

2017 WATER QUALITY REPORT FOR NORTH LIBERTY 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 Yes/No | Source |
|--|----------------------|------------|------------------|------------|---------------------|---|
| | | Type | Value & (Range) | | | |
| Copper (ppm) | AL=1.3 (1.3) | 90th | 0.88 (ND – 1.0) | 2015 | No | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (ppb) | AL=15 (0) | 90th | 2.00 (ND - 3) | 2015 | No | Corrosion of household plumbing systems; erosion of natural deposits |
| 950 - DISTRIBUTION SYSTEM | | | | | | |
| Chlorine (ppm) | MRDL=4.0 (MRDLG=4.0) | RAA | 1.16 (1.00-1.26) | 12/31/2016 | No | Water additive used to control microbes |
| Total Trihalomethanes (ppb) [TTHM] | 80 (N/A) | LRAA | 2.00 (2 – 2) | 09/30/2017 | No | By-products of drinking water chlorination |
| 03 - S/EP FRM WELLS #1,#2,#3,#4,#5,#6 | | | | | | |
| Gross Alpha, inc (pCi/L) | 15 (0) | SGL | 6.4 | 05/06/2015 | No | Erosion of natural deposits |
| Combined Radium (pCi/L) | 5 (0) | SGL | 1.7 | 05/06/2015 | No | Erosion of natural deposits |
| Fluoride (ppm) | 4 (4) | SGL | 1.34 | 01/21/2015 | No | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Sodium (ppm) | N/A (N/A) | SGL | 300 | 07/31/2017 | No | Erosion of natural deposits; Added to water during treatment process |
| Nitrate [as N] (ppm) | 10 (10) | SGL | 1.2 | 2017 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| 04 - S/EP FROM WELL #7 (ASR) | | | | | | |
| Arsenic (ppb) | 10 (N/A) | SGL | 3.00 | 08/13/2015 | No | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes |
| Sodium (ppm) | N/A (N/A) | SGL | 250 | 07/06/2017 | No | Erosion of natural deposits; Added to water during treatment process |

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
- IDSE – Initial Distribution System Evaluation
- 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. NORTH LIBERTY 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>.

SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains its water from the sandstone and dolomite of the Cambrian-Ordovician aquifer. The Cambrian-Ordovician aquifer was determined to have low susceptibility to contamination because the characteristics of the aquifer and the overlying materials provide natural protection from contaminants at the land surface. The Cambrian-Ordovician 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 319-626-5719

OTHER INFORMATION

North Liberty's new water treatment plant, which uses reverse osmosis and nano-filtration technologies, is expected to be on line by the end of May. The new plant will increase the city's drinking water quality and production capacity.

While our water sources remain the Jordan and Silurian aquifers, the new plant, located along South Front Street, will filter out more of the minerals associated with these underground water sources that, while not harmful, affect water's taste and scent. As the new plant comes on line, customers with water softeners should make adjustments to account for the reduction in water hardness, which is currently 10 to 12 grains per gallon, to just 5 to 6 grains per gallon.

The new plant also brings online new wells and raw water mains, and replaces a plant built in 1977 and expanded in 2001 to produce about 1.6 million gallons of water per day. The new plant nearly doubles the system's production to 3 million gallons per day and is built to serve a population of 30,000. North Liberty water customers use an average of about 1.4 million gallons of water a day, and use has peaked as high as 2.2 million gallons in a day. In all, the city invested about \$20 million in these water system improvements. The old plant, located at 281 South Chestnut Street, will be decommissioned and used as a workshop for the water department.

Following the 2001 expansion, the city, in 2007, added a 1-million-gallon water tower along Kansas Avenue and a 39-million-gallon aquifer storage and recovery, or ASR, well, essentially an underground storage tank to accommodate periods of increased

demand. However, as the city's population has grown, and is now above 19,000, more of the redundant equipment was pressed into regular service and the excess water production, used to fill water towers and the ASR well, diminished. In 2014, the water department conducted a pilot study and design work began. Construction began in 2016. The plant design allows for a future second phase that would bring daily production to 6 million gallons.

The plant will host a ribbon cutting and open house for the public on Wednesday, June 20, 2018, from 4 to 6 p.m.

CONTACT INFORMATION

For questions regarding this information or how you can get involved in decisions regarding the water system, please contact NORTH LIBERTY WATER SUPPLY at 319-626-5719. Decisions are made at the city council meetings held on the 2nd and 4th Tuesday of each month at 6:30 pm and are open to the public.