

# Keeping Track Of Groundwater Monitoring Wells

When local governments, consultants and other parties investigate and clean up contaminated properties, they are often required and/or choose to install groundwater monitoring wells on and around the properties in question.

In order to protect groundwater aquifers from contamination via wells that are no longer used or maintained, the state requires these wells to be properly abandoned under NR 141, Wis. Adm. Code. As part of this process, there are specific steps needed to keep track of the wells so the responsible party does not "lose" them.

Wells installed consistent with the surveying requirements in NR 141 are rarely lost. Steps include surveying the wells into a local geodetic benchmark and tying this information into a point on a horizontal grid system. To make it even easier to find monitoring wells at the end of an investigation or after a property has been redeveloped, the RR Program suggests individuals obtain Global Positioning System (GPS) coordinates for all of the monitoring wells so that, if the top of the casing is accidentally removed, the well can be found again.

According to NR 141.065 (2), Wis. Adm. Code, the following steps should be taken when installing a groundwater monitoring well:

- following installation of the wells, an "as-built plan map" should be submitted, specifying the exact vertical and horizontal location of the wells; the plan map should be drawn to a specific scale and indicate structure boundaries, property boundaries, any nearby surface waters and a north arrow;
- the plan should also show the wells in relation to each other, to property and structure boundaries and to a common reference point on a horizontal grid system; the origin of the grid system should be located according to latitude and longitude, or according to the state plane coordinate system;
- the exact vertical location of the top of the well casing should be referenced to the nearest benchmark for the national geodetic survey datum, to an accuracy of 0.01 feet;
- the plan map must show the exact location of the installed well on a horizontal grid system, which is accurate to within one foot;
- direction of groundwater flow should be indicated; and
- an additional 8.5-inch by 11-inch site map drawn to scale according to the horizontal grid system should be submitted, showing the location of wells and structures on the site.

Wells can become lost for a number of reasons, including parties not properly locating the well or from heavy equipment destroying the above-ground portion of the well. Lost monitoring wells can pose a problem when parties and the DNR are seeking closure for a site, and from the environmental risk due to wells' unsealed casings in the soil providing a path for pollutants to reach the groundwater.

If a well becomes lost, RR staff will first review actions that responsible parties have taken to locate the well and may require more aggressive actions, such as using metal detectors, removing asphalt or making small excavations in the area where the well might be located. For more information, please see "How Do You Abandon 'Lost' Groundwater Monitoring Wells?," *Re News*, December 2007 (volume 17 number 4), page 1.