

## York Region Memo

Subject: Toronto Region Source Protection Authority – York Region  
Transport Pathways Strategy and Engagement

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Prepared for: Kristina Anderson, Sr. Hydrogeologist, TRCA  
Don Ford, Sr. Manager, Hydrogeology, TRCA

Copy to: Emil Rafanan, Manager, Infrastructure Water and Wastewater  
Servicing, Public Works, York Region

Prepared by: Tom Bradley, Program Manager (A), Source Water Protection,  
Infrastructure Water and Wastewater Servicing, Public Works,  
York Region

Branch: Infrastructure Asset Management

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### Background

The following is a summary of the work completed by York Region in 2023 (with support from TRSPA staff) on the development of a revised transport pathways screening program that is in line with the recent Credit Valley Source Protection Authority (CVSPA) pilot study and the Conservation Ontario (CO) guidance document. York Region will update the existing processes to screen development applications and capital projects for the creation of potential future transport pathways. York Region staff will also complete a desk top analysis to identify existing transport pathways that were previously constructed within York Region. This memo is intended to satisfy the requirements of the Toronto and Region Source Protection Authority (TRSPA) transfer payment agreement (justification and requirements for provincial funding to update the TRSPA Assessment Report).

### Development of a York Region Definition for Transport Pathways

In 2023, York Region source water protection staff adapted the transport pathway definition created for the November 2023 CVSPA pilot study entitled, “Credit Valley Source Protection Area Transport Pathway Assessment Technical Report”. The following definitions will be used by York Region in efforts to screen for proposed transport pathways and identify existing transport pathways.

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*Future Transport Pathway:* As defined South Georgian Bay Lake Simcoe (SGBLS) or Credit Valley – Toronto and Region – Central Lake Ontario (CTC) Source Protection Plan, a future transport pathway is a “condition of land proposed to result or resulting from human activity that increases the vulnerability of a raw water supply/source or drinking water system set out in clause 15(2)(e) of the Clean Water Act, 2006” (O. Reg. 287/07). This can include constructed pathways such as pits and quarries, geothermal systems, underground parking lots and excavations. This does not include low-density residential basements. For a detailed description of potential transport pathways refer to Table 1. For additional general guidance refer to the Conservation Ontario document entitled, “Transport Pathways Guidance Document” dated January 20, 2023.

**Table 1.** Potential Future Transport Pathways:

<b>Potential Transport Pathway</b>	<b>Suggested Threshold (all circumstances must be met)</b>
Pits and quarries	Base of excavation within three metres or less of top of municipal source aquifer.
Man-made ponds	Base of excavation within three metres or less of top of municipal source aquifer.
Re-grading associated with new development	Base of excavation within three metres or less of top of municipal source aquifer.
Construction of foundation envelopes	Base of excavation within three metres or less of top of municipal source aquifer.
Linear sewage and storm collection systems and Linear utility corridors	Base of excavation within three metres or less of top of municipal source aquifer.
Geothermal wells/Earth Energy systems with no annular seal (as outlined in Reg. 903)*	Base of excavation within three metres or less of top of municipal source aquifer.
Other below ground construction and excavations	Within three metres or less of top of municipal source aquifer.
Storm sewers, discharge pipes, utility trenches, ditches, drains, or any other works that reduces the time it takes a contaminant to reach a surface water intake	The discharge occurs in an IPZ-2.

*Existing Transport Pathway:* As defined in South Georgian Bay Lake Simcoe (SGBLS) or Credit Valley – Toronto and Region – Central Lake Ontario (CTC) Source Protection Plan, as applicable, is an existing “condition of land resulting from human activity that increases the vulnerability of a raw water supply/source or drinking water system set out in clause 15(2)e of the Clean Water Act, 2006” (O. Reg. 287/07). This can include constructed pathways such as, improperly abandoned boreholes, improperly constructed or maintained wells, or improperly abandoned wells, pits and quarries, geothermal systems, underground parking lots and excavations. This does not include low-density residential basements. For a detailed description of potential transport pathways refer to Table 2. For additional general guidance refer to the Conservation Ontario document entitled, “Transport Pathways Guidance Document” dated January 20, 2023.

**Table 2.** Potential Existing Transport Pathways:

<b>Potential Transport Pathway</b>	<b>Suggested Threshold (all circumstances must be met)</b>
Water wells or monitoring wells in use	Unknown construction, non-compliant with O.Reg. 903, constructed prior to 1990 and three metres or less to top of municipal source aquifer
Unused/abandoned water wells	Three metres or less to top of municipal source aquifer, not abandoned in accordance with O.Reg. 903 or abandonment records unavailable
Boreholes	Three metres or less to top of municipal source aquifer. Not abandoned/sealed or constructed in accordance with O.Reg.903 or no record of abandonment.
Oil and gas wells	Three metres or less to top of municipal source aquifer, not abandoned/sealed or constructed in accordance with O.Reg.903 or no record of abandonment.
Pits and quarries	Base of excavation within three metres or less of top of municipal source aquifer.
Man-made ponds	Base of excavation within three metres or less of top of municipal source aquifer.
Re-grading associated with new development	Base of excavation was within three metres or less of top of municipal source aquifer.
Construction of foundation envelopes	Base of excavation within three metres or less of top of municipal source aquifer.
Linear sewage collection systems and Linear utility corridors	Base of excavation within three metres or less of top of municipal source aquifer.
Geothermal wells/Earth Energy systems	Base of excavation within three metres or less of top of municipal source aquifer.
Other below ground construction and excavations	Within three metres or less of top of municipal source aquifer.
Storm sewers, discharge pipes, utility trenches, ditches, drains, or any other works that reduces the time it takes a contaminant to reach a surface water intake	The discharge occurs in an IPZ-2.

### **Screen and Report New Transport Pathways to TRSPA**

York Region will modify the existing source water protection development approvals process to identify new transport pathways. Development applications related to the Table 1 activities and located within source water protection vulnerable areas (wellhead protection area, highly vulnerable aquifer) will be screened to ensure excavations are greater than three metres above the top of the municipal aquifer.

Capital projects led by York Region staff will be screened with a new internal process. When new capital projects are initiated, staff will assess potential impacts to groundwater. Similar to the development applications process, excavations should be greater than three meters above the top of the municipal aquifer.

It is anticipated that screening for transport pathways will commence once the aquifer depth have been reviewed for each York Region community. York Region will concurrently work with TRSPA to develop a transport pathway reporting process.

### **Documenting Existing Transport Pathways in York Region**

After York Region staff initiates screening and reporting of transport pathways, staff will draft a scope of work for a desktop analysis to identify existing transport pathways. It is anticipated that the work will be completed in-house with existing York Region source water protection, water resources and geomatics staff. Collaboration with TRSPA will be required with expected completion in 2025.

The project will incorporate the York Region specific definition for transport pathways and incorporate the thresholds listed in Table 2. The methodology will reference both the Conservation Ontario document entitled, "Transport Pathways Guidance Document" and the CVSPA pilot study entitled, "Credit Valley Source Protection Area Transport Pathway Assessment Technical Report".

### **Summary**

York Region has consulted TRSPA on their transport pathway obligations. Source water protection staff at York Region are currently working on a transport pathway screening and reporting process. The work will be completed in two phases. The first phase will implement revised screening process for development planning applications and York Region capital projects (expected completion 2024 with implementation in 2025). The second phase will be a

study to identify existing transport pathways in York Region (expected completion of CTC communities in 2025).