

2016 CONSUMER CONFIDENCE REPORT
Annual Drinking Water Quality Report
The Water We Drink
City of Tomah Water Utility

We are pleased to provide you with this year's Annual Quality Water Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. Our water source is groundwater wells. We have five wells that supply the City of Tomah.

We have a well-head protection plan available from our office that provides more information such as potential sources of contamination.

If you have any questions about this report or concerning your water utility, please contact **Mark Rezin at (608) 374-7433**. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on **4th Wednesday of each month at 5:30 in the Public Works Conference Room in City Hall**.

The City of Tomah Water Utility routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, **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 contaminants does not necessarily pose a health risk.

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

Source ID	Source	Depth (in feet)	Status
6	Groundwater	325	Active
9	Groundwater	175	Active
10	Groundwater	251	Active
11	Groundwater	240	Active
12	Groundwater	240	Active

To obtain a summary of the source water assessment please contact, Mark Rezin at (608) 374-7433.

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.

Definitions

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 Assessment	1 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 Assessment	2 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.

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 2016)	Violation	Typical Source of Contaminant
HAA5 (ppb)	D-30	60	60	4	4		No	By-product of drinking water chlorination
TTHM (ppb)	D-31	80	0	3.3	3.3		No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
BARIUM (ppm)		2	2	0.104	0.007 - 0.104	3/5/2014	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
MERCURY (ppb)		2	2	0.1	0.0 - 0.1	3/5/2014	No	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland
NICKEL (ppb)		100		9.6700	0.0000 - 9.6700	3/5/2014	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	6.20	0.00 - 6.20		No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SELENIUM (ppb)		50	50	1	0 - 1	3/5/2014	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
SODIUM (ppm)		n/a	n/a	24.90	2.05 - 24.90	3/5/2014	No	n/a

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.5750	0 of 20 results were above the action level.	7/9/2014	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	0.83	0 of 20 results were above the action level.	7/9/2014	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 2016)	Violation	Typical Source of Contaminant
GROSS ALPHA, EXCL. R & U (pCi/l)		15	0	0.8	0.8		No	Erosion of natural deposits
RADIUM, (226 + 228) (pCi/l)		5	0	6.5	0.5 -		Yes,	Erosion of natural deposits

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2016)	Violation	Typical Source of Contaminant
					7.0		Ongoing	
GROSS ALPHA, INCL. R & U (n/a)		n/a	n/a	0.8	0.8		No	Erosion of natural deposits

Health effects for any contaminants with MCL violations/Action Level Exceedances

Contaminant Health Effects

RADIUM, (226 + Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.)

Corrective Actions Taken

The Water Utility has reduced the pumping capacity of well #9 and is currently investigating and implementing well rehabilitation measures to reduce the radium.

The following information is what was mailed to each customer in regards to the radium issues in well #9:

WELL # 9 RADIUM NOTICE AND UPDATES

Well # 9- 24033 Goose Ave., one of Tomah's six wells, produces water with the presence of Radium (226 + 228) in excess of the 5 picocuries per liter (PC/L) drinking water standard set by state and federal agencies.

Well # 9 is currently being operated under the conditions of a Wisconsin DNR consent order which allows corrective action measures to reduce radium at well # 9 be implemented and requires that strict reporting and testing obligations are met.

Since the original maximum contaminant level (MCL) exceedance in May of 2014 and the public notification of the exceedance in March of 2015 the investigative efforts to reduce radium at well # 9 have included well televising, geophysical logging and extensive water quality testing. Using the data from these procedures, the following corrective measures have been taken:

Addition of a well recirculation system, which allows a small amount of pumped water return down the well casing and borehole to provide a fresh, steady flow and minimize any film, which can contribute to higher radium.

Installation of a well packer, which is placed at the bottom of the well casing and designed to seal off undesirable areas of the well and to draw water from areas found during the geophysical logging process to contain less radium. Better overall water quality has been observed since the addition of the packer and supports the installation a permanent liner in its place as a long term improvement.

In 2016 a seven month study using a constant lower volume pumping rate was implemented to provide a continuous flow pattern through the aquifer and draw radium out of the formation in areas where it had been accumulating in the flow patterns before the installation of the well packer. At the conclusion of the study in July, water quality and radium samples were taken from above and below the packer and the well was returned to normal cyclical pumping. In late 2016 2 separate well flushing procedures known as "rawhiding" showed promise of lowering Radium levels, its effectiveness is being evaluated.

Just as the levels of radium in well # 9 increased very slowly over time it is apparent that even with these corrective measures in place and showing signs of improvement it will take some time to return the well to full compliance. We are working with DNR officials and appreciate their cooperation as we strive for a practical, cost effective solution.

Important Information about your Drinking Water

Levels of Radium, (226 + 228) in Tomah Waterworks water exceeded standard on 02/17/15

The samples listed below indicate the presence of Radium, (226 + 228) in excess of the 5PC/L Maximum Contaminant Level (MCL) in your drinking water and are a violation of State and Federal Safe Drinking Water Regulations.

QUARTERLY COMPLIANCE SAMPLES COLLECTED AT WELL 9 FROM 2015 TO 2017

HAD AN AVERAGE RADIUM LEVEL (226+228) OF 6.3 PC/L

RADIUM LEVEL FOR THE COMPLIANCE QUARTER ENDING 3-31-2017 WAS 5.3 PC/L

RADIUM LEVEL FOR THE COMPLIANCE QUARTER ENDING 6-30-17 IS 7.9 PC/L

SAMPLES COLLECTED AT THE OTHER ACTIVE WELLS DO NOT EXCEED THE MCL.

What precautions should be taken at this time?

You do not need to use an alternative (e.g. bottled) water supply. However, if you have specific health concerns, consult your doctor.

What does this mean?

This is not an immediate risk. If it had been, you would have been notified immediately. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

What is being done to correct the problem?

Corrective action(s) taken: The city is currently investigating and implementing well rehabilitation measures to reduce the radium levels at well #9. Sample results will be monitored and reported to the DNR to determine the effectiveness. The DNR consent order requires total compliance or abandonment of the well by 12-31-2018. We are working to resolve this.

Radium notices, information updates are available on the tomahonline.com and in the Water Department section under Special Notices

If you have questions regarding the safety of our drinking water, please contact the

**Tomah Water Utility
Business Office: (608) 374-7431**

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, or businesses). You can do this by posting this notice in a public place or distributing copies by hand or email.

Initial notices of a violation for exceeding radium levels in drinking water were mailed and delivered to Tomah water customers on March 12th 2015. In 2016 the exceedance notice, updated status report and a RADIUM INFORMATION SHEET were added to the tomahonline.com homepage with reminders to view this information included on the monthly water bills. Also the current Consumer Confidence Report (CCR), which contains important information related to Tomah's drinking water including all sampling results and the status of any exceedance, is available at tomahonline.com in the Water Department section under special notices and at the utilities business office, 819 Superior Ave.

The additional radium information on the reverse side may be helpful with any questions or concerns you may have

Additional Health Information

The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data, though representative is more than one year old.

Possible Health Effects of detected contaminants:

Nitrates:

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Lead:

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 (1-800-426-4791).

Radon:

We constantly monitor the water supply for various constituents. We have detected radon in the finished water. There is no federal regulation for radon levels in drinking water. Exposure to air transmitted radon over a long period of time may cause adverse health effects.

We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

“All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or is manmade. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials.”

All 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 1-800-426-4791.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Total Coliform: The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

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. Tomah 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.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

“The City of Tomah Water Utility works around the clock to provide top quality water to every tap”, said Kirk Arity, Director of Public Works & Utilities, “We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children’s future”.

Please call our office if you have questions.

Kirk Arity

Kirk Arity
Director
Tomah Public Works & Utilities