

Metres

1:10,000

Railway (Operational)

Railway (Discontinued)

Mining

Provincial Forest

\*Towers are subject to change, and are only used as a rough guid Sensitive Sites\* Point Features Linear Features
Area Features

A Rail Crossing Transmission Line Crossing

Approved Access Route

Bypass Trails

**Construction Section C1 Environmentally Sensitive Site Locations** 

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	<b>UTM Zone</b>	Distance
C1-S11	C1-Aqua-126	Unnamed wetland	Site: 77 to 78	E-448543 N-5706862	E-448596 N-5706802	14N	79m

#### **Potential Effects:**

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

## **Specific Mitigation:**

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

## ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S11	C1-Aqua- 204	Artesian areas with uncertain water quality	Site: 79 to 80	E-449205 N-5706117	E-450423 N-5704746	14N	1834 m

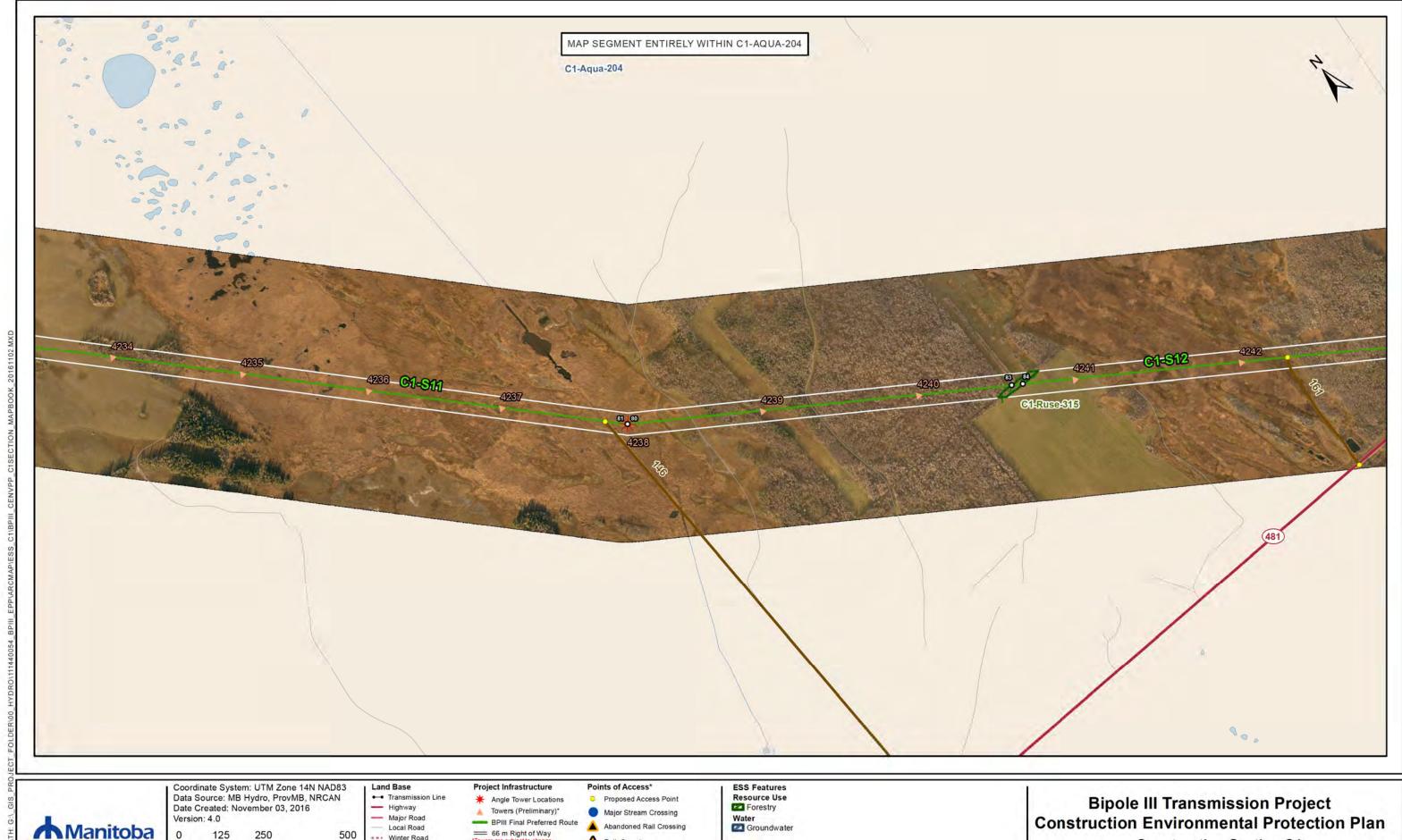
## **Potential Effects:**

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

# **Specific Mitigation:**

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

Version: Final 4.0



125 250 Metres

1:10,000

Mining

Provincial Forest

Railway (Operational) and are only used as a rough guid Sensitive Sites\* Railway (Discontinued)

Point Features

Linear Features
Area Features

A Rail Crossing Transmission Line Crossing Bypass Trails

Approved Access Route

**Construction Section C1** 

**Environmentally Sensitive Site Locations** 

## ESS Group: Forestry

Sec-Seg ID	ESS ID	<b>ESS Name</b>	Location	Start	Stop	<b>UTM Zone</b>	Distance
C1-S12	C1-RUse-315	Shelterbelt	Site: 83 to 84	E-451358 N-5704087	E-451385 N-5704069	14N	32m

#### **Potential Effects:**

Removal in area of ROW intersect

## **Specific Mitigation:**

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- · Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- · Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- · No pushing debris into adjacent timber

## ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S11	C1-Aqua- 204	Artesian areas with uncertain water quality	Site: 79 to 80	E-449205 N-5706117	E-450423 N-5704746	14N	1834 m
C1-S12	C1-Aqua- 204	Artesian areas with uncertain water quality	Site: 81 to 82	E-450423 N-5704746	E-453335 N-5702694	14N	3562 m

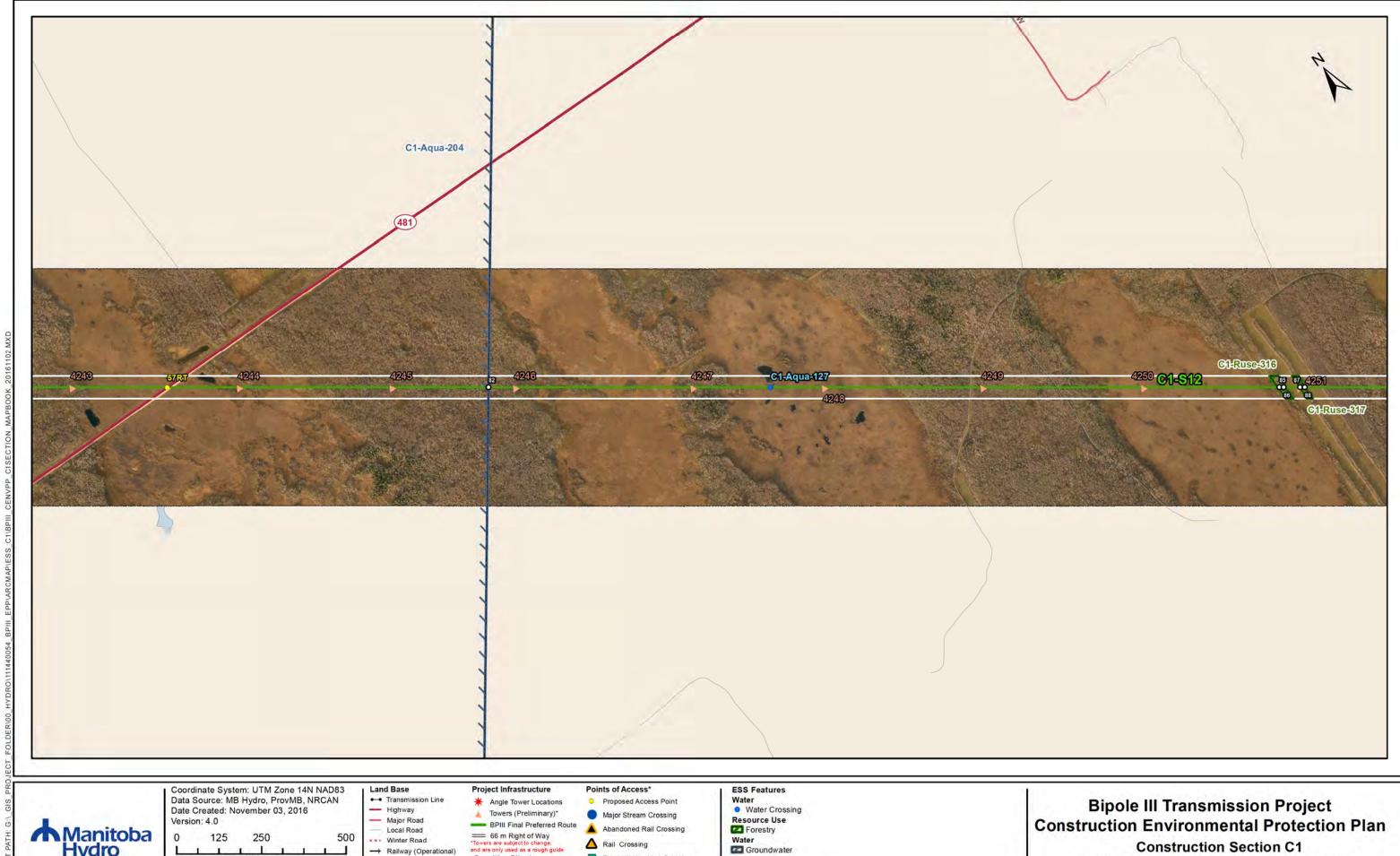
# **Potential Effects:**

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

## **Specific Mitigation:**

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

Version: Final 4.0



Metres 1:10,000

Sensitive Sites\* Railway (Discontinued) Point Features Linear Features
Area Features

Mining

Provincial Forest

Transmission Line Crossing Bypass Trails

Approved Access Route

**Environmentally Sensitive Site Locations** 

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
C1-S12	C1-Aqua- 127	Unnamed pond	454017	5702215	14N	N/A	N/A	Low	No Fish Habitat

# **Potential Effects:**

Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

#### **Specific Mitigation:**

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

#### ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S12	C1-Aqua- 204	Artesian areas with uncertain water quality	Site: 81 to 82	E-450423 N-5704746	E-453335 N-5702694	14N	3562 m

#### **Potential Effects:**

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

#### Specific Mitigation:

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

Version: Final 4.0

#### ESS Group: Forestry

Sec-Seg ID	ESS ID	<b>ESS Name</b>	Location	Start	Stop	<b>UTM Zone</b>	Distance
C1-S12	C1-RUse-316	Shelterbelt	Site: 85 to 86	E-455244 N-5701349	E-455254 N-5701342	14N	12 m
C1-S12	C1-RUse-317	Shelterbelt	Site: 87 to 88	E-455294 N-5701314	E-455306 N-5701305	14N	15 m

#### **Potential Effects:**

Removal in area of ROW intersect

## Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- · Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber



125 250

Metres 1:10,000

"Towers are subject to change, and are only used as a rough guide Sensitive Sites\* Railway (Discontinued) Point Features

Linear Features
Area Features

Railway (Operational)

Mining

Provincial Forest

A Rail Crossing Transmission Line Crossing Bypass Trails

Approved Access Route

**Construction Section C1** 

**Environmentally Sensitive Site Locations** 

## ESS Group: Archaeological

Sec-Seg ID	ESS ID	<b>ESS Name</b>	Easting	Northing	UTM Zone
C1-S12	C1-Hert-127	Creek	455825	5700940	14N

#### **Potential Effects:**

Potential disturbance to Heritage Resources

## **Specific Mitigation:**

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

## ESS Group: Forestry

Sec-Seg ID	ESS ID	<b>ESS Name</b>	Location	Start	Stop	<b>UTM Zone</b>	Distance
C1-S12	C1-RUse-318	Shelterbelt	Site: 89 to 90	E-456850 N-5700217	E-456857 N-5700212	14N	8m

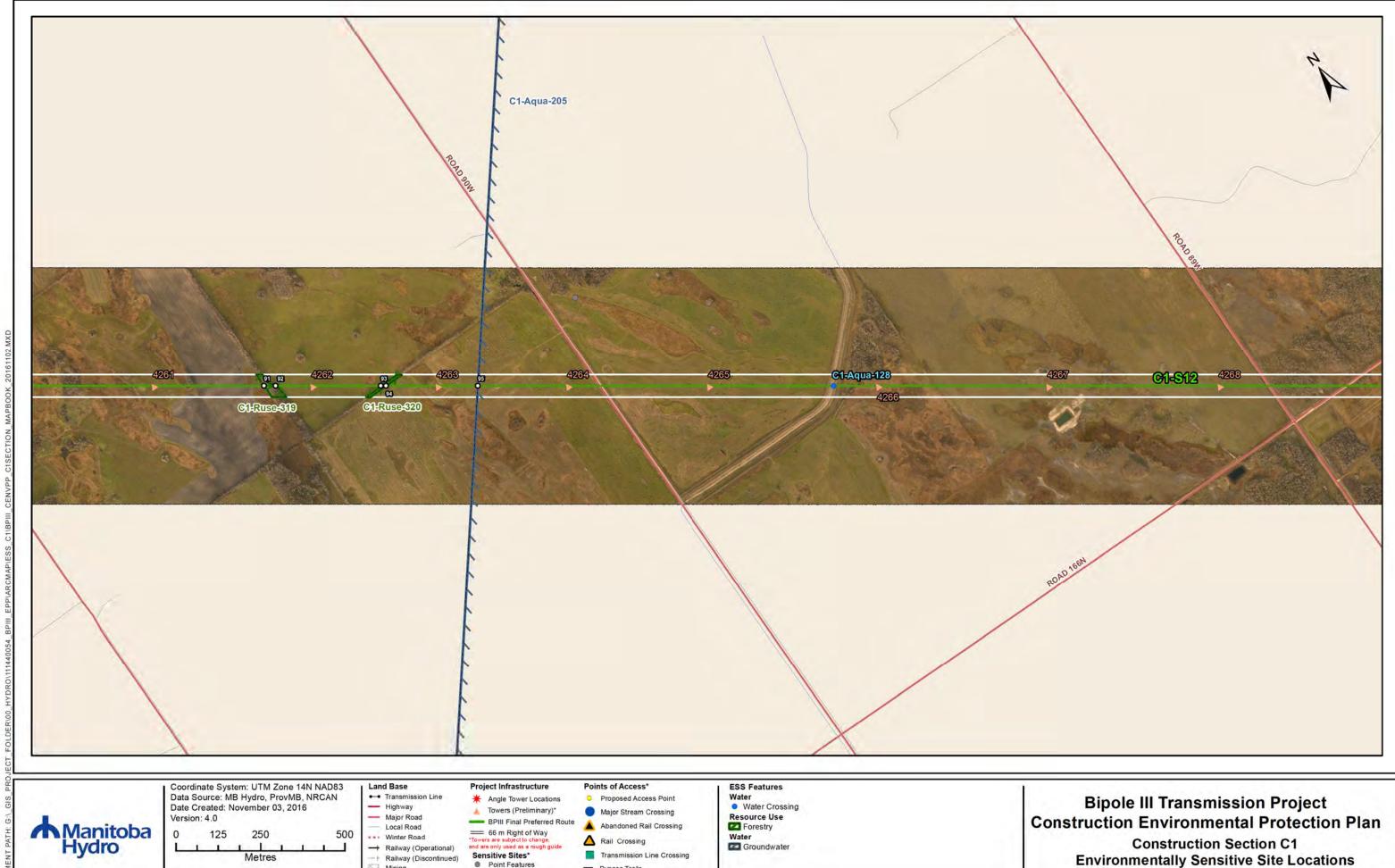
## **Potential Effects:**

Removal in area of ROW intersect

#### Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber

Version: Final 4.0



Point Features

Linear Features
Area Features

Bypass Trails

Approved Access Route

Map 237

Mining

Provincial Forest

1:10,000

Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
C1-S12	C1- Aqua- 128	Unnamed agricultural drain	460647	5697543	14N	N/A	8m	Low	Marginal

## **Potential Effects:**

Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

#### **Specific Mitigation:**

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

#### ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	<b>UTM Zone</b>	Distance
C1-S12	C1-Aqua-205	Saline artesian areas	Site: 95 to 96	E-459788 N-5698147	E-468605 N-5691935	14N	10785 m

#### **Potential Effects:**

Increase in salinity of soils and surface water in case of potential groundwater discharge to the surface. Also, wetting the surficial environment (ground saturation); effect on local vegetation

## Specific Mitigation:

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

Version: Final 4.0

#### ESS Group: Forestry

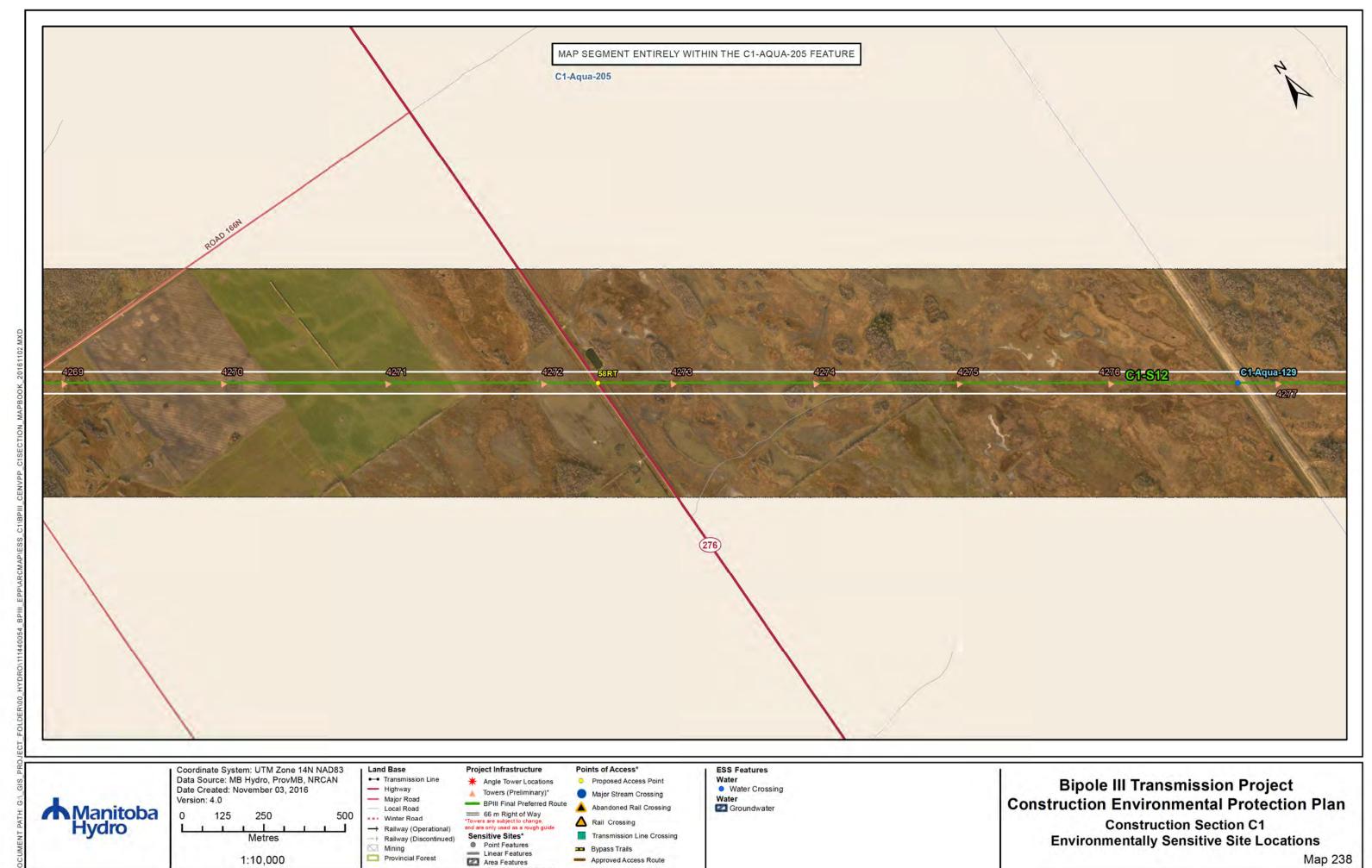
Sec-Seg ID	ESS ID	<b>ESS Name</b>	Location	Start	Stop	<b>UTM Zone</b>	Distance
C1-S12	C1-RUse-319	Shelterbelt	Site: 91 to 92	E-459270 N-5698513	E-459298 N-5698493	14N	34 m
C1-S12	C1-RUse-320	Shelterbelt	Site: 93 to 94	E-459554 N-5698312	E-459566 N-5698303	14N	15 m

#### **Potential Effects:**

Removal in area of ROW intersect

#### Specific Mitigation:

- Carry out construction activities on frozen or dry ground to minimize surface damage, rutting and erosion
- · Identify and flag prior to start of work
- If Burning of clearing debris is required it must be conducted during winter months only and ensure that all fires are extinguished prior to spring break-up
- · Notify landowner regarding construction activities and schedule, and address concerns prior to start of work
- Use existing access trails, roads or cut lines whenever possible as access routes
- Limit all equipment to project footprint only, where possible
- No damage to Vegetation on the edge of the Right of Way
- No pushing debris into adjacent timber



Approved Access Route

1:10,000

Provincial Forest

Sec- Seg ID	ESS ID	ESS Name	Easting	Northing	UTM Zone	Channel Width	Wet Width	Fish Habitat Class	Habitat Sensitivity
C1-S12	C1- Aqua- 129	Unnamed agricultural drain	464949	5694511	14N	15m	3m	Low	Important

## **Potential Effects:**

Habitat loss and contamination from structure foundations & installations; increased erosion & sedimentation of streams; Damage to stream banks; Loss of riparian vegetation; Fish habitat disturbances and impeded fish movement; Rutting of floodplain

## **Specific Mitigation:**

- · Carry out construction activities on frozen ground to minimize surface damage, rutting and erosion
- Use existing trails, roads or cut lines whenever possible as access routes
- Identify and flag buffer areas prior to start of work
- Riparian Buffers shall be a minimum of 30m and increase in size based on slope of land entering waterway. Within
  these buffers shrub and herbaceous understory veg will be maintained along with trees that do not violate MH Veg
  Clearance Requirements.
- 7m no machine zone will restrict equipment in close proximity to the waterbody except at the trail crossing.
- No instream works or fording from April 1 July 15

## ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	UTM Zone	Distance
C1-S12	C1-Aqua-205	Saline artesian areas	Site: 95 to 96	E-459788 N-5698147	E-468605 N-5691935	14N	10785m

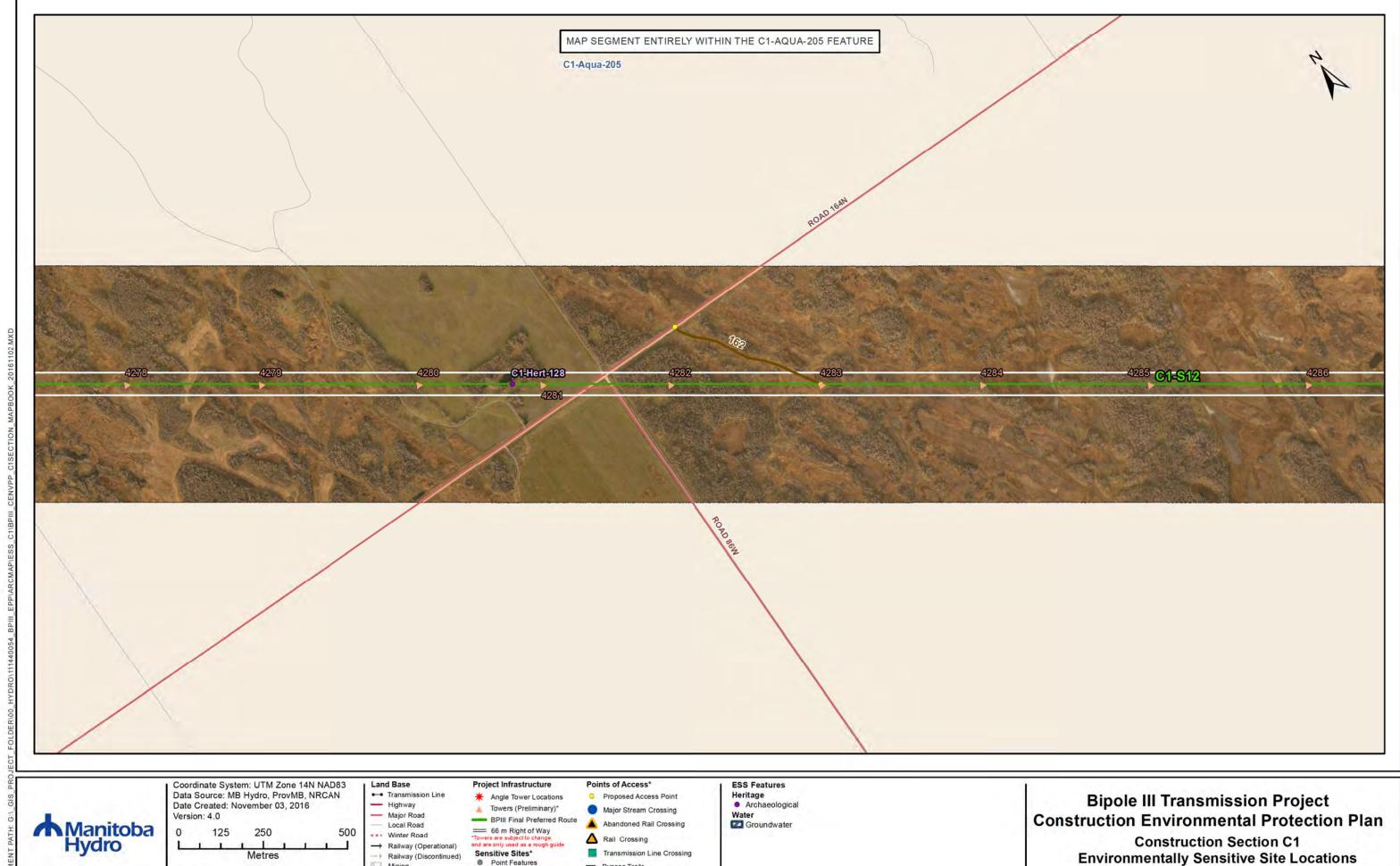
#### **Potential Effects:**

Increase in salinity of soils and surface water in case of potential groundwater discharge to the surface. Also, wetting the surficial environment (ground saturation); effect on local vegetation

## Specific Mitigation:

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

Version: Final 4.0



Point Features

Linear Features
Area Features

Bypass Trails

Approved Access Route

Map 239

Mining

Provincial Forest

1:10,000

## ESS Group: Archaeological

Sec-Seg ID	ESS ID	ESS Name	Easting	Northing	<b>UTM Zone</b>
C1-S12	C1-Hert-128	Abandoned Building	466338	5693533	14N

#### **Potential Effects:**

Potential disturbance to Heritage Resources

## **Specific Mitigation:**

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

## ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	<b>UTM Zone</b>	Distance
C1-S12	C1-Aqua-205	Saline artesian areas	Site: 95 to 96	E-459788 N-5698147	E-468605 N-5691935	14N	10785m

## **Potential Effects:**

Increase in salinity of soils and surface water in case of potential groundwater discharge to the surface. Also, wetting the surficial environment (ground saturation); effect on local vegetation

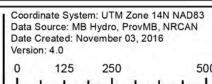
## **Specific Mitigation:**

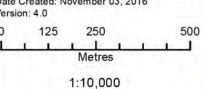
- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
- Emergency response plans for sealing/grouting and pumping will be implemented as required.
- Follow up inspections of installed foundations will be undertaken to monitor for excess moisture.

Version: Final 4.0









- Major Road Local Road

-- Winter Road

Provincial Forest

Mining



Point Features Linear Features
Area Features Approved Access Route

Major Stream Crossing Abandoned Rail Crossing A Rail Crossing Transmission Line Crossing Bypass Trails

**Z** Groundwater

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

**Construction Section C1 Environmentally Sensitive Site Locations** 

# ESS Group: Groundwater

Sec-Seg ID	ESS ID	ESS Name	Location	Start	Stop	<b>UTM Zone</b>	Distance
C1-S12	C1-Aqua-205	Saline artesian areas	Site: 95 to 96	E-459788 N-5698147	E-468605 N-5691935	14N	10785m

## **Potential Effects:**

Increase in salinity of soils and surface water in case of potential groundwater discharge to the surface. Also, wetting the surficial environment (ground saturation); effect on local vegetation

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- Qualified driller with appropriate experience will be contracted to work in areas affected by artesian conditions.
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Version: Final 4.0