

Groundwater Contamination

Groundwater is a vital source of water, but it is also susceptible to pollutants. Gasoline, oil, road salts and chemicals can all contaminate groundwater, making it unfit for human use. Any addition of undesirable substances to groundwater due to human activity is considered contamination.



Point and Non-Point Sources of Contamination

Groundwater contamination is hard to clean up and can easily spread beyond the zone originally affected. Sources of groundwater contaminants are divided into two categories: **point sources and non-point sources.**

Examples of point sources include:

- Municipal landfills
- Industrial waste disposal sites
- Septic tanks, leaks and spills (individually less significant, but with substantial cumulative impacts)

Examples of non-point sources include:

- Used motor oil
- Road salt
- Fertilizer and pesticides
- Livestock waste



Monitoring, Assessment and Characterization Services

The best approach to groundwater contamination is to prevent it from happening in the first place. But if contamination does occur, **HCL is here to help.** We offer a complete array of services ranging from assessment and characterization to decontamination. Using the most modern technology and methods, our experienced team of skilled professionals will help you deal with contamination issues on time and on budget.

Groundwater monitoring is a valuable tool used to detect early signs of contamination, or to ensure that existing contamination is under control and does not spread. In cases of existing contamination, the first step is to conduct a characterization study to determine the nature, scope and trajectory of the contamination. This process is usually performed through an Environmental Site Assessment (ESA).

Environmental Site Assessment (ESA)

Environmental site assessments are divided into three main phases:

Phase 1

General environmental assessment

- Nature and source of contamination (point or non-point)
- Trajectory and scope
- Location and identity of eventual receptors

Phase 2

Preliminary characterization

- Validation of Phase 1 findings

Phase 3

Comprehensive characterization

- Level of threat to potential receptors (intensity and time)
- Mitigation and possible cleanup measures

Groundwater and Surface Water Solutions for a Changing Environment