**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>N3-S18</td>
<td>N3-125</td>
<td>unnamed tributary of Little Frog Creek</td>
<td>372650</td>
<td>5979847</td>
<td>14N</td>
<td>100m</td>
<td>100m</td>
<td>Moderate</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 surrounds shall be a minimum of 30m and increase in size based on slope or and 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.
- No in-stream works or bonding from April 1 – July 15

**ESS Group: Mammals 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>N3-S18</td>
<td>N3-Wild-201</td>
<td>Moose Habitat</td>
<td>Site: 183 to 184</td>
<td>E-372678 N-5979669</td>
<td>E-365184 N-5973630</td>
<td>14N</td>
<td>9623 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Moose Concerns

**Specific Mitigation:**
- For mitigation in this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

**ESS Group: Conservation**

<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>N3-S17</td>
<td>N3-Luse-101</td>
<td>Tom L. Lamb WMA Site: 159 to 163</td>
<td>E-376423 N-5984938</td>
<td>E-372982 N-5980114</td>
<td>14N</td>
<td>5925 m</td>
<td></td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Luse-100</td>
<td>Tom L. Lamb WMA Site: 174 to 180</td>
<td>E-372982 N-5980114</td>
<td>E-365184 N-5973630</td>
<td>14N</td>
<td>10014 m</td>
<td></td>
</tr>
</tbody>
</table>

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

**Specific Mitigation:**
- Must not place food for the purpose of attracting, feeding or hold no bears
- All project staff must record all bears encountered/observed on a daily basis, any observations of bears or bear tracks must be reported to the MINE Site Environmental Officer or MINE Environmental Inspector
- All garbage must be stored in bear proof containers or within electric fencing and removed from Wildlife Management Area
- Clearing within the ROW will be kept to a minimum and with non-hazard trees removed. Any trees that are cleared must be cut, piled and burned under safe conditions.
- Carry out construction activities on well frozen ground in wetlands

**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>N3-S17</td>
<td>N3-201</td>
<td>Aquifers Vulnerable to contamination Site: 160 to 166</td>
<td>E-376423 N-5984938</td>
<td>E-372982 N-5980114</td>
<td>14N</td>
<td>5925 m</td>
<td></td>
</tr>
<tr>
<td>N3-S19</td>
<td>N3-201</td>
<td>Aquifers Vulnerable to contamination Site: 175 to 176</td>
<td>E-372982 N-5980114</td>
<td>E-368783 N-5976730</td>
<td>14N</td>
<td>5392 m</td>
<td></td>
</tr>
</tbody>
</table>

**Potential Effects:**
- Potential groundwater contamination from a contingency event (eg., spill)

**Specific Mitigation:**
- Marshalling yards will be located on upland sites where possible.
- An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept on site at all times in case of fluid leaks or spills from machinery.
- Qualified driller with appropriate experience will be contracted to work in areas affected by petrochemicals.
- Emergency response plans for sealing/grafting and pumping will be implemented as required.

**MAP NUMBER:** 150
ESS Group: Permafrost

<table>
<thead>
<tr>
<th>Sec-Seq 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>N3-S17</td>
<td>N3-Soils-126</td>
<td>Permafrost</td>
<td>Site: 171 to 172</td>
<td>E-375381 N-5983478</td>
<td>E-373338 N-5980614</td>
<td>14N</td>
<td>3518 m</td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Soils-126</td>
<td>Permafrost</td>
<td>Site: 181 to 182</td>
<td>E-372756 E-372669</td>
<td>E-371989 N-5979862</td>
<td>14N</td>
<td>124 m</td>
</tr>
<tr>
<td>N3-S10</td>
<td>N3-Soils-126</td>
<td>Permafrost</td>
<td>Site: 185 to 186</td>
<td>E-372608 N-5979913</td>
<td>E-371990 N-5979314</td>
<td>14N</td>
<td>795 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Melting or loss of permafrost due to disturbance of the active layer

Specific Mitigation:
- Carry out construction activities on frozen ground to minimize surface damage and rutting.
- Use existing trails, roads or cut lines whenever possible as access routes.
- Maintain shrub and herbaceous vegetation to the extent possible.
- Remove trees by low-disturbance methods.
- Confin e vehicle traffic to established trails to the extent possible.
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan.

ESS Group: Species of Concern

<table>
<thead>
<tr>
<th>Sec-Seq 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>N3-S17</td>
<td>N3-Eco-301</td>
<td>Species of Concern</td>
<td>Site: 161 to 164</td>
<td>E-376423 N-5984080</td>
<td>E-372902 N-5980114</td>
<td>14N</td>
<td>5925 m</td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Eco-301</td>
<td>Species of Concern</td>
<td>Site: 173 to 177</td>
<td>E-372982 N-5979014</td>
<td>E-379067 N-5976959</td>
<td>14N</td>
<td>5027 m</td>
</tr>
<tr>
<td>N3-S17</td>
<td>N3-Eco-302</td>
<td>Species of Concern</td>
<td>Site: 162 to 165</td>
<td>E-376423 N-5984038</td>
<td>E-372982 N-5980114</td>
<td>14N</td>
<td>5925 m</td>
</tr>
<tr>
<td>N3-S10</td>
<td>N3-Eco-302</td>
<td>Species of Concern</td>
<td>Site: 176 to 179</td>
<td>E-372982 N-5980114</td>
<td>E-368056 N-5976145</td>
<td>14N</td>
<td>625 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential loss of previously known 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.
- Use existing access roads and trails to the extent possible.
- Remove trees by low-disturbance methods.
- Confin e 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.

MAP NUMBER: 150
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>N3-S18</td>
<td>N3-Wild-201</td>
<td>Moose Habitat</td>
<td>Site: 183 to 184</td>
<td>E-372676</td>
<td>N-597889</td>
<td>14N</td>
<td>9623 m</td>
</tr>
</tbody>
</table>

Specific Mitigation:
- Must not place food for the purpose of attracting, feeding or holding bears
- All project staff must record all bears encountered/observed on a daily basis, any observations of bears or bear tracks must be reported to the MH Site Environmental Officer or MH Environmental Inspector
- All garbage must be stored in bear proof containers or within electric fences and removed from Wildlife Management Area
- Clearing within the ROW will be kept to a minimum and with non-hazard trees removed. Any trees that are cleared must be cut, piled and burned under safe conditions.
- Carry out construction activities on well frozen ground in wetlands.

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>N3-S18</td>
<td>N3-Aqua-201</td>
<td>Aquifers Vulnerable to contamination</td>
<td>Site: 175 to 176</td>
<td>E-372982</td>
<td>N-5980114</td>
<td>14N</td>
<td>5392 m</td>
</tr>
</tbody>
</table>

Specific Mitigation:
- Potential groundwater contamination from a contingency event (e.g., spill)

ESS Group: Permafrost

<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>N3-S18</td>
<td>N3-Soils-126</td>
<td>Permafrost</td>
<td>Site: 185 to 186</td>
<td>E-372608</td>
<td>N-5979313</td>
<td>14N</td>
<td>795 m</td>
</tr>
</tbody>
</table>

Potential Effects:
- Potential disruption to resource use activities

Potential Mitigation:
- Melting or loss of permafrost due to disturbance of the active layer

Specific Mitigation:
- Carry out construction activities on frozen ground to minimize surface damage and rutting.
- Use existing trails, roads or cut lines whenever possible as access routes
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confine vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

Potential Effects:
- Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation or 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 NV 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 forwarding from April 1 - July 15

ESS Group: Mammals and Habitat

Potential Effects:
- Moose Concerns

Specific Mitigation:
- For mitigation in this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

ESS Group: Conservation

Potential Effects:
- Potential disruption to resource use activities
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>N3-S18</td>
<td>N3-Eco-301</td>
<td>Species of Concern</td>
<td>Site: 173 to 177</td>
<td>E-372982</td>
<td>E-369067</td>
<td>14N</td>
<td>5027 m</td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Eco-302</td>
<td>Species of Concern</td>
<td>Site: 176 to 179</td>
<td>E-372982</td>
<td>E-368056</td>
<td>14N</td>
<td>6325 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Potential loss of previously known 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
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confining 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

MAP NUMBER: 151
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### 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>N3-S18</td>
<td>N3-Aqua-127</td>
<td>Unnamed tributary of Little Frog Creek</td>
<td>368024</td>
<td>5976025</td>
<td>14N</td>
<td>23m</td>
<td>N/A</td>
<td>Low</td>
<td>No Fish Habitat</td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Aqua-128</td>
<td>Unnamed tributary of Little Frog Creek</td>
<td>368260</td>
<td>5976110</td>
<td>14N</td>
<td>19m</td>
<td>N/A</td>
<td>Low</td>
<td>No Fish Habitat</td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Aqua-129</td>
<td>Unnamed tributary of Little Frog Creek</td>
<td>367917</td>
<td>5976033</td>
<td>14N</td>
<td>30m</td>
<td>N/A</td>
<td>Low</td>
<td>No Fish Habitat</td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Aqua-131</td>
<td>Unnamed tributary of Little Frog Creek</td>
<td>367723</td>
<td>5975877</td>
<td>14N</td>
<td>26m</td>
<td>N/A</td>
<td>Low</td>
<td>No Fish Habitat</td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Aqua-132</td>
<td>Unnamed tributary of Little Frog Creek</td>
<td>366743</td>
<td>5975087</td>
<td>14N</td>
<td>16m</td>
<td>N/A</td>
<td>Low</td>
<td>No 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

**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: Mammals 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>N3-S18</td>
<td>N3-Wild-201</td>
<td>Moose Habitat</td>
<td>Site: 183 to 189</td>
<td>E-372285</td>
<td>E-365184</td>
<td>14N</td>
<td>9623 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Moose Concerns

**Specific Mitigation:**

- For mitigation in this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

### ESS Group: Conservation

<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>N2-S18</td>
<td>N2-Unea-100</td>
<td>Tom Lamb WMA</td>
<td>Site: 174 to 180</td>
<td>E-372985</td>
<td>E-365184</td>
<td>14N</td>
<td>1004 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential disruption to resource use activities

**Specific Mitigation:**

- Must not place food for the purpose of attracting, feeding or holding bears
- All project staff must record all bears encountered/observed on a daily basis, any observations of bears or bear tracks must be reported to the Mh Site Environmental Officer or Mh Environmental Steward
- All garbage must be stored in bear proof containers or within electric fencing and removed from Wildlife Management Area
- Clearing within the ROW will be kept to a minimum and with non-hazard trees removed. Any trees that are cleared must be cut, piled and burned under safe conditions.
- Carry out construction activities on well frozen ground in wetlands.

MAP NUMBER: 152
**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>N3-S18</td>
<td>N3-201</td>
<td>Aquifers: vulnerable to contamination</td>
<td>Site: 1/3 to 1/8</td>
<td>E-377087 N-5980114</td>
<td>E-368478 N-5976730</td>
<td>14N</td>
<td>3.94 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential groundwater contamination from a contingency event (e.g., spill)

**Specific Mitigation:**

- Keruing and yards will be located on upland sites where possible.
- An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept on-site at all times in case of fluid leaks or spills from machinery.
- 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.

**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>N3-S18</td>
<td>N3-Eco-301</td>
<td>Species of Concern</td>
<td>Site: 173 to 177</td>
<td>E-372982 N-5980114</td>
<td>E-369097 N-5976959</td>
<td>14N</td>
<td>5027 m</td>
</tr>
<tr>
<td>N3-S18</td>
<td>N3-Eco-302</td>
<td>Species of Concern</td>
<td>Site: 176 to 179</td>
<td>E-372982 N-5980114</td>
<td>E-368096 N-5976145</td>
<td>14N</td>
<td>6325 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential loss of previously known 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
- Use existing access roads and trails to the extent possible
- Remove trees by low-disturbance methods
- Confining 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: 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 in width 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 NV veg Clearance Requirements.
- No machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.

**ESS Group: Mammals and Habitat**

**Potential Effects:**
- Moose Carnivory

**Specific Mitigation:**
- For mitigation in this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

**ESS Group: Conservation**

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

**Specific Mitigation:**
- Must not place food for the purpose of attracting, feeding or hold bears
- All project staff must record all bears encountered/observed on a daily basis, any observations of bears or bear tracks must be reported to the MHI Site Environmental Officer or MHI Environmental Inspector
- All garbage must be stored in bear proof containers or within electric fencing and removed from Wildlife Management Area
- Clearing within the ROW will be kept to a minimum and with non-hazard trees removed. Any trees that are cleared must be cut, piled and burned under safe conditions
- Carry out construction activities on well frozen ground in wetlands

**ESS Group: Groundwater**

**Potential Effects:**
- Wetting the surficial environment near potential discharge from tower foundation drill hole (ground saturation); Also, potential level drop in the aquifers

**Specific Mitigation:**
- Qualified driller with appropriate experience will be contracted to work in areas affected by artisanal 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: Erosion

<table>
<thead>
<tr>
<th>Sec-Seq 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>N3-519</td>
<td>N3-Solls-320</td>
<td>Eolian (i.e. wind-modified) Deposits</td>
<td>Site: 195 to 197</td>
<td>E-362894</td>
<td>N-5971603</td>
<td>14N</td>
<td>648 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Loss of topsoil due to wind erosion (e.g. creep, saltation, suspension) on disturbed surfaces.

**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
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Remove trees by low-disturbance methods
- Confining vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

### ESS Group: Terrain

<table>
<thead>
<tr>
<th>Sec-Seq 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>N3-519</td>
<td>N3-Solls-400</td>
<td>Steep/Unstable Slopes</td>
<td>Site: 196 to 197</td>
<td>E-363934</td>
<td>N-5971603</td>
<td>14N</td>
<td>648 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Loss of topsoil due to water erosion (e.g. sheet, rill, gully) on disturbed surfaces; mass-movement due to slope stabilization.

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid construction on steep slopes or the creation of steep slopes to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Confining vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan

### ESS Group: Terrain

<table>
<thead>
<tr>
<th>Sec-Seq ID</th>
<th>ESS ID</th>
<th>ESS Name (Unique Terrain/Soil Features)</th>
<th>Location</th>
<th>Start</th>
<th>Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>N3-519</td>
<td>N3-Solls-461</td>
<td>Enduring Features</td>
<td>Site: 193 to 194</td>
<td>E-364115</td>
<td>N-5971927</td>
<td>14N</td>
<td>1019m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Impairment or loss of approximately 67 ha (0.18 %) of single occurrence PAI enduring feature from right-of-way establishment.

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Avoid development of new borrow areas, access routes and other activities within enduring features
- Maintain 100m setback around feature outside of RCW
- Minimize movement of vehicles, machinery and equipment during construction
- Prevent off-ROW activities and equipment use within terrain feature, during construction
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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>N3-S19</td>
<td>N3-104</td>
<td>Saskatchewan River</td>
<td>363610</td>
<td>5970734</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
- 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: Mammals 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>N3-S19</td>
<td>N3-Wild-201</td>
<td>Moose Habitat</td>
<td>Site: 188 to 189</td>
<td>E-363584 N-5970714</td>
<td>E-363617</td>
<td>14N</td>
<td>3202 m</td>
</tr>
<tr>
<td>N3-S20</td>
<td>N3-Wild-201</td>
<td>Moose Habitat</td>
<td>Site: 207 to 210</td>
<td>E-363610 N-5970729</td>
<td>E-363610</td>
<td>14N</td>
<td>268 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Moose Concerns

**Specific Mitigation:**

- For mitigation in this area refer to the "Moose and Woodland Caribou Sensitive Range Delineation and Mitigation Plans" document

**ESS Group: Conservation**

<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>N3-S19</td>
<td>N3-Luse-100</td>
<td>Tom Lamb WMA</td>
<td>Site: 187 to 190</td>
<td>E-365164 N-5973380</td>
<td>E-365161</td>
<td>14N</td>
<td>3202 m</td>
</tr>
<tr>
<td>N3-S20</td>
<td>N3-Luse-100</td>
<td>Tom Lamb WMA</td>
<td>Site: 205 to 211</td>
<td>E-363601 N-5970323</td>
<td>E-363601</td>
<td>14N</td>
<td>614 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Potential disruption to resource use activities

**Specific Mitigation:**

- Must not place food for the purpose of attracting, feeding or holding bears
- All project staff must record all bears encountered/observed on a daily basis, any observations of bears or bear tracks must be reported to the MH Site Environmental Officer or MH Environmental Inspector
- All garbage must be stored in bear proof containers or within electric fencing and removed from Wildlife Management Area
- Clearing within the kuwv will be kept to a minimum and will non-hazard trees removed. Any trees that are cleared must be cut, piled and burned under safe conditions
- Carry out construction activities on well frozen ground in wetlands

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MAP NUMBER: 154
**Potential Effects:**

- Potential groundwater contamination from a contingency event (e.g., spill).

**Specific Mitigation:**

- Marshalling yards will be located on upland sites where possible.
- An Emergency Preparedness and Spill Response Plan will be developed and an emergency response spill kit will be kept on-site at all times in case of leaks or spills from machinery.
- 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.

**Potential Effects:**

- Wetting the surficial environment near potential discharge from tower foundation drill holes (ground saturation); also, potential level drop in the aquifer.

**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-Seq 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>N3-519</td>
<td>N3-Aqua-203</td>
<td>Aquifers Vulnerable to contamination</td>
<td>Site: 199 to 200</td>
<td>E-363758 N-5971038</td>
<td>E-363617 N-5971038</td>
<td>14N</td>
<td>289 m</td>
</tr>
<tr>
<td>N3-320</td>
<td>N3-Aqua-203</td>
<td>Aquifers Vulnerable to contamination</td>
<td>Site: 202 to 214</td>
<td>E-363617 N-5971038</td>
<td>E-363395 N-5962364</td>
<td>14N</td>
<td>310 m</td>
</tr>
</tbody>
</table>

**ESS Group: Waterbody/Riparian Buffer**

<table>
<thead>
<tr>
<th>Sec-Seq 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>N3-520</td>
<td>N3-Aqua-135</td>
<td>Unnamed agricultural drain</td>
<td>Site: 215 to 216</td>
<td>E-363569 N-5969162</td>
<td>E-363569 N-5969183</td>
<td>14N</td>
<td>20 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

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

**Specific Mitigation:**

- Riparian buffers shall be a minimum of 5m and increase in size based on slope or land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MI Veg Clearance Requirements.
- 7m from machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.

**ESS Group: Erosion**

<table>
<thead>
<tr>
<th>Sec-Seq ID</th>
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</thead>
<tbody>
<tr>
<td>N3-519</td>
<td>N3-Sols-300</td>
<td>Eolian (i.e. wind-modified) Deposits</td>
<td>Site: 195 to 197</td>
<td>E-363934 N-5971038</td>
<td>E-363617 N-5971038</td>
<td>14N</td>
<td>648 m</td>
</tr>
<tr>
<td>N3-320</td>
<td>N3-Sols-300</td>
<td>Eolian (i.e. wind-modified) Deposits</td>
<td>Site: 206 to 209</td>
<td>E-363617 N-5970823</td>
<td>E-363617 N-5970823</td>
<td>14N</td>
<td>214 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

- Loss of topsoil due to wind erosion (e.g. creep, saltation, suspension) on disturbed surfaces.

**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.
- Avoid dry soil conditions with high and severe wind erosion risk to the extent possible.
- Maintain shrub and herbaceous vegetation to the extent possible.
- Remove trees by low-disturbance methods.
- Conine vehicle traffic to established trails to the extent possible.
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan.
### ESS Group: Terrain

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</thead>
<tbody>
<tr>
<td>N3-S19</td>
<td>N3-Solls-401</td>
<td>Enduring Features (Unique Terrain/Soil Features)</td>
<td>Site: 193 to 194</td>
<td>E-364115 North: 5971927</td>
<td>E-363617 North: 5971038</td>
<td>14N</td>
<td>1019m</td>
</tr>
<tr>
<td>N3-S20</td>
<td>N3-Solls-401</td>
<td>Enduring Features (Unique Terrain/Soil Features)</td>
<td>Site: 203 to 215</td>
<td>E-363617 North: 5971038</td>
<td>E-363395 North: 5982364</td>
<td>14N</td>
<td>607m</td>
</tr>
</tbody>
</table>

#### Potential Effects:
- Unplanned or low or approximately 0/5 of wet (e.g., 0.1%) or single occurrence of enduring feature from right-of-way establishment.

#### Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Use existing tracks, roads or cutlines whenever possible as access routes
- Avoid development of new borrow areas, access routes and other activities within enduring features
- Maintain 100m setback area feature outside of RCW
- Minimize movement of vehicles, machinery and equipment during construction
- Prevent off-ROW activities and equipment use within terrain feature, during construction

### ESS Group: Terrain

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</thead>
<tbody>
<tr>
<td>N3-S19</td>
<td>N3-Solls-400</td>
<td>Steep/Unstable Slopes</td>
<td>Site: 196 to 198</td>
<td>E-363934 North: 5971603</td>
<td>E-363617 North: 5971038</td>
<td>14N</td>
<td>648 m</td>
</tr>
<tr>
<td>N3-S20</td>
<td>N3-Solls-400</td>
<td>Steep/Unstable Slopes</td>
<td>Site: 204 to 208</td>
<td>E-363617 North: 5971038</td>
<td>E-363611 North: 5970823</td>
<td>14N</td>
<td>214 m</td>
</tr>
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#### Potential Effects:
- Loss of topsoil due to water erosion (e.g., sheet, rill, gully) on disturbed surfaces; mass-movement due to slope destabilization.

#### Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Avoid construction on steep slopes or the creation of steep slopes to the extent possible
- Maintain shrub and herbaceous vegetation to the extent possible
- Confining vehicle traffic to established trails to the extent possible
- Implement erosion protection before commencing construction in accordance with Erosion/Sediment Control Plan