

GRS020 METADATA

GENERAL INFORMATION

Title

Tritium in Shallow Groundwater of Southern Ontario

Alternate Title

GRS020

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June 1, 2022

Abstract

This Groundwater Resources Study presents a spatially detailed, tritium concentration interpolation that represents shallow, modern recharge conditions in groundwater across southern Ontario. Also included is a description of data sources, the data selection process and the approach to interpolating tritium concentrations. The tritium and well data used here were collected from the Ontario Geological Survey Ambient Groundwater Geochemistry Project (AGGP) database (MRD283-REV2). The AGGP was conducted from 2007 to 2019 in southern Ontario with the aim of characterizing baseline groundwater geochemistry of major overburden and bedrock aquifers. The southern Ontario study area, for this project and the AGGP, covers approximately 95,000 km². It is anticipated that the shallow groundwater tritium interpolation offered here may be used as a proxy for the precipitation input function needed for estimating groundwater ages, to support baseflow separation, or simply to investigate relative age ranges and tritium trends in shallow groundwater systems. While no interpolation is perfectly reliable, the data and supporting information provided in this Groundwater Resources Study and its associated files offers users the opportunity to assess reliability as they interpret these result in their area(s) of interest. This release comprises 1 Microsoft® Excel® for Office 365 (.xlsx) workbook file, 2 raster images (as .tif files) for use in ESRI® ArcGIS® and 1 document in portable document format (.pdf).

Additional information can be found within a readme file provided with the product.

Purpose or Objective

The purpose of this project is to produce a spatially detailed tritium concentration interpolation that represents shallow, modern recharge conditions across southern Ontario. It is anticipated that such an interpolation may be used as a proxy for the precipitation input function needed for estimating groundwater ages, to support baseflow separation or simply to investigate relative age ranges and tritium trends in shallow groundwater systems.

The objective of this product is to collect and disseminate geoscience information for Ontario.

Keywords

Geological Survey

Geology

Ministry of Northern Development, Mines, Natural Resources and Forestry

NDMNRF

Ontario Geological Survey

OGS

Groundwater Resources Study

GRS

Aquifer

Groundwater

Geochemistry, General

Hydrogeology

Business Themes

Geological Survey

Geology

GEOGRAPHIC INFORMATION

Geographic bounding box (decimal degrees)

North bounding latitude:	45.6489°
West bounding longitude:	-83.1077°
East bounding longitude:	-74.3338°
South bounding latitude:	41.9128°

Description of Completeness: irregularly shaped study area - completeness not available

MAPPING INFORMATION:

Grid Coordinate System Used:	Universal Transverse Mercator
Map Projection:	Transverse Mercator
Horizontal Geodetic Datum:	NAD83
Vertical Datum:	Unknown
Horizontal Position Accuracy of Features:	±100 m
Vertical Position Accuracy of Features:	Precise ±5 m
Spatial Data Qualifier(s):	Horizontal Accuracy: Accuracy of station locations is ±100 m for private wells and ±5 m publicly owned wells, such as monitoring wells.

DATA SOURCE INFORMATION

Data Source Type and Description

Includes Bibliographic Information: Product includes references to other sources of information

Data Source Type and Description

Direct Field Collection: Field work conducted from June 2007 to October 2019.

Current Status of the Data: Complete

Frequency of Changes or Additions to be made to the Data: Not Planned

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