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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>S1-S13</td>
<td>S1-124</td>
<td>Bagott Creek</td>
<td>529984</td>
<td>5529173</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>S1-S13</td>
<td>S1-Aqua-124</td>
<td>Unnamed tributary of Rat Creek</td>
<td>529973</td>
<td>5530875</td>
<td>14N</td>
<td>No Data</td>
<td>No Data</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 NH 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 Stop</th>
<th>UTM Zone</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1-S13</td>
<td>S1-Rise-303</td>
<td>Shelterbelt</td>
<td>Site: 29 to 30</td>
<td>E-530722 N-5532505</td>
<td>14N</td>
<td>1311m</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

MAP NUMBER: 287
**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>S1-S13</td>
<td>S1-Eco-301</td>
<td>Species of Concern (Plant)</td>
<td>Site: 27 to 28</td>
<td>E-530721</td>
<td>E-530740</td>
<td>14N</td>
<td>4188 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, cutting and creation
- 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
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>S1-S13</td>
<td>S1-Hert-103</td>
<td>Rat Creek</td>
<td>530001</td>
<td>5526734</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: 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>S1-S15</td>
<td>S1-Aqua-126</td>
<td>Rat Creek</td>
<td>530001</td>
<td>5526726</td>
<td>14N</td>
<td>20m</td>
<td>20m</td>
<td>Moderate</td>
<td>Important</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 flowpath

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 MI Veg Clearance Requirements.
- No machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fencing 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>S1-S15</td>
<td>S1-Rule-309</td>
<td>Shelterbelt</td>
<td>Site: 35 to 36</td>
<td>E-529819</td>
<td>E-529819</td>
<td>14N</td>
<td>30m</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 pruning of clearing debris is required it must be conducted during winter months only and ensure that all trees 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: Reptiles/Amphibians

<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>S1-S15</td>
<td>S1-Wild-300</td>
<td>Snk/KSalamander Habitat</td>
<td>Site: 31 to 32</td>
<td>E-529818</td>
<td>E-529882</td>
<td>14N</td>
<td>10252 m</td>
</tr>
<tr>
<td>S1-S15</td>
<td>S1-Wild-301</td>
<td>Northern Prairie Snk Habitat</td>
<td>Site: 33 to 34</td>
<td>E-529818</td>
<td>E-529882</td>
<td>14N</td>
<td>10251 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

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
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confinie vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints
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: 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 flowway

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: Forestry

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 clearing or deforestation is required it must be conducted during winter months only and ensure that all trees 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 wherever 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: Reptiles/Amphibians

Potential Effects:
Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

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
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Maintain shrub and herbaceous vegetation to the extent possible
- Confine vehicle traffic to established trails to the extent possible
- Conduct Summer field investigations prior to tower placement where habitat overlaps tower footprints

MAP NUMBER: 289
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

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
### 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>S1-S15</td>
<td>S1-Eco-302</td>
<td>Species of Concern (Plant)</td>
<td>Site: 41 to 42</td>
<td>E-529855</td>
<td>E-529882</td>
<td>14N</td>
<td>3950 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
- 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: Water Crossing

**Sec-Seg ID** | **ESS ID** | **ESS Name** | **Easting** | **Northing** | **UTM Zone** | **Channel Width** | **Wet Width** | **Fish Habitat Class** | **Habitat Sensitivity**
---|---|---|---|---|---|---|---|---|---
S1-S19 | S1-Aqua-129 | Unnamed Tributary of Assiniboine River | 529869 | 5514592 | 14N | No Data | No Data | Low | Marginal

**Potential Effects:**

Increased erosion and sedimentation of streams

**Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion. If wet conditions, one time fencing is permitted
- Use existing trails, roads or cut lines whenever possible as access routes
- Limit machinery moving or the watercourse to a one-time event (over and back) only if no alternative crossing method is available. If repeated crossings of the watercourses are necessary prior approval from the MH Environmental Inspector is required
- Locate crossings perpendicular to the bank, whenever possible.
- Immediately stabilize shoreline or banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation, preferably through re-vegetation with native species suitable for the site.

### ESS Group: Intersection

**Sec-Seg ID** | **ESS ID** | **Location** | **ESS Name** | **Crossing Coordinates** | **UTM Zone**
---|---|---|---|---|---
S1-S15 | S1-RectUse-100 | C1 | Snowmobile Trail | E-529864 N-5514592 | 14N

**Potential Effects:**

Potential interference with snowmobilers; safety issues

**Specific Mitigation:**

- Identify and flag prior to start of work
- Avoid surface damage to and obstruction of access route
- Post warning markers and signs at snowmobile trail crossing
- Notify snowmobile club/users and local authorities regarding construction activities and schedule, and address concerns prior to construction

### ESS Group: Erosion

**Sec-Seg ID** | **ESS ID** | **ESS Name** | **Location** | **Start** | **Stop** | **UTM Zone** | **Distance**
---|---|---|---|---|---|---|---
S1-S19 | S1-Solls-300 | Water Erosion Risk Site: 87 to 88 | E-5319368 N-5513764 | E-531928 | E-531970 | 14N | 766 m

**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. 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
- Use no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing
- Centreline clearing is a maximum of 12 meters wide
- Locate crossings perpendicular to the bank, whenever possible
- Outside of centre-line clearing, access trails and tower footprints, shrub and herbaceous understory vegetation will be maintained along with trees under MH veg clearance requirements (Refer to engineered drawing for spans between towers 6196-6201)
- Outside of centre-line clearing, access trails and tower footprints, stumps should be retained up to a maximum of 20 centimeters in height
- Stabilize shoreline or banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation

### ESS Group: Groundwater

**Sec-Seg ID** | **ESS ID** | **ESS Name** | **Location** | **Start** | **Stop** | **UTM Zone** | **Distance**
---|---|---|---|---|---|---|---
S1-S15 | S1-Aqua-202 | Aquifer Site: 45 to 46 | E-529879 N-5514739 | E-529882 N-5514486 | 14N | 253 m
S1-S16 | S1-Aqua-202 | Aquifer Site: 49 to 52 | E-529882 N-5514592 | E-5514486 N-5513765 | 14N | 1036 m
S1-C17 | C1-Aqua-202 | Aquifer Site: 50 m 67 | E-530627 N-5513491 | E-5312635 N-5513265 | 14N | 616 m
S1-S18 | S1-Aqua-202 | Aquifer Site: 70 to 73 | E-531236 N-5514591 | E-5513951 N-5513318 | 14N | 430 m
S1-S19 | S1-Aqua-202 | Aquifer Site: 80 to 85 | E-531508 N-5513318 | E-531927 N-5512844 | 14N | 763 m

**Potential Effects:**

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

- Marshaling 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 drillers 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.

**ESS Group:** Reptiles/Amphibians

<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>S1-S15</td>
<td>S1-Eco-302</td>
<td>Species of Concern (Plant)</td>
<td>Site: 71 to 72</td>
<td>E-531236</td>
<td>N-5513310</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S16</td>
<td>S1-Eco-302</td>
<td>Species of Concern (Plant)</td>
<td>Site: 83 to 84</td>
<td>E-531568</td>
<td>N-5513310</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S17</td>
<td>S1-Eco-302</td>
<td>Species of Concern (Plant)</td>
<td>Site: 70 to 71</td>
<td>E-531927</td>
<td>N-5513310</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S18</td>
<td>S1-Eco-302</td>
<td>Species of Concern (Plant)</td>
<td>Site: 71 to 72</td>
<td>E-531568</td>
<td>N-5513310</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S19</td>
<td>S1-Eco-302</td>
<td>Species of Concern (Plant)</td>
<td>Site: 71 to 72</td>
<td>E-531927</td>
<td>N-5513310</td>
<td>14N</td>
<td>763 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
- Provide 100 m vegetated (shrub and herbaceous) buffer around site
- Identify and flag buffer areas prior to start of work
- Remove trees by low-disturbance methods
- Confin[e vehicle traffic to existing trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

**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>S1-S15</td>
<td>S1-RUsl-315</td>
<td>Shelterbelt</td>
<td>Site: 43 to 44</td>
<td>E-52963</td>
<td>N-5516194</td>
<td>14N</td>
<td>14m</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

**MAP NUMBER:** 291
## ESS Group: Food/Medicinal

<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>S1-S16</td>
<td>S1-RUse-200</td>
<td>Berry Harvest</td>
<td>Site: 55 to 56</td>
<td>E-530428 N-5513908</td>
<td>E-530627 N-5517764</td>
<td>14N</td>
<td>277 m</td>
</tr>
<tr>
<td>S1-S17</td>
<td>S1-RUse-200</td>
<td>Berry Harvest</td>
<td>Site: 61 to 65</td>
<td>E-530627 N-5513765</td>
<td>E-531236 N-5513591</td>
<td>14N</td>
<td>632 m</td>
</tr>
<tr>
<td>S1-S18</td>
<td>S1-RUse-200</td>
<td>Berry Harvest</td>
<td>Site: 67 to 75</td>
<td>E-531236 N-5513586</td>
<td>E-531568 N-5513240</td>
<td>14N</td>
<td>430 m</td>
</tr>
<tr>
<td>S1-S19</td>
<td>S1-RUse-200</td>
<td>Berry Harvest</td>
<td>Site: 81 to 94</td>
<td>E-531568 N-5513318</td>
<td>E-531927 N-5512644</td>
<td>14N</td>
<td>763 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Loss of vegetation as a result of clearing, construction, maintenance and decommissioning activities.

**Specific Mitigation:**
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Minimize surface disturbance around the site to the extent possible
- Remove trees by low-disturbance methods
- No herbicide to be applied during construction
- Confine vehicle traffic to established trails to the extent possible

## ESS Group: Invasive 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>S1-S19</td>
<td>S1-Eco-400</td>
<td>Invasive species patch</td>
<td>Site: 81A to 81B</td>
<td>E-531744 N-5513908</td>
<td>E-531927 N-5517644</td>
<td>14N</td>
<td>389 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Increased risk of spreading invasive weeds

**Specific Mitigation:**
- Implement Low-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP. If the land parcel contained within this polygon has been designated as High Risk, full clearing/grading mitigation is to be followed as per the SOP.
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Remove trees by low-disturbance methods
- Implement additional mitigation from site investigation
- 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: 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>S1-S19</td>
<td>S1-Hert-104a</td>
<td>Potential Heritage Site</td>
<td>51731</td>
<td>5513014</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**
Potential disturbance to Heritage Resource

**Specific Mitigation:**
- Archaeologists will be on site during foundation installation
- 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
- The presence of the Project Archaeologist is required to monitor the excavation of tower footings at tower # 6197
**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>S1-520</td>
<td>S1-Hert-105</td>
<td>Assiniboine River</td>
<td>532262</td>
<td>5512397</td>
<td>14N</td>
</tr>
<tr>
<td>S1-520</td>
<td>S1-Hert-106A</td>
<td>Registered Archaeological Site</td>
<td>532839</td>
<td>5511985</td>
<td>14N</td>
</tr>
<tr>
<td>S1-520</td>
<td>S1-Hert-106B</td>
<td>Registered Archaeological Site</td>
<td>533102</td>
<td>5511612</td>
<td>14N</td>
</tr>
<tr>
<td>S1-670</td>
<td>S1-Hert-106C</td>
<td>Registered Archaeological Site</td>
<td>533333</td>
<td>5511408</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
- Perform site investigation with Archaeologist present 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
- The presence of the Project Archaeologist is required to monitor the excavation of tower footings at tower #5's 6199 and 6200

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**ESS Group: Fishing**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location ESS Name</th>
<th>Crossing Coordinates</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1-520</td>
<td>S1-Ruse-400</td>
<td>C3 Fishing - Assiniboine River</td>
<td>E-532306 N-5512317</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Loss of recreational activities for community members and potential shoreline damage due to construction activities and noise

**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 MVEG Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.

---

**ESS Group: Trapping**

<table>
<thead>
<tr>
<th>Sec-Seg ID</th>
<th>ESS ID</th>
<th>Location ESS Name</th>
<th>Crossing Coordinates</th>
<th>UTM Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1-520</td>
<td>S1-Ruse-500</td>
<td>C2 Trapping - Assiniboine River</td>
<td>E-532304 N-5512319</td>
<td>14N</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Loss of ATK and local historical record due to access road construction and ROW activities.

**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 MVEG 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>Channel Width</th>
<th>Wet Width</th>
<th>Fish Habitat Class</th>
<th>Fish Habitat Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1-520</td>
<td>S1-Aqua-130</td>
<td>Assiniboine River</td>
<td>532305</td>
<td>5512320</td>
<td>55m</td>
<td>55m</td>
<td>High</td>
<td>Important</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 MVEG Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream work or flooding from April 1 – July 15
ESS Group: Erosion

<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>S1-S19</td>
<td>S1</td>
<td>soils-300</td>
<td>Site: 87 to 88</td>
<td>E-531743 N-5517064</td>
<td>E-531927 N-5517444</td>
<td>14N</td>
<td>391 m</td>
</tr>
<tr>
<td>S1-S20</td>
<td>S1</td>
<td>soils-300</td>
<td>Site: 94 to 95</td>
<td>E-531928 N-5512644</td>
<td>E-532905 N-5511801</td>
<td>14N</td>
<td>1230 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Loss of topsoil due to water erosion (e.g., sheet, rill, gully) on disturbed surfaces.

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.
- 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.
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with the site Rehabilitation Plan.

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>S1-S19</td>
<td>S1</td>
<td>Aquifer</td>
<td>Site: 80 to 85</td>
<td>E-531568 N-5513318</td>
<td>E-531927 N-5512644</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S20</td>
<td>S1</td>
<td>Aquifer</td>
<td>Site: 90 to 100</td>
<td>E-531568 N-5512644</td>
<td>E-5509768 N-5509644</td>
<td>14N</td>
<td>4402 m</td>
</tr>
</tbody>
</table>

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

Specific Mitigation:
- Marshaling 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: Reptiles/Amphibians

<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>S1-S19</td>
<td>S1</td>
<td>Wild-300</td>
<td>Site: 77 to 86</td>
<td>E-531927 N-5512644</td>
<td>E-531927 N-5517444</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S20</td>
<td>S1</td>
<td>Wild-300</td>
<td>Site: 93 to 96</td>
<td>E-531927 N-5513318</td>
<td>E-53384 N-551184</td>
<td>14N</td>
<td>1924 m</td>
</tr>
<tr>
<td>S1-S19</td>
<td>S1</td>
<td>Wild-301</td>
<td>Site: 79 to 82</td>
<td>E-531927 N-5512644</td>
<td>E-53384 N-551184</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S20</td>
<td>S1</td>
<td>Wild-301</td>
<td>Site: 91 to 97</td>
<td>E-531927 N-5512644</td>
<td>E-53384 N-551184</td>
<td>14N</td>
<td>1924 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Disturbance and destruction of suitable habitat/habitat loss (including nests if present) along the ROW; microhabitat alterations; sensory disturbance effects and direct mortality from machinery-related activity.

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.
- Provide 100 m vegetated (shrub and herbaceous) buffer around site.
- Identify and flag buffer areas prior to start of work.
- Remove trees by low-disturbance methods.
- Maintain shrub and herbaceous vegetation to the extent possible.
- Confining vehicle traffic to established trails to the extent possible.
- Conduct summer field investigations prior to tower placement where habitat overlaps tower footprints.

ESS Group: Food/Medicinal

<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>S1-S19</td>
<td>S1</td>
<td>Ruse-200</td>
<td>Site: 81 to 84</td>
<td>E-531927 N-5513318</td>
<td>E-531927 N-5512644</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S20</td>
<td>S1</td>
<td>Ruse-200</td>
<td>Site: 92 to 98</td>
<td>E-531927 N-5512644</td>
<td>E-5511244</td>
<td>14N</td>
<td>2143 m</td>
</tr>
</tbody>
</table>

Potential Effects:
Loss of vegetation as a result of clearing, construction, maintenance and decommissioning activities.

Specific Mitigation:
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion.
- Minimize surface disturbance around the site to the extent possible.
- Remove trees by low-disturbance methods.
- No herbicide to be applied during construction.
- Confining vehicle traffic to established trails to the extent possible.
**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>S1-S19</td>
<td>S1-Eco-302</td>
<td>Species of Concern (Plant)</td>
<td>Site: 78 to 83</td>
<td>E-531958</td>
<td>E-531927</td>
<td>14N</td>
<td>763 m</td>
</tr>
<tr>
<td>S1-S20</td>
<td>S1-Eco-302</td>
<td>Species of Concern (Plant)</td>
<td>Site: 89 to 99</td>
<td>E-531927</td>
<td>E-535261</td>
<td>14N</td>
<td>4402 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
- Perform vehicle traffic on established trails to the extent possible
- Stabilize sites immediately after construction and re-vegetate disturbed areas in accordance with site Rehabilitation Plan

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**ESS Group: Invasive 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>S1-S19</td>
<td>S1-Eco-400</td>
<td>Invasive species patch</td>
<td>Site: 81A to 81B</td>
<td>E-531744</td>
<td>E-531927</td>
<td>14N</td>
<td>389 m</td>
</tr>
<tr>
<td>S1-S20</td>
<td>S1-Eco-400</td>
<td>Invasive species patch</td>
<td>Site: 81C to 81D</td>
<td>E-531927</td>
<td>E-532073</td>
<td>14N</td>
<td>192 m</td>
</tr>
<tr>
<td>S1-S19</td>
<td>S1-Eco-401</td>
<td>Invasive species patch</td>
<td>Site: 103A to 103B</td>
<td>E-532368</td>
<td>E-532565</td>
<td>14N</td>
<td>262 m</td>
</tr>
<tr>
<td>S1-S20</td>
<td>S1-Eco-402</td>
<td>Invasive species patch</td>
<td>Site: 104A to 105B</td>
<td>E-533498</td>
<td>E-534157</td>
<td>14N</td>
<td>870 m</td>
</tr>
</tbody>
</table>

**Potential Effects:**

Increased risk of spreading invasive weeds

**Specific Mitigation:**

- Implement Low-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP. If the land parcel contained within this polygon has been designated as High-Risk, full cleaning/washing mitigation is to be followed as per the SOP
- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Remove trees by low-disturbance methods
- Implement additional mitigation from site investigation
- Confinve 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:** 292