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Manitoba Hydro

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
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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

*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

**Soils and Terrain**
- Erosion

**Wildlife**
- Mammals and Habitat

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

Map 213

**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-S02 | C1-Soils-302 | Water Erosion Risk | Site: 21 to 22 | E-397253 N-5763336 | E-398794 N-5760723 | 14N | 3033 m |

**Potential Effects:**

*Loss of topsoil due to water erosion (e.g. sheet, rill, gully) 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:** 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 |
| C1-S02 | C1-Hert-102 | arrowheads/Spearheads | Site: 18 to 19 | E-396683 N-5764303 | E-396905 N-5763926 | 14N | 436m |

**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

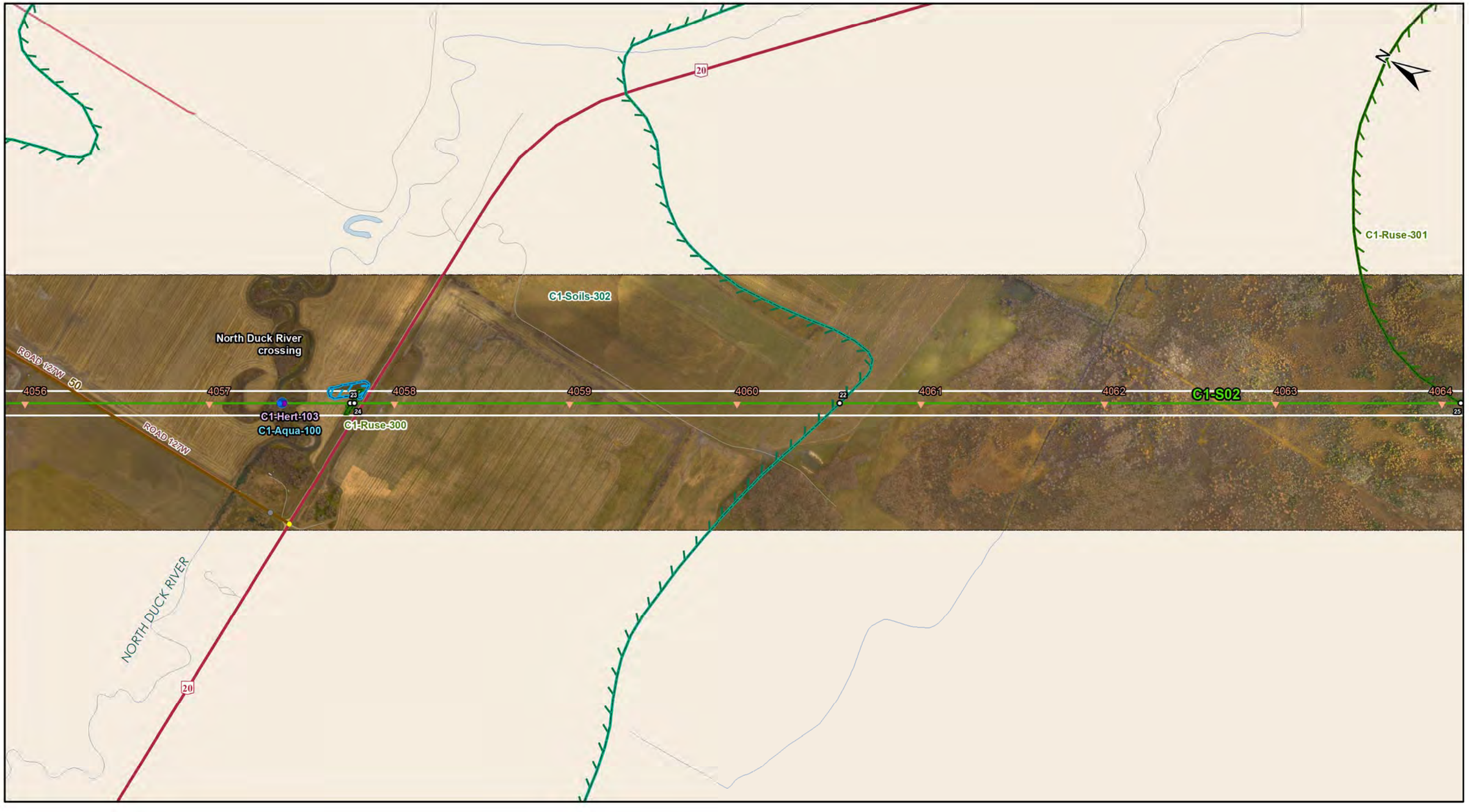
| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S01 | C1-Hert-200 | Gathering Area | Site: 1 to 2 | E-379493 N-5779808 | E-396683 N-5764303 | 14N | 23149 m |
| C1-S02 | C1-Hert-200 | Gathering Area | Site: 17 to 20 | E-396683 N-5764303 | E-397163 N-5763488 | 14N | 946 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

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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
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

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

**Water**
- Water Crossing

**Water**
- Water Crossing

**Resource Use**
- Forestry

**Soils and Terrain**
- Erosion

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

Map 214

**ESS Group:** Archaeological

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone |
|---|---|---|---|---|---|
| C1-S02 | C1-Hert-103 | Duck River | 398020 | 5762037 | 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:** Water Crossing

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|---|---|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Aqua-100 | North Duck River | 398014 | 5762047 | 14N | 16.5m | 15.5m | High | Important |

**Potential Effects:**

*Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain*

**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
- Identify and flag buffer areas prior to start of work
- 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.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fording from April 1 - July 15

**ESS Group:** Erosion

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Soils-302 | Water Erosion Risk | Site: 21 to 22 | E-397253 N-5763336 | E-398794 N-5760723 | 14N | 3033 m |

**Potential Effects:**

*Loss of topsoil due to water erosion (e.g. sheet, rill, gully) 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:** Forestry

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-RUse-301 | ATK-97 Duck Bay | Site: 25 to 26 | E-399660 N-5759256 | E-400498 N-5757836 | 14N | 1649m |

**Potential Effects:**

*Potential to disrupt access to fuel wood area*

**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
- Make fuel wood from ROW clearing available to local community where demand exists

**ESS Group:** Forestry

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-RUse-300 | Shelterbelt | Site: 23 to 24 | E-398112<br>N-5761880 | E-398118<br>N-5761870 | 14N | 11 m |

**Potential Effects:**

*Removal in area of ROW intersect*

**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
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

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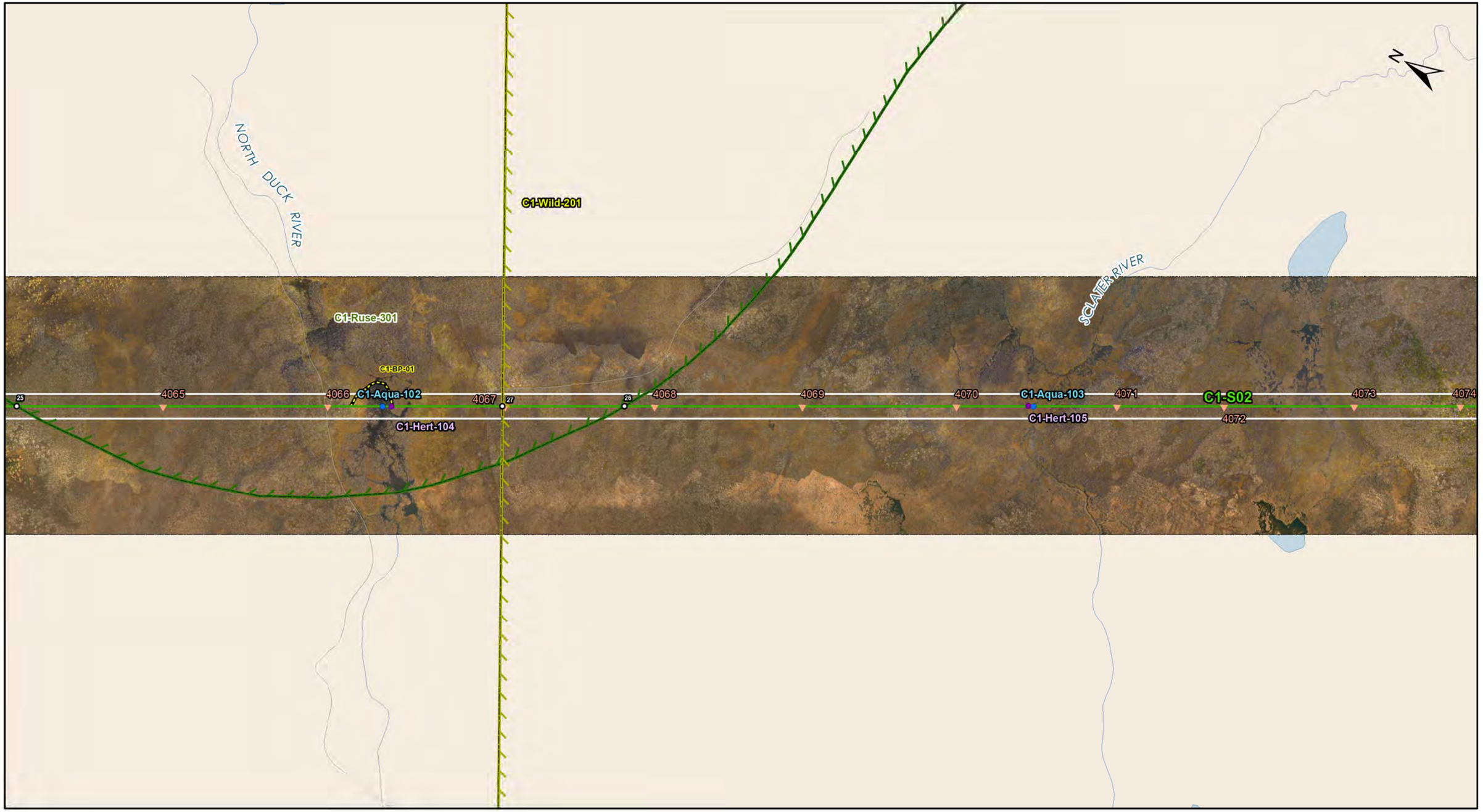


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**Land Base**
- Transmission Line
- Highway
- Major Road
- Local Road
- Winter Road
- Railway (Operational)
- Railway (Discontinued)
- Mining
- Provincial Forest

**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
- Abandoned Rail Crossing
- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

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

**Water**
- Water Crossing

**Resource Use**
- Forestry

**Wildlife**
- Mammals and Habitat

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

Map 215

**ESS Group:** Archaeological

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone |
|---|---|---|---|---|---|
| C1-S02 | C1-Hert-104 | North Duck River | 400164 | 5758405 | 14N |
| C1-S02 | C1-Hert-105 | Sclater River | 401057 | 5756891 | 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:** Water Crossing

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|---|---|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Aqua-102 | Unnamed tributary of North Duck River | 400162 | 5758408 | 14N | 3m | 3m | Moderate | Important |
| C1-S02 | C1-Aqua-103 | Sclater River | 401046 | 5756909 | 14N | N/A | 5m | Moderate | Important |

**Potential Effects:**

*Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain*

**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
- Identify and flag buffer areas prior to start of work
- 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.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fording from April 1 - July 15

**ESS Group:** Forestry

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-RUse-301 | ATK-97 Duck Bay | Site: 25 to 26 | E-399660 N-5759256 | E-400498 N-5757836 | 14N | 1649m |

**Potential Effects:**

*Potential to disrupt access to fuel wood area*

**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
- Make fuel wood from ROW clearing available to local community where demand exists

**ESS Group:** Mammals and Habitat

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Wild-201 | Moose Sensitive Area | Site: 27 to 28 | E-400330 N-5758121 | E-404690 N-5750732 | 14N | 8579 m |

**Potential Effects:**

*GHA 19A Sensitive Moose Range*

**Specific Mitigation:**

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

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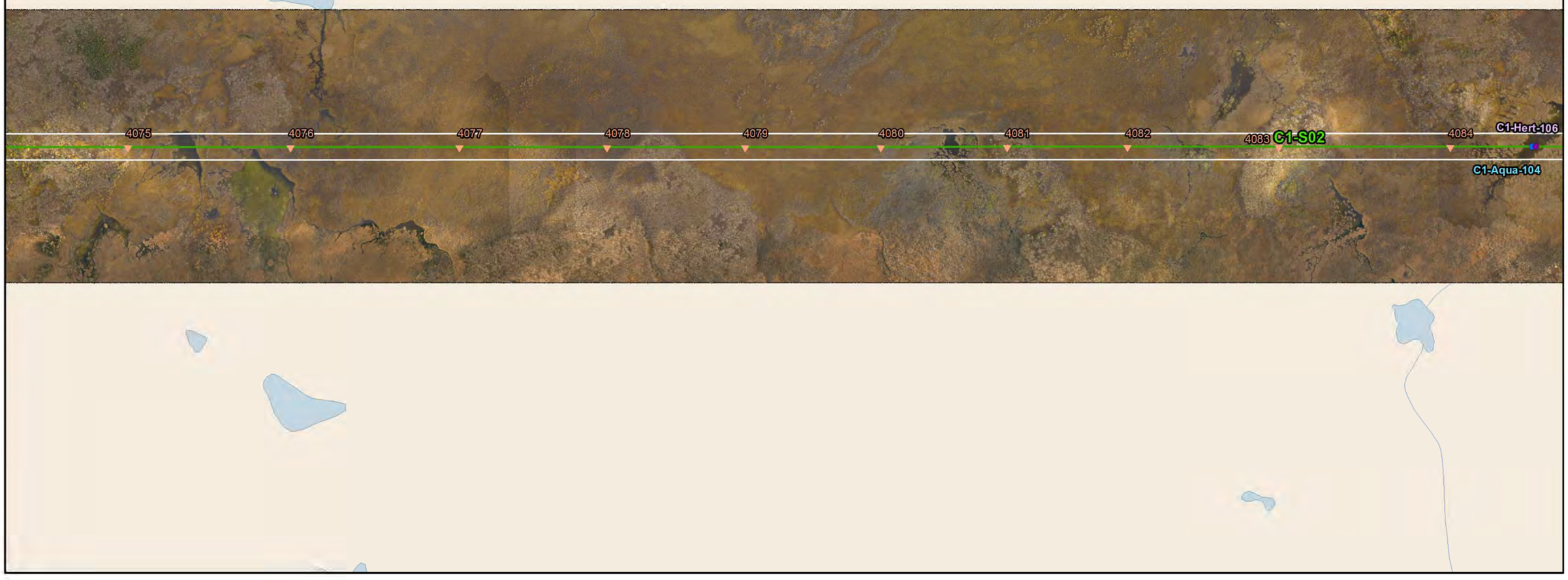
C1-Wild-201

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

**Project Infrastructure**
- Angle Tower Locations
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- 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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- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

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

**Water**
- Water Crossing

**Wildlife**
- Mammals and Habitat

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

Map 216

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**ESS Group:** Water Crossing

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|---|---|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Aqua-104 | Unnamed tributary of Sclater River | 403650 | 5752497 | 14N | N/A | 29m | Moderate | Important |

**Potential Effects:**

*Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain*

**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
- Identify and flag buffer areas prior to start of work
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- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fording from April 1 - July 15

**ESS Group:** Mammals and Habitat

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Wild-201 | Moose Sensitive Area | Site: 27 to 28 | E-400330 N-5758121 | E-404690 N-5750732 | 14N | 8579m |

**Potential Effects:**

*GHA 19A 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:** Archaeological

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone |
|---|---|---|---|---|---|
| C1-S02 | C1-Hert-106 | Wasyliuk Drain | 403653 | 5752490 | 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
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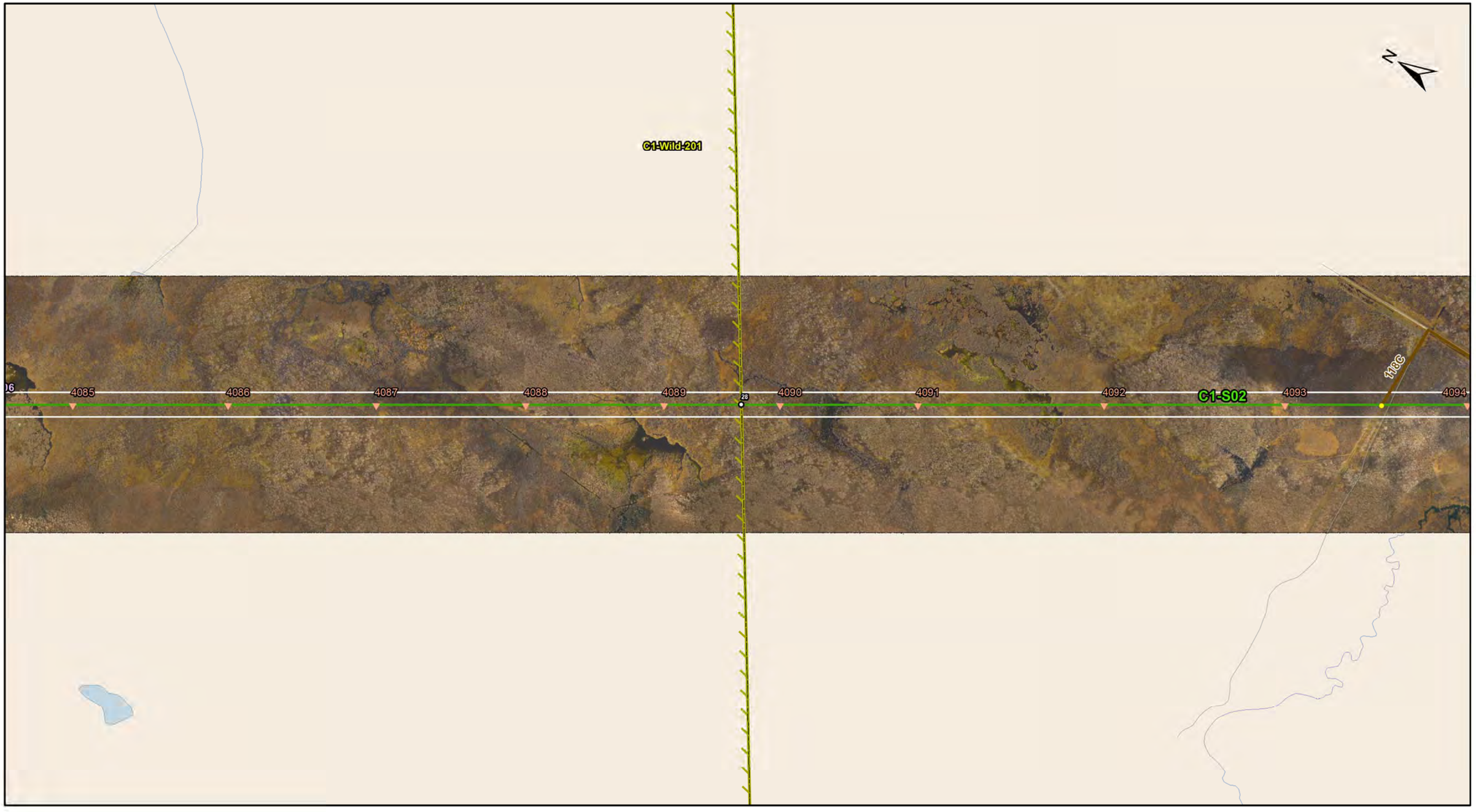


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**Sensitive Sites***
- Point Features
- Linear Features
- Area Features

*Currently outside Project footprint

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

**ESS Features**
**Wildlife**
- Mammals and Habitat

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

Map 217

**ESS Group:** Mammals and Habitat

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Wild-201 | Moose Sensitive Area | Site: 27 to 28 | E-400330<br>N-5758121 | E-404690<br>N-5750732 | 14N | 8579m |

**Potential Effects:**

*GHA 19A Sensitive Moose Range*

**Specific Mitigation:**

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


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**Points of Access***
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- Bypass Trails
- Approved Access Route

**ESS Features**

**Heritage**
- Archaeological

**Water**
- Water Crossing

**Land Use**
- Crown Land Encumbrance

**Resource Use**
- Forestry

**Water**
- Groundwater

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

Map 218

**ESS Group:** Archaeological

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone |
|---|---|---|---|---|---|
| C1-S02 | C1-Hert-107 | North branch of North Pine River | 405900 | 5748685 | 14N |
| C1-S02 | C1-Hert-108 | North Pine River | 406694 | 5747338 | 14N |
| C1-S02 | C1-Hert-109 | North Pine River | 406762 | 5747223 | 14N |
| C1-S02 | C1-Hert-110 | North Pine River | 406799 | 5747161 | 14N |
| C1-S02 | C1-Hert-111 | South Pine River | 407694 | 5745645 | 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:** Water Crossing

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|---|---|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Aqua-105 | Unnamed tributary of North Pine River | 405898 | 5748687 | 14N | 6.6m | 3.5m | Moderate | Marginal |
| C1-S02 | C1-Aqua-106 | North Pine River | 406691 | 5747344 | 14N | 13m | 10m | Moderate | Important |
| C1-S02 | C1-Aqua-107 | North Pine River | 406755 | 5747235 | 14N | N/A | 7m | Moderate | Important |
| C1-S02 | C1-Aqua-108 | North Pine River | 406789 | 5747177 | 14N | N/A | 7m | Moderate | Important |
| C1-S02 | C1-Aqua-109 | South Pine River | 407691 | 5745651 | 14N | 7m | 7m | Moderate | Important |

**Potential Effects:**

*Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain*

**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
- Identify and flag buffer areas prior to start of work
- 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.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fording from April 1 - July 15

**ESS Group:** Groundwater

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Aqua-201 | Artesian areas with uncertain water quality | Site: 29 to 30 | E-406018 N-5748482 | E-407883 N-5745321 | 14N | 3670 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.

**ESS Group:** Crown Land Encumbrance

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-LUse-200 | Campground – Crown land encumbrance | Site: 31 to 32 | E-406047 N-5748433 | E-406521 N-5747629 | 14N | 933m |

**Potential Effects:**

*Potential disruption to recreational use activities*

**Specific Mitigation:**

- Notify Manitoba Conservation, local authorities and operator regarding construction activities and schedule, and address concerns prior to construction
- Observe municipal and local by-laws and protocols including noise and work scheduling
- Minimize noise, dust and other emissions from work activities and maintain clean and aesthetic appearance of work site
- Provide warning signage for vehicle traffic and public safety

**ESS Group:** Forestry

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-RUse-302 | Shelterbelt | Site: 33 to 34 | E-407349<br>N-5746226 | E-407360<br>N-5746207 | 14N | 21 m |
| C1-S02 | C1-RUse-303 | Shelterbelt | Site: 35 to 36 | E-407496<br>N-5745976 | E-407511<br>N-5745951 | 14N | 29 m |

**Potential Effects:**

*Removal in area of ROW intersect*

**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
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

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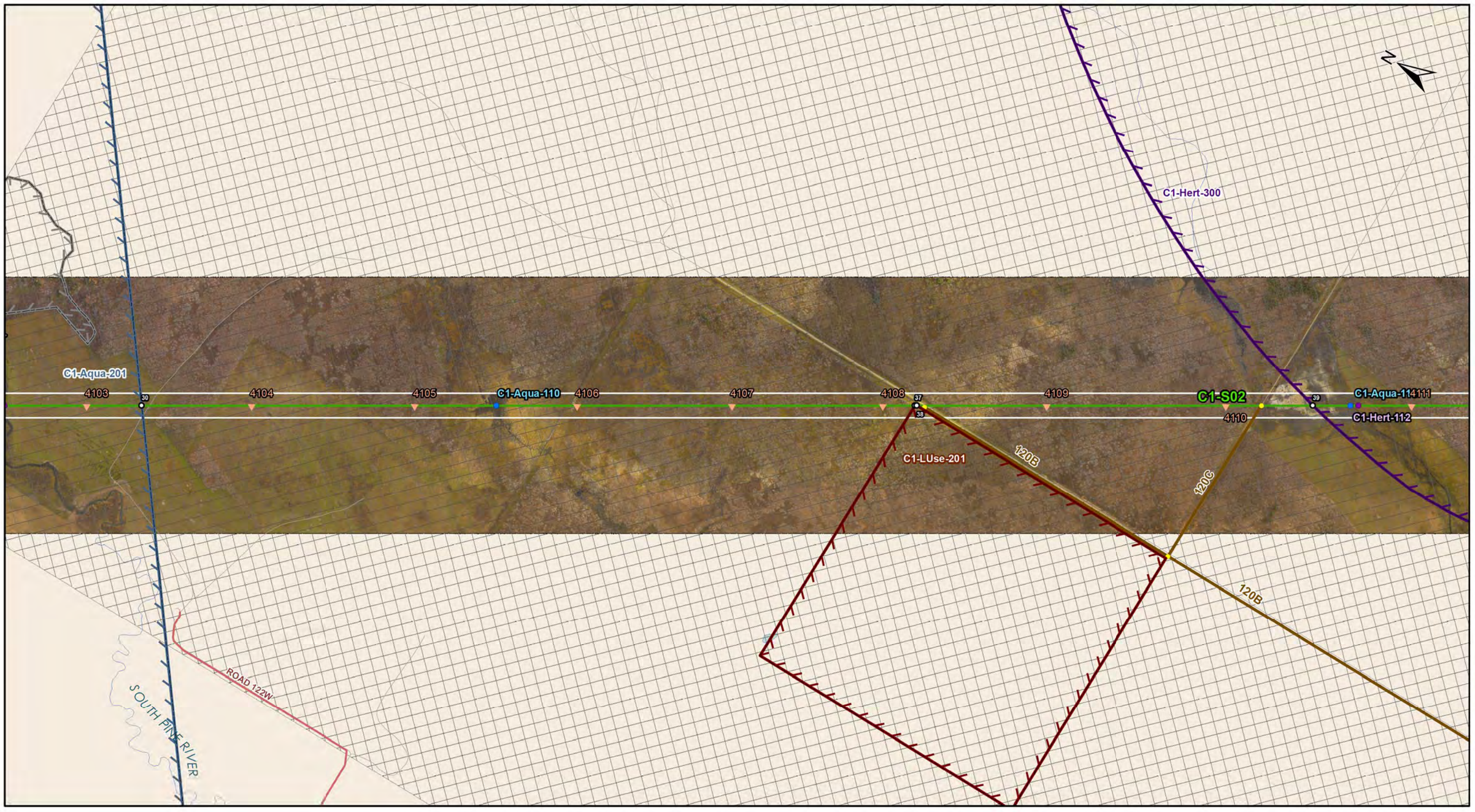


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Manitoba Hydro

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

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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**
**Heritage**
- Archaeological
- Groundwater

**Water**
- Water Crossing

**Heritage**
- Historic

**Land Use**
- Residential

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

Map 219

**ESS Group:** Archaeological

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone |
|---|---|---|---|---|---|
| C1-S02 | C1-Hert-112 | Duck River | 409566 | 5742471 | 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:** Water Crossing

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|---|---|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Aqua-110 | Unnamed pond | 408377 | 5744487 | 14N | N/A | N/A | Low | No Fish Habitat |
| C1-S02 | C1-Aqua-111 | Unnamed tributary of Garland River | 409568 | 5742468 | 14N | N/A | N/A | Moderate | Marginal |

**Potential Effects:**

*Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain*

**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
- Identify and flag buffer areas prior to start of work
- 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.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fording from April 1 - July 15

**ESS Group:** Groundwater

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Aqua-201 | Artesian areas with uncertain water quality | Site: 29 to 30 | E-406018 N-5748482 | E-407883 N-5745321 | 14N | 3670 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.

**ESS Group:** Historic

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Hert-300 | Coal Mine | Site: 39 to 40 | E-409509 N-5742565 | E-410445 N-5740979 | 14N | 1841m |

**Potential Effects:**

*Potential loss of heritage resources. Pine Creek Group A - Lines - 2562 - 2795*

**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
- 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

**ESS Group:** Residential

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-LUse-201 | Remote Cottage – Crown land encumbrance | Site: 37 to 38 | E-408956 N-5743502 | E-408959 N-5743498 | 14N | 4 m |

**Potential Effects:**

*Potential disruption to recreational use activities*

**Specific Mitigation:**

- Notify Manitoba Conservation, local authorities and operator regarding construction activities and schedule, and address concerns prior to construction
- Observe municipal and local by-laws and protocols including noise and work scheduling
- Minimize noise, dust and other emissions from work activities and maintain clean and aesthetic appearance of work site
- Provide warning signage for vehicle traffic and public safety

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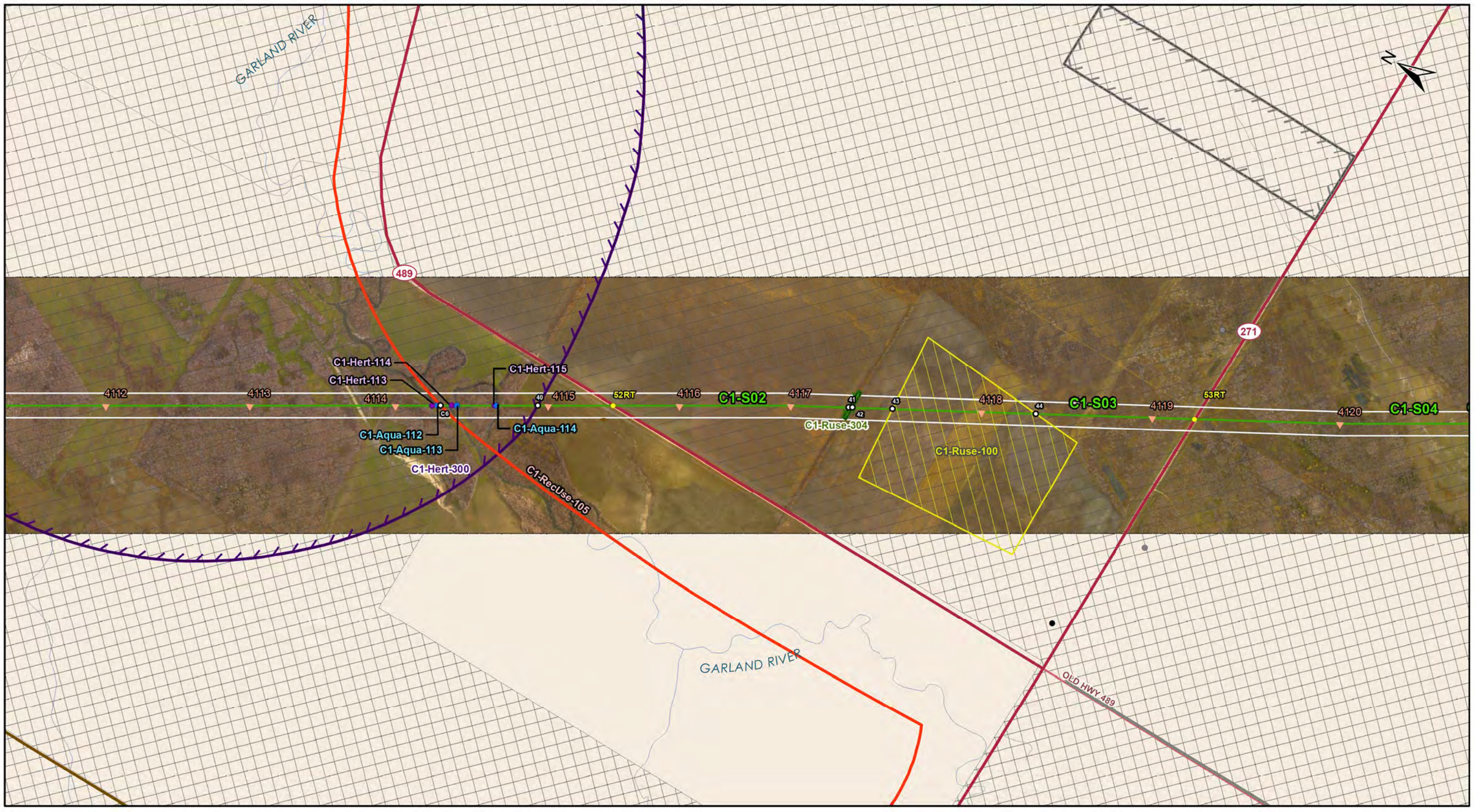


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Manitoba Hydro

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

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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**

**Heritage**
- Archaeological

**Water**
- Water Crossing

**RecUse**
- Intersection

**Heritage**
- Historic

**Resource Use**
- Agriculture
- Forestry

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

Map 220

**ESS Group:** Archaeological

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone |
|---|---|---|---|---|---|
| C1-S02 | C1-Hert-113 | Garland River | 410300 | 5741226 | 14N |
| C1-S02 | C1-Hert-114 | Garland River | 410320 | 5741193 | 14N |
| C1-S02 | C1-Hert-115 | Garland River | 410387 | 5741081 | 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:** Water Crossing

| Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|---|---|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Aqua-112 | Garland River | 410306 | 5741217 | 14N | 10m | 10m | Moderate | Important |
| C1-S02 | C1-Aqua-113 | Backwater of Garland River | 410334 | 5741170 | 14N | 10m | 10m | Moderate | Important |
| C1-S02 | C1-Aqua-114 | Backwater of Garland River | 410389 | 5741076 | 14N | 9.6m | 7.6m | Moderate | Important |

**Potential Effects:**

*Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain*

**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
- Identify and flag buffer areas prior to start of work
- 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.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fording from April 1 - July 15

**ESS Group:** Intersection

| Sec-Seg ID | ESS ID | Location | ESS Name | Crossing Coordinates | UTM Zone |
|---|---|---|---|---|---|
| C1-S02 | C1-RecUse-105 | C6 | Wagon Road | E-410310<br>N-5741207 | 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:** Historic

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S02 | C1-Hert-300 | Coal Mine | Site: 39 to 40 | E-409509<br>N-5742565 | E-410445<br>N-5740979 | 14N | 1841m |

**Potential Effects:**

*Potential loss of heritage resources. Pine Creek Group A - Lines - 2562 - 2795*

**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
- 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

**ESS Group:** Agriculture

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S03 | C1-RUse-100 | Gardening | Site: 43 to 44 | E-410929<br>N-5740139 | E-411117<br>N-5739795 | 14N | 392 m |

**Potential Effects:**

*Potential impact on agricultural practice, health & wellness and economic activity*

**Specific Mitigation:**

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Allow gardening activities to continue within the ROW,
- Use appropriate signage to address any safety concerns arising from this usage
- Educate gardeners on EMF issues to mitigate concerns proactively

**ESS Group:** Forestry

| Sec-Seg ID | ESS ID | ESS Name | Location | Start | Stop | UTM Zone | Distance |
|---|---|---|---|---|---|---|---|
| C1-S03 | C1-RUse-304 | Shelterbelt | Site: 41 to 42 | E-410872<br>N-5740244 | E-410877<br>N-5740236 | 14N | 10 m |

**Potential Effects:**

*Removal in area of ROW intersect*

**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
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
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- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

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