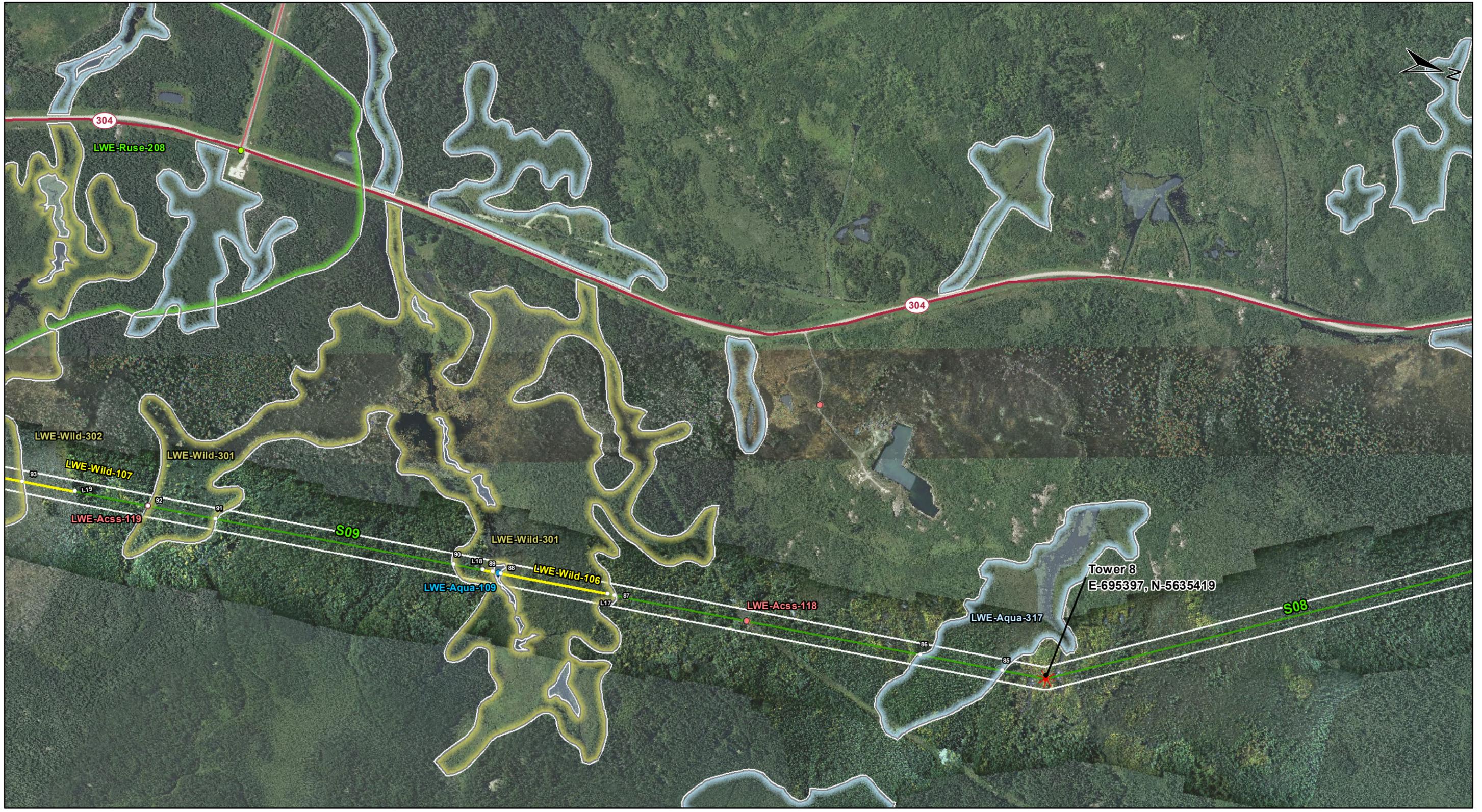


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Coordinate System: UTM Zone 14N NAD83
 Data Source: MB Hydro, ProvMB, NRCAN
 Date Created: July 29, 2014
 Version: Draft

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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
 - Manigotagan Corner Station Preferred Site

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

- Water**
- Wetland
- Wildlife**
- Reptiles/Amphibians

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

DRAFT: FOR DISCUSSION PURPOSES ONLY

MAP 10

ESS Group: Intersection

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S09	LWE-Acss-118	Trail crossing	695456	5634593	14N	Manitoba Hydro Consultants
LWE-S09	LWE-Acss-119	Trail crossing	695576	5632936	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-S09	LWE-Aqua-109	Unnamed tributary of Kapukwaywetewunk Creek	695506	5633905	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-S09	LWE-Wild-106	Waterfowl and other waterbird sensitivity area	Site: L17 to L18	E-695484 N-5634207	E-695508 N-5633862	14N	346m	MBCWS
LWE-S09	LWE-Wild-107	Waterfowl and other waterbird sensitivity area	Site: L19 to L20	E-695590 N-5632735	E-695615 N-5632382	14N	354m	MBCWS

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: Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S09	LWE-Wild-301	Amphibian sensitivity area	Site: 87 to 88	E-695482 N-5634228	E-695505 N-5633912	14N	316 m	MBCWS
LWE-S09	LWE-Wild-301	Amphibian sensitivity area	Site: 89 to 90	E-695506 N-5633889	E-695514 N-5633781	14N	108 m	MBCWS
LWE-S09	LWE-Wild-301	Amphibian sensitivity area	Site: 91 to 92	E-695562 N-5633123	E-695575 N-5632937	14N	186 m	MBCWS
LWE-S09	LWE-Wild-302	Amphibian sensitivity area	Site: 93 to 94	E-695600 N-5632588	E-695611 N-5632435	14N	153 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)
- 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-S09	LWE-Aqua-317	Wetland sensitivity area	Site: 85 to 86	E-695405 N-5635301	E-695421 N-5635074	14N	227 m	MBCWS

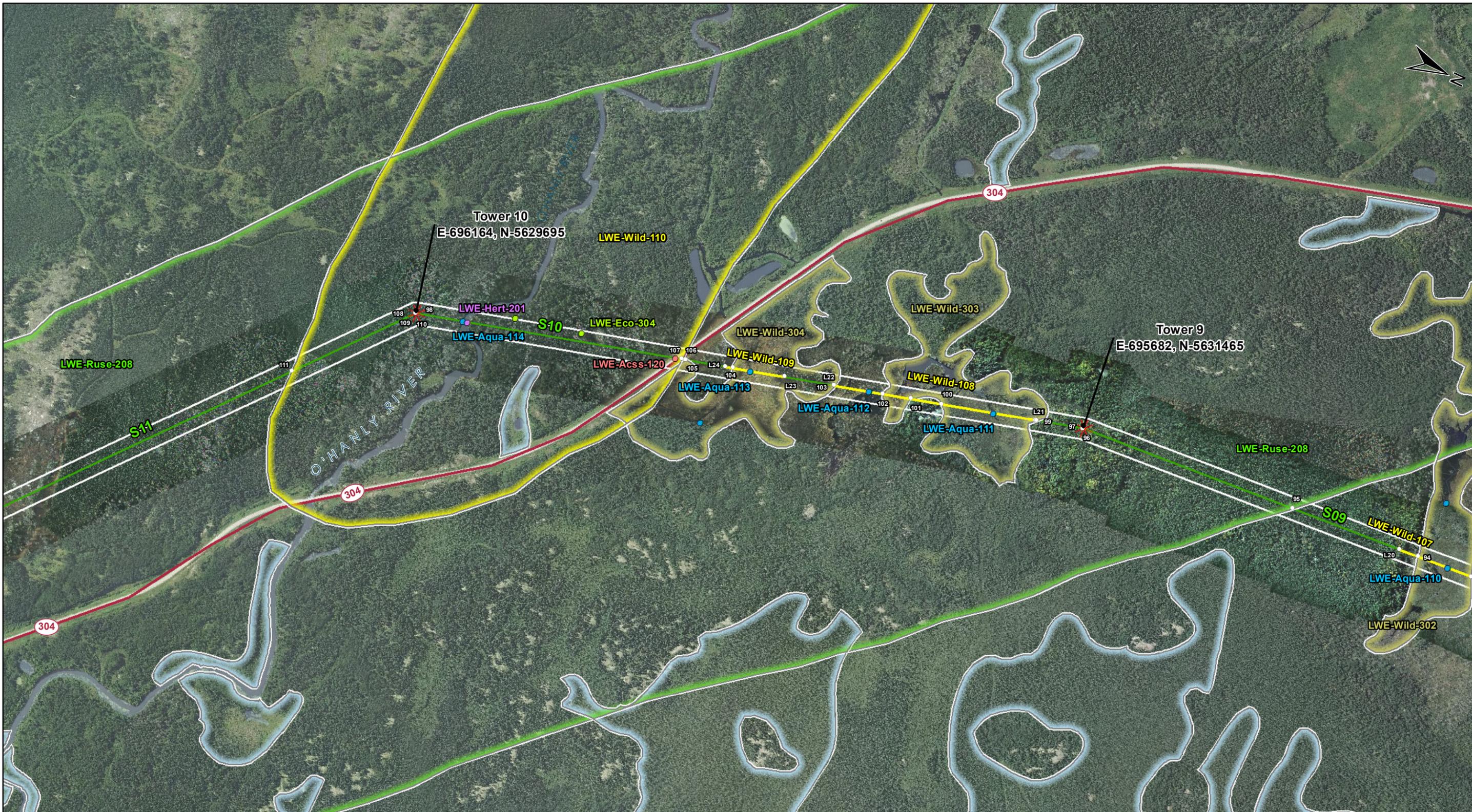
Potential Effects:

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

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

- Resource Use**
- Food/Medicinal Water
 - Wetland
 - Birds and Habitat
 - Reptiles/Amphibians

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

DRAFT: FOR DISCUSSION PURPOSES ONLY

MAP 11

ESS Group: Cultural

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S10	LWE-Hert-201	O'Hanly River	696126	5629832	14N	Manitoba Hydro Consultants

Potential Effects:

Potential disturbance to heritage Resources

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
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation
- 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-S10	LWE-Acss-120	Road crossing	695976	5630385	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-S10	LWE-Eco-304	Plant - Carex intumescens	696023	5630125	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
- Implement additional mitigation from site investigation
- 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-S09	LWE-Aqua-110	Unnamed tributary of O'Hanly River	695606	5632521	14N	Manitoba Hydro Consultants
LWE-S10	LWE-Aqua-111	Creek draining to pond	695746	5631228	14N	Manitoba Hydro Consultants
LWE-S10	LWE-Aqua-112	Beaver flood	695836	5630899	14N	Manitoba Hydro Consultants
LWE-S10	LWE-Aqua-113	Unnamed Drain	695922	5630583	14N	Manitoba Hydro Consultants
LWE-S10	LWE-Aqua-114	O'Hanly River	696130	5629820	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-S10	LWE-Wild-107	Waterfowl and other waterbird sensitivity area	Site: L19 to L20	E-695590 N-5632735	E-695615 N-5632382	14N	354m	Manitoba Hydro Consultants
LWE-S10	LWE-Wild-108	Waterfowl and other waterbird sensitivity area	Site: L21 to L22	E-695716 N-5631339	E-695861 N-5630805	14N	552m	Manitoba Hydro Consultants
LWE-S09	LWE-Wild-109	Waterfowl and other waterbird sensitivity area	Site: L23 to L24	E-695897 N-5630673	E-695940 N-5630516	14N	162m	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-S09	LWE-Ruse-208	Berry Harvest	Site: 95 to 96	E-695637 N-5632072	E-695681 N-5631465	14N	608 m	ATK
LWE-S10	LWE-Ruse-208	Berry Harvest	Site: 97 to 98	E-695681 N-5631465	E-696163 N-5629694	14N	1835 m	ATK
LWE-S11	LWE-Ruse-208	Berry Harvest	Site: 110 to 112	E-696163 N-5629694	E-699801 N-5626644	14N	4747 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: Birds and Habitat

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S10	LWE-Wild-110	Eagle Nesting	Site: 107 to 108	E-695971 N-5630399	E-696163 N-5629694	14N	730m	ATK
LWE-S11	LWE-Wild-110	Eagle Nesting	Site: 109 to 111	E-696163 N-5629694	E-696448 N-5629456	14N	370m	ATK

Potential Effects:

May be a higher risk of wire collision, 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: Reptiles/Amphibians

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S09	LWE-Wild-302	Amphibian sensitivity area	Site: 93 to 94	E-695600 N-5632588	E-695611 N-5632435	14N	153 m	MBCWS
LWE-S10	LWE-Wild-303	Amphibian sensitivity area	Site: 99 to 100	E-695714 N-5631343	E-695783 N-5631090	14N	261 m	MBCWS
LWE-S10	LWE-Wild-303	Amphibian sensitivity area	Site: 101 to 102	E-695806 N-5631008	E-695826 N-5630934	14N	77 m	MBCWS
LWE-S10	LWE-Wild-304	Amphibian sensitivity area	Site: 103 to 104	E-695861 N-5630805	E-695934 N-5630536	14N	278 m	MBCWS
LWE-S10	LWE-Wild-304	Amphibian sensitivity area	Site: 105 to 106	E-695968 N-5630412	E-695968 N-5630410	14N	1 m	MBCWS

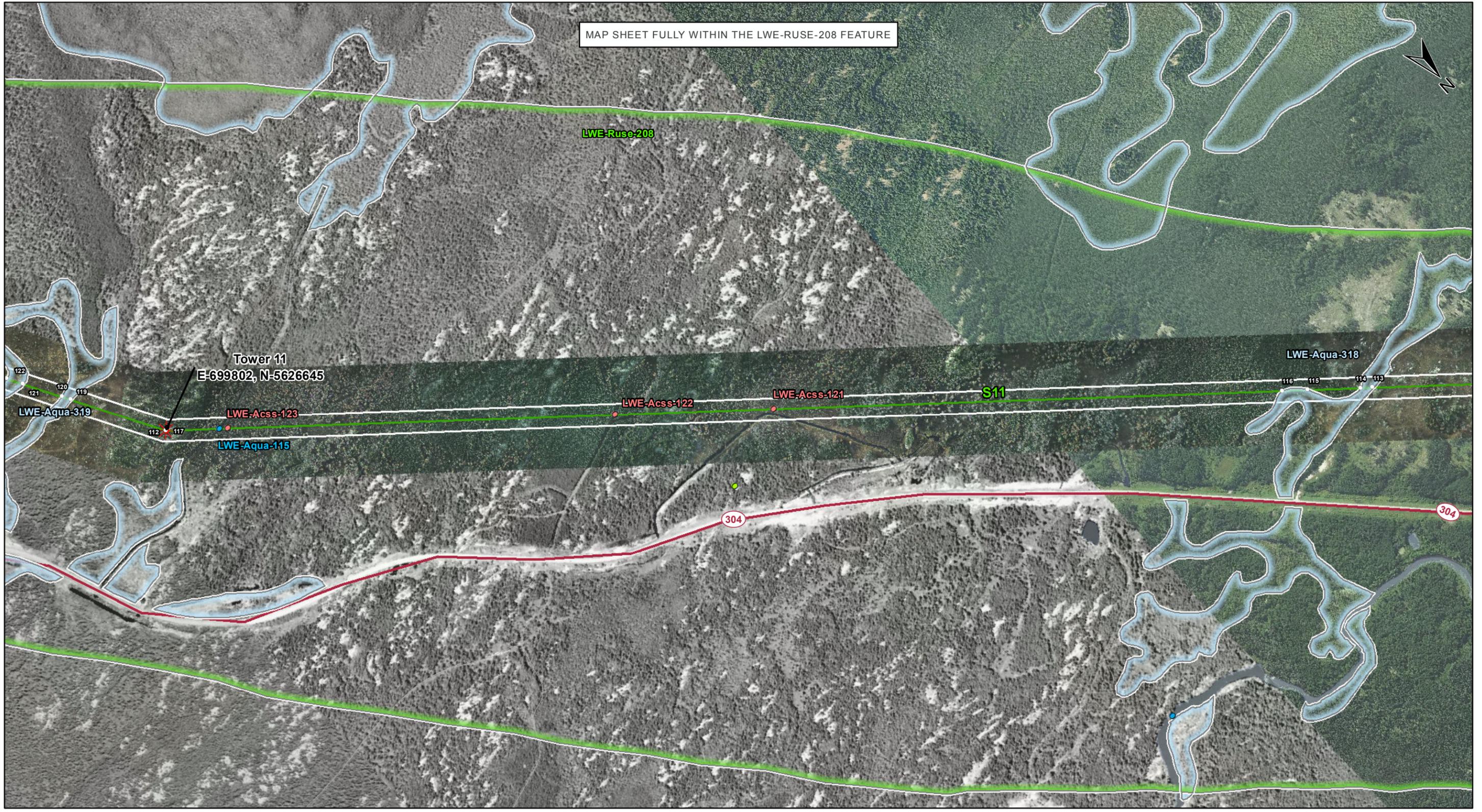
Potential Effects:

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)
- 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

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MAP SHEET FULLY WITHIN THE LWE-RUSE-208 FEATURE



Coordinate System: UTM Zone 14N NAD83
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 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
 - LWE SI Final Preferred Route
 - 60 m Right of Way
 - ⊠ Manigotagan Corner Station Preferred Site

- ESS Features**
- Access**
 - Intersection
 - Ecosystem**
 - Species of Concern
 - Water**
 - Water Crossing
 - Resource Use**
 - Food/Medicinal Water
 - Wetland

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

DRAFT: FOR DISCUSSION PURPOSES ONLY

MAP 12

ESS Group: Intersection

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Source
LWE-S11	LWE-Acss-121	Trail crossing	698534	5627707	14N	Manitoba Hydro Consultants
LWE-S11	LWE-Acss-122	Trail crossing	698866	5627430	14N	Manitoba Hydro Consultants
LWE-S11	LWE-Acss-123	Trail crossing	699675	5626751	14N	Manitoba Hydro Consultants

Potential Effects:

May provide 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-S11	LWE-Aqua-115	Unnamed Drain	699692	5626737	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-S11	LWE-Ruse-208	Berry Harvest	Site: 110 to 112	E-696163 N-5629694	E-699801 N-5626644	14N	4747 m	ATK
LWE-S12	LWE-Ruse-208	Berry Harvest	Site: 117 to 118	E-699801 N-5626644	E-703282 N-5620617	14N	6960 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: Wetland /Fens

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance	Source
LWE-S11	LWE-Aqua-318	Wetland sensitivity area	Site: 113 to 114	E-697281 N-5628757	E-697306 N-5628736	14N	33 m	MBCWS
LWE-S11	LWE-Aqua-318	Wetland sensitivity area	Site: 115 to 116	E-697416 N-5628644	E-697470 N-5628599	14N	70 m	MBCWS
LWE-S12	LWE-Aqua-319	Wetland sensitivity area	Site: 119 to 120	E-699938 N-5626408	E-699951 N-5626386	14N	25 m	MBCWS
LWE-S12	LWE-Aqua-319	Wetland sensitivity area	Site: 121 to 122	E-700006 N-5626290	E-700029 N-5626250	14N	45 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