



RANTOUL WATER SOFTENING PLANT

2019 PUBLIC WORKS YEAR IN REVIEW

During the last year, the Village completed a significant rehabilitation project at the Water Treatment Plant. The existing chlorine gas disinfection system was replaced with a new sodium hypochlorite disinfection system. Managing the chlorine in a liquid state (which

will be a more stable form), offers safer handling and a more consistent injection into the water treatment and disinfection process. Other maintenance projects to be completed this year, at the Water Treatment Plant, include HVAC upgrades and roof replacements.

2019 ANNUAL DRINKING WATER REPORT

Dear Customer: We are pleased to present a summary of the quality of the water provided to you for the period of January 1, 2019 to December 31, 2019. The Safe Drinking Water Act of 1996 (SDWA) requires that water utilities issue an annual “Consumer Confidence” report to customers, in addition to other notices that may be required by law, that details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. The Village of Rantoul’s drinking water meets or surpasses all federal and state drinking-water standards. The Village of Rantoul is committed to providing you with the safest and most reliable water supply. Informed consumers are our best allies in maintaining safe drinking water. Call us for information about the next opportunity for public participation in decisions about our drinking water.

The source assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please contact our Public Works department at (217) 892-6526. 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 www.myrantoul.com/epa.

Consult our Web site at www.myrantoul.com/water or see U.S. Environmental Protection Agency (EPA) water information at: www.epa.gov/safewater.

Este informe contiene informacion muy importante sobre el agua usted bebe. Traduzcalo o hable con alguien que lo entienda bien.

The Village of Rantoul’s drinking water meets or surpasses all federal and state drinking-water standards. *La Aldea de Rantoul es bebiendo agua encuentra o supera todo federal y el estado que bebe los estándares de agua.*

WATER SOURCE

What is the source of our water? The Village of Rantoul receives its water from eight (8) wells. High quality water is pumped from a depth of between 225 to 300 feet to supply our system. Wells #5, #7, #8, #9, #10, #11, #12, and #13 provide an average of 1,420,000 gallons per day to 4,400 services or a population of 13,000. The aquifers (underground water sources), which underlay Champaign County and Rantoul, were formed during three successive periods of glaciation. The layers of debris left behind during these periods formed the groundwater aquifers which all of Champaign County derives its water. Collectively they are known as the Mahomet Bedrock Valley Aquifer.

Rantoul's water supply wells are located in the lower two aquifers. The lowest aquifer found at a depth of over 200 feet beneath the ground surface was created during the first glacial age or Kansan age. This aquifer is filled with large quantities of continuous sand and gravel deposits and is capable of producing up to 3000 gallons per minute (gpm) of water.

The following glacial period, or Illinoian age, created the middle aquifer known as the Glasford Formation. This aquifer is located between depths of 50 to 200 feet below the ground surface. Water from the Mahomet Aquifer is pumped out of the ground. This ground water is pumped to the Village's water treatment facility through a network of underground pipes. At the water treatment plant, the water is aerated to assist in removing iron, softened to reduce mineral hardness, filtered to remove any other impurities and disinfected to

protect against any bacteria.

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.

To determine Rantoul's susceptibility to groundwater contamination, a Well Site Survey, published in 1991 by the Illinois EPA, and a potential source inventory conducted by the Illinois Rural Water Association in 2001, were reviewed. Based on the information contained in these documents, forty-nine potential sources of groundwater contamination are present that could pose a hazard to groundwater pumped by the Rantoul community water supply wells. These include seven below ground fuel storages, an above ground fuel storage, a hardware store, five electrical generators/substations, twelve auto repairs, an above or below ground fuel storage, eight vehicle sales, two autobodies, two stores/sales, a printing, a small engine repair, four manufacturing processes, a military installation, a former petroleum storage facility, a treated wood/lumber yard, a dry cleaners, The Illinois EPA has determined that Rantoul Wells #5, #7, #8, #9, #10, #11, #12, and #13 are not susceptible to IOC, VOC, and SOC 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 for the wells.

WATER QUALITY TABLE

How to read this table:

This table shows the results of our water-quality analyses from calendar year 2019. Every regulated contaminant that we detected in the water, even in the most minute traces, is listed here and is well below all federal and state drinking water standards. The table contains the name of each substance, the highest level allowed by regulation (MCL); the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement.

2019 WATER QUALITY DATA

Definition of terms:

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 system on multiple occasions.
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.
Maximum Residual Disinfectant Level (MRDL):	The highest level of 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 (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:	Millirams per year (a measure of radiation absorbed by the body)
ppb:	Parts per billion, micrograms per liter (µg/l), or 1 oz. in 7,350,000 gallons of water
ppm:	Parts per million, milligrams per liter (mg/l), or 1 oz. in 7,350 gallons of water
Treatment Technique (TT):	A required process intended to reduce the level of a contaminant in drinking water.

Detected Contaminants:

0190650 Rantoul

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Levels Detected	Date	Violation
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Inorganic Contaminants

BARIUM(ppm) <i>Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.</i>	2	2	0.036	0.036-0.036	10/4/2017	No
FLOURIDE(ppm) <i>Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.</i>	4	4.0	.557	.557-.557	10/4/2017	No
IRON(ppm) <i>Not currently regulated by the USEPA, however the state regulates; Erosion of natural deposits</i>	n/a	1	0.014	.014-.014	10/4/2017	No
NITRATE(as N)(ppm) <i>Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.</i>	10	10	1	1.3-1.3	10/4/2019	No
SODIUM(ppm) <i>Erosion of naturally occurring deposits; Used as water softener.</i>	n/a	n/a	30	30-30	10/4/2017	No

Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	Action Level	90th Percentile	# of Sites over AL		Violation
<u>Lead and Copper</u>						
LEAD(ppb) Corrosion of household plumbing systems; Erosion of natural deposits.	0	15	1.6	0	7/14/2017	No
COPPER(ppm) Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.	1.3	1.3	.081	0	7/14/2017	No
Contaminant (unit of measurement) Typical Source of Contaminant	MCLG	MCL	Highest Level Detected	Range of Levels Detected		Violation

<u>Disinfectants/Disinfection By-Products</u>						
TTHMS (TOTAL TRIHALOMETHANES)(ppb) By-product of drinking water disinfection.	n/a	80	22.6	19-22.6	2019	No
HALOACETIC ACIDS (HAA5)(ppb) By-product of drinking water disinfection.	n/a	60	9.99	8.63-9.99	2019	No
CHLORINE(ppm) Water additive used to control microbes	MRDLG =4	MRDL =4	0.6	0.5-0.6	2019	No

<u>Radioactive Contaminants</u>						
Gross Alpha excluding Radon and Uranium(pCi/L) Erosion of naturally occurring deposits	0	15	2.7	2.7-2.7	10/1/2014	No
COMBINED RADIUM 226/228(pCi/L) Erosion of naturally occurring deposits	0	5	.82	0.82-0.82	10/1/2014	No

The Fourth Unregulated Contaminant Monitoring Rule (UCMR 4):

Contaminant (unit of measurement) Typical Source of Contaminant	Min, Reporting Level	Highest Level Detected	Range of Levels Detected	Date
<u>Ten Cyanotoxin Chemical Contaminants</u>				
TOTAL MICROCYSTIN(ppb) A class of toxins produced by certain freshwater blue-green algae.	0.3 µg/L	<0.3	<0.3-<0.3	7/18/2018
NODULARIN(ppb) Visible colonies that present as algal blooms in brackish water bodies .	0.005 µg/L	<0.005	<0.005-<0.005	7/18/2018
ANATOXIN-A(ppb) A class of toxins produced by certain freshwater blue-green algae	0.03 µg/L	<0.03	<0.03-<0.03	7/18/2018
CYLINDROSPERMOPSIN(ppb) A class of toxins produced by certain freshwater blue-green algae.	0.09 µg/L	<0.09	<0.09-<0.09	7/18/2018
<u>Metals</u>				
GERMANIUM(ppb) Elemental germanium is used as a semiconductor in transistors and various other electronic devices.	0.3 µg/L	<0.3	<0.3-<0.3	7/18/2018
MANGANESE(ppb) is used for rust and corrosion prevention on steel.	0.4 µg/L	13.1	<0.4-13.1	7/18/2018

Contaminant (unit of measurement) Typical Source of Contaminant	Min, Reporting Level	Highest Level Detected	Range of Levels Detected	Date
Pesticides and Pesticide Manufacturing Byproduct				
ALPHA-HEXACHLOROCYCLOHEXANE(ppb) <i>used in insecticide.</i>	0.01 µg/L	<0.01	<0.01- <0.01	7/18/2018
CHLORPYRIFOS(ppb) <i>used in insecticide.</i>	0.03 µg/L	<0.03	<0.03- <0.03	7/18/2018
DIMETHIPIN(ppb) <i>used in insecticide.</i>	0.2 µg/L	<0.2	<0.2-<0.2	7/18/2018
ETHOPROP(ppb) <i>used in insecticide.</i>	0.03 µg/L	<0.03	<0.03- <0.03	7/18/2018
OXYFLUORFEN(ppb) <i>used in insecticide.</i>	0.05 µg/L	<0.05	<0.05- <0.05	7/18/2018
PROFENOFOS(ppb) <i>used in insecticide.</i>	0.3 µg/L	<0.3	<0.3-<0.3	7/18/2018
TEBUCONAZOLE(ppb) <i>used in insecticide.</i>	0.2 µg/L	<0.2	<0.2-<0.2	7/18/2018
TOTAL PERMETHRIN (CIS- & TRANS-)(ppb) <i>used in insecticide.</i>	0.04 µg/L	<0.04	<0.04- <0.04	7/18/2018
TRIBUFOS(ppb) <i>by-product of insecticide manufacturing.</i>	0.7 µg/L	<0.07	<0.07- <0.07	7/18/2018
Brominated Haloacetic Acids				
HAA5 total haloacetic acids(ppb) <i>by-product of drinking water disinfection.</i>	N/A	11.87	5.2-11.87	7/18/2018
HAA6Br(ppb) <i>by-product of drinking water disinfection.</i>	N/A	1.54	.45-1.54	7/18/2018
HAA9(ppb) <i>by-product of drinking water disinfection.</i>	N/A	13.41	5.7-13.41	7/18/2018
Alcohols				
1-BUTANOL(ppb) <i>used as a solvent for a wide variety of chemical and textile processes.</i>	2.0 µg/L	<2.0	<2.0-<2.0	1/10/2018
2-METHOXYETHANOL(ppb) <i>used as a solvent for a wide variety of chemical and textile processes.</i>	0.4 µg/L	<0.4	<0.4-<0.4	1/10/2018
2-PROPEN-1-OL(ppb) <i>used in flame-resistant materials, drying oils, and plasticizers.</i>	0.5 µg/L	<0.5	<0.5-<0.5	1/10/2018
Other Semivolatile Chemicals				
BUTYLATED HYDROXYANISOLE(ppb) <i>used in preservative in food, animal feed, cosmetics, rubber, and petroleum products.</i>	0.03 µg/L	<0.03	<0.03- <0.03	1/10/2018
O-TOLUIDINE(ppb) <i>used in herbicides.</i>	0.007 µg/L	<0.007	<0.007- <0.007	1/10/2018
QUINOLINE(ppb) <i>Quinoline is mainly used as in the production of other specialty chemicals,</i>	0.02 µg/L	<0.02	<0.02- <0.02	1/10/2018

Contaminant (unit of measurement) <i>Typical Source of Contaminant</i>	Min, Reporting Level	Highest Level Detected	Range of Levels Detected	Date
Other Semivolatile Chemicals(Continued)				
TOTAL ORGANIC CARBON (TOC)(ppb) <i>important parameter to evaluate the quality of organic .</i>	N/A	2.9	1.2-2.9	1/10/2018
BROMIDE(ppb) <i>is present in typical seawater and dissolved salts.</i>	N/A	0.05	<0.02-0.05	1/10/2018

WATER QUALITY TABLE FOOTNOTES

- There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If the level is greater than 20 mg/l , and you are on a sodium restricted diet, you should consult a physician.
- Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. A maximum contaminant level (MCL) for those substances has not been established by either state or federal regulations, nor has mandatory health effects language.
- 0 exceeding AL. 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 \(800-426-4791\)](tel:8004264791)

Other Monitoring

In addition to the items listed in the previous table, our water system tests for hundreds of additional substances and microscopic organisms to make certain our water is safe and of high quality. If you are interested in a more detailed report, [contact the Public Works Department at \(217\) 892-6526](tel:2178926526).



REQUIRED ADDITIONAL HEALTH INFORMATION

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. 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.](#)

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.

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>.

QUESTIONS?

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. For more information, please contact the Village of Rantoul's Public Works Department at (217) 892-6526. You can also learn more about the Village of Rantoul water system and view previous water quality reports at www.myrantoul.com/water



Village of Rantoul
Department of Public Works

200 W. Grove Avenue
Rantoul, Illinois 6x1866

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Village of Rantoul
2019 Water Quality Report

