

## ANNUAL DRINKING WATER QUALITY REPORT FOR 2016

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the quality of your water. Our town uses ground water provided by three wells drilled into the San-Koty aquifer. An aquifer is a geological formation that contains water. These wells are 320 feet deep. The three wells are located within the village limits.

We have greatly reduced the amount of iron that goes out into the water distribution system, but some iron will still settle out in the water mains. Over time iron accumulates at the bottom of the water mains. It then gets stirred up when water flow rates increase through the water mains. Periodic flushing removes these sediments.

If you have any questions about this report, or concerning your water quality, please contact Water Operator Brad Bode at the Goodfield Water Department, 203 W Fisk Street, phone 965-2710. We want our customers to be informed about their water quality.

The Village of Goodfield routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2016. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these small amounts of contaminants does not necessarily pose a health risk.

**The Village Board meetings are conducted at the Village Hall (114 S Eureka Street, Goodfield, IL) on the 3<sup>rd</sup> Thursday of each month at 7:00p.m. For an item to appear on the agenda of a Regular Board Meeting, you must present the item to be discussed to the Village Clerk by noon on the Friday preceding the Regular Meeting, including your name and any relevant information regarding the topic to be raised. For agenda of non-agenda items, any member of the public may address the Village Board but must limit the presentation to a maximum of five minutes. The Village Board shall have discretion to enter into further dialogue with the member of the public or take any action with regard to the item.**

### **Your Village Officers & Employees:**

**President:** Ross Hohulin

**Trustees:** Terry Nohl, Blake Otto, Wade Wettstein, Matt Ginder, Todd Perry and Jim Edwards

**Public Works Admin:** Josh Nohl, **Water Operator:** Brad Bode, **Sewer Operator:** Mike Carr

**Treasurer:** Teresa DeGrave, **Clerk:** Sheri Martin

**Streets:** Terry Nohl, **Laborer:** Terry Holliger, John Kennedy

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# Annual Drinking Water Quality Report

GOODFIELD

IL2034450

Annual Water Quality Report for the period of January 1 to December 31, 2016

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.

The source of drinking water used by GOODFIELD is Ground Water

For more information regarding this report contact:

Name Brad Bode

Phone 309-965-2710

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

## Source of Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and 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.

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.

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 EPAs 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).

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. We 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 Information

Source Water Name	Type of Water	Report Status	Location
WELL 1 (31419)	GW	<u>Active</u>	<u>Inside Water Treatment Plant</u>
WELL 2 (31420)	GW	<u>Active</u>	<u>2 Blocks West of Water Treatment Plant</u>
WELL 3 (01753)	GW	<u>Active</u>	<u>S of E Fisk St, E of Existing Water Treatment Plant</u>

## Source Water Assessment

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome 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 City Hall or call our water operator at 309-965-2710. To view a summary version of the completed 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>.

Source of Water: GOODFIELD based on information obtained in a Well Site Survey, published in 1990 by the Illinois EPA, there were 12 potential sources of groundwater contamination that may pose a hazard to Goodfield's wells. However, the Illinois EPA has determined that several of these potential sources may now be of reduced risk to Goodfield's source water. Furthermore, information provided by the LUST database indicated nine additional sites, some of which may have on-going remediations, which may be of concern. However, these sites have not been field verified by the Groundwater Section staff and may or may not be located in proximity to the village's source water protection area. Based on information provided by Goodfield's water supply officials, the following facilities, also indicated as potential sources in the site data table, have changed their status: Vogel Oil Co. changed to Freedom Oil; Cropmate Soil Lab changed to Midwest Welding and Testing; Glenn's Standard Service Station (tanks removed); Goodfield Laundromat (out of business); and GTE changed to Verizon. The Illinois EPA has determined that the Goodfield Community Water Supply's source water is not susceptible to contamination. This determination is based on a number of criteria including: monitoring conducted at the wells; 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 Goodfield community 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 prevents 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 the sanitary survey of the water supply did not indicate a viral contamination threat. Because the community's wells are constructed in a confined aquifer and the movement of pathogens into the wells should be minimized, well hydraulics were not considered to be a significant factor in the vulnerability determination. Hence, well hydraulics were not evaluated for this groundwater supply.

**Village of Goodfield Water Supply has been issued a Vulnerability Waiver for testing of SOC's (Synthetic Organic Chemicals). We are however required to test for these once every nine years. The Illinois EPA issued this waiver based on review of past testing data and aquifer formations which protect the aquifer from contamination. The Village of Goodfield Water Supply has also been issued a Special Exception Permit for the addition of poly/ortho blend phosphates to prevent corrosion of lead and copper in the water distribution system. Phosphates of this type are added to many food products and are considered safe.**

**Lead and Copper**

Definitions:

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2016	1.3	1.3	0.79	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

**Water Quality Test Results**

- Definitions: The following tables contain scientific terms and measures, some of which may require explanation.
- Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
- Maximum Contaminant Level or 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 or 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.
- Maximum residual disinfectant level or 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.
- Maximum residual disinfectant level goal or 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.
- na: not applicable.
- mrem: millirems per year (a measure of radiation absorbed by the body)
- ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
- ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
- Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

## Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2016	3.1	2.7 - 3.3	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2016	90	0 - 175	No goal for the total	60	ppb	Y	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2016	54	1.67 - 150.4	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic - While your drinking water meets EPA standards 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.	2016	8	5.5 - 7.9	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	12/09/2015	0.23	0.23 - 0.23	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	12/09/2015	1.07	1.07 - 1.07	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Iron	12/09/2015	0.025	0.025 - 0.025		1.0	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.

Manganese	12/09/2015	31	31 - 31	150	150	ppb	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Nitrate [measured as Nitrogen]	2016	0.03	0.03 - 0.03	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Sodium	12/09/2015	120	120 - 120			ppm	N	Erosion from naturally occurring deposits: Used in water softener regeneration.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	04/23/2015	1.537	1.537 - 1.537	0	5	pCi/L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	04/23/2015	5.39	5.39 - 5.39	0	15	pCi/L	N	Erosion of natural deposits.
Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Xylenes	2016	0.001	0.00052 - 0.00052	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories.

**Violations Table**

<b>Haloacetic Acids (HAA5)</b>			
Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
MCL, LRAA	07/01/2016	09/30/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

**Explanation of Corrective Action Taken:** Chlorine disinfection by-products (including HAA5's) occur because of naturally occurring organic materials in water combining with chlorine which is added to protect everyone's health from bacteria that otherwise could be present in water. If water doesn't get used for a long time after pumping and chlorination it is more likely to have this problem. We have lowered the water tower levels further to help prevent this. We have also added automatic flushing hydrants which automatically flush at night as programmed to help alleviate this problem. All recent samples, since the sample that caused the violation, have come back with much lower results at the site where the violation occurred. The standard calls for total HAA5's to be less than 60 ppb. Listed below are the results of tests taken since the violation:

04-25-17	10.35 ppb
01-12-17	8.58 ppb
10-20-16	8.30 ppb
07-20-16	14.93 ppb