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May 1st, 2019

ANNUAL DRINKING WATER QUALITY REPORT CITY OF AMERY PUBLIC WATER SUPPLY SYSTEM

We are pleased to provide the required 2018 Annual Drinking Water Report. Our constant goal is to provide 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 our water, and are pleased to verify that our drinking water is safe and meets State and Federal requirements.

Our water source is derived from the Trempealeau and Franconian Sandstone Aquifers, and obtains water from two public wells, identified as Well #3 and Well #4.

Well #3 was constructed in 1974, is 395' deep and has a pumping operational capacity of 470 G.P.M.

Well #4 was constructed in 2004, is 400' deep and has a pumping operational capacity of 500 gallons per minute (G.P.M.).

Well #3 has a portable auxiliary power source and was Y2K compliant. The distribution system contains approximately 23 miles of water mains of various sizes ranging from $\frac{3}{4}$ inches to 12 inches. We also have two elevated storage tanks (water towers).

One tower provides 300,000 gallon capacity, while another provides 200,000 gallon capacity. Both towers maintain overflow elevations at 135'.

The City of Amery generally uses approximately 350,000 gallons of water per day or approximately 128 million gallons per year.

The City of Amery Water Utility currently treats raw water introduced into our system with hydrofluosilicic additive (fluoride), polyphosphate to sequester iron residuals, and chlorine to maintain disinfection within the system. We have three trained and Wisconsin certified system operators.

Please be reminded that our most valuable commodity is our drinking water. Please learn to conserve and protect the resources. Simple leaks such as running toilet tanks or dripping faucets can waste enormous amounts of water daily. Please review the following chart:

LEAKS

<u>PIPE LEAK SIZE</u>	<u>GALS/MIN</u>	<u>GALS/DAY</u>	<u>GALS/YR</u>	<u>COST/YR</u>
	0.25	360	131,400	\$ 65.70
	2.15	3100	1,130,040	\$ 565.00
	5.85	8420	3,074,760	\$1537.38
	10.38	14950	5,457,480	\$2728.74

Based on 60 psi and \$0.50 per 1000 gallons production costs. **If leak is escaping into a sanitary sewer, these costs will more than triple.**

Should you have questions or concerns about this report, or concerning your water utility, please contact Kim Moore at 715-268-3410 between the hours of 8:00 a.m. and 4:30 p.m. Kim will be happy to notify our staff to respond to questions or concerns.

Additional information may be obtained by your invited attendance to the City of Amery common council regular monthly meetings held on the first Wednesday of every month at 5:00 p.m. at the Amery City Hall Council Room, 118 Center Street, Amery, Wisconsin.

The City of Amery routinely monitors for elements in your drinking water pursuant to Federal and State laws. This report shows the results of our monitoring for the period of January 1 through December 31, 2018.

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 the 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 at (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.

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 stormwater 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 stormwater 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 stormwater 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.

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.
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 or why total coliform bacteria have been found in our water system, or both, on multiple occasions.
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
MRDL	Maximum Residual Disinfectant Level: 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.
MRDLG	Maximum Residual Disinfectant Level Goal: 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.
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.

PWS ID 64903289 AMERY WATERWORKS FOR 2018

Detected Contaminants

Your water was tested for many contaminants last year. We are allowed to monitor for some contaminants less frequently than once a year. The following tables list only those contaminants which were detected in your water. If a contaminant was detected last year, it will appear in the following tables without a sample date. If the contaminant was not monitored last year, but was detected within the last 5 years, it will appear in the tables below along with the sample date.

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2018)	Violation	Typical Source of Contaminant
TTHM (ppb)	BAC-B	80	0	4.1	4.1		NO	By-product of drinking water chlorination
HAA5 (ppb)	BAC-B	60	60	1	1		NO	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2018)	Violation	Typical Source of Contaminant
ARSENIC (ppb)		10	n/a	1	0 – 1	4/18/2017	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)		2	2	0.028	0.015 - 0.028	4/18/2017	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE (ppm)		4	4	0.1	0.1 - 0.1	4/18/2017	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		0.7700	0.0000 - 0.7700	4/18/2017	NO	Nickel occurs naturally in soils, ground water and surface waters and is often used in electroplating, stainless steel and alloy products.

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2018)	Violation	Typical Source of Contaminant
NITRATE (NO ₃ -N) (ppm)		10	10	0.79	0.10 – 0.79		NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)		n/a	n/a	3.70	3.60 - 3.70	4/18/2017	NO	n/a

Contaminant (units)	Action Level	MCLG	90 th Percentile Level Found	# of Results	Sample Date (if prior to 2018)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.2800	0 of 10 results were above the action level	6/27/2017	NO	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	0.64	0 of 10 results were above the action level	6/27/2017	NO	Corrosion of household plumbing systems; Erosion of natural deposits

Radioactive Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2018)	Violation	Typical Source of Contaminant
GROSS ALPHA, EXCL. R & U (pCi/l)		15	0	7.2	5.3 – 7.2	2/19/2014	NO	Erosion of natural deposits
GROSS ALPHA, INCL. R & U (n/a)		n/a	n/a	7.2	5.3 – 7.2	2/19/2014	NO	Erosion of natural deposits
RADIUM, (226 + 228) (pCi/l)		5	0	2.5	2.0 – 2.5	2/19/2014	NO	Erosion of natural deposits

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2018)	Violation	Typical Source of Contaminant
DI (2-ETHYLHEXYL) PHTHALATE (ppb)		6	0	1.3	1.3	4/12/2017	NO	Discharge from rubber and chemical factories

Unregulated Contaminants

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. EPA required us to participate in this monitoring.

Contaminant (units)	Level Found	Range	Sample Date (if prior to 2018)
1, 2, 4 - TRIMETHYLBENZENE (ppb)	0.76	0.76	8/16/2017

Other Compliance

Lead Consumer Notice. During the year, we failed to provide lead results to persons served at the sites that were tested as required by the Lead and Copper Rule.

Uncorrected Significant Deficiencies

Deficiency Description and Progress to Date	Date System Notified	Scheduled Correction Date
SIG DEF 2. The vent on top of the North Tower was changed in 2014, without prior Department approval. City records also show that the wet interior of the tower was painted without prior Department approval around that same time. These are violations of section NR 811.08 and NR 108.03, Wis. Adm. Code.	12/20/2018	04/27/2019
The reservoirs do not meet all of the other NR 811 requirements and/or the O&M of the storage facilities is/are not adequate.	12/20/2018	04/27/2019

Actions Taken. The lane tank is sending DNR after the fact approval forms.

Additional Health Information

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. Amery Waterworks 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 www.epa.gov/safewater/lead.

Thank you for allowing us to continue to provide you and your families with clean, quality water this year.

In order to maintain a safe and dependable water supply, we sometimes need to make system improvements that will benefit all of our customers. These improvements are often reflected as rate structure adjustments. Thank you for your understanding.

The City of Amery water utility personnel work diligently to provide top quality to everyone daily. We do ask that all of our customers help us protect our water sources, which are the heart of any community, our way of life, and our children's future.