



### SCOPE OF PROJECT

The prerequisite to designing a groundwater monitoring system is to conduct a hydrogeological investigation of the area of the existing or proposed facility. The hydrogeological investigation must include sufficient site-specific information to answer to the following question: If the landfill released a pollutant, where would it go? A properly designed groundwater monitoring system will detect pollutants released into the groundwater from the facility. A hydrogeological investigation will include or address the following:

- Characterization of the groundwater table and the uppermost aquifer
- Direction and rate of groundwater flow (horizontal and vertical)
- Types of soils and soil stratigraphy
- Regional characterization of geology and hydrogeology

A hydrogeological investigation involves research and field investigation. Historical information, such as USGS maps and previous studies, is needed. Field work includes drilling a sufficient number of borings to the appropriate depths, installing groundwater monitoring wells and/or piezometers, collecting and analyzing soil samples, and measuring groundwater levels. This information is compiled into a hydrogeological investigation report, which is used to design the required hydrologic monitoring system.

### IMPLEMENTATION

**BARKER LEMAR** conducted hydrogeologic investigations for the above-listed facilities, which provided the basis for the current hydrologic monitoring system plan. The hydrogeologic investigation reports are also providing information needed to revise the hydrologic monitoring systems to meet the new Chapter 113 rules. Since **BARKER LEMAR** Engineering Consultants has its own drilling equipment and employs experienced drillers, borings and monitoring wells are installed to meet correct location, depth, and construction requirements. In addition, adjustments in the number and/or depth of borings can be made over the telephone as the driller communicates with the engineer.

### TIMELINE

Project Start Date: 1995

Project Completed: Ongoing