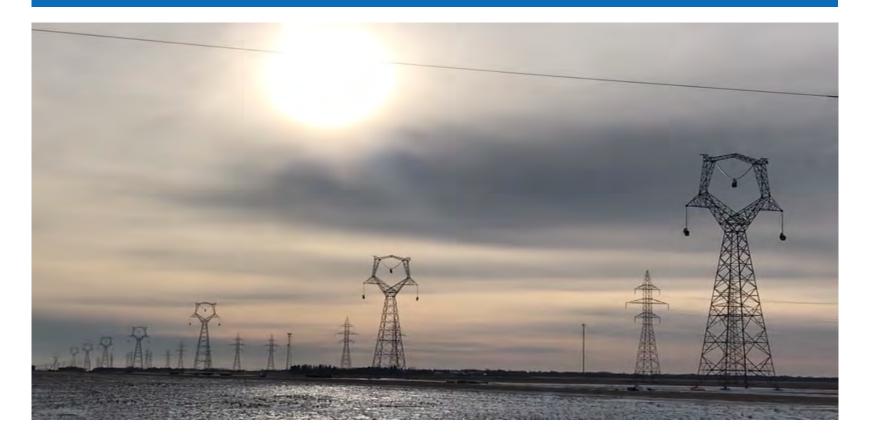
Manitoba-Minnesota Transmission Project Operation and Maintenance Environmental Protection Plan Mapbook



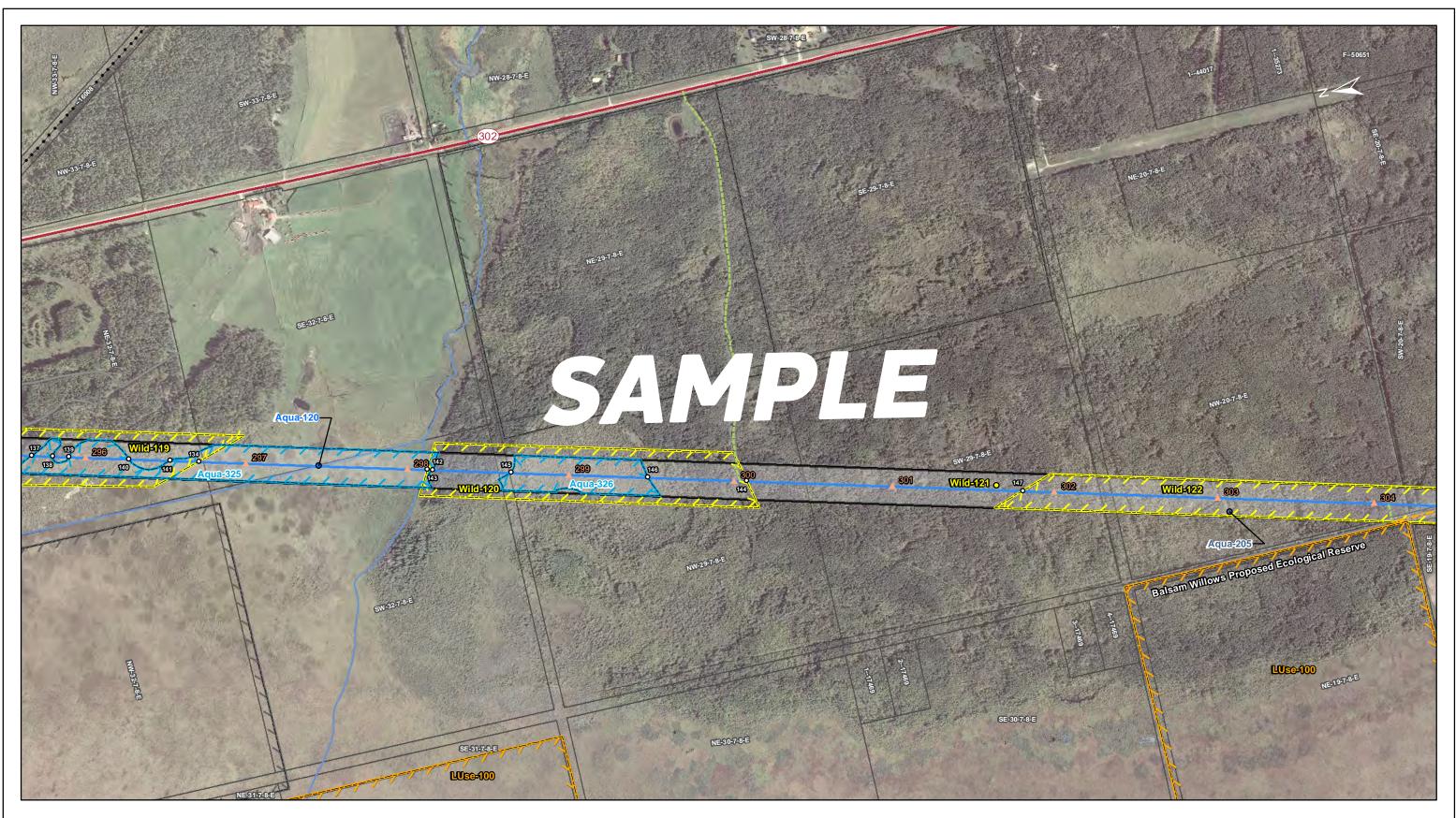
Lac du Bonnet Region: Tower 140-496 May 2020

Document Owner: Licensing and Environmental Assessment Department Transmission Planning and Design Division Transmission Business Unit Manitoba Hydro

Version Final 1.0

List of Revisions - MMTP Operation & Maintenance Environmental Protection Plan Mapbook

| onservation and Climate Manitoba | Maps 1-53 | Manitoba Hydro | 20200302 20200514 |
|----------------------------------|-----------|----------------|----------------------|
| onservation and Climate Manitoba | | | 20200514 |
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| 0 125 250 500 1 | Manitoba Hydro | Metres | Railway (Discontinued) First Nation Provincial Forest Parcel Fabric | Converter Station Footprint M602F Modification (Salvage) M602F Modification (New) | Existing Gravel/Dirt Road Field Access New Trail Restricted Access Load Restriction | Conservation Water Wetland | Man E |
|---|-------------------|--------|--|---|---|----------------------------------|----------|
|---|-------------------|--------|--|---|---|----------------------------------|----------|

SAMPLE MITIGATION TABLE (See KEY below for additional Information)

ESS Group: Wetlands

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) | |
|----------|----------|----------|-----------------------|-----------------------|--------------|---|
| Aqua-301 | Wetland | 21 to 22 | E-671537 N-5525458 | E-671580 N-5525456 | 43 | 3 |

Potential Effects:

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

Specific Mitigation (ID #205): 5

- 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
- Identify and flag a 30 m vegetated (shrub and herbaceous) buffer around site
- Remove trees by low-disturbance methods
- The application of herbicides is prohibited
- Maintain shrub and herbaceous vegetation to the extent possible

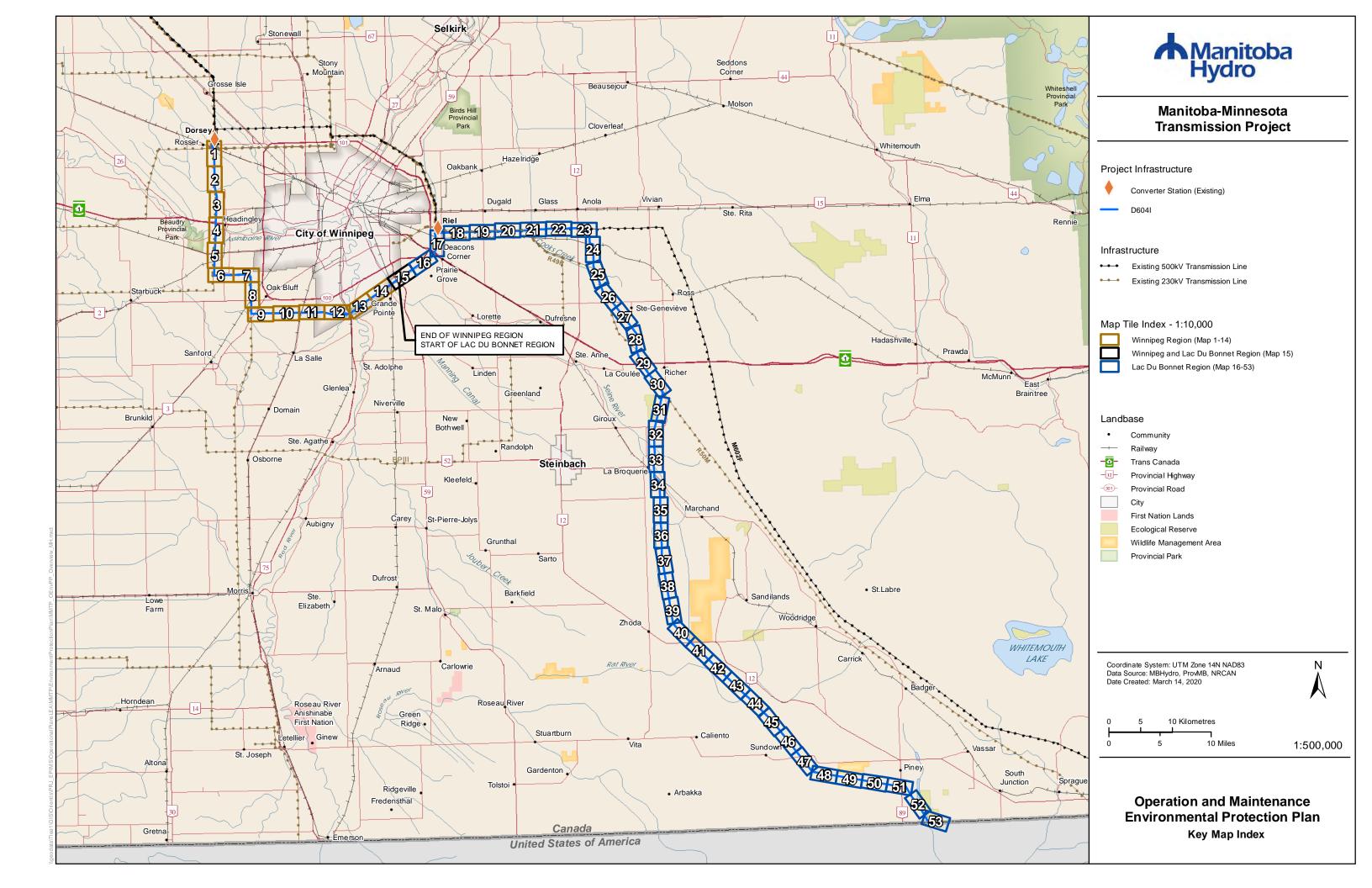
KEY to Sample Mitigation Table

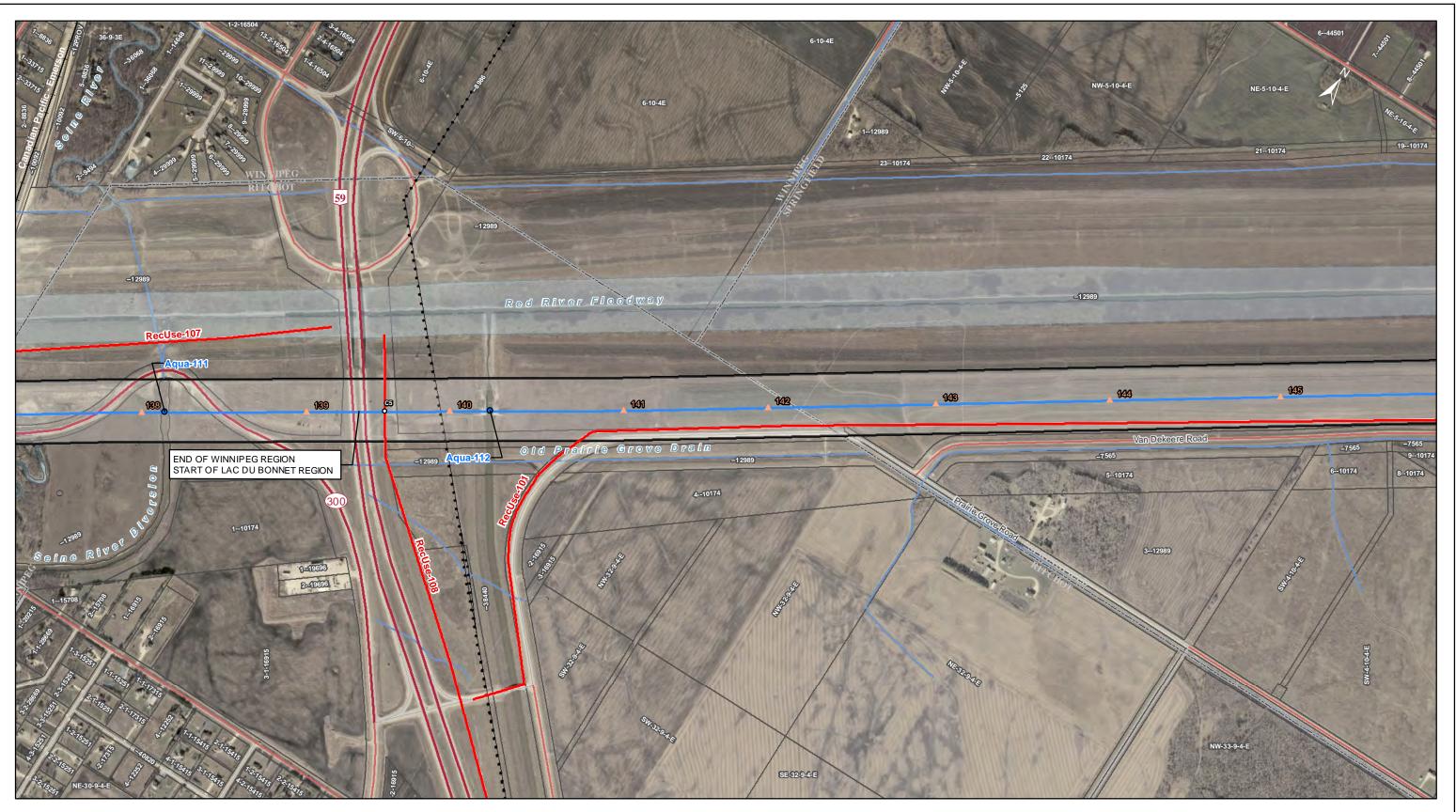
- 1 ESS Group classification of Environmentally Sensitive Sites (ESS) which are shown on the map
- 2 Notation indicates the geometry type of the ESS feature
- **3** ESS location summary; includes the following fields:
 - ESS ID Site specific ID assigned to each ESS according to naming convention (See ESS naming convention table)
 - ESS Name Brief name/description of ESS
 - Site identification numbers for the start and stop site points of ESS intersection with the ROW (lines and polygons only)
 - Easting/Northing UTM Zone 14 coordinates of ESS location (for points only)
 - Start/Stop UTM Zone 14 coordinates of the start/stop identification numbers listed in the "Location" field (lines and polygons only)
 - Distance length of ESS feature in meters
- 4 Potential effects identified for ESS listed in the ESS Location Summary table
- **5** Mitigation measures identified for a specific site. The ID number indicates a specific combination of mitigation measures
- 6 Map on which ESS listed in the ESS Location Summary tables are illustrated

ESS NAMING CONVENTION

| CATEGORY | GROUP (Number Series Representing Group) | ESS ID (Category-Group Number) | |
|-------------------|---|-----------------------------------|--|
| Access | Intersection (100) | RecUse-100 | |
| Ecosystem | Habitat (100) | Eco-100 | |
| Research (200) | | Eco-200 | |
| | Species of Concern (300) | Eco-300 | |
| | Invasive Species (400) | Eco-400 | |
| | Traditional Use (500) | Eco-500 | |
| Heritage | Archaeological (100) | Hert-100 | |
| | Cultural (200) | Hert-200 | |
| | Historic (300) | Hert-300 | |
| Land Use | Conservation (100) | LUse-100 | |
| | Crown Land Encumbrance (200) | LUse-200 | |
| | Recreation (300) | LUse-300 | |
| | Residential (400) | LUse-400 | |
| Resource Use | Agriculture (100) | RUse-100 | |
| | Food/Medicinal (200) | RUse-200 | |
| | Forestry (300) | RUse-300 | |
| | Hunting/Fishing (400) | RUse-400 | |
| | Trapping (500) | RUse-500 | |
| Soils and Terrain | Permafrost (100-200) | Soils-100 | |
| | Erosion (300) | Soils-300 | |
| | Terrain (400) | Soils-400 | |
| Water | Water Crossing (100) | Aqua-100 | |
| | Groundwater (200) | Aqua-200 | |
| | Wetlands (300) | Aqua-300 | |
| | Aquatic Invasive Species (400) | Aqua-400 | |
| Wildlife | Birds and Habitat (100) | Wild-100 | |
| | Mammal and Habitat (200) | Wild-200 | |
| | Reptiles/Amphibians and Habitat (300) | Wild-300 | |
| | Line of Sight Buffer (400) | Wild-400 | |

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| A Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base → Transmission Line → Highway → Major Road → Local Road → Railway (Operational) + Railway (Discontinued) ➡ First Nation ➡ Provincial Forest ➡ Parcel Fabric ➡ Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ➡ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Water • Water Crossing Rec Use • Trail | Man E |
|---------------------|---|--|---|--|---|----------|

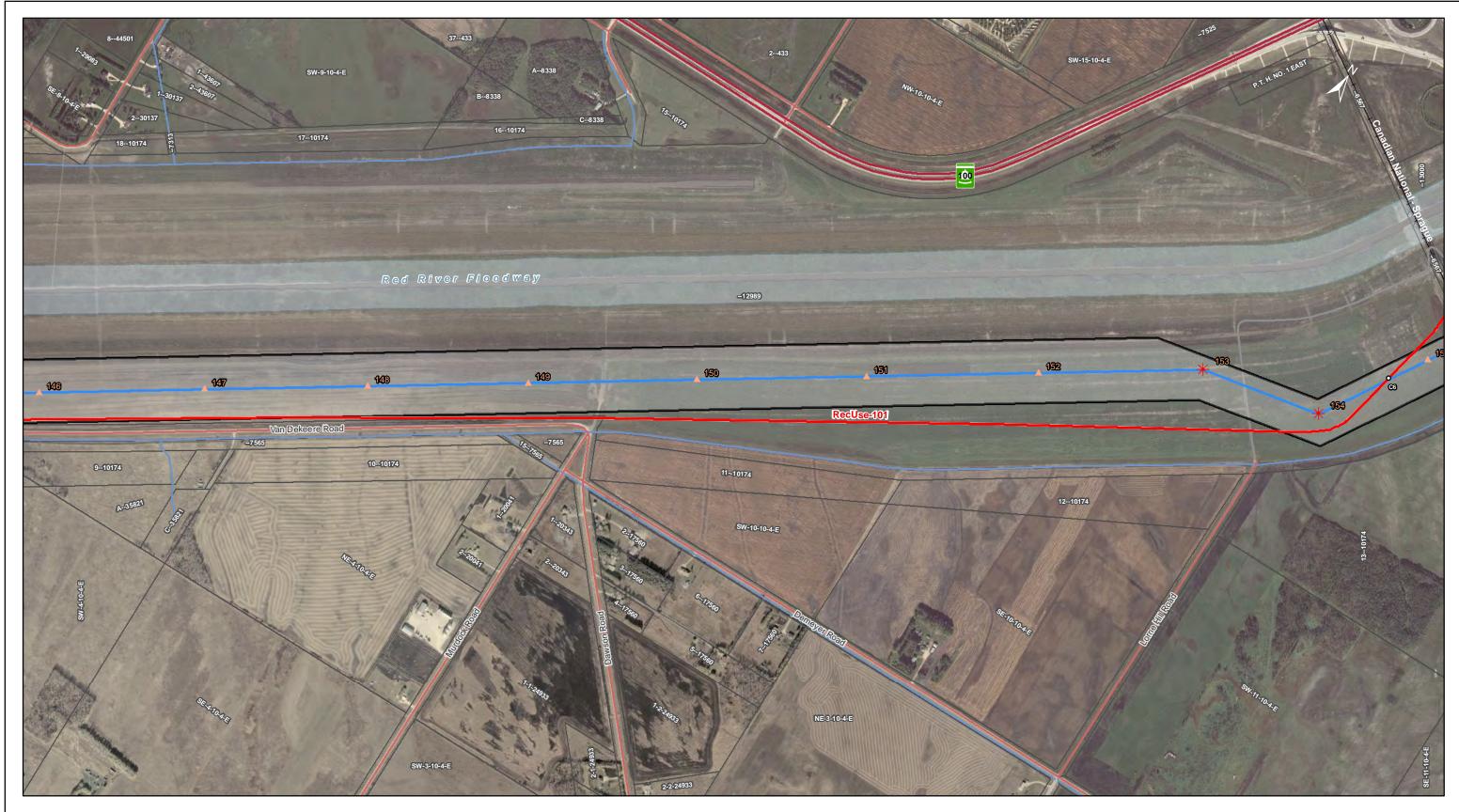
Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|-------------------------------------|-----------------------|----------------------|------------------|
| Aqua-111 | Seine River Bypass Crossing | E-640893 N-5516973 | 22 | 18.0 |
| Aqua-112 | Old Prairie Grove Drain Crossing | E-641655 N-5517486 | 11 | 4.5 |

*Features represented as lines (Mitigation ID# 7)

| ESS ID | ESS Name | Site | Location |
|------------|--------------------|------|-----------------------|
| RecUse-108 | Snoman Trail CT710 | C5 | E-641409 N-5517320 |

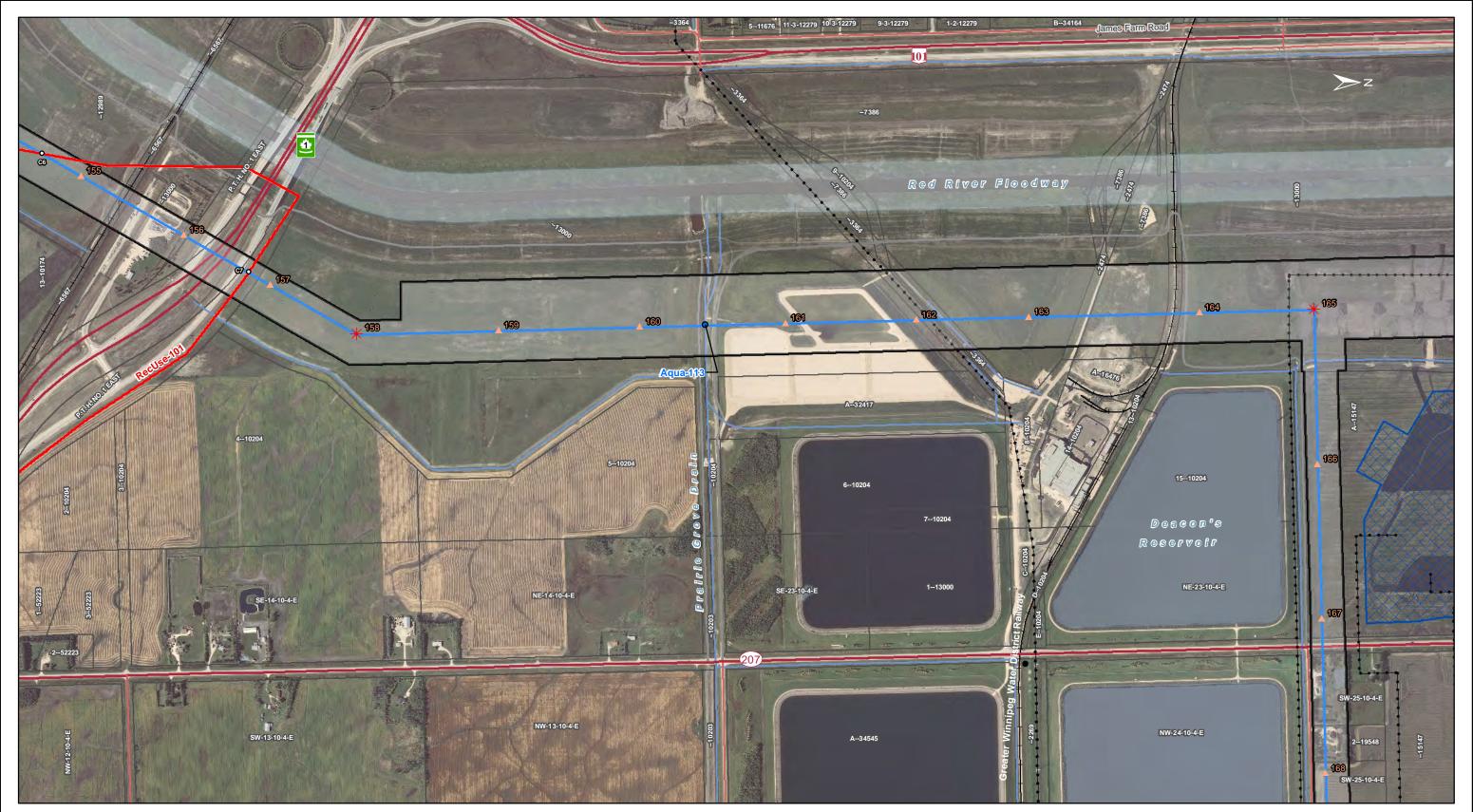


| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Errest | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ■ D6041 ■ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602E Modification (Salvane) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Rec Use Trail | Mani E |
|-------------------|--|---|--|--|----------------------------------|-----------|
| | 1:10,000 | Provincial Forest Parcel Fabric Rural Municipality | M602F Modification (Salvage) M602F Modification (New) | | | L |

Standard Mitigation - See appendix for details

*Features represented as lines (Mitigation ID# 7)

| ESS ID | ESS Name | Site | Location |
|------------|--------------------|------|-----------------------|
| RecUse-101 | Snoman Trail CT710 | C6 | E-647025 N-5521190 |



| Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 0 125 250 500 0 125 100 0 100 0 125 100 0 1 | Land Base → Transmission Line → Highway Major Road → Local Road → Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest → Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ➡ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Water Water Crossing Rec Use Trail | Mani E |
|--|--|---|--|---|-----------|

Standard Mitigation - See appendix for details

*Features represented as lines (Mitigation ID# 7)

| ESS ID | ESS Name | Site | Location |
|------------|--------------------|------|-----------------------|
| RecUse-101 | Snoman Trail CT710 | C6 | E-647025 N-5521190 |
| RecUse-101 | Snoman Trail CT710 | C7 | E-647356 N-5521767 |

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|---------------------------------|-----------------------|----------------------|------------------|
| Aqua-113 | Prairie Grove Drain Crossing | E-647503 N-5523042 | N/A | N/A |



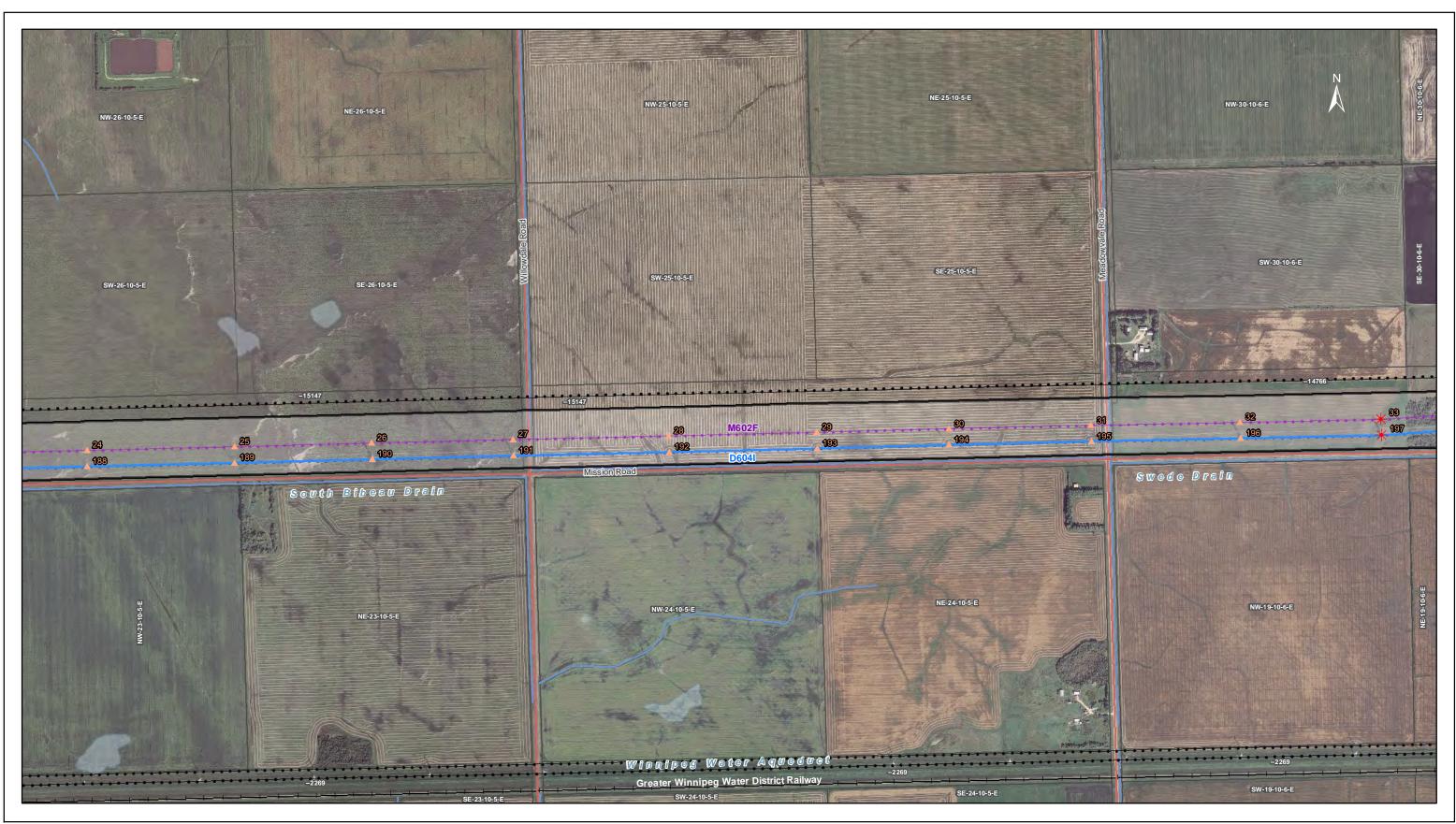
| | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base → Transmission Line Highway Major Road Local Road → Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ■ Right of Way Station Expansion ■ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features | Man E |
|--|--|--|---|--|--------------|----------|
|--|--|--|---|--|--------------|----------|

No specific mitigation measures for this map, page intentionally left blank



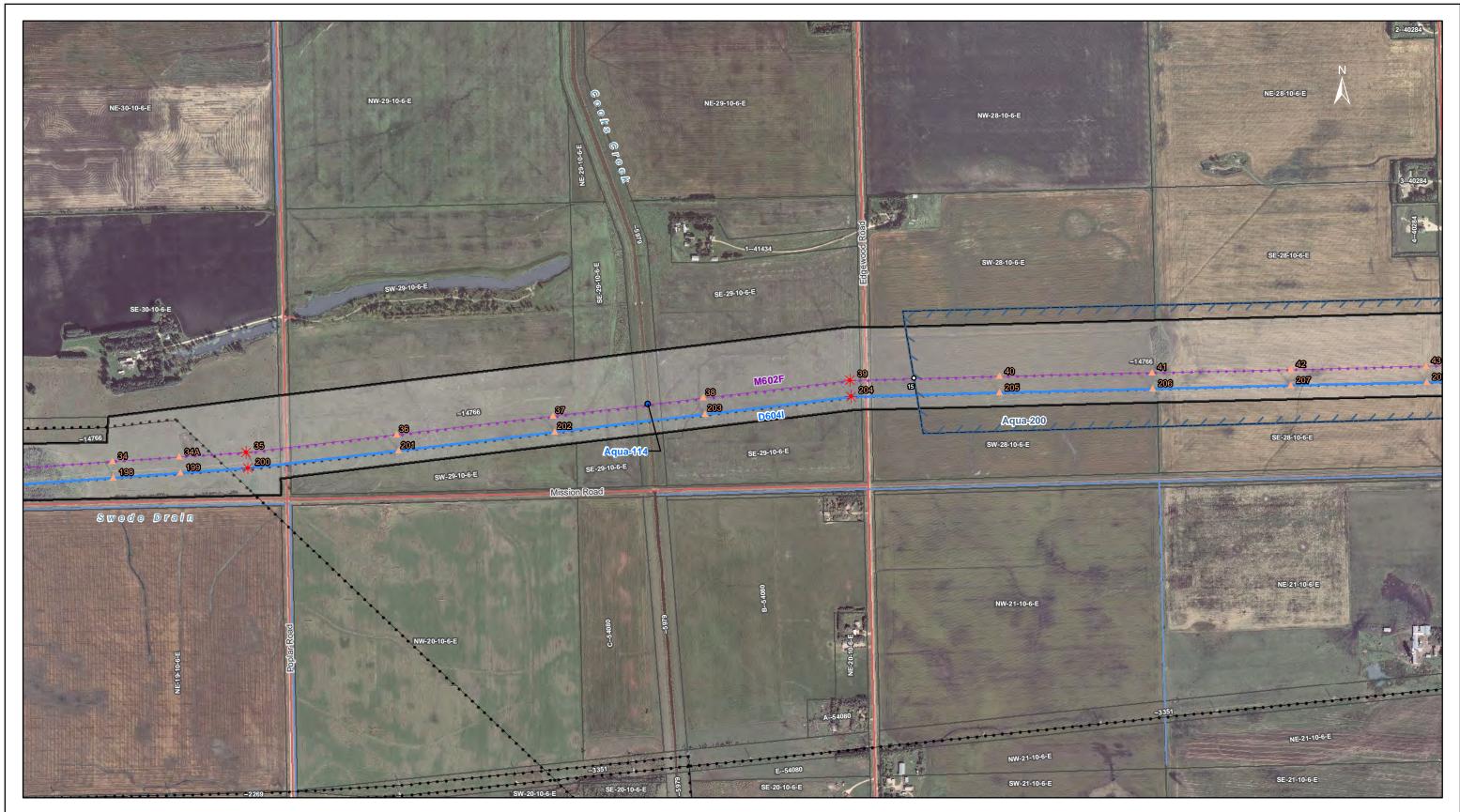
| A Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) Railway (Obscontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ➡ D6041 ➡ Right of Way ▷ Station Expansion ▷ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features * Some road names have not been verified * Tower locations subject to final design | ESS Features | Man E |
|---------------------|--|--|---|--|--------------|----------|
|---------------------|--|--|---|--|--------------|----------|

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| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ▶ D6041 ■ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features *Some road names have not been verified *Tower locations subject to final design | ESS Features | Mai |
|-------------------|--|--|---|--|--------------|-----|
|-------------------|--|--|---|--|--------------|-----|

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| Manitoba | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 | Land Base ← Transmission Line ← Highway ← Major Road ← Local Road ← Railway (Operational) | Project Infrastructure Tower Locations Angle Tower Locations D6041 Right of Way | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Water Water Crossing Water Z Groundwater | Man |
|----------|--|---|--|--|---|-----|
| Hydro | 0 125 250 500 Metres 1:10,000 | + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Station Expansion Converter Station Footprint M602F Modification (Salvage) M602F Modification (New) | | | E |

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|----------|-----------------------|-----------------------|--------------|
| Aqua-200 | Flowing Aquifer | 15 to 16 | E-663359 N-5525376 | E-672760 N-5525362 | 9410 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

- Qualified driller with appropriate experience will be utilized 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

Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|-------------------------|-----------------------|----------------------|------------------|
| Aqua-114 | Cooks Creek Crossing | E-662607 N-5525303 | 30 | 6 |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ■ Right of Way ☑ Station Expansion ፪ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Water Water Crossing Wetland | Mar |
|-------------------|---|--|---|--|--|-----|
|-------------------|---|--|---|--|--|-----|

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|----------|-----------------------|-----------------------|--------------|
| Aqua-200 | Flowing Aquifer | 17 to 18 | E-671689 N-5525406 | E-672285 N-5521842 | 3963 |

Potential Effects:

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

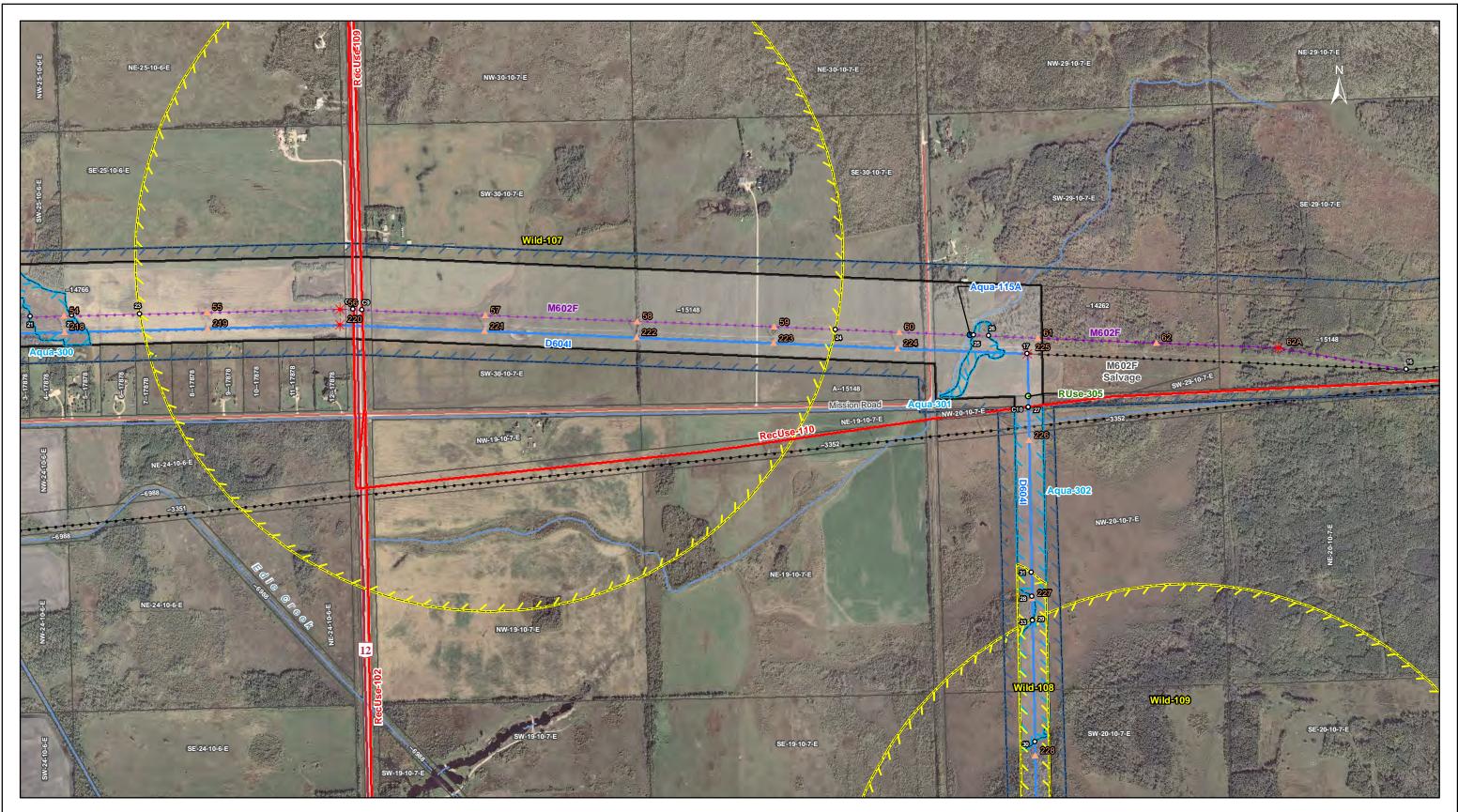
Specific Mitigation (ID# 7050):

- Qualified driller with appropriate experience will be utilized 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

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 14)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|------------------------|----------|-----------------------|-----------------------|--------------|
| Aqua-115 | Edie Creek Crossing | 19 to 20 | E-667523 N-5525478 | E-667948 N-5525488 | 425 |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Aailway (Operational) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ▶ D6041 ■ Right of Way ▷ Station Expansion ▷ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features *Some road names have not been verified *Tower locations subject to final design | ESS Features Resource Use O Forestry Water O Water Crossing Rec Use Trail Water Z Groundwater Witdinfe D Birds and Habitat | Man |
|-------------------|--|--|---|--|--|-----|
|-------------------|--|--|---|--|--|-----|

ESS Group: Birds and Habitat

*Features represented as polygons

| E | ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---|----------|-------------|----------|-----------------------|-----------------------|--------------|
| V | Vild-108 | GWW Habitat | 31 to 32 | E-671701 N-5524787 | E-671720 N-5523774 | 1013 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- ٠ At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------------------------|----------|-----------------------|-----------------------|--------------|
| Wild-107 | Sharp-tailed grouse lek | 23 to 24 | E-669181 N-5525519 | E-671147 N-5525474 | 1968 |
| Wild-109 | Sharp-tailed grouse lek | 33 to 34 | E-671704 N-5524653 | E-672299 N-5521282 | 3771 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba ٠ Hydro Environmental Specialist to discuss potential mitigation options

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|----------|-----------------------|-----------------------|--------------|
| Aqua-200 | Flowing Aquifer | 15 to 16 | E-663359 N-5525376 | E-672760 N-5525362 | 9410 |
| Aqua-200 | Flowing Aquifer | 17 to 18 | E-671689 N-5525406 | E-672285 N-5521842 | 3963 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

- •
- ٠ Emergency response plans for sealing/grouting and pumping will be implemented as required
- ٠ Follow up inspections of installed foundations will be undertaken to monitor for excess moisture

Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 2)

| ESS ID | ESS Name | Location |
|----------|-------------|----------------------|
| RUse-305 | Shelterbelt | E-671692 - N-5525286 |

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|----------|-----------------------|-----------------------|--------------|
| Aqua-300 | Wetland | 21 to 22 | E-668871 N-5525511 | E-668988 N-5525514 | 117 |
| Aqua-301 | Wetland | 25 to 26 | E-671537 N-5525458 | E-671581 N-5525456 | 43 |
| Aqua-302 | Wetland | 27 to 28 | E-671692 N-5525252 | E-671702 N-5524720 | 533 |
| Aqua-302 | Wetland | 29 to 30 | E-671704 N-5524652 | E-671710 N-5524308 | 344 |

*Features represented as points (Mitigation ID# 14)

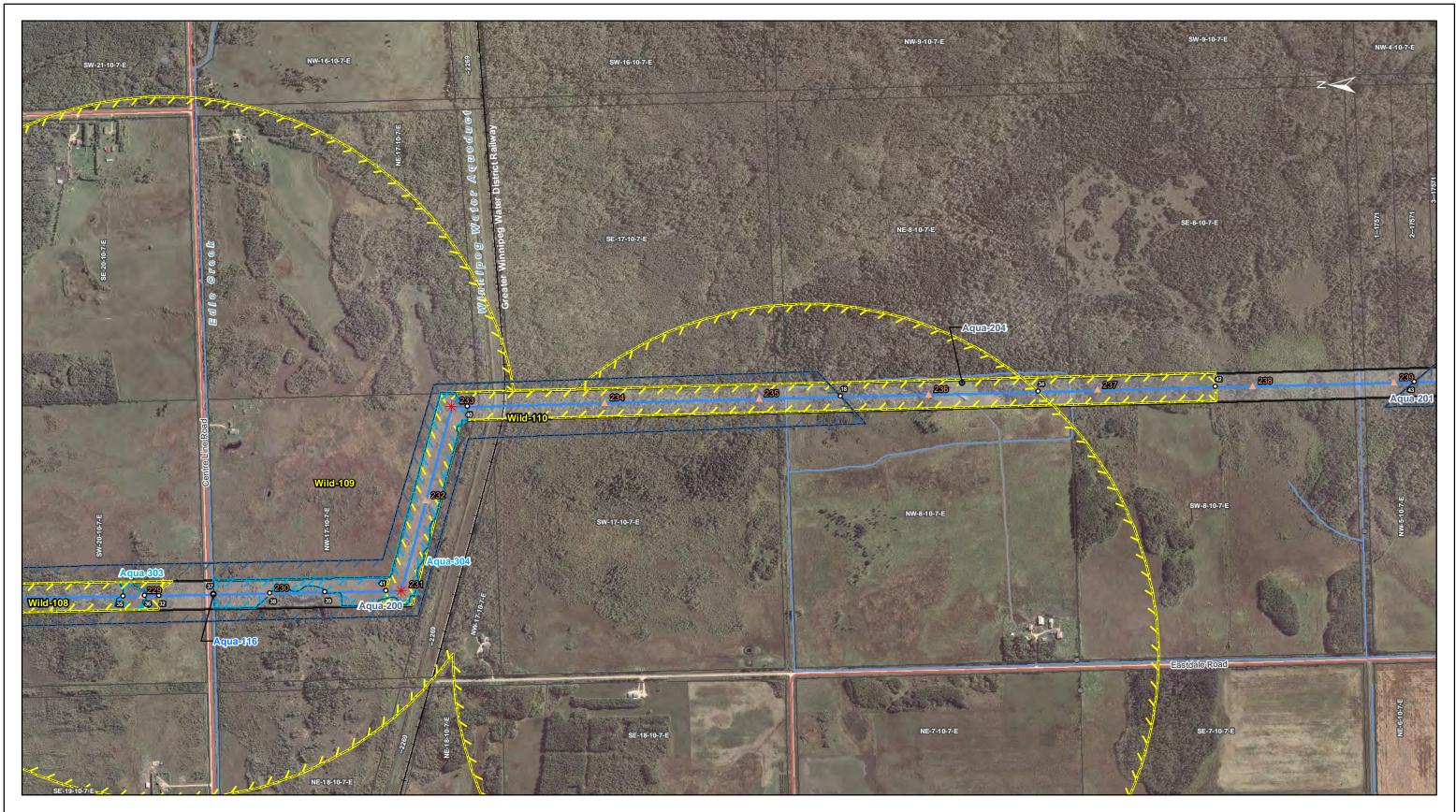
| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|-----------|---------------------------|-----------------------|----------------------|------------------|
| Aqua-115A | Unnamed Creek Crossing | E-671528 N-5525459 | N/A | N/A |

Qualified driller with appropriate experience will be utilized to work in areas affected by artesian conditions

*Features represented as lines (Mitigation ID# 7)

| ESS ID | ESS Name | Site | Location |
|------------|--------------------|------|-----------------------|
| RecUse-110 | Snoman Trail CT270 | C10 | E-671692 N-5525255 |
| RecUse-109 | Snoman Trail PT50 | C8 | E-669784 N-5525531 |
| RecUse-102 | Snoman Trail PT50 | C9 | E-669809 N-5525530 |

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| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base ← Transmission Line ← Highway ← Major Road ← Local Road ← Railway (Operational) + Railway (Discontinued) ← First Nation ← Provincial Forest ← Parcel Fabric ← Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ■ Right of Way ✓ Station Expansion ☑ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features * Some road names have not been verified * Tower locations subject to final design | ESS Features Water • Water Crossing • Groundwater Water • Groundwater • Wetland Wildlife • Birds and Habitat | Mar |
|-------------------|--|--|---|---|--|-----|
|-------------------|--|--|---|---|--|-----|

ESS Group: Birds and Habitat

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|----------|-----------------------|-----------------------|--------------|
| Wild-108 | GWW Habitat | 31 to 32 | E-671701 N-5524787 | E-671720 N-5523774 | 1013 |
| Wild-110 | GWW Habitat | 41 to 42 | E-671733 N-5523132 | E-672312 N-5520779 | 2752 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|----------|-----------------------|-----------------------|--------------|
| Wild-109 | Sharp-tailed grouse lek | 33 to 34 | E-671704 N-5524653 | E-672299 N-5521282 | 3771 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st
- ٠ If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba Hydro Environmental Specialist to discuss potential mitigation options

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|----------|-----------------------|-----------------------|--------------|
| Aqua-200 | Flowing Aquifer | 17 to 18 | E-671689 N-5525406 | E-672285 N-5521842 | 3963 |
| Aqua-201 | Flowing Aquifer | 43 to 44 | E-672326 N-5520215 | E-672624 N-5518730 | 1536 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

- ٠
- ٠ Follow up inspections of installed foundations will be undertaken to monitor for excess moisture

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|---------------|----------------------|
| Aqua-204 | Artesian Well | E-672322 - N-5521498 |

Potential Effects:

Potential damage to wellhead or potential groundwater contamination from a contingency even (e.g., spill)

Specific Mitigation (ID# 7200):

- ٠ Locate and flag a 10m buffer around wellhead if at risk of damage due to work activities
- No fueling or servicing of vehicles within 100m of wellhead
- No fuel or hazardous materials storage within 100m of wellhead

Qualified driller with appropriate experience will be utilized to work in areas affected by artesian conditions Emergency response plans for sealing/grouting and pumping will be implemented as required

ESS Group: Water Crossing

*Features represented as polygons

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|------------------------|-----------------------|----------------------|------------------|
| Aqua-116 | Edie Creek Crossing | E-671723 N-5523620 | N/A | N/A |

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 (ID# 1500):

- 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 will not violate MH Veg Clearance Requirements
- ٠
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing Where possible carry out construction activities on frozen ground to minimize surface damage, rutting and ٠ erosion
- ٠ Wash, refuel and service machinery and store fuel and other materials for the machinery at least 100m from high water mark, preventing any deleterious substances from entering the water
- ٠ Do not wash buckets and equipment in the watercourse

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|----------|-----------------------|-----------------------|--------------|
| Aqua-303 | Wetland | 35 to 36 | E-671718 N-5523877 | E-671720 N-5523816 | 61 |
| Aqua-304 | Wetland | 37 to 38 | E-671723 N-5523620 | E-671726 N-5523461 | 159 |
| Aqua-304 | Wetland | 39 to 40 | E-671729 N-5523304 | E-672257 N-5522900 | 803 |

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| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ■ D6041 ■ Right of Way ☑ Station Expansion ☑ Converter Station Footprint | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Water Water Crossing Ecosystem Habitat Water Groundwater Withdiffea | Man |
|-------------------|--|--|---|--|---|-----|
| riyaro | Metres 1:10,000 | First Nation Provincial Forest Parcel Fabric Rural Municipality | Converter Station Footprint M602F Modification (Salvage) M602F Modification (New) | | Wildlife | E |

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|----------|-----------------------|-----------------------|--------------|
| Wild-111 | GWW Habitat | 51 to 52 | E-672670 N-5518609 | E-675858 N-5513172 | 6430 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- ٠ At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|----------|-----------------------|-----------------------|--------------|
| Aqua-201 | Flowing Aquifer | 43 to 44 | E-672326 N-5520215 | E-672624 N-5518730 | 1536 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

- Qualified driller with appropriate experience will be utilized to work in areas affected by artesian conditions Emergency response plans for sealing/grouting and pumping will be implemented as required ٠
- ٠
- ٠ Follow up inspections of installed foundations will be undertaken to monitor for excess moisture

ESS Group: Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|----------------------|----------|-----------------------|-----------------------|--------------|
| Eco-101 | Prairie Grassland | 49 to 50 | E-672568 N-5518878 | E-672594 N-5518810 | 73 |

Potential Effects:

Potential loss of species of conservation concern or traditional use from clearing, construction, maintenance and decommissioning activities

Specific Mitigation (ID# 1600):

- ٠
- Use existing access roads and trails to the extent possible
- ٠ Confine vehicle traffic to established trails to the extent possible

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

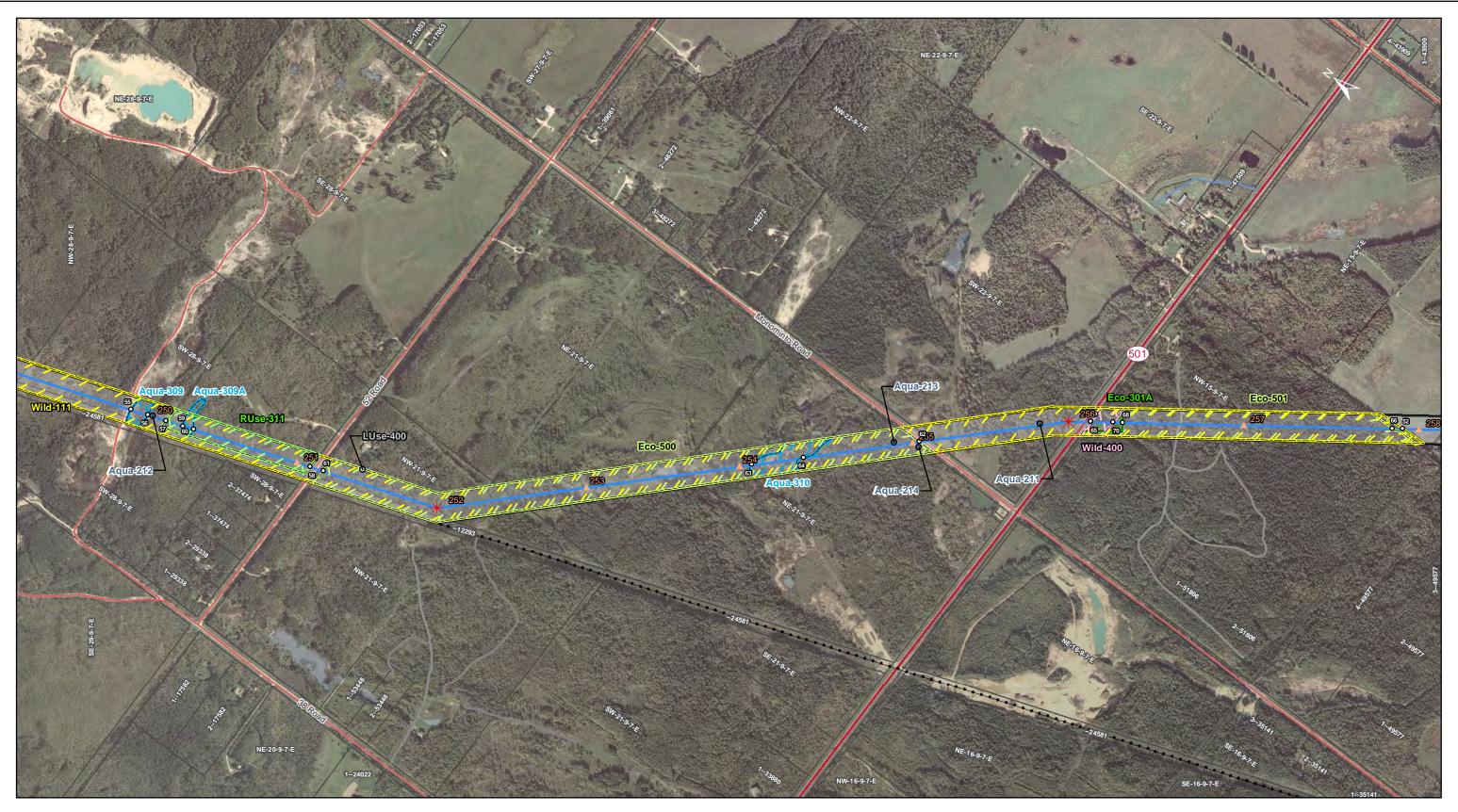
| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|----------|-----------------------|-----------------------|--------------|
| Aqua-305 | Wetland | 45 to 46 | E-672335 N-5519905 | E-672336 N-5519870 | 35 |
| Aqua-308 | Wetland | 47 to 48 | E-672460 N-5519162 | E-672470 N-5519136 | 28 |
| Aqua-308A | Wetland | 53 to 54 | E-672909 N-5517984 | E-672917 N-5517964 | 22 |

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|-------------------------|-----------------------|----------------------|------------------|
| Aqua-117 | Cooks Creek Crossing | E-672775 N-5518336 | N/A | N/A |

Version: Final 1.0

Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion.



| | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 | Land Base → Transmission Line Highway Major Road Local Road | Project Infrastructure Tower Locations Angle Tower Locations D6041 Right of Way | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Land Use O Residential Water O Groundwater Ecosystem | Water Wildlife Birds and Habitat Dine of Sight | Man |
|-------|---|---|--|--|--|---|-----|
| Hydro | 0 125 250 500 Metres 1:10,000 | Railway (Operational) Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Station Expansion Converter Station Footprint M602F Modification (Salvage) M602F Modification (New) | | Species of Traditional U Species of Concern Resource Use Sorestry | | E |

ESS Group: Birds and Habitat

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|----------|-----------------------|-----------------------|--------------|
| Wild-111 | GWW Habitat | 51 to 52 | E-672670 N-5518609 | E-675858 N-5513172 | 6430 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- ٠ At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Forestry

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------------------|----------|-----------------------|-----------------------|--------------|
| RUse-311 | Large Berry Picking Area | 57 to 58 | E-673702 N-5515906 | E-673854 N-5515507 | 427 |

Potential Effects:

Unnecessary damage to fruit and berry trees

Specific Mitigation (ID# 5040):

- 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
- Confine vehicle traffic to established trails to the extent possible ٠
- Apply a 30m buffer around polygon, within the polygon and buffered area no herbicide shall be applied

ESS Group: Groundwater

*Features represented as points

| ESS ID | ESS Name | Location |
|----------|------------------|----------------------|
| Aqua-211 | Groundwater Well | E-675231 - N-5513978 |
| Aqua-212 | Groundwater Well | E-673689 - N-5515943 |
| Aqua-213 | Groundwater Well | E-674934 - N-5514267 |
| Aqua-214 | Groundwater Well | E-674967 - N-5514203 |

Potential Effects:

Potential damage to wellhead or potential groundwater contamination from a contingency even (e.g., spill)

Specific Mitigation (ID# 7200):

- Locate and flag a 10m buffer around wellhead if at risk of damage due to work activities
- ٠ No fueling or servicing of vehicles within 100m of wellhead
- ٠ No fuel or hazardous materials storage within 100m of wellhead

ESS Group: Residential

*Features represented as points

| ESS ID | ESS Name | Location |
|----------|-------------------------------|----------------------|
| LUse-400 | Septic Ejector Discharge Pipe | E-673940 - N-5515387 |

Potential Effects:

Potential damage to septic system piping

Specific Mitigation (ID# 7210):

٠ Locate and flag a 5m buffer around pipe discharge, selective clearing to be used within buffer

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|----------|-----------------------|-----------------------|--------------|
| Aqua-309 | Wetland | 55 to 56 | E-673665 N-5516003 | E-673683 N-5515956 | 50 |
| Aqua-309A | Wetland | 59 to 60 | E-673720 N-5515859 | E-673731 N-5515829 | 32 |
| Aqua-310 | Wetland | 63 to 64 | E-674635 N-5514541 | E-674742 N-5514439 | 148 |

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|--|----------|-----------------------|-----------------------|--------------|
| Eco-301A | Plant Species of Concern | 67 to 68 | E-675325 N-5513870 | E-675380 N-5513799 | 90 |
| Eco-500 | Traditional Use Plant Species >30% Cover | 61 to 62 | E-673868 N-5515471 | E-674980 N-5514213 | 1705 |
| Eco-501 | Traditional Use Plant Species >30% Cover | 65 to 66 | E-675325 N-5513870 | E-675841 N-5513195 | 849 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|----------|-----------------------|-----------------------|--------------|
| Wild-400 | Line of Sight Buffer | 69 to 70 | E-675325 N-5513870 | E-675363 N-5513820 | 63 |

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| Coordinate System: UTM Zone 14N NAD83 Land Base Project Infrastruc | |
|--|--|
| Amapitoba Data Source: MB Hydro, ProvMB, NRCAN → Transmission Line → Transmission Line → Transmission Line → Transmission Line → Major Road → Locali Road → Major Road → Locali Road → Rijhu of Way → Station Expan → Major Road → Converter Station → Metres → Transmission Line → Transmission Line → Major Road → D6041 → Converter Station → Metres → Transmission Line → Major Road → Major Road → D6041 → Converter Station → Metres → Major Roat → Ma | s Point Features Linear Features Data Features Some road names have not been verified 'Tower locations subject to final design ion on Footprint ation (Salvage) Linear Features Description Water Water Water Description Description Water Description Des |

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|----------|-----------------------|-----------------------|--------------|
| Wild-112 | GWW Habitat | 71 to 72 | E-676235 N-5512678 | E-676526 N-5512297 | 480 |
| Wild-113 | GWW Habitat | 79 to 80 | E-676669 N-5512111 | E-677157 N-5511471 | 805 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- ٠ Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- ٠ Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|------------------|----------------------|
| Aqua-215 | Groundwater Well | E-676140 - N-5512805 |

Potential Effects:

Potential damage to wellhead or potential groundwater contamination from a contingency even (e.g., spill)

Specific Mitigation (ID# 7200):

- Locate and flag a 10m buffer around wellhead if at risk of damage due to work activities
- No fueling or servicing of vehicles within 100m of wellhead
- No fuel or hazardous materials storage within 100m of wellhead

ESS Group: Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|----------------------|----------|-----------------------|-----------------------|--------------|
| Eco-102 | Prairie Grassland | 75 to 76 | E-676547 N-5512270 | E-676660 N-5512122 | 186 |

Potential Effects:

Potential loss of species of conservation concern or traditional use from clearing, construction, maintenance and decommissioning activities

Specific Mitigation (ID# 1600):

- ٠
- ٠ Use existing access roads and trails to the extent possible
- ٠ Confine vehicle traffic to established trails to the extent possible

Standard Mitigation - See appendix for details

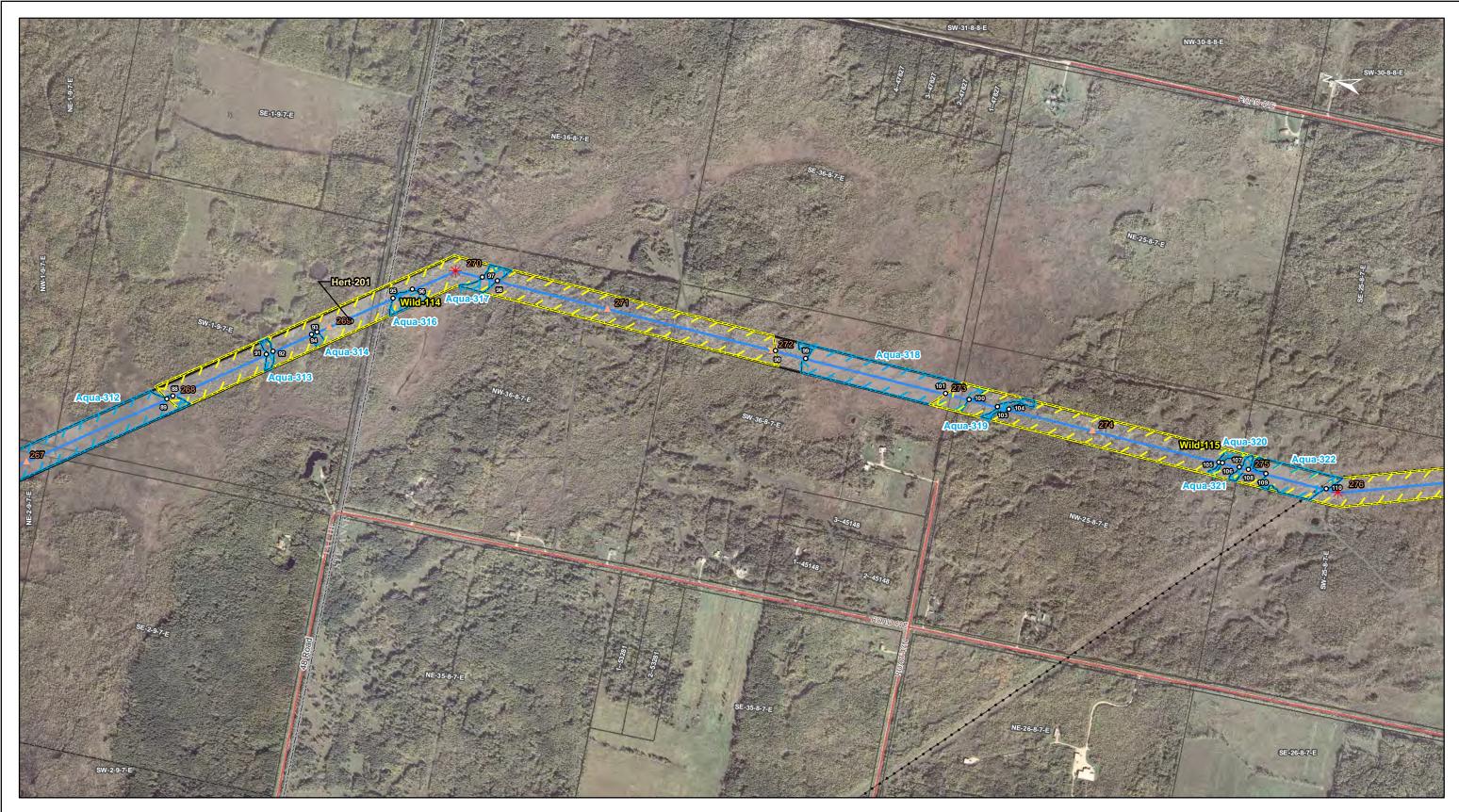
*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|------------------------|-----------------------|----------------------|------------------|
| Aqua-118 | Fish Creek Crossing | E-676922 N-5511779 | N/A | N/A |

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|----------|-----------------------|-----------------------|--------------|
| Aqua-310A | Wetland | 73 to 74 | E-676367 N-5512506 | E-676405 N-5512456 | 63 |
| Aqua-310B | Wetland | 77 to 78 | E-676624 N-5512169 | E-676669 N-5512110 | 74 |
| Aqua-310C | Wetland | 81 to 82 | E-676759 N-5511993 | E-676779 N-5511967 | 33 |
| Aqua-310C | Wetland | 83 to 84 | E-676780 N-5511965 | E-676782 N-5511962 | 4 |
| Aqua-311 | Wetland | 85 to 86 | E-677626 N-5510857 | E-677765 N-5510674 | 230 |
| Aqua-312 | Wetland | 87 to 88 | E-677776 N-5510660 | E-678614 N-5509562 | 1381 |

Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion.



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations D6041 Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features * Some road names have not been verified * Tower locations subject to final design | ESS Features Heritage O Cultural or Historic Water Witaland Wildlife Wildlife Birds and Habitat | Man E |
|-------------------|--|--|---|--|--|------------|

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|------------|-----------------------|-----------------------|--------------|
| Wild-115 | GWW Habitat | 101 to 102 | E-679125 N-5507447 | E-679344 N-5505623 | 1863 |
| Wild-114 | GWW Habitat | 89 to 90 | E-678602 N-5509578 | E-679131 N-5507941 | 1819 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Cultural

*Features represented as points

| ESS ID | ESS Name | Location |
|----------|----------------|----------------------|
| Hert-201 | Protected Tree | E-678935 - N-5509123 |

Potential Effects:

Potential disturbance to Heritage Resources

Specific Mitigation (ID# 3170):

- ٠ Identify and flag the large diameter Oak tree, establish a buffer of 10m prior to start of work
- Minimize surface disturbance around the site to the extent possible
- Remove trees that aren't identified using a selective clearing method within buffer and fell them away from the identified tree
- ٠ For more information refer to Written Letter and/or Agreement between Manitoba Hydro and landowner about tree retention that can be found in landworks

ESS Group: Wetland

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|----------|-----------------------|-----------------------|--------------|
| Aqua-317 | Wetland | 97 to 98 | E-679141 N-5508793 | E-679141 N-5508749 | 44 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless impacts to the bogs shall be implemented
- ٠ Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- wetlands in non-frozen conditions
- Remove trees by low ground disturbance methods
- ٠ Confine vehicle traffic to established access roads and travel trails to the extent possible
- ٠ The application of herbicides is prohibited within buffer

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

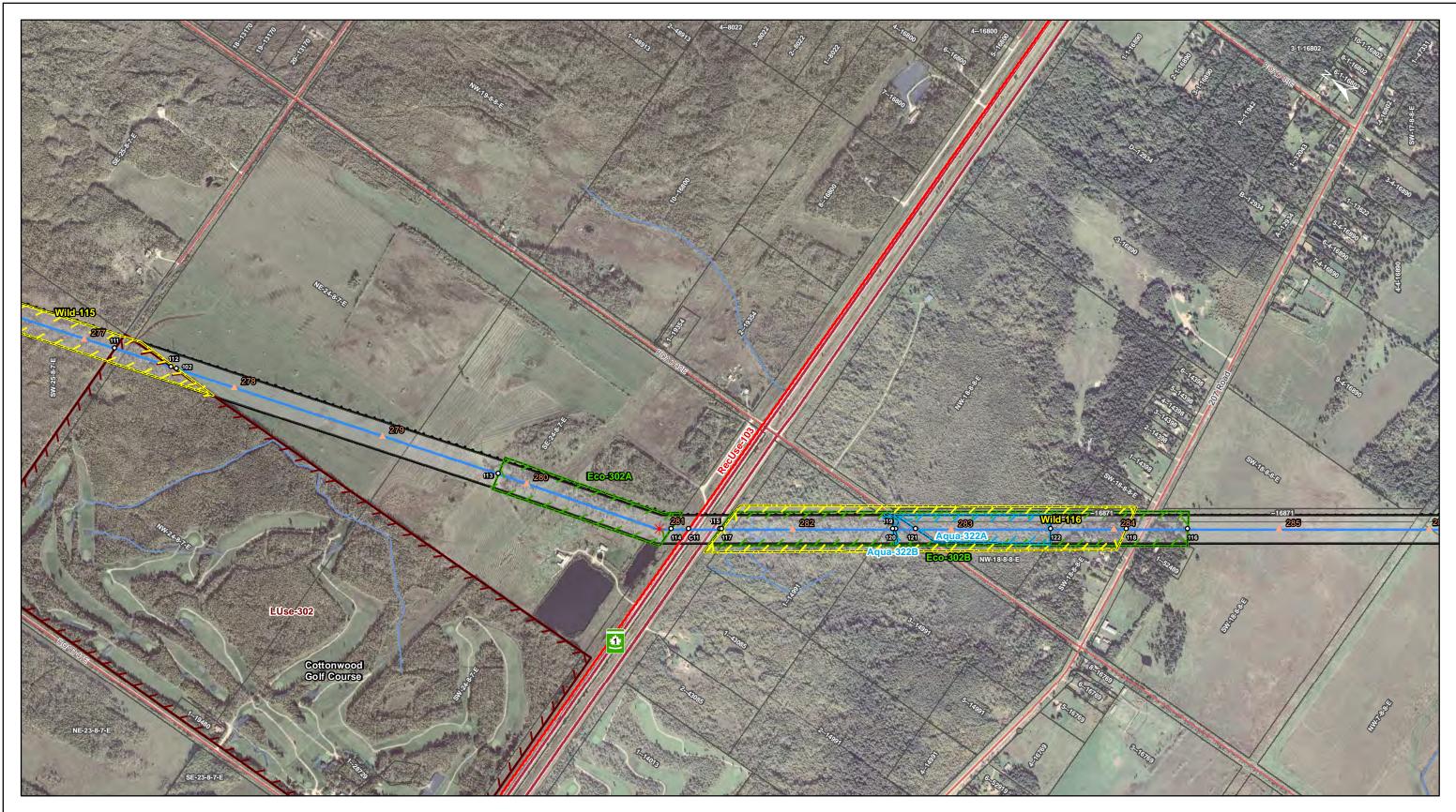
| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-318 | Wetland | 99 to 100 | E-679124 N-5507379 | E-679130 N-5507853 | 474 |
| Aqua-316 | Wetland | 95 to 96 | E-679025 N-5509024 | E-679062 N-5508975 | 61 |
| Aqua-314 | Wetland | 93 to 94 | E-678873 N-5509223 | E-678883 N-5509210 | 17 |
| Aqua-313 | Wetland | 91 to 92 | E-678789 N-5509333 | E-678801 N-5509318 | 19 |
| Aqua-312 | Wetland | 87 to 88 | E-677776 N-5510660 | E-678614 N-5509562 | 1381 |
| Aqua-322 | Wetland | 109 to 110 | E-679113 N-5506519 | E-679111 N-5506343 | 176 |
| Aqua-321 | Wetland | 107 to 108 | E-679114 N-5506595 | E-679114 N-5506569 | 26 |
| Aqua-320 | Wetland | 105 to 106 | E-679115 N-5506655 | E-679115 N-5506645 | 10 |
| Aqua-319 | Wetland | 103 to 104 | E-679123 N-5507297 | E-679122 N-5507264 | 33 |

required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce

Equipment operators will be trained in low impact driving techniques for traversing water courses and

Version: Final 1.0

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| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 | Land Base ← Transmission Line ← Highway ← Major Road ← Local Road | Project Infrastructure Tower Locations Angle Tower Locations D6041 | Sensitive Sites Point Features Linear Features Area Features * Some road names have not been verified | ESS Features Rec Use Trail Ecosystem Species of Concern | Mani |
|-------------------|---|--|---|---|---|------|
| | 0 125 250 500 Metres 1:10,000 | Local Koad Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | (Operational) Right of Way (Discontinued) Station Expansion ion Converter Station Footprint al Forest M602F Modification (Salvage) abric M602F Modification (New) | *Tower locations subject to final design Tower locations subject to final design Land Use Table Recreation Water Table Wetland Wildlife Table Birds and Habitat | Recreation Water Wetland Wildlife | E |

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|------------|-----------------------|-----------------------|--------------|
| Wild-115 | GWW Habitat | 101 to 102 | E-679125 N-5507447 | E-679344 N-5505623 | 1863 |
| Wild-116 | GWW Habitat | 117 to 118 | E-679906 N-5504116 | E-680593 N-5503200 | 1145 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- ٠ Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Recreation

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|---------------------------|------------|-----------------------|-----------------------|--------------|
| LUse-302 | Cottonwood Golf Course | 111 to 112 | E-679286 N-5505796 | E-679339 N-5505638 | 167 |

Potential Effects:

Potential disruption to recreational use activities

Specific Mitigation (ID# 4080):

- Carry out construction activities following any applicable noise bylaws MH to notify golf course manager of major noise-generating activities
- ٠

ESS Group: Species of Concern

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------------------|------------|-----------------------|-----------------------|--------------|
| Eco-302A | Plant Species of Concern | 113 to 114 | E-679652 N-5504715 | E-679820 N-5504231 | 514 |
| Eco-302B | Plant Species of Concern | 115 to 116 | E-679903 N-5504120 | E-680696 N-5503061 | 1323 |

Potential Effects:

Potential loss of plants of conservation concern from clearing, construction, maintenance and decommissioning activities

Specific Mitigation (ID# 2150):

- Remove trees by low ground disturbance methods
- ٠ Use existing access roads and trails to the extent possible
- ٠ revegtation mitigation measures found in the OMEnvPP Text
- ٠ No Herbicide application with Polygon

Standard Mitigation - See appendix for details

*Features represented as lines (Mitigation ID# 7)

| ESS ID | ESS Name | Site | Location |
|------------|-------------------|------|-----------------------|
| RecUse-103 | Snoman Trail PT21 | C11 | E-679850 N-5504191 |

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-322B | Wetland | 119 to 120 | E-680196 N-5503729 | E-680201 N-5503722 | 9 |
| Aqua-322A | Wetland | 121 to 122 | E-680234 N-5503678 | E-680463 N-5503372 | 382 |

In the event of ground disturbance contact Environmental Specialist who will refer to rehabilitation and



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ▶ D6041 ➡ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features *Some road names have not been verified *Tower locations subject to final design | ESS Features Ecosystem ● Species of Concern Ecosystem ✓ Species of Concern Water ✓ Wetland Widliffe ✓ Birds and Habitat | Mar |
|-------------------|--|--|---|--|---|-----|

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|------------|-----------------------|-----------------------|--------------|
| Wild-117 | GWW Habitat | 123 to 124 | E-681321 N-5502229 | E-682169 N-5501100 | 1412 |
| Wild-119 | GWW Habitat | 133 to 134 | E-682607 N-5500516 | E-682997 N-5498510 | 2255 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- ٠ Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- ٠ Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Species of Concern

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------------------|------------|-----------------------|-----------------------|--------------|
| Eco-302C | Plant Species of Concern | 125 to 126 | E-681327 N-5502221 | E-682160 N-5501111 | 1389 |
| Eco-302D | Plant Species of Concern | 131 to 132 | E-682533 N-5500614 | E-683229 N-5499501 | 1360 |

Potential Effects:

Potential loss of plants of conservation concern from clearing, construction, maintenance and decommissioning activities

Specific Mitigation (ID# 2150):

- ٠
- Remove trees by low ground disturbance methods Use existing access roads and trails to the extent possible In the event of ground disturbance contact Environmental Specialist who will refer to rehabilitation and ٠ revegtation mitigation measures found in the OMEnvPP Text
- No Herbicide application with Polygon

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-323 | Wetland | 127 to 128 | E-681539 N-5501939 | E-681557 N-5501914 | 31 |
| Aqua-324 | Wetland | 129 to 130 | E-682161 N-5501110 | E-682839 N-5500207 | 1129 |
| Aqua-324B | Wetland | 135 to 136 | E-683240 N-5499548 | E-683195 N-5499355 | 198 |

*Features represented as points (Mitigation ID# 1)

| ESS ID | ESS Name | Location |
|---------|--------------------------|----------------------|
| Eco-303 | Plant Species of Concern | E-683222 - N-5499546 |



| Metres First Nation Converter Station Footprint Water 1:10,000 Parcel Fabric M602F Modification (New) Wetland | Manitoba Hydro | | Provincial Forest | M602F Modification (Salvage) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | | |
|---|-------------------|--|-------------------|------------------------------|--|--|--|
|---|-------------------|--|-------------------|------------------------------|--|--|--|

NTIS\PRJ_EPIMS\OPERATIONALPLANSLEA\WMTP\ENVIRONMENTPROTECTIONPLAN\WMTP_OENVPP_MAPBOOK_MH.MXD

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|------------|----------------------|
| Wild-121 | Stick Nest | E-682495 - N-5496311 |

Potential Effects:

Potential disruption of stick nest

Specific Mitigation (ID# 8240):

- Nest tree will be located and marked with Flagging tape
- During the breeding season (April 30 to July 31) if work activities may cause a sensory disturbance during the breeding season the environmental specialist will be contacted and will refer to OMEnvPP text on appropriate setback distance
- If nest removal is required, Environmental Specialist will be contacted to verify the nest is empty

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|------------|-----------------------|-----------------------|--------------|
| Wild-119 | GWW Habitat | 133 to 134 | E-682607 N-5500516 | E-682997 N-5498510 | 2255 |
| Wild-120 | GWW Habitat | 143 to 144 | E-682850 N-5497881 | E-682644 N-5497001 | 903 |
| Wild-122 | GWW Habitat | 147 to 148 | E-682466 N-5496241 | E-682140 N-5494851 | 1427 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- Retain shrubs and herbaceous vegetation <4m tall to the extent possible Typically 5-10 perch site trees must be retained per span where feasible
- ٠

ESS Group: Conservation

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|---|----------|
| LUse-100 | Balsam Willows Proposed Ecological Reserve | *See Map |

Potential Effects:

Potential disruption to protected area outside of ROW

Specific Mitigation (ID# 4070):

Absolutely no activities are to extend into the boundaries of this area

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|------------------|----------------------|
| Aqua-205 | Groundwater Well | E-682294 - N-5495679 |

Potential Effects:

Potential damage to wellhead or potential groundwater contamination from a contingency even (e.g., spill)

Specific Mitigation (ID# 7200):

- ٠ Locate and flag a 10m buffer around wellhead if at risk of damage due to work activities
- ٠ No fueling or servicing of vehicles within 100m of wellhead
- No fuel or hazardous materials storage within 100m of wellhead

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-325 | Wetland | 137 to 138 | E-683104 N-5498969 | E-683091 N-5498911 | 59 |
| Aqua-325 | Wetland | 139 to 140 | E-683080 N-5498868 | E-683042 N-5498703 | 169 |
| Aqua-325 | Wetland | 141 to 142 | E-683015 N-5498589 | E-682846 N-5497866 | 742 |
| Aqua-326 | Wetland | 145 to 146 | E-682795 N-5497649 | E-682707 N-5497273 | 386 |

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|---------------------------|-----------------------|----------------------|------------------|
| Aqua-120 | Unnamed Creek Crossing | E-682919 N-5498179 | 2.5 | 2.5 |

Map Number: 31



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) Rirst Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations D6041 Right of Way Station Expansion Station Expansion Converter Station Footprint M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Resource Use Wildlife Forestry Image: Birds and Habitat Water Water Crossing Land Use Conservation Water Water Image: Conservation Water Water Wetland | Man E |
|-------------------|--|--|---|--|---|----------|
|-------------------|--|--|---|--|---|----------|

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|------------|-----------------------|-----------------------|--------------|
| Wild-122 | GWW Habitat | 147 to 148 | E-682466 N-5496241 | E-682140 N-5494851 | 1427 |

Potential Effects:

Potential loss of habitat for Golden-winged Warbler from clearing, construction, maintenance and decommissioning activities.

Specific Mitigation (ID# 8260):

- ٠ At the planning stage contact the Environmental Specialist who will refer the Golden-winged warbler habitat management plan for clearing prescriptions and design drawings
- Retain shrubs and herbaceous vegetation <4m tall to the extent possible
- ٠ Typically 5-10 perch site trees must be retained per span where feasible

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|------------|-----------------------|-----------------------|--------------|
| Aqua-202 | Flowing Aquifer | 151 to 152 | E-681891 N-5491992 | E-682785 N-5483579 | 8768 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

- Qualified driller with appropriate experience will be utilized 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 ٠
- ٠
- ٠

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-327 | Wetland | 149 to 150 | E-682032 N-5494396 | E-682025 N-5494370 | 27 |

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|---------------------------|-----------------------|----------------------|------------------|
| Aqua-121 | Unnamed Drain Crossing | E-682024 N-5494365 | N/A | N/A |
| Aqua-122 | Unnamed Creek Crossing | E-681913 N-5491373 | 6.5 | 5.0 |

*Features represented as points (Mitigation ID# 2)

| ESS ID | ESS Name | Location |
|----------|-------------|----------------------|
| RUse-306 | Shelterbelt | E-681861 - N-5492719 |
| RUse-307 | Shelterbelt | E-681912 - N-5491242 |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base → Transmission Line Highway Major Road Local Road → Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ■ Right of Way ✓ Station Expansion ▲ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Resource Use Forestry Water Water Crossing Rec Use Trail Ecosystem Invasive Species Species of Traditional Us Land Use Recreation | Water Image: Mater Crossing Mater Crossing e | Man E |
|-------------------|--|--|---|--|---|---|----------|
| | | | | | | | |

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|------------|-----------------------|-----------------------|--------------|
| Aqua-202 | Flowing Aquifer | 151 to 152 | E-681891 N-5491992 | E-682785 N-5483579 | 8768 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

- ٠ Qualified driller with appropriate experience will be utilized to work in areas affected by artesian conditions
- ٠
- 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: Invasive Species

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|---------------------|----------|
| Eco-400C | Tier 1 Noxious Weed | *See Map |

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation (ID# 2130):

- ٠ Implement High-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP.
- ٠ Confine vehicle traffic to established trails to the extent possible

ESS Group: Invasive Species

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|------------------------|------------|-----------------------|-----------------------|--------------|
| Eco-400 | Tier 1 Noxious Weed | 159 to 160 | E-681876 N-5488477 | E-681847 N-5488327 | 162 |
| Eco-400A | Tier 1 Noxious Weed | 161 to 162 | E-681855 N-5488121 | E-681860 N-5488026 | 95 |
| Eco-400B | Tier 1 Noxious Weed | 163 to 164 | E-681860 N-5488016 | E-681861 N-5488005 | 11 |

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation (ID# 2130):

- Implement High-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP. Confine vehicle traffic to established trails to the extent possible

ESS Group: Recreation

*Features represented as polygons

| ESS ID | ESS Name | |
|----------|-------------------|--|
| LUse-303 | La Verendrye Golf | |

Potential Effects:

Potential disruption to recreational use activities

Specific Mitigation (ID# 4080):

- Carry out construction activities following any applicable noise bylaws MH to notify golf course manager of major noise-generating activities ٠
- ٠

Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 2)

| ESS ID ESS Name | | Location |
|-----------------|-------------|----------------------|
| RUse-308 | Shelterbelt | E-681925 - N-5491056 |
| RUse-309 | Shelterbelt | E-681956 - N-5490246 |

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|---------------------------|-----------------------|----------------------|------------------|
| Aqua-124 | Unnamed Creek Crossing | E-681856 N-5488115 | 8 | 0.3 |

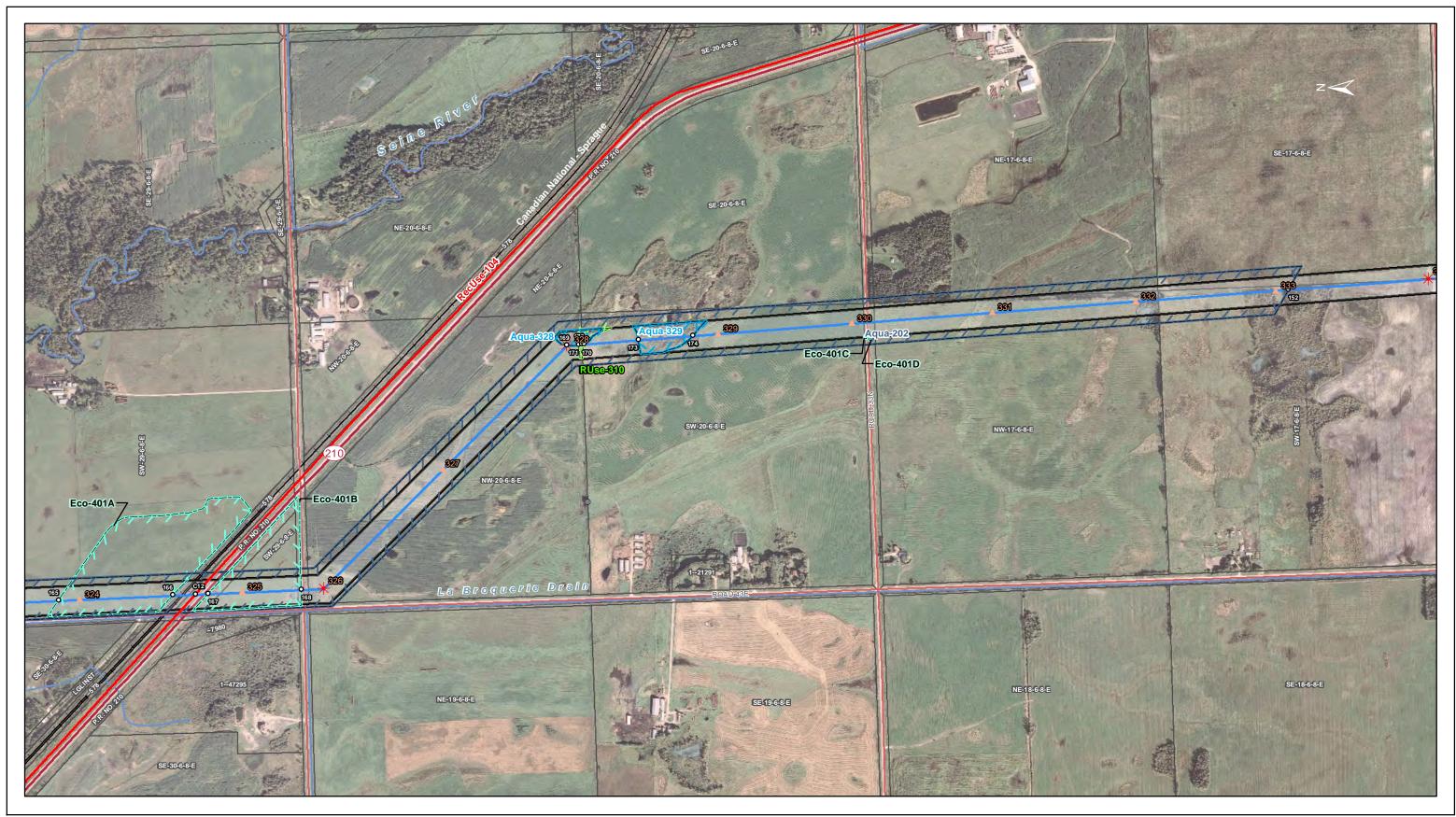
*Features represented as polygons (Mitigation ID# 14)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-123 | Seine River Crossing | 157 to 158 | E-681945 N-5488567 | E-681876 N-5488477 | 114 |

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-502 | Traditional Use Plant Species >30% Cover | 153 to 154 | E-681980 N-5489664 | E-681992 N-5489252 | 412 |
| Eco-503 | Traditional Use Plant Species >30% Cover | 155 to 156 | E-681985 N-5488619 | E-681945 N-5488567 | 65 |

| | Location |
|----------|----------|
| f Course | *See Map |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Aaiway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ■ Right of Way ⊠ Station Expansion ⊠ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features * Some road names have not been verified * Tower locations subject to final design | ESS Features Rec Use — Trail Ecosystem C Invasive Species Resource Use C Forestry Water C Groundwater Wetland | |
|-------------------|--|---|---|---|--|--|
|-------------------|--|---|---|---|--|--|

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|------------|-----------------------|-----------------------|--------------|
| Aqua-202 | Flowing Aquifer | 151 to 152 | E-681891 N-5491992 | E-682785 N-5483579 | 8768 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

- Qualified driller with appropriate experience will be utilized 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 •
- ٠
- ٠

ESS Group: Invasive Species

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|---------------------|----------|
| Eco-401C | Tier 1 Noxious Weed | *See Map |
| Eco-401D | Tier 1 Noxious Weed | *See Map |

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation (ID# 2130):

- Implement High-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP.
 Confine vehicle traffic to established trails to the extent possible

ESS Group: Invasive Species

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|------------------------|------------|-----------------------|-----------------------|--------------|
| Eco-401A | Tier 1 Noxious Weed | 165 to 166 | E-681902 N-5487074 | E-681917 N-5486748 | 326 |
| Eco-401B | Tier 1 Noxious Weed | 167 to 168 | E-681921 N-5486648 | E-681933 N-5486384 | 264 |

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation (ID# 2130):

- Implement High-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP. Confine vehicle traffic to established trails to the extent possible ٠

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 2)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------|------------|-----------------------|-----------------------|--------------|
| RUse-310 | Shelterbelt | 171 to 172 | E-682629 N-5485596 | E-682631 N-5485580 | 16 |

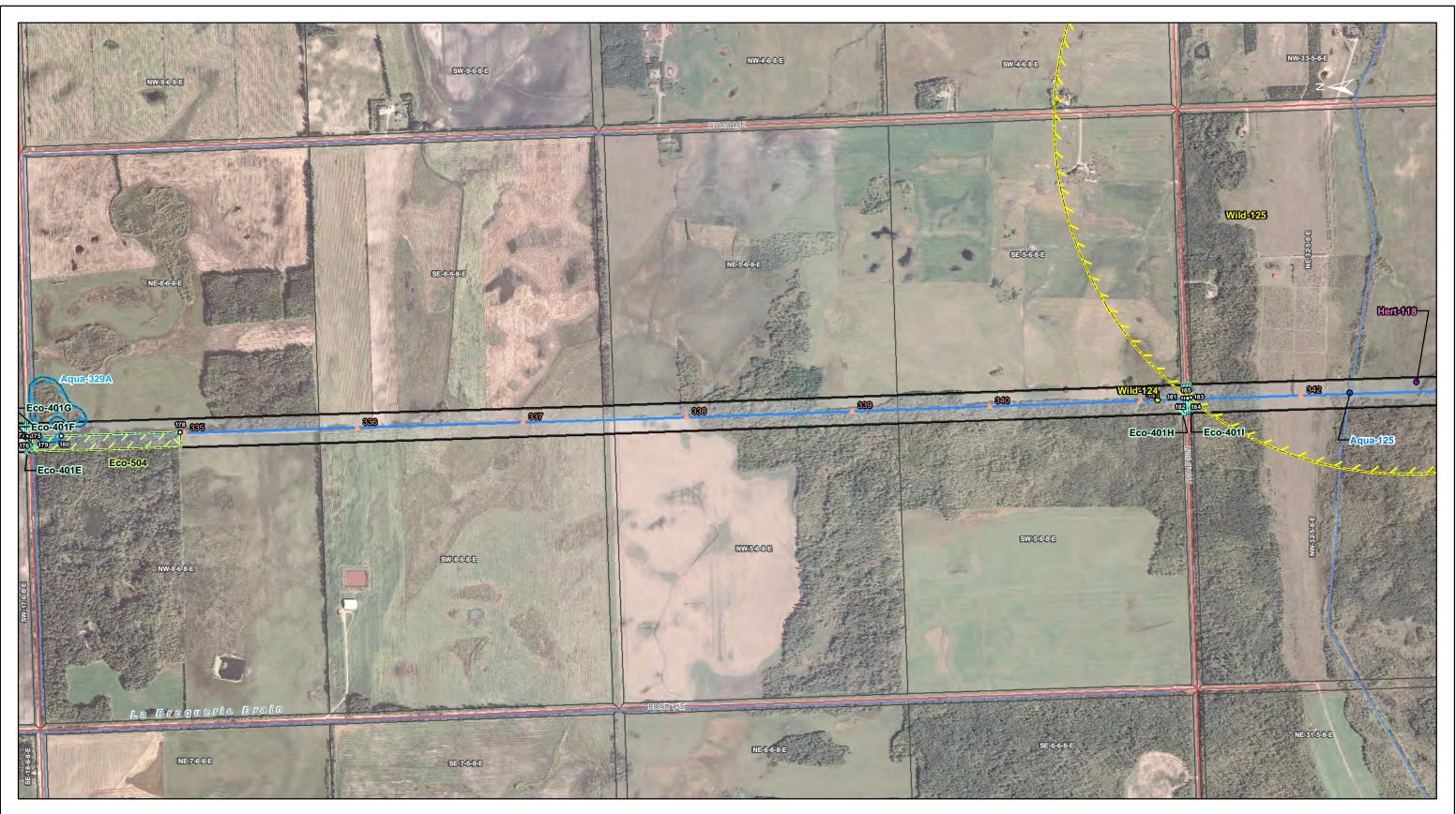
*Features represented as lines (Mitigation ID# 7)

| ESS ID | ESS Name | Site | Location |
|------------|-------------------|------|-----------------------|
| RecUse-104 | Snoman Trail PT29 | C12 | E-681920 N-5486684 |

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-328 | Wetland | 169 to 170 | E-682627 N-5485629 | E-682630 N-5485586 | 43 |
| Aqua-329 | Wetland | 173 to 174 | E-682643 N-5485426 | E-682655 N-5485270 | 156 |

Version: Final 1.0



| Manitaha | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 | Land Base ← Transmission Line ← Highway ← Major Road ← Local Road | Project Infrastructure Tower Locations Angle Tower Locations D6041 | Sensitive Sites Point Features Linear Features Area Features 'Some road names have not been verified | Archaeological Water Water Crossing | Water Wetland Wildlife C Birds and Habitat | Man |
|-------------------|---|--|--|--|--|---|-----|
| Manitoba Hydro | 0 125 250 500 Metres 1:10,000 | Railway (Operational) Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Right of Way Station Expansion Converter Station Footprint M602F Modification (Salvage) M602F Modification (New) | * Tower locations subject to final design | Wildlife Birds and Habitat Ecosystem Invasive Species Species of Traditional Use | | E |

ESS Group: Archaeological

*Features represented as points

| ESS ID | ESS Name | Location |
|----------|-----------------------|----------------------|
| Hert-118 | Area of Potential Use | E-682973 - N-5479217 |

Potential Effects:

Potential disturbance to Heritage Resources

Specific Mitigation (ID# 3180):

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion Inspect excavated materials or surface disturbance for heritage resources and report any finds to
- **Environmental Specialist**
- Minimize surface disturbance around the site to the extent possible
- Refer to the Heritage Resources Mitigation Measures found in the Heritage Resource Protection Plan when a suspected cultural heritage resource is discovered

ESS Group: Birds and Habitat

*Features represented as points

| ESS ID | ESS Name | Location |
|----------|------------|----------------------|
| Wild-124 | Stick Nest | E-682922 - N-5479948 |

Potential Effects:

Potential disruption of stick nest

Specific Mitigation (ID# 8240):

- Nest tree will be located and marked with Flagging tape
- During the breeding season (April 30 to July 31) if work activities may cause a sensory disturbance during the breeding season the environmental specialist will be contacted and will refer to OMEnvPP text on appropriate setback distance
- If nest removal is required, Environmental Specialist will be contacted to verify the nest is empty

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-125 | Sharp-tailed grouse lek | 185 to 186 | E-682927 N-5479862 | E-683021 N-5476992 | 2871 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st
- ٠ Hydro Environmental Specialist to discuss potential mitigation options

ESS Group: Invasive Species

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|---------------------|----------|
| Eco-401F | Tier 1 Noxious Weed | *See Map |
| Eco-401G | Tier 1 Noxious Weed | *See Map |

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation (ID# 2130):

- Implement High-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP.
- Confine vehicle traffic to established trails to the extent possible

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If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba

ESS Group: Invasive Species

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|------------------------|------------|-----------------------|-----------------------|--------------|
| Eco-401E | Tier 1 Noxious Weed | 175 to 176 | E-682817 N-5483152 | E-682817 N-5483147 | 5 |
| Eco-401H | Tier 1 Noxious Weed | 181 to 182 | E-682927 N-5479878 | E-682927 N-5479871 | 7 |
| Eco-401I | Tier 1 Noxious Weed | 183 to 184 | E-682927 N-5479863 | E-682928 N-5479855 | 7 |

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation (ID# 2130):

- Implement High-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP.
 Confine vehicle traffic to established trails to the extent possible

Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|---------------------------|-----------------------|----------------------|------------------|
| Aqua-125 | Unnamed Drain Crossing | E-682942 N-5479404 | N/A | N/A |

*Features represented as polygons (Mitigation ID# 1)

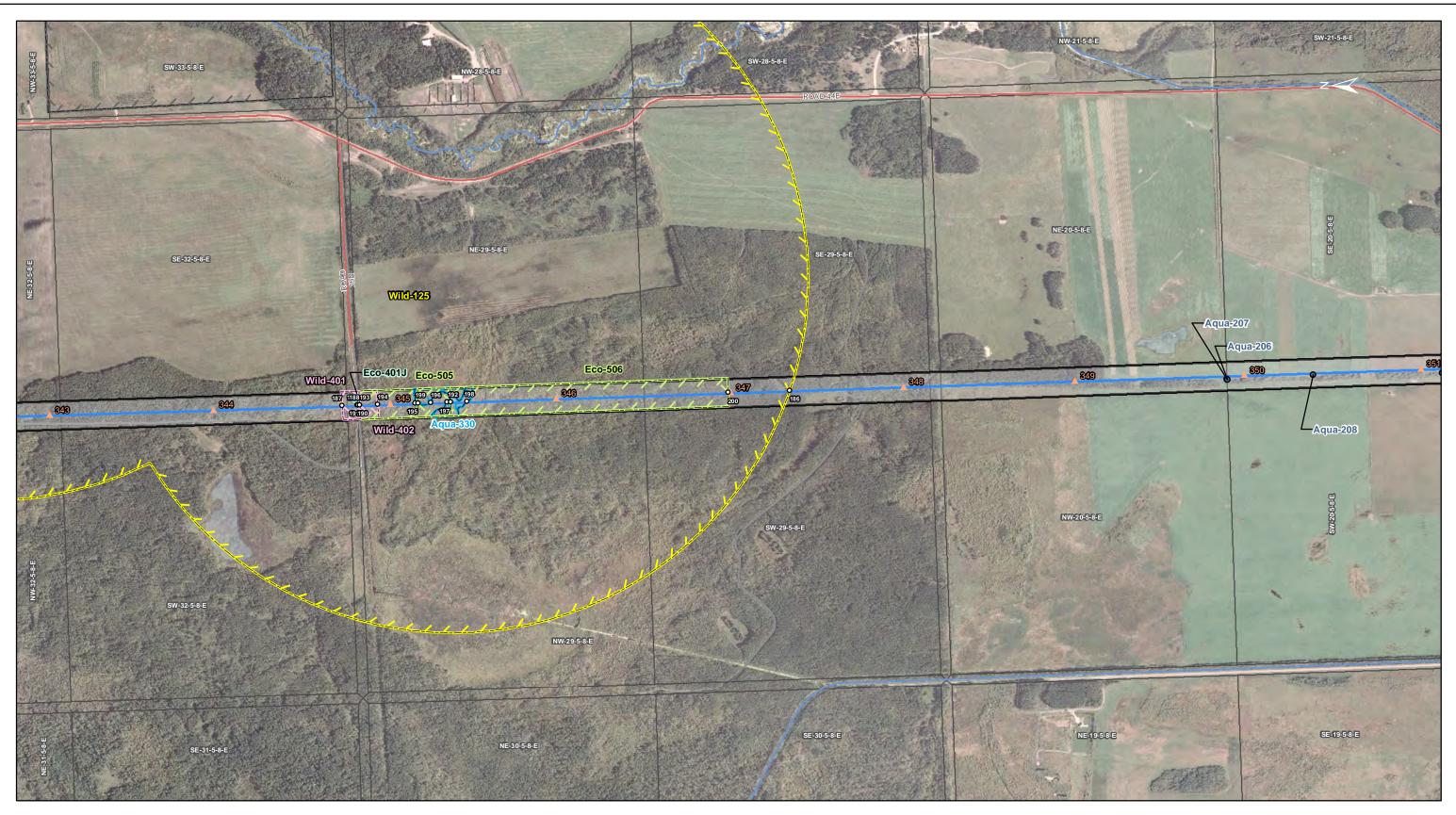
| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-504 | Traditional Use Plant Species >30% Cover | 177 to 178 | E-682817 N-5483135 | E-682830 N-5482713 | 422 |

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-329A | Wetland | 179 to 180 | E-682818 N-5483116 | E-682820 N-5483049 | 67 |

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| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base → Transmission Line → Highway → Major Road → Local Road → Railway (Operational) + Railway (Discontinued) ■ First Nation ■ Provincial Forest ■ Parcel Fabric ■ Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ➡ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Some road names have not been verified Tower locations subject to final design | ESS Features Water © Groundwater Ecosystem © Invasive Species © Species of Traditional Use Water Water Wetland Wildlife © Birds and Habitat © Line of Sight | Mani |
|-------------------|--|--|---|---|--|------|

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-125 | Sharp-tailed grouse lek | 185 to 186 | E-682927 N-5479862 | E-683021 N-5476992 | 2871 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st
- If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba Hydro Environmental Specialist to discuss potential mitigation options

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|------------------|----------------------|
| Aqua-206 | Groundwater Well | E-683052 - N-5475759 |
| Aqua-207 | Groundwater Well | E-683053 - N-5475760 |
| Aqua-208 | Groundwater Well | E-683066 - N-5475517 |

Potential Effects:

Potential damage to wellhead or potential groundwater contamination from a contingency even (e.g., spill)

Specific Mitigation (ID# 7200):

- Locate and flag a 10m buffer around wellhead if at risk of damage due to work activities
 No fueling or servicing of vehicles within 100m of wellhead
 No fuel or hazardous materials storage within 100m of wellhead

ESS Group: Invasive Species

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|------------------------|------------|-----------------------|-----------------------|--------------|
| Eco-401J | Tier 1 Noxious Weed | 189 to 190 | E-682980 N-5478210 | E-682980 N-5478208 | 2 |

Potential Effects:

Increased risk of spreading invasive weeds

Specific Mitigation (ID# 2130):

- Implement High-Risk Biosecurity cleaning measures as per the Agricultural Biosecurity SOP.
- ٠ Confine vehicle traffic to established trails to the extent possible

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

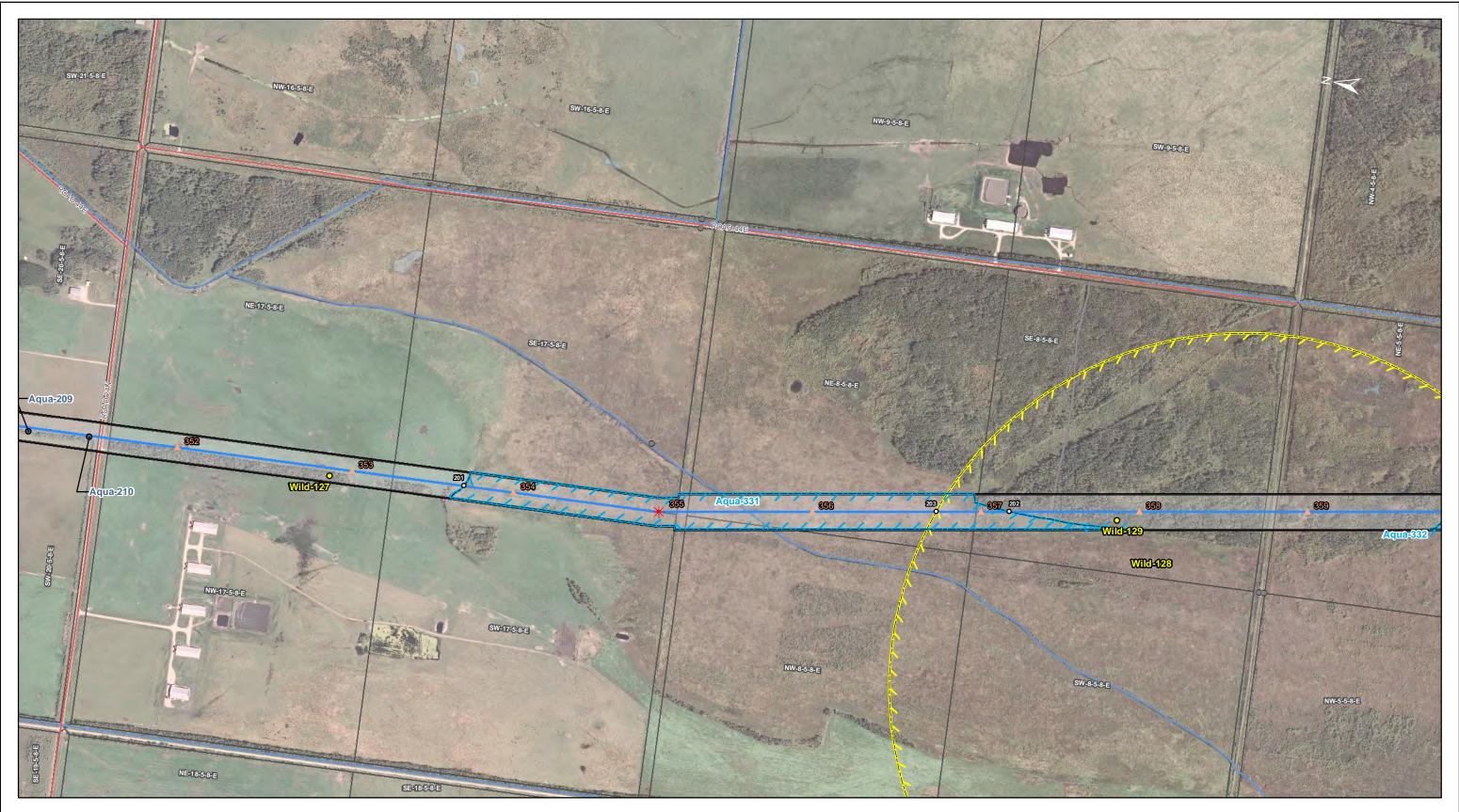
| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-330 | Wetland | 195 to 196 | E-682986 N-5478047 | E-682987 N-5478002 | 45 |
| Aqua-330 | Wetland | 197 to 198 | E-682989 N-5477957 | E-682991 N-5477900 | 57 |

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-505 | Traditional Use Plant Species >30% Cover | 191 to 192 | E-682980 N-5478202 | E-682989 N-5477947 | 255 |
| Eco-506 | Traditional Use Plant Species >30% Cover | 199 to 200 | E-682986 N-5478039 | E-683015 N-5477165 | 874 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-401 | Line of Sight Buffer | 187 to 188 | E-682979 N-5478252 | E-682980 N-5478202 | 50 |
| Wild-402 | Line of Sight Buffer | 193 to 194 | E-682980 N-5478202 | E-682982 N-5478152 | 50 |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations D6041 Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Mrea Features Some road names have not been verified Tower locations subject to final design | ESS Features Water © Groundwater Wildlife © Birds and Habitat Water Wetland Wildlife © Birds and Habitat | Mani E |
|-------------------|--|--|---|--|--|-----------|

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|------------|----------------------|
| Wild-127 | Stick Nest | E-683091 - N-5474296 |
| Wild-129 | Stick Nest | E-683342 - N-5472086 |

Potential Effects:

Potential disruption of stick nest

Specific Mitigation (ID# 8240):

- Nest tree will be located and marked with Flagging tape
 During the breeding season (April 30 to July 31) if work activities may cause a sensory disturbance during the breeding season the environmental specialist will be contacted and will refer to OMEnvPP text on appropriate setback distance
- ٠ If nest removal is required, Environmental Specialist will be contacted to verify the nest is empty

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-128 | Sharp-tailed grouse lek | 203 to 204 | E-683280 N-5472593 | E-683570 N-5470897 | 1721 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st
- ٠ If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba Hydro Environmental Specialist to discuss potential mitigation options

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|------------------|----------------------|
| Aqua-209 | Groundwater Well | E-683071 - N-5475154 |
| Aqua-210 | Groundwater Well | E-683085 - N-5474982 |

Potential Effects:

Potential damage to wellhead or potential groundwater contamination from a contingency even (e.g., spill)

Specific Mitigation (ID# 7200):

- Locate and flag a 10m buffer around wellhead if at risk of damage due to work activities No fueling or servicing of vehicles within 100m of wellhead No fuel or hazardous materials storage within 100m of wellhead
- ٠

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-331 | Wetland | 201 to 202 | E-683128 N-5473917 | E-683315 N-5472391 | 1541 |

Version: Final 1.0



| | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 | Land Base Transmission Line Highway Major Road Local Road | Project Infrastructure Tower Locations Angle Tower Locations D6041 | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified | ESS Features Water Witalnd Witalife Irds and Habitat | Man |
|-------------------|---|--|--|---|--|-----|
| Manitoba Hydro | 0 125 250 500 Metres 1:10,000 | Railway (Operational) Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Right of Way Station Expansion Converter Station Footprint M602F Modification (Salvage) M602F Modification (New) | * Tower locations subject to final design | | E |

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-128 | Sharp-tailed grouse lek | 203 to 204 | E-683280 N-5472593 | E-683570 N-5470897 | 1721 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st
 If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba Hydro Environmental Specialist to discuss potential mitigation options

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-332 | Wetland | 205 to 206 | E-683527 N-5471154 | E-683577 N-5470860 | 298 |
| Aqua-333 | Wetland | 207 to 208 | E-683886 N-5469050 | E-683893 N-5469013 | 37 |

Version: Final 1.0



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Local Road Cocal Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ● Right of Way ☑ Station Expansion ☑ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features * Some road names have not been verified * Tower locations subject to final design | ESS Features | Man E |
|-------------------|---|--|---|--|--------------|----------|

No specific mitigation measures for this map, page intentionally left blank



| A Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base ← Transmission Line Highway Major Road Local Road ← Local Road ← Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations D6041 Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Ecosystem Species of Traditional Use Water Witalnd Wildlife Line of Sight | Mani E |
|---------------------|--|--|---|--|--|-----------|

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-333B | Wetland | 213 to 214 | E-686806 N-5461150 | E-686884 N-5461066 | 114 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-403 | Line of Sight Buffer | 211 to 212 | E-685959 N-5462069 | E-686012 N-5462012 | 78 |

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-507 | Traditional Use Plant Species >30% Cover | 209 to 210 | E-685430 N-5462643 | E-686012 N-5462012 | 858 |

Version: Final 1.0



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations D6041 Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features * Some road names have not been verified * Tower locations subject to final design | ESS Features Water ₩ Wetland | Man E |
|-------------------|--|--|---|--|------------------------------------|----------|

ESS Group: Conservation

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|------------------------|----------------------|
| LUse-101 | Watson P. Davidson WMA | E-687712 - N-5460336 |

Potential Effects:

Potential disruption to protected area outside of ROW

Specific Mitigation (ID# 4070):

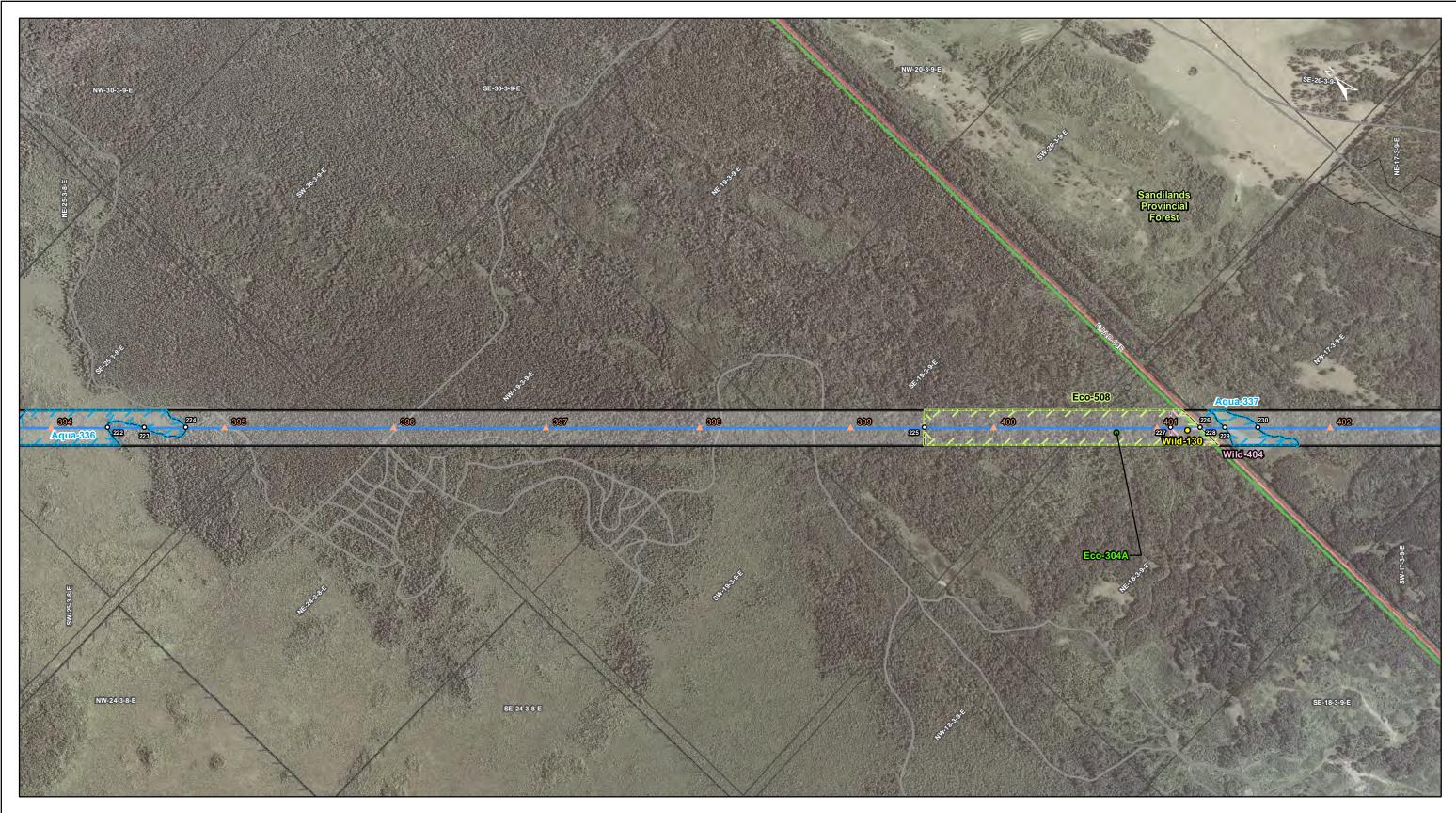
• Absolutely no activities are to extend into the boundaries of this area

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-333A | Wetland | 215 to 216 | E-687975 N-5460018 | E-687999 N-5459995 | 33 |
| Aqua-334 | Wetland | 217 to 218 | E-689988 N-5458083 | E-690088 N-5457987 | 138 |
| Aqua-335 | Wetland | 219 to 220 | E-690160 N-5457917 | E-690373 N-5457713 | 295 |
| Aqua-336 | Wetland | 221 to 222 | E-690438 N-5457650 | E-690632 N-5457464 | 268 |

Version: Final 1.0



| A Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations D6041 Right of Way Station Expansion Station Expansion Converter Station Footprint M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Some road names have not been verified Tower locations subject to final design | ESS Features Ecosystem Species of Concern Wildlife Birds and Habitat Ecosystem Species of Traditional Use Water Wetland Wildlife Line of Sight | Man |
|---------------------|--|--|---|---|--|-----|
|---------------------|--|--|---|---|--|-----|

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Location |
|----------|------------|----------------------|
| Wild-130 | Stick Nest | E-692822 - N-5455347 |

Potential Effects:

Potential disruption of stick nest

Specific Mitigation (ID# 8240):

- Nest tree will be located and marked with Flagging tape
 During the breeding season (April 30 to July 31) if work activities may cause a sensory disturbance during the breeding season the environmental specialist will be contacted and will refer to OMEnvPP text on appropriate setback distance
- If nest removal is required, Environmental Specialist will be contacted to verify the nest is empty

Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 1)

| ESS ID | ESS Name | Location |
|----------|--------------------------|----------------------|
| Eco-304A | Plant Species of Concern | E-692674 - N-5455480 |

*Features represented as polygons (Mitigation ID# 1)

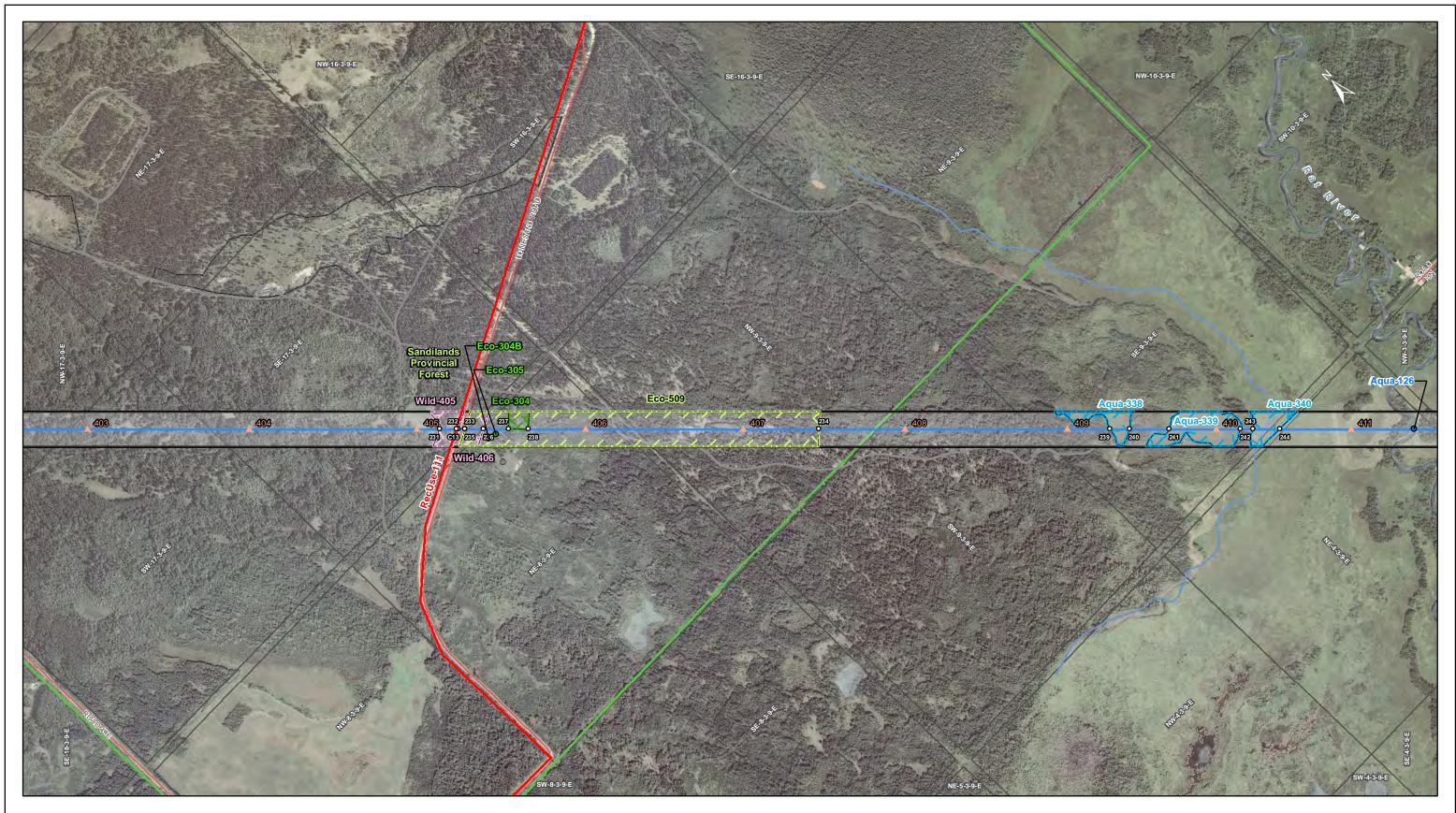
| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-508 | Traditional Use Plant Species >30% Cover | 225 to 226 | E-692293 N-5455867 | E-692854 N-5455328 | 779 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-404 | Line of Sight Buffer | 227 to 228 | E-692794 N-5455385 | E-692854 N-5455328 | 83 |

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-336 | Wetland | 221 to 222 | E-690438 N-5457650 | E-690632 N-5457464 | 268 |
| Aqua-336 | Wetland | 223 to 224 | E-690706 N-5457393 | E-690791 N-5457311 | 117 |
| Aqua-337 | Wetland | 229 to 230 | E-692904 N-5455280 | E-692972 N-5455215 | 94 |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ➡ D6041 ➡ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features * Some road names have not been verified * Tower locations subject to final design | ESS Features Ecosystem Species of Concern Water Water Crossing Rec Use Trail Ecosystem Species of Traditional Us Species of Concern Water Water Wetland | Wildlife | Mani |
|-------------------|--|--|---|--|---|----------|------|
|-------------------|--|--|---|--|---|----------|------|

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|---------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-338 | Wetland - Caliento Bog | 239 to 240 | E-695558 N-5452729 | E-695598 N-5452691 | 55 |
| Aqua-339 | Wetland - Caliento Bog | 241 to 242 | E-695679 N-5452612 | E-695825 N-5452472 | 202 |
| Aqua-340 | Wetland - Caliento Bog | 243 to 244 | E-695850 N-5452448 | E-695905 N-5452395 | 76 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce impacts to the bogs shall be implemented
- ٠ Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- ٠ Equipment operators will be trained in low impact driving techniques for traversing water courses and wetlands in non-frozen conditions
- ٠
- Remove trees by low ground disturbance methods Confine vehicle traffic to established access roads and travel trails to the extent possible The application of herbicides is prohibited within buffer ٠
- ٠

Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|--------------------|-----------------------|----------------------|------------------|
| Aqua-126 | Rat River Crossing | E-696180 N-5452131 | 14 | 10 |

*Features represented as lines (Mitigation ID# 7)

| ESS ID | ESS Name | Site | Location |
|------------|--------------------|------|-----------------------|
| RecUse-111 | Snoman Trail CT715 | C13 | E-694222 N-5454013 |

*Features represented as points (Mitigation ID# 1)

| ESS ID | ESS Name | Location |
|----------|--------------------------|----------------------|
| Eco-304B | Plant Species of Concern | E-694270 - N-5453930 |
| Eco-305 | Plant Species of Concern | E-694292 - N-5453924 |

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-304 | Plant Species of Concern | 237 to 238 | E-694328 N-5453911 | E-694368 N-5453872 | 56 |
| Eco-509 | Traditional Use Plant Species >30% Cover | 233 to 234 | E-694239 N-5453996 | E-694963 N-5453301 | 1004 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-405 | Line of Sight Buffer | 231 to 232 | E-694187 N-5454046 | E-694226 N-5454009 | 53 |
| Wild-406 | Line of Sight Buffer | 235 to 236 | E-694239 N-5453996 | E-694277 N-5453960 | 52 |



| Manitoba 0 125 250 500 Metres Netres 1:10,000 First Nation Station Expansion N602F Modification (Salvage) Medication (Salvage) Medication (Salvage) Medication (Salvage) | | Metres | Railway (Operational) Railway (Discontinued) First Nation Provincial Forest Parcel Fabric | Station Expansion Converter Station Footprint M602F Modification (Salvage) | | | M |
|--|--|--------|---|--|--|--|---|
|--|--|--------|---|--|--|--|---|

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|---------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-341 | Wetland - Caliento Bog | 245 to 246 | E-696419 N-5451902 | E-696462 N-5451860 | 60 |
| Aqua-342 | Wetland - Caliento Bog | 247 to 248 | E-696867 N-5451471 | E-697316 N-5451039 | 624 |
| Aqua-343 | Wetland - Caliento Bog | 249 to 250 | E-698710 N-5449699 | E-698836 N-5449577 | 176 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce impacts to the bogs shall be implemented
- ٠ Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- ٠ Equipment operators will be trained in low impact driving techniques for traversing water courses and wetlands in non-frozen conditions
- ٠
- Remove trees by low ground disturbance methods Confine vehicle traffic to established access roads and travel trails to the extent possible The application of herbicides is prohibited within buffer ٠
- ٠

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-510 | Traditional Use Plant Species >30% Cover | 251 to 252 | E-698836 N-5449577 | E-699042 N-5449380 | 285 |
| Eco-511 | Traditional Use Plant Species >30% Cover | 257 to 258 | E-699070 N-5449352 | E-699508 N-5448931 | 608 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-407 | Line of Sight Buffer | 253 to 254 | E-699002 N-5449418 | E-699042 N-5449380 | 55 |
| Wild-408 | Line of Sight Buffer | 255 to 256 | E-699071 N-5449352 | E-699111 N-5449313 | 56 |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base → Transmission Line Highway Major Road Local Road → Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ➡ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Mrea Features Some road names have not been verified Tower locations subject to final design | ESS Features Heritage O Cultural or Historic Ecosystem Species of Traditional Use Water Wetland Wildlife Line of Sight | Man |
|-------------------|--|--|---|--|--|-----|

ESS Group: Cultural

*Features represented as points

| ESS ID | ESS Name | Location |
|----------|----------|----------------------|
| Hert-202 | Cemetery | E-699074 - N-5449196 |

Potential Effects:

Potential disturbance to Heritage Resources

Specific Mitigation (ID# 3120):

- Avoid the area around the cemetery observe a 75 meter buffer around it MH to contact RM prior to conducting work in the area and adjust timing of construction and maintenance ٠ to avoid any religious ceremonies/practices or interments at the cemetery

ESS Group: Wetland

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|--------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-344 | Wetland - Sundown Bog | 259 to 260 | E-699525 N-5448915 | E-700049 N-5448411 | 728 |
| Aqua-345 | Wetland - Sundown Bog | 261 to 262 | E-700614 N-5447775 | E-700671 N-5447703 | 93 |
| Aqua-346 | Wetland - Sundown Bog | 263 to 264 | E-700700 N-5447665 | E-700719 N-5447641 | 31 |
| Aqua-347 | Wetland - Sundown Bog | 265 to 266 | E-700772 N-5447574 | E-700914 N-5447395 | 228 |
| Aqua-347 | Wetland - Sundown Bog | 267 to 268 | E-700976 N-5447315 | E-701619 N-5446501 | 1037 |
| Aqua-348 | Wetland - Sundown Bog | 269 to 270 | E-701732 N-5446358 | E-702450 N-5445448 | 1159 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce impacts to the bogs shall be implemented
- ٠ Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- ٠ Equipment operators will be trained in low impact driving techniques for traversing water courses and wetlands in non-frozen conditions
- ٠
- Remove trees by low ground disturbance methods Confine vehicle traffic to established access roads and travel trails to the extent possible
- ٠ The application of herbicides is prohibited within buffer

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-511 | Traditional Use Plant Species >30% Cover | 257 to 258 | E-699070 N-5449352 | E-699508 N-5448931 | 608 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-408 | Line of Sight Buffer | 255 to 256 | E-699071 N-5449352 | E-699111 N-5449313 | 56 |



| A Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations D6041 ➡ Right of Way Station Expansion ➡ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Xrea Features * Some road names have not been verified * Tower locations subject to final design | ESS Features Water Wetland | Ma |
|---------------------|--|--|---|--|----------------------------------|----|
|---------------------|--|--|---|--|----------------------------------|----|

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|--------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-348 | Wetland - Sundown Bog | 269 to 270 | E-701732 N-5446358 | E-702450 N-5445448 | 1159 |
| Aqua-349 | Wetland - Sundown Bog | 271 to 272 | E-702982 N-5444774 | E-704329 N-5443067 | 2175 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce impacts to the bogs shall be implemented
- Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- Equipment operators will be trained in low impact driving techniques for traversing water courses and ٠ wetlands in non-frozen conditions
- ٠
- Remove trees by low ground disturbance methods Confine vehicle traffic to established access roads and travel trails to the extent possible The application of herbicides is prohibited within buffer ٠
- ٠



| Hydro 0 125 250 500 - Kalway (Derational) Station Expansion • Water Crossing Hydro Metres First Nation Converter Station Footprint • Me02F Modification (Salvage) • Me02F Modification (Salvage) • Metres • Metres< | | | | | | | | |
|--|-------------------|--|--|---|---|---|---------------|-----|
| 1:10,000 | Manitoba Hydro | Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Image: Comparison of the second se | Transmission Line Highway Major Road Local Road Arailway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric | Tower Locations Angle Tower Locations D6041 Right of Way Station Expansion Converter Station Footprint | Point Features Linear Features Area Features *Some road names have not been verified | Ecosystem Species of Concern Resource Use Food/Medicinal Water Water Crossing Ecosystem Cosystem | Line of Sight | Mar |

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|--------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-349 | Wetland - Sundown Bog | 271 to 272 | E-702982 N-5444774 | E-704329 N-5443067 | 2175 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce impacts to the bogs shall be implemented
- ٠ Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- Equipment operators will be trained in low impact driving techniques for traversing water courses and ٠ wetlands in non-frozen conditions
- ٠
- Remove trees by low ground disturbance methods Confine vehicle traffic to established access roads and travel trails to the extent possible The application of herbicides is prohibited within buffer ٠
- ٠

Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 1)

| ESS ID | ESS Name | Location |
|----------|--------------------------|----------------------|
| RUse-312 | Plant Harvest | E-705112 - N-5442058 |
| Eco-305A | Plant Species of Concern | E-704915 - N-5442331 |
| Eco-306 | Plant Species of Concern | E-704951 - N-5442249 |
| Eco-307 | Plant Species of Concern | E-704966 - N-5442236 |
| Eco-307A | Plant Species of Concern | E-704965 - N-5442210 |
| Eco-307D | Plant Species of Concern | E-705344 - N-5441723 |

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-512 | Traditional Use Plant Species >30% Cover | 273 to 274 | E-704921 N-5442317 | E-705541 N-5441531 | 1001 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-409 | Line of Sight Buffer | 275 to 276 | E-704921 N-5442317 | E-704957 N-5442271 | 58 |

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|---------------------------|-----------------------|----------------------|------------------|
| Aqua-127 | Unnamed Drain Crossing | E-704495 N-5442856 | N/A | N/A |



| | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN | Land Base ← Transmission Line | Project Infrastructure Tower Locations | Sensitive Sites Point Features Linear Features | ESS Features Ecosystem Species of Concern | Mar |
|-------------------|--|--|--|--|---|-----|
| Manitoba Hydro | Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Angle Tower Locations D6041 Right of Way Station Expansion Converter Station Footprint M602F Modification (Salvage) M602F Modification (New) | Area Features Some road names have not been verified Tower locations subject to final design | Water Wildlife Line of Sight | E |

*Features represented as points

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|--------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-350 | Wetland - Sundown Bog | 281 to 282 | E-709334 N-5439532 | E-709384 N-5439523 | 51 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce impacts to the bogs shall be implemented
- ٠ Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- Equipment operators will be trained in low impact driving techniques for traversing water courses and ٠ wetlands in non-frozen conditions
- ٠
- Remove trees by low ground disturbance methods Confine vehicle traffic to established access roads and travel trails to the extent possible ٠
- ٠ The application of herbicides is prohibited within buffer

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-410 | Line of Sight Buffer | 277 to 278 | E-709113 N-5439569 | E-709164 N-5439561 | 51 |
| Wild-411 | Line of Sight Buffer | 279 to 280 | E-709164 N-5439561 | E-709225 N-5439550 | 62 |

*Features represented as points (Mitigation ID# 1)

| ESS ID | ESS Name | Location |
|----------|--------------------------|----------------------|
| RUse-313 | Plant Harvest | E-709116 - N-5440525 |
| Eco-310 | Plant Species of Concern | E-709132 - N-5440347 |
| Eco-311 | Plant Species of Concern | E-709132 - N-5440434 |
| Eco-312 | Plant Species of Concern | E-709128 - N-5440456 |
| Eco-313 | Plant Species of Concern | E-709132 - N-5440475 |
| Eco-314 | Plant Species of Concern | E-709123 - N-5440487 |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations D6041 ■ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ➡ M602F Modification (Salvage) ➡ M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Water Water Crossing Water Wetland | Man E |
|-------------------|---|--|---|--|---|----------|
|-------------------|---|--|---|--|---|----------|

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|--------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-351 | Wetland - Sundown Bog | 283 to 284 | E-710726 N-5439297 | E-711740 N-5439125 | 1028 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce impacts to the bogs shall be implemented
- Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- Equipment operators will be trained in low impact driving techniques for traversing water courses and ٠ wetlands in non-frozen conditions
- ٠
- Remove trees by low ground disturbance methods Confine vehicle traffic to established access roads and travel trails to the extent possible ٠
- ٠ The application of herbicides is prohibited within buffer

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-351A | Wetland | 285 to 286 | E-714209 N-5438707 | E-714660 N-5438631 | 458 |

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|---------------------------|-----------------------|----------------------|------------------|
| Aqua-128 | Unnamed Creek Crossing | E-714471 N-5438663 | N/A | N/A |



| Manitoba | Coordinate System: UTM Zone 14N NAD83Data Source: MB Hydro, ProvMB, NRCANDate Created: March 14, 2020Version: Final 1.00125250500 | Land Base ← Transmission Line Highway Major Road – Local Road ← Railway (Operational) | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations — D6041 — Right of Way Station Expansion | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Ecosystem Species of Traditional Use Water Groundwater Wetland Wildlife | Man |
|----------|---|--|---|--|--|-----|
| Hydro | Metres 1:10,000 | + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Converter Station Footprint M602F Modification (Salvage) M602F Modification (New) | | Z Birds and Habitat | E |

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-134 | Sharp-tailed grouse lek | 291 to 292 | E-717982 N-5438069 | E-719885 N-5437842 | 1924 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st
- ٠ If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba Hydro Environmental Specialist to discuss potential mitigation options

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|------------|-----------------------|-----------------------|--------------|
| Aqua-203 | Flowing Aquifer | 289 to 290 | E-716324 N-5438350 | E-723883 N-5434129 | 9636 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

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

ESS Group: Wetland

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-352 | Wetland - Piney Bog | 287 to 288 | E-715915 N-5438419 | E-719052 N-5437888 | 3182 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless impacts to the bogs shall be implemented
- ٠ Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- wetlands in non-frozen conditions
- Remove trees by low ground disturbance methods
- ٠ Confine vehicle traffic to established access roads and travel trails to the extent possible
- The application of herbicides is prohibited within buffer

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-513 | Traditional Use Plant Species >30% Cover | 293 to 294 | E-718080 N-5438053 | E-719071 N-5437885 | 1005 |

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-351A | Wetland | 285 to 286 | E-714209 N-5438707 | E-714660 N-5438631 | 458 |

required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce

Equipment operators will be trained in low impact driving techniques for traversing water courses and



| A Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ■ D6041 ■ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Some road names have not been verified Tower locations subject to final design | ESS Features Ecosystem Species of Traditional Use Water Soroundwater Wetland Wildlife Birds and Habitat Line of Sight | Man E |
|---------------------|--|--|---|---|---|----------|
|---------------------|--|--|---|---|---|----------|

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-134 | Sharp-tailed grouse lek | 291 to 292 | E-717982 N-5438069 | E-719885 N-5437842 | 1924 |
| Wild-135 | Sharp-tailed grouse lek | 299 to 300 | E-721732 N-5437236 | E-722224 N-5436401 | 970 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st
- If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba Hydro Environmental Specialist to discuss potential mitigation options

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|------------|-----------------------|-----------------------|--------------|
| Aqua-203 | Flowing Aquifer | 289 to 290 | E-716324 N-5438350 | E-723883 N-5434129 | 9636 |

Potential Effects:

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

Specific Mitigation (ID# 7050):

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

ESS Group: Wetland

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|------------------------|------------|-----------------------|-----------------------|--------------|
| Aqua-352 | Wetland - Piney Bog | 287 to 288 | E-715915 N-5438419 | E-719052 N-5437888 | 3182 |

Potential Effects:

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

Specific Mitigation (ID# 1800):

- impacts to the bogs shall be implemented
- ٠ Where possible carry out work activities on frozen ground to minimize surface damage, rutting and erosion
- wetlands in non-frozen conditions
- Remove trees by low ground disturbance methods
- ٠ Confine vehicle traffic to established access roads and travel trails to the extent possible
- ٠ The application of herbicides is prohibited within buffer

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|-----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-352A | Wetland | 297 to 298 | E-720756 N-5437879 | E-721084 N-5437893 | 328 |

*Features represented as polygons (Mitigation ID# 13)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-412 | Line of Sight Buffer | 295 to 296 | E-719004 N-5437897 | E-719071 N-5437885 | 68 |

*Features represented as polygons (Mitigation ID# 1)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|---------|--|------------|-----------------------|-----------------------|--------------|
| Eco-513 | Traditional Use Plant Species >30% Cover | 293 to 294 | E-718080 N-5438053 | E-719071 N-5437885 | 1005 |

Carry out work activities on frozen ground to minimize surface damage, rutting and erosion, unless required to ensure safe and reliable operation of the line, in which case mitigation measures to reduce

Equipment operators will be trained in low impact driving techniques for traversing water courses and



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base → Transmission Line → Highway Major Road → Local Road → Railway (Operational) + Railway (Discontinued) ■ First Nation ■ Provincial Forest ■ Parcel Fabric ■ Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ■ D6041 ■ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Some road names have not been verified Tower locations subject to final design | ESS Features Water Water Crossing Water Groundwater Wildlife Birds and Habitat | Man E |
|-------------------|--|--|---|---|--|----------|
|-------------------|--|--|---|---|--|----------|

ESS Group: Birds and Habitat

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-------------------------|------------|-----------------------|-----------------------|--------------|
| Wild-135 | Sharp-tailed grouse lek | 299 to 300 | E-721732 N-5437236 | E-722224 N-5436401 | 970 |

Potential Effects:

Potential disruption of mating success for sharp-tailed grouse

Specific Mitigation (ID# 8300):

- Do not plan to carry out work activities within this area between April 15 to June 1st
- If construction activity is required within this area between April 15 to June 1st. Contact the Manitoba Hydro Environmental Specialist to discuss potential mitigation options

ESS Group: Groundwater

*Features represented as polygons

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|-----------------|------------|-----------------------|-----------------------|--------------|
| Aqua-203 | Flowing Aquifer | 289 to 290 | E-716324 N-5438350 | E-723883 N-5434129 | 9636 |

Potential Effects:

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

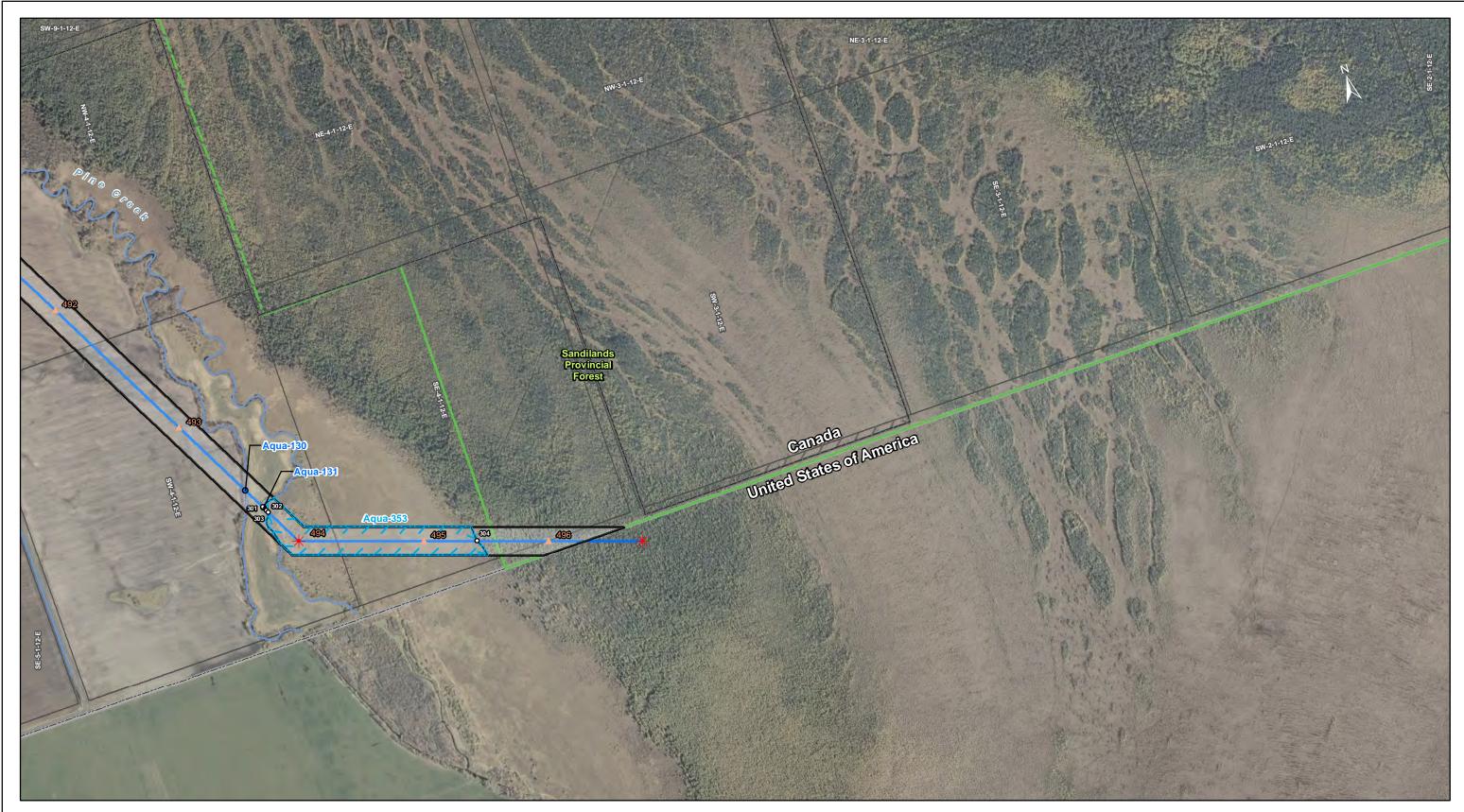
Specific Mitigation (ID# 7050):

- Qualified driller with appropriate experience will be utilized 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 ٠
- ٠
- ٠

Standard Mitigation - See appendix for details

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|----------------------------------|-----------------------|----------------------|------------------|
| Aqua-129 | Pine Creek Diversion Crossing | E-722728 N-5435667 | N/A | N/A |



| Manitoba Hydro | Coordinate System: UTM Zone 14N NAD83 Data Source: MB Hydro, ProvMB, NRCAN Date Created: March 14, 2020 Version: Final 1.0 0 125 250 500 Metres 1:10,000 | Land Base Transmission Line Highway Major Road Local Road Railway (Operational) + Railway (Discontinued) First Nation Provincial Forest Parcel Fabric Rural Municipality | Project Infrastructure ▲ Tower Locations ★ Angle Tower Locations ● D6041 ■ Right of Way ☑ Station Expansion ☑ Converter Station Footprint ● M602F Modification (Salvage) ● M602F Modification (New) | Sensitive Sites Point Features Linear Features Area Features Some road names have not been verified Tower locations subject to final design | ESS Features Water ● Water Crossing Water ▼ Wetland | Man E |
|-------------------|--|--|---|--|---|----------|
|-------------------|--|--|---|--|---|----------|

Standard Mitigation - See appendix for details

*Features represented as polygons (Mitigation ID# 9)

| ESS ID | ESS Name | Site | Start | Stop | Distance (m) |
|----------|----------|------------|-----------------------|-----------------------|--------------|
| Aqua-353 | Wetland | 301 to 302 | E-724876 N-5432377 | E-724883 N-5432365 | 14 |
| Aqua-353 | Wetland | 303 to 304 | E-724886 N-5432359 | E-725424 N-5432111 | 619 |

*Features represented as points (Mitigation ID# 14)

| ESS ID | ESS Name | Location | Channel Width (m) | Wet Width (m) |
|----------|------------------------|-----------------------|----------------------|------------------|
| Aqua-130 | Pine Creek Crossing | E-724843 N-5432435 | 9 | 3.5 |
| Aqua-131 | Pine Creek Crossing | E-724877 N-5432375 | 9 | 3.5 |

| Symbol | MIT ID # | ESS Group | Potential Effects | Specific Mitigations |
|--------------------------|-------------|-----------------------------|--|--|
| Species of Concern | 1 | Species of Concern | Potential loss of previously known plants of conservation concern from clearing, construction, maintenance and decommissioning activities. | Carry out construction activities on frozen or dry ground t Identify and flag a 5m vegetated (shrub and herbaceous) Confine vehicle traffic to established trails to the extent p Remove trees using selective cutting methods No Herbicide application with Polygon or buffered area |
| Forestry | 2 | Shelterbelt | Removal in area of ROW intersect | Construction matting will be used along access trail to prosaturated soil conditions Use existing access trails, roads or cut lines whenever pos No pushing debris into adjacent timber |
| Intersection | 7 | Trails, Routes and Roads | Potential interference with trail users; safety issues | Notify local snow mobile club/trail owner of work crossing Provide temporary signage that work is taking place on th Do not leave debris or obstruct the trail |
| 🖾 Wetland | 9 | Wetland | Increased erosion and sedimentation; rutting of floodplains; loss of riparian vegetation; potential impact to reptile and amphibian habitat | Carry out construction activities on frozen or dry ground t Construction matting or low ground pressure equipment exposure of soil during Non-frozen ground conditions Identify and flag a 30 m vegetated (shrub and herbaceous No Herbicide application with Polygon or buffered area Maintain shrub and herbaceous vegetation to the extent Use existing access trails, roads or cut lines whenever pos Equipment operators will be trained in low impact driving in non- frozen conditions |
| [] Line of Sight | 13 | Line of Sight Buffer | Reducing line of sight down the ROW to reduce hunting pressure and increase wildlife protection. | Remove only trees and all shrubs >4m tall Retain shrubs and herbaceous vegetation <4m tall to the Use existing access trails, roads or cut lines whenever pos |

d to minimize surface damage, rutting and erosion s) buffer around site if work activity poses a risk to area t possible

protect the area from rutting and exposure of soil during

ossible as access routes

sing trails the trail to warn users

nd to minimize surface damage, rutting and erosion. nt will be used to protect the area from rutting and

ous) buffer around site

nt possible possible as access routes ing techniques for traversing water courses and wetlands

ne extent possible possible as access routes

| Symbol | MIT ID # | ESS Group | Potential Effects | Specific Mitigations |
|----------------|-------------|----------------|--|---|
| Water Crossing | 14 | Water Crossing | Increased erosion and sedimentation of streams and waterbodies | Riparian Buffers shall be a minimum of 30m and increase i Within these buffers shrub and herbaceous understory ver- violate MH Vegetation Clearance Requirements 7m no machine zone will restrict equipment in close proxi Where possible carry out construction activities on frozen erosion Equipment operators will be trained in low impact driving in non- frozen conditions Use existing trails, roads whenever possible and crossing p possible Limit machinery fording of the watercourse to a one-time crossing method is available. If repeated crossings of the v crossing structure or add matting Use temporary crossing structures or other practices to cru- fording is required and minor rutting is likely to occur, use swamp mats, pads) If banks appear to be damaged as a result of crossing cont Ensure that machinery is maintained free of fluid leaks, im Wash, refuel and service machinery and store fuel and oth high water mark, preventing any deleterious substances fr Do not wash buckets and equipment in the watercourse No Vegetation or Woody debris is to be left in water after |

e in size based on slope of land entering waterway. veg will be maintained along with trees that will not

oximity to the waterbody except at the trail crossing en ground to minimize surface damage, rutting and

ng techniques for traversing water courses and wetlands

g point will be perpendicular to the bank whenever

ne event (i.e., over and back), and only if no alternative e watercourse are required, construct a temporary

cross steep and highly erodible banks and beds. If se stream bank and bed protection methods (e.g.,

ntact the MH Environmental Specialist

invasive species and noxious weeds

other materials for the machinery at least 100m from s from entering the water

2

er work activities