

Baseline Testing – Groundwater and Surface Water

HCL offers a full range of baseline testing services, meeting the latest requirements of the regulator and the needs of the client. Baseline groundwater (water well) testing or surface water testing could be required for various reasons, including the following:

- Hydrocarbon drilling
- Seismic surveys
- Reduced water well yield
- Real estate review
- Legal cases
- Increased groundwater use (e.g. feedlot, municipal water source well)
- Activities that change the local geology (e.g. gravel or coal mining)

Baseline testing, also referred to as pre-testing, is a responsible water-management practice used to enhance groundwater and surface water protection. HCL can manage all baseline testing requirements, including:

- Review of consultant, government and water well drilling reports
- Site visit to confirm water well(s) and/or water source(s)
- Water quantity testing and analysis (aquifer testing)
- Sampling for water quality analyses
- Liaison with certified water testing labs
- Construction/completion review per Ministerial Regulation
- Preparation of report summarizing data and providing recommendations

Experience

Hydrogeological Consultants Ltd. has been providing baseline testing services for over 45 years.

Qualifications

Our experienced staff includes members of:
• APEGA • APEGBC • APEGM • ASPB • ASET

Water Management

The Alberta government is committed to safeguarding Alberta's water resources; however, the legislation supporting the management of groundwater and surface water resources in proximity to various types of development, including hydrocarbon drilling operations, has yet to mature fully.

Legislation

Presently, only the development of coal-bed methane (CBM) gas has a regulatory requirement for groundwater and environmental protection. While standard baseline testing is mandatory for CBM operations in Alberta, it is not a requirement for any other related oil and gas activities.

To minimize the risk of groundwater and surface water contamination, and to protect the health and safety of private water well users and the surrounding environment, many oil and gas companies have voluntarily adopted the standard baseline testing protocol.



Sustainability

Managing a sustainable groundwater and surface water supply in Alberta is a shared responsibility.

The partnership between the groundwater or surface water user, the resource industry, the water consultant and the government is essential to achieving stewardship of water resources.

Each partner has a different but complementary role, with the main goal being to protect and manage water resources in Alberta.

HCL Services

Per the baseline testing standard, HCL can complete baseline testing for all water supplies, including water wells, springs and surface water catchments, within a specified radius of oil or gas drilling operations.

HCL's data warehousing service, The Groundwater Centre, is a one-stop source for groundwater information for Alberta, British Columbia, Saskatchewan, Manitoba, the Northwest Territories and the state of Montana. The information stored in The Groundwater Centre database is used to identify all of the water sources that require testing, and to provide the landowner with a complete record of their water wells and/or surface water sources, including all aquifer testing and chemical analysis results.

In Summary

Baseline groundwater (water well) testing includes aquifer testing, water quality sampling and testing.

Baseline surface water testing includes water-level monitoring, water quality sampling and testing.

HCL will summarize the baseline data collected, along with complementary information available from The Groundwater Centre, in a covering report that is provided to the client and to the water source owner.

Groundwater and Surface Water Solutions for a Changing Environment