





ESS Group: Water Crossing

| Sec-Seg ID | ESS ID      | ESS Name                              | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|------------|-------------|---------------------------------------|---------|----------|----------|---------------|-----------|--------------------|---------------------|
| N3-S03     | N3-Aqua-106 | Unnamed Tributary into Mitishto River | 473866  | 6048581  | 14N      | N/A           | N/A       | Low                | 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: Mammals and Habitat

| Sec-Seg ID | ESS ID      | ESS Name                    | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|-----------------------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Wild-200 | MCWS Caribou Sensitive Area | Site: 32 to 34 | E-479645<br>N-6050506 | E-458248<br>N-6043655 | 14N      | 22469 m  |

Potential Effects:

Wabowden Woodland Caribou Range Sensitive Area

Specific Mitigation:

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

ESS Group: Groundwater

| Sec-Seg ID | ESS ID      | ESS Name                             | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|--------------------------------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Aqua-200 | Aquifers Vulnerable to contamination | Site: 31 to 33 | E-479645<br>N-6050506 | E-460122<br>N-6044246 | 14N      | 20504 m  |

Potential Effects:

Potential groundwater contamination from a contingency event (e.g., spill)

Specific Mitigation:

- Marshalling yards will be located on upland sites where possible.
- An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept on-site at all times in case of fluid leaks or spills from machinery.
- 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.

ESS Group: Permafrost

| Sec-Seg ID | ESS ID       | ESS Name   | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|--------------|------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Soils-107 | Permafrost | Site: 43 to 44 | E-475319<br>N-6049039 | E-474214<br>N-6048691 | 14N      | 1159 m   |
| N3-S03     | N3-Soils-108 | Permafrost | Site: 45 to 46 | E-472774<br>N-6048237 | E-460347<br>N-6044317 | 14N      | 13030 m  |

Potential Effects:

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

Specific Mitigation:

- 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
- 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: Water Crossing

| Sec-Seg ID | ESS ID      | ESS Name                              | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|------------|-------------|---------------------------------------|---------|----------|----------|---------------|-----------|--------------------|---------------------|
| N3-S03     | N3-Aqua-107 | Unnamed Tributary into Mitishto River | 470610  | 6047554  | 14N      | 2.5m          | 2.5m      | Low                | 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: Mammals and Habitat

| Sec-Seg ID | ESS ID      | ESS Name                    | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|-----------------------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Wild-200 | MCWS Caribou Sensitive Area | Site: 32 to 34 | E-479645<br>N-6050506 | E-458248<br>N-6043655 | 14N      | 22469 m  |

Potential Effects:

Wabowden Woodland Caribou Range Sensitive Area

Specific Mitigation:

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

ESS Group: Permafrost

| Sec-Seg ID | ESS ID       | ESS Name   | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|--------------|------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Soils-108 | Permafrost | Site: 45 to 46 | E-472774<br>N-6048237 | E-460347<br>N-6044317 | 14N      | 13030m   |

Potential Effects:

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

Specific Mitigation:

- 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
- 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: Groundwater

| Sec-Seg ID | ESS ID      | ESS Name                             | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|--------------------------------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S02     | N3-Aqua-200 | Aquifers Vulnerable to contamination | Site: 21 to 22 | E-487454<br>N-6054294 | E-479645<br>N-6050506 | 14N      | 8679 m   |
| N3-S03     | N3-Aqua-200 | Aquifers Vulnerable to contamination | Site: 31 to 33 | E-479645<br>N-6050506 | E-460122<br>N-6044246 | 14N      | 20504 m  |

Potential Effects:

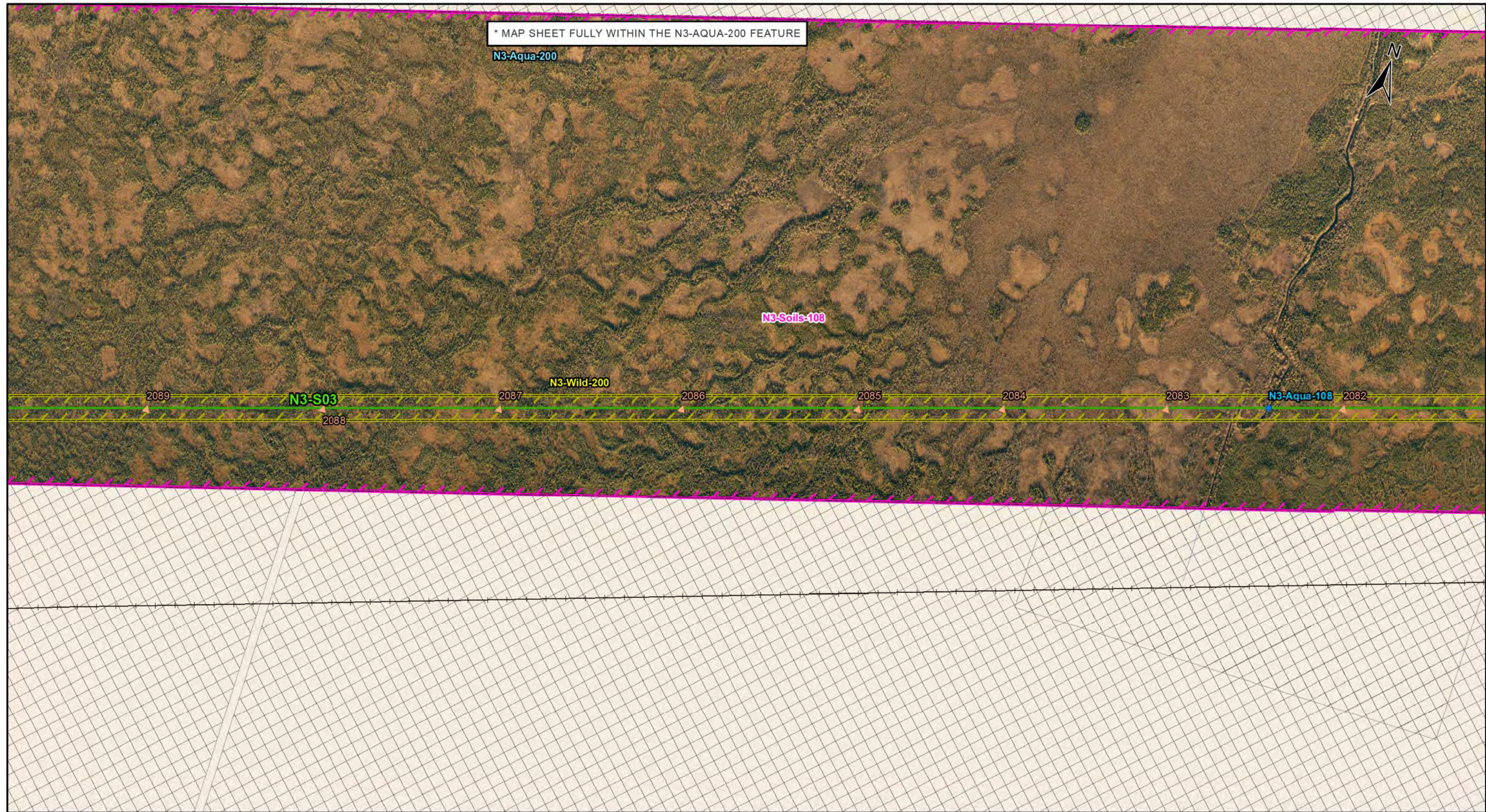
Potential groundwater contamination from a contingency event (e.g., spill)

Specific Mitigation:

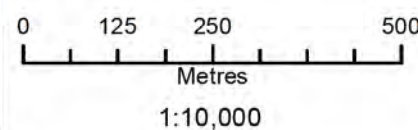
- Marshalling yards will be located on upland sites where possible.
- An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept on-site at all times in case of fluid leaks or spills from machinery.
- Qualified driller with appropriate experience 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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Coordinate System: UTM Zone 14N NAD83  
Data Source: MB Hydro, ProvMB, NRCAN  
Date Created: October 31, 2016  
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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\*
- 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 the 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

- Water**
- Water Crossing
- Soils and Terrain**
- Permafrost
- Water**
- Groundwater
- Wildlife**
- Mammals and Habitat

## Bipole III Transmission Project Construction Environmental Protection Plan Construction Section N3 Environmentally Sensitive Site Locations



ESS Group: Water Crossing

| Sec-Seg ID | ESS ID      | ESS Name                              | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|------------|-------------|---------------------------------------|---------|----------|----------|---------------|-----------|--------------------|---------------------|
| N3-S03     | N3-Aqua-108 | Unnamed Tributary into Mitishto River | 466424  | 6046234  | 14N      | 6m            | 6m        | Low                | 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: Mammals and Habitat

| Sec-Seg ID | ESS ID      | ESS Name                    | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|-----------------------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Wild-200 | MCWS Caribou Sensitive Area | Site: 32 to 34 | E-479645<br>N-6050506 | E-458248<br>N-6043655 | 14N      | 22469 m  |

Potential Effects:

Wabowden Woodland Caribou Range Sensitive Area

Specific Mitigation:

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

ESS Group: Permafrost

| Sec-Seg ID | ESS ID       | ESS Name   | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|--------------|------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Soils-108 | Permafrost | Site: 45 to 46 | E-472774<br>N-6048237 | E-460347<br>N-6044317 | 14N      | 13030m   |

Potential Effects:

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

Specific Mitigation:

- 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
- 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: Groundwater

| Sec-Seg ID | ESS ID      | ESS Name                             | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|--------------------------------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Aqua-200 | Aquifers Vulnerable to contamination | Site: 31 to 33 | E-479645<br>N-6050506 | E-460122<br>N-6044246 | 14N      | 20504 m  |

Potential Effects:

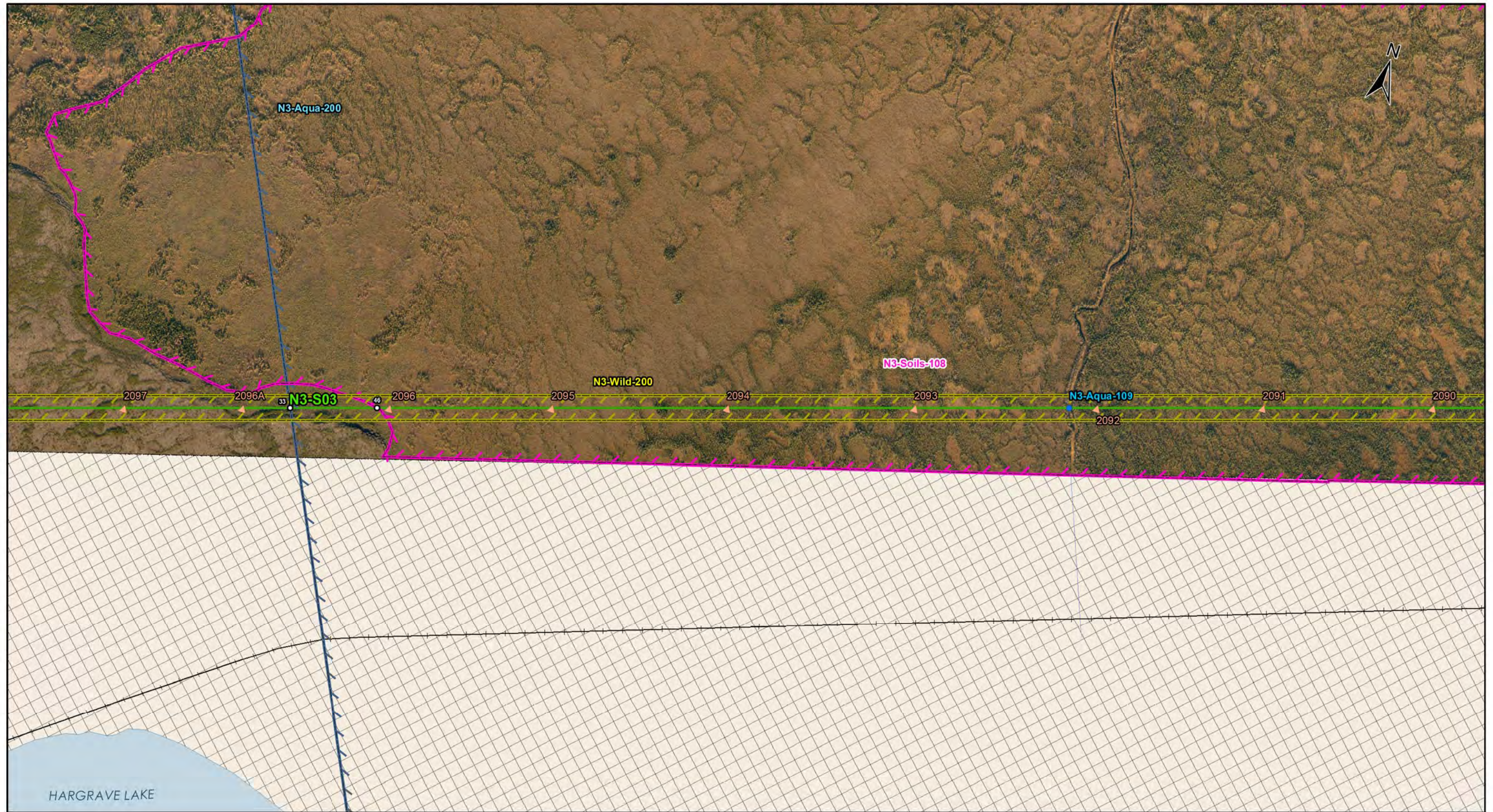
Potential groundwater contamination from a contingency event (e.g., spill)

Specific Mitigation:

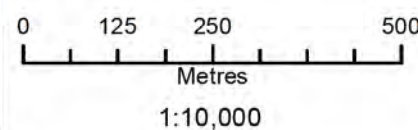
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#### Land Base

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

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- Angle Tower Locations\*
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#### Points of Access

- Proposed Access Point
- Major Stream Crossing
- Abandoned Rail Crossing
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- Bypass Trails
- Approved Access Route

#### ESS Features

- Water**
- Water Crossing
- Soils and Terrain**
- Permafrost
- Water**
- Groundwater
- Wildlife**
- Mammals and Habitat

## Bipole III Transmission Project Construction Environmental Protection Plan Construction Section N3 Environmentally Sensitive Site Locations



ESS Group: Water Crossing

| Sec-Seg ID | ESS ID      | ESS Name                              | Easting | Northing | UTM Zone | Channel Width | Wet Width | Fish Habitat Class | Habitat Sensitivity |
|------------|-------------|---------------------------------------|---------|----------|----------|---------------|-----------|--------------------|---------------------|
| N3-S03     | N3-Aqua-109 | Unnamed Tributary into Mitishto River | 462134  | 6044881  | 14N      | 7m            | 7m        | Low                | 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:

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ESS Group: Mammals and Habitat

| Sec-Seg ID | ESS ID      | ESS Name                    | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|-----------------------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Wild-200 | MCWS Caribou Sensitive Area | Site: 32 to 34 | E-479645<br>N-6050506 | E-458248<br>N-6043655 | 14N      | 22469 m  |

Potential Effects:

Wabowden Woodland Caribou Range Sensitive Area

Specific Mitigation:

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

ESS Group: Permafrost

| Sec-Seg ID | ESS ID       | ESS Name   | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|--------------|------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S03     | N3-Soils-108 | Permafrost | Site: 45 to 46 | E-472774<br>N-6048237 | E-460347<br>N-6044317 | 14N      | 13030m   |

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ESS Group: Groundwater

| Sec-Seg ID | ESS ID      | ESS Name                             | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|--------------------------------------|----------------|-----------------------|-----------------------|----------|----------|
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Potential Effects:

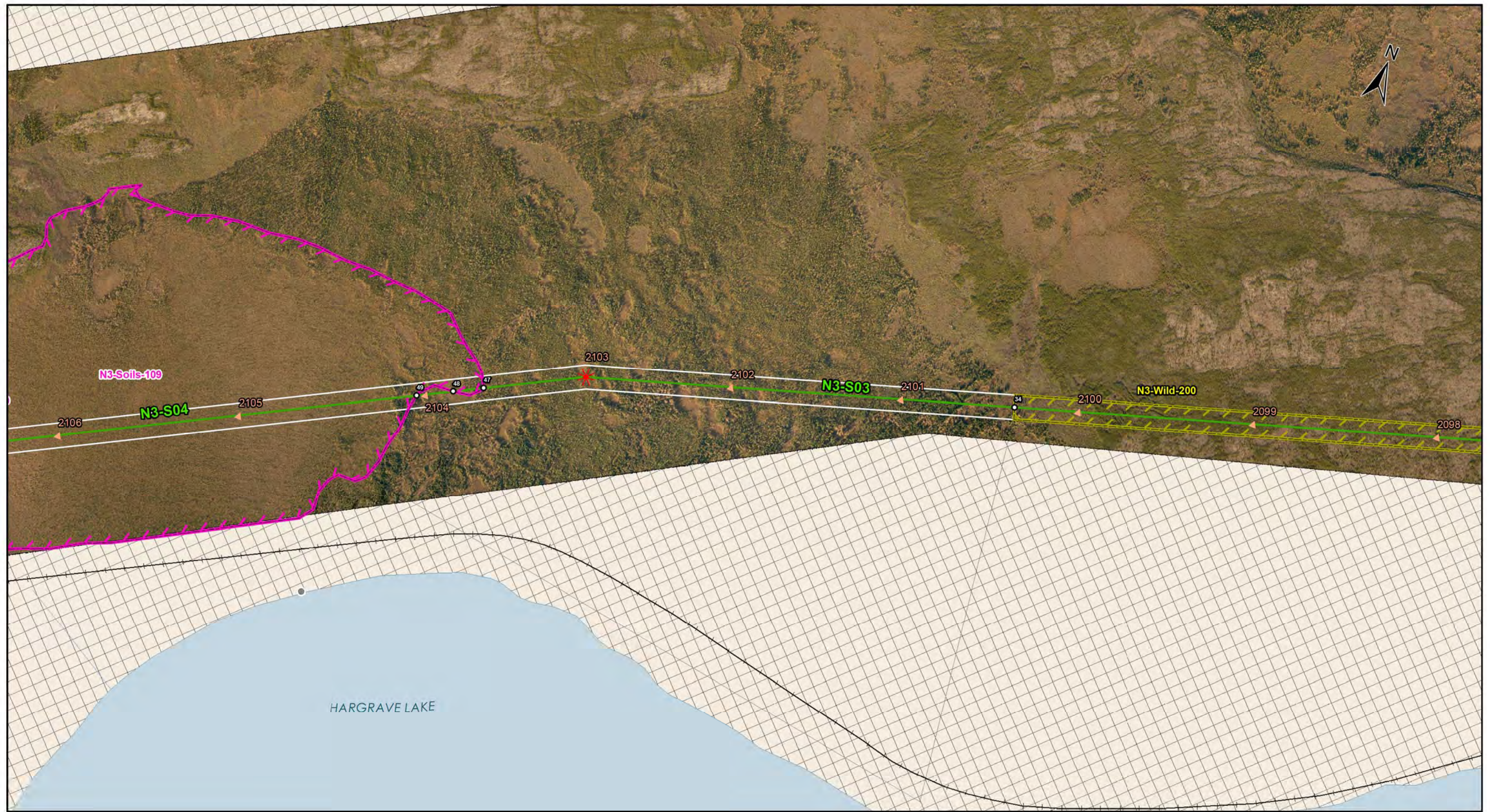
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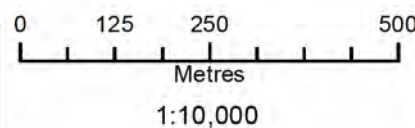
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- Rail Crossing
- Transmission Line Crossing
- Bypass Trails
- Approved Access Route

#### ESS Features

- Soils and Terrain
- Permafrost
- Wildlife
- Mammals and Habitat

## Bipole III Transmission Project Construction Environmental Protection Plan Construction Section N3 Environmentally Sensitive Site Locations



ESS Group: Permafrost

| Sec-Seg ID | ESS ID       | ESS Name   | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|--------------|------------|----------------|-----------------------|-----------------------|----------|----------|
| N3-S04     | N3-Soils-109 | Permafrost | Site: 47 to 48 | E-456889<br>N-6043174 | E-456816<br>N-6043135 | 14N      | 83m      |
| N3-S04     | N3-Soils-109 | Permafrost | Site: 49 to 50 | E-456727<br>N-6043088 | E-455490<br>N-6042434 | 14N      | 1399m    |

Potential Effects:

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

Specific Mitigation:

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ESS Group: Mammals and Habitat

| Sec-Seg ID | ESS ID      | ESS Name                    | Location       | Start                 | Stop                  | UTM Zone | Distance |
|------------|-------------|-----------------------------|----------------|-----------------------|-----------------------|----------|----------|
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Potential Effects:

Wabowden Woodland Caribou Range Sensitive Area

Specific Mitigation:

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