

CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

MINUTES NO. 5

AUTHORITY MEETING

Tuesday, June 20, 2023 - 5:00 P.M.

MEETING LOCATION: HYBRID – Virtual through Zoom and/or in person at 100 Whiting Avenue, Oshawa

Authority Elizabeth Roy – Chair
Members: Bob Chapman – Vice Chair
Marilyn Crawford
Sami Elhajjeh
Bruce Garrod
Ron Hooper
Rick Kerr
Chris Leahy
Tito-Dante Marimpietri
Ian McDougall
David Pickles
Steve Yamada

Authority C. Darling, Chief Administrative Officer
Staff: B. Boardman, Executive/Accounting Administrator/ Recording Secretary
R. Catulli, Director, Corporate Services
J. Davidson, Director, Watershed Planning & Natural Heritage
R. Gerber, Senior Hydrogeologist
C. Gregory, Coordinator, Conservation Education
L. Hastings, Communications Specialist
D. Hope, Conservation Lands & Education Manager
C. Jones, Director, Planning & Regulation
P. Sisson, Director, Engineering & Field Operations & Education
L. Vaja, Executive Assistant/Health & Safety Administrator
R. Wilmot, Information Management & Technology Manager

Absent: Rhonda Mulcahy
John Neal
Corinna Trall

Others:

The Chair called the meeting to order at 5:00 p.m.

LAND ACKNOWLEDGEMENT STATEMENT

Chair Roy recited the Land Acknowledgement.

DECLARATIONS of interest by members on any matters herein contained - *None*

ADOPTION OF MINUTES (Agenda pg. 1)

Res. #46 Moved by R. Kerr
Seconded by C. Leahy

THAT the Authority minutes of May 16, 2023, be adopted as circulated.

CARRIED

PRESENTATIONS – *None*

D. Pickles joined virtually at 5:03 p.m.
M. Crawford arrive at 5:05 p.m.
S. Yamada joined virtually at 5:10 p.m.

CORRESPONDENCE – *None*

SENIOR HYDROGEOLOGIST, OAK RIDGES MORAINÉ GROUNDWATER PROGRAM

(1) Staff Report #5823-23 (Agenda pg. 5)
Re: 2022 Annual Report and 2023 Work Plan (staff presentation attached)

Res. #47 Moved by B. Chapman
Seconded by R. Kerr

THAT Staff Report #5837-23 be received for information.

CARRIED

DIRECTOR, PLANNING & REGULATION

- (1) Staff Report #5835-23 (Agenda pg. 23)
Re: Permits Issued for Development, Interference with Wetlands, and Alteration to Shorelines and Watercourses – May 1 to 31, 2023

Res. #48 Moved by D. Pickles
Seconded by M. Crawford

THAT Staff Report #5835-23 be received for information.
CARRIED

DIRECTOR, WATERSHED PLANNING & NATURAL HERITAGE – None

DIRECTOR, ENGINEERING AND FIELD OPERATIONS

- (1) Staff Report #5839-23 (Agenda pg. 25)
Re: Conservation Education Update – September 2022 to June 2023

Res. #49 Moved by C. Leahy
Seconded by R. Hooper

THAT Staff Report #5839-23 be received for information.
CARRIED

DIRECTOR, CORPORATE SERVICES – None

CHIEF ADMINISTRATIVE OFFICER

- (1) Staff Report #5836-23 (Agenda pg. 33)
Re: Board of Directors Meetings – Start Time

Res. #50 Moved by M. Crawford
Seconded by B. Chapman

THAT Staff Report #5836-23 be received for information.
THAT Staff consider a change in the meeting start time to 3:00 p.m. for the next term of council. And, THAT the meetings continue the third Tuesday of each month at 5:00 p.m. for this term of council.
CARRIED

- (2) Staff Report #5838-23 (Agenda pg. 34)
Re: Memorandum of Understandings to Govern Municipal Funding for Programs and Services provide by CLOCA

Res. #51 Moved by C. Leahy
Seconded by T-D. Marimpietri

THAT the Board of Directors of the Central Lake Ontario Conservation Authority endorse the circulation of the attached draft Memorandum of Understandings (MOUs) between CLOCA and our municipal partners and authorize the Chair and CAO to execute the MOUs subject to any minor revisions as may be required.
CARRIED

CONFIDENTIAL MATTERS – None

NEW AND UNFINISHED BUSINESS

Vice Chair B. Chapman and Staff met with the Honorable Minister David Piccini, Minister of the Environment, Conservation and Parks at Lynde Shores Conservation Area on June 19th for a plaque unveiling by Trees for Life. B. Chapman noted that it was a very successful event.

Chair E. Roy reminded members to kindly respond to the calendar invites to Board Meetings.

ADJOURNMENT

Res. #52 Moved by C. Leahy
 Seconded by R. Kerr

THAT the meeting adjourns.
CARRIED

The meeting adjourned at 5:24 p.m.

ELIZABETH ROY, CHAIR

CHRIS DARLING, CHIEF ADMINISTRATIVE OFFICER

DRAFT

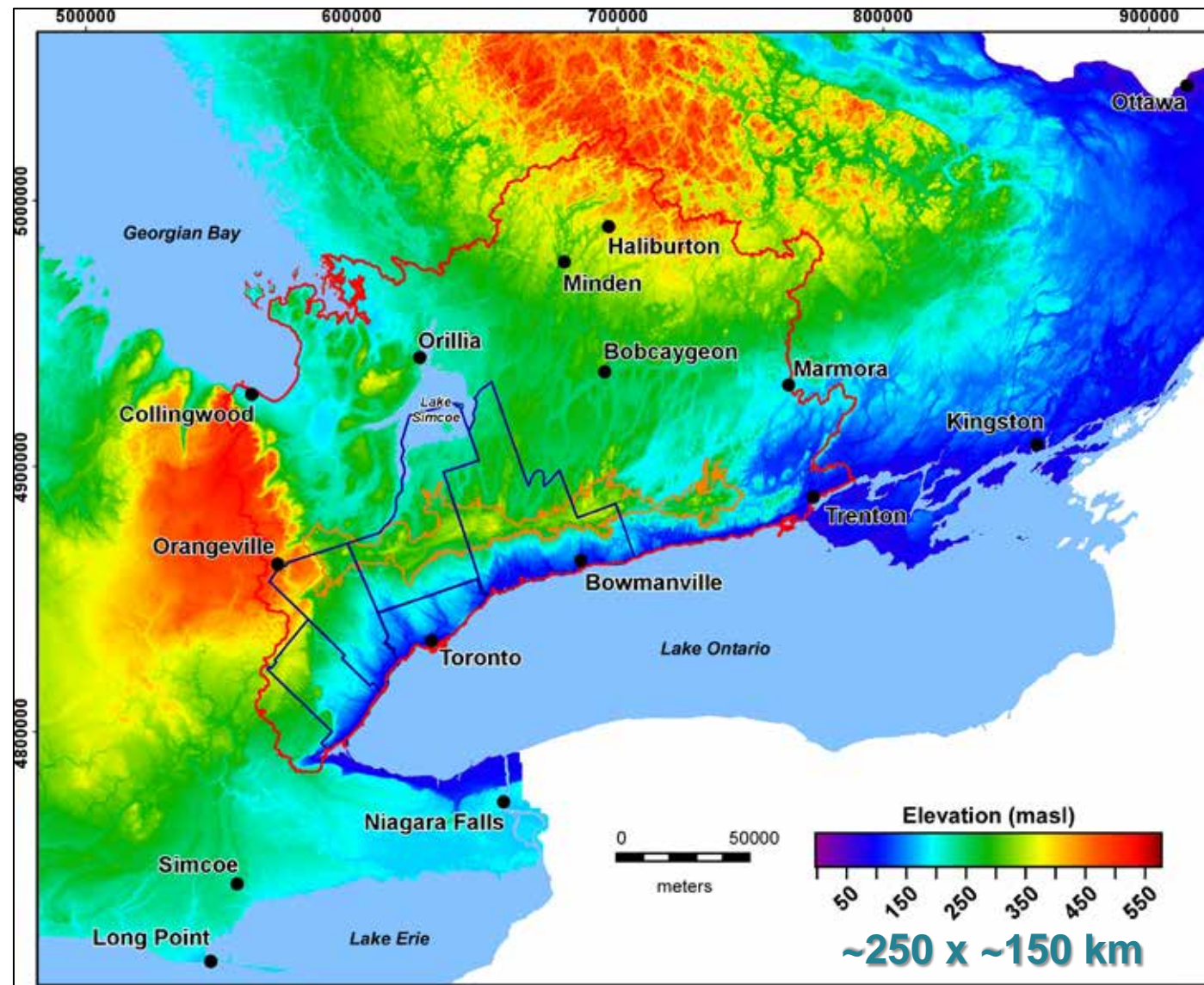
CLOCA Board of Directors

Oak Ridges Moraine Groundwater Program

- program overview**
- 2022 Annual Report**

Richard Gerber
20-June-2023





What

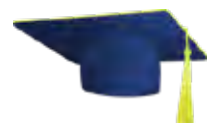
- Geology, Climate, Land Use, Library
 - Groundwater – Quantity & Quality
 - Surface Water – Quantity & Quality
- (www.oakridgeswater.ca)

REG 20-Jun-2023

Who

- MOU (2001-)
- #1] 2010
 - #2] 2020
 - #3] 2030

Logos for participating organizations: York Region, Region of Peel (working with you), Halton Region, Toronto, Central Lake Ontario Conservation, Credit Valley Conservation (inspired by nature), Conservation Halton, Toronto and Region Conservation (for The Living City), Ganaraska Conservation, Otonabee Conservation, Kawartha Conservation, Lower Trent Preservation, Ontario, and Canada (Environment and Climate Change Canada).



Oak Ridges Moraine Groundwater Program 2001 →



Bryan Tuckey



Nick Tunnacliffe



Alex Georgieffe



Russ
Powell



Situation/Approach

- **Problem: Lack of Integration**

- Perception: not enough gw data to make decisions
 - ∅ Politicians, Env Commissioner, Planners
- Water Resource Management – Fragmented
- Partners: Issue (gw ‘drama/surprise’) repetition
 - ∅ Avoid – Issue repetition & Data Collection repetition
- Mountain of information: what does it all mean?
 - ∅ Connect with decision-makers, project managers, planners, etc.

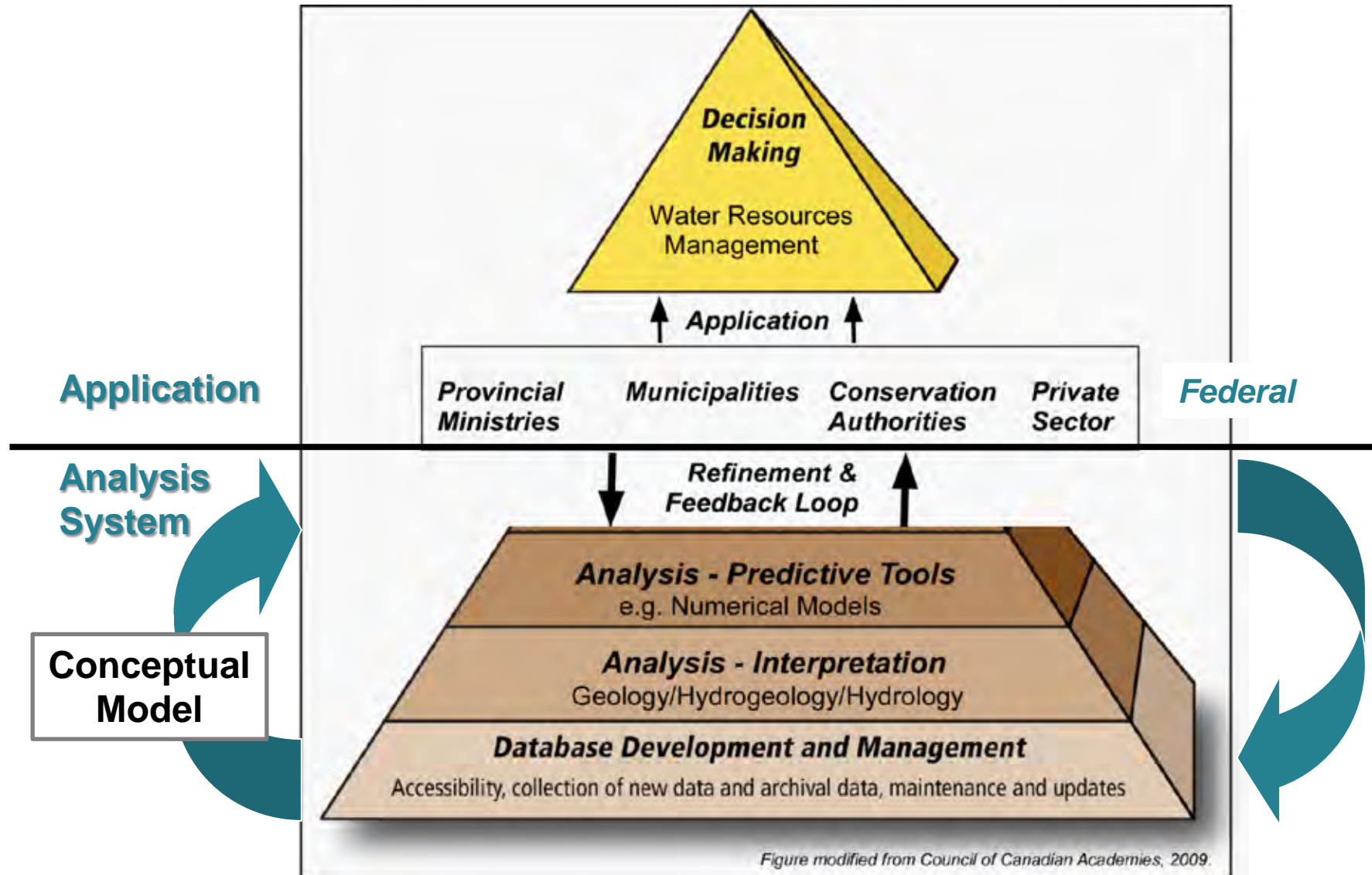
- **Attempt**

- ‘Groundwater Knowledge’ locations – lessons learned
- Where would I go to look for groundwater trouble?
 - ∅ Groundwater ‘Areas of Concern’ mapping



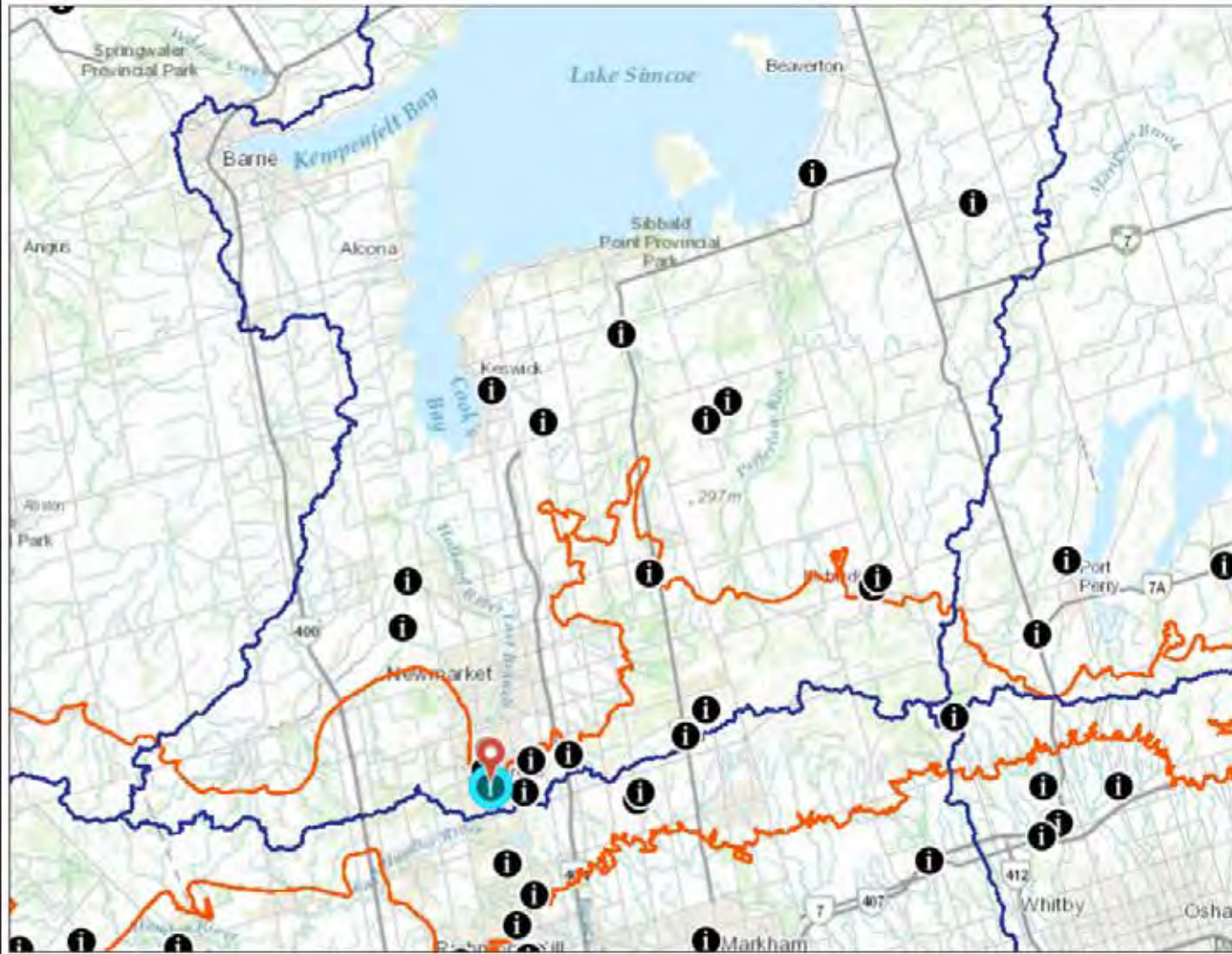
Sportsbusinessdaily.com (20200213)

Framework – overcome fragmentation



(Council of Canadian Academies, 2009; modified from Sharpe et al., 2002)

- Experience
- Lessons Learned



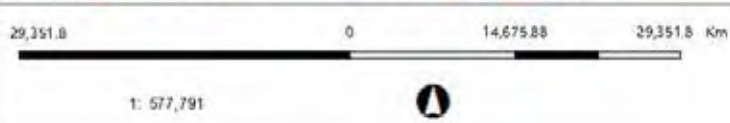
Legend

- Groundwater Knowledge point
- ORMGP Boundary
- Conservation Authority Boundary
- ORM Plan Boundary
- Mississauga Environment Plan Boundary

☆ CNR Yonge Street Underpass: York - Aurora - CNR Underpass ✕

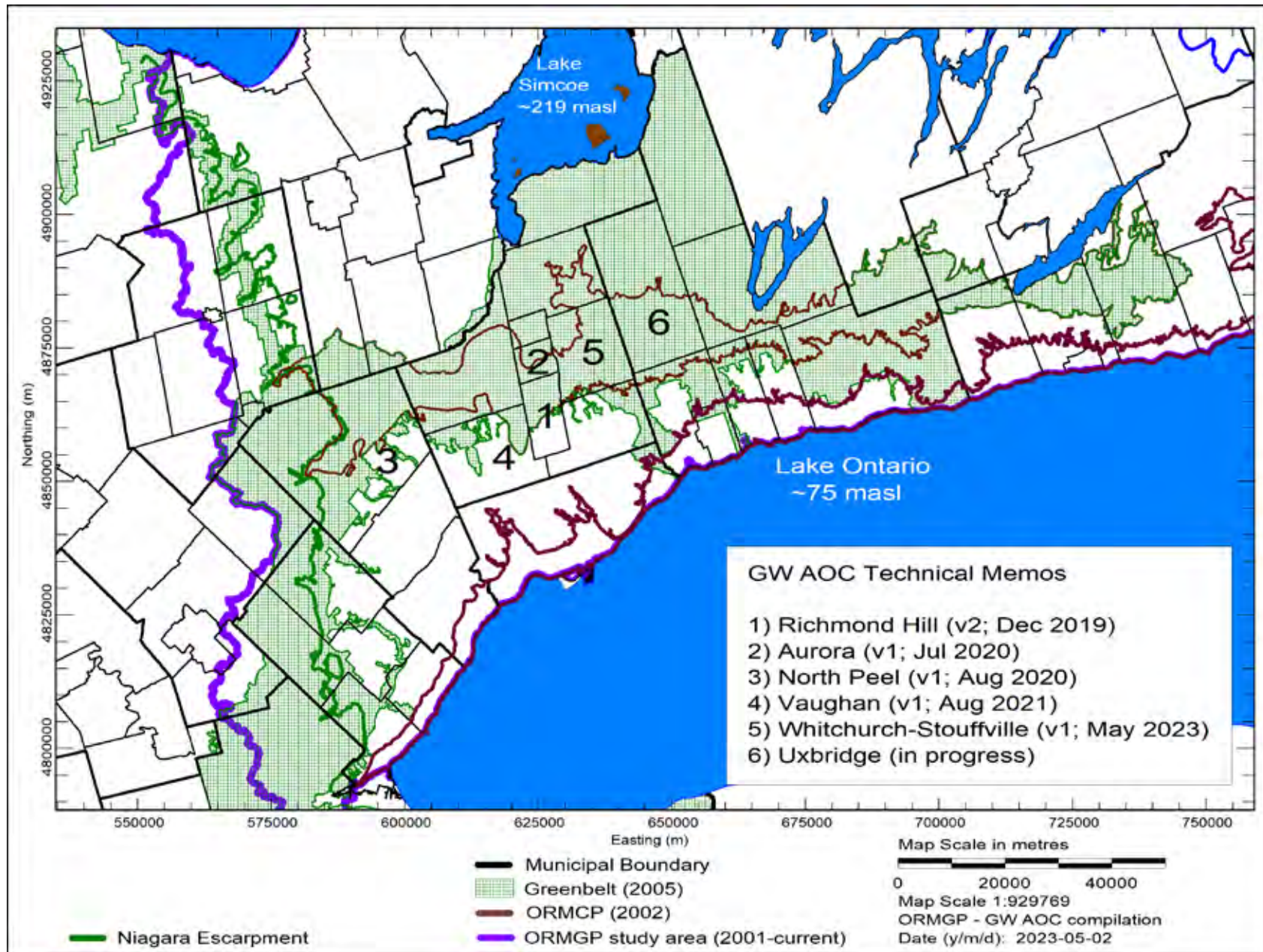
During the original construction of the CNR rail line over Yonge Street, the bridge footings penetrated the shallow Oak Ridges Aquifer and as a result a sump and connected storm drain underlying the structure were incorporated into the bridge design to continually control and remove discharging groundwater from the structure. Fluctuations of heads within the aquifer occasionally exceeded the bridge drain capacity thus creating temporary flooding of the roadway. Road repairs have been a common occurrence at this location, however with a 1.5 to 2 m recovery in the shallow aquifer following the February 2008 decrease in pumping at the Aurora municipal wells, a major rebuild of the structure was necessitated in 2009.

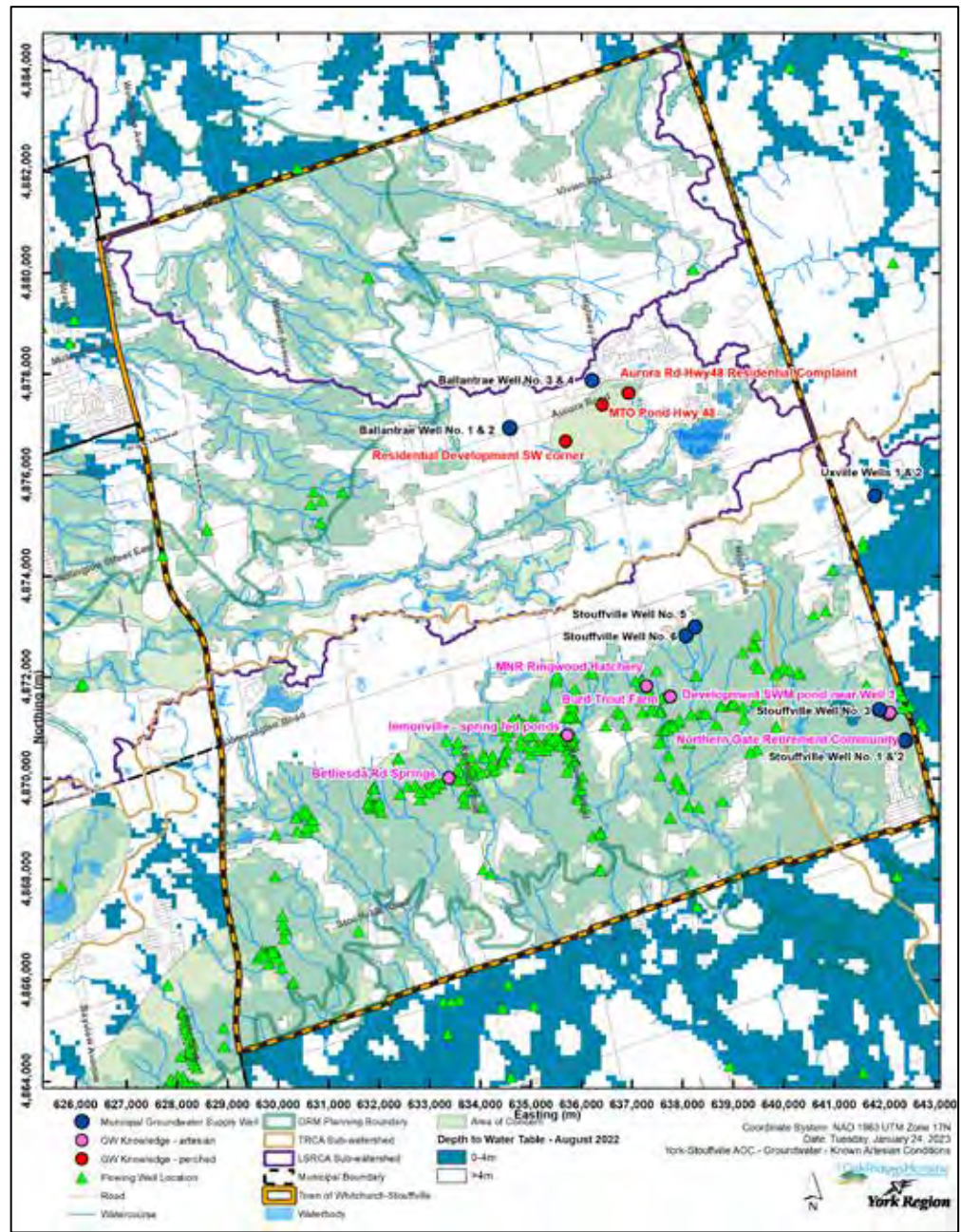
[Add to Results](#) | [View Additional Details](#)



© Oak Ridges Moraine Groundwater Program, 2021
 Map Compiled by the Oak Ridges Moraine Groundwater Program, 101 Exchange Avenue, Vaughan, Ontario, M3N 1S4
 This map is for information purposes only and the Oak Ridges Moraine Groundwater Program takes no responsibility for, nor guarantees, the accuracy of all the information contained within the map.

SOURCE: ORMGP, 2021; MNRF, 2021;
 PROJECTION: WGS_1984_Web_Mercator_Auxiliary_Sphere
 DATE PRINTED: November 4, 2021





GW Areas of Concern
 ~ where Water Table \leq 4 mbgs

- Flowing Wells
- GW Knowledge – artesian
- Perched Water Table
- Active Municipal Pumping

Figure by Joanna Miron (York Region)

Stouffville GW Areas of Concern



Credit Valley Conservation
 Nottawasaga Valley Conservation
 Toronto and Region Conservation
 Lake Simcoe Region Conservation
 Central Lake Ontario Conservation
 Kawartha Conservation
 Ganaraska Region Conservation
 Otonabee Conservation
 Lower Trent Conservation
 Conservation Halton



**ANNUAL PROGRAM OVERVIEW (2022)
 &
 WORK PLAN (2023)**

TO: ORMGP Executive Steering Team
 FROM: Steve Holysh and Rick Gerber
 DATE: May 9, 2023
 RE: 2022 Overview/2023 Work Plan – Oak Ridges Moraine Groundwater Program (ORMGP)

Background

The Oak Ridges Moraine Groundwater Program (ORMGP) was initiated in 2001, driven by the encroachment of development onto the Oak Ridges Moraine and the recognition of an absence of high-quality environmental data and analyses, particularly with respect to groundwater. Since inception, the program has provided partner agencies with an actively managed water-related database and the regional geological and groundwater context for on-going day-to-day water resource management activities (e.g., development review, PTTW review, watershed management, source water protection, etc.). The framework for the program is succinctly summarized in the adjacent figure, taken from the Council of Canadian Academies 2009 report: The Sustainable Management of Groundwater in Canada.



Mandate

The mandate of the ORMGP partnership is to provide a multi-agency, collaborative approach to collecting, analyzing and disseminating water resource data as a basis for effective stewardship of water resources. The ORMGP builds, maintains and provides to partnered agencies the regional geological and hydrogeological context for ongoing groundwater studies and management initiatives within the partnership area.

2023

- Ø Update data/interpretation (geology)/flow system understanding
- Ø Web Mapping
 - Chemistry/GWL Variability/Water Budget
 - Training/Metadata
- Ø ORM eBook (The Groundwater Project)
 - Global water resource education
- Ø GW Areas of Concern – Twp of Uxbridge
- Ø Communication Strategy/Marketing
 - Greenbelt Foundation
 - Province/Federal/Researchers – Lake Ontario water quality (groundwater component)

Information & Analysis System – Infrastructure(?)

(Millions \$)

- Program Cost (2001 – 2020) \$ 14.0
- Boreholes/Wells (550K/1.3 million m) \$ 162.5
 - Assume \$40/ft drilling)
- Water Quality (116K samples) \$ 32.6
 - Assume \$280/sample)
- Monitoring Water Levels (>100 million) \$ 18.1
 - Assume quarterly 1-day site visits for every 15 monitoring wells
- Documents/Reports (~12K) \$ 595.3
 - Assume \$50,000/Report
- Numerical Models (~70 Models) \$ 24.0

~ORMGP-Housed Infrastructure Value ~\$850 Million

“It is in our long-term, best interest to have a well-informed public.” Bredehoeft, 1992