

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S03	N2-Soils-104	Permafrost	Site: 33 to 34	E- 613022 N- 6200759	E- 609855 N- 6197111	14N	790 m
N2-S03	N2-Soils-105	Permafrost	Site: 35 to 36	E- 609247 N- 6196728	E- 609189 N- 6196692	14N	69 m
N2-S03	N2-Soils-105	Permafrost	Site: 37 to 38	E- 608905 N- 6196514	E- 608671 N- 6196366	14N	277 m
N2-S03	N2-Soils-105	Permafrost	Site: 39 to 40	E- 608506 N- 6196263	E- 608506 N- 6196263	14N	326 m
N2-S03	N2-Soils-105	Permafrost	Site: 41 to 42	E- 607979 N- 6195931	E- 607902 N- 6195883	14N	91 m
N2-S03	N2-Soils-105	Permafrost	Site: 43 to 44	E- 607867 N- 6195861	E- 607774 N- 6195803	14N	110 m
N2-S03	N2-Soils-105	Permafrost	Site: 45 to 46	E- 607659 N- 6195731	E- 607093 N- 6195375	14N	668 m
N2-S03	N2-Soils-106	Permafrost	Site: 47 to 48	E- 606754 N- 6195162	E- 606640 N- 6195090	14N	134 m
N2-S03	N2-Soils-106	Permafrost	Site: 49 to 50	E- 606553 N- 6195036	E- 606507 N- 6195007	14N	55 m
N2-S03	N2-Soils-106	Permafrost	Site: 51 to 52	E- 606381 N- 6194928	E- 606329 N- 6194895	14N	61 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 ٠
- Avoid organic soils containing permafrost to the extent possible ٠
- Maintain shrub and herbaceous vegetation to the extent possible ٠
- Remove trees by low-disturbance methods ٠
- Confine vehicle traffic to established trails to the extent possible ٠
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control ٠ 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
N2-S03	N2- Aqua- 103	Tributary of Brannigan Creek	609674	6196997	14N	2m	2m	Marginal	Low
N2-S03	N2- Aqua- 104	Tributary of Brannigan Creek	607580	6195681	14N	N/A	N/A	Marginal	Low
N2-S03	N2- Aqua- 105	Brannigan Creek	607326	6195522	14N	92m	92m	Marginal	Moderate

### Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation

## 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
- Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 July 15

Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice

# MAP NUMBER : 64 cont'd

# ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Ston	UTM Zone	Distance
N2-S03	N2-Wild-101	Waterfowl sensitivity area	Site: L3 to L4	E- 607422 N-6195581	E- 607293 N-6195501	14N	152 m

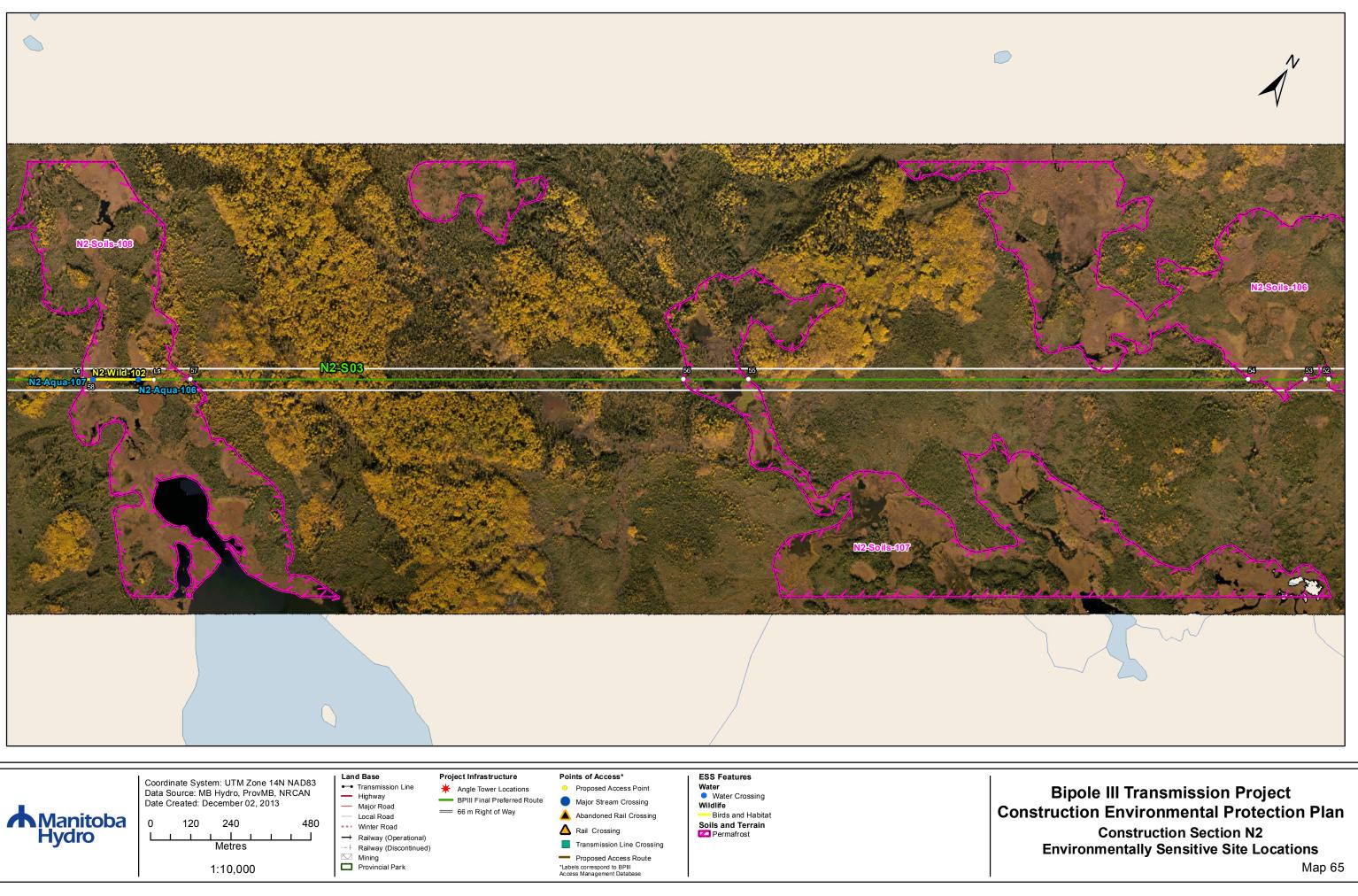
## Potential Effects:

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

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Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S03	N2-Soils-106	Permafrost	Site: 51 to 52	E- 606381 N- 6194928	E- 606329 N- 6194895	14N	61 m
N2-S03	N2-Soils-106	Permafrost	Site: 53 to 54	E- 606271 N- 6194858	E- 606271 N- 6194858	14N	171 m
N2-S03	N2-Soils-107	Permafrost	Site: 55 to 56	E- 604861 N- 6193973	E- 604697 N- 6193869	14N	194 m
N2-S03	N2-Soils-108	Permafrost	Site: 57 to 58	E- 603450 N- 6193086	E- 603176 N- 6192914	14N	323 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 ٠
- Remove trees by low-disturbance methods ٠
- Confine vehicle traffic to established trails to the extent possible ٠
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control ٠ Plan

## ESS Group : Birds and Habitat

Sec-Seg I	ESS ID	ESS Name	Location	Start	Ston	UTM Zone	Distance
N2-S03	N2-Wild-102	Waterfowl sensitivity area	Site: L5 to L6	E- 603357 N-6193028	E- 603166 N-6192908	14N	226 m

#### 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 ٠
- 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
N2-S03	N2-Aqua- 106	Unnamed stream	603319	6193004	14N	25m	25m	Marginal	Low
N2-S03	N2-Aqua- 107	Unnamed stream	603204	6192932	14N	29m	29m	Marginal	Low

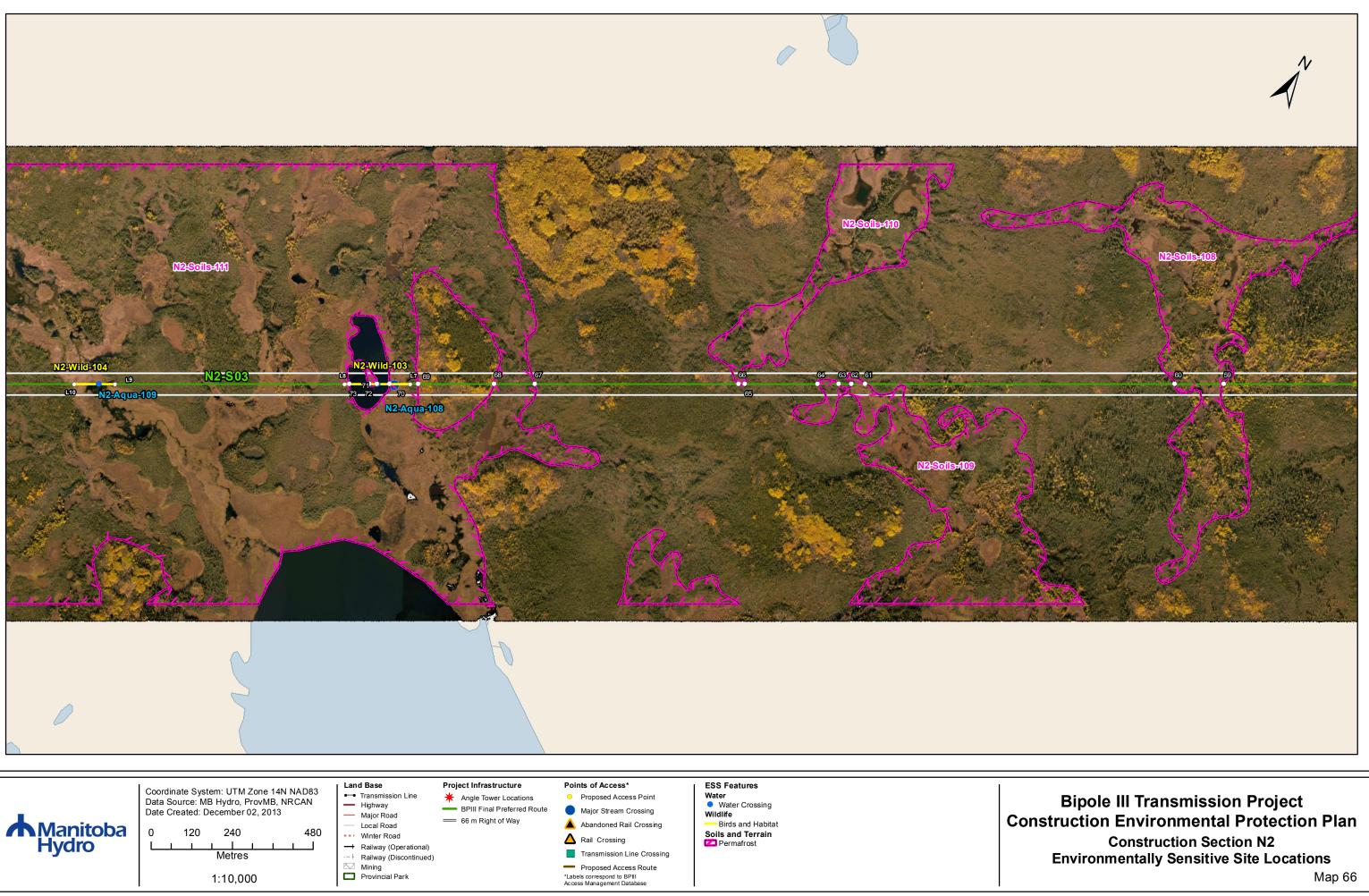
#### **Potential Effects:**

Habitat loss & contamination from structure foundations & installations; Increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation

#### 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 •
- ٠ Bridges and Snow Fills, and Overhead Line Construction
- No instream works or fording from April 15 July 15

Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Temporary Stream Crossings, Ice



Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S03	N2-Soils-108	Permafrost	Site: 59 to 60	E- 602682 N- 6192604	E- 602560 N- 6192527	14N	144 m
N2-S03	N2-Soils-109	Permafrost	Site: 61 to 62	E- 601784 N- 6192040	E- 601749 N- 6192017	14N	42 m
N2-S03	N2-Soils-109	Permafrost	Site: 63 to 64	E- 601717 N- 6191998	E- 601665 N- 6191965	14N	62 m
N2-S03	N2-Soils-110	Permafrost	Site: 65 to 66	E- 601483 N- 6191850	E- 601467 N- 6191840	14N	18 m
N2-S03	N2-Soils-111	Permafrost	Site: 67 to 68	E- 600957 N- 6191520	E- 600854 N- 6191455	14N	67 m
N2-S03	N2-Soils-111	Permafrost	Site: 69 to 70	E- 600664 N- 6191336	E- 600593 N- 6191291	14N	84 m
N2-S03	N2-Soils-111	Permafrost	Site: 71 to 72	E- 600561 N- 6191271	E- 600542 N- 6191259	14N	22 m
N2-S03	N2-Soils-111	Permafrost	Site: 73 to 74	E- 600491 N- 6191227	E- 598340 N- 6189876	14N	2540 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 ٠
- Avoid organic soils containing permafrost to the extent possible •
- Maintain shrub and herbaceous vegetation to the extent possible ٠
- Remove trees by low-disturbance methods ٠
- Confine vehicle traffic to established trails to the extent possible ٠
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

#### ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S03	N2-Wild-103	Waterfowl sensitivity area		E- 600645 N-6191324		14N	193 m
N2-S03	N2-Wild-104	Waterfowl sensitivity area	Site: L9 to L10	E- 599906 N-6190859	E-599803 N-6190795	14N	121 m

#### **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

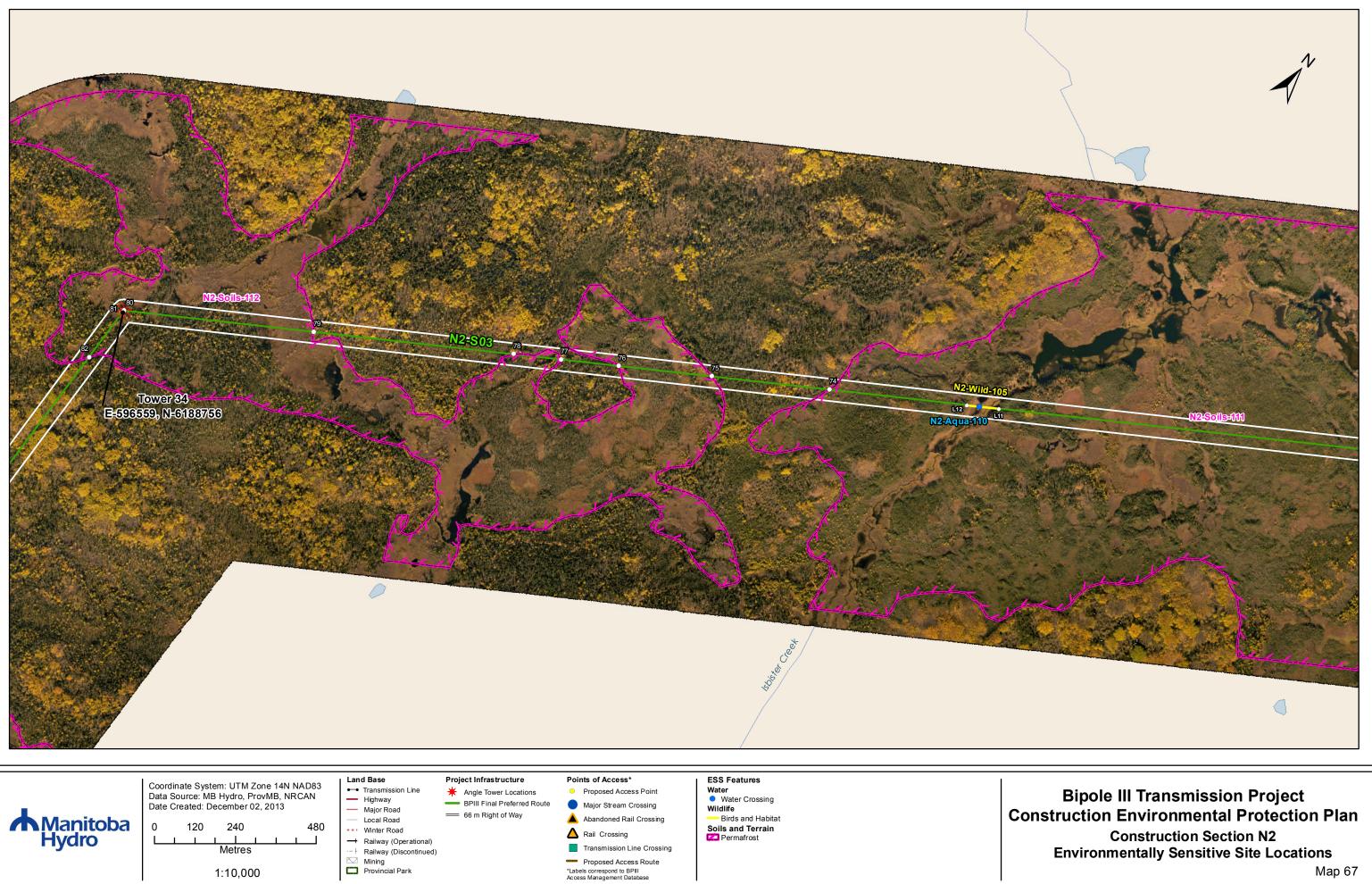
Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
N2-S03	N2- Aqua- 108	Small, unnamed lake	600563	6191272	14N	N/A	N/A	Marginal	Low
N2-S03	N2- Aqua- 109	Tributary of Isbister Creek	600563	6191272	14N	2m	2m	Marginal	Moderate

## **Potential Effects:**

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation

#### 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



Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
N2-S03	N2-Soils-111	Permafrost	Site: 73 to 74	E- 600491 N- 6191227	E- 598340 N- 6189876	14N	2540 m
N2-S03	N2-Soils-112	Permafrost	Site: 75 to 76	E-598044 N-6189689	E-597808 N-6189541	14N	278 m
N2-S03	N2-Soils-112	Permafrost	Site: 77 to 78	E-597662 N-6189450	E-597543 N-6189375	14N	141 m
N2-S03	N2-Soils-112	Permafrost	Site: 79 to 80	E-597038 N-6189057	E-596559 N-6188756	14N	566 m
N2-S04	N2-Soils-112	Permafrost	Site: 81 to 82	E-596559 N-6188756	E-596565 N-6188584	14N	172 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 ٠
- Avoid organic soils containing permafrost to the extent possible ٠
- Maintain shrub and herbaceous vegetation to the extent possible ٠
- 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 ٠ Plan

#### ESS Group : Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Ston	UTM Zone	Distance
N2-S03	N2-Wild-105	Waterfowl sensitivity area	Site: L11 to L12	E- 598770 N-6190145	E-598689 N-6190095	14N	95 m

#### **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 ٠
- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing ٠
- 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		Fish Habitat Class	Habitat Sensitivity
N2-S03	N2-Aqua- 110	Tributary of Isbister Creek	598721	6190115	14N	3m	3m	Marginal	Moderate

## Potential Effects:

Habitat loss & contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream banks; loss of riparian vegetation

## 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
  - ٠ 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