

pH

pH is a measure of the acid level in water. The desirable range of pH in groundwater is 7.0-8.3. Ninety-seven percent of all samples from Iowa County fell within the desired pH levels. Only 3% of samples tested had a pH lower than 7.0. This could lead to a gradual deterioration of plumbing materials.

Alkalinity

Naturally occurring carbonate minerals in water mainly cause alkalinity. Alkalinity protects water from rapid changes in pH. Low alkalinity water (less than 50 mg/l) may be corrosive. Only two percent of the samples tested had less than 50 mg/l alkalinity.

Conductivity

Conductivity measures the total amount of dissolved minerals in a water sample, but does not tell what the minerals are. In natural groundwater in Iowa County, conductivity is typically twice the hardness value. If it is much greater than two times the hardness, human-made contaminants like chloride or nitrate are usually present. Iowa County typically has hard water from all the limestone ridges. Conductivity, for the most part, fell in the ideal ranges, two times the hardness.

Atrazine

Atrazine is the most common herbicide (a weed killing pesticide) used in Wisconsin. It is also the one most commonly found in groundwater. Private wells within ¼ mile of a corn field should be tested for atrazine. About 38% of the wells tested in Iowa County had traceable amounts of atrazine. Forty percent of wells tested in Wisconsin have some amount of atrazine found.

Conclusions about Groundwater Quality in Iowa County

1. Natural water is abundant in the county. But there are issues with water quality as many samples had high levels of nitrates and chlorides, showing that the water has been influenced by humans on the surface. Also, the high hardness levels make water softeners desirable for some people.
2. Atrazine is found in some wells. Throughout Wisconsin traceable amounts of atrazine are found in forty percent of all rural wells. Iowa County is right on that average. Safe drinking water standards for atrazine are 3 parts per billion.
3. Twenty-four percent of the samples had unsafe coliform bacteria levels.
4. Some Iowa County residents need to learn more about their wells. Only forty-five percent of the participants knew their well depth. Forty-eight percent did not know when their water had last been tested, or if it ever had been tested. Fourteen percent had tested their water within the last two years. Sixty-four percent had no idea if they had a well casing or not.

For more information on groundwater quality and drinking water quality in Iowa County, or on how you can have your well water tested, contact the Iowa County University Extension Office at 935-0391 or Iowa County Health Department at 935-2810.

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Other Water Resources and Information for Iowa County

Well Testing for Newborns: If you have a newborn you are offered a free water test by the Iowa County Health Dept. This water analysis will test for bacteria, fluoride and nitrate. Call 935-2810.

Further Testing: The UW-Extension Office also has testing information available. There are three different tests that a rural homeowner can do:

- **Homeowners** test for nitrate, coliform bacteria, pH, alkalinity, hardness, conductivity, chloride and corrosivity
- **Metals** test looks at copper, lead, iron, manganese, zinc, potassium, calcium, magnesium
- **Triazine** test looks for triazine-type pesticides like atrazine.

Fluoride tablets: If you are interested in fluoride tablets for your children contact the Iowa County Health Department at 935-2810 for information on how to receive these tablets.

Municipalities that have fluoride in their municipal water supply are: Arena, Avoca, Barneveld, Dodgeville and Mineral Point.

Well Abandonment: Iowa County has a cost-share program to cap old unused wells. Call Tony Pillow at the Land Conservation Office at 935-2791 ext. 3 for more information.

Water Testing for Refinancing: This is to be done through the State Hygiene Lab, not the Iowa County Health Department. Call 1-800-442-4618 for test packet.

Drinking Water Quality in Iowa County



UW
Extension
Iowa County

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Prepared by Paul Ohlrogge
UW Extension Iowa County
Community Resource Development Agent
608 935-0391