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Groundwater Resources Studies

The *Groundwater Resources Study* (GRS) series seeks to better the understanding of Ontario's groundwater resources through the collection, evaluation and distribution of geoscience data. The main objective of the series is to provide accurate information on a range of groundwater-related themes, including local- to watershed-scale aquifer characterization and delineation; geologic controls and influences on groundwater quantity and quality; and methods development. Products of the groundwater program include geoscience reports, data sets and protocols for information collection and handling. Geoscience information generated through the series will find application in the protection and sustainable management of the province's groundwater resources.

Groundwater Resources Study 16

Discrete, High-Quality Hydraulic Conductivity Estimates for the Early Silurian Carbonates of the Guelph Region

by E.H. Priebe, C.J. Neville and F.R. Brunton

This publication can be downloaded from

http://www.geologyontario.mndm.gov.on.ca/mndmaccess/mndm_dir.asp?type=pub&id=GRS016

This digital data release provides a large, high-quality set of hydraulic conductivity (K) estimates, with values tied to stratigraphy, for the Guelph region. The 72 K values represent a summary of the best discrete single-hole hydraulic testing conducted for the City of Guelph in the past 2 decades. This study was conducted in collaboration with the City of Guelph.

The report provides detailed descriptions of how the hydraulic test analyses were conducted, a summary table of the best K estimate for each test and the borehole logs for each well. Associated hydraulic test analyses for each hydraulic conductivity value are also provided as graphic plots, which are hyperlinked from the report. Data files are provided as 53 plots (as *.tif* files), 1 Microsoft® Excel® 2010 workbook (*.xlsx*) and 1 portable document format (*.pdf*) file.

This GRS is an interactive publication, with information and data organized in a report and 2 folders.

1. Hydraulic_Test_Analyses
2. K_values

GRS16_Report.pdf contains a detailed description of the analytical methods used to make the hydraulic conductivity (“K”) estimates. Instructions about using the hyperlinks and navigation are provided in this document. Features to note within the document are the following:

“Figure 1” is a map showing the locations of the monitoring well in which the hydraulic tests were conducted. A hyperlink is provided for each monitoring well location, which links to the borehole log (in Appendix 1) for the selected monitoring well.

“Table 1” provides a summary of the monitoring well details and locations (UTMs), the geological formation(s) associated with each hydraulic test interval and the high-quality K estimates. A hyperlink is provided for each monitoring well number, which links to the borehole log (in Appendix 1) for the selected monitoring well.

“Appendix 1. Borehole Logs”. The borehole logs are provided in Appendix 1, or can be accessed by selecting the hyperlink for each monitoring well location identified in Figure 1 or the monitoring well number in Table 1. The UTM co-ordinates for the monitoring well locations are provided in Table 1. In addition, each hydraulic conductivity (“K”) value in the borehole logs is hyperlinked to the associated hydraulic test analysis (in folder “Hydraulic_Test_Analyses”).

NAVIGATION TIP: To navigate between pages in the report PDF, particularly after selecting a hyperlink, use the “Alt” + “left arrow” keys to return to the page from which you started (i.e., “previous view”). Similarly, use the “Alt” + “right arrow” keys to change to the last viewed page (i.e., “next view”).

1. Hydraulic_Test_Analyses. This folder contains 53 plots (as *.tif* files) providing the associated hydraulic test analyses for each hydraulic conductivity value. Each analysis is labelled by the monitoring well ID (“MW” or “OW”) with the test interval, in metres below ground surface, provided in the file name (e.g., *OW1-06_40-45m.tif*). These analyses can also be accessed individually via the hyperlinks in each borehole log (Appendix 1 in the report) by selecting a K value.

2. K_values. This folder contains 1 Microsoft® Excel® 2010 (*.xlsx*) workbook file.

GRS16_Table 1.xlsx is Table 1 from the report.

Acknowledgments

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