

DOCUMENT PATH: G:\GIS_PROJECT_FOLDER\HYDRO\LWESI\ARCMAP\LWESI_CENVPP_ESS_10K_MAPS_2014.0728.MXD



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

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 Metres
 1:10,000

- 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
 - Manigotagan Corner Station Preferred Site

- ESS Features**
- Water**
- Wetland

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

DRAFT: FOR DISCUSSION PURPOSES ONLY

ESS Group: Wetland /Fens

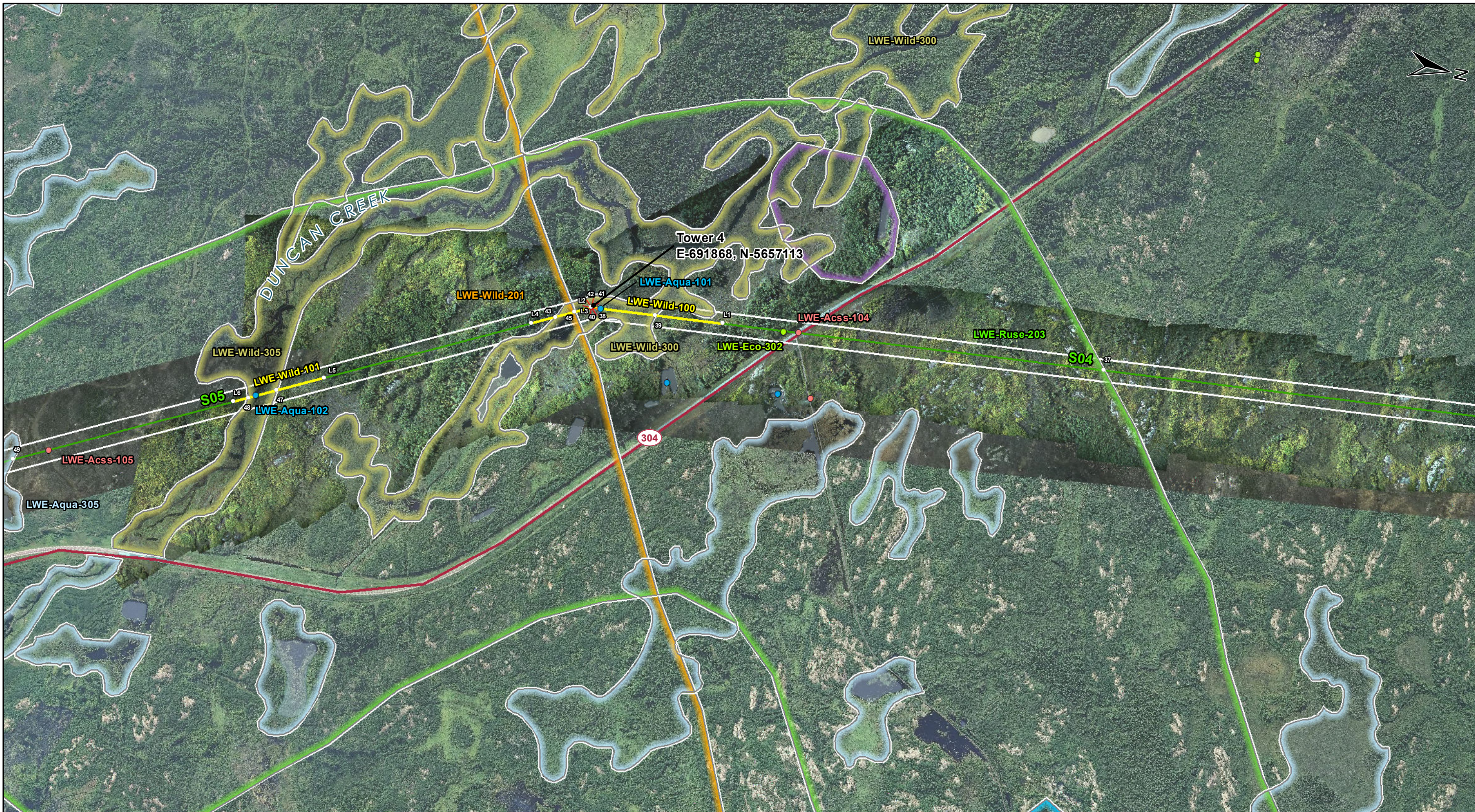
Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S04	LWE- Aqua - 303	Wetland sensitivity area	Site: 27 to 28	E-691380 N-5662674	E-691388 N-5662584	14N	90 m	MBCWS
LWE-S04	LWE- Aqua - 304	Wetland sensitivity area	Site: 29 to 30	E-691485 N-5661474	E-691504 N-5661263	14N	211 m	MBCWS
LWE-S04	LWE- Aqua - 304	Wetland sensitivity area	Site: 31 to 32	E-691515 N-5661137	E-691518 N-5661099	14N	37 m	MBCSW
LWE-S04	LWE- Aqua - 304	Wetland sensitivity area	Site: 33 to 34	E-691526 N-5661012	E-691535 N-5660903	14N	109 m	MBCSW
LWE-S04	LWE-Aqua-304	Wetland sensitivity area	Site: 35 to 36	E-691544 N-5660800	E-691554 N-5660688	14N	112 m	MBCSW

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
 - Water**
 - Water Crossing
 - Wildlife**
 - Birds and Habitat
 - Heritage**
 - Cultural

- Resource Use**
- Food/Medicinal
 - Waterbody/Riparian
 - Wetland
 - Mammals and Habitat
 - Reptiles/Amphibians

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MAP 4

ESS Group: Intersection

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S04	LWE-Acss-104	Road crossing	691819	5657673	14N	Manitoba Hydro Consultants
LWE-S05	LWE-Acss-105	Trail crossing	692552	5655756	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-S04	LWE-Eco-302	Plant - Platanthera hookeri	691825	5657633	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-S04	LWE-Aqua-101	Unnamed Tributary	691866	5657136	14N	Manitoba Hydro Consultants
LWE-S05	LWE-Aqua-102	Duncan Creek	692290	5656272	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-S04	LWE-Wild-100	Waterfowl and other waterbird sensitivity area	Site: L1 to L2	E-691837 N-5657470	E-691868 N-5657112	14N	358m	Manitoba Hydro Consultants
LWE-S05	LWE-Wild-100	Waterfowl and other waterbird sensitivity area	Site: L3 to L4	E-691868 N-5657112	E-691944 N-5656962	14N	168m	Manitoba Hydro Consultants
LWE-S05	LWE-Wild-101	Waterfowl and other waterbird sensitivity area	Site: L5 to L6	E-692204 N-5656444	E-692319 N-5656217	14N	254m	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: Food/Medicinal

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S04	LWE-Ruse-203	Gathering Area	Site: 37 to 38	E-691746 N-5658504	E-691868 N-5657112	14N	1396 m	ATK
LWE-S05	LWE-Ruse-203	Gathering Area	Site: 41 to 44	E-691868 N-5657112	E-692764 N-5655333	14N	1992 m	ATK

Potential Effects:

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

Specific Mitigation:

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

ESS Group: Mammals and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S05	LWE-Wild-201	Moose crossing area	Site: 45 to 46	E-691889 N-5657070	E-692746 N-5655367	14N	1906 m	ATK

Potential Effects:

Increased line of sight and access to area.

Specific Mitigation:

- Low disturbance clearing methods that retain existing shrubs and understory
- Any access trails used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction.

ESS Group: Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S04	LWE-Wild-300	Amphibian sensitivity area	Site: 39 to 40	E-691853 N-5657285	E-691868 N-5657112	14N	173 m	MBCWS
LWE-S05	LWE-Wild-300	Amphibian sensitivity area	Site: 42 to 43	E-691868 N-5657112	E-691913 N-5657023	14N	100 m	MBCWS
LWE-S05	LWE-Wild-300	Amphibian sensitivity area	Site: 47 to 48	E-692264 N-5656326	E-692300 N-5656255	14N	79 m	MBCWS

Potential Effects:

Potential disruption to Northern leopard frog and wood frog breeding habitat

Specific Mitigation:

- Winter clearing & construction only (outside of the April 1-May 31 breeding period)
- Minimize habitat polygon disturbance during tower placement
- Provide 30m vegetated (shrub and understory) buffer around site
- Retention of logs, snags, and other woody debris and slash piles on forest floor following RoW clearing

ESS Group: Wetland /Fens

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S04	LWE- Aqua - 305	Wetland sensitivity area	Site: 49 to 50	E-692596 N-5655667	E-692614 N-5655630	14N	41 m	MBCWS

Potential Effects:

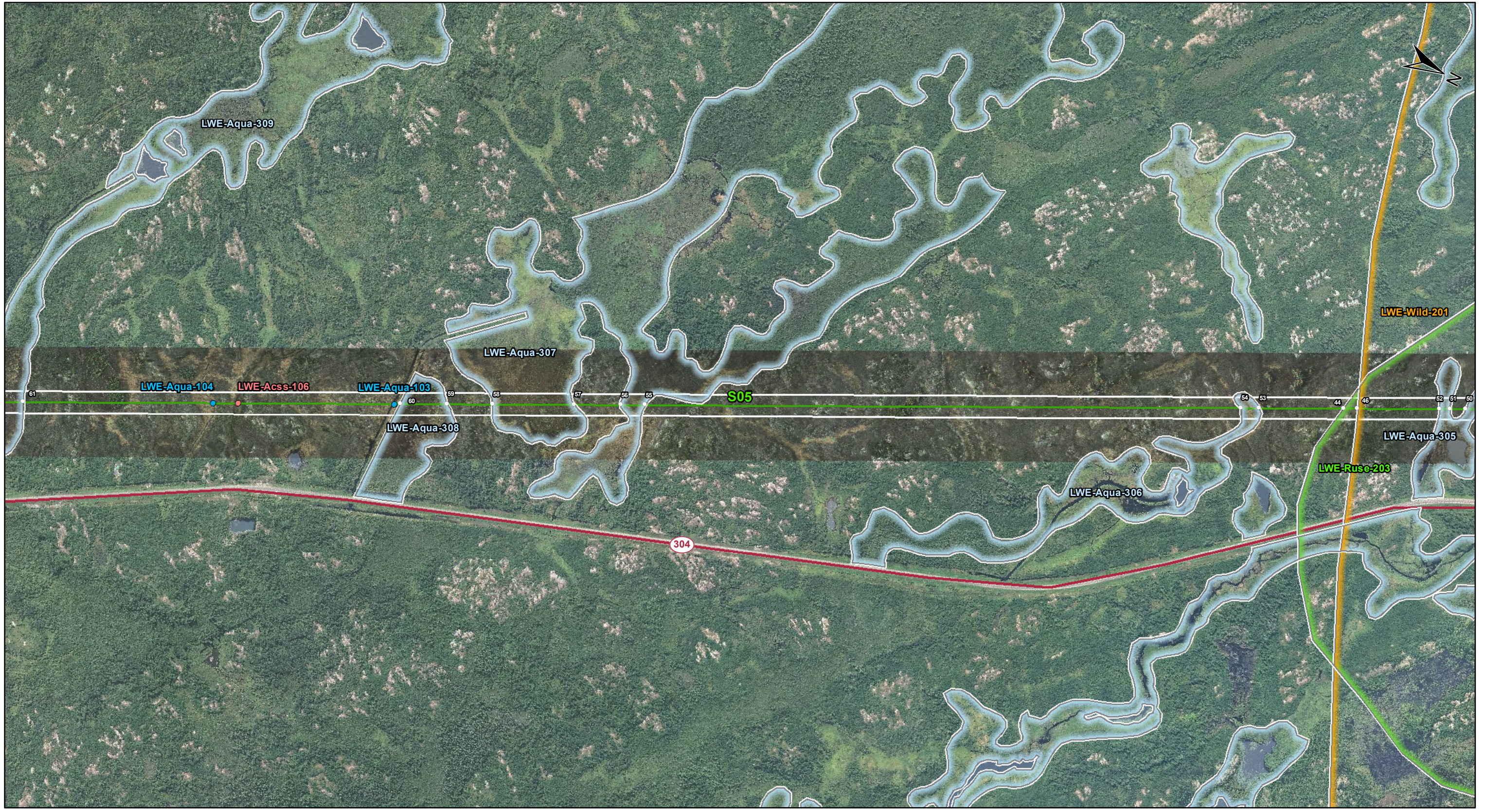
Potential Disruption to sensitive wetland habitat

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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 - Manigotagan Corner Station Preferred Site

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 - Wildlife**
 - Mammals and Habitat

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MAP 5

ESS Group: Intersection

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S05	LWE-Acss-106	Trail crossing	694116	5652647	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-S05	LWE-Aqua-103	Unnamed Drain	693925	5653028	14N	Manitoba Hydro Consultants
LWE-S05	LWE-Aqua-104	Unnamed Drain	694147	5652587	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: Food/Medicinal

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S05	LWE-Ruse-203	Gathering Area	Site: 41 to 44	E-691868 N-5657112	E-692764 N-5655333	14N	1992 m	ATK

Potential Effects:

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

Specific Mitigation:

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

ESS Group: Mammals and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S05	LWE-Wild-201	Moose crossing area	Site: 45 to 46	E-691889 N-5657070	E-692746 N-5655367	14N	1906 m	ATK

Potential Effects:

Increased line of sight and access to area.

Specific Mitigation:

- Low disturbance clearing methods that retain existing shrubs and understory
- Any access trails used to access the ROW for construction that will not be needed for future maintenance will be decommissioned on completion of construction.

ESS Group: Wetland /Fens

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S05	LWE-Aqua-305	Wetland sensitivity area	Site: 49 to 50	E-692596 N-5655667	E-692614 N-5655630	14N	41 m	MBCWS
LWE-S05	LWE- Aqua - 305	Wetland sensitivity area	Site: 51 to 52	E-692634 N-5655591	E-692646 N-5655567	14N	27 m	MBCWS
LWE-S05	LWE- Aqua - 306	Wetland sensitivity area	Site: 53 to 54	E-692867 N-5655127	E-692889 N-5655084	14N	49 m	MBCWS
LWE-S05	LWE- Aqua - 307	Wetland sensitivity area	Site: 55 to 56	E-693618 N-5653636	E-693648 N-5653577	14N	66 m	MBCWS
LWE-S05	LWE- Aqua - 307	Wetland sensitivity area	Site: 57 to 58	E-693704 N-5653464	E-693804 N-5653265	14N	222 m	MBCWS
LWE-S05	LWE- Aqua - 308	Wetland sensitivity area	Site: 59 to 60	E-693860 N-5653155	E-693917 N-5653041	14N	127 m	MBCWS
LWE-S05	LWE- Aqua - 309	Wetland sensitivity area	Site: 61 to 62	E-694378 N-5652126	E-694424 N-5652034	14N	102 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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