

TECHNICAL MEMORANDUM

DATE January 29, 2019 **Project No.** 1668414

TO Andrew Evraire
Parsons Corporation

CC Amanda Malatesta (Golder), Sandra McGaghran (Golder) Christopher Ng (Golder), Nikol Kochmanova (Golder)

FROM John Piersol **EMAIL** John_Piersol@golder.com

MAJOR MACKENZIE CLASS EA – RESPONSE TO MECP COMMENTS ON HYDROGEOLOGICAL ASPECTS OF THE DESKTOP STUDY

Dear Mr. Evraire,

Golder Associates Ltd. (Golder) prepared and submitted a desktop study to Parsons Corporation (Parsons), entitled: “Improvements to Major Mackenzie Drive (Y.R. 25) from Highway 400 to Jane Street (Y.R. 55), City of Vaughan, Regional Municipality of York”, on November 24, 2017 associated with a Municipal Class EA technical support section submission to the Ministry of Environment, Conservation and Parks (MECP). On January 22, 2019, the MECP provided comments to Parsons including a comment related to hydrogeological aspects of the desktop study. The MECP comment and Golder’s response providing the requested clarification is presented below.

MECP Comment: *Upon review of the ministry’s Source Water Protection Information Atlas, the study area is located in an area designated as Highly Vulnerable Aquifer (score 6) and in Wellhead Protection Area Q1/Q2 (water quality, moderate stress). See appendix 1 for more details. Please update section F.2.7 accordingly.*

The desktop study report included a reference to the Aquifer Vulnerability Index for the study area as presented in the following report:

Toronto Region Conservation Authority (TRCA). 2009. Geology and Groundwater Resources – Report on Current Conditions.

We have included below in Figure 1 the latest mapping of Highly Vulnerable Aquifers (HVAs) from the online York Region Source Water Protection Mapping (accessed January 2019). This mapping shows that portions of the study area are mapped as Highly Vulnerable Aquifers. HVAs are defined as portions of the landscape that are vulnerable to contamination based on depth to the aquifer and type of materials above it (e.g., clay vs. sand). HVAs are one of four types of vulnerable areas identified in the Ontario Clean Water Act, 2006. HVAs are not within Wellhead Protection Areas or Intake Protection Zones. Under the Clean Water Act, HVAs are assigned a vulnerability score of 6.

In addition, the study area is located in within the York Region Wellhead Protection Area (WHPA) Q1/Q2. The WHPA Q1/Q2 is a quantity protection zone assigned under the Clean Water Act to ensure York Region has a sustainable supply of groundwater.

We trust that the above responses address your comments on the hydrogeological comments of the desktop study. Should you have any further questions regarding this submission, please contact the undersigned.

Yours Sincerely,



Amanda Malatesta, M.Sc.
Geoscientist

AM/JAP/img



John Piersol, M.Sc., P.Geo.
Associate, Senior Hydrogeologist

[https://golderassociates-my.sharepoint.com/personal/iguterres_golder_com/documents/isabel/project/misc jobs/amanda malatesta/1668414-tm-rev0-29jan2019 parson major mackenzie.docx](https://golderassociates-my.sharepoint.com/personal/iguterres_golder_com/documents/isabel/project/misc%20jobs/amanda%20malatesta/1668414-tm-rev0-29jan2019%20parson%20major%20mackenzie.docx)

Attachment:

Figure 1: Highly Vulnerable Aquifer Mapping of the Study Area, Major Mackenzie Dr. from Hwy 400 to Jane St.

FIGURE

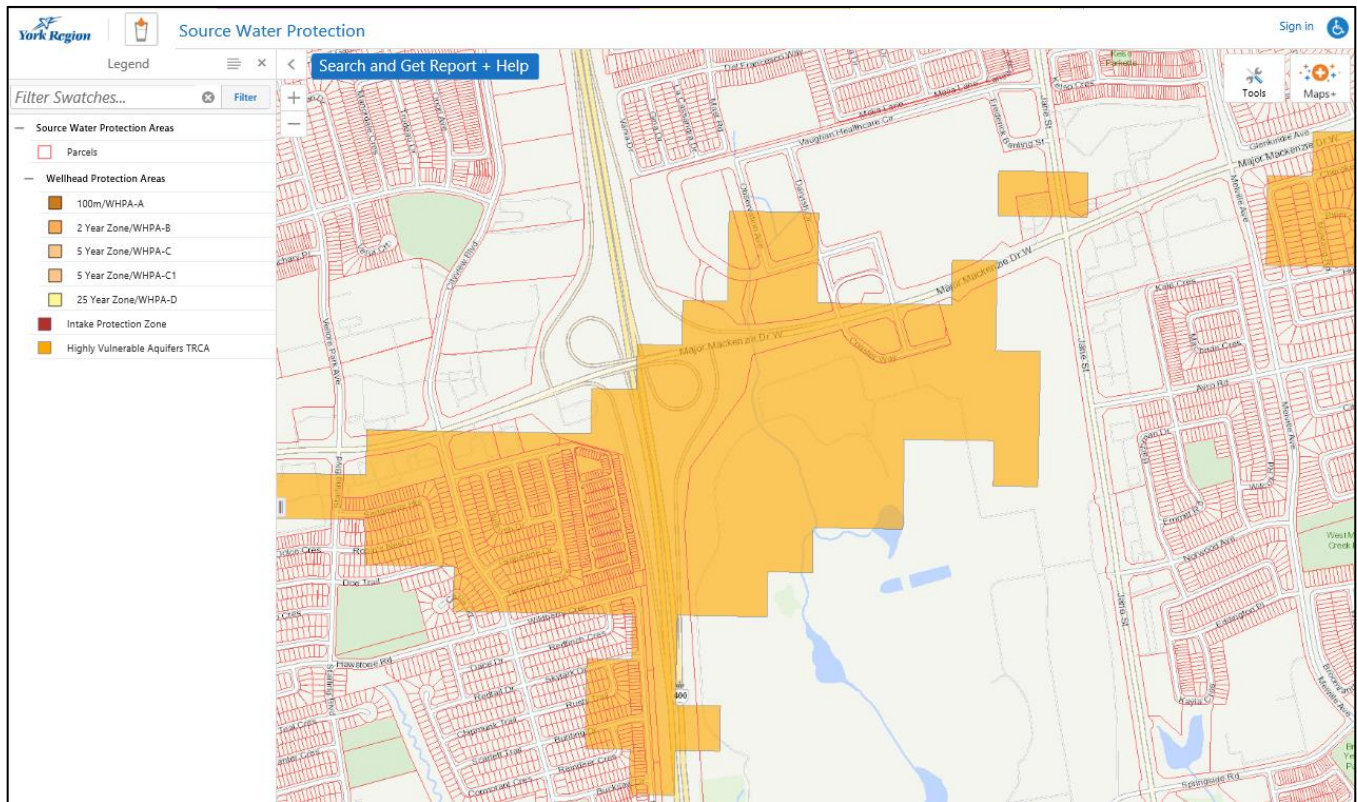


Figure 1: Highly Vulnerable Area Mapping of the Study Area, Major Mackenzie Dr. from Hwy 400 to Jane St.