

2025 Eastern Ontario Geoscience Open House

November 10, 2025

Schedule

Start	End	Presentation Title <i>Presenter, Organization</i>
07:30	08:30	Registration and Networking (coffee and refreshments)
08:30	08:45	Opening Remarks <i>Shane Foubister, City of Ottawa</i>
08:45	09:20	Geological Mapping Activities in Eastern Ontario: Current Projects and Future Directions <i>Katie Hahn*, Riley Mulligan*, Laura Colgrove and Rhiannon James, Ontario Geological Survey (*presenters)</i> The Ontario Geological Survey is currently undertaking multiple multi-year mapping projects investigating Paleozoic bedrock, Quaternary sediments and landforms, and ambient groundwater geochemistry in eastern Ontario. Several additional initiatives are underway including updating stratigraphic nomenclature, updating digital product delivery, and thematic studies spanning the entire province including landform mapping and compilations, assessment and stratigraphy at well screens and open hole intervals in the Provincial Groundwater Monitoring Network, and new insights into bedrock erosional processes and their implications for resource management and geotechnical considerations.
09:20	10:05	Revisiting the Regional Hydrogeological Understanding of Bedrock Water Supplies in Eastern Ontario <i>Sean Sterling, Geofirma Engineering; Bill Arnott, University of Ottawa; and Heather Crow, Geological Survey of Canada</i> This presentation will provide an overview of: <ul style="list-style-type: none">• regional understanding of Paleozoic bedrock in Eastern Ontario;• regional hydrogeological understanding of bedrock water supplies in Eastern Ontario;• recent advances and studies in deeper sandstone aquifers; and• potential future plans to advance the understanding.
10:05	10:30	Introduction to Microtremor HVSr <i>Barbara Dietiker, Geological Survey of Canada</i> The microtremor Horizontal-to-Vertical Spectral Ratio (HVSr) method provides fundamental resonance frequencies (f_0), which are primarily used in site characterization to estimate earthquake ground amplification. HVSr is also a rapid and efficient geophysical technique for subsurface reconnaissance. To accurately interpret HVSr results, calibration with boreholes or other geophysical data is essential to correlate f_0 with depths to bedrock or other competent layers.

2025 Eastern Ontario Geoscience Open House

November 10, 2025

		Examples showcase successful application in various geological settings, including bedrock mapping in Ottawa, surveying of an esker aquifer in the South Nation watershed, and profiling of buried valleys in Southern Ontario.
10:30	11:00	Refreshments & Networking Break
11:00	11:20	<p>The History and Future of Source Water Protection in Eastern Ontario <i>Marika Livingston, Mississippi-Rideau Source Protection Region and Jason Symington, Raisin-South Nation Source Protection Region</i></p> <p>This presentation provides an overview of the history and evolution of source water protection in Ontario, highlighting the development of the Clean Water Act and the identification of vulnerable areas. It will also outline recent updates being completed under Section 36 of the Act to ensure local Source Protection Plans remain current and effective.</p>
11:20	11:40	<p>The City of Ottawa Source Water Protection Program and Wellhead Protection Study Terms of Reference <i>Tessa Di Iorio, City of Ottawa</i></p> <p>The City of Ottawa has a proactive approach to raising public awareness and managing threats to municipal drinking water sources as part of its Source Water Protection Program. This includes screening new development applications within Drinking Water Protection Zones, developing risk management plans for existing or new activities that may be a threat, as well as organizing outreach and education programs and opportunities for impacted residents and businesses. This presentation will outline the City's Source Protection Program and highlight some of the past, ongoing and future initiatives to protect Ottawa's municipal drinking water resources.</p> <p>The presentation will also provide an overview of the City's Wellhead Protection Study Terms of Reference for municipal and private communal well systems, with an emphasis on when a study is expected, mandatory technical consultation and minimum study requirements.</p>
11:40	12:00	<p>Low Water Response in the South Nation River Watershed <i>Katherine Watson, South Nation Conservation</i></p> <p>This presentation provides an overview of Ontario's Low Water Response Program. It details the environmental conditions leading to the lowest water levels observed in recent history in the SNR Watershed and summarizes impacts resulting from these conditions. The presentation ends with a discussion on water management needs and next steps.</p>
12:00	13:00	Lunch & Networking Break

2025 Eastern Ontario Geoscience Open House

November 10, 2025

13:00	13:40	<p>Areas Potentially Susceptible to Retrogressive Landslides – Technical Aspects <i>Raymond Haché, Stantec</i></p> <p>This presentation will outline the geological evolution that leads to retrogressive landslide susceptibility. LiDAR imagery will be discussed as an important tool for locating and assessing landslides. Examples of landslide types will be shown, as well as trigger mechanisms. The methods used to determine the level of sensitivity of marine clay will also be discussed.</p>
13:40	14:00	<p>Geotechnical Data Collection in Champlain Sea Clays of Eastern Ontario <i>N'eem Tavakkoli, Ministry of Transportation Ontario</i></p> <p>This presentation will focus on the importance of understanding the geotechnical behavior of Champlain Sea Clay in Eastern Ontario and will provide an overview of a study conducted to collect geotechnical data including data sources, and key considerations in compiling reliable datasets. Key study methodologies will be emphasized, such as (1) the statistical data cleaning procedures undertaken to ensure consistency and accuracy across the compiled information, and (2) the statistical approach used to assess the spatial distribution of undrained shear strength, emphasizing observed regional trends and variability. Finally, practical recommendations will be presented for improving data collection practices and reducing inherent variability in geotechnical datasets to support more reliable engineering design and interpretation.</p>
14:00	14:30	<p>Ottawa Geoscience Information Platform – Data Sharing Services <i>Sharon Lee and Shane Foubister, City of Ottawa</i></p> <p>This presentation will provide an update on the City of Ottawa's Geoscience Information Platform program and demo the current online resources for geoscience digital data covering the Ottawa region. There will be a focus on hydrogeological data resources and services. Demonstrations will highlight a new forthcoming online data request service.</p>
14:30	15:00	Refreshments & Networking Break

2025 Eastern Ontario Geoscience Open House

November 10, 2025

15:00	15:20	<p>Enhancing Technical Resources for Contaminated Site Redevelopment <i>Erin Tait, City of Ottawa</i></p> <p>This presentation provides an overview of recent advancements in the City's technical resources supporting contaminated site redevelopment. Key updates include enhancements to the Historical Land Use Inventory, the integration of the City of Ottawa Storage Tank Dataset, and revisions to the Eastern Ontario Background Metals Study. Attendees will also gain insight into ongoing initiatives led by the Environmental Remediation Unit aimed at improving data accessibility and environmental decision-making across Ottawa.</p>
15:20	16:00	<p>PFAS – Overview of an Emerging Contaminant <i>Michel France and Jennifer Kirk, Arcadis Professional Services (Canada) Inc.</i></p> <p>The presentation will provide an overview of per- and polyfluoroalkyl substances (PFAS), beginning with an introduction to what PFAS are and their significance. An overview of current PFAS regulations will be presented, with a particular focus on Canada's risk management approach. The presentation will also cover how PFAS considerations are being incorporated into the Record of Site Condition (RSC) process, including approaches to risk assessment.</p>
16:00	16:30	<p>PFAS Sampling Programs <i>Berend Velderman and Michaye McMaster, Geosyntec Consultants</i></p> <p>Per- and polyfluoroalkyl substances (PFAS) sampling programs have become a cornerstone of environmental risk assessment and remediation efforts due to the persistence, mobility, and toxicity of these compounds. The presentation will cover PFAS sources, transport, fate and PFAS sampling protocols across diverse environmental media, including groundwater, surface water, soil, sediment, and biota. The presentation will reference real-world examples and include tips for setting up, implementing, revising and interpreting effective PFAS sampling programs.</p>
16:30	16:45	<p>Participant Questionnaire and Closing Remarks <i>Shane Foubister, City of Ottawa</i></p>