

2012
Consumer Confidence Report
For 44304931 LENA WATERWORKS

We are pleased to present our Annual Quality Water Report. This report is designed to inform you about the quality of the water and services we deliver to you each day. Our goal is to continue 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 water treatment process and protect our water resources. We are committed to ensuring the quality of your water. We currently draw our water from two deep sandstone wells (#1 & #2) that are constructed in the Elk Mound Group of the Cambrian Aquifer

Well #1 is located within the Village Hall

Well #2 is located at Second Str. & Harley St.

The Village of Lena routinely monitors for constituents in your drinking water according to Federal & State laws. The following tables show the results of our monitoring for the period of January 1st – December 31st, 2012.

Water System Information

If you would like to know more about the information contained in this report, please contact Cory Marquardt at (920) 829-5226.

Health 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 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. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people 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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Environmental Protection Agency's safe drinking water hotline (800-426-4791).

Source(s) of Water To obtain a summary of the source water assessment please contact Cory Marquardt at (920) 829-5226

Source id	Source	Depth (in feet)	Status
1	Groundwater	500	Active
2	Groundwater	496	Active

Educational Information

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.
- In order 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. FDA regulations establish limits for contaminants in bottled water, which shall provide the same protection for public health.

Number of Contaminants required to be tested

This table displays the number of contaminants that were required to be tested in the last five years. The CCR may contain up to five years' worth of water quality results. If a water system tests annually, or more frequently, the results from the most recent year are shown on the CCR. If testing is done less frequently, the results shown on the CCR are from the past five years.

Contaminant Group	# of Contaminants
Disinfection Byproducts	2
Inorganic Contaminants	17
Microbiological Contaminants	1
Radioactive Contaminants	4
Synthetic Organic Contaminants including Pesticides and Herbicides	23
Unregulated Contaminants	4
Volatile Organic Contaminants	20

Inorganic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2011)	Violation	Typical Source of Contaminant
ARSENIC (ppb)	10	n/a	1	1		NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and

							electronics production wastes
BARIUM (ppm)	2	2	.150	.140- .150		NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
COPPER (ppm)	AL=1.3	1.3	.14	0 of 10 results were above the action level.		NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
FLUORIDE (ppm)	4	4	.2	.2		NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
LEAD (ppb)	AL=15	0	3.60	0 of 10 results were above the action level.		NO	Corrosion of household plumbing systems; Erosion of natural deposits
NICKEL (ppb)	100		1.8000	1.3000-1.8000		NO	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.
SODIUM (ppm)	n/a	n/a	11.00	8.20- 11.00		NO	n/a

Radioactive Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2011)	Violation	Typical Source of Contaminant
GROSS ALPHA, EXCL. R & U (pCi/l)	15	0	4.6	3.8- 4.6		NO	Erosion of natural deposits
GROSS ALPHA, INCL. R & U (n/a)	n/a	n/a	4.6	3.8- 4.6		NO	Erosion of natural deposits
RADIUM, (226 + 228) (pCi/l)	5	0	4.8	3.1- 6.5		NO	Erosion of natural deposits

Volatile Organic Contaminants

Contaminant (units)	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2011)	Violation	Typical Source of Contaminant
TOLUENE (ppm)	1	1	.0002	.0002		NO	Discharge from petroleum factories

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. MCLs are set as close to the MCLGs 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.
MFL	million fibers per liter
mrem/year	millirems per year (a measure of radiation absorbed by the body)
NTU	Nephelometric Turbidity Units
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)
ppt	parts per trillion, or nanograms per liter
ppq	parts per quadrillion, or picograms per liter
TCR	Total Coliform Rule
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

A water sample collected on July 13, 2011 indicated the presence of Radium, (226 + 228) above the Maximum Contaminant Level (MCL). Further sampling between February 2012 and December 2012 confirmed the high levels of Radium, (226 + 228).

Naturally occurring radium (Ra) is a radioactive element contained in many rock formations, usually in small amounts. There are two forms of radium that can most likely be transferred from the rock into Wisconsin groundwater: Ra-226 and Ra-228. As they naturally breakdown over time, they give off different types of radioactive particles. Ra-226 gives off alpha particles; Ra-228 gives off beta particles.

The National Academy of Sciences has concluded that long-term exposure to elevated levels of radium in drinking water may result in increased risk of bone cancer. When ingested into the body from drinking water, radium can accumulate in the bones; just like calcium does from milk. When consumed in high doses, or at a lower dose extended over a lifetime, the risk increases. Additional information please see:

<http://water.epa.gov/drink/contaminants/basicinformation/radionuclides.cfm>

A formal MCL violation occurred on January 9, 2013 when the running annual average exceeded 5 pCi/L. As a result of this violation, the Well providing high radium water (Well 1) was taken offline and will only be used in an emergency. A radium treatment system is currently being designed. Once the radium treatment system is installed, Well 1 will be brought back online.

Village of Lena board meetings are the 3rd Monday of each month at the Village Hall, 117 E. Main Street, Lena, WI beginning at 6:30 p.m.

