



# Annual Drinking Water Quality Report for Calendar Year 2014

## City of Silvis

**This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water. This report includes drinking water facts, information on violations (if applicable), and contaminants detected in your drinking water supply during calendar year 2014. Each year, we will provide you a new report. If you need help understanding this report or have general questions, please contact the person listed below.**

*Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.*

Contact Name: James L. Grafton  
Telephone Number: 309-792-9181  
E-mail (if available) jgrafton@silvisil.org

Before we begin listing our unique water quality characteristics, here are some important facts you should know to help have a basic understanding of drinking water in general.

### **Sources of Drinking Water**

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Our source of water comes from Ground Water. The City of Silvis now has a total of nine wells that provide all of the city water needs. In February 2009 the City of Silvis started construction of a new well in the area of 10<sup>th</sup> Street and 33<sup>rd</sup> Avenue. The well was completed and put in operation in late May 2010. As a part of the new well construction, the City of Silvis placed the Glendale Well into operation in May 2010. In December 2010 the City of Silvis began providing water for residents of the Fair Acres subdivision. The private well in the Fair Acres subdivision was abandoned and sealed August 2012.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

### **Other Facts about Drinking Water**

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 poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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).

### **Source Water Assessments**

Source water protection (SWP) is a proactive approach to protecting our critical sources of public water supply and assuring that the best source of water is being utilized to serve the public. It involves implementation of pollution prevention practices to protect the water quality in a watershed or wellhead protection area serving a public water supply. Along with treatment, it establishes a multi-barrier approach to assuring clean and safe drinking water to the citizens of Illinois. The Illinois EPA has implemented a source water assessment program (SWAP) to assist with wellhead and watershed protection of public drinking water supplies.

We want our valued customers to be informed about their water quality. If you would like to learn more please feel free to attend any of our regularly scheduled meetings. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by the City Hall at 121 11<sup>th</sup> Street or call our water operator at 309-792-0170. To view a summary

version of the Source Water Assessments, including: Importance of Source water; susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

To determine Silvis's susceptibility to groundwater contamination, information obtained during a Well Site Survey performed by the Illinois Rural Water Association on May 20, 1999, was reviewed. Based on this information, 24 potential sites of concern were identified within the proximity of this water supply's wells. The Illinois EPA does not consider the city's source water susceptible to contamination. This determination is based on a number of criteria including: monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data on the wells. In anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that the water supply is not vulnerable to viral contamination. This determination is based upon the completed evaluation of the following criteria during the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper site conditions; a hydrogeologic barrier exists that should prevent pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and a sanitary survey of the water supply did not indicate a viral contamination threat. Because the community's wells are constructed in a confined aquifer, which should minimize the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in the vulnerability determination. Hence, well hydraulics were not evaluated for this groundwater supply.

#### **2014 Regulated Contaminants Detected**

The next several tables summarize contaminants detected in your drinking water supply. The City of Silvis did purchase water from the City of East Moline from April to July 2013 to paint the 17<sup>th</sup> Avenue water tower.

Here are a few definitions and scientific terms, which will help you understand the information in the contaminant detection tables.

|       |   |
|-------|---|
| AL    | Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.   |
| Avg   | Regulatory compliance with some MCLs is based on running annual average of monthly samples.   |
| MCL   | Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goal as feasible using the best available treatment technology. |
| MCLG  | Maximum Contaminant Level Goal: 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.  |
| MRDL  | Maximum Residual Disinfectant Level: The highest level of disinfectant allowed in drinking water.   |
| MRDLG | Maximum Residual Disinfectant Level Goal: The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLGs allow for a margin of safety.                                    |
| N/A   | Not Applicable  |
| NTU   | Nephelometric Turbidity Units   |
| pCi/L | picocuries per liter ( a measure of radioactivity)  |
| ppb   | parts per billion or micrograms per liter (ug/L) - or one ounce in 7,350,000 gallons of water.  |
| ppm   | parts per million or milligrams per liter (mg/L) - or one ounce in 7,350 gallons of water.  |
| TT    | Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.  |

| Coliform Bacteria | MCLG | Total Coliform MCL        | Highest Number of Positive Samples | Fecal Coliform or <i>E. coli</i> MCL | Total No. of Positive <i>E. coli</i> or Fecal Coliform Samples | Violation | Likely Source of Contamination       |
|-------------------|------|---------------------------|------------------------------------|--------------------------------------|--|-----------|--------------------------------------|
|                   | 0    | 1 positive monthly sample | 1                                  | 0                                    | 0  | Y         | Naturally present in the environment |

| Lead and Copper | Date Sampled | MCLG | Action Level (AL) | 90 <sup>th</sup> Percentile | # Sites Over AL | Units | Violation | Likely Source of Contamination   |
|-----------------|--------------|------|-------------------|-----------------------------|-----------------|-------|-----------|--|
| Copper          | 2014         | 1.3  | 1.3               | 1.2                         | 1               | ppm   | N         | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead            | 2014         | 0    | 15                | 9.8                         | 1               | ppb   | N         | Corrosion of household plumbing systems; erosion of natural deposits                                   |

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. The City of Silvis 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>.

| Disinfectants & Disinfection Byproducts | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG    | MCL | Units | Violation | Likely Source of Contamination            |
|---|-----------------|------------------------|--------------------------|---------|-----|-------|-----------|---|
| Chlorine                                | 12-31-14        | 2.6                    | 2-3                      | 4       | 4   | ppm   | N         | Water additive used to control microbes   |
| Haloacetic Acids (HAAS)                 | 2014            | 1                      | 0-2.1                    | No goal | 60  | ppb   | N         | By-product of drinking water chlorination |
| Total Trihalomethanes (TThm)            | 2014            | 2                      | 0.9681-2.2967            | No goal | 80  | ppb   | N         | By-product of drinking water chlorination |

| Organic Contaminants        |   | Violation | Likely Source of Contamination       |
|-----------------------------|---|-----------|--------------------------------------|
| <b>Total Organic Carbon</b> | The percentage of Total Organic Carbon (TOC) removal was measured each month and the system et all TOC removal requirements set by IEPA, unless a TOC violation is noted in the violation section | N         | Naturally present in the environment |

| Inorganic Contaminants                | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination  |
|---------------------------------------|-----------------|------------------------|--------------------------|------|-----|-------|-----------|---|
| <b>Arsenic</b>                        | 10-16-12        | 1.9                    | 1.1-1.9                  | 0    | 10  | ppb   | N         | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.                                     |
| <b>Barium</b>                         | 10-16-12        | 0.11                   | 0.076-0.11               | 2    | 2   | ppm   | N         | Discharge of drilling waste, discharge from metal refineries, erosion of natural deposits   |
| <b>Chromium</b>                       | 10-16-12        | 5                      | 0- 5                     | 100  | 100 | ppg   | N         | Discharge from steel and pulp mills, erosion of natural deposits  |
| <b>Fluoride</b>                       | 10-16-12        | 1.18                   | 1.03-1.18                | 4    | 4   | ppm   | N         | Discharge from fertilizer and aluminum factories, erosion of natural deposits, water additive that enhances dental health                   |
| <b>Iron</b>                           | 10-16-12        | 0.14                   | 0.093-0.14               |      | 1.0 | ppm   | N         | This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits                         |
| <b>Manganese</b>                      | 10-16-12        | 1.6                    | 1.4-1.6                  | 150  | 150 | ppb   | N         | This contaminant is not currently regulated by the USEPA. However, the state does regulates. Erosion of natural deposits                    |
| <b>Nitrate (measured as Nitrogen)</b> | 2014            | .29                    | 0.24-0.29                | 10   | 10  | ppm   | N         | Erosion of natural deposits, leaching from septic tanks and sewage, runoff produced from agriculture processes                              |
| <b>Selenium</b>                       | 10-16-12        | 7.1                    | 0-7.1                    | 50   | 50  | ppb   | N         | Discharge from petroleum and metal refineries, erosion of natural deposits, discharge from mines  |
| <b>Sodium</b>                         | 10-16-12        | 180                    | 130-180                  |      |     | ppm   | N         | Erosion of naturally occurring deposits, used in water softener regeneration  |
| <b>Zinc</b>                           | 10-16-12        | 0.0062                 | 0- 0.062                 | 5    | 5   | ppm   | N         | This contaminant is not currently regulated by the USEPA. However, the state regulates. Naturally occurring; discharge from metal factories |

| Radioactive Contaminants                              | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination |
|---|-----------------|------------------------|--------------------------|------|-----|-------|-----------|--------------------------------|
| <b>Combined Radium 226/228</b>                        | 2014            | 4                      | 2.67-4.3                 | 0    | 5   | pCi/L | N         | Erosion of natural deposits    |
| <b>Gross Alpha excluding radon and uranium TAP 01</b> | 2014            | 10                     | 4.3-12.1                 | 0    | 15  | pCi/L | N         | Erosion of natural deposits    |
| <b>Combined Radium 226/228</b>                        | 2013            | 4                      | 3.9-3.9                  | 0    | 5   | pCi/L | N         | Erosion of natural deposits    |
| <b>Gross Alpha excluding radon and uranium TAP 03</b> | 2013            | 7                      | 7.1-7.1                  | 0    | 15  | pCi/L | N         | Erosion of natural deposits    |
| <b>Uranium</b>  | 1-19-09         | 0.0149                 | 0.0149-0.0149            | 0    | 30  | Ug/l  | N         | Erosion of natural deposits    |

Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old. Not all of the sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

| Unregulated Contaminant Monitoring Rule | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination  |
|---|-----------------|------------------------|--------------------------|------|-----|-------|-----------|---|
| <b>1,4-Dioxane: Entry Point</b>         | 2013            | 0.31                   | 0.00-0.56                | NA   | NA  | ppb   | NA        | Cyclic Aliphatic Ether- which is used as a solvent or solvent stabilizer in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics, shampoos, cleaning agents, surface coating, and adhesive agents |
| <b>Chlorate: Entry Point</b>            | 2013            | 174                    | 46-310                   | NA   | NA  | ppb   | NA        | Erosion of naturally occurring deposits, used in water  |

|  |      |      |           |    |    |     |    |   |
|--|------|------|-----------|----|----|-----|----|---|
| <b>Distribution</b>  | 2013 | 191  | 46-340    | NA | NA | ppb | NA | softener regeneration   |
| <b>Chromium 6: Entry Point Distribution</b>  | 2013 | 0.05 | 0.00-0.07 | NA | NA | ppb | NA | Naturally occurring element, used in making steel and other alloys, used for chrome plating, dyes, pigments, leather tanning, and wood preservation |
|  | 2013 | 0.06 | 0.03-0.09 | NA | NA | ppb | NA |   |
| <b>Molybdenum: Entry Point Distribution</b>  | 2013 | 0.06 | 0.00-1.3  | NA | NA | ppb | NA | Commonly used from molybdenum trioxide used as a chemical reagent, naturally occurring element found in ores, plants, animals, and bacteria         |
|  | 2013 | 0.06 | 0.00-1.3  | NA | NA | ppb | NA |   |
| <b>Strontium: Entry Point Distribution</b>   | 2013 | 96   | 86-110    | NA | NA | ppb | NA | Naturally occurring element, commercially found in the faceplate glass of cathode-ray televisions to block x-ray emissions                          |
|  | 2013 | 92   | 87-110    | NA | NA | ppb | NA |   |
| <b>Vanadium: Entry Point Distribution</b>  | 2013 | 0.96 | 0.29-1.60 | NA | NA | ppb | NA | Naturally occurring elemental metal, used in the form of vanadium pentoxid as a chemical intermediate and catalyst                                  |
|  | 2013 | 0.98 | 0.43-1.50 | NA | NA | ppb | NA |   |
| Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of these substances has not been established by either state or federal regulations, nor has mandatory health effects language. |      |      |           |    |    |     |    |   |

## Violations Table

| <b>Chlorine</b>  |                        |                      |   |
|--|------------------------|----------------------|---|
| Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort. |                        |                      |   |
| <b>Violation Type</b>  | <b>Violation Begin</b> | <b>Violation End</b> | <b>Violation Explanation</b>  |
| MONITORING, ROUTINE (DBP), MAJOR   | 4-1-2014               | 6-30-2014            | We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. |

  

| <b>Total Coliform</b>   |                        |                      |   |
|---|------------------------|----------------------|---|
| Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. |                        |                      |   |
| <b>Violation Type</b>   | <b>Violation Begin</b> | <b>Violation End</b> | <b>Violation Explanation</b>  |
| MCL (TCR), MONTHLY  | 6-1-2014               | 6-30-2014            | Total coliform bacteria were found in our drinking water during the period indicated in enough samples to violate a standard.   |
| MONITORING (TCR), REPEAT MAJOR  | 6-1-2014               | 6-30-2014            | We failed to collect follow-up samples in response to finding total coliform bacteria in a routine sample. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. |