

# 2015 WATER QUALITY REPORT FOR BADGER WATER SUPPLY

This report contains important information regarding the water quality in our water system. The source of our water is groundwater. Our water quality testing shows the following results:

| CONTAMINANT                                   | MCL - (MCLG)         | Compliance |                 | Date       | Violation | Source                                                                                                                    |
|-----------------------------------------------|----------------------|------------|-----------------|------------|-----------|---------------------------------------------------------------------------------------------------------------------------|
|                                               |                      | Type       | Value & (Range) |            |           |                                                                                                                           |
| Total Trihalomethanes (ppb) [TTHM]            | 80 (N/A)             | LRAA       | 15.00 (10 - 20) | 09/30/2015 | No        | By-products of drinking water chlorination                                                                                |
| Total Haloacetic Acids (ppb) [HAA5]           | 60 (N/A)             | LRAA       | 8.00 (ND - 30)  | 12/31/2015 | No        | By-products of drinking water disinfection                                                                                |
| Copper (ppm)                                  | AL=1.3 (1.3)         | 90th       | 0 (ND - 0.18)   | 2015       | No        | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives                    |
| Lead (ppb)                                    | AL=15 (0)            | 90th       | ND              | 2015       | No        | Corrosion of household plumbing systems; erosion of natural deposits                                                      |
| 950 - DISTRIBUTION SYSTEM                     |                      |            |                 |            |           |                                                                                                                           |
| Chlorine (ppm)                                | MRDL=4.0 (MRDLG=4.0) | RAA        | 1.2 (ND - 1.7)  | 03/31/2015 | No        | Water additive used to control microbes                                                                                   |
| 01 - S/EP WELL #2 ('48) OR #3 ('73) - TREATED |                      |            |                 |            |           |                                                                                                                           |
| Gross Alpha, inc (pCi/L)                      | 15 (0)               | SGL        | 2               | 06/04/2012 | No        | Erosion of natural deposits                                                                                               |
| Fluoride (ppm)                                | 4 (4)                | SGL        | 2.24            | 10/20/2015 | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Sodium (ppm)                                  | N/A (N/A)            | SGL        | 41              | 10/20/2015 | No        | Erosion of natural deposits; Added to water during treatment process                                                      |
| Nitrate [as N] (ppm)                          | 10 (10)              | SGL        | 0.2229          | 2015       | No        | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits                               |

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

## DEFINITIONS

- Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Maximum Contaminant Level Goal (MCLG) -- The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- ppb -- parts per billion.
- ppm -- parts per million.
- pCi/L – picocuries per liter
- N/A – Not applicable
- ND -- Not detected
- RAA – Running Annual Average
- LRAA – Locational Running Annual Average
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

- Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- SGL – Single Sample Result
- TCR – Total Coliform Rule

## **GENERAL INFORMATION**

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water posed a health risk. More information about contaminants or potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. BADGER WATER SUPPLY is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## **ADDITIONAL HEALTH INFORMATION**

Fluoride in children's drinking water at levels of approximately 1 mg/L reduces the number of dental cavities. However, some children exposed to levels of fluoride greater than about 2.0 mg/L may develop dental fluorosis. Dental fluorosis, in its moderate and severe forms, is a brown staining or pitting of the permanent teeth, or both.

Because dental fluorosis occurs only when developing teeth (before they erupt from the gums) are exposed to elevated fluoride levels, households without children are not expected to be affected by this level of fluoride.

Families with children under the age of nine are encouraged to seek other sources of drinking water for their children to avoid the possibility of staining and pitting.

Your water supplier can lower the concentration of fluoride in your water so you will still receive the benefits of cavity prevention while the possibility of stained and pitted teeth is minimized. Removal of fluoride may increase your water costs. Treatment systems are also commercially available for home use. Information on such systems is available at the address given by your public water supplier. Low fluoride bottled drinking water that would meet all standards is also commercially available.

## **OTHER VIOLATIONS**

In January 2015 we failed to monitor for Haloacetic Acids (HAA5). Adverse health effects, if any, are not known. Monitoring procedures have been corrected to avoid future violations.

In January 2015 we failed to monitor for Total THM. Adverse health effects, if any, are not known. Monitoring procedures have been corrected to avoid future violations.

## **SOURCE WATER ASSESSMENT INFORMATION**

This water supply obtains its water from the limestone and dolomite of the Mississippian aquifer. The Mississippian aquifer was determined to have low susceptibility to contamination because the characteristics of the aquifer and overlying materials provide natural protection from contaminants at the land surface. The Mississippian wells will have low susceptibility to surface contaminants such as leaking underground storage tanks, contaminant spills, and excess fertilizer application. A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources, and is available from the Water Operator at 515-545-4514.

## **CONTACT INFORMATION**

For questions regarding this information or how you can get involved in decisions regarding the water system, please contact BADGER WATER SUPPLY at 515-545-4514.