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Village of Johnson Creek Resident

2012 Consumer Confidence Report for Johnson Creek Waterworks PSC # 12801074

Village of Johnson Creek "Crossroads with a Future"

This Annual Drinking Water Quality Report complies with state and federal drinking water regulations, which require us to produce and mail this information to our customers every year. Water quality data contained in this report is based on monitoring results from the calendar year 2012. Most of the language included in this report is required by federal regulations. Congress, the EPA, and Johnson Creek Water Utility want consumers to know the quality of their drinking water. The key piece of information customers want to know; is my water safe to drink? Answer: YES it is safe and we recommend you drink it!

Our Drinking Water Supply Is In Compliance With All State And Federal Regulations.

Water System Information: If you have questions, would like more information about this report or drinking water quality, please contact Peter Hartz at 920-699-3341. You may also write to Water Utilities at the address above. We encourage all residents to attend the monthly Village Board meetings. For current meeting times and dates, please call the Village Hall at 920-699-2296. We welcome customer reports and comments so please contact us with any questions, comments, or concerns. Visit with us on the Village website at: www.johnsoncreek-wi.us where this report and more are available to view for free!

Source(s) of Water

Source ID	Depth (in feet)	Wisconsin Unique Well #	Common Name	Location	Water Source
2	360	BG007	Well #2	Depot Street	Wonewoc Sandstone Formation Groundwater
3	509	DW152	Well #3 Reconstructed	Grell Lane	Eau Claire Sandstone Formation Groundwater

What keeps your water safe: Johnson Creek's water source is treated naturally by a sandstone aquifer. Due to the source water's high quality, very little additional treatment is required. Disinfection: A small amount of chlorine is used to disinfect our water and minimize the risk of microbial contamination. The average free residual chlorine in the system is maintained at 0.20 – 0.80 parts per million. Monitoring: Bacteriological samples are taken twice monthly at representative sites in the distribution system in addition to daily testing for pH and chlorine residual. We conduct quarterly monitoring for radionuclides and annual testing for nitrates in the drinking water. High Standards of Operation: Utility staff strives to maintain high levels of operation and service by: identifying and acting proactively on circumstances that could potentially degrade water quality, regular cleaning of the distribution system by flushing the entire system twice per year to remove any accumulated sediments in the pipelines, and maintaining system pressure at all times.

Watershed/Groundwater Protection: Groundwater in Wisconsin doesn't move hundreds of miles. Most precipitation, which recharges groundwater, moves only a few miles from the point of recharge to the point of discharge. Water is part of a deeply interconnected system, what we pour down on the ground and in a drain ends up in our water as well as what we spew into the sky, it all ends up in our water. Everyday activities affect groundwater quality. Water should be considered an asset for present and future generations. The Village's Wellhead Protection Plan helps to better protect our water supply, and define and enforce The Municipal Well Recharge Area Overlay Zoning District #250-509 (available for viewing at the village hall). Together as a community we can help conserve water and protect our groundwater recharge areas to better manage the resource and allow the utility to optimally manage the water system. A summary of the source water assessment, prepared by the WDNR for Johnson Creek Waterworks, is available upon request.

Health Information: Drinking water, including bottled water, may 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 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. Immune-compromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune systems 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. Environmental Protection Agency (EPA) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the EPA's safe drinking water hotline by calling 1-800-426-4791.

Water Conservation: *Lawn and Garden* Get quality information for effective lawn care methods to maximize lawn health and minimize watering. Have the soil tested to determine what nutrients are needed before applying fertilizer. A more expensive, but beneficial, test is the soil food web analysis. This test identifies the micro-organisms found in the soil. The quantity and types of micro-organisms are the key to establishing healthy soils. Consider the type of plantings best suited for local conditions by planting native flowers, grasses, and plants. Please voluntarily observe "alternate side" sprinkling (even calendar day = even street address, and odd calendar day = odd street address). Morning and evening watering (before 9 a.m. or after 7 p.m.) minimizes evaporation. Proper placement of the sprinkler will minimize loss to driveways and sidewalks. Leaving the grass clippings on the lawn and mulch use around plantings and gardens will reduce the evaporation loss. Electrical energy is needed to pump water from the wells and deliver it to our costumers; conserving water is an effective way to conserve energy during electrical outages or shortages.

Educational Information: The sources of both tap and bottled drinking 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 metals including radium. It can also pick up substances resulting from the presence of animals or from human activity. To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Federal Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health, although the FDA regulations are not as strict as the EPA limits imposed on all municipal water suppliers. 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 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.

Radium Facts/Information: Radium is a naturally occurring radioactive metal in the environment contained in many rock formations. Radium is a radionuclide formed by the decay of uranium and thorium. There are two forms of radium that can most likely be transferred from the rock into Wisconsin groundwater: Radium-226 (Ra-226), and Radium-228 (Ra-228). Ra-226 is found in the uranium-238 decay process, and Ra-228 is found in the thorium-232 decay process. Ra-226 is the most common isotope and is an alpha emitter with a half-life of about 1600 years. Ra-228 is a beta emitter and has a half-life of 5.76 years. These radium isotopes further decay to form isotopes of the radioactive gas radon. Stable lead is the final product of this radioactive decay series.

Additional information is available from a brochure put together by the WDNR called Radium in Drinking Water. The brochure and others are available at **http://www.dnr.state.wi.us** and additional information can be obtained from the Wisconsin Department of Health and Family Services, Watertown Health Department, Wisconsin Department of Natural Resources, and an on-line search on **http://www.epa.gov** using radium exposure and/or drinking water standards as the key words.

Number of Contaminants Required to be Tested for Johnson Creek Waterworks: This table displays the contaminants tested over the last five years including 2010 through 2012. The most recent results are shown, and any new parameters will be added as required the year after testing.

Contaminant Group	# Of Contaminants Tested For:
Inorganic Contaminants	16
Microbiological Contaminants	3
Radioactive Contaminants	4
Synthetic Organic Contaminants including Pesticides and Herbicides	25
Unregulated Contaminants	4
Volatile Organic Contaminants	20
Disinfection By-products	2

Microbial Contaminants

Contaminant (units)	MCL	MCLG	Counts of Positive	Sample Date	Violation	Typical Source of Contaminant
Coliform (TCR)	> / = 5% of samples	0	1	2011	NO	Naturally present in the environment

Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source of Contaminant
ANTIMONY TOTAL (ppb)	6	6	<0.70	<0.70	03/23/11	NO	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
BARIUM (ppm)	2	2	0.411	0.364 - 0.457	03/23/11	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CADMIUM (ppb)	5	5	<0.27	<0.27	03/23/11	NO	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
CHROMIUM (ppb)	100	100	<0.64	<0.50 – 0.79	03/23/11	NO	Discharge from steel and pulp mills; Erosion of natural deposits
COPPER (ppm)	1.3	1.3	.128	.016 - 0.284	09/08/11	NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
FLUORIDE (ppm)	4	4	0.155	0.15 – 0.16	03/23/11	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
LEAD (ppb)	15	0	1.766	<0.50 – 5.6	09/08/11	NO	Corrosion of household plumbing systems; Erosion of natural deposits
NICKEL (ppb)	100	100	<0.60	<0.60	03/23/11	NO	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
NITRATE (N03-N) (ppm)	10	10	< 0.1	< 0.1	04/11/12	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)	n/a	n/a	3.08	2.5 – 3.66	03/23/11	NO	Land use practices and the earth.

Radioactive Contaminants (Well #3 Entry Point)

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source of Contaminant
Gross Alpha (pCi/L)	15	0	6.9 avg.	5.3 – 8.5	2011	No	Erosion of natural deposits
Radium 226 – 228 Combined (pCi/L)	5	0	2.87 avg.	2.0 – 4.2	2012	No	Erosion of natural deposits

Disinfection / Disinfection By-Products Organic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical Source of Contaminant
Chloroform (ppb)	n/a	n/a	<0.16	<0.16	3/23/11	No	By-product of chlorination
Bromodichloromethane (ppb)	n/a	n/a	< .15	< 0.15	3/23/11	No	By-product of chlorination
Total Trihalo-Methanes (TTHM's) (ppb)	80	0	< 0.40	< 0.40	9/15/10	No	By-product of chlorination

Definition of Terms

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water.
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below that there is no known or expected risk to health.
pCi/l	picocuries per liter (a measure of radioactivity)
ppm	parts per million, or milligrams per liter (mg/l)
ppb	parts per billion, or micrograms per liter (ug/l)