

2022 Consumer Confidence Report Data FREDONIA WATERWORKS, PWS ID: 24601093

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

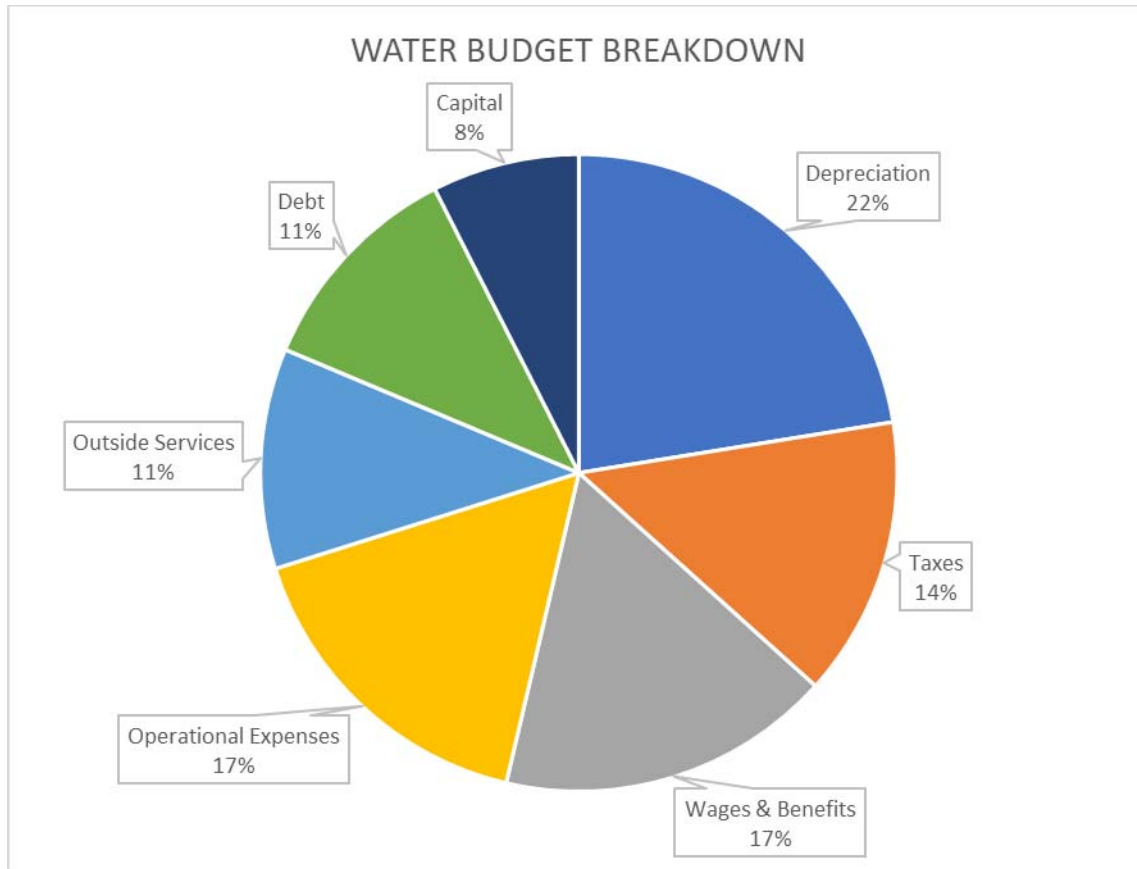
Dlaim ntawv tshaabzu nuav muaj lug tseemceeb heev nyob rua huv kws has txug cov dlej mej haus. Kuas ib tug paab txhais rua koj, los nrug ib tug kws paub lug thaam.

Letter from the Director

Enclosed is our annual update to the residents of Fredonia regarding the safety of our drinking water. I am pleased to report that Fredonia's water has met or surpassed all Federal and State standards for health and safety. Please see the Water Quality Table on page 5 for the details. Last year we pumped 64,759,000 gallons from our wells which is about 2% more than the previous year.

With the critical necessity of water for all of us, the Village strives to keep water affordable and reliable. However, that requires investments into the water supply system and also the water removal system (sewers) along with water and wastewater treatment because of changing regulations and aging equipment. The Village chose to not increase rates during 2022 and delay capital projects so as to provide affordable water. Our rates compare favorably to other Ozaukee County communities.

The largest portion of our water utility budget goes for capital equipment and facilities such as meters, water mains, water tower, pumps, etc. The breakdown of the budget is shown below.



This year, we installed an additional valve on Manor Drive to help reduce the number of homes shut off from water during a water main break in the area. We also replaced a valve at the intersection of Manor Drive and Summit Drive. Water main was extended into a parcel behind the water tower and a meter was replaced at Village Hall (well 2) well house. About 1/3 of the valves were exercised and all of the hydrants were flushed and inspected. During 2022, we will replace the water main on N. Wilson street, wash the water tower, prepare a preliminary report on water storage capacity (do we need another water tower) and replace about 40 meters in homes and businesses.

If you would like to know more about the information contained in this report, please contact Roger Strohm at (262) 692-9125.

Opportunity for input on decisions affecting your water quality

First and Third Tuesday of every month at 7:00 PM at the Fredonia Government Center located at 242 Fredonia Avenue, Fredonia, WI.

Health Information

The Village's water supply naturally contains Fluoride at about 0.5 mg/L. We do not add Fluoride to the drinking water. The U.S. Public Health Service recommends 0.7 mg/L of Fluoride in the community drinking water supply. You should discuss with your dentist and health care provider if you feel that you need additional fluoride.

The Village water supply also naturally contains Arsenic. The levels of arsenic in the water supply are about 1/3 of the amount allowed by the EPA. We do not treat for arsenic in the water supply. Removal of arsenic in the home can be accomplished by adding a filter or ion exchange system. If you choose to add one of these systems to your home, **follow the manufacturer's recommendations for replacement of the filter. This applies to any filter that you use in your water system at home including refrigerator filters.** These filters can become home to bacterial growth causing taste and odor problems.

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). **Our water is supplied from the ground and does not contain many of the contaminants found in surface water sources such as cryptosporidium.**

Source(s) of Water

Source ID	Source	Depth (in feet)	Status
1	Groundwater	457	Active
2	Groundwater	360	Active

To obtain a summary of the source water assessment please contact, Roger Strohm at (262) 692-9125.

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 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

Term	Definition
	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.

Our water exceeds all standards set by the EPA and the DNR at less than 0.5¢ per gallon.

Microbiological Contaminants

Contaminant	MCL	MCLG	Count of Positives	Violation	Typical Source of Contaminant
E. COLI	Routine and repeat samples are total coliform-positive and either is E. coli-positive or system fails to take repeat samples following E. coli-positive routine sample or system fails to analyze total coliform-positive repeat sample for E. coli	0	2	No	Human and animal fecal waste

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to

conduct assessments to identify problems and to correct any problems that were found during these assessments.

During the past year, we were required to conduct 1 Level 1 assessment(s). All assessments were completed on time.

We believe that this positive test was the result of lab contamination. We found that the lab courier transported our samples with wastewater samples. Upon notification from the lab, we promptly sampled our water supply (two wells), resampled the location with the failed sample, sampled two locations upstream and downstream of the failed location within 5 connections. All of these additional samples were negative. We now use a different lab.

Assessments

Assessment Description	Status	Due Date	Completed	Violation
Perform Level 1 Assessment: Multiple Total Coliform-positive samples	COMPLETE	8/28/2021	8/13/2016	No

Disinfection Byproducts

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2021)	Violation	Typical Source of Contaminant
HAA5 (ppb)	S-6	60	60	0	0		No	By-product of drinking water chlorination
TTHM (ppb)	S-6	80	0	8.5	8.5		No	By-product of drinking water chlorination

Inorganic Contaminants

Contaminant (units)	Site	MCL	MCLG	Level Found	Range	Sample Date (if prior to 2021)	Violation	Typical Source of Contaminant
ARSENIC (ppb)		10	n/a	4	3-4	8/6/2020	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIUM (ppm)		2	2	0.095	0.035 - 0.095	8/6/2020	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE (ppm)		4	4	0.5	0.4 - 0.5	8/6/2020	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		1.1000	0.5500 - 1.000	8/6/2020	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	13.00	13.00	8/6/2020	No	n/a

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2021)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.1230	0 of 10 results were above the action level.	8/6/2020	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	5.00	0 of 10 results were above the action level.	8/6/2020	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 2021)	Violation
GROSS ALPHA, EXCL. R & U (pCi/l)		15	0	1.9	0.0 - 1.9	8/6/2020	No
RADIUM, (226 + 228) (pCi/l)		5	0	0.6	0.0 - 0.6	8/6/2020	No

Contaminants with a Health Advisory Level or a Secondary Maximum Contaminant Level

The following tables list contaminants which were detected in your water and that have either a Health Advisory Level (HAL) or a Secondary Maximum Contaminant Level (SMCL), or both. There are no violations for detections of contaminants that exceed Health Advisory Levels, Groundwater Standards or Secondary Maximum Contaminant Levels. Secondary Maximum Contaminant Levels are levels that do not present health concerns but may pose aesthetic problems such as objectionable taste, odor, or color. Health Advisory Levels are levels at which concentrations of the contaminant present a health risk.

Contaminant (units)	Site	SMCL (ppm)	HAL (ppm)	Level Found	Range	Sample Date (if prior to 2021)	Typical Source of Contaminant
CHLORIDE (ppm)		250		12.00	5.10 - 12.00	8/23/2017	Runoff/leaching from natural deposits, road salt, water softeners
IRON (ppm)		0.3		0.79	0.44 - 0.79	8/23/2017	Runoff/leaching from natural deposits, industrial wastes
MANGANESE (ppm)		0.05	0.3	0.02	0.01 - 0.02	8/23/2017	Leaching from natural deposits
ZINC (ppm)		5		0.01	0.01 - 0.01	8/23/2017	Runoff/leaching from natural deposits, industrial wastes

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

Contaminant Health Effects

IRON Waters containing iron in quantities above the SMCL are not hazardous to health but may be objectionable for taste, odor, or color.

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. Fredonia 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.