

# Contaminated Sites Policy Update

## Guide to Excluding the Domestic Use Aquifer based on Municipal Bylaws Tier 2 Policy

Christopher Chalk, Hydrogeologist  
Contaminated Sites and Remediation Section  
October 14, 2022

# Why the guide, and what does it mean?

- This policy change allows for an alternative Tier 2 domestic use aquifer (DUA) pathway exclusion. Similar to other Tier 2 options this exclusion provides an equivalent level of protection.
- Municipalities are responsible for confirming the presence of bylaw(s) and their interpretation and establishing whether they wish to allow this type of exclusion.
- It is the responsibility of the proponents/responsible parties to gather the necessary technical data in support of the DUA exclusion.
- Alberta Environment and Parks (AEP)/Alberta Energy Regulator (AER) are responsible for reviewing applications of the Tier 2 exclusion and providing final acceptance or rejection.

# Conditions for Excluding the DUA Pathway

In general the guide states that the DUA pathway can be eliminated if:

- The legal property boundary of a Site is located more than 300 m inside the incorporated boundary;
- There are bylaws compelling connection to the municipal system, as well as, bylaws preventing the installation and use of groundwater supply wells for drinking water.



# Conditions for Excluding the DUA Pathway cont'd

- Heavily impacted media remaining has a NAPL phase equal to or less than 100 m<sup>2</sup> in size.
- No current water wells or surface water bodies within 300 m of legal property boundary being used for domestic or municipal supply.
- Heavily impacted media remaining extending off property is more than 300 m away from a water well or surface body used for domestic or municipal supply



# Site Conditions Requiring Further Tier 2 Evaluation

- The Darcy Velocity is greater than  $3.0 \times 10^{-7}$  m/s;
- Preferential flow pathways are present;
- Underground utility corridors intersect heavily impacted media;
- Groundwater contamination within 10 m of surface water body;
- Comingled plumes; and/or
- High volume groundwater extraction wells present.

# Requirements for Determining Potable Water Use

- The determination of current domestic water users or surface water body(s) users must include:
  - a search of the Alberta Water Well Database; and
  - correspondence with the city, town, village, or urban service area of a specialized municipality to confirm no current potable water users in the area.
- A door-to-door survey is required if potential use is confirmed. If the location of the well is in question, it must be verified in the field.

# Requirements for Municipal Bylaw Confirmation

1. A copy of the written referral that was provided.
2. A copy of documentation that confirms that a bylaw(s) meets criteria (i), (ii), and (iii) of page 6 Section 3 of the guide.

## Considerations:

- A municipality has the discretion to object to the exclusion approach being used within their jurisdiction.
- The applicant may ask the Director to consider an alternative to the required municipal written confirmation if no response is provided in 60 days or an objection is provided.

# Examples

---



# Ideal Site



# Heavily Impacted Media within Utility Corridor/ Preferential Flow Path





# Groundwater contamination shown to extend within 10 m of a tributary connected to a surface water body used for domestic supply

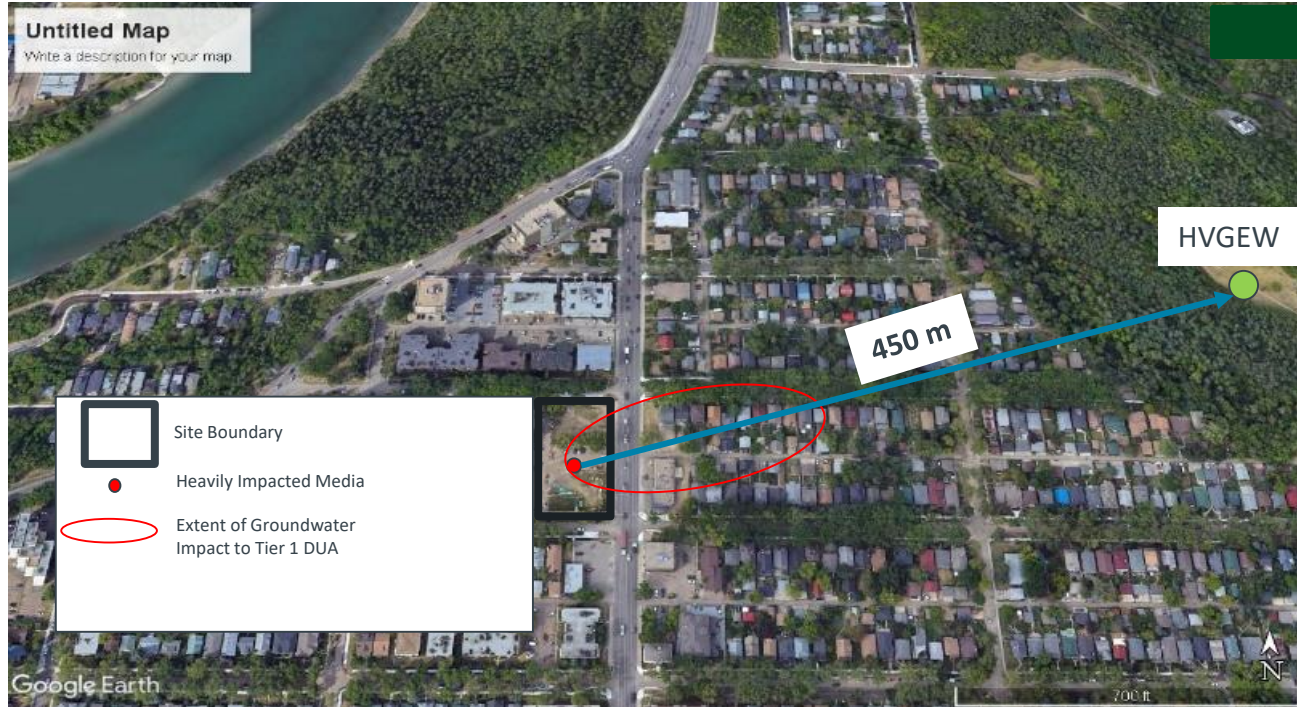


# Comingled plumes





# High Volume Groundwater Extraction Well (HVGEW) within 500 m of Heavily Impacted Media



# Questions?

---

