Development and Environmental Protection

Working Collaboratively for Continued Drinking Water Safety

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Introduction

Who are the people behind "risk management"?

- Environmental Risk Management and Compliance (ERMC) is part of Waste Management and Environmental Sustainability
- they are managed by the City's Risk Management Official
- multi-disciplinary team consisting of hydrogeologist/Professional Geoscientist (RMO), environmental scientists and other professionals

What's their mandate?

- protection of human health and the environment
- development – review applications with a focus on drinking water protection, risks to the municipal aquifer, environmental compliance requirements
- on-going environmental protection – spill response, beach water quality, Sewer Use By-law, compliance monitoring

> The Corporation of the City of Barrie will protect its drinking resources from negative quantity and quality impacts due to activities related to private and municipal construction, land development, renovation, repair, maintenance, or demolition activity at a property.
>
> - Drinking Water Protection Policy

Our Obligation to Barrie

Why is ERMC involved in the Development Review process?

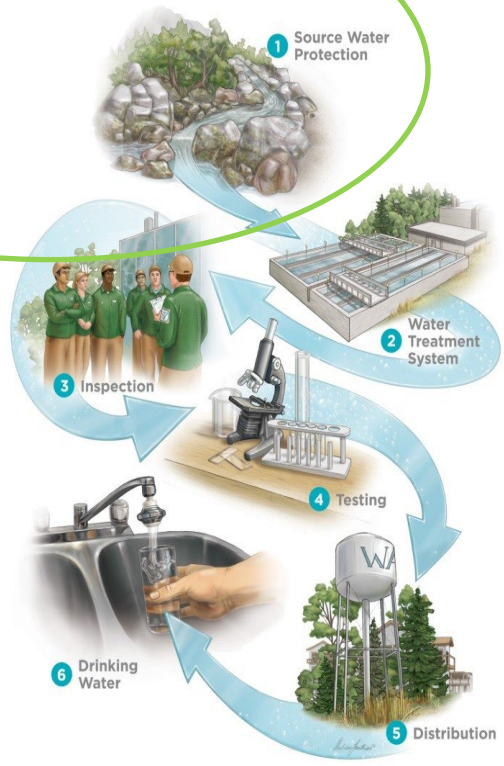
- obligation to protect drinking water sources woven into the Planning process/Building Approvals through legislation –

  Clean Water Act
  Provincial Planning Statement
  Ontario Building Code
  Official Plan 2051
  Drinking Water Protection Policy
  Sewer Use By-law

- act as liasion with the Source Protection Authority, Ministry of the Environment, Conservation and Parks (MECP)

1 Clean Water Act, 2006

2 3 4 5 Safe Drinking Water Act, 2002



Assessing Risk

What are the potential environmental risks associated with development?

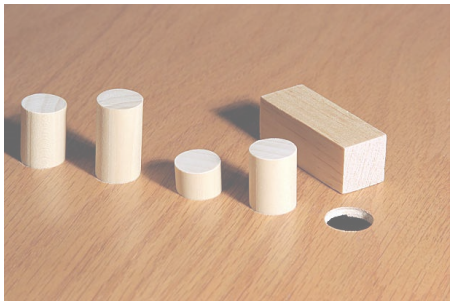
- Drinking Water Protection Policy outlines a number of sources of risk from new development – drilling/excavations, dewatering, water taking
- drilling/excavation can lead to contaminating groundwater by potentially creating pathways to the aquifer
- garbage – building on waste, landfill gas (D-4 requirements)
- discharge of runoff – silt and other contaminates can harm what's downstream (ultimate receptor is Kempenfelt Bay)
- stormwater – salt contamination, potential long-term costs to the City for on-going maintenance and care of infrastructure, spill response

Understanding the Site and Project

Does all development pose risk to drinking water?

- review of development applications considers that different areas of the City pose different levels of environmental risk
- there are specific/unique subsurface conditions within the City that make some projects more complex/challenging
- all sites and/or projects aren't created equal – require site/project-specific review
  - → proximity to municipal supply wells (Map 7 from the OP)
  - → contamination (on or offsite)
  - → aquitard thickness in the area (barrier protecting the aquifer)
  - → soil type
  - → depth of groundwater, artesian conditions
  - → future use of the property

"One size does not fit all"



Project-by-Project Assessment

When does ERMC get involved in the application process?

- begins at pre-consultation – understanding the site and proposed development/project, discuss potential construction dewatering

What required technical studies are reviewed by ERMC?

- ERMC review studies that provide information on historic use of the property, groundwater conditions, stormwater management
  - → Phase I Environmental Site Assessment (ESA)
  - → Hydrogeological Study, Geotechnical Study
  - → Stormwater Management Report
  - → Functional Site Servicing Report (underground workings)

What role do other agencies have in environmental protection/development process?

- MECP – Record of Site Condition for a change in land use (brownfield redevelopment), potential on-going monitoring through a Certificate of Property Use, water taking limits/quality (under the EPA)

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The Risk Checklist

What potential risks does ERMC look for in development applications?

More Complexity, More Risk

When does ERMC request supplementary information or studies?

- specific site conditions – proximity to muncipal well(s), on-site contamination, potential risks identified in the Phase I ESA (historic land use), etc.
- specific future site activities – deep drilling/excavating, potential for spills, ability to meet the Sewer Use By-law, dewatering, snow storage/use of salt, proposed geothermal systems, etc.

What type of application triggers a more in-depth review and/or a peer review?

- applications that pose significant risk to the City's drinking water sources generally require additional consultation, studies, review time and/or a peer review
    - → deep construction activities (underground parking, geothermal systems, etc.)
    - → drilling into the municipal aquifer
    - → historical contamination

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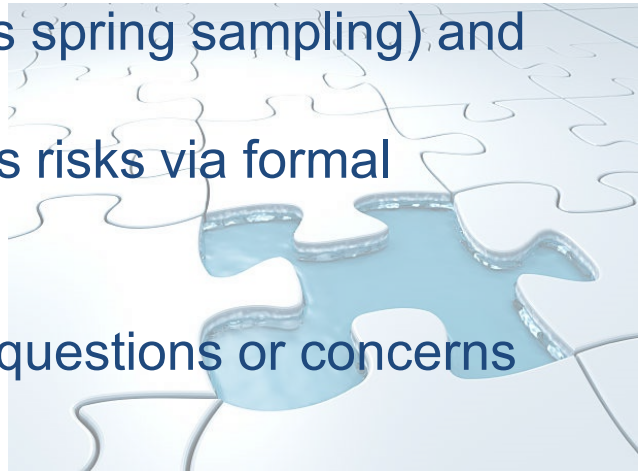
Ensuring Successful Outcomes

How what helps the process go smoother?

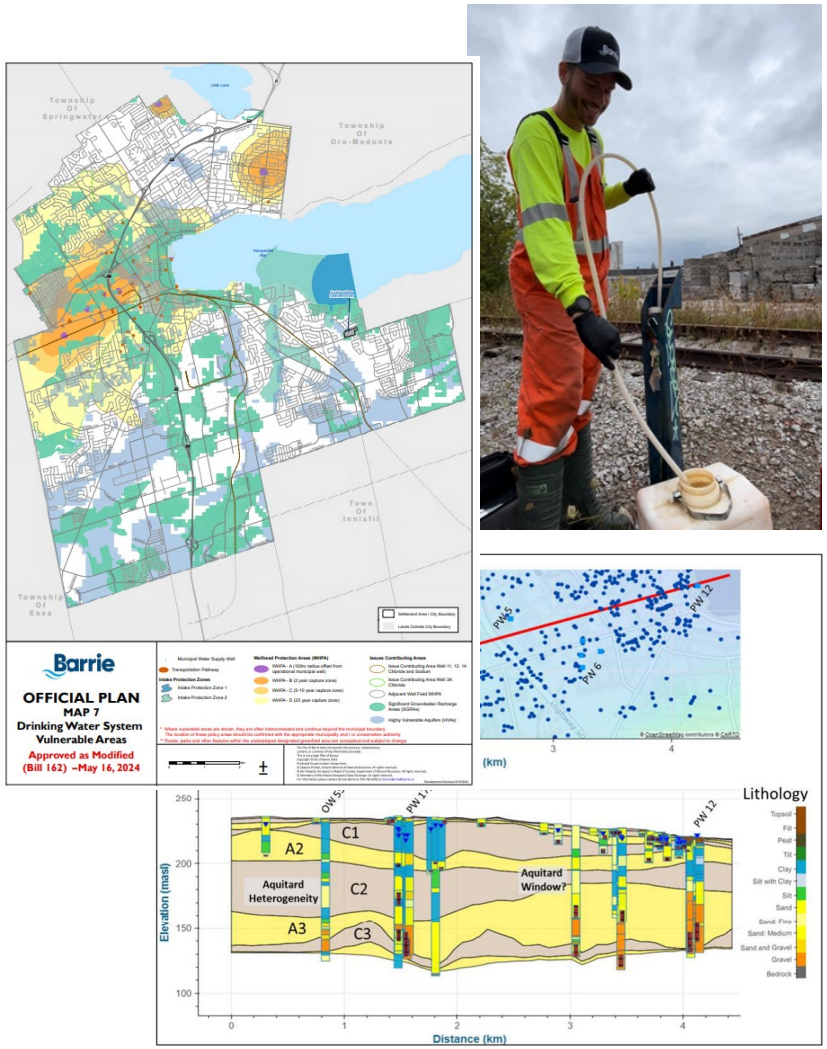
- pre-consultation – start early, build relationships
  - → discuss/understand “why” – subsurface conditions are unique in certain areas of the City, requirements under our Drinking Water Protection Policy (Clean Water Act)
  - → receive background on why certain studies/information are requested, Terms of Reference
  - → prepare upfront for what could delay the process (future dewatering application, etc.)
- plan the timing of required studies (such as spring sampling) and potentially combining reports/information
- data-driven, professional sign-off – address risks via formal memos, reports and comments
- upload all documents to APLI
- **communication** – meet early and often if questions or concerns arise (we’re here to help)



On-going Investment in Source Protection

What are we doing to better understand and support Source Protection as we grow?

- investment in robust groundwater monitoring and sampling programs
- updating groundwater modeling and investing in new studies
- looking at best practices in managing/reviewing development on contaminated sites
- in-house and external technical expertise – a wide range of experts to ensure we're prepared for future risks to the City's drinking water sources
- prioritizing internal collaboration



Our Commitment

We’re committed to protecting the City’s drinking water sources and infrastructure (our obligation).

We’re here to help – we understand the importance of moving applications forward in a timely and organized manner.

We’re committed to work collaboratively together as a team and with the development industry to seek innovative solutions that protect the environment.