

A Jurisdiction Review of Groundwater (Drinking Water) Pathway Assessments

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Summary

A key exposure pathway in environmental assessment of contaminated sites is groundwater for drinking water use (including drinking water or domestic use aquifers). Protection of drinking water aquifers is a key focus for most jurisdictions to protect public health via current water supplies and preserve future groundwater sources. Drinking water pathway assessments feed into environmental site management: for on-going groundwater monitoring, preparing risk assessments reports, risk management plans, and determining remediation target concentrations.

This presentation will provide a brief overview in how Alberta and other jurisdictions consider drinking water pathways assessments, with the intent of sharing best practices and identifying supplementary paradigms. There are jurisdictions that have allocated significant resources to aquifer protection, especially in geographically arid regions, such as Nevada and Kansas (United States). Other governing bodies have had to address long histories of groundwater contamination or have been compelled to accommodate natural and economic factors in established urban areas, such as European nations like the United Kingdom and Germany. Consideration of other Canadian ministries will be included. Understanding differing approaches and alternate strategies exposes practitioners to a global view of how contamination near and within groundwater resources are managed.

The intended audience will be site managers and environmental professionals who assess site data with the intent of maintaining aquifer protection while balancing reasonable and practical conservation. A key outcome of investigating other jurisdictions is to apply science-based methods and avoid overly conservative approaches to ensure environmental management funds are spent effectively and provide value-added benefits to aquifers, the public and the holistic environment.