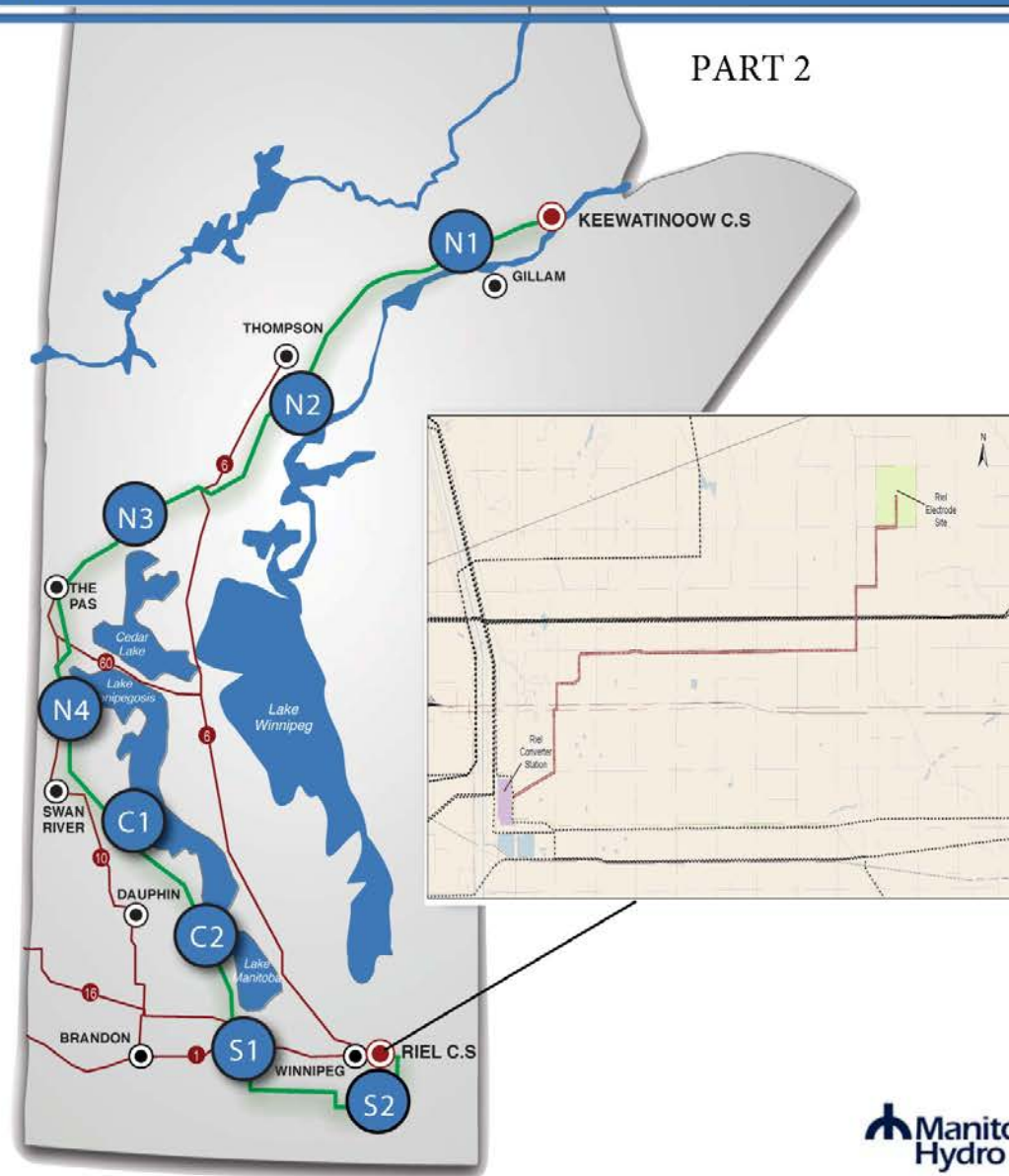
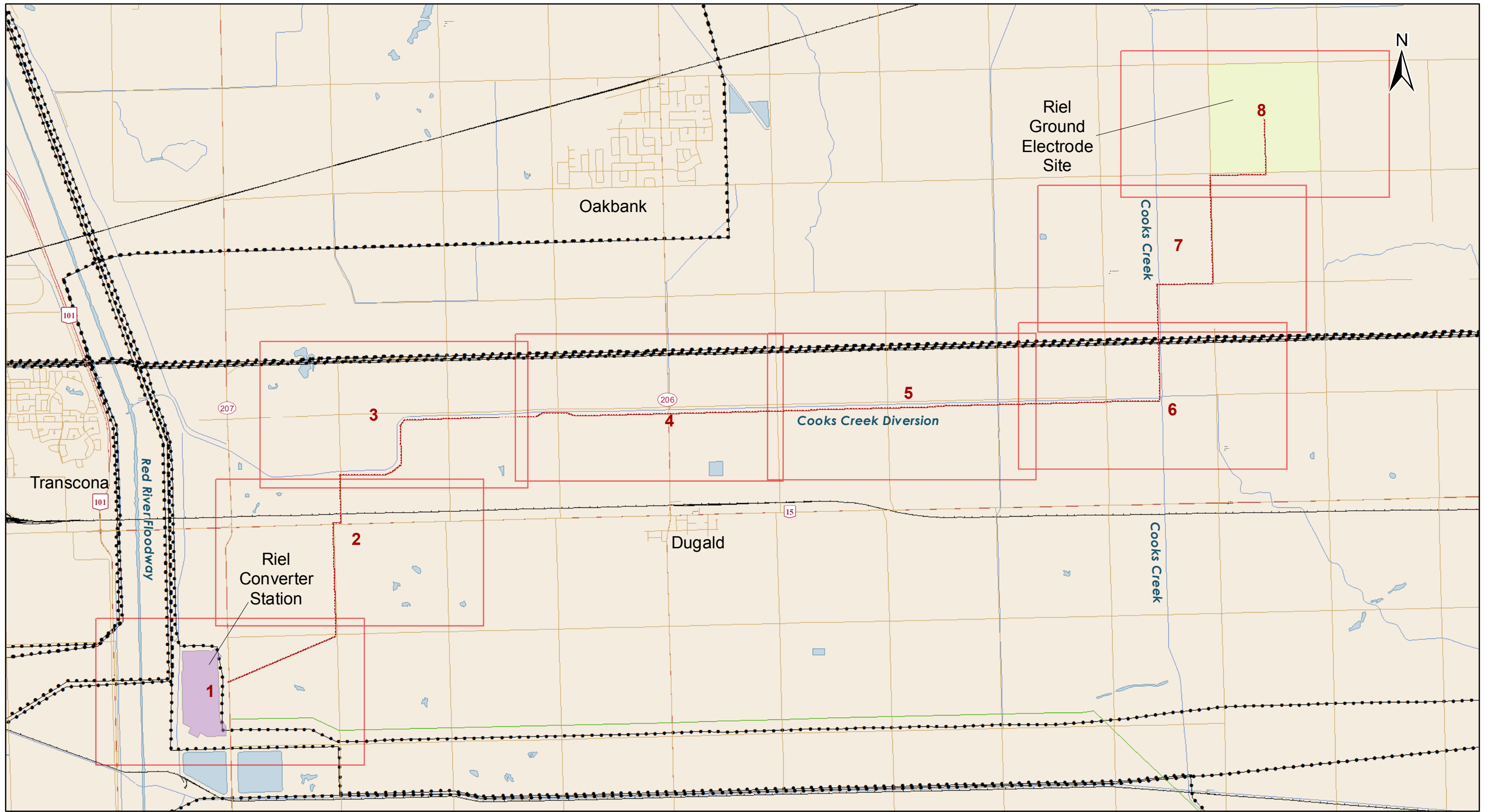


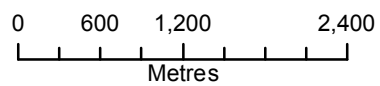
BIPOLE III TRANSMISSION PROJECT  
CONSTRUCTION ENVIRONMENTAL PROTECTION PLAN  
- Riel Converter Station Ground Electrode Line  
Mapbook







Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: February 04, 2015  
 Version: Draft



1:55,000

**Land Base**

- Road (Other)
- Provincial Road
- Provincial Highway
- Transmission Line
- Railway (Operational)

**Project Infrastructure**

- Ground Electrode Line
- Bipole III Final Preferred Route
- Riel converter station footprint
- Riel ground electrode site

**Bipole III Transmission Project  
 Construction Environmental Protection Plan**

**Riel Ground Electrode Line  
 Key Index Map**



This page is intentionally left blank.

**ESS Group:** Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	Distance
RGEL	S2-Aqua-206	Aquifers vulnerable to contamination	Site: 1 to 2	E-648506 N-5525757	E-649938 N-5527470	1096 m

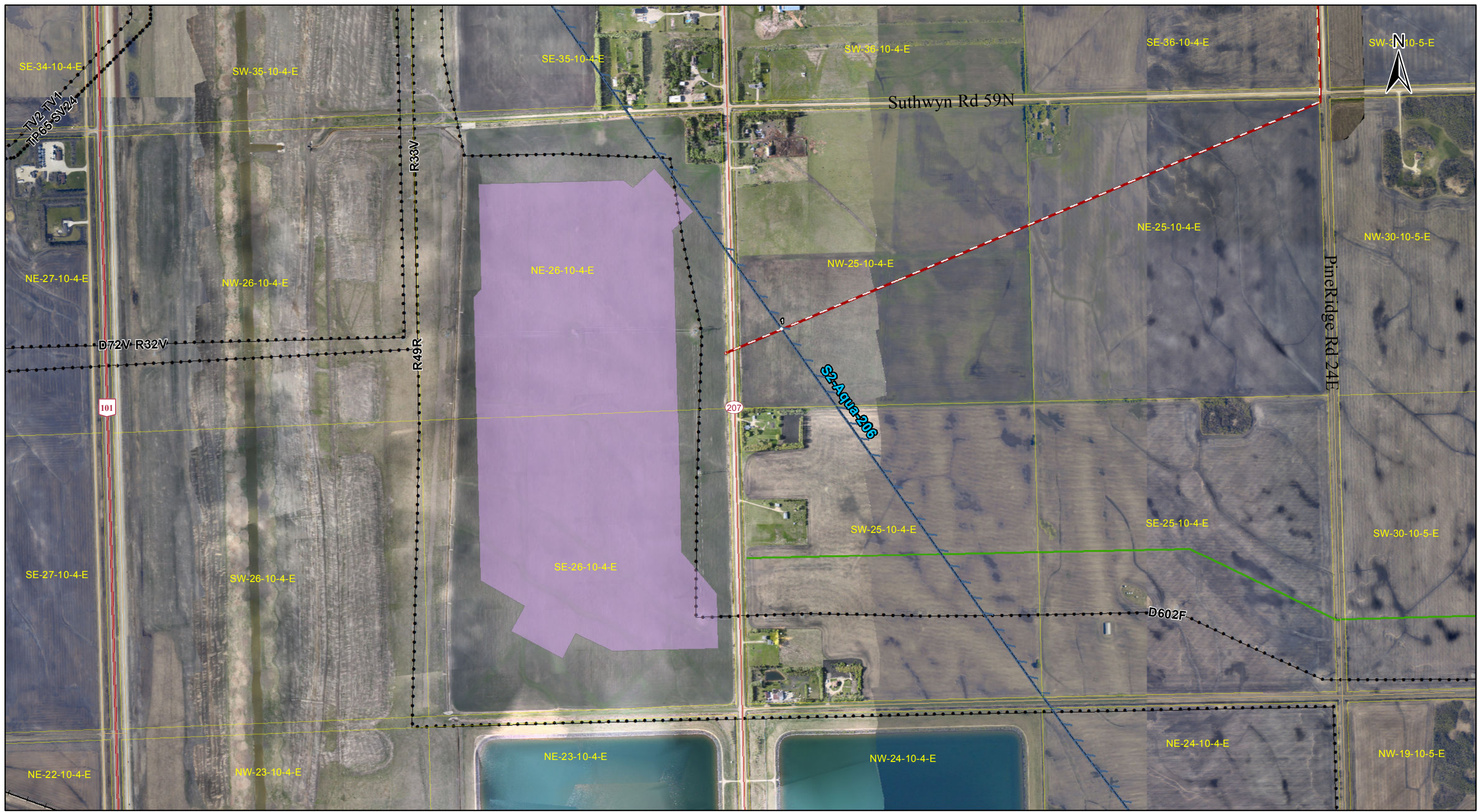
**Potential Effects:**

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

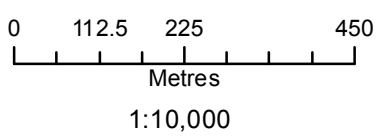
**Specific Mitigation:**

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





Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: February 04, 2015  
 Version: Draft



- | Land Base             | Project Infrastructure           | ESS Feature |
|-----------------------|----------------------------------|-------------|
| Parcel Fabric         | Riel Ground Electrode Line       | Groundwater |
| Road (Other)          | Bipole III Final Preferred Route |             |
| Provincial Road       | Riel Converter Station Footprint |             |
| Provincial Highway    |                                  |             |
| Transmission Line     |                                  |             |
| Railway (Operational) |                                  |             |

**Bipole III Transmission Project**  
**Construction Environmental Protection Plan**  
 Riel Ground Electrode Line





**ESS Group:** Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	Distance
RGEL	S2-Aqua-206	Aquifers vulnerable to contamination	Site: 1 to 2	E-648506 N-5525757	E-649938 N-5527470	1096 m

**Potential Effects:**

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

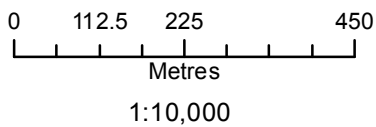
**Specific Mitigation:**

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





Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: February 04, 2015  
 Version: Draft



**Land Base**

- Parcel Fabric
- Road (Other)
- Provincial Road
- Provincial Highway
- + Railway (Operational)

**Project Infrastructure**

- Riel Ground Electrode Line

**ESS Feature**

- Groundwater

**Bipole III Transmission Project  
 Construction Environmental Protection Plan  
 Riel Ground Electrode Line**



ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name
RGEL	RGEL-Aqua-100	Cooks Creek Diversion

**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*

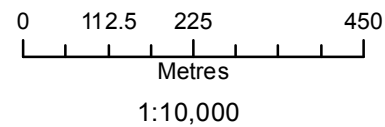
**Specific Mitigation:**

- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.





Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: February 04, 2015  
 Version: Draft



**Land Base**  
 Parcel Fabric  
 Road (Other)  
 Transmission Line

**Project Infrastructure**  
 Riel Ground Electrode Line

**ESS Feature**  
 Water Crossing

**Bipole III Transmission Project  
 Construction Environmental Protection Plan  
 Riel Ground Electrode Line**





ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name
RGEL	RGEL-Aqua-100	Cooks Creek Diversion

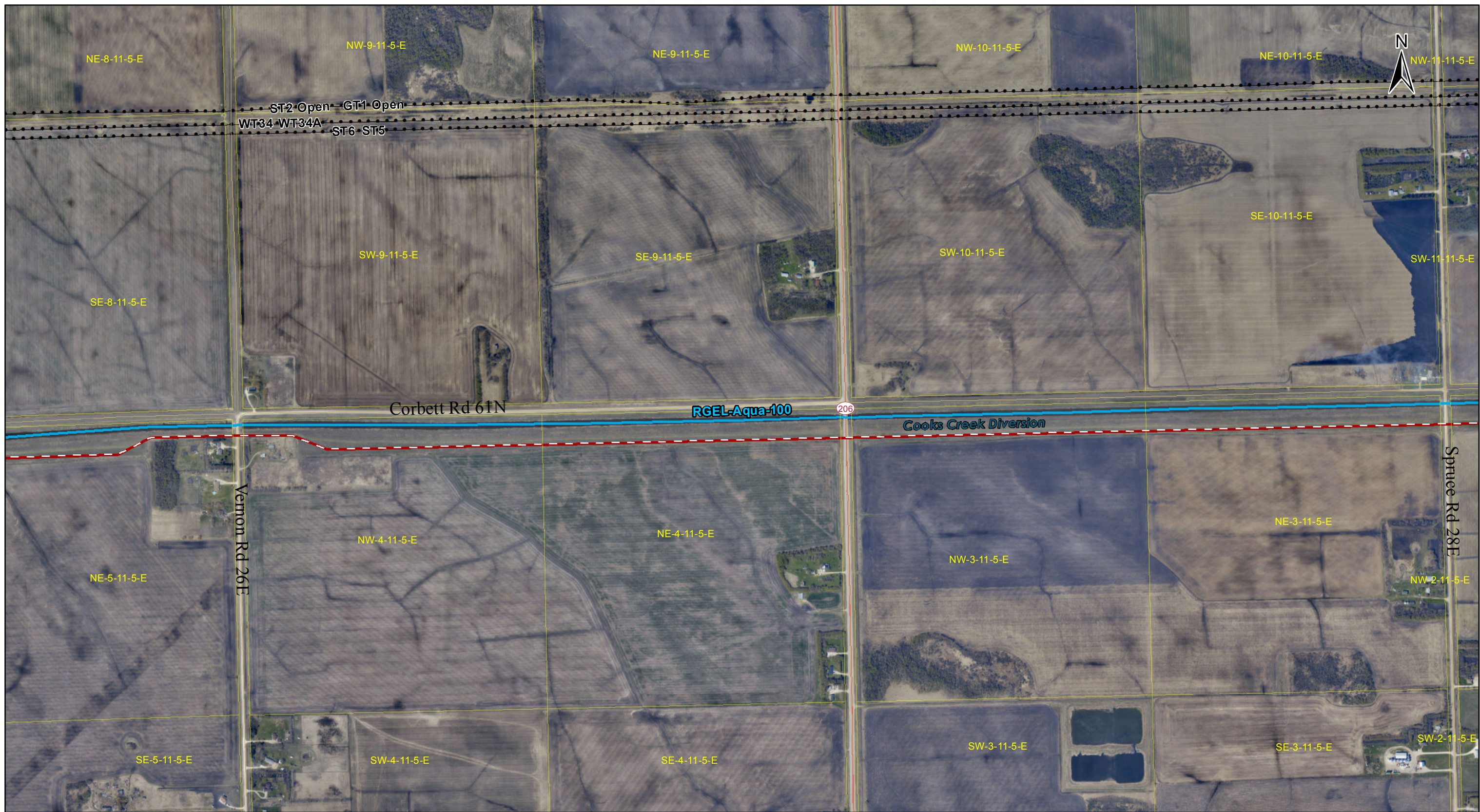
**Potential Effects:**

*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*

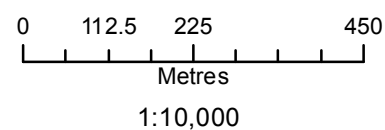
**Specific Mitigation:**

- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.





Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: February 04, 2015  
 Version: Draft



- Land Base**
- Parcel Fabric
  - Road (Other)
  - Provincial Road
  - Transmission Line

- Project Infrastructure**
- Riel Ground Electrode Line

- ESS Feature**
- Water Crossing

## Bipole III Transmission Project Construction Environmental Protection Plan

Riel Ground Electrode Line



ESS Group: Water Crossing

Sec-Seg ID	ESS ID	ESS Name
RGEL	RGEL-Aqua-100	Cooks Creek Diversion

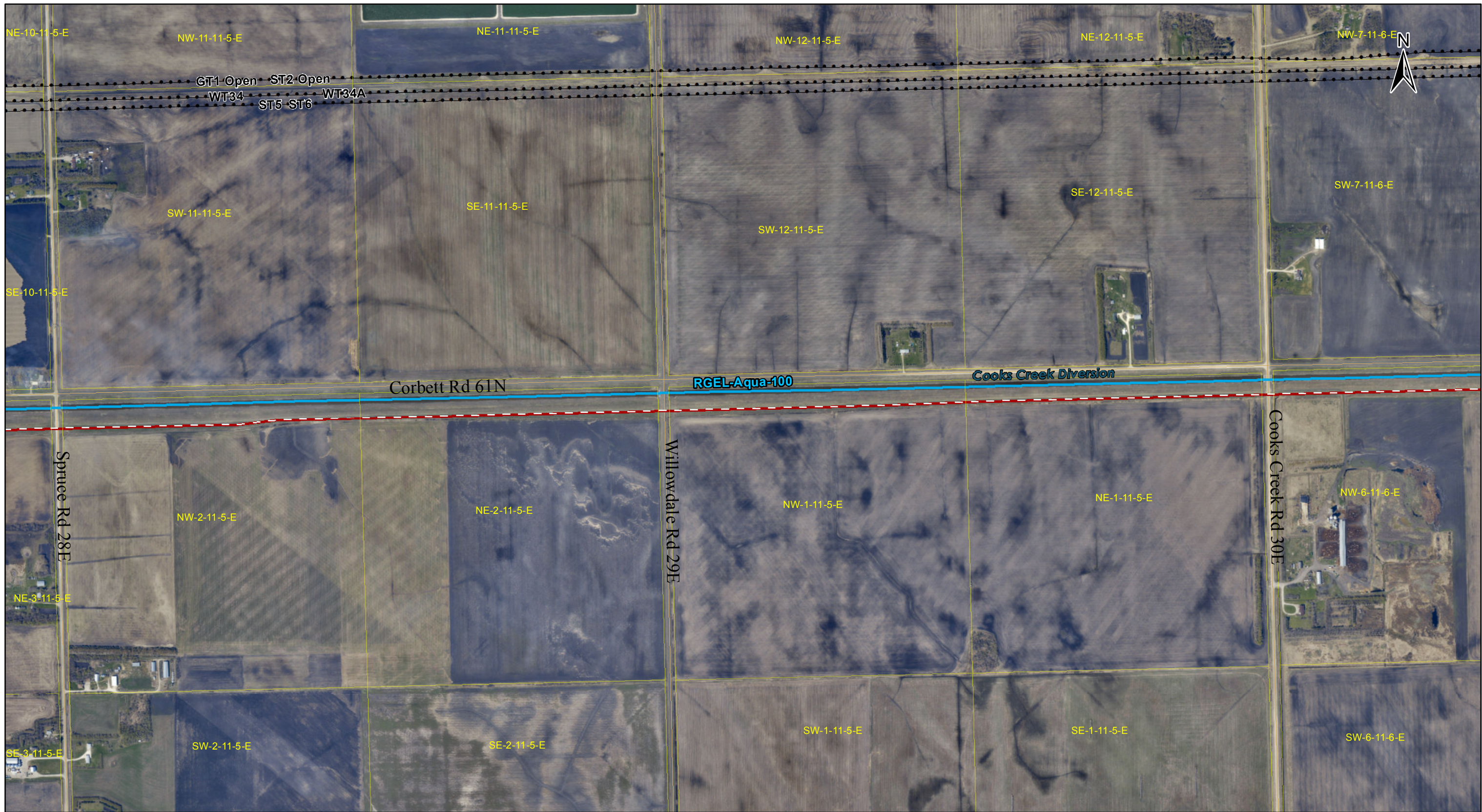
**Potential Effects:**

*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*

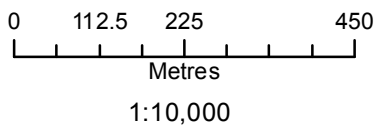
**Specific Mitigation:**

- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.





Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: February 04, 2015  
 Version: Draft



**Land Base**  
 Parcel Fabric  
 Road (Other)  
 Transmission Line

**Project Infrastructure**  
 Riel Ground Electrode Line

**ESS Feature**  
 Water Crossing

## Bipole III Transmission Project Construction Environmental Protection Plan

Riel Ground Electrode Line





**ESS Group:** Water Crossing

Sec-Seg ID	ESS ID	ESS Name
RGEL	RGEL-Aqua-100	Cooks Creek Diversion

**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:**

- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.

**ESS Group:** Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing
RGEL	RGEL-Aqua-100	Cooks Creek Diversion	662265	5529934

**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*

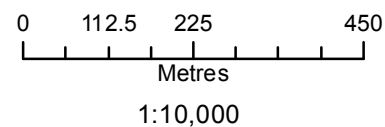
**Specific Mitigation:**

- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream work or fording from April 1 to June 30





Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: February 04, 2015  
 Version: Draft



**Land Base**  
 Parcel Fabric  
 Road (Other)  
 Transmission Line

**Project Infrastructure**  
 Riel Ground Electrode Line

**ESS Feature**  
 Water Crossing  
 Water Crossing

## Bipole III Transmission Project Construction Environmental Protection Plan

Riel Ground Electrode Line





**ESS Group:** Water Crossing

Sec-Seg ID	ESS ID	ESS Name
RGEL	RGEL-Aqua-100	Cooks Creek and Drain

**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:**

- Use existing trails, roads or cut lines whenever possible as access routes
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.

**ESS Group:** Water Crossing

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing
RGEL	RGEL-Aqua-101	Cooks Creek and Drain	662247	5531626

**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:**

- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream work or fording from April 1 to June 30