GEOSCIENCES

Understanding and protecting soil and water resources

Communities and businesses have many reasons for needing to understand the water and soil in their local environment. They may seek to comply with regulations, protect residents' health, open business opportunities or be good stewards of the environment.

Our Service

We document the condition of the water or soil at a site and determine how human activity could affect, or is currently affecting, the water and soil.

Our work falls primarily in two areas:

- Helping clients protect water resources, and
- Helping clients comply with requirements for developing, occupying or maintaining tenancy of land.

We start our work by gaining an understanding of site operations. We then assist in gaining an understanding of how those operations may affect the soil, groundwater and surface water resources in close proximity to your property.

We can locate and quantify groundwater resources, monitor the quality of groundwater, measure and characterize soil or surface water and monitor how site processes and activities may be affecting the nearby water and land. We have a track record of completing complex geoscience assessments under technically challenging field conditions.

In this work, we draw on expertise in soil science, geology, hydrogeology, geochemistry and hydrology. We are experts in state-of-the-art techniques for groundwater monitoring, hydraulic conductivity testing (slug testing) and pumping test analysis. Our scientists and licensed qualified professionals have an excellent reputation in their fields of expertise.

Typical Scenarios & Services

Environmental Standards and Regulatory Compliance

- Monitor facilities to support compliance with operating permit. Typical compliance-related geoscience programs include sampling of groundwater boreholes and surface water at facilities such as landfills, open-pit mines and manufacturing sites.
- Help clients obtain Permits to Take Water (PTTW).
- Characterize excavated materials or water to be removed/discharged off-site in the case of a brownfields remediation program or spill cleanup. If needed, we can assist clients with the decommissioning of above-ground storage tanks (AST) or underground storage tanks (UST) and provide the necessary sampling and documentation.

Site Development and Land-Use Changes

- Support due diligence activities:
  - Provide Environmental Site Assessment (ESA) / Phase I, II, III services in support of financial obligations.
  - Conduct environmental studies required for land transfer transactions.
  - Where site remediation is required, file a Record of Site Condition (RSC).
- Where a building is present, provide a Designated Substance Survey (DSS) / Building Materials Survey to assess potentially hazardous materials before a land transfer transaction or before construction, renovations or retrofits.
- Complete hydrogeological studies in support of land development application (e.g., aquifer studies, water supply investigations).
- Provide Environmental Impact Assessments (EIA) for transportation and infrastructure projects.

GEOSCIENCES

RWDI is a valuable partner to clients seeking to...

Explore Innovations

- Choose among siting options to minimize environmental impact

Create Opportunities

- Locate sources of groundwater
- Propose development plans based on a clear understanding of the environmental condition of the property

Meet Challenges

- Evaluate and address current or historical contamination
- Manage spill cleanup
- Plan for infiltrating water during construction

Fulfill Expectations

- Comply with groundwater and soil assessment and monitoring requirements
- Demonstrate due diligence

Infrastructure/Construction

- Conduct baseline hydrogeological assessments to determine the impact of construction on the local groundwater and surface water resources and to define the dewatering requirements for the project.
- Monitor the condition of groundwater/surface water resources for the duration of construction, documenting actual site conditions for the owner's project records. Projects vary widely, ranging from roadways, to building complexes, to landfill cells and other structural features.

Disputes

- Provide investigative services, peer reviews and expert witness testimony in support of litigation and to protect owners from possible future claims.
- Conduct internal due diligence investigations to determine past land use impacts and potential risks.