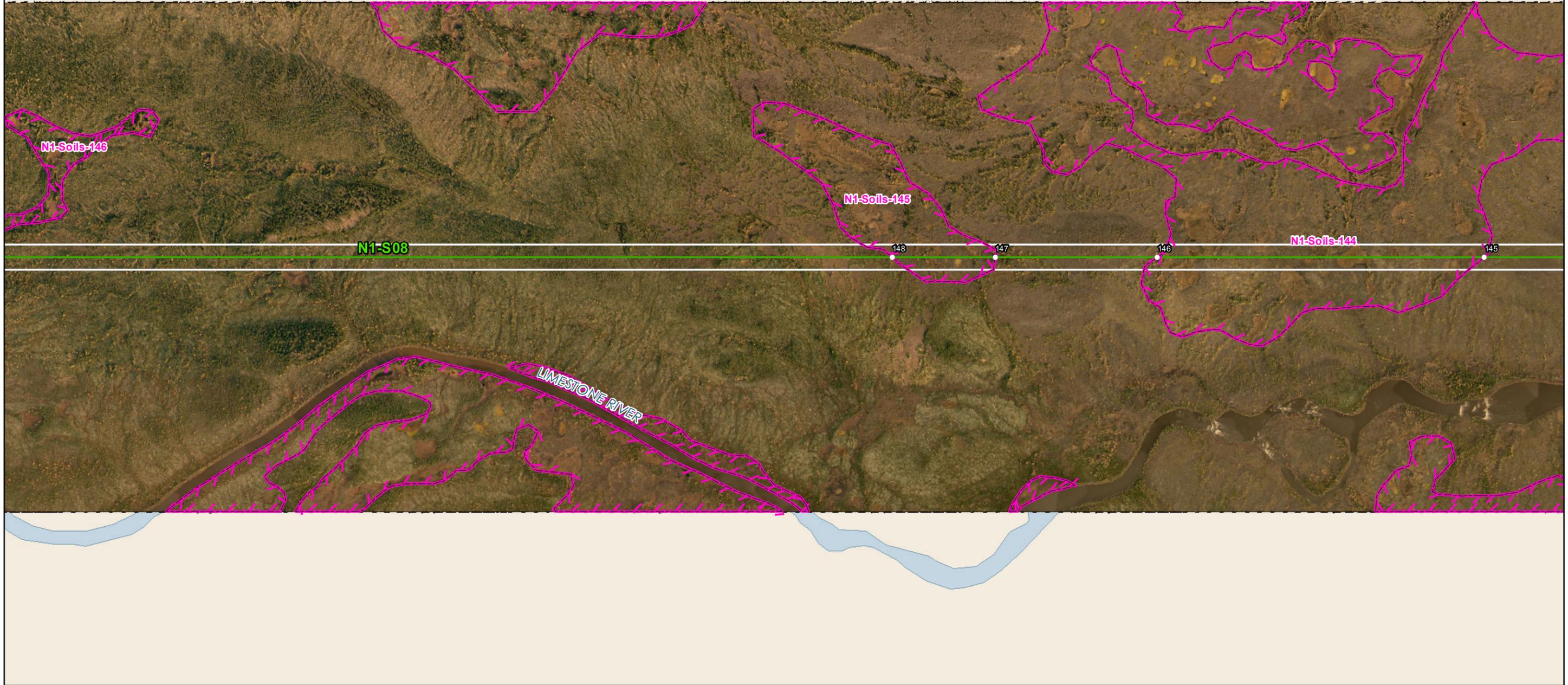


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Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: December 09, 2013

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

- 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**
- Soils and Terrain**
- Permafrost
  - Terrain

**Bipole III Transmission Project  
 Construction Environmental Protection Plan  
 Construction Section N1  
 Environmentally Sensitive Site Locations**

MAP NUMBER : 20

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S08	N1-Soils-144	Permafrost	Site: 145 to 146	E-744080 N-6279043	E-743242 N-6279085	14N	838 m
N1-S08	N1-Soils-145	Permafrost	Site: 147 to 148	E-742827 N-6279106	E-742563 N-6279119	14N	264 m

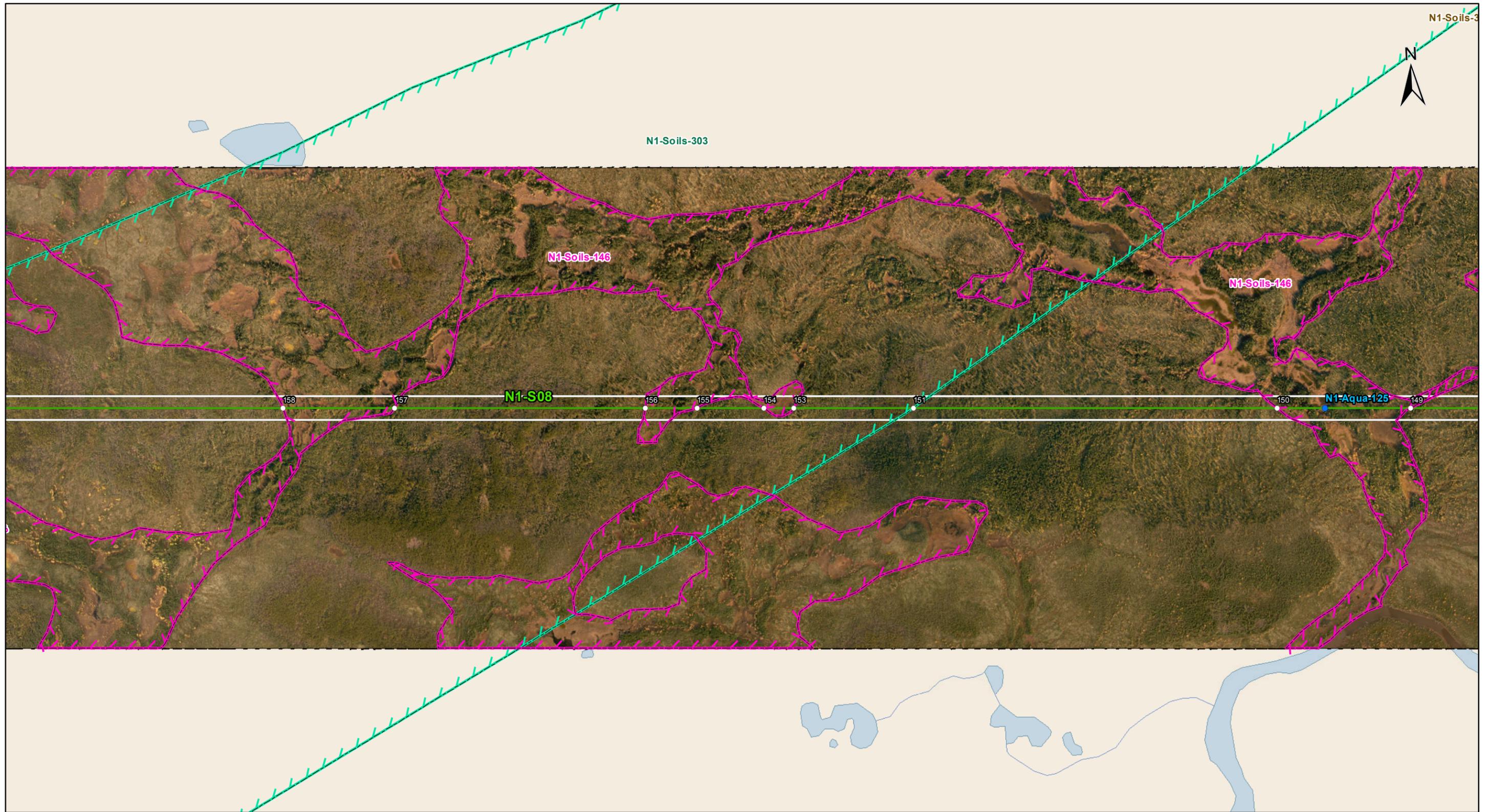
**Potential Effects:**

*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
- Avoid organic soils containing permafrost 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

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Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: December 09, 2013

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**Land Base**

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

**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**

- Water
  - Water Crossing
- Soils and Terrain
  - Permafrost
  - Terrain

**Bipole III Transmission Project  
 Construction Environmental Protection Plan  
 Construction Section N1  
 Environmentally Sensitive Site Locations**

MAP NUMBER : 21

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S08	N1-Aqua-125	Unnamed Tributary of Limestone River	739913	6279252	14N	3.3m	3.3m	Moderate	Marginal

**Potential Effects:**

*Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & 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
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 - July 15

ESS Group : Terrain

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S08	N1-Soils-303	Enduring Features (Unique Terrain/Soil Features)	Site: 151 to 151a	E-738796 N-6279308	E-736223 N-6279437	14N	2576 m

**Potential Effects:**

*Impairment or loss of rare occurrence PAI enduring feature from right-of-way establishment.*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag prior to start of work
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible
- Maintain 100m setback around feature outside of ROW
- Minimize movement of vehicles, machinery and equipment during construction
- Prevent off-ROW activities and equipment use within terrain feature, during construction

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S08	N1-Soils-146	Permafrost	Site: 149 to 150	E-740143 N-6279240	E-739782 N-6279258	14N	361 m
N1-S08	N1-Soils-146	Permafrost	Site: 153 to 154	E-738470 N-6279324	E-738390 N-6279328	14N	80 m
N1-S08	N1-Soils-146	Permafrost	Site: 155 to 156	E-738209 N-6279337	E-738068 N-6279344	14N	140 m
N1-S08	N1-Soils-146	Permafrost	Site: 157 to 158	E-737389 N-6279378	E-737086 N-6279393	14N	303 m

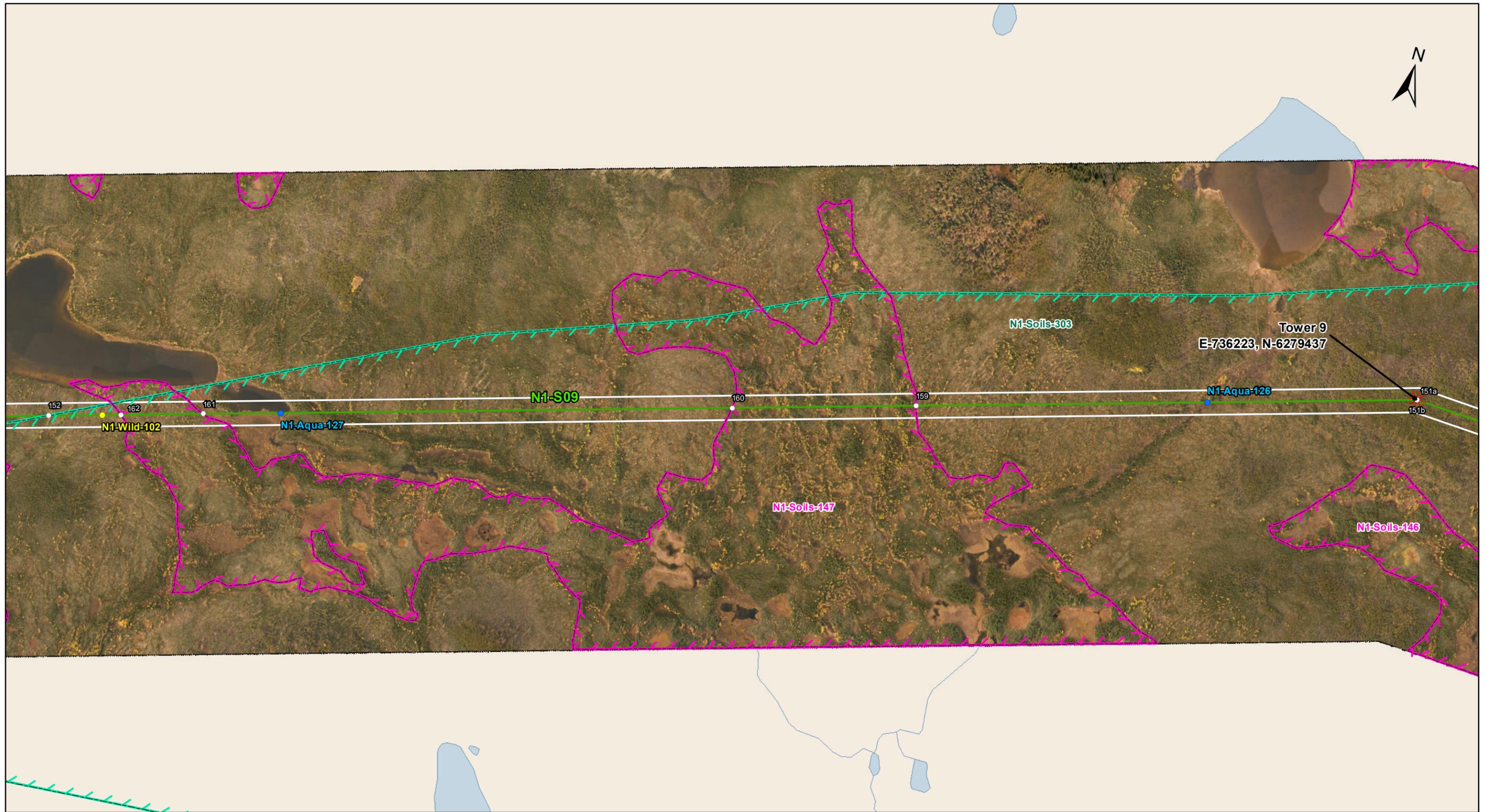
**Potential Effects:**

*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
- Avoid organic soils containing permafrost 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

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Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: December 09, 2013

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**Land Base**

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

**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**

- Water**
  - Water Crossing
- Wildlife**
  - Birds and Habitat
- Soils and Terrain**
  - Permafrost
  - Terrain

**Bipole III Transmission Project  
 Construction Environmental Protection Plan  
 Construction Section N1  
 Environmentally Sensitive Site Locations**

MAP NUMBER : 22

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N1-S09	N1-Wild-102	Nearby Bonaparte's gull colony	732805	6278403	14N

**Potential Effects:**

*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:**

- Adhere to reduced risk timing windows for protection of birds (August 1- April 30)
- Maintain setback during 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

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S09	N1-Aqua-126	Unnamed Tributary of Limestone River	735679	6279272	14N	1.9m	N/A	Low	Marginal
N1-S09	N1-Aqua-127	Unnamed Tributary of Unnamed Lake	733269	6278543	14N	N/A	N/A	Moderate	Marginal

**Potential Effects:**

*Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & 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
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 - July 15

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S08	N1-Soils-146	Permafrost	Site: 149 to 150	E-740143 N-6279240	E-739782 N-6279258	14N	361 m
N1-S08	N1-Soils-146	Permafrost	Site: 153 to 154	E-738470 N-6279324	E-738390 N-6279328	14N	80 m
N1-S08	N1-Soils-146	Permafrost	Site: 155 to 156	E-738209 N-6279337	E-738068 N-6279344	14N	140 m
N1-S08	N1-Soils-146	Permafrost	Site: 157 to 158	E-737389 N-6279378	E-737086 N-6279393	14N	303 m
N1-S09	N1-Soils-147	Permafrost	Site: 159 to 160	E-734920 N-6279042	E-734442 N-6278898	14N	499 m
N1-S09	N1-Soils-147	Permafrost	Site: 161 to 162	E-733067 N-6278482	E-732854 N-6278417	14N	223 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
- Avoid organic soils containing permafrost 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 : Terrain

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S08	N1-Soils-303	Enduring Features (Unique Terrain/Soil Features)	Site: 151 to 151a	E-738796 N-6279308	E-736223 N-6279437	14N	2576 m
N1-S09	N1-Soils-303	Enduring Features (Unique Terrain/Soil Features)	Site: 151b to 152	E-738796 N-6279308	E-732666 N-6278360	14N	3716 m

**Potential Effects:**

*Impairment or loss of rare occurrence PAI enduring feature from right-of-way establishment.*

**MAP NUMBER :** 22 cont'd

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag prior to start of work
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible
- Maintain 100m setback around feature outside of ROW
- Minimize movement of vehicles, machinery and equipment during construction
- Prevent off-ROW activities and equipment use within terrain feature, during construction

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Coordinate System: UTM Zone 14N NAD83  
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- Land Base**
- Transmission Line
  - Highway
  - Major Road
  - Local Road
  - Winter Road
  - Railway (Operational)
  - Railway (Discontinued)
  - ⊠ Mining

- 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**
- Water
  - Water Crossing
  - Soils and Terrain
  - Permafrost
  - Terrain

**Bipole III Transmission Project  
 Construction Environmental Protection Plan  
 Construction Section N1  
 Environmentally Sensitive Site Locations**

MAP NUMBER : 23

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S09	N1-Aqua-128	Unnamed Tributary of Unnamed Lake	731834	6278109	14N	N/A	N/A	Low	Marginal

**Potential Effects:**

*Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement*

**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
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 - July 15

ESS Group : Terrain

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S08	N1-Soils-303	Enduring Features (Unique Terrain/Soil Features)	Site: 151 to 152	E-738796 N-6279308	E-732666 N-6278360	14N	6292 m

**Potential Effects:**

*Impairment or loss of rare occurrence PAI enduring feature from right-of-way establishment.*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag prior to start of work
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible
- Maintain 100m setback around feature outside of ROW
- Minimize movement of vehicles, machinery and equipment during construction
- Prevent off-ROW activities and equipment use within terrain feature, during construction

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S09	N1-Soils-148	Permafrost	Site: 163 to 164	E-731814 N-6278102	E-731191 N-6277914	14N	650 m
N1-S10	N1-Soils-149	Permafrost	Site: 165 to 166	E-729034 N-6277138	E-728329 N-6276590	14N	892 m

**Potential Effects:**

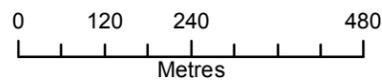
*Melting or loss of permafrost due to disturbance of the active layer*

**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
- Avoid organic soils containing permafrost 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



Coordinate System: UTM Zone 14N NAD83  
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**Land Base**

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

**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
- Water**
- Water Crossing
- Wildlife**
- Birds and Habitat
- Soils and Terrain**
- Permafrost

**Bipole III Transmission Project  
 Construction Environmental Protection Plan  
 Construction Section N1  
 Environmentally Sensitive Site Locations**

MAP NUMBER : 24

ESS Group : Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
N1-S10	N1-Hert-104	Limestone River	728330	6276592	14N
N1-S10	N1-Hert-105	Limestone River	728304	6276571	14N
N1-S10	N1-Hert-106	Unnamed Creek	727626	6276044	14N

**Potential Effects:**

*Potential disturbance to Heritage Resource*

**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
N1-S10	N1-Aqua-129	Limestone River	728318	6276582	14N	11m	11m	Moderate	Important

**Potential Effects:**

*Habitat loss & contamination from structure foundations & installations; Increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbance & impeded fish movement*

**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
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from September 1 - July 15

ESS Group : Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N1-S10	N1-Aqua-130	Unnamed Tributary of Limestone River	727624	6276043	14N	N/A	N/A	Low	Marginal

**Potential Effects:**

*Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation; fish habitat disturbance & impeded fish movement*

**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
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 - July 15

ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S10	N1-Wild-103	Limestone River crossing; movement route for raptors and waterfowl	Site: L5 to L6	E- 728330 N- 6276591	E- 728303 N- 6276570	14N	33 m

**Potential Effects:**

*Higher risk of wire collision, risk of wire collision is localized to the right-of-way*

**Specific Mitigation:**

- Adhere to reduced risk timing windows for protection of birds (August 1- April 30)
- Maintain setback during 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

MAP NUMBER : 24 cont'd

ESS Group : Permafrost

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N1-S10	N1-Soils-149	Permafrost	Site: 165 to 166	E-729034 N-6277138	E-728329 N-6276590	14N	892 m
N1-S10	N1-Soils-150	Permafrost	Site: 167 to 168	E-728244 N-6276524	E-728207 N-6276496	14N	45 m
N1-S10	N1-Soils-151	Permafrost	Site: 169 to 170	E-727628 N-6276046	E-727620 N-6276040	14N	10 m
N1-S10	N1-Soils-151	Permafrost	Site: 171 to 172	E-727274 N-6275770	E-727181 N-6275698	14N	118 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
- Avoid organic soils containing permafrost 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

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