



Coordinate System: UTM Zone 14N NAD83
 Data Source: MB Hydro, ProvMB, NRCAN
 Date Created: July 29, 2014
 Version: Draft

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 Metres
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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
 - LWESI Final Preferred Route
 - 60 m Right of Way
 - Manitogan Corner Station Preferred Site

- ESS Features**
- Access**
 - Intersection
 - Ecosystem**
 - Species of Concern
 - Resource Use**
 - Food/Medicinal
 - Water**
 - Water Crossing
 - Wildlife**
 - Birds and Habitat

- Heritage**
- Cultural
 - Water
 - Wetland

**Lake Winnipeg East Side Initiative
 Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site Locations**

DRAFT: FOR DISCUSSION PURPOSES ONLY

ESS Group: Food/Medicinal

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S05	LWE-Ruse-204	Gathering Area	694820	5650904	14N	ATK
LWE-S05	LWE-Ruse-205	Gathering Area	694811	5650850	14N	ATK

Potential Effects:

Loss of plants 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: Intersection

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S05	LWE-Acss-107	Trail crossing	694603	5651681	14N	Manitoba Hydro Consultants
LWE-S05	LWE-Acss-108	Trail crossing	694766	5651356	14N	Manitoba Hydro Consultants
LWE-S06	LWE-Acss-109	Trail crossing	694379	5648219	14N	Manitoba Hydro Consultants

Potential Effects:

May provide increased sightlines from the road and additional access for hunters

Specific Mitigation:

- Maintain existing shrubs and understory for 100m on both sides of the crossing
- Minimize centerline trail clearing width

ESS Group: Species of Concern

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S06	LWE-Eco-303	Plant - Sagittaria rigida	694817	5650886	14N	Manitoba Hydro Consultants

Potential Effects:

Loss of plants of conservation concern from clearing and construction activities.

Specific Mitigation:

- Identify and flag prior to start of work
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Provide 5m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S05	LWE-Aqua-105	Unnamed Drain	694429	5652027	14N	Manitoba Hydro Consultants
LWE-S06	LWE-Aqua-106	Sandy River	694814	5650870	14N	Manitoba Hydro Consultants
LWE-S06	LWE-Aqua-107	Unnamed Drain	694587	5649494	14N	Manitoba Hydro Consultants

Potential Effects:

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

ESS Group: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S06	LWE-Wild-102	Sandy River Crossing	Site: L7 to L8	E-694821 N-5650915	E-694809 N-5650838	14N	78m	Manitoba Hydro Consultants
LWE-S06	LWE-Wild-103	Waterfowl and other waterbird sensitivity area	Site: L9 to L10	E-694593 N-5649531	E-694425 N-5648514	14N	1031m	Manitoba Hydro Consultants

Potential Effects:

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

Specific Mitigation:

- 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: Wetland /Fens

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S05	LWE-Aqua-309	Wetland sensitivity area	Site: 61 to 62	E-694378 N-5652126	E-694424 N-5652034	14N	102 m	MBCWS
LWE-S05	LWE-Aqua-310	Wetland sensitivity area	Site: 63 to 64	E-694653 N-5651580	E-694700 N-5651485	14N	105 m	MBCWS
LWE-S06	LWE-Aqua-311	Wetland sensitivity area	Site: 65 to 66	E-694571 N-5649397	E-694555 N-5649301	14N	96 m	MBCWS

Potential Effects:

Potential Disruption to sensitive wetland habitat

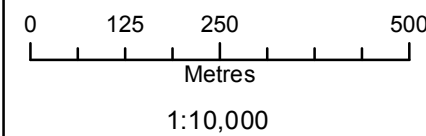
Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Provide 30 m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods within buffer
- The application of herbicides is prohibited within buffer

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| <p>Land Base</p> <ul style="list-style-type: none"> — Transmission Line — Highway — Major Road — Local Road — Winter Road — Railway (Operational) — Railway (Discontinued) ☒ Mining | <p>Project Infrastructure</p> <ul style="list-style-type: none"> ★ Angle Tower Locations — LWESI Final Preferred Route — 60 m Right of Way ■ Manigotagan Corner Station Preferred Site |
|--|---|

- ESS Features**
- Access Intersection
 - Water
 - Wetland

**Lake Winnipeg East Side Initiative
 Transmission Project
 Construction Environmental Protection Plan
 Environmentally Sensitive Site Locations**

DRAFT: FOR DISCUSSION PURPOSES ONLY

DOCUMENT PATH: G:\GIS_PROJECT_FOLDER00_HYDRO\LWESI\ARCMAP\LWESI_CENVPP_ESS_10K_MAPS_2014.0728.MXD

ESS Group: Intersection

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S06	LWE-Acss-110	Trail crossing	694284	5647654	14N	Manitoba Hydro Consultants
LWE-S06	LWE-Acss-111	Trail crossing	694181	5647034	14N	Manitoba Hydro Consultants
LWE-S06	LWE-Acss-112	Trail crossing	694052	5646231	14N	Manitoba Hydro Consultants

Potential Effects:

May provide increased sightlines from the road and additional access for hunters

Specific Mitigation:

- Maintain existing shrubs and understory for 100m on both sides of the crossing
- Minimize centerline trail clearing width

ESS Group: Wetland /Fens

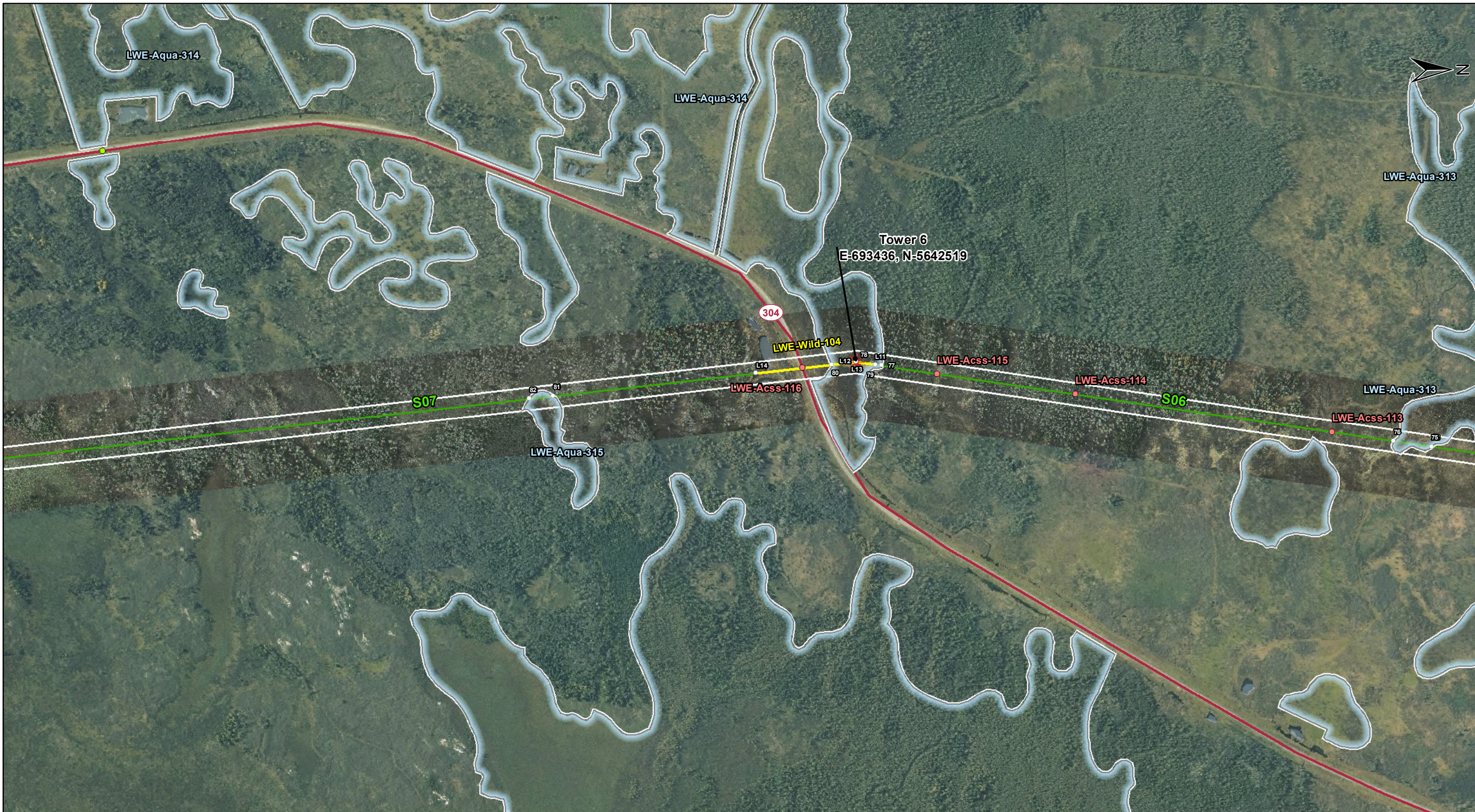
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S06	LWE-Aqua-312	Wetland sensitivity area	Site: 67 to 68	E-694244 N-5647415	E-694220 N-5647272	14N	144 m	Manitoba Hydro Consultants
LWE-S06	LWE-Aqua-313	Wetland sensitivity area	Site: 69 to 70	E-694034 N-5646146	E-693784 N-5644633	14N	1533 m	Manitoba Hydro Consultants
LWE-S06	LWE-Aqua-313	Wetland sensitivity area	Site: 71 to 72	E-693779 N-5644604	E-693751 N-5644429	14N	176 m	Manitoba Hydro Consultants
LWE-S06	LWE-Aqua-313	Wetland sensitivity area	Site: 73 to 74	E-693744 N-5644389	E-693722 N-5644257	14N	133 m	Manitoba Hydro Consultants

Potential Effects:

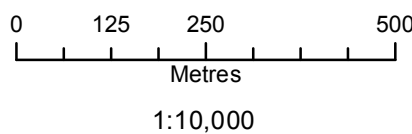
Potential Disruption to sensitive wetland habitat

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Provide 30 m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods within buffer
- The application of herbicides is prohibited within buffer



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- ESS Features**
- Access
 - Intersection
 - Ecosystem
 - Species of Concern
 - Wildlife
 - Birds and Habitat
 - Water
 - Wetland

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ESS Group: Intersection

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S06	LWE-Acss-113	Trail crossing	693647	5643802	14N	Manitoba Hydro consultants
LWE-S06	LWE-Acss-114	Trail crossing	693533	5643111	14N	Manitoba Hydro Consultants
LWE-S06	LWE-Acss-115	Trail crossing	693472	5642738	14N	Manitoba Hydro Consultants
LWE-S07	LWE-Acss-116	Road crossing	693449	5642374	14N	Manitoba Hydro Consultants

Potential Effects:

May provide increased sightlines from the road and additional access for hunters

Specific Mitigation:

- Maintain existing shrubs and understory for 100m on both sides of the crossing
- Minimize centerline trail clearing width

ESS Group: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S06	LWE-Wild-104	Waterfowl and other waterbird sensitivity area	Site: L11 to L12	E-693444 N-5642570	E-693435 N-5642518	14N	52m	Manitoba Hydro Consultants
LWE-S07	LWE-Wild-104	Waterfowl and other waterbird sensitivity area	Site: L13 to L14	E-693435 N-5642518	E-693461 N-5642248	14N	271m	Manitoba Hydro Consultants

Potential Effects:

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

Specific Mitigation:

- 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: Wetland /Fens

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S06	LWE-Aqua-313	Wetland sensitivity area	Site: 75 to 76	E-693692 N-5644072	E-693675 N-5643970	14N	103 m	MBCWS
LWE-S06	LWE-Aqua-314	Wetland sensitivity area	Site: 77 to 78	E-693446 N-5642587	E-693435 N-5642518	14N	70 m	MBCWS
LWE-S07	LWE-Aqua-314	Wetland sensitivity area	Site: 79 to 80	E-693435 N-5642518	E-693441 N-5642453	14N	65 m	MBCWS
LWE-S07	LWE-Aqua-315	Wetland sensitivity area	Site: 81 to 82	E-693513 N-5641698	E-693519 N-5641633	14N	65 m	MBCWS

Potential Effects:

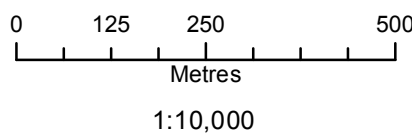
Potential Disruption to sensitive wetland habitat

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Provide 30 m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods within buffer
- The application of herbicides is prohibited within buffer



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|--|---|
| <p>ESS Features</p> <ul style="list-style-type: none"> Access ● Intersection Heritage ● Archaeological Resource Use ● Food/Medicinal Water ● Water Crossing Wildlife ● Birds and Habitat | <p>Water</p> <ul style="list-style-type: none"> ■ Wetland |
|--|---|

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ESS Group: Food/Medicinal

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S08	LWE-Ruse-206	Gathering Area	693817	5638523	14N	ATK
LWE-S08	LWE-Ruse-207	Gathering Area	693822	5638464	14N	ATK

Potential Effects:

Loss of plants 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: Intersection

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S08	LWE-Acss-117	Road crossing	693785	5638860	14N	Manitoba Hydro Consultants

Potential Effects:

May provide increased sightlines from the road and additional access for hunters

Specific Mitigation:

- Maintain existing shrubs and understory for 100m on both sides of the crossing
- Minimize centerline trail clearing width

ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S08	LWE-Aqua-108	Black River	693820	5638490	14N	Manitoba Hydro Consultants

Potential Effects:

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

ESS Group: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S08	LWE-Wild-105	Black River Crossing	Site: L15 to L16	E-693814 N-5638541	E-693824 N-5638441	14N	100m	Manitoba Hydro Consultants

Potential Effects:

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

Specific Mitigation:

- 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: Wetland /Fens

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S08	LWE-Aqua-316	Wetland sensitivity area	Site: 83 to 84	E-693980 N-5637964	E-694059 N-5637821	14N	163m	MBCWS

Potential Effects:

Potential Disruption to sensitive wetland habitat

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Provide 30 m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods within buffer
- The application of herbicides is prohibited within buffer