



Hydrogeological Studies for Landfill Groundwater

Guidelines

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Alaska Department of Environmental Conservation
Division of Environmental Health
Solid Waste Program

The quality and quantity of available hydrogeological data contributes to determining the adequacy of the groundwater monitoring program at a facility. An effective groundwater monitoring program relies upon a thorough understanding of the site hydrology while realizing that it is a dynamic system that must be continuously evaluated for accurate characterization of potential impacts.

Tasks for a hydrogeological study:

- Characterize subsurface geology and hydrology
- Determine groundwater elevations throughout a site
- Develop a map of groundwater flow

A new or updated study is required for:

- A new facility
- Significant changes to an existing facility
- Addressing inconsistencies in monitoring results that cannot otherwise be explained
- An apparent significant change in groundwater levels or flow

Expected deliverables:

- Narrative description of site geology
- Hydrologic cross sections
- Geologic cross sections
- Geologic or soil map
- Well boring logs
- Potentiometric or water table maps with flow lines
- Water table elevations site-wide
- Narrative description of groundwater detailing flow patterns

Optional deliverables:

- Structure contour maps of aquifer and confining layer
- Raw data and interpretive analysis of geophysical studies
- Raw data and interpretive analysis of material tests
- Raw data and interpretive analysis of any slug tests, pump tests, tracer studies, etc.