This page is intentionally left blank.
Potential Effects:

Removal in area of ROW intersect pending species composition confirmation and LiDAR analysis of vegetation height complete or partial removal may be required

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Identify and flag prior to start of work
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No pushing debris into adjacent timber
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners

ESS Group: Water Crossing

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.
Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: September 09, 2015
Version: Draft

± 1:10,000
0 125 250 500
1:10,000

Local Base
- Transmission Line
- Highway
- Major Road
- Local Road
- Railway (Operational)
- Railway (Discontinued)
- First Nation
- Provincial Forest
- Parcel Fabric

Project Infrastructure
- Angle Tower Locations
- MMTP Final Preferred Route
- Right of Way
- Station Expansion
- Converter Station Footprint
- M602F Modification (Salvage)
- M602F Modification (New)

Sensitive Sites
- Point Features
- Line Features
- Area Features

Parcels
- Station Expansion
- Converter Station Footprint
- M602F Modification (Salvage)
- M602F Modification (New)

Points of Access
- Proposed Access Point
- Proposed Access Route

Draft: For Discussion Purposes Only
## ESS Group:
Trail

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Crossing Coordinates</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S05</td>
<td>RecUse-100</td>
<td>C1</td>
<td>Trail PT30</td>
<td>E-613035</td>
<td>N-5528354</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14N</td>
</tr>
</tbody>
</table>

### Potential Effects:
Potential interference with snowmobilers; safety issues

### Specific Mitigation:
- Identify and flag where trail intersects ROW
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail location during construction
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction
### Archaeological ESS Group

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S05</td>
<td>Hert-100</td>
<td>Area of Potential Use</td>
<td>612772</td>
<td>5525618</td>
<td>14N</td>
</tr>
<tr>
<td>MMTP-S05</td>
<td>Hert-101</td>
<td>Area of Potential Use</td>
<td>612887</td>
<td>5524931</td>
<td>14N</td>
</tr>
</tbody>
</table>

**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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Conduct site investigation with Archaeologist 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
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered.

### Forestry ESS Group

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S05</td>
<td>RUse-301</td>
<td>Shelterbelt</td>
<td>612825</td>
<td>5523378</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**

- Removal in area of ROW intersect pending species composition confirmation and LiDAR analysis of vegetation height
- Complete or partial removal may be required

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Identify and flag prior to start of work
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Use existing trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners
- 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.

### Water Crossing ESS Group

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S05</td>
<td>Aqua-101</td>
<td>Third Creek Crossing</td>
<td>612931</td>
<td>5525935</td>
<td>14N</td>
<td>43</td>
<td>3</td>
<td>Low</td>
</tr>
<tr>
<td>MMTP-S05</td>
<td>Aqua-102</td>
<td>Unnamed Creek Crossing</td>
<td>612903</td>
<td>5525289</td>
<td>14N</td>
<td>23</td>
<td>15</td>
<td>Low</td>
</tr>
<tr>
<td>MMTP-S05</td>
<td>Aqua-103</td>
<td>Assiniboine River Clam Beds</td>
<td>612886</td>
<td>5524895</td>
<td>14N</td>
<td>108</td>
<td>99</td>
<td>High</td>
</tr>
<tr>
<td>MMTP-S05</td>
<td>Aqua-104</td>
<td>Unnamed Drain Crossing</td>
<td>612825</td>
<td>5523357</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>Low</td>
</tr>
</tbody>
</table>

**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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Use existing trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No pushing debris into adjacent timber
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.

### Birds and Habitat ESS Group

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S05</td>
<td>Wild-100</td>
<td>Assiniboine River crossing</td>
<td>Site: L1 to L2</td>
<td>E-612904 N-5525233</td>
<td>E-612866 N-5524413</td>
<td>14N</td>
<td>900m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

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

**Specific Mitigation:**

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans
## ESS Group: Species of Concern

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S05</td>
<td>Eco-300</td>
<td>Plant Species of Concern</td>
<td>Site: 1 to 2</td>
<td>E-612891</td>
<td>N-5525018</td>
<td>14N</td>
<td>60 m</td>
</tr>
<tr>
<td>MMTP-S05</td>
<td>Eco-301</td>
<td>Plant Species of Concern</td>
<td>Site: 3 to 4</td>
<td>E-612883</td>
<td>N-5524839</td>
<td>14N</td>
<td>44 m</td>
</tr>
</tbody>
</table>

### Potential Effects:

*Potential loss of species of conservation concern from clearing, construction, maintenance and decommissioning 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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Provide 5m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods that protect shrubs and understory
- Confine vehicle traffic to established trails to the extent possible
This page is intentionally left blank.
Map 5
Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations

Draft For Discussion Purposes Only
This page is intentionally left blank.
This page is intentionally left blank.
**ESS Group:** Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S08</td>
<td>Aqua-105</td>
<td>Unnamed Drain Crossing</td>
<td>618457</td>
<td>5515033</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>Low</td>
</tr>
<tr>
<td>MMTP-S08</td>
<td>Aqua-106</td>
<td>Oak Bluff Drain Crossing</td>
<td>618475</td>
<td>5514203</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>Low</td>
</tr>
</tbody>
</table>

**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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
### 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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
**ESS Group:** Forestry

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S09</td>
<td>RUse-302</td>
<td>Shelterbelt</td>
<td>628295</td>
<td>5512228</td>
<td>14N</td>
</tr>
<tr>
<td>MMTP-S09</td>
<td>RUse-303</td>
<td>Shelterbelt</td>
<td>629012</td>
<td>5512244</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Removal in area of ROW intersect pending species composition confirmation and LiDAR analysis of vegetation height complete or partial removal may be required

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Identify and flag prior to start of work
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No pushing debris into adjacent timber
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners

**ESS Group:** Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S09</td>
<td>Wild-101</td>
<td>Brady Landfill migratory route</td>
<td>Site: L3 to L4</td>
<td>E-628251 N-5512227</td>
<td>E-629811 N-5512261</td>
<td>14N</td>
<td>1559m</td>
</tr>
<tr>
<td>MMTP-S10</td>
<td>Wild-101</td>
<td>Brady Landfill migratory route</td>
<td>Site: L5 to L6</td>
<td>E-629811 N-5512261</td>
<td>E-631445 N-5511891</td>
<td>14N</td>
<td>1675m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Higher risk of wire collision, Risk of wire collision is localized to the right-of-way

**Specific Mitigation:**
- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans
ESS Group:

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S11</td>
<td>LUs-300</td>
<td>Southwood Golf and Country Club</td>
<td>632998</td>
<td>5512039</td>
<td>14N</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential disruption of recreational activities.

Specific Mitigation:
- Conduct construct activities following any applicable noise bylaws
- Notify golf course manager of major noise-generating activities and coordinate around special events
- Where the golf course borders the ROW limit all equipment to the project footprint only, where possible
- Where the golf course borders the ROW No damage to Vegetation on the edge of the Right of Way or pushing debris onto adjacent property

ESS Group: Archaeological

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S11</td>
<td>Hert-103</td>
<td>La Salle River Crossing</td>
<td>633222</td>
<td>5512056</td>
<td>14N</td>
</tr>
<tr>
<td>MMTP-S11</td>
<td>Hert-104</td>
<td>La Salle River Crossing</td>
<td>633225</td>
<td>5512074</td>
<td>14N</td>
</tr>
</tbody>
</table>

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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Conduct site investigation with Archaeologist 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
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered.

ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S11</td>
<td>Aqua-108</td>
<td>La Salle River Crossing</td>
<td>633238</td>
<td>5512065</td>
<td>14N</td>
<td>31</td>
<td>24</td>
<td>High</td>
</tr>
</tbody>
</table>

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S10</td>
<td>Wild-101</td>
<td>Brady Landfill migratory route</td>
<td>Site: L5 to L6</td>
<td>E-629811</td>
<td>E-631445</td>
<td>N-5512261 N-5511891</td>
<td>14N</td>
</tr>
<tr>
<td>MMTP-S11</td>
<td>Wild-102</td>
<td>La Salle River crossing</td>
<td>Site: L7 to L8</td>
<td>E-632873</td>
<td>E-633482</td>
<td>N-5511858 N-5512205</td>
<td>14N</td>
</tr>
<tr>
<td>MMTP-S12</td>
<td>Wild-102</td>
<td>La Salle River crossing</td>
<td>Site: L9 to L10</td>
<td>E-633482</td>
<td>E-633644</td>
<td>N-5512205 N-5512189</td>
<td>14N</td>
</tr>
</tbody>
</table>

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

Specific Mitigation:
- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

MAP NUMBER: 12

Version: Final 1.0
**ESS Group:** Forestry

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S10</td>
<td>RUse-304</td>
<td>Shelterbelt</td>
<td>Site: 5 to 6</td>
<td>E-632359</td>
<td>N-5511684</td>
<td>14N</td>
<td>13m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Removal in area of ROW intersect pending species composition confirmation and LiDAR analysis of vegetation height complete or partial removal may be required

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No pushing debris into adjacent timber
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners
This page is intentionally left blank.
**ESS Group:**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S13</td>
<td>LUse-301</td>
<td>Duff Roblin Provincial Heritage Park</td>
<td>634866</td>
<td>5512713</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential disruption to Provincial Park

**Specific Mitigation:**

- Follow all Provincial Park work permit conditions.
- Observe municipal and local by-laws and protocols including noise and work scheduling
- Minimize noise, dust and other emissions from work activities and maintain clean and tidy of work site
- Provide warning signage for vehicle traffic and public safety

**ESS Group:** Archaeological

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S13</td>
<td>Hert-105</td>
<td>Red River Crossing</td>
<td>634532</td>
<td>5512417</td>
<td>14N</td>
</tr>
<tr>
<td>MMTP-S13</td>
<td>Hert-106</td>
<td>Red River Crossing</td>
<td>634677</td>
<td>5512500</td>
<td>14N</td>
</tr>
</tbody>
</table>

**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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

**ESS Group:** Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S13</td>
<td>Wild-103</td>
<td>Red River crossing</td>
<td>Site: L11 to L13</td>
<td>E-634255</td>
<td>E-634920</td>
<td>14N</td>
<td>766m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

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

**Specific Mitigation:**

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans
Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations

Map 15

Draft For Discussion Purposes Only
### 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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S15</td>
<td>Aqua-111</td>
<td>Seine River Bypass Crossing</td>
<td>640893</td>
<td>5516973</td>
<td>14N</td>
<td>22</td>
<td>18</td>
<td>Moderate</td>
</tr>
<tr>
<td>MMTP-S15</td>
<td>Aqua-112</td>
<td>Old Prairie Grove Drain Crossing</td>
<td>641659</td>
<td>5517489</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>Low</td>
</tr>
</tbody>
</table>
**ESS Group:** Trail

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Crossing Coordinates</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S16</td>
<td>RecUse-101</td>
<td>C2</td>
<td>Trail CT710</td>
<td>E-446986 N-5521009</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential interference with snowmobilers; safety issues

**Specific Mitigation:**

- Identify and flag where trail intersects ROW
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail location during construction
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction
**ESS Group: Water Crossing**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S18</td>
<td>Aqua-113</td>
<td>Prairie Grove Drain Crossing</td>
<td>647519</td>
<td>5523041</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>Low</td>
</tr>
</tbody>
</table>

**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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing

---

**ESS Group: Trail**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Crossing Coordinates</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S17</td>
<td>RecUse-101</td>
<td>C3</td>
<td>Trail CT710</td>
<td>E-647540 N-5521626</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential interference with snowmobilers; safety issues

**Specific Mitigation:**
- Identify and flag where trail intersects ROW
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail location during construction
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction

---

**ESS Group: Birds and Habitat**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S18</td>
<td>Wild-104</td>
<td>Deacon’s Reservoir waterfowl sensitive area</td>
<td>Site: L13 to L14</td>
<td>E-647516 N-5522748</td>
<td>E-647465 N-5524742</td>
<td>14N</td>
<td>1994m</td>
</tr>
<tr>
<td>MMTP-S19</td>
<td>Wild-104</td>
<td>Deacon’s Reservoir waterfowl sensitive area</td>
<td>Site: L15 to L16</td>
<td>E-647465 N-5524742</td>
<td>E-649889 N-5524803</td>
<td>14N</td>
<td>2425m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Higher risk of wire collision, Risk of wire collision is localized to the right-of-way

**Specific Mitigation:**
- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans
ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S19</td>
<td>Wild-104</td>
<td>Deacon’s Reservoir waterfowl sensitive area</td>
<td>Site: L15 to L16</td>
<td>E-647465</td>
<td>E-649889</td>
<td>14N</td>
<td>2425m</td>
</tr>
</tbody>
</table>

Potential Effects:

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

Specific Mitigation:

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans
**ESS Group:** Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S21</td>
<td>Aqua-114</td>
<td>Cooks Creek Crossing</td>
<td>662609</td>
<td>5525264</td>
<td>14N</td>
<td>30</td>
<td>6</td>
<td>High</td>
</tr>
</tbody>
</table>

**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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

**ESS Group:** Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S22</td>
<td>Aqua-200</td>
<td>Flowing Aquifer</td>
<td>Site: 7 to 8</td>
<td>E-663366 E-669745</td>
<td>N-5525330 N-5525486</td>
<td>14N</td>
<td>6380m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

- Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

**Specific Mitigation:**

- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.
Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: September 10, 2015
Version: Draft

0 125 250 500
1:10,000

Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations

Map 22

Draft For Discussion Purposes Only
ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S22</td>
<td>Aqua-115</td>
<td>Edie Creek Crossing</td>
<td>667940</td>
<td>5525448</td>
<td>14N</td>
<td>22</td>
<td>8</td>
<td>Low</td>
</tr>
</tbody>
</table>

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
• 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.

ESS Group: Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S22</td>
<td>Aqua-200</td>
<td>Flowing Aquifer</td>
<td>Site: 7 to 8</td>
<td>E-663366</td>
<td>E-669745</td>
<td>14N</td>
<td>6380 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

Specific Mitigation:
• 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.
• Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.
**Potential Effects:**
Removal in area of ROW intersect pending species composition confirmation and LiDAR analysis of vegetation height complete or partial removal may be required

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions.
- Identify and flag prior to start of work.
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up.
- Use existing access trails, roads or cut lines whenever possible as access routes.
- Limit all equipment to project footprint only, where possible.
- No pushing debris into adjacent timber.
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners.

**Potential Effects:**
Potential interference with snowmobilers; safety issues

**Specific Mitigation:**
- Identify and flag where trail intersects ROW.
- Avoid surface damage to and obstruction of access route.
- Post warning markers and signs at snowmobile trail location during construction.
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction.

**Potential Effects:**
Potential loss of habitat for species of conservation concern from clearing, construction, maintenance and decommissioning activities.

**Specific Mitigation:**
- This area of potential golden-winged warbler habitat will undergo further analysis prior to construction.
- The use of LiDAR and ground truthing to assess vegetation composition and structure to determine candidate areas where selective clearing of trees while maintaining shrubs and understory will occur.
- Centerline trail and tower footprints will require complete clearing to facilitate construction.

**Potential Effects:**
Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

**Specific Mitigation:**
- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.
**ESS Group:** Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S22</td>
<td>Aqua-300</td>
<td>Wetland</td>
<td>Site: 9 to 10</td>
<td>E-668884</td>
<td>N-5525465</td>
<td>E-669032</td>
<td>N-5525469</td>
</tr>
<tr>
<td>MMTP-S23</td>
<td>Aqua-301</td>
<td>Wetland</td>
<td>Site: 13 to 14</td>
<td>E-671526</td>
<td>N-5525412</td>
<td>E-671623</td>
<td>N-5525408</td>
</tr>
<tr>
<td>MMTP-S24</td>
<td>Aqua-302</td>
<td>Wetland</td>
<td>Site: 17 to 18</td>
<td>E-671696</td>
<td>N-5525055</td>
<td>E-671702</td>
<td>N-5524719</td>
</tr>
<tr>
<td>MMTP-S24</td>
<td>Aqua-302</td>
<td>Wetland</td>
<td>Site: 21 to 22</td>
<td>E-671703</td>
<td>N-5524652</td>
<td>E-671710</td>
<td>N-5524308</td>
</tr>
</tbody>
</table>

**Potential Effects:**

*Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S24</td>
<td>E-671701</td>
<td>Aquatic-105</td>
<td>Site: 19 to 20</td>
<td>E-671720</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>1013 m</td>
</tr>
<tr>
<td>MMTP-S24</td>
<td>E-671732</td>
<td>Aquatic-106</td>
<td>Site: 29 to 30</td>
<td>E-671733</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>43 m</td>
</tr>
<tr>
<td>MMTP-S25</td>
<td>E-671733</td>
<td>Aquatic-106</td>
<td>Site: 31 to 32</td>
<td>E-671733</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>530 m</td>
</tr>
<tr>
<td>MMTP-S26</td>
<td>E-672245</td>
<td>Aquatic-106</td>
<td>Site: 38 to 42</td>
<td>E-672245</td>
<td>E-672309</td>
<td>N-5520779</td>
<td>2171 m</td>
</tr>
</tbody>
</table>

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S24</td>
<td>E-671701</td>
<td>Aquatic-105</td>
<td>Site: 19 to 20</td>
<td>E-671720</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>1013 m</td>
</tr>
<tr>
<td>MMTP-S24</td>
<td>E-671732</td>
<td>Aquatic-106</td>
<td>Site: 29 to 30</td>
<td>E-671733</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>43 m</td>
</tr>
<tr>
<td>MMTP-S25</td>
<td>E-671733</td>
<td>Aquatic-106</td>
<td>Site: 31 to 32</td>
<td>E-671733</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>530 m</td>
</tr>
<tr>
<td>MMTP-S26</td>
<td>E-672245</td>
<td>Aquatic-106</td>
<td>Site: 38 to 42</td>
<td>E-672245</td>
<td>E-672309</td>
<td>N-5520779</td>
<td>2171 m</td>
</tr>
</tbody>
</table>

Potential Effects:
- Potential loss of habitat for species of conservation concern from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:
- This area of potential golden-winged warbler habitat will undergo further analysis prior to construction
- The use of LIDAR and ground truthing to assess vegetation composition and structure to determine candidate areas where selective clearing of trees while maintaining shrubs and understory will occur
- Centerline trail and tower footprints will require complete clearing to facilitate construction

ESS Group: Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S24</td>
<td>E-671701</td>
<td>Aquatic-105</td>
<td>Site: 19 to 20</td>
<td>E-671720</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>1013 m</td>
</tr>
<tr>
<td>MMTP-S24</td>
<td>E-671732</td>
<td>Aquatic-106</td>
<td>Site: 29 to 30</td>
<td>E-671733</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>43 m</td>
</tr>
<tr>
<td>MMTP-S25</td>
<td>E-671733</td>
<td>Aquatic-106</td>
<td>Site: 31 to 32</td>
<td>E-671733</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>530 m</td>
</tr>
<tr>
<td>MMTP-S26</td>
<td>E-672245</td>
<td>Aquatic-106</td>
<td>Site: 38 to 42</td>
<td>E-672245</td>
<td>E-672309</td>
<td>N-5520779</td>
<td>2171 m</td>
</tr>
</tbody>
</table>

Potential Effects:
- Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

Specific Mitigation:
- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S24</td>
<td>E-671701</td>
<td>Aquatic-105</td>
<td>Site: 19 to 20</td>
<td>E-671720</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>1013 m</td>
</tr>
<tr>
<td>MMTP-S24</td>
<td>E-671732</td>
<td>Aquatic-106</td>
<td>Site: 29 to 30</td>
<td>E-671733</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>43 m</td>
</tr>
<tr>
<td>MMTP-S25</td>
<td>E-671733</td>
<td>Aquatic-106</td>
<td>Site: 31 to 32</td>
<td>E-671733</td>
<td>E-672245</td>
<td>N-5523088</td>
<td>530 m</td>
</tr>
<tr>
<td>MMTP-S26</td>
<td>E-672245</td>
<td>Aquatic-106</td>
<td>Site: 38 to 42</td>
<td>E-672245</td>
<td>E-672309</td>
<td>N-5520779</td>
<td>2171 m</td>
</tr>
</tbody>
</table>

Potential Effects:
- Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
### ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S27</td>
<td>Aqua-117</td>
<td>Cooks Creek Crossing</td>
<td>672786</td>
<td>5518328</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>High</td>
</tr>
</tbody>
</table>

**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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

### ESS Group: Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S26</td>
<td>Aqua-201</td>
<td>Flowing Aquifer</td>
<td>Site: 43 to 44</td>
<td>E-672325 N-5520215</td>
<td>E-672345 N-5519451</td>
<td>14N</td>
<td>764 m</td>
</tr>
<tr>
<td>MMTP-S27</td>
<td>Aqua-201</td>
<td>Flowing Aquifer</td>
<td>Site: 51 to 52</td>
<td>E-672348 N-5519451</td>
<td>E-672623 N-5518730</td>
<td>14N</td>
<td>771 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

**Specific Mitigation:**
- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

### ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S27</td>
<td>Wild-107</td>
<td>Sensitive Avian Habitat</td>
<td>Site: 57 to 56</td>
<td>E-672669 N-5518609</td>
<td>E-673986 N-5515157</td>
<td>14N</td>
<td>3694 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Potential loss of habitat for species of conservation concern from clearing, construction, maintenance and decommissioning activities.

**Specific Mitigation:**
- This area of potential golden-winged warbler habitat will undergo further analysis prior to construction
- The use of LIDAR and ground truthing to assess vegetation composition and structure to determine candidate areas where selective clearing of trees while maintaining shrubs and understory will occur
- Centerline trail and tower footprints will require complete clearing to facilitate construction

### ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S26</td>
<td>Aqua-305</td>
<td>Wetland</td>
<td>Site: 45 to 46</td>
<td>E-672335 N-5519904</td>
<td>E-672336 N-5519869</td>
<td>14N</td>
<td>34 m</td>
</tr>
<tr>
<td>MMTP-S26</td>
<td>Aqua-306</td>
<td>Wetland</td>
<td>Site: 47 to 48</td>
<td>E-672338 N-5519783</td>
<td>E-672340 N-5519732</td>
<td>14N</td>
<td>50 m</td>
</tr>
<tr>
<td>MMTP-S26</td>
<td>Aqua-307</td>
<td>Wetland</td>
<td>Site: 49 to 50</td>
<td>E-672341 N-5519695</td>
<td>E-672346 N-5519594</td>
<td>14N</td>
<td>100 m</td>
</tr>
<tr>
<td>MMTP-S27</td>
<td>Aqua-308</td>
<td>Wetland</td>
<td>Site: 53 to 54</td>
<td>E-672387 N-5519349</td>
<td>E-672397 N-5519321</td>
<td>14N</td>
<td>30 m</td>
</tr>
<tr>
<td>MMTP-S27</td>
<td>Aqua-308</td>
<td>Wetland</td>
<td>Site: 55 to 56</td>
<td>E-672431 N-5519232</td>
<td>E-672614 N-5518763</td>
<td>14N</td>
<td>512 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S27</td>
<td>Wild-107</td>
<td>Sensitive Avian Habitat</td>
<td>Site: 57 to 58</td>
<td>E-672669 N-5518609</td>
<td>E-673986 N-5515157</td>
<td>14N</td>
<td>3694 m</td>
</tr>
<tr>
<td>MMTP-S28</td>
<td>Wild-107</td>
<td>Sensitive Avian Habitat</td>
<td>Site: 61 to 62</td>
<td>E-673986 N-5515157</td>
<td>E-675260 N-5513955</td>
<td>14N</td>
<td>1751 m</td>
</tr>
<tr>
<td>MMTP-S29</td>
<td>Wild-107</td>
<td>Sensitive Avian Habitat</td>
<td>Site: 65 to 66</td>
<td>E-675260 N-5513955</td>
<td>E-675858 N-5513172</td>
<td>14N</td>
<td>984 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential loss of habitat for species of conservation concern from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:
- This area of potential golden-winged warbler habitat will undergo further analysis prior to construction
- The use of LIDAR and ground truthing to assess vegetation composition and structure to determine candidate areas where selective clearing of trees while maintaining shrubs and understory will occur
- Centerline trail and tower footprints will require complete clearing to facilitate construction

ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S27</td>
<td>Aqua-309</td>
<td>Wetland</td>
<td>Site: 59 to 60</td>
<td>E-673664 N-5516002</td>
<td>E-673682 N-5515955</td>
<td>14N</td>
<td>50 m</td>
</tr>
<tr>
<td>MMTP-S28</td>
<td>Aqua-310</td>
<td>Wetland</td>
<td>Site: 63 to 64</td>
<td>E-674641 N-5514540</td>
<td>E-674764 N-5514423</td>
<td>14N</td>
<td>170 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
ESS Group: Water Crossing

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
• 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.

ESS Group: Birds and Habitat

Potential Effects:
Potential loss of habitat for species of conservation concern from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:
• This area of potential golden-winged warbler habitat will undergo further analysis prior to construction
• The use of Lidar and ground truthing to assess vegetation composition and structure to determine candidate areas where selective clearing of trees while maintaining shrubs and understory will occur
• Centerline trail and tower footprints will require complete clearing to facilitate construction

ESS Group: Wetland

Potential Effects:
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:
• Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
• 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
### ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S29</td>
<td>Wild-110</td>
<td>Sensitive Avian Habitat</td>
<td>Site: 75 to 76</td>
<td>E-679142 N-5508870</td>
<td>E-679142 N-5508870</td>
<td>14N</td>
<td>889 m</td>
</tr>
<tr>
<td>MMTP-S30</td>
<td>Wild-110</td>
<td>Sensitive Avian Habitat</td>
<td>Site: 85 to 86</td>
<td>E-679142 N-5508870</td>
<td>E-679130 N-5507941</td>
<td>14N</td>
<td>929 m</td>
</tr>
<tr>
<td>MMTP-S30</td>
<td>Wild-111</td>
<td>Sensitive Avian Habitat</td>
<td>Site: 91 to 92</td>
<td>E-679124 N-5507447</td>
<td>E-679110 N-5506302</td>
<td>14N</td>
<td>1144 m</td>
</tr>
<tr>
<td>MMTP-S31</td>
<td>Wild-111</td>
<td>Sensitive Avian Habitat</td>
<td>Site: 101 to 102</td>
<td>E-679110 N-5506302</td>
<td>E-679344 N-5505620</td>
<td>14N</td>
<td>721 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential loss of habitat for species of conservation concern from clearing, construction, maintenance and decommissioning activities.

**Specific Mitigation:**
- This area of potential golden-winged warbler habitat will undergo further analysis prior to construction
- The use of LIDAR and ground truthing to assess vegetation composition and structure to determine candidate areas where selective clearing of trees while maintaining shrubs and understory will occur
- Centerline trail and tower footprints will require complete clearing to facilitate construction

### ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S29</td>
<td>Aqua-312</td>
<td>Wetland</td>
<td>Site: 73 to 74</td>
<td>E-677776 N-5510660</td>
<td>E-678614 N-5509577</td>
<td>14N</td>
<td>1380 m</td>
</tr>
<tr>
<td>MMTP-S29</td>
<td>Aqua-313</td>
<td>Wetland</td>
<td>Site: 77 to 78</td>
<td>E-678789 N-5509333</td>
<td>E-678800 N-5509317</td>
<td>14N</td>
<td>19 m</td>
</tr>
<tr>
<td>MMTP-S29</td>
<td>Aqua-314</td>
<td>Wetland</td>
<td>Site: 79 to 80</td>
<td>E-678872 N-550223</td>
<td>E-678863 N-5509209</td>
<td>14N</td>
<td>16 m</td>
</tr>
<tr>
<td>MMTP-S29</td>
<td>Aqua-315</td>
<td>Wetland</td>
<td>Site: 81 to 82</td>
<td>E-678965 N-5509101</td>
<td>E-678999 N-5509057</td>
<td>14N</td>
<td>56 m</td>
</tr>
<tr>
<td>MMTP-S29</td>
<td>Aqua-316</td>
<td>Wetland</td>
<td>Site: 83 to 84</td>
<td>E-679025 N-5509023</td>
<td>E-679062 N-5508975</td>
<td>14N</td>
<td>61 m</td>
</tr>
<tr>
<td>MMTP-S30</td>
<td>Aqua-317</td>
<td>Wetland</td>
<td>Site: 87 to 88</td>
<td>E-679141 N-5508792</td>
<td>E-679140 N-5508748</td>
<td>14N</td>
<td>44 m</td>
</tr>
<tr>
<td>MMTP-S30</td>
<td>Aqua-318</td>
<td>Wetland</td>
<td>Site: 89 to 90</td>
<td>E-679129 N-5507853</td>
<td>E-679123 N-5507379</td>
<td>14N</td>
<td>473 m</td>
</tr>
<tr>
<td>MMTP-S30</td>
<td>Aqua-319</td>
<td>Wetland</td>
<td>Site: 93 to 94</td>
<td>E-679122 N-5507296</td>
<td>E-679122 N-5507264</td>
<td>14N</td>
<td>32 m</td>
</tr>
<tr>
<td>MMTP-S30</td>
<td>Aqua-320</td>
<td>Wetland</td>
<td>Site: 95 to 96</td>
<td>E-679115 N-5506654</td>
<td>E-679114 N-5506644</td>
<td>14N</td>
<td>10 m</td>
</tr>
<tr>
<td>MMTP-S30</td>
<td>Aqua-321</td>
<td>Wetland</td>
<td>Site: 97 to 98</td>
<td>E-679134 N-5506595</td>
<td>E-679114 N-5506595</td>
<td>14N</td>
<td>25 m</td>
</tr>
<tr>
<td>MMTP-S30</td>
<td>Aqua-322</td>
<td>Wetland</td>
<td>Site: 99 to 100</td>
<td>E-679133 N-5506518</td>
<td>E-679111 N-5506342</td>
<td>14N</td>
<td>175 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
### ESS Group: Trail

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Crossing Coordinates</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S32</td>
<td>RecUse-103</td>
<td>C5</td>
<td>Trail PT21</td>
<td>E-679842 N-5504205</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Potential interference with snowmobilers; safety issues

**Specific Mitigation:**
- Identify and flag where trail intersects ROW
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail location during construction
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction

### ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S31</td>
<td>Wild-111</td>
<td>Site: 101 to 102</td>
<td>Sensitive Avian Habitat</td>
<td>E-679110 N-5506302</td>
<td>E-679344 N-5505620</td>
<td>14N</td>
<td>721 m</td>
</tr>
<tr>
<td>MMTP-S32</td>
<td>Wild-112</td>
<td>Site: 109 to 110</td>
<td>Sensitive Avian Habitat</td>
<td>E-679909 N-5504116</td>
<td>E-680595 N-5503200</td>
<td>14N</td>
<td>1144 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Potential loss of habitat for species of conservation concern from clearing, construction, maintenance and decommissioning activities.

**Specific Mitigation:**
- This area of potential golden-winged warbler habitat will undergo further analysis prior to construction
- The use of LIDAR and ground truthing to assess vegetation composition and structure to determine candidate areas where selective clearing of trees while maintaining shrubs and understory will occur
- Centerline trail and tower footprints will require complete clearing to facilitate construction

### ESS Group: Species of Concern

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S31</td>
<td>Eco-302</td>
<td>Site: 105 to 106</td>
<td>Plant Species of Concern</td>
<td>E-679669 N-5504670</td>
<td>E-679816 N-5504239</td>
<td>14N</td>
<td>455 m</td>
</tr>
<tr>
<td>MMTP-S32</td>
<td>Eco-302</td>
<td>Site: 107 to 108</td>
<td>Plant Species of Concern</td>
<td>E-679816 N-5504239</td>
<td>E-683233 N-5499680</td>
<td>14N</td>
<td>5696 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Potential loss of 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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods that protect shrubs and understory
- 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: Recreation

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S31</td>
<td>LUse-302</td>
<td>Site: 103 to 104</td>
<td>Cottonwood Golf Course</td>
<td>E-679284 N-5505796</td>
<td>E-679339 N-5505634</td>
<td>14N</td>
<td>170 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Potential disruption to recreational use activities

**Specific Mitigation:**
- Conduct construct activities following any applicable noise bylaws
- Notify Golfcourse manager of major noise-generating activities and coordinate around special events
- Where the Golfcourse borders the ROW limit all equipment to the project footprint only, where possible
- Where the Golfcourse borders the ROW No damage to Vegetation on the edge of the Right of Way or pushing debris onto adjacent property
ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S32</td>
<td>Aqua-119</td>
<td>Unnamed Creek Crossing</td>
<td>682214</td>
<td>5501015</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>Not Fish Habitat</td>
</tr>
</tbody>
</table>

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S32</td>
<td>Wild-115</td>
<td>Waterfowl sensitivity area near reservoir</td>
<td>Site: L17 to L18</td>
<td>E-682272</td>
<td>N-5500963</td>
<td>14N</td>
<td>1649m</td>
</tr>
<tr>
<td>MMTP-S33</td>
<td>Wild-115</td>
<td>Waterfowl sensitivity area near reservoir</td>
<td>Site: L19 to L20</td>
<td>E-683261</td>
<td>N-5499642</td>
<td>14N</td>
<td>920m</td>
</tr>
</tbody>
</table>

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

Specific Mitigation:
- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Species of Concern

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S32</td>
<td>Eco-302</td>
<td>Plant Species of Concern</td>
<td>Site: 107 to 108</td>
<td>E-679816</td>
<td>N-5504239</td>
<td>14N</td>
<td>5696m</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential loss of 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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods that protect shrubs and understory
- 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: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S32</td>
<td>Aqua-323</td>
<td>Wetland</td>
<td>Site: 113 to 114</td>
<td>E-681539 N-5501940</td>
<td>E-681557 N-5501916</td>
<td>14N</td>
<td>30 m</td>
</tr>
<tr>
<td>MMTP-S32</td>
<td>Aqua-324</td>
<td>Wetland</td>
<td>Site: 115 to 116</td>
<td>E-682162 N-5501109</td>
<td>E-682839 N-5500207</td>
<td>14N</td>
<td>1127 m</td>
</tr>
</tbody>
</table>

### Potential Effects:

- Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

### Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
This page is intentionally left blank.
ESS Group: Conservation

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S33</td>
<td>LUse-100</td>
<td>Balsam Willows Proposed Ecological Reserve</td>
<td>682170</td>
<td>5495191</td>
<td>14N</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential disruption to Ecological Reserve

Specific Mitigation:
- Absolutely no activities are to extend into the boundaries of this ecological reserve

ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S33</td>
<td>Wild-114</td>
<td>Landbird sensitivity area</td>
<td>Site: L19 to L20</td>
<td>E-683261 N-5499642</td>
<td>E-683051 N-5498746</td>
<td>14N</td>
<td>920m</td>
</tr>
</tbody>
</table>

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.
ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S33</td>
<td>Aqua-325</td>
<td>Wetland</td>
<td>Site: 121 to 122</td>
<td>E-683103N-5498969</td>
<td>E-683090N-5498911</td>
<td>14N</td>
<td>59 m</td>
</tr>
<tr>
<td>MMTP-S33</td>
<td>Aqua-325</td>
<td>Wetland</td>
<td>Site: 123 to 124</td>
<td>E-683080N-5498867</td>
<td>E-683041N-5498702</td>
<td>14N</td>
<td>169 m</td>
</tr>
<tr>
<td>MMTP-S33</td>
<td>Aqua-325</td>
<td>Wetland</td>
<td>Site: 125 to 126</td>
<td>E-683015N-5498589</td>
<td>E-682845N-5497866</td>
<td>14N</td>
<td>742 m</td>
</tr>
<tr>
<td>MMTP-S33</td>
<td>Aqua-326</td>
<td>Wetland</td>
<td>Site: 129 to 130</td>
<td>E-682794N-5497649</td>
<td>E-682706N-5497272</td>
<td>14N</td>
<td>387 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
This page is intentionally left blank.
ESS Group: Forestry

Potential Effects:
Removal in area of ROW intersect pending species composition confirmation and LiDAR analysis of vegetation height complete or partial removal may be required.

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions.
- Identify and flag prior to start of work.
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up.
- Use existing access trails, roads or cut lines whenever possible as access routes.
- Limit all equipment to project footprint only, where possible.
- No pushing debris into adjacent timber.
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners.

ESS Group: Water Crossing

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions.
- 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.

ESS Group: Birds and Habitat

Potential Effects:
Potential loss of habitat for species of conservation concern from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:
- This area of potential golden-winged warbler habitat will undergo further analysis prior to construction.
- The use of LiDAR and ground truthing to assess vegetation composition and structure to determine candidate areas where selective clearing of trees while maintaining shrubs and understory will occur.
- Centerline trail and tower footprints will require complete clearing to facilitate construction.

ESS Group: Wetland

Potential Effects:
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat.

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions.
- 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.
### ESS Group: Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S34</td>
<td>Aqua-202</td>
<td>Flowing Aquifer</td>
<td>Site: 135 to 136</td>
<td>E-681887 N-5491994</td>
<td>E-682009 N-5488650</td>
<td>14N</td>
<td>3346 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

**Specific Mitigation:**

- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.
This page is intentionally left blank.
Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations
ESS Group: Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone
--- | --- | --- | --- | --- | ---
MMTP-S36 | LUse-303 | La Verendrye Golf Course | 681823 | 5488383 | 14N

Potential Effects:
Potential disruption to golf course

Specific Mitigation:
- Conduct construct activities following any applicable noise bylaws
- Notify golf course manager of major noise-generating activities and coordinate around special events
- Where the golf course borders the ROW limit all equipment to the project footprint only, where possible
- Where the golf course borders the ROW No damage to Vegetation on the edge of the Right of Way or pushing debris onto adjacent property

ESS Group: Archaeological
Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone
--- | --- | --- | --- | --- | ---
MMTP-S35 | Hert-107 | Seine River Crossing | 681939 | 5488555 | 14N
MMTP-S35 | Hert-108 | Seine River Crossing | 681876 | 5488478 | 14N

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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Conduct site investigation with Archaeologist 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
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered.

ESS Group: Forestry
Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | UTM Zone
--- | --- | --- | --- | --- | ---
MMTP-S34 | RUse-308 | Shelterbell | 681919 | 5491057 | 14N
MMTP-S34 | RUse-309 | Shelterbell | 681947 | 5490246 | 14N

Potential Effects:
Removal in area of ROW intersect pending species composition confirmation and LiDAR analysis of vegetation height complete or partial removal may be required

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Identify and flag prior to start of work
- If burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No pushing debris into adjacent timber
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners

ESS Group: Water Crossing
Sec-Seg ID | ESS ID | ESS Name | Easting | Northing | Channel Width | Wet Width | Habitat Sensitivity
--- | --- | --- | --- | --- | --- | --- | ---
MMTP-S36 | Aqua-123 | Seine River Crossing | 681924 | 5488540 | 18 | 8 | High
MMTP-S36 | Aqua-124 | Unnamed Creek Crossing | 681859 | 5488119 | 8 | 0.3 | Low

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.
### ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S34</td>
<td>Wild-118</td>
<td>Seine River crossing</td>
<td>Site: L21 to L22</td>
<td>E-682007 N-5488717</td>
<td>E-682009 N-5488650</td>
<td>14N</td>
<td>66m</td>
</tr>
<tr>
<td>MMTP-S35</td>
<td>Wild-118</td>
<td>Seine River crossing</td>
<td>Site: L23 to L24</td>
<td>E-682009 N-5488650</td>
<td>E-681846 N-5488438</td>
<td>14N</td>
<td>267m</td>
</tr>
<tr>
<td>MMTP-S36</td>
<td>Wild-118</td>
<td>Seine River crossing</td>
<td>Site: L25 to L26</td>
<td>E-681846 N-5488438</td>
<td>E-681848 N-5488371</td>
<td>14N</td>
<td>67m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

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

**Specific Mitigation:**

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires.
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans.

### ESS Group: Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S34</td>
<td>Aqua-202</td>
<td>Flowing Aquifer</td>
<td>Site: 135 to 136</td>
<td>E-681887 N-5491994</td>
<td>E-682009 N-5488650</td>
<td>14N</td>
<td>3346m</td>
</tr>
<tr>
<td>MMTP-S35</td>
<td>Aqua-202</td>
<td>Flowing Aquifer</td>
<td>Site: 137 to 138</td>
<td>E-682009 N-5488650</td>
<td>E-681846 N-5488438</td>
<td>14N</td>
<td>267m</td>
</tr>
<tr>
<td>MMTP-S36</td>
<td>Aqua-202</td>
<td>Flowing Aquifer</td>
<td>Site: 139 to 140</td>
<td>E-681846 N-5488438</td>
<td>E-681931 N-5486323</td>
<td>14N</td>
<td>2116m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

**Specific Mitigation:**

- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.
This page is intentionally left blank.
# ESS Group: Trail

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location</th>
<th>ESS Name</th>
<th>Crossing Coordinates</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S36</td>
<td>RecUse-104</td>
<td>C6 Trail PT29</td>
<td>E-681917 N-5486686</td>
<td>14N</td>
<td></td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential interference with snowmobilers; safety issues

**Specific Mitigation:**
- Identify and flag where trail intersects ROW
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail location during construction
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction

# ESS Group: Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S36</td>
<td>Aqua-202</td>
<td>Flowing Aquifer</td>
<td>Site: 139 to 140</td>
<td>E-681846 N-5488438</td>
<td>E-681931 N-5486323</td>
<td>14N</td>
<td>2116 m</td>
</tr>
<tr>
<td>MMTP-S37</td>
<td>Aqua-202</td>
<td>Flowing Aquifer</td>
<td>Site: 141 to 142</td>
<td>E-681931 N-5486323</td>
<td>E-682626 N-5485631</td>
<td>14N</td>
<td>980 m</td>
</tr>
<tr>
<td>MMTP-S38</td>
<td>Aqua-202</td>
<td>Flowing Aquifer</td>
<td>Site: 143 to 144</td>
<td>E-682626 N-5485631</td>
<td>E-682776 N-5483594</td>
<td>14N</td>
<td>2052 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

**Specific Mitigation:**
- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

# ESS Group: Forestry

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S38</td>
<td>RUse-310</td>
<td>Shelterbelt</td>
<td>Site: 147 to 148</td>
<td>E-682629 N-5485595</td>
<td>E-682630 N-5485579</td>
<td>14N</td>
<td>16 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Removal in area of ROW intersect pending species composition confirmation and LiDAR analysis of vegetation height complete or partial removal may be required

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No pushing debris into adjacent timber
- All burn piles to be extinguished with water and then scanned for hotspots with handheld infrared scanners

# ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S38</td>
<td>Aqua-328</td>
<td>Wetland</td>
<td>Site: 145 to 146</td>
<td>E-682626 N-5485628</td>
<td>E-682630 N-5485587</td>
<td>14N</td>
<td>41 m</td>
</tr>
<tr>
<td>MMTP-S38</td>
<td>Aqua-329</td>
<td>Wetland</td>
<td>Site: 149 to 150</td>
<td>E-682641 N-5485426</td>
<td>E-682653 N-5485271</td>
<td>14N</td>
<td>154 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
### ESS Group: Archaeological

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S39</td>
<td>Hert-109</td>
<td>Area of Potential Use</td>
<td>Site: 151 to 152</td>
<td>E-682925</td>
<td>E-682964</td>
<td>14N</td>
<td>1102m</td>
</tr>
</tbody>
</table>

**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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Conduct site investigation with Archaeologist 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
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered

### ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S39</td>
<td>Aqua-125</td>
<td>Unnamed Drain Crossing</td>
<td>Site: Site: L27 to L28</td>
<td>682941</td>
<td>5479405</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>Low</td>
</tr>
</tbody>
</table>

**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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing

### ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S39</td>
<td>Wild-119</td>
<td>Breeding habitat sensitive area</td>
<td>Site: L27 to L28</td>
<td>E-682930</td>
<td>E-683037</td>
<td>14N</td>
<td>3062m</td>
</tr>
</tbody>
</table>

**Potential Effects:**  
Higher risk of wire collision. Disturbance during breeding and nesting

**Specific Mitigation:**
- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans
### ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTP-S39</td>
<td>Wild-119</td>
<td>Breeding habitat sensitive area</td>
<td>Site: L27 to L28</td>
<td>E-682930 N-5479624</td>
<td>E-683037 N-5476563</td>
<td>14N</td>
<td>3062m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Higher risk of wire collision. Disturbance during breeding and nesting

**Specific Mitigation:**
- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two guywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

### ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTP-S39</td>
<td>Aqua-330</td>
<td>Wetland</td>
<td>Site: 153 to 154</td>
<td>E-682985 N-5478046</td>
<td>E-682987 N-5478001</td>
<td>14N</td>
<td>44m</td>
</tr>
<tr>
<td>MTP-S39</td>
<td>Aqua-330</td>
<td>Wetland</td>
<td>Site: 155 to 156</td>
<td>E-682988 N-5477956</td>
<td>E-682990 N-5477899</td>
<td>14N</td>
<td>56m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Conduct site investigation with Archaeologist 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
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered

### ESS Group: Archaeological

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S39</td>
<td>Hert-109</td>
<td>Area of Potential Use</td>
<td>Site: 151 to 152</td>
<td>E-682925 N-5479759</td>
<td>E-682964 N-5478657</td>
<td>14N</td>
<td>1102 m</td>
</tr>
</tbody>
</table>

**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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Conduct site investigation with Archaeologist 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
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered
GOVERNMENT ROAD ALLOWANCE

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: September 09, 2015
Version: Draft

±

0 125 250 500

Meters

1:10,000

Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations

Points of Access*:
- Proposed Access Point
- Proposed Access Route

Advance and retrograde in NWP
Access Management Database

[Map 37]
<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S39</td>
<td>Aqua-331</td>
<td>Wetland</td>
<td>Site: 157 to 158</td>
<td>E-683129 N-5473916</td>
<td>E-683148 N-5473364</td>
<td>14N</td>
<td>552 m</td>
</tr>
<tr>
<td>MMTP-S40</td>
<td>Aqua-331</td>
<td>Wetland</td>
<td>Site: 159 to 160</td>
<td>E-683148 N-5473364</td>
<td>E-683315 N-5472391</td>
<td>14N</td>
<td>987 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

- Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S40</td>
<td>Aqua-332</td>
<td>Wetland</td>
<td>Site: 161 to 162</td>
<td>E-683526 N-5471153</td>
<td>E-683576 N-5470859</td>
<td>14N</td>
<td>298 m</td>
</tr>
<tr>
<td>MMTP-S40</td>
<td>Aqua-333</td>
<td>Wetland</td>
<td>Site: 163 to 164</td>
<td>E-683894 N-5469000</td>
<td>E-683917 N-5468866</td>
<td>14N</td>
<td>135 m</td>
</tr>
</tbody>
</table>

Potential Effects:

Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
This page is intentionally left blank.
This page is intentionally left blank.
## ESS Group: Conservation

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S42</td>
<td>LUse-101</td>
<td>Watson P. Davidson WMA</td>
<td>687712</td>
<td>5460336</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential disruption to protected area

**Specific Mitigation:**
- No disturbance permitted within legally protected area

## ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S42</td>
<td>Aqua-334</td>
<td>Wetland</td>
<td>Site: 165 to 166</td>
<td>E-689987 N-5458082</td>
<td>E-690087 N-5457987</td>
<td>14N</td>
<td>138 m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Aqua-335</td>
<td>Wetland</td>
<td>Site: 167 to 168</td>
<td>E-690160 N-5457917</td>
<td>E-690372 N-5457712</td>
<td>14N</td>
<td>294 m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Aqua-336</td>
<td>Wetland</td>
<td>Site: 169 to 170</td>
<td>E-690438 N-5457656</td>
<td>E-690631 N-5457464</td>
<td>14N</td>
<td>268 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S42</td>
<td>Aqua-336</td>
<td>Wetland</td>
<td>Site: 169 to 170 E-690438</td>
<td>N-5457650</td>
<td>E-690631</td>
<td>14N</td>
<td>268 m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Aqua-336</td>
<td>Wetland</td>
<td>Site: 171 to 172 E-690705</td>
<td>N-5457392</td>
<td>E-690790</td>
<td>14N</td>
<td>117 m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Aqua-337</td>
<td>Wetland</td>
<td>Site: 173 to 174 E-692903</td>
<td>N-5455279</td>
<td>E-692971</td>
<td>14N</td>
<td>94 m</td>
</tr>
</tbody>
</table>

Potential Effects:

- Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations

ESS Features
- Heritage
- Geophysical
- Water
- Water Crossing
- Wetlands and Habitat
- Ecosystem
- Species of Concern
- Wetland

Sensitive Sites
- Right of Way
- Tower locations
- Station Expansion
- Converter Station Footprint
- Virtual Modification (Existing)
- Virtual Modification (New)

Points of Access
- Proposed Access Point
- Proposed Access Route
- Facilities considered in MAM Access Management Database

Linear Features
- Transmission Line
- Highways
- Major Road
- Local Road
- Railway (Operational)
- Railway (Discontinued)
- First Nation
- Provincial Forest
- Parcel Fabric

Area Features
- Sensitive Sites
- Water Bodies

Map 43
Draft: For Discussion Purposes Only

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProMB, NRCAN
Date Created: September 09, 2015
Version: Draft

± 1:10,000
0 125 250 500 Metres
1:10,000
ESS Group: Archaeological

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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Conduct site investigation with Archaeologist 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
- Cultural and Heritage Resources Protection Plan will be followed when a suspected cultural or heritage resource is discovered.

ESS Group: Water Crossing

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

ESS Group: Birds and Habitat

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

Specific Mitigation:
- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Species of Concern

Potential Effects:
Potential loss of species of conservation concern from clearing, construction, maintenance and decommissioning 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. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Provide 5m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods that protect shrubs and understory
- Confine vehicle traffic to established trails to the extent possible
ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S42</td>
<td>Aqua-338</td>
<td>Wetland</td>
<td>Site: 177 to 178</td>
<td>E-695567 N-5452728</td>
<td>E-695597 N-5452690</td>
<td>14N</td>
<td>54 m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Aqua-339</td>
<td>Wetland</td>
<td>Site: 179 to 180</td>
<td>E-695679 N-5452612</td>
<td>E-695824 N-5452472</td>
<td>14N</td>
<td>201 m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Aqua-340</td>
<td>Wetland</td>
<td>Site: 181 to 182</td>
<td>E-695850 N-5452447</td>
<td>E-695994 N-5452395</td>
<td>14N</td>
<td>75 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
This page is intentionally left blank.
ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S42</td>
<td>Wild-120</td>
<td>Rat River crossing</td>
<td>Site: L29 to L30</td>
<td>E-695855</td>
<td>N-5452443</td>
<td>14N</td>
<td>669m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Wild-121</td>
<td>Waterfowl sensitivity area</td>
<td>Site: L31 to L32</td>
<td>E-699042</td>
<td>N-5449378</td>
<td>14N</td>
<td>701m</td>
</tr>
</tbody>
</table>

Potential Effects:

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

Specific Mitigation:

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S42</td>
<td>Aqua-341</td>
<td>Wetland</td>
<td>Site: 183 to 184</td>
<td>E-696418</td>
<td>N-5451901</td>
<td>14N</td>
<td>59 m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Aqua-342</td>
<td>Wetland</td>
<td>Site: 185 to 186</td>
<td>E-696866</td>
<td>N-5451470</td>
<td>14N</td>
<td>623 m</td>
</tr>
<tr>
<td>MMTP-S42</td>
<td>Aqua-343</td>
<td>Wetland</td>
<td>Site: 187 to 188</td>
<td>E-698709</td>
<td>N-5449699</td>
<td>14N</td>
<td>175 m</td>
</tr>
</tbody>
</table>

Potential Effects:

- Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
ESS Group: Birds and Habitat

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S42</td>
<td>Wild-121</td>
<td>Waterfowl sensitivity area</td>
<td>Site: L31 to L32</td>
<td>E-699042</td>
<td>E-699548</td>
<td>14N</td>
<td>701m</td>
</tr>
</tbody>
</table>

Potential Effects:

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

Specific Mitigation:

- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S42</td>
<td>Aqua-344</td>
<td>Wetland</td>
<td>Site: 189 to 190</td>
<td>E-699524</td>
<td>E-700049</td>
<td>14N</td>
<td>727 m</td>
</tr>
<tr>
<td>MMTP-S43</td>
<td>Aqua-345</td>
<td>Wetland</td>
<td>Site: 191 to 192</td>
<td>E-700613</td>
<td>E-700670</td>
<td>14N</td>
<td>92 m</td>
</tr>
<tr>
<td>MMTP-S43</td>
<td>Aqua-346</td>
<td>Wetland</td>
<td>Site: 193 to 194</td>
<td>E-700700</td>
<td>E-700719</td>
<td>14N</td>
<td>30 m</td>
</tr>
<tr>
<td>MMTP-S43</td>
<td>Aqua-347</td>
<td>Wetland</td>
<td>Site: 195 to 196</td>
<td>E-700772</td>
<td>E-700913</td>
<td>14N</td>
<td>228 m</td>
</tr>
<tr>
<td>MMTP-S43</td>
<td>Aqua-348</td>
<td>Wetland</td>
<td>Site: 197 to 198</td>
<td>E-700976</td>
<td>E-701619</td>
<td>14N</td>
<td>1037 m</td>
</tr>
</tbody>
</table>

Potential Effects:

Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
**ESS Group: Birds and Habitat**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S43</td>
<td>Wild-122</td>
<td>Sundown Lake and wetland sensitive area</td>
<td>Site: L33 to L34</td>
<td>E-701934 N-5446101</td>
<td>E-704088 N-5443371</td>
<td>14N</td>
<td>3478m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Higher risk of wire collision, Risk of wire collision is localized to the right-of-way

**Specific Mitigation:**
- As per industry standards, bird diverters will be installed in a manner to maximize visibility by alternating between reflective and spiral diverters along the two skywires
- Install bird diverter with spacing as per Transmission Line Design specifications for these spans

**ESS Group: Historic**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S43</td>
<td>Hert-301</td>
<td>Historic Trail</td>
<td>Site: 201 to 202</td>
<td>E-701778 N-5446299</td>
<td>E-702566 N-5445301</td>
<td>14N</td>
<td>1271m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential disturbance to heritage or historic trail

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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

**ESS Group: Wetland**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S43</td>
<td>Aqua-348</td>
<td>Wetland</td>
<td>Site: 199 to 200</td>
<td>E-701731 N-5446358</td>
<td>E-702447 N-5445448</td>
<td>14N</td>
<td>1159 m</td>
</tr>
<tr>
<td>MMTP-S43</td>
<td>Aqua-349</td>
<td>Wetland</td>
<td>Site: 203 to 204</td>
<td>E-702981 N-5444774</td>
<td>E-704328 N-5443067</td>
<td>14N</td>
<td>2174m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing

Potential Effects: Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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

ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S43</td>
<td>Aqua-127</td>
<td>Unnamed Drain Crossing</td>
<td>704486</td>
<td>5442853</td>
<td>14N</td>
<td>TBD</td>
<td>TBD</td>
<td>Low</td>
</tr>
</tbody>
</table>

ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S43</td>
<td>Aqua-349</td>
<td>Wetland</td>
<td>Site: 203 to 204</td>
<td>E-702981 N-5444774</td>
<td>E-704328 N-5443067</td>
<td>14N</td>
<td>2174m</td>
</tr>
</tbody>
</table>
Map 48
Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations

Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: September 10, 2015
Version: Draft

±

1:10,000

0 125 250 500 Metres

Manitoba-Hydro
**ESS Group:** Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S44</td>
<td>Aqua-350</td>
<td>Wetland</td>
<td>Site: 205 to 206</td>
<td>E-709334</td>
<td>E-709384</td>
<td>14N</td>
<td>51 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S44</td>
<td>Aqua-128</td>
<td>Unnamed Creek</td>
<td>Site: 207 to 208</td>
<td>E-710726 N-5439296</td>
<td>E-711740 N-5439125</td>
<td>14N</td>
<td>1028m</td>
</tr>
</tbody>
</table>

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S44</td>
<td>Aqua-351</td>
<td>Wetland</td>
<td>Site: 207 to 208</td>
<td>E-710726 N-5439296</td>
<td>E-711740 N-5439125</td>
<td>14N</td>
<td>1028m</td>
</tr>
</tbody>
</table>

Potential Effects:
- Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
Coordinate System: UTM Zone 14N NAD83
Data Source: MB Hydro, ProvMB, NRCAN
Date Created: September 10, 2015
Version: Draft

±

1:10,000

0 125 250 500

Metres

Manitoba-Minnesota Transmission Project
Construction Environmental Protection Plan
Environmentally Sensitive Site Locations

Draft For Discussion Purposes Only

Map 50
**ESS Group:** Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S44</td>
<td>Aqua-352</td>
<td>Wetland</td>
<td>Site: 209 to 210</td>
<td>E-715914 N-5438419</td>
<td>E-719051 N-5437888</td>
<td>14N</td>
<td>3181m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

*Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat*

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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

**ESS Group:** Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S44</td>
<td>Aqua-203</td>
<td>Flowing Aquifer</td>
<td>Site: 211 to 212</td>
<td>E-716323 N-5438349</td>
<td>E-719289 N-5437848</td>
<td>14N</td>
<td>3008 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

*Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.*

**Specific Mitigation:**

- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.
**ESS Group:** Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S44</td>
<td>Aqua-352</td>
<td>Wetland</td>
<td>Site: 209 to 210</td>
<td>E-715914 N-5438419</td>
<td>E-719051 N-5437888</td>
<td>14N</td>
<td>3181m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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

**ESS Group:** Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S44</td>
<td>Aqua-203</td>
<td>Flowing Aquifer</td>
<td>Site: 211 to 212</td>
<td>E-716323 N-5438349</td>
<td>E-719289 N-5437848</td>
<td>14N</td>
<td>3008 m</td>
</tr>
<tr>
<td>MMTP-S45</td>
<td>Aqua-203</td>
<td>Flowing Aquifer</td>
<td>Site: 213 to 214</td>
<td>E-719289 N-5437848</td>
<td>E-721347 N-5437888</td>
<td>14N</td>
<td>2058 m</td>
</tr>
<tr>
<td>MMTP-S46</td>
<td>Aqua-203</td>
<td>Flowing Aquifer</td>
<td>Site: 215 to 216</td>
<td>E-721347 N-5437888</td>
<td>E-722374 N-5436145</td>
<td>14N</td>
<td>2023 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

**Specific Mitigation:**
- 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.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.
ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S47</td>
<td>Aqua-129</td>
<td>Pine Creek Diversion Crossing</td>
<td>722732</td>
<td>5435667</td>
<td>14N</td>
<td>11</td>
<td>8</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
• Use existing trails, roads or cut lines whenever possible as access routes
• 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing

ESS Group: Groundwater

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S46</td>
<td>Aqua-203</td>
<td>Flowing Aquifer</td>
<td>Site: 215 to 216</td>
<td>E-721347 N-5437888</td>
<td>E-722374 N-5436145</td>
<td>14N</td>
<td>2023m</td>
</tr>
<tr>
<td>MMTP-S47</td>
<td>Aqua-203</td>
<td>Flowing Aquifer</td>
<td>Site: 217 to 218</td>
<td>E-722374 N-5436145</td>
<td>E-723263 N-5434941</td>
<td>14N</td>
<td>1496m</td>
</tr>
<tr>
<td>MMTP-S48</td>
<td>Aqua-203</td>
<td>Flowing Aquifer</td>
<td>Site: 219 to 220</td>
<td>E-723263 N-5434941</td>
<td>E-723568 N-5434683</td>
<td>14N</td>
<td>400m</td>
</tr>
<tr>
<td>MMTP-S49</td>
<td>Aqua-203</td>
<td>Flowing Aquifer</td>
<td>Site: 221 to 222</td>
<td>E-723568 N-5434683</td>
<td>E-723882 N-5434129</td>
<td>14N</td>
<td>636m</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential to disturb groundwater quantity through the unintended discharge of aquifers in artesian areas of flowing wells and springs.

Specific Mitigation:
• 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.
• Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.
### ESS Group: Water Crossing

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Easting</th>
<th>Northing</th>
<th>UTM Zone</th>
<th>Channel Width</th>
<th>Wet Width</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S49</td>
<td>Aqua-130</td>
<td>Pine Creek</td>
<td>724847</td>
<td>5432437</td>
<td>14N</td>
<td>10</td>
<td>4</td>
<td>Moderate</td>
</tr>
<tr>
<td>MMTP-S49</td>
<td>Aqua-131</td>
<td>Pine Creek</td>
<td>724879</td>
<td>5432380</td>
<td>14N</td>
<td>9</td>
<td>3.5</td>
<td>Low</td>
</tr>
</tbody>
</table>

**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 or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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.

### ESS Group: Wetland

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>ESS Name</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMTP-S49</td>
<td>Aqua-353</td>
<td>Wetland</td>
<td>Site: 223 to 224</td>
<td>E-724876 N-5432376</td>
<td>E-724882 N-5432364</td>
<td>14N</td>
<td>13m</td>
</tr>
<tr>
<td>MMTP-S49</td>
<td>Aqua-353</td>
<td>Wetland</td>
<td>Site: 225 to 226</td>
<td>E-724886 N-5432358</td>
<td>E-724943 N-5432257</td>
<td>14N</td>
<td>116m</td>
</tr>
<tr>
<td>MMTP-S50</td>
<td>Aqua-353</td>
<td>Wetland</td>
<td>Site: 227 to 228</td>
<td>E-724943 N-54322257</td>
<td>E-725424 N-5432110</td>
<td>14N</td>
<td>502m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions
- 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
### Potential Effects:

Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat

### Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. Construction matting will be used to protect the area from rutting and exposure to mineral soil during wet conditions.
- 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.