Iowa’s Private Wells
A Brief Look at Well Water Quality

Russ Tell Iowa DNR
Approximately 6-7% of the wells are tested any given year.*

* Varies - based on the PWTS water test entries.
What Water Testing is Required?

- Bacteria and nitrate for all newly constructed water wells, and
- when any well services or reconstruction takes place.
- The **well owner** is responsible for testing.
- Well owner funded water testing does not require submission to DNR.
Tracking Private Well Water Quality

The Private Well Tracking System (PWTS)

- On-line web database to track Private Well information
  - Well Construction Permits
  - Well Construction Logs
  - Water Analysis Reports – 6000 to 8000 annually
  - Well Renovation Activity
  - Well Plugging Reports

https://programs.iowadnr.gov/pwts/
Private Well Testing

• The well owner pays – total number unknown.*
• Grants to Counties (GTC) Well Program pays.
• Historically, nitrate and bacteria have been the 2 core water tests offered to private well owners.
• Starting July 1, 2015 arsenic was added to GTC.
• Well users can also work directly with SHL if they have concerns regarding other types of contaminants like other metals, VOCs, pesticides, and etcetera.*
136,522 Well Records in PWTS*
105,944 Individual Nitrate Results in PWTS
13,730 Exceeding Nitrate MCL or 13%
110,673 Coliform Results in PWTS
36,485 Coliform Results Indicate Positive or 33%
78,734 E. Coli Results in PWTS
4820 E. Coli Positive Results or 6%
4297 Arsenic Samples in PWTS
618 Arsenic Results Above MCL or 14%
Well Program Goals

• Promote yearly water testing for all private drinking water wells:
  – Bacteria, E. Coli,
  – Nitrate, and
  – any other contaminant the well owner is concerned about.
• Promote arsenic testing for all new and all existing private wells - at least one time.
• Provide meaningful information to all well users and work to raise awareness of those who are unaware of local water quality issues.
• Work with well professionals and well/property owners to ensure they understand:
  – Local contaminants of concern,
  – areas where additional construction standards are needed to improve well water quality, and
  – the resources that are available to help inform them of potential issues.
• Work with federal, state, county, and local officials to provide information on local well water quality issues.
Well and Water Testing Resources

Iowa DNR Private Wells  www.iowadnr.gov/waterwells

Private Well Program Hot Topics

This web page contains current hot topics in the Iowa DNR private well program. The content of this page changes, so check back for the latest updates. Personal computer users can also choose topics from the toolbar to the left of the page, or for mobile device users, the mobile menu button located at the top of the web page.

Test your private well before the holiday season

The holidays bring families and friends together for reflection, festivities, and fun. Holiday gatherings can also mean that guests are consuming water from your private well. Because of this, now is a great time to have your well water tested so you can serve your water with confidence.

When considering well water testing, keep in mind that the contaminants you should test for can vary by well location. Sometimes testing for the basics - bacteria, nitrates, and arsenic - may not be enough.

The DNR has guidance available to help you understand the importance of sampling and testing your private water system. Check out our Frequently Asked Questions About Private Drinking Water web page. To arrange water testing, please contact your local county environmental health office.

Heavy rains cause flood waters - Will your water well be affected?

Flood waters can present a hazard to your water supply well regardless if your well is located in the flood way or not.

Hazards include contamination of the well and your drinking water, electrical shock and damage due to floating debris.

The Iowa DNR has information on how flood waters can impact your water supply well and the items that you should consider before using your well during or after a flood event.

Please view our Wells and Flooding document for additional formation.

Do you live in one of the green or red shaded areas?

If so, you are located in a Karst area. Constructing and maintaining a well in Karst areas can be complicated. Wells finished in the shallow aquifers can contain high levels of nitrates and other chemicals that may cause health concerns.

The Iowa DNR has basic information that can help you understand how your well may interact with shallow groundwater in these areas. Please see our Shallow Wells in Karst web page for additional information.
For Additional Information Contact

RUSSELL TELL | Iowa Private Well Program
Iowa Department of Natural Resources
515.725.0462 | Russell.tell@dnr.iowa.gov
502 East 9th Street, | Des Moines, IA 50319