Drilling on Your Property with Your Cooperation

Our Goal Is to Leave the Site As We Found It

Illinois State Geological Survey Drilling Operation

Why Drill?
We need to understand what lies hidden underground. In Illinois, beneath a landscape changed by glaciers, the subsurface consists of many different kinds of materials that affect and are affected by human activities. To discover what is below the surface, geologists must drill boreholes, remove cores of earth and rock, and analyze them. Geologists then use their expertise to interpret the occurrence and distribution of materials between boreholes.

The information obtained by drilling is used to construct buildings and transportation corridors, install utilities, develop and manage water and mineral resources, and plan for efficient and beneficial land use, among other uses.

You Can Help
Your assistance is vital to the success of this project. The more information we can obtain from drilling, the more accurate are our interpretations.

Equipment Used to Drill on Your Property

- Drill rig mounted on a tandem-axle truck
- Water truck (2,000-gallon tank)
- 16-foot pipe trailer
- 24-foot enclosed trailer support vehicle
- Staff vehicle

ISGS Staff

- One operator and two drilling service personnel
- One or two geologists

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What Can You Expect?

Before sampling starts, the property is checked for underground utilities using JULIE.

To prevent damage, selected sites must be on firm ground. The drilling team avoids moving equipment when the ground is soft or muddy.

Setup time is approximately 2 hours. Sampling can then begin.

Continuous sampling averages 100 feet per day. The geologists will let you know how deep they intend to sample. During sampling, a nontoxic mud made of neutral earth material is used. The water used is from a municipal water source to avoid contamination of the borehole with stream or pond water. Upon completion of the sampled hole, the team runs downhole gamma and self-potential logs to further interpret the materials that have been collected.

When continuous sampling and logging has been completed, it takes about 4 hours to tear down the equipment and clean it. The equipment can then be moved from your property. The borehole is plugged in accordance with the Department of Public Health Part 920 Illinois Water Well Construction Code. The top 3 feet are backfilled with dirt. Any drill cuttings left at the site will be washed away with water so that they mix with the soil. This is the final step in the drilling operation.

With the permission of the landowner, where needed, a monitoring well is installed to monitor the groundwater level and is used to better understand our groundwater resources for present and future use.

We carry liability insurance, we are very willing to share all information we obtain, and we are committed to working with landowners to make sure they are satisfied with the site conditions after we leave.

Our goal is to leave the drilling site as we found it!