

# 2016 WATER QUALITY REPORT FOR JEWELL 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       | 5.00 (5 - 5)                               | 09/30/2016 | No        | By-products of drinking water chlorination                                                                                |
| Total Haloacetic Acids (ppb) [HAA5]    | 60 (N/A)             | LRAA       | 6.00 (6 - 6)                               | 09/30/2016 | No        | By-products of drinking water disinfection                                                                                |
| Lead (ppb)                             | AL=15 (0)            | 90th       | 39.00 (ND - 98)<br>3 sample(s) exceeded AL | 2016       | Yes       | Corrosion of household plumbing systems; erosion of natural deposits                                                      |
| Copper (ppm)                           | AL=1.3 (1.3)         | 90th       | 0.6 (0.02 - 0.67)                          | 2016       | No        | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives                    |
| 950 - DISTRIBUTION SYSTEM              |                      |            |                                            |            |           |                                                                                                                           |
| Chlorine (ppm)                         | MRDL=4.0 (MRDLG=4.0) | RAA        | 1.8 (1.49 - 2.61)                          | 12/31/2016 | No        | Water additive used to control microbes                                                                                   |
| 01 - S/EP WELL #3-1985 AFTER TREATMENT |                      |            |                                            |            |           |                                                                                                                           |
| Fluoride (ppm)                         | 4 (4)                | SGL        | 0.82                                       | 08/05/2013 | No        | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Arsenic (ppb)                          | 10 (0)               | SGL        | 6.00                                       | 08/18/2016 | No        | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes                     |
| Barium (ppm)                           | 2 (2)                | SGL        | 0.09                                       | 08/05/2013 | No        | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                                |
| Sodium (ppm)                           | N/A (N/A)            | SGL        | 73.63                                      | 09/19/2016 | No        | Erosion of natural deposits; Added to water during treatment process                                                      |
| Nitrate [as N] (ppm)                   | 10 (10)              | SGL        | 0.071                                      | 2016       | 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
- 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
- RTCR – Revised Total Coliform Rule
- NTU – Nephelometric Turbidity Units

## 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. JEWELL 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>.

## CONTAMINANT VIOLATIONS

| Violation Type                                                                                                                                                                                                                                                                                                                                                                                     | Contaminant | Begin date | End Date   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|------------|
| Our water system violated a drinking water standard for Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or, high blood pressure. |             |            |            |
| AL (Pb/Cu), 90th Percentile                                                                                                                                                                                                                                                                                                                                                                        | Lead        | 06/01/2014 | 09/30/2016 |

## ADDITIONAL HEALTH INFORMATION

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

## 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 well 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 515-836-8144 .

## **CONTACT INFORMATION**

For questions regarding this information or how you can get involved in decisions regarding the water system, please contact JEWELL WATER SUPPLY at 515-836-8144.

## **Additional Information**

The City of Jewell is adding a phosphate mixture to assist with the lead issues we are currently experiencing. If you are interested in a Consumer Confidence Report, you can obtain a copy at City Hall during normal business hours.