



Fact Sheet

Performing Well Surveys

Background

Requirements exist in Illinois and federal regulations¹ to identify potable water wells in relation to cleanup sites to ensure that water supply wells are protected by proposed cleanup remedies. Because of concerns about known inaccuracies in certain databases and instances with inadequate documentation, a more thorough approach is needed for surveys of potable water supply wells. The enhanced techniques described in this fact sheet will apply across all remedial programs and RCRA Permits in Illinois EPA's Bureau of Land. While some additional research and reporting may be required, this approach should not prove overly burdensome to the regulated community, and it will provide the level of detail necessary to make informed decisions to protect well users. Much of the information for identifying wells can now be accessed through a [Geographic Information System \(GIS\) database](#).

Why does the Illinois EPA require water well surveys?

When a site is being investigated for contamination, it is necessary to know whether site-related contaminants have affected the groundwater (or may affect it in the future) and, further, whether those contaminants affect any public or private drinking water supply before decisions can be made about how cleanup should proceed.

Do the enhanced techniques apply to clean up sites under review by different Illinois EPA cleanup programs?

Yes. While the search distances for specific potable wells (community wells or private wells, for example) from a given site may vary depending on program rules, the performance of surveys of potable water supply wells will now be consistent across all the cleanup programs.

What sources should be researched for location of potable wells?

To identify community water supply wells and other potable wells (private, semi-private and non-community water supply wells) within applicable distances² as defined by the appropriate program regulations, the following sources should be contacted:

- Illinois EPA, Division of Public Water Supplies;
- Illinois State Geological Survey (ISGS);
- Illinois State Water Survey;
- Illinois Department of Public Health or delegated county/local health department; and
- The local water supply entity to determine what areas/ properties are served by the community water supply.

¹ [Leaking Underground Storage Tank regulations \(35 Ill. Adm. Code 732\)](#); [Leaking Underground Storage Tank regulations \(35 Ill. Adm. Code 734\)](#); [Site Remediation Program \(35 Ill. Adm. Code 740.425\(b\)\(2\)\(D\)\)](#); [RCRA Permit regulations \(35 Ill. Adm. Code 703.183\(s\)\(9\); 703.184\(a\)\(3\)\)](#); and the National Contingency Plan (40 CFR 300.430(d)).

² For example, if groundwater contamination has exceeded the Tier 1 remediation objectives of [35 Ill. Adm. Code 742](#) or is modeled to migrate off-site, the area of the survey of water supply wells is extended based on the actual and modeled groundwater plume.

What information is available on the Illinois EPA's web-based GIS system?

This system shows locations of all community and non-community water supply wells. In addition, the system includes the ISGS database of private and semi-private drinking water wells. The ISGS database does not contain all of the wells mentioned above, and in some cases, the locations may not be accurate. However it is the most complete electronic database available. The GIS system also shows setback zones and regulated recharge areas for wells.

How do I obtain access to the web-based GIS files?

Users must complete a confidentiality agreement. Please contact Janet Christer at 217/782-8482 or via [email](#). The [GIS web page](#) may also be used to find well locations.

How should the water well survey results be reported?

The following should be submitted:

1. Maps at an appropriate scale showing:
 - Community and other potable water wells and setback zones;
 - Extent of the measured and modeled contamination plume; and
 - Locations of any regulated recharge areas and wellhead protection areas.
2. Tables showing the setback zone for each potable water well.
3. Narrative identifying field observations, persons contacted, and sources of information used.
4. Certification by an Illinois-licensed Professional Engineer or Professional Geologist (if regulations allow).

Are there other survey methods that might be used to identify wells?

Yes. Door-to-door interviews with residents, mailing or placing door-hangers asking for a response about potable well locations, and windshield or walk-around surveys are all types of physical means of obtaining individual information about potable wells at given locations.

When might a physical well survey be conducted?

A physical survey may become necessary when there is reason to believe that potable wells (that were not identified as part of the above data search) exist near a site and may be threatened by contamination from a site. Circumstances that could trigger a more in-depth, physical survey include:

- The local water supply entity does not provide water to a residence/business, but the data search does not reveal a well;
- Wells are identified in a given area but not all residences/businesses are accounted for and their water source is unclear; or
- Other site-specific situations.

Are the enhanced techniques for identifying potable wells being used now?

Yes. Certain programs, such as the Site Remediation Program, have been using this approach for some time. All cleanup actions under purview of the Illinois EPA are subject to the enhanced techniques for identifying potable wells.

Technical questions about GIS web site:

[Wade Boring, P.G.](#)

Bureau of Water, Division of Public Water Supplies, Geographic Analysis Subunit Supervisor
217/785-4787.

Questions about individual program requirements: Phone the Bureau of Land phone-duty officer at 217/782-6762 and ask for: Leaking Underground Storage Tank Section, Remediation Project Management Section, Federal Site Remediation Section, or Permit Section.

Example Map that would be submitted with a potable well survey report (along with contamination plume, existing and modeled):

