No specific mitigation measures for this map, page 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>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2-S3</td>
<td>C2-Aqua 103</td>
<td>Unnamed Creek</td>
<td>49388</td>
<td>5649707</td>
<td>14N</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
</tr>
<tr>
<td>C2-S3</td>
<td>C2-Aqua 104</td>
<td>Unnamed Creek</td>
<td>493891</td>
<td>5649349</td>
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<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
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</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

**Specific Mitigation:**
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
ESS Group: Archaeological

Potential Effects:
Potential disturbance to Heritage Resource

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Crown Land Encumbrance

Potential Effects:
Potential disturbance effects to conservation land

Specific Mitigation:
- Notify Crown Lands and permittee with respect to clearing and construction schedules; adhere to Manitoba Hydro’s standard environmental protection practices in wetland areas
- Clearing and construction to occur in the winter months; install bird diverters if a waterfowl sensitive area; adhere to seasonally limited maintenance times

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

Specific Mitigation:
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
ESS Group: Archaeological

Potential Effects:
Potential disturbance to Heritage Resource

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Crown Land Encumbrance

Potential Effects:
Potential disturbance effects to conservation land

Specific Mitigation:
- Notify Crown Lands and permittee with respect to clearing and construction schedules; adhere to Manitoba Hydro's standard environmental protection practices in wetland areas
- Clearing and construction to occur in winter months; install bird diverters if a waterfowl sensitive area; adhere to seasonally limited maintenance times

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

Specific Mitigation:
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 50m 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 Mit 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>C2-53</td>
<td>C2-Aqua-260</td>
<td>Artesian areas with uncertain water quality</td>
<td>0.00 10 to 30</td>
<td>E-497785 N° 3042121</td>
<td>E-499686 N° 3033000</td>
<td>UTM Zone</td>
<td>Distance</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential increases in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface; wetting the surficial environment (ground saturation).

Specific Mitigation:
- Qualified driller with appropriate experience will be restricted 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.
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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>C2-S4</td>
<td>C2-Hert-103</td>
<td>Creek near Jarvis Lake</td>
<td>500124</td>
<td>5638620</td>
<td>14N</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
- Identify and flag prior to start of work
- Conduct site investigation with Archaeologist post clearing and prior to construction
- Minimize surface disturbance around the site to the extent possible
- Inspect excavated materials or surface disturbance for heritage resources and report any finds to Environmental Inspector
- Implement additional mitigation from site investigation

ESS Group: Water Crossing

<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>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2-S04</td>
<td>C2-Aqua-107</td>
<td>Drain</td>
<td>500119</td>
<td>5638626</td>
<td>14N</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
</tr>
<tr>
<td>C2-S04</td>
<td>C2-Aqua-108</td>
<td>Unnamed tributary from Jarvis Lake</td>
<td>500152</td>
<td>5638584</td>
<td>14N</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</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

Specific Mitigation:
- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grounding and pumping will be implemented as required.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

ESS Group: Crown Land Encumbrance

<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>
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</thead>
<tbody>
<tr>
<td>C2-S4</td>
<td>C2-USE-203</td>
<td>DU Canada Project – Crown land encumbrance</td>
<td>Site: 25 to 26</td>
<td>E-500229</td>
<td>N-5638487</td>
<td>14N</td>
<td>120 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential disturbance effects to conservation land

Specific Mitigation:
- Notify Crown Lands and permittee with respect to clearing and construction schedules; adhere to Manitoba Hydro’s standard environmental protection practices in wetland areas
- Clearing and construction to occur in the winter months; install bird diverters if a waterfowl sensitive area; adhere to seasonally limited maintenance times

MAP NUMBER: 256
**ESS Group: Groundwater**

<table>
<thead>
<tr>
<th>Sec-Seg</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>C2-53</td>
<td>C2-Aqua-200</td>
<td>Artesian areas with uncertain water quality</td>
<td>Site: 19 to 20</td>
<td>E-497785</td>
<td>N- 5642511</td>
<td>14N</td>
<td>3847m</td>
</tr>
<tr>
<td>C2-54</td>
<td>C2-Aqua-200</td>
<td>Artesian areas with uncertain water quality</td>
<td>Site: 23 to 24</td>
<td>E-499686</td>
<td>N- 5639166</td>
<td>14N</td>
<td>3598m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential increase in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface; wetting the surficial environment (ground saturation)

**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.
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## 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>C2-S4</td>
<td>C2-Aqua-200</td>
<td>Artesian areas with uncertain water quality</td>
<td>Site: 23 to 24</td>
<td>E-499686 N-5639166</td>
<td>E-501935 N-5636356</td>
<td>14N</td>
<td>3598m</td>
</tr>
<tr>
<td>C2-S5</td>
<td>C2-Aqua-200</td>
<td>Artesian areas with uncertain water quality</td>
<td>Site: 27 to 28</td>
<td>E-50400 N-5636356</td>
<td>E-505389 N-5635389</td>
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<td>1073m</td>
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</tbody>
</table>

### Potential Effects:

Potential increase in salinity of soils and surface water in case where aquifer is saline and groundwater discharges to the surface, wetting the surficial environment (ground saturation)

### 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>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>F3-ER</td>
<td>C2-Aqua-118</td>
<td>Unnamed Creek</td>
<td>621131</td>
<td>623877</td>
<td>14N</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</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

Specific Mitigation:

- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
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>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2-S7</td>
<td>C2-Aqua 111</td>
<td>Garnoch Creek</td>
<td>503982</td>
<td>5626741</td>
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<td>3m</td>
<td>Low</td>
<td>Marginal</td>
</tr>
</tbody>
</table>

Potential Effects:
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; disturbance to stream banks, loss of riparian vegetation, fish habitat disturbance and impacted fish movement; flooding of floodplain

Specific Mitigation:
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines wherever 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.
- No instream works or fording from April 1 - July 15

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>C2-S6</td>
<td>C2-Rise-306</td>
<td>Alonsa Woodlots</td>
<td>Site: 29 to 30</td>
<td>N-503564</td>
<td>N-5630190</td>
<td>N-503969</td>
<td>N-5627740</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential for additional damage outside of ROW

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If burning of debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber
**ESS Group: 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 ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No in-stream works or fording from April 1 – July 15

---

**ESS Group: Water Crossing**

### Potential Effects:

Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation

### Specific Mitigation:

- 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: Water Crossing

Potential Effects:
Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; damage to stream bank; loss of riparian vegetation

Specific Mitigation:
- Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.

ESS Group: Water Crossing

Potential Effects:
Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation

Specific Mitigation:
- 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.

MAP NUMBER: 261
### 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>Fish Habitat Class</th>
<th>Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2-57</td>
<td>C2-Aqua-10</td>
<td>Unnamed road</td>
<td>507943</td>
<td>5617883</td>
<td>14N</td>
<td>No Data</td>
<td>No Data</td>
<td>Low</td>
<td>Marginal</td>
</tr>
<tr>
<td>C2-57</td>
<td>C2-Aqua-120</td>
<td>Unnamed road ditch</td>
<td>507943</td>
<td>5617883</td>
<td>14N</td>
<td>No Data</td>
<td>No Data</td>
<td>Low</td>
<td>Marginal</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 ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MN Veg Clearance Requirements.
- 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>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2-57</td>
<td>C2-Rise-309</td>
<td>Shelterbelt</td>
<td>Site: 35 to 39</td>
<td>5617931</td>
<td>5617937</td>
<td>14N</td>
<td>15m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Removal in area of ROW intersect

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- 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
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber