

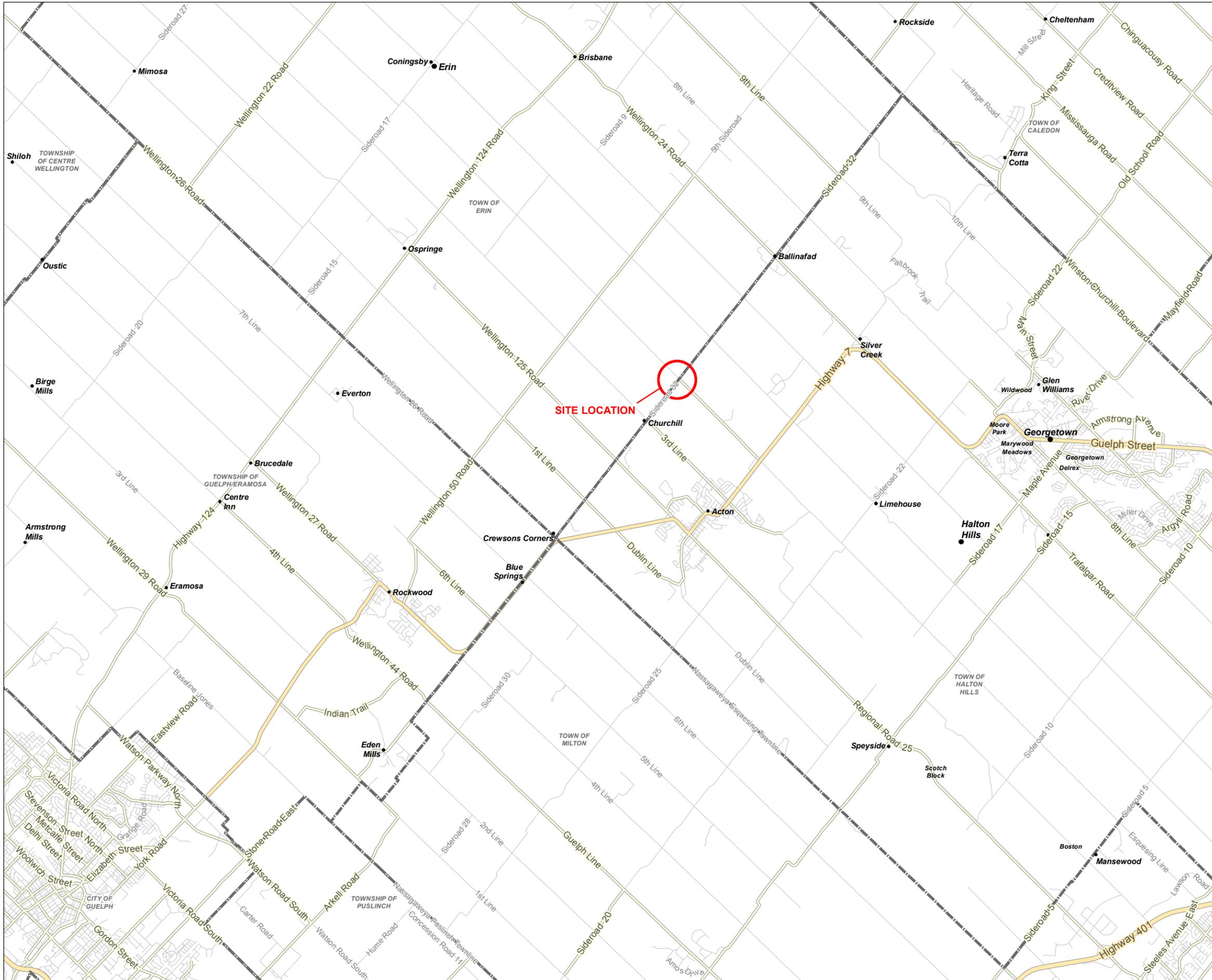
**FOURTH LINE WELL FIELD EXPANSION, ACTON, MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT
STUDY – PROJECT FILE**

Appendix A Figures
January 21, 2015

Appendix A Figures

Legend

- Site Location
- Highway
- Major Road
- Local Road
- Municipal Boundary



- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
 3. Orthoimagery © First Base Solutions, 2010.

December 2014
16111105

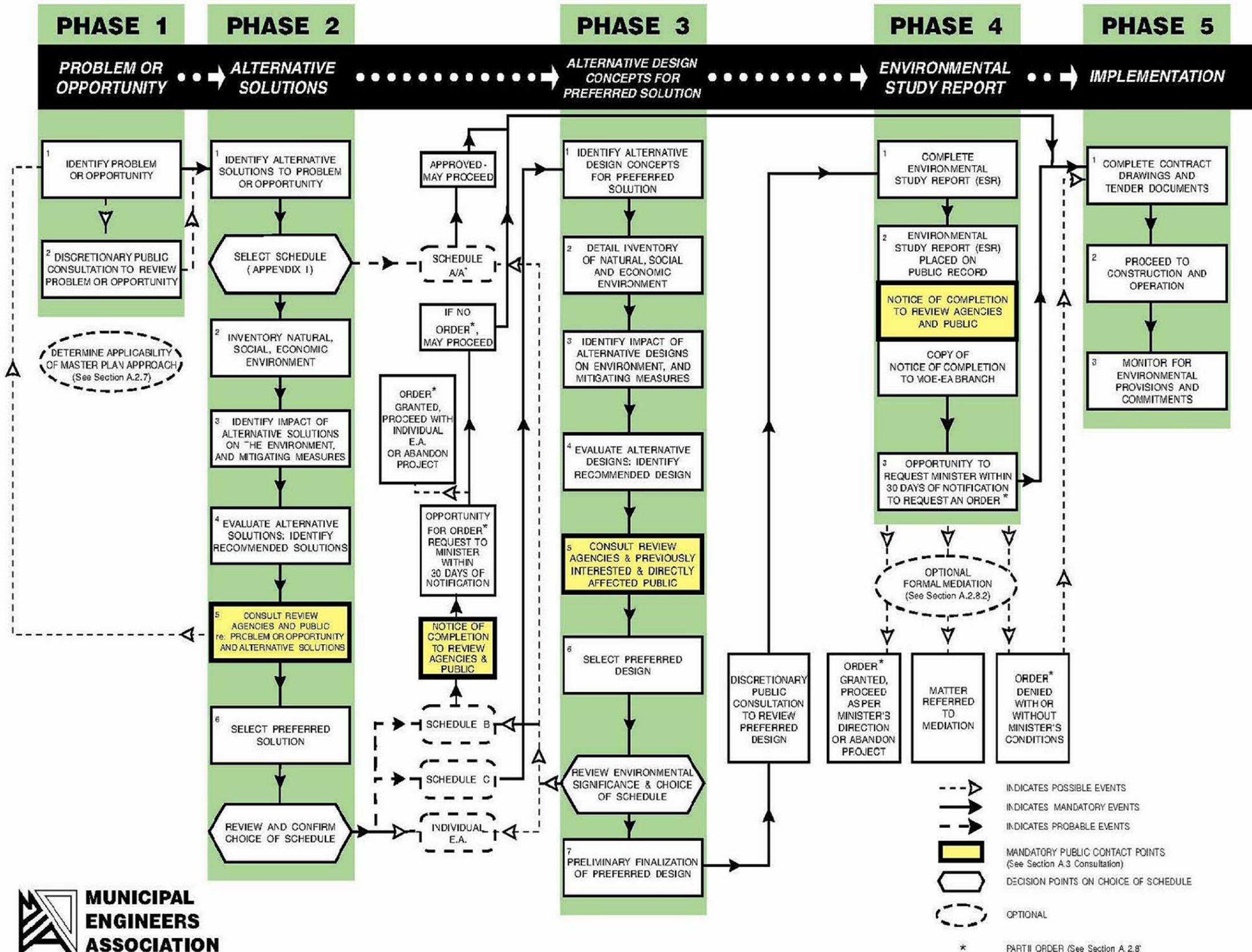
Client/Project
Halton Region
Fourth Line Wells - Proposed Pumping Rate Increase

Figure No.
1

Title
Site Location

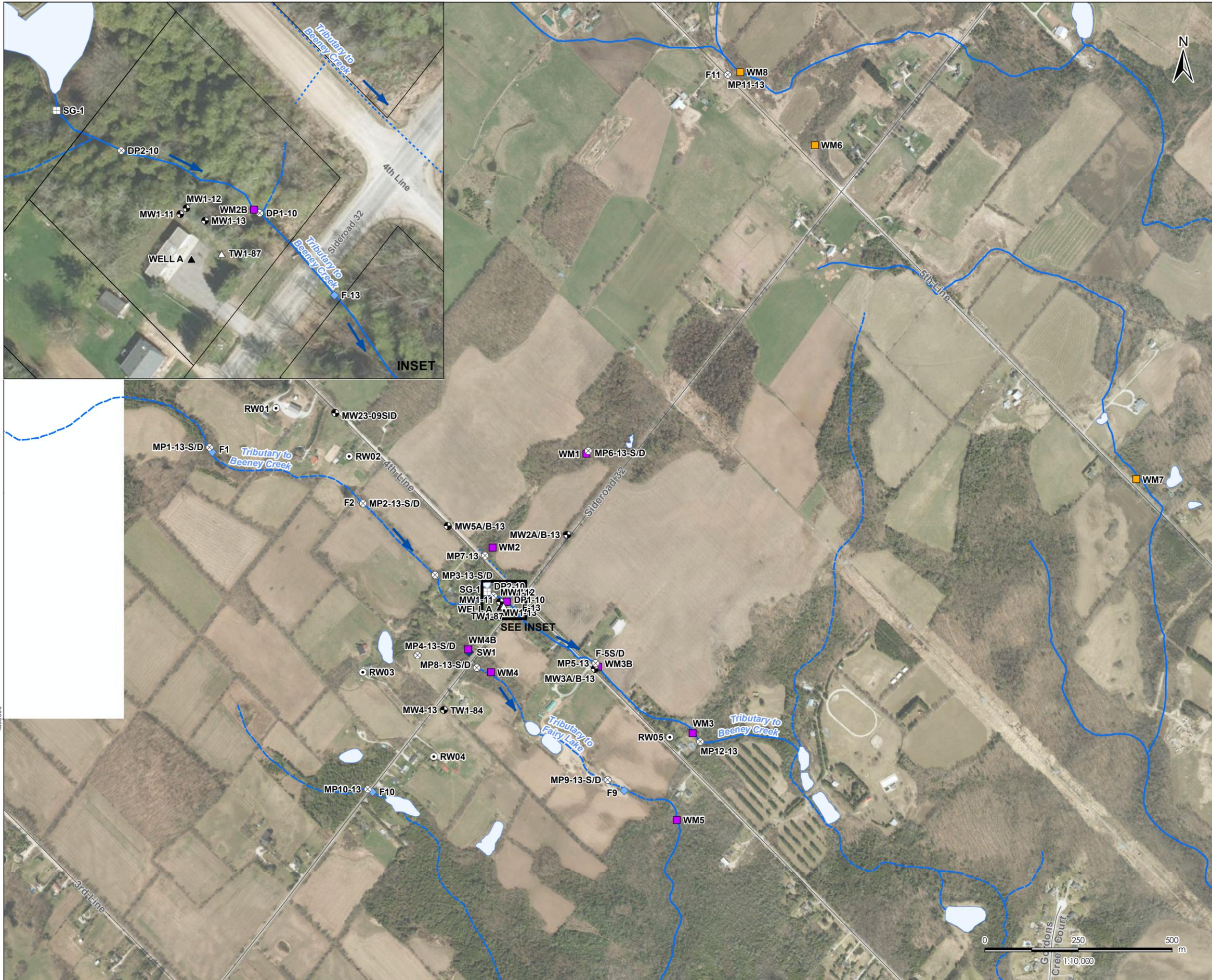
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 Revised: 2014-12-02 By: ccoghan

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



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Revised: 2014-12-02 By: ccoghan

- Legend**
- ▲ Production Well
 - △ Test Well
 - Monitoring Well
 - ⊗ Drive-Point Piezometer
 - ⊞ Staff Gauge
 - ◆ Flow Monitoring Station
 - ◆ Surface Water Monitor
 - Control Wetland Monitor/Vegetation Assessment Point
 - Wetland Monitor/Vegetation Assessment Point
 - Private Well
 - ➔ Direction of Flow
 - Road
 - Watercourse - Permanent
 - - - Watercourse - Intermittent
 - ⋯ Watercourse - Ephemeral Flow
 - Waterbody



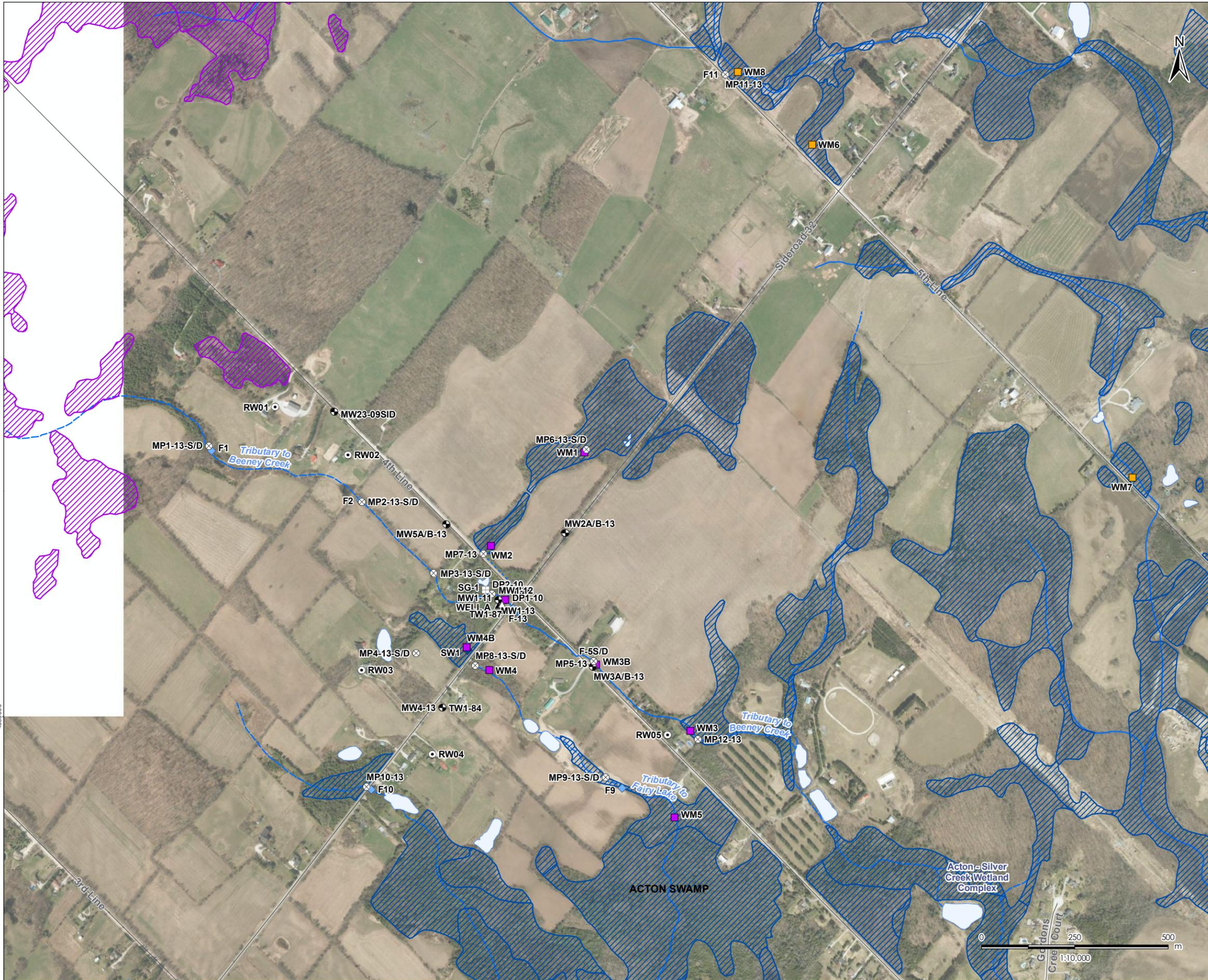
- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
 3. Orthoimagery © First Base Solutions, 2010.
 4. Watercourses beyond the site limits are based on the MNRs interpretation and should be considered approximate. December 2014 16111105

Client/Project
 Halton Region
 Fourth Line Wells - Proposed Pumping Rate Increase

Figure No.
3

Title
Site Plan

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 4835000
 Revised: 2014-12-02 By: ccoghlan



Legend

- ▲ Production Well
- △ Test Well
- Monitoring Well
- ⊗ Drive-Point Piezometer
- ⊞ Staff Gauge
- ◆ Flow Monitoring Station
- ◆ Surface Water Monitor
- Control Wetland Monitor/Vegetation Assessment Point
- Wetland Monitor/Vegetation Assessment Point
- Private Well
- Road
- Watercourse - Permanent
- - - Watercourse - Intermittent
- · · Watercourse - Ephemeral Flow
- Waterbody

Provincially Significant Wetlands

- ▨ Acton - Silver Creek Wetland Complex
- ▨ Eramosa River - Blue Springs Creek Wetland Complex

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 - Watercourses beyond the site limits are based on the MNRs interpretation and should be considered approximate.

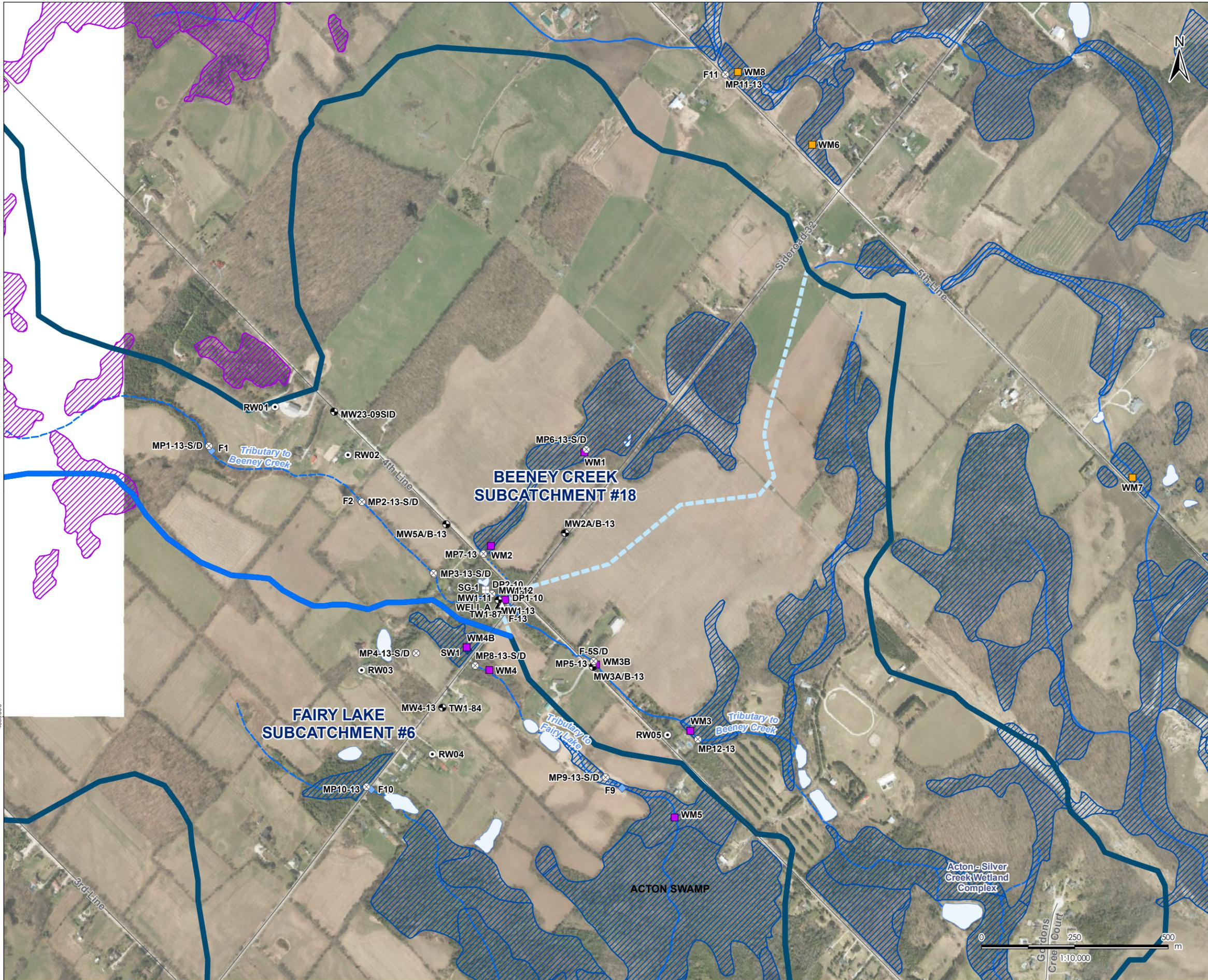
December 2014
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Client/Project
Halton Region
Fourth Line Wells - Proposed Pumping Rate Increase

Figure No.
4

Title
Surface Water Features

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 Revised: 2014-12-02 By: ccoghan
 4835000



Legend

- ▲ Production Well
- △ Test Well
- Monitoring Well
- ⊗ Drive-Point Piezometer
- ⊞ Staff Gauge
- ◆ Flow Monitoring Station
- ◆ Surface Water Monitor
- Control Wetland Monitor/Vegetation Assessment Point
- Wetland Monitor/Vegetation Assessment Point
- Private Well
- Road
- Watercourse - Permanent
- - - Watercourse - Intermittent
- · · Watercourse - Ephemeral Flow
- - - Fairy Lake/Beeney Creek Subcatchment Boundary as per Dillon 2012
- Revised Fairy Lake/Beeney Creek Subcatchment Boundary
- ▭ Fairy Lake/Beeney Creek Subcatchment Boundary
- Waterbody

Provincially Significant Wetlands

- ▨ Acton - Silver Creek Wetland Complex
- ▨ Eramosa River - Blue Springs Creek Wetland Complex

- Notes**
- Coordinate System: NAD 1983 UTM Zone 17N
 - Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
 - Orthimagery © First Base Solutions, 2010.
 - Subcatchments presented in Dillon 2012 (provided by MNR and Halton Region) are modified based on field observations made in 2014 (CVC and Stantec).
 - Watercourses beyond the site limits are based on the MNRs interpretation and should be considered approximate. December 2014 16111105

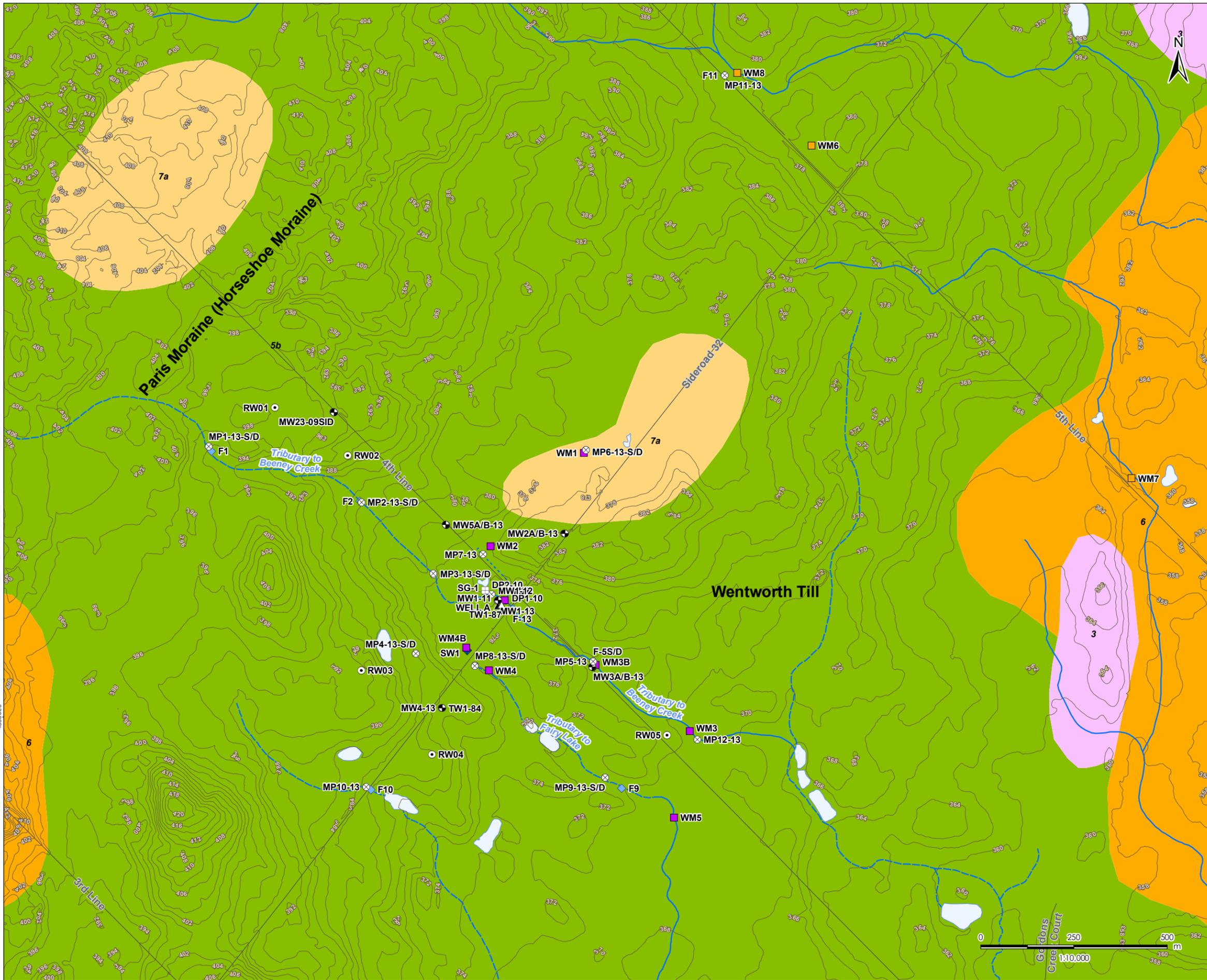
Client/Project
 Halton Region
 Fourth Line Wells - Proposed Pumping Rate Increase

Figure No.
5

Title

Credit River Subcatchments

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 4835000
 Revised: 2014-12-02 By: ccoghan



Legend

- ▲ Production Well
- △ Test Well
- Monitoring Well
- ⊗ Drive-Point Piezometer
- ⊞ Staff Gauge
- ◆ Flow Monitoring Station
- ◆ Surface Water Monitor
- Control Wetland Monitor/Vegetation Assessment Point
- Wetland Monitor/Vegetation Assessment Point
- Private Well
- Road
- Topographic Contour (mAMSL)
- Watercourse - Permanent
- - - Watercourse - Intermittent
- ⋯ Watercourse - Ephemeral Flow
- Waterbody

Surficial Geology

- 7a: Glaciofluvial deposits (Sandy deposits)
- 6: Ice-contact stratified deposits
- 5b: Stone-poor, carbonate-derived silty to sandy till
- 3: Paleozoic bedrock

- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
 3. Surficial geology produced by the Ontario Geological Survey 2003. Surficial geology of Southern Ontario; Ontario Geological Survey, MRD 128.
 4. Topography derived from the Southwestern Ontario Orthophotography Project (2010) - Digital Elevation Model © Queen's Printer for Ontario, 2010.
 5. Watercourses beyond the site limits are based on the MNR's interpretation and should be considered approximate. December 2014 16111105

Client/Project
 Halton Region
 Fourth Line Wells - Proposed Pumping Rate Increase

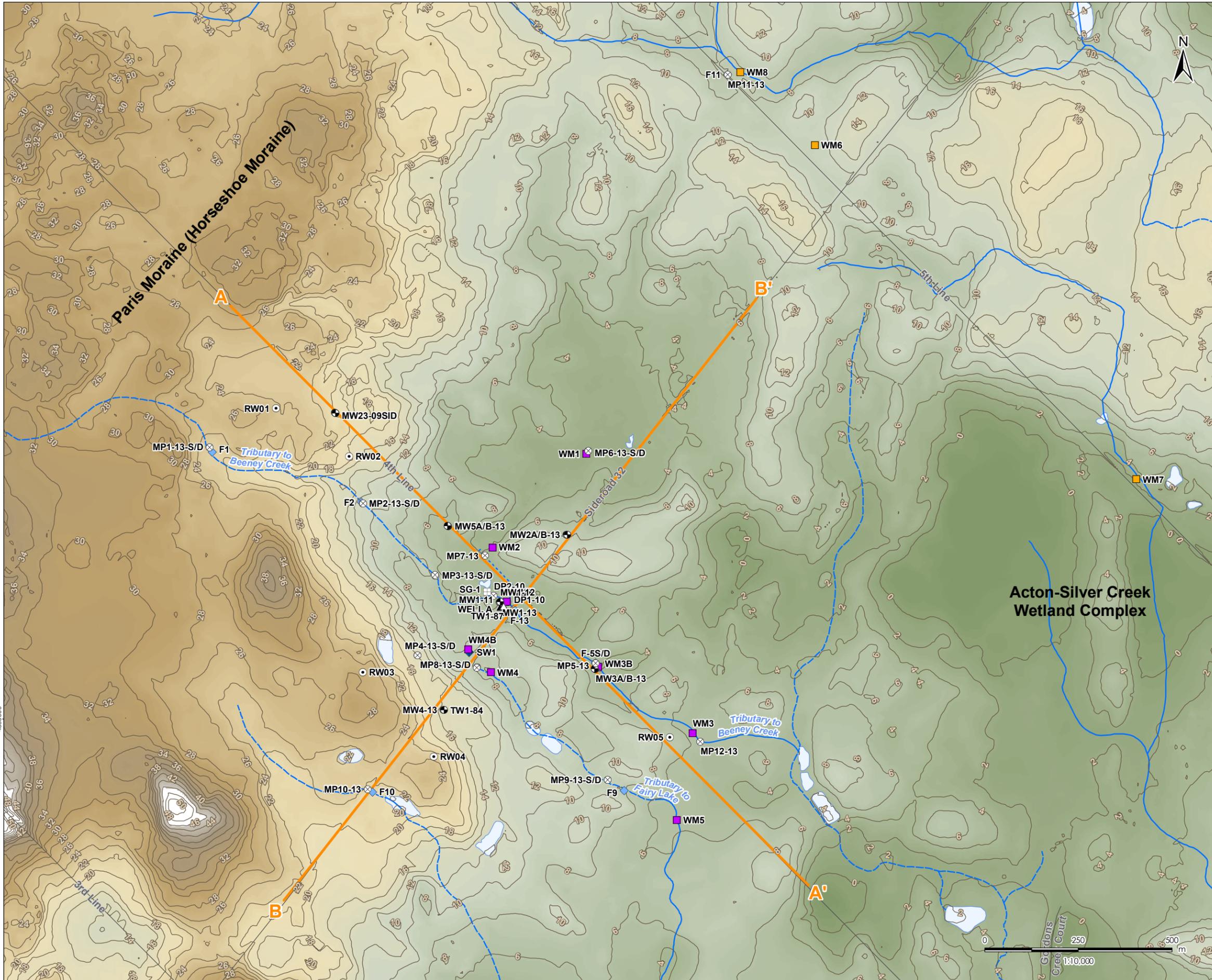
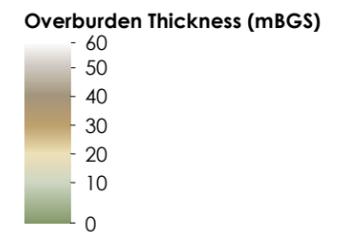
Figure No.
6

Title

Surficial Geology and Ground Surface Topography

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 Revised: 2014-12-02 By: ccoghlan

- Legend**
- ▲ Production Well
 - △ Test Well
 - Monitoring Well
 - ⊗ Drive-Point Piezometer
 - ⊞ Staff Gauge
 - ◆ Flow Monitoring Station
 - ◆ Surface Water Monitor
 - Control Wetland Monitor/Vegetation Assessment Point
 - Wetland Monitor/Vegetation Assessment Point
 - Private Well
 - Cross-Section Location
 - Road
 - Overburden Thickness Contour (mBGS)
 - Watercourse - Permanent
 - - - Watercourse - Intermittent
 - · · Watercourse - Ephemeral Flow
 - Waterbody



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Client/Project
 Halton Region
 Fourth Line Wells - Proposed Pumping Rate Increase

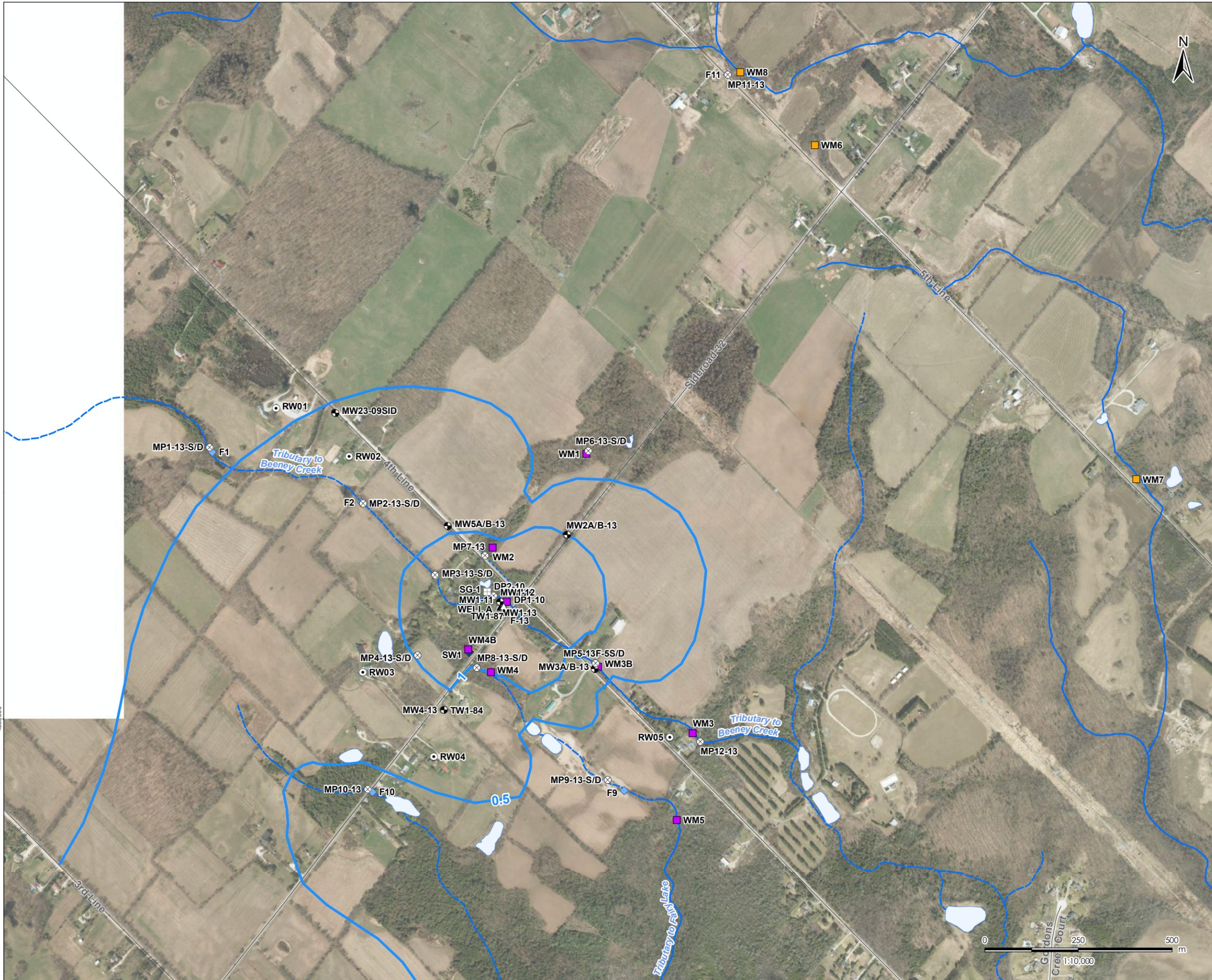
Figure No.
7

Title

Overburden Thickness

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 Revised: 2014-12-02 By: ccoghan
 4835000

- Legend**
- ▲ Production Well
 - △ Test Well
 - Monitoring Well
 - ⊗ Drive-Point Piezometer
 - ⊞ Staff Gauge
 - ◆ Flow Monitoring Station
 - ◆ Surface Water Monitor
 - Control Wetland Monitor/Vegetation Assessment Point
 - Wetland Monitor/Vegetation Assessment Point
 - Private Well
 - Modelled Drawdown Contour
 - Road
 - Watercourse - Permanent
 - - - Watercourse - Intermittent
 - · · Watercourse - Ephemeral Flow
 - Waterbody



- Notes**
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
 3. Orthoimagery © First Base Solutions, 2010.
 4. Modelled drawdown from AECOM et al., 2011.
 5. Watercourses beyond the site limits are based on the MNRs interpretation and should be considered approximate.
- December 2014
16111105

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Halton Region
Fourth Line Wells - Proposed Pumping Rate Increase

Figure No.
8
Title

**Modelled Drawdown Contours
(Tier 3 Water Budget)**

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 Revised: 2014-12-02 By: ccoghan
 4835000

- Legend**
- ▲ Production Well
 - △ Test Well
 - Monitoring Well
 - ⊗ Drive-Point Piezometer
 - ⊞ Staff Gauge
 - ◆ Flow Monitoring Station
 - ◆ Surface Water Monitor
 - Control Wetland Monitor/Vegetation Assessment Point
 - Wetland Monitor/Vegetation Assessment Point
 - Private Well
 - 2.5 Estimated Drawdown (m)
 - Drawdown Contour (m)
 - Road
 - Watercourse - Permanent
 - - - Watercourse - Intermittent
 - ⋯ Watercourse - Ephemeral Flow
 - Waterbody



