

Grand River Source Protection Area

ASSESSMENT REPORT **Submission Draft**

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28.0 MAP REFERENCES

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Additional references for specific maps are given in the table below:

| Map # | Description | Reference |
|-----------|--|---|
| Map 2-5: | Population and Population Density in Watershed by Municipality and Reserve | Grand River Conservation Authority, August 2018. Summary of Population Statistics for Grand River Watershed. |
| Map 2-7: | Physiography of Grand River Watershed Area | Physiography of Southern Ontario Geological Survey dataset MRD228, Chapman, L.J. and Putnam, D.F. 2007. Ministry of Northern Development and Mines, Copyright © Queen's Printer, 2010. |
| Map 2-8: | Hummocky Topography | Various Authors, 1967-1993, Quaternary and Pleistocene Geology, Southern Ontario, Ontario Geological Survey. Ministry of Northern Development and Mines, Copyright © Queen's Printer, 2003. |
| Map 2-10: | Bedrock Topography | Gao, C., Shirota, J., Kelly, R.I., Brunton, F.R. and van Haften, S. 2006. Bedrock topography and overburden thickness mapping, southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 207. |
| Map 2-11: | Bedrock Geology | Paleozoic Geology of Southern Ontario, Ontario Geological Survey dataset MRD219, Armstrong, D.K., Dodge, J.E.P., 2007. Ministry of Northern Development and Mines, Copyright © Queen's Printer, 2010. |
| Map 2-12: | Quaternary (Surficial) Geology | Various Authors, 1967-1993, Quaternary and Pleistocene Geology, Southern Ontario, Ontario Geological Survey. Ministry of Northern Development and Mines, Copyright © Queen's Printer, 2010. |
| Map 2-13: | Overburden Thickness | Holysh, S., Pitcher, J., and Boyd, D. 2001. <i>Grand River Regional Groundwater Study</i> . Grand River Conservation Authority, Cambridge, ON. |
| Map 2-14: | Water Table Surface of the Grand River Watershed | AquaResource Inc. 2009a. Integrated Water Budget Report, Grand River Watershed: Final Report, June 2009. |

| Map # | Description | Reference |
|---------------------|--|---|
| Map 2-15: | Potentiometric Surface of the Grand River Watershed | AquaResource Inc. 2009a. Integrated Water Budget Report, Grand River Watershed: Final Report, June 2009. |
| Map 2-17: | Groundwater Discharge Map | Groundwater Discharge derived from Figure 70 (page 169) of: AquaResource Inc., June 2009. Final GRCA Integrated Water Budget Report. |
| Map 2-18: | Average Annual Temperature | Based on Environment and Climate Change Canada data. Produced using information under License with the Grand River Conservation Authority © Grand River Conservation Authority, 2019. |
| Map 2-19: | Average Annual Precipitation | Based on Environment and Climate Change Canada data. Produced using information under License with the Grand River Conservation Authority © Grand River Conservation Authority, 2019. |
| Map 18-2: | Groundwater Discharge Map in the Grand River Watershed | Groundwater Discharge derived from Figure 70 (page 169) of: AquaResource Inc., June 2009. Final GRCA Integrated Water Budget Report. |
| Map 18-4: | Water Quantity Stress Levels by Groundwater Assessment Area within the Grand River Watershed | Adapted from AquaResource Inc. 2009. Tier 2 Water Quantity Stress Assessment Report: Grand River Watershed, Final Report December 2009. AquaResource Inc., Breslau, ON. |
| Maps 19-1 to 19-12: | Region of Waterloo Tier 3 Water Budget and Risk Assessment | Matrix Solutions Inc. 2014. Region of Waterloo Tier Three Water Budget and Local Area Risk Assessment. Matrix Solutions Inc., Waterloo, ON. |
| Maps 20-1 to 20-12: | Whitemans Creek Tier 3 Water Budget and Risk Assessment | Earthfx Inc., 2018. Whitemans Creek Tier Three Local Area Water Budget and Risk Assessment: Risk Assessment Report. |
| Maps 22-1 to 22-8: | Centre Wellington Tier 3 Water Budget and Risk Assessment | Matrix Solutions Inc. 2020. Centre Wellington Tier Three Water Budget Final Risk Assessment Report. Matrix Solutions Inc., Guelph, ON. |

APPENDIX A

**Written Notice from Director Classifying Intakes per Technical Rule 55.1
Requests for Approval of Alternative Approach**

APPENDIX B

Correspondence Regarding Excavation that Breaches the Aquitard