		8	MAP SHEET FU	LLY WITHIN THE S1-ECO-301 FEATURE	5	Ŧ	
17 SW	NW	SW	91 <b>-30</b> -301	NW		SW	
			yre Roa			<b>1</b> +	
	47-Road	West	Maint				
						+	
						Ŧ	
						ł	
						1	
	NE	SE		NE		SE	
						+	
			TURAIA	PAR NILL			
SE			RGE08			A. RE	
	7			6			
				S1-S05			
North							
Road							
18	2						
	1	SW				sw	
SW						-	
					-	. \	
					-	- <	
						-	
						-	
	WESTBOURNE DRAIN						
	NE	12 SE	TWP012	NE	1 58		
SE 13			W1M		-		
					-		

Manitoba Hydro	Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: July 23, 2014 Version: Draft 0 125 250 500 Metres 1:10,000	Land Base Transmission Line Highway Major Road Local Road Railway (Operational) Railway (Discontinued) First Nation Mining Provincial Forest Township/Range	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 Ecosystem Species of Concern	Cons
-------------------	---	---	---	---	---	------



# Bipole III Transmission Project struction Environmental Protection Plan Construction Section S1 Environmentally Sensitive Site Locations

ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S05	S1-Eco-301	Species of Concern (Plant)	Site: 21 to 22	E-532293 N-5544266	E-532373 N-5532723	14N	11543m

### **Potential Effects:**

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

## Specific Mitigation:

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

# Version: DRAFT



Resource Use

C Forestry

Manitoba	0	125	250		
Hydro	Ĺ		Metres	1	

1:10,000



# Bipole III Transmission Project Construction Environmental Protection Plan Construction Section S1 Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Map 286

**ESS Group:** Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S07	S1-Aqua-123	Small, unnamed waterbody	Site: 31 to 32	E-529958 N-5532481	E-529958 N-5532456	14N	24 m

### **Potential Effects:**

Increased erosion and sedimentation; rutting of floodplains; 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 work or fording from April 1 to June 30

### **ESS Group:** Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S05	S1-Eco-301	Species of Concern (Plant)	Site: 21 to 22	E-532293 N-5544266	E-532373 N-5532723	14N	11543 m
S1-S06	S1-Eco-301	Species of Concern (Plant)	Site: 27 to 28	E-532373 N-5532723	E-529956 N-5532712	14N	2416 m
S1-S07	S1-Eco-301	Species of Concern (Plant)	Site: 29 to 30	E-529956 N-5532712	E-529983 N-5528733	14N	3978 m

### **Potential Effects:**

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

### Specific Mitigation:

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

### **ESS Group:** Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S05	S1-RUse-301	Shelterbelt	Site: 23 to 24	E-532363 N-5535107	E-532363 N-5535088	14N	18 m
S1-S05	S1-RUse-302	Shelterbelt	Site: 25 to 26	E-532369 N-5533426	E-532370 N-5533343	14N	83 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
- Burn clearing debris 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

# Version: DRAFT



Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: July 23, 2014 Version: Draft 0 125 250 500 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	Points of Access* ESS Features Heritage ESS Features Heritage Cons   Major Stream Crossing Abandoned Rail Crossing Water Cons   ▲ Abandoned Rail Crossing Water Water Crossing Cons   ▲ Rail Crossing Birds and Habitat Ecosystem Cons   ■ Transmission Line Crossing Image: Consent Consent Construction Image: Consent Con
--	--

# Bipole III Transmission Project struction Environmental Protection Plan Construction Section S1 Environmentally Sensitive Site Locations

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S07	S1-Hert-102	Bagot Creek	529984	5529173	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:** Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S07	S1-Wild-102	Bagot Creek crossing; raptor and waterfowl habitat	529984	5529180	14N

### **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 applicable setback during nesting and breeding timing window
- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
- Install bird diverters or other measures at high priority sites

### ESS Group: Water Crossing

Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S07	S1- Aqua- 124	Unnamed tributary of Rat Creek	529973	5530875	14N	N/A	N/A	Low	No Fish Habitat
S1-S07	S1- Aqua- 125	Bagot Creek	529984	5529173	14N	3m	3m	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.
- 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 work or fording from April 1 to June 30

### ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S07	S1-Eco-301	Species of Concern (Plant)	Site: 29 to 30	E-529956 N-5532712	E-529983 N-5528733	14N	3978 m

### **Potential Effects:**

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

### Specific Mitigation:

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

ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S07	S1-RUse-303	Shelterbelt	Site: 33 to 34	E-529979 N-5529361	E-529979 N-5529347	14N	13 m
S1-S07	S1-RUse-304	Shelterbelt	Site: 35 to 36	E-529984 N-5528463	E-529986 N-5528178	14N	285 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
- Burn clearing debris 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

# Version: DRAFT

This page is intentionally left blank.



Manitoba Hydro	Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: July 23, 2014 Version: Draft 0 125 250 500 Metres 1:10,000	Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Mining Provincial Forest Township/Range	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 Resource Use Forestry Wildlife Carter Crossing Wildlife Carter Crossing Carter Crossing Wildlife Carter Crossing Wildlife Carter Crossing Wildlife Carter Crossing Carter Cros	Co Draft: I	כחי כחי : For
-------------------	---	---	---	--	---	----------------	---------------------

# Bipole III Transmission Project struction Environmental Protection Plan Construction Section S1 Environmentally Sensitive Site Locations

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S07	S1-Hert-103	Rat Creek	530001	5526734	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: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S09	S1-Wild-103	Rat Creek crossing; raptor and waterfowl habitat	530001	5526718	14N
S1-S09	S1-Wild-104	Nearby Franklins gull colony	529805	5525416	14N

### **Potential Effects:**

S1-Wild-103: Higher risk of wire collision, risk of wire collision is localized to the right-of-way S1-Wild-104: 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 affect colonies up to 400 meters away

### Specific Mitigation:

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

### ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S07	S1-Aqua- 126	Rat Creek	530001	5526726	14N	20m	20m	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. • 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 work or fording from April 1 to June 30

### **ESS Group:** Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Wild-301	Northern Prairie Skink Habitat	Site: 39 to 40	E-529817 N-5524736	E-529883 N-5514407	14N	10329 m
S1-S09	S1-Wild-300	Skink/Salamander Habitat	Site: 41 to 42	E-529817 N-5524736	E-529883 N-5514407	14N	10328 m

### **Potential Effects:**

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

### Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

### ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S07	S1-RUse-304	Shelterbelt	Site: 35 to 36	E-529984 N-5528463	E-529986 N-5528178	14N	285 m
S1-S07	S1-RUse-305	Shelterbelt	Site: 37 to 38	E-529987 N-5528131	E-529988 N-5527849	14N	281 m
S1-S09	S1-RUse-309	Shelterbelt	Site: 43 to 44	E-529818 N-5524500	E-529819 N-5524469	14N	30 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
- Burn clearing debris 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

# Version: DRAFT

This page is intentionally left blank.





# Bipole III Transmission Project Construction Environmental Protection Plan Construction Section S1 Environmentally Sensitive Site Locations

Draft: For Discussion Purposes Only

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S09	S1-Hert-104	Potential archaeological site	529813	5523974	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
S1-S09	S1-Aqua- 127	Unnamed Wetland	529812	5523968	14N	N/A	N/A	Low	No Fish Habitat

### **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.
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Timing Windows, Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction

### ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-RUse-310	Shelterbelt	Site: 45 to 46	E-529835 N-5521545	E-529836 N-5521341	14N	203m

### **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
- Burn clearing debris 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

### **ESS Group:** Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Wild-301	Northern Prairie Skink Habitat	Site: 39 to 40	E-529817 N-5524736	E-529883 N-5514407	14N	10329 m
S1-S09	S1-Wild-300	Skink/Salamander Habitat	Site: 41 to 42	E-529817 N-5524736	E-529883 N-5514407	14N	10328 m

### **Potential Effects:**

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

### **Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

# Version: DRAFT



A Manitoba Hydro	Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: July 23, 2014 Version: Draft 0 125 250 500 Metres 1:10,000	Land Base → Transmission Line → Highway → Major Road → Local Road → Railway (Operational) → Railway (Discontinued) → First Nation ◇ Mining → Provincial Forest ↓ Township/Range	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 Resource Use Forestry Water Water Crossing Ecosystem Species of Concern Wildlife Reptiles/Amphibians	Cons Draft: For D
---------------------	---	---	---	---	---	----------------------

**Construction Section S1** 

Environmentally Sensitive Site Locations

### ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S09	S1-RUse-311	Shelterbelt	529823	5517484	14N
S1-S09	S1-RUse-312	Shelterbelt	529822	5517381	14N
S1-S09	S1-RUse-313	Shelterbelt	529826	5517130	14N
S1-S09	S1-RUse-314	Shelterbelt	529824	5517065	14N

### **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
- Burn clearing debris during winter months only and ensure that all fires are extinguished prior to spring break-up; pile debris away from ROW edge
- 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

### ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
S1-S09	S1-Aqua- 128	Fetterly Creek	529844	5517874	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.
- Adhere to Department of Fisheries and Oceans (DFO) Operational Statements for Timing Windows, Temporary Stream Crossings, Ice Bridges and Snow Fills, and Overhead Line Construction

### ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Eco-302	Species of Concern (Plant)	Site: 47 to 48	E-529855 N-5518436	E-529883 N-5514407	14N	4028m

### **Potential Effects:**

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

### **Specific Mitigation:**

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

### **ESS Group:** Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Wild-301	Northern Prairie Skink Habitat	Site: 39 to 40	E-529817 N-5524736	E-529883 N-5514407	14N	10329 m
S1-S09	S1-Wild-300	Skink/Salamander Habitat	Site: 41 to 42	E-529817 N-5524736	E-529883 N-5514407	14N	10328 m

### **Potential Effects:**

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

### Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

# Version: DRAFT



Manitoba Hydro	Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: July 23, 2014 Version: Draft 0 125 250 500 Metres 1:10,000	Land Base → Transmission Line → Highway → Major Road → Local Road → Railway (Operational) + Railway (Discontinued) First Nation Mining Provincial Forest Township/Range	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 Wildlife   Heritage Soils and Terrain Wildlife   Archaeological Erosion Reptiles/Amphibians   Water Ecosystem Resource Use   Intersection Food/Medicinal   Resource Use Forestry   Fishing Water   Trapping Groundwater	Const Draft: For Dis
-------------------	---	---	---	---	--	-------------------------

# **Bipole III Transmission Project** truction Environmental Protection Plan **Construction Section S1 Environmentally Sensitive Site Locations**

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S10	S1-Hert-105	Unnamed Creek	531502	5513012	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
S1-S10	S1- Aqua- 129	Unnamed Tributary of Assiniboine River	529869	5514592	14N	N/A	N/A	Low	Marginal
S1-S10	S1- Aqua- 130	Unnamed Creek	531489	5513024	14N	N/A	N/A	None	None

### **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.
- 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 work or fording from April 1 to June 30

### **ESS Group:** Intersection

Sec-Seg ID	ESS ID	Location	ESS Name	Crossing Coordinates	UTM Zone
S1-S09	S1-Acss-100	C1	Snowmobile Trail	E-529863 N-5516094	14N

### **Potential Effects:**

Potential interference with snowmobilers; safety issues

### **Specific Mitigation:**

- Identify and flag prior to start of work
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail location
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction

### ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Aqua-202	Aquifer	Site: 51 to 52	E-529879 N-5514739	E-529883 N-5514407	14N	331 m
S1-S10	S1-Aqua-202	Aquifer	Site: 56 to 60	E-529883 N-5514407	E-535261 N-5509768	14N	7102 m

## **Potential Effects:**

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

## **Specific Mitigation:**

- Marshaling yards will be located on upland sites where possible.
- 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.

• An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept

ESS Group: Erosion

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S10	S1-Soils-300	Water Erosion Risk	Site: 63 to 64	E-531103 N-5513355	E-532167 N-5512438	14N	1404 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: Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Wild-301	Northern Prairie Skink Habitat	Site: 39 to 40	E-529817 N-5524736	E-529883 N-5514407	14N	10329 m
S1-S10	S1-Wild-301	Northern Prairie Skink Habitat	Site: 53 to 57	E-529883 N-5514407	E-533386 N-5511386	14N	4625 m
S1-S09	S1-Wild-300	Skink/Salamander Habitat	Site: 41 to 42	E-529817 N-5524736	E-529883 N-5514407	14N	10328 m
S1-S10	S1-Wild-300	Skink/Salamander Habitat	Site: 55 to 58	E-529883 N-5514407	E-533386 N-5511385	14N	4626 m

### **Potential Effects:**

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

### **Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

### ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Eco-302	Species of Concern (Plant)	Site: 47 to 48	E-529855 N-5518436	E-529883 N-5514407	14N	4028 m
S1-S10	S1-Eco-302	Species of Concern (Plant)	Site: 54 to 59	E-529883 N-5514407	E-535261 N-5509768	14N	7102 m

### **Potential Effects:**

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

### Specific Mitigation:

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

### ESS Group: Forestry

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-RUse-315	Shelterbelt	Site: 49 to 50	E-529862 N-5516208	E-529862 N-5516194	14N	14m

### **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
- Burn clearing debris 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

# Version: DRAFT

ESS Group: Food/Medicinal

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S10	S1-RUse-200	Berry Harvest	Site: 61 to 62	E-530407 N-5513956	E-533550 N-5511244	14N	4151 m

### **Potential Effects:**

Loss of vegetation as a result of clearing, construction, maintenance and decommissioning activities.

## 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

# Version: DRAFT



Manitoba Hydro	Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: July 23, 2014 Version: Draft 0 125 250 500 Metres 1:10,000	Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Mining Provincial Forest Township/Range	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 Resource Use Fishing Trapping Wildlife Birds and Habita	Soils and Terrain Erosion Ecosystem Species of Concern Resource Use Food/Medicinal Water Groundwater at Wildlife Reptiles/Amphibians	Cons Draft: For D
-------------------	---	---	---	--	--	---	----------------------

# Bipole III Transmission Project struction Environmental Protection Plan Construction Section S1 Environmentally Sensitive Site Locations

Discussion Purposes Only

Map 292

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone
S1-S10	S1-Hert-106	Assiniboine River	532262	5512357	14N
S1-S10	S1-Hert-107	Assiniboine River	532347	5512284	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
S1-S10	S1-Aqua- 131	Assiniboine River	532305	5512320	14N	55m	55m	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.
- 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 work or fording from September 15 to June 30

### ESS Group: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S10	S1-Wild- 105	Assiniboine River; migration route for raptors and waterfowl	Site: L5 to L6	E-532263 N-5512355	E-532345 N-5512283	14N	108m

### **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 applicable setback during nesting and breeding timing window
- Conduct priority assessment for bird diverters and other measures prior to transmission line stringing
- Install bird diverters or other measures at high priority sites

### ESS Group: Fishing

Sec-Seg ID	ESS ID	Location	ESS Name	Crossing Coordinates	UTM Zone
S1-S10	S1-RUse-400	C2	Fishing - Assiniboine River	E-532306 N-5512317	14N

### **Potential Effects:**

Loss of recreational activities for community members and potential shoreline damage due to construction activities and 0&M.

### 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

# Version: DRAFT

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

### ESS Group: Trapping

Sec-Seg ID	ESS ID	Location	ESS Name	Crossing Coordinates	UTM Zone
S1-S10	S1-RUse-500	C3	Trapping - Assiniboine River	E-532304 N-5512319	14N

### **Potential Effects:**

Loss of ATK and local historical record due to access road construction and ROW activities.

### 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

### ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Aqua-202	Aquifer	Site: 51 to 52	E-529879 N-5514739	E-529883 N-5514407	14N	331 m
S1-S10	S1-Aqua-202	Aquifer	Site: 56 to 60	E-529883 N-5514407	E-535261 N-5509768	14N	7102 m

### **Potential Effects:**

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

### **Specific Mitigation:**

- Marshaling 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: Erosion

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S10	S1-Soils-300	Water Erosion Risk	Site: 63 to 64	E-531103 N-5513355	E-532167 N-5512438	14N	1404 m
S1-S10	S1-Soils-301	Water Erosion Risk	Site: 65 to 66	E-532340 N-5512288	E-532847 N-5511851	14N	668 m
S1-S10	S1-Soils-301	Water Erosion Risk	Site: 67 to 68	E-534025 N-5510834	E-534409 N-5510503	14N	506 m
S1-S10	S1-Soils-301	Water Erosion Risk	Site: 69 to 70	E-534455 N-5510463	E-534535 N-5510395	14N	105 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:** Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S10	S1-Wild-301	Northern Prairie Skink Habitat	Site: 53 to 57	E-529883 N-5514407	E-533386 N-5511386	14N	4625 m
S1-S10	S1-Wild-300	Skink/Salamander Habitat	Site: 55 to 58	E-529883 N-5514407	E-533386 N-5511385	14N	4626 m

### **Potential Effects:**

Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

### Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing access roads and trails to the extent possible
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

### ESS Group: Food/Medicinal

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S10	S1-RUse-200	Berry Harvest	Site: 61 to 62	E-530407 N-5513956	E-533550 N-5511244	14N	4151m

## **Potential Effects:**

Loss of vegetation as a result of clearing, construction, maintenance and decommissioning activities.

### Specific Mitigation:

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

### ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
S1-S09	S1-Eco-302	Species of Concern (Plant)	Site: 47 to 48	E-529855 N-5518436	E-529883 N-5514407	14N	4028 m
S1-S10	S1-Eco-302	Species of Concern (Plant)	Site: 54 to 59	E-529883 N-5514407	E-535261 N-5509768	14N	7102 m

### **Potential Effects:**

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

### Specific Mitigation:

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

# Version: DRAFT