

BULLETIN 2016-004-BU

March 30, 2016

## Risk of Encountering Artesian Conditions While Drilling or Constructing Below Ground

Information bulletin regarding risk of encountering artesian conditions while drilling or constructing below ground

There are large areas of the City located over aquifers, which are large underground geological formations that contain and transport groundwater. Some aquifers are close to the surface of the ground and groundwater in those aquifers can be under pressure. While drilling or constructing below ground, flowing artesian conditions can be encountered.

Artesian flow from those activities can result from puncturing or rupturing ground cover over aquifers potentially resulting in uncontrolled flow of water onto the ground. Uncontrolled artesian flow may pose a danger to property, infrastructure, neighbouring properties, the ground surface, the aquifer or the environment and, on occasion, danger of injury or to life due to ground subsidence or sinkhole development, if the flow from the well cannot be stopped or brought under control and the well properly de-commissioned.

If you are planning to drill anywhere in Vancouver (whether for geotechnical testing, installing a geexchange system or for any other reason), you must understand and comply with the applicable provisions of the new Water Sustainability Act (BC) ("WSA") and the new Groundwater Protection Regulation ("GPR), which were brought into effect on February 29, 2016. Also, you must comply with any applicable municipal bylaw provisions, such as in relation to drainage works or building construction.

The WSA and the GPR set out a regulatory framework for drilling and constructing wells, including certain geexchange wells, such as closed loop geexchange wells, other than exempted horizontal closed-loop geexchange wells less than 5 m deep.

Part 3 - Division 3 of the WSA specifically governs "Wells and Groundwater Protection".

This Division governs who is responsible for a well, including a closed-loop geexchange well (unless exempted), and sets out rules regarding:

- Restrictions on constructing or decommissioning wells and related activities
- Required qualifications for activities related to particular kinds of wells and proof of those qualifications
- Stopping or controlling flowing artesian wells
- Well caps and well covers

The GPR also includes specific rules regarding closed-loop geexchange wells, other than exempted horizontal closed-loop geexchange wells less than 5 m deep.

You can read the Water Sustainability Act by visiting: <https://engage.gov.bc.ca/watersustainabilityact/>

You can find out more about the Groundwater Protection Regulation, aquifers and well owner obligations by visiting:

<http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells>

This is a link for Q's and A's on the Ground Water Protection Regulation:

<http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/laws-rules/groundwater-protection-regulation>

If you have any questions regarding this new statute and accompanying regulations, you should contact the Province by emailing [livingwatersmart@gov.bc.ca](mailto:livingwatersmart@gov.bc.ca)

If you have any questions regarding drilling in the City of Vancouver you can contact Environmental Services at [environmental.services@vancouver.ca](mailto:environmental.services@vancouver.ca) .

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