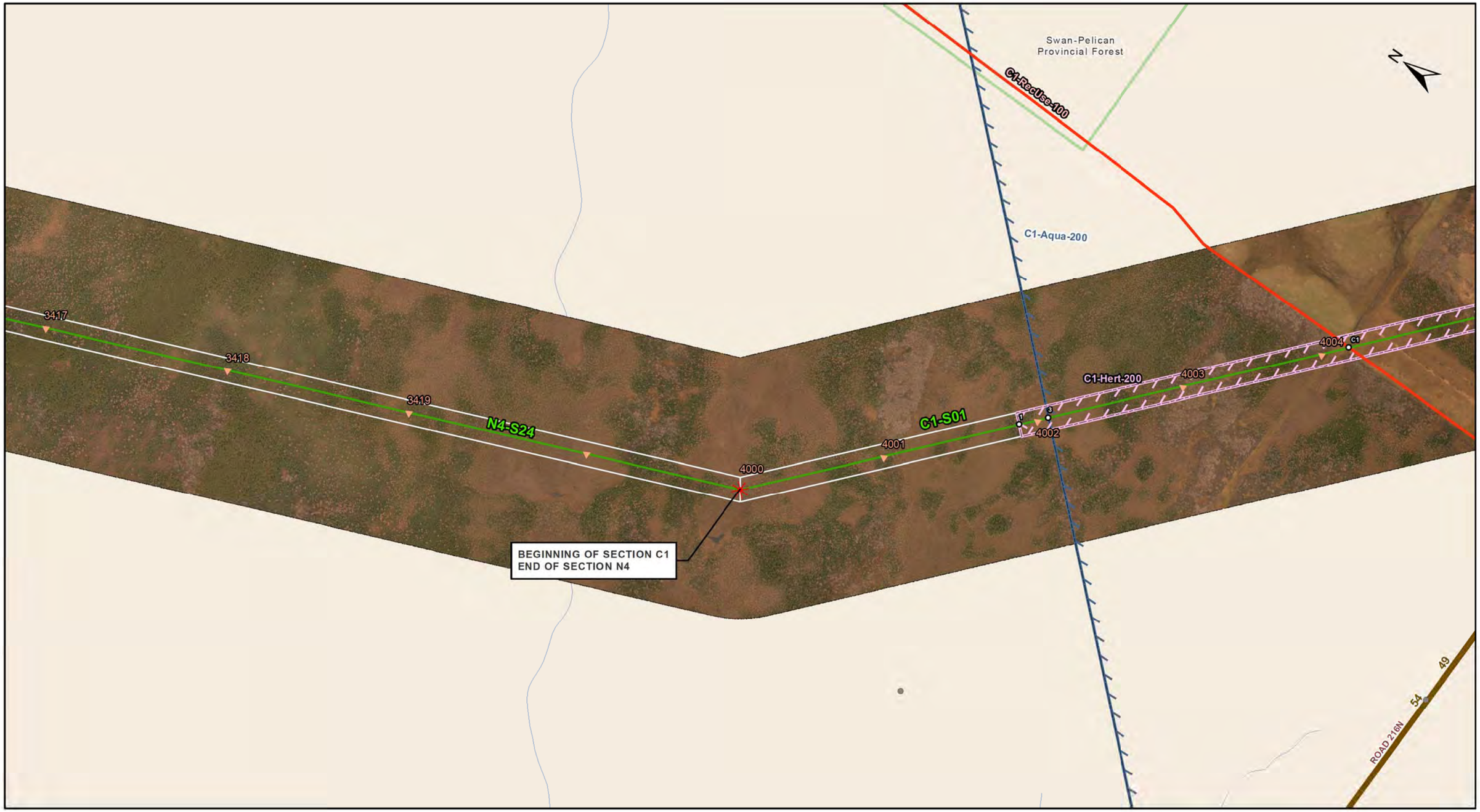
**3** ESS location summary; includes the following fields:
- Sec-Seg - ID of the construction section (i.e. N2) and segment (i.e. S03) for ESS location
- ESS ID - Site specific ID assigned to each ESS according to **naming convention** listed below
- ESS Name - Brief name/description of ESS
- Easting/Northing - UTM coordinates of ESS location (for points only)
- Location - site identification numbers for the start and stop site points of ESS intersection with the ROW (lines and polygons only)
- Start/Stop - UTM coordinates of the start/stop identification numbers listed in the "Location" field (lines and polygons only)
- Characteristics of stream crossings identified in the ESS Location Summary tables (where applicable and as information is available)

**4** Potential effects identified for ESS listed in the ESS Location Summary table

**5** Mitigation measures identified for ESS listed in the ESS Location Summary table

### ESS NAMING CONVENTION

| CATEGORY | GROUP (Number Series Representing Group) | ESS ID (Section ID-Category-Group Number) |
|---|---|---|
| **Access** | Intersection (100) | N2-Acss-100 |
| **Ecosystem** | Habitat (100) | N2-Eco-100 |
| | Research (200) | N2-Eco-200 |
| | Species of Concern (300) | N2-Eco-300 |
| **Heritage** | Archaeological (100) | N2-Hert-100 |
| | Cultural (200) | N2-Hert-200 |
| | Historic (300) | N2-Hert-300 |
| **Land Use** | Conservation (100) | N2-LUse-100 |
| | Crown Land Encumbrance (200) | N2-LUse-200 |
| | Recreation (300) | N2-LUse-300 |
| | Residential (400) | N2-LUse-400 |
| **Resource Use** | Agriculture (100) | N2-RUse-100 |
| | Food/Medicinal (200) | N2-RUse-200 |
| | Forestry (300) | N2-RUse-300 |
| | Hunting/Fishing (400) | N2-RUse-400 |
| | Trapping (500) | N2-RUse-500 |
| **Soils and Terrain** | Permafrost (100-200) | N2-Soils-100 |
| | Erosion (300) | N2-Soils-300 |
| | Terrain (400) | N2-Soils-400 |
| **Water** | Water Crossing (100) | N2-Aqua-100 |
| | Groundwater (200) | N2-Aqua-200 |
| | Wetlands (300) | N2-Aqua-300 |
| **Wildlife** | Birds and Habitat (100) | N2-Wild-100 |
| | Mammal and Habitat (200) | N2-Wild-200 |
| | Reptiles/Amphibians and Habitat (300) | N2-Wild-300 |

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Manitoba Hydro

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**Land Base**
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- Mining
- Provincial Forest

**Project Infrastructure**
- Angle Tower Locations
- Towers (Preliminary)*
- BPIII Final Preferred Route
- 66 m Right of Way

*Towers are subject to change, and are only used as a rough guide

**Sensitive Sites***
- Point Features
- Linear Features
- Area Features

*Currently outside Project footprint

**Points of Access***
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

**ESS Features**
**RecUse**
- Intersection

**Heritage**
- Cultural

**Water**
- Groundwater

# Bipole III Transmission Project
# Construction Environmental Protection Plan
## Construction Section C1
## Environmentally Sensitive Site Locations

Map 207

**ESS Group:** Intersection

| Sec-Seg ID | ESS ID | Location | ESS Name | Crossing Coordinates | UTM Zone |
|---|---|---|---|---|---|
| C1-S1 | C1-RecUse-100 | C1 | Access Route | E-380178 N-5779190 | 14N |

**Potential Effects:**

*Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- If any heritage resources are discovered, Archaeologist to conduct site investigation and recommend any additional mitigation measures

**ESS Group:** Cultural

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S1 | C1-Hert-200 | Gathering Area | Site: 1 to 2 | E-379493 N-5779808 | E-396683 N-5764303 | 14N | 23149m |

**Potential Effects:**

*Potential loss of vegetation during Project construction; potential for increased access to a traditional gathering area by non-community members*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible

**ESS Group:** Groundwater

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Aqua-200 | Artesian areas with uncertain water quality | Site: 3 to 4 | E-379554 N-5779753 | E-382245 N-5777326 | 14N | 3624 m |

**Potential Effects:**

*Potential increase in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface; Also, wetting the surficial environment (ground saturation)*

**Specific Mitigation:**

- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

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**Land Base**
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- Mining
- Provincial Forest

**Project Infrastructure**
- Angle Tower Locations
- Towers (Preliminary)*
- BPIII Final Preferred Route
- 66 m Right of Way

*Towers are subject to change, and are only used as a rough guide

**Sensitive Sites***
- Point Features
- Linear Features
- Area Features

*Currently outside Project footprint

**Points of Access***
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

**ESS Features**
**RecUse**
- Intersection

**Heritage**
- Cultural

**Water**
- Groundwater

# Bipole III Transmission Project
# Construction Environmental Protection Plan
## Construction Section C1
## Environmentally Sensitive Site Locations

Map 208

DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPP\ARCMAP\ESS_C1\BPIII_CENVPP_C1SECTION_MAPBOOK_20161102.MXD

**ESS Group:** Cultural

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Hert-200 | Gathering Area | Site: 1 to 2 | E-379493 N-5779808 | E-396683 N-5764303 | 14N | 23149m |

**Potential Effects:**

*Potential loss of vegetation during Project construction; potential for increased access to a traditional gathering area by non-community members*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible

**ESS Group:** Groundwater

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Aqua-200 | Artesian areas with uncertain water quality | Site: 3 to 4 | E-379554 N-5779753 | E-382245 N-5777326 | 14N | 3624 m |

**Potential Effects:**

*Potential increase in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface; Also, wetting the surficial environment (ground saturation)*

**Specific Mitigation:**

- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.
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Version: 4.0

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**Land Base**
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- Mining
- Provincial Forest

**Project Infrastructure**
- Angle Tower Locations
- Towers (Preliminary)*
- BPIII Final Preferred Route
- 66 m Right of Way

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**Sensitive Sites***
- Point Features
- Linear Features
- Area Features

*Currently outside Project footprint

**Points of Access***
- Proposed Access Point
- Major Stream Crossing
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- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

**ESS Features**
**Ecosystem**
- Species of Concern

**Heritage**
- Cultural

# Bipole III Transmission Project
# Construction Environmental Protection Plan
## Construction Section C1
## Environmentally Sensitive Site Locations

Map 209

**ESS Group:** Cultural

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Hert-200 | Gathering Area | Site: 1 to 2 | E-379493 N-5779808 | E-396683 N-5764303 | 14N | 23149m |

**Potential Effects:**

*Potential loss of vegetation during Project construction; potential for increased access to a traditional gathering area by non-community members*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible

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Coordinate System: UTM Zone 14N NAD83
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**Land Base**
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- Point Features
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- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

**ESS Features**

**Heritage**
- Archaeological

**RecUse**
- Intersection

**Ecosystem**
- Species of Concern

**Heritage**
- Cultural

**Soils and Terrain**
- Erosion

# Bipole III Transmission Project
# Construction Environmental Protection Plan
## Construction Section C1
## Environmentally Sensitive Site Locations

Map 210

DOCUMENT PATH: G:_GIS_PROJECT_FOLDER\00_HYDRO\111440054_BPIII_EPP\ARCMAP\ESS_C1\BPIII_CENVPP_C1SECTION_MAPBOOK_20161102.MXD

**ESS Group:** Archaeological

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone |
|---|---|---|---|---|---|
| C1-S01 | C1-Hert-100 | ATK - Old trail/road north to Kettle Hills - access for picking | 388405 | 5771770 | 14N |
| C1-S01 | C1-Hert-101 | ATK - Trails to access land by wagon | 388928 | 5771300 | 14N |

**Potential Effects:**

*Potential disturbance to Heritage Resources*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

**ESS Group:** Intersection

| Sec-Seg ID | ESS ID | Location | ESS Name | Crossing Coordinates | UTM Zone |
|---|---|---|---|---|---|
| C1-S01 | C1-RecUse-101 | C2 | Access Route | E-388315<br>N-5771851 | 14N |

**Potential Effects:**

*Loss of cultural values associated with the Kettle Hills due to increased access by non-community members. Loss of spirituality and world view due to access roads and ROW construction*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- If any heritage resources are discovered , Archaeologist to conduct site investigation and recommend any additional mitigation measures

**ESS Group:** Intersection

| Sec-Seg ID | ESS ID | Location | ESS Name | Crossing Coordinates | UTM Zone |
|---|---|---|---|---|---|
| C1-S01 | C1-RecUse-102 | C3 | Access Route | E-388818<br>N-5771397 | 14N |
| C1-S01 | C1-RecUse-103 | C4 | Access Route | E-388927<br>N-5771298 | 14N |

**Potential Effects:**

*Potential disturbance of access; disruption of social cohesion*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- If any heritage resources are discovered , Archaeologist to conduct site investigation and recommend any additional mitigation measures

**ESS Group:** Intersection

| Sec-Seg ID | ESS ID | Location | ESS Name | Crossing Coordinates | UTM Zone |
|---|---|---|---|---|---|
| C1-S01 | C1-RecUse-104 | C5 | Access Route | E-389011<br>N-5771223 | 14N |

**Potential Effects:**

*Loss of historic road due to construction of access road to ROW and activities associated with the ROW. Loss of cultural value associated with historic events*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid surface damage to and obstruction of access route
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- If any heritage resources are discovered , Archaeologist to conduct site investigation and recommend any additional mitigation measures

**ESS Group:** Erosion

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Soils-300 | Eolian (i.e. wind-modified) Deposits | Site: 7 to 8 | E-387072 N-5772971 | E-387910 N-5772216 | 14N | 1128 m |
| C1-S01 | C1-Soils-300 | Eolian (i.e. wind-modified) Deposits | Site: 9 to 10 | E-388915 N-5771309 | E-389177 N-5771073 | 14N | 352 m |
| C1-S01 | C1-Soils-301 | Eolian (i.e. wind-modified) Deposits | Site: 11 to 12 | E-389177 N-5771073 | E-390222 N-5770131 | 14N | 1407 m |

**Potential Effects:**

*Loss of topsoil due to wind erosion (e.g. creep, saltation, suspension) on disturbed surfaces.*

**Specific Mitigation:**

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

**ESS Group:** Cultural

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Hert-200 | Gathering Area | Site: 1 to 2 | E-379493 N-5779808 | E-396683 N-5764303 | 14N | 23149m |

**Potential Effects:**

*Potential loss of vegetation during Project construction; potential for increased access to a traditional gathering area by non-community members*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible

**ESS Group:** Species of Concern

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Eco-300 | Species of Concern | Site: 5 to 6 | E-386324 N-5773647 | E-393609 N-5767075 | 14N | 9811 m |

**Potential Effects:**

*Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities.*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

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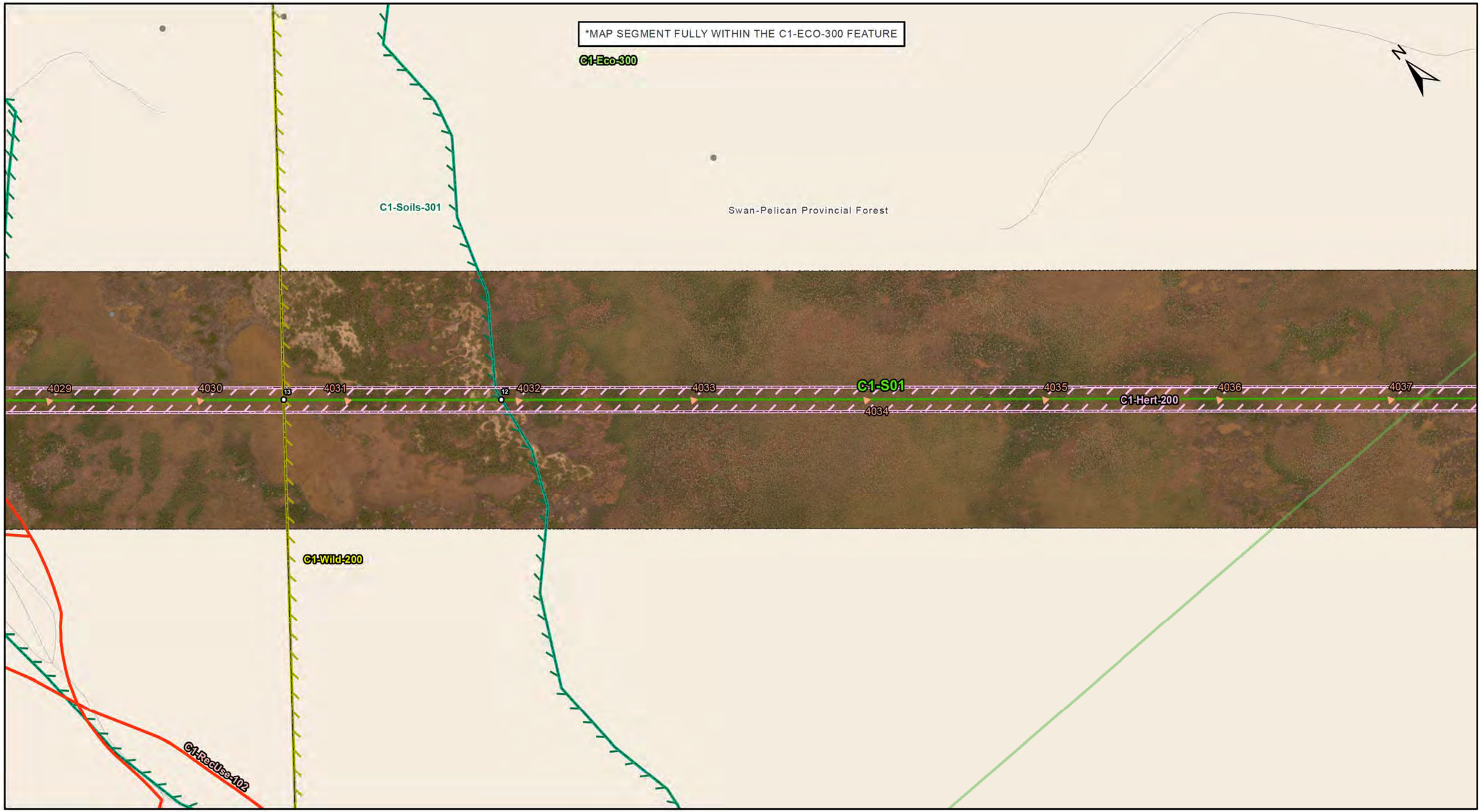


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Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: November 03, 2016
Version: 4.0

0 125 250 500
Metres
1:10,000

**Land Base**
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- Mining
- Provincial Forest

**Project Infrastructure**
- Angle Tower Locations
- Towers (Preliminary)*
- BPIII Final Preferred Route
- 66 m Right of Way

*Towers are subject to change, and are only used as a rough guide

**Sensitive Sites***
- Point Features
- Linear Features
- Area Features

*Currently outside Project footprint

**Points of Access***
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

**ESS Features**

**RecUse**
- Intersection

**Ecosystem**
- Species of Concern

**Heritage**
- Cultural

**Soils and Terrain**
- Erosion

**Wildlife**
- Mammals and Habitat

# Bipole III Transmission Project
# Construction Environmental Protection Plan
## Construction Section C1
## Environmentally Sensitive Site Locations

Map 211

**ESS Group:** Mammals and Habitat

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Wild-200 | Moose Sensitive Area | Site: 13 to 14 | E-389782 N-5770528 | E-395210 N-5765631 | 14N | 7310 m |

**Potential Effects:**

*GHA 14A Sensitive Moose Range*

**Specific Mitigation:**

- For mitigation for this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

**ESS Group:** Erosion

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Soils-301 | Eolian (i.e. wind-modified) Deposits | Site: 11 to 12 | E-389177 N-5771073 | E-390222 N-5770131 | 14N | 1407 m |

**Potential Effects:**

*Loss of topsoil due to wind erosion (e.g. creep, saltation, suspension) on disturbed surfaces.*

**Specific Mitigation:**

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

**ESS Group:** Cultural

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Hert-200 | Gathering Area | Site: 1 to 2 | E-379493 N-5779808 | E-396683 N-5764303 | 14N | 23149m |

**Potential Effects:**

*Potential loss of vegetation during Project construction; potential for increased access to a traditional gathering area by non-community members*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible

**ESS Group:** Species of Concern

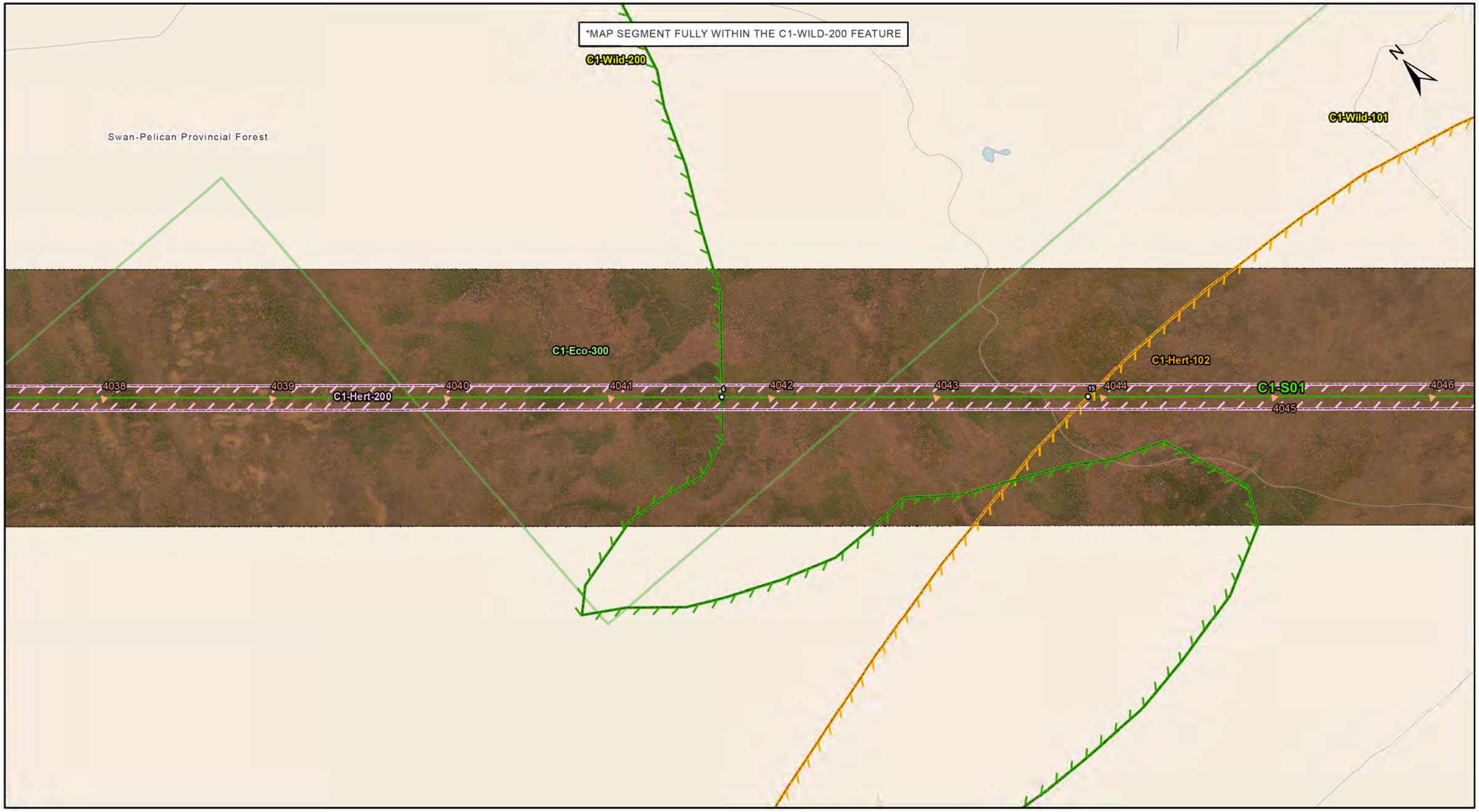
| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Eco-300 | Species of Concern | Site: 5 to 6 | E-386324 N-5773647 | E-393609 N-5767075 | 14N | 9811 m |

**Potential Effects:**

*Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities.*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

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Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: November 03, 2016
Version: 4.0

0 125 250 500
Metres

1:10,000

**Land Base**
- Transmission Line
- Highway
- Major Road
- Local Road
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- Railway (Operational)
- Railway (Discontinued)
- Mining
- Provincial Forest

**Project Infrastructure**
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- Towers (Preliminary)*
- BPIII Final Preferred Route
- 66 m Right of Way

*Towers are subject to change, and are only used as a rough guide

**Sensitive Sites***
- Point Features
- Linear Features
- Area Features

*Currently outside Project footprint

**Points of Access***
- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

**ESS Features**

**Ecosystem**
- Species of Concern

**Heritage**
- Archaeological
- Cultural

**Wildlife**
- Mammals and Habitat

# Bipole III Transmission Project
# Construction Environmental Protection Plan
## Construction Section C1
## Environmentally Sensitive Site Locations

Map 212

**ESS Group:** Mammals and Habitat

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Wild-200 | Moose Sensitive Area | Site: 13 to 14 | E-389782 N-5770528 | E-395210 N-5765631 | 14N | 7310 m |

**Potential Effects:**

*GHA 14A Sensitive Moose Range*

**Specific Mitigation:**

- For mitigation for this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

**ESS Group:** Species of Concern

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Eco-300 | Species of Concern | Site: 5 to 6 | E-386324 N-5773647 | E-393609 N-5767075 | 14N | 9811 m |

**Potential Effects:**

*Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities.*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

**ESS Group:** Archaeological

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Hert-102 | arrowheads/Spearheads | Site: 15 to 16 | E-394349 N-5766407 | E-396683 N-5764303 | 14N | 3142m |

**Potential Effects:**

*Loss of heritage resources due to inadvertent disturbance of sites. Ref: Duck Bay Group I - Lines - 1664 - 1752*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

**ESS Group:** Cultural

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Hert-200 | Gathering Area | Site: 1 to 2 | E-379493 N-5779808 | E-396683 N-5764303 | 14N | 23149 m |

**Potential Effects:**

*Potential loss of vegetation during Project construction; potential for increased access to a traditional gathering area by non-community members*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No Herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible