



2018 Annual Drinking Water Quality Report Village of Oostburg

Our Mission

The Oostburg Municipal Water Department strives to provide safe and sufficient water to enhance and sustain our vibrant community. Our goal is to furnish you with the best possible water at the lowest possible price. We continually surpass all state and federal health and safety standards while providing water at a cost of less than a quarter of a penny per gallon.

The 2018 Water Quality Report

As a service to our customers, we are pleased to provide you with this annual water quality report for 2018. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually protect our water resources. We are committed to ensuring the quality of your water.

Tri-monthly tests are performed throughout the distribution system to look for indicator organisms called coliform bacteria. If these bacteria are detected, there may be a potential for harmful organisms also to be present. Last year we collected 36 samples to monitor for this condition. There have been no unsafe sample results since 1990. This is a very good record.

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 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/CD 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 of Water Supply

The water we use in the village is drawn from the Niagaran Dolomite Aquifer. This aquifer is overlain by 130 to 165 feet of glacial drift. We currently have three wells in the village that pump water from this aquifer into our system. Well #1 that is located at 324 N. 9th Street is 275 feet deep and can pump 400 gallons a minute into the system. Well #2 is located at 513 Center Ave., is 360 feet deep and can pump 430 gallons a minute. Well #3 is located at 538 S Business Park Drive, is 353 feet deep and can pump 400 gallons a minute. All the wells are computer controlled and have the ability to be run by a portable generator in an emergency with well #3 having a dedicated generator set installed.

Water Storage Capacity

The water that is pumped from the wells is stored in the system mains and two reservoirs. In 2018 the village was serviced by 97,210 feet of water main with 1,223 water services connected to it. Pressure for the system is supplied by two reservoirs. The main reservoir is an elevated steel storage tank of 250,000-gallon capacity. It provides pressure to the system through the gravitational pull on the water stored 143 feet high. The second reservoir is a concrete reservoir at well #1 with a capacity of 60,000 gallons. It is stored mostly below ground level and provides pressure to the system by pumping the water into the mains at 420 gallons per minute as needed. These systems are all computer controlled.

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:

1. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
2. 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.
3. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
4. 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.
5. 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	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	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 2018)	Violation	Typical Source of Contaminant
HAA5 (ppb)	101	60	60	5	5		No	By-product of drinking water chlorination
TTHM (ppb)	101	80	0	20.3	20.3		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	8	1-8	6/20/2017	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
BARIIUM (ppm)		2	2	0.054	0.010 - 0.054	6/20/2017	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CADMIUM (ppb)		5	5	.03	0.0-0.3	6/20/2017	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
CHROMIUM (ppb)		100	100	1	0-1	6/20/2017	No	Discharge from steel and pulp mills; Erosion of natural deposits
FLUORIDE (ppm)		4	4	1.0	0.5 - 1.0	6/20/2017	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NICKEL (ppb)		100		1.9000	0.8000 - 1.9000	6/20/2017	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	0.15			No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SODIUM (ppm)		n/a	n/a	160.00	33.00 - 160.00	6/20/2017	No	n/a

Contaminant (units)	Action Level	MCLG	90th Percentile Level Found	# of Results	Sample Date (if prior to 2018)	Violation	Typical Source of Contaminant
COPPER (ppm)	AL=1.3	1.3	0.0514	0 of 10 results were above the action level.	8/16/2017	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD (ppb)	AL=15	0	1.90	0 of 10 results were above the action level.	8/16/2017	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	3.4	-0.2 - 3.4	5/28/2014	No	Erosion of natural deposits
GROSS ALPHA, INCL. R & U (n/a)		n/a	n/a	3.4	0.0 - 3.4	5/28/2014	No	Erosion of natural deposits
COMBINED URANIUM (ug/l)		30	0	0.5	0.0 - 0.5	5/28/2014	No	Erosion of natural deposits

Additional Health Information

While your drinking water meets USEPA's standard for **arsenic**, it does contain low levels of arsenic. USEPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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. Oostburg 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.

Information on Monitoring for Cryptosporidium and Radon

Our water system did not monitor our water for cryptosporidium or radon during 2018. We are not required by State or Federal drinking water regulations to do so.

Taste and Odor

Our water supply, coming from an aquifer deep in the ground, is rich in solids consisting mostly of minerals. These minerals dissolve over time and become part of the water supply. This can result in occasional water complaints but are not harmful for consumption or health.

At times our water customers have reported "brown" or "rust colored" water. This is due to the high iron content of our water supply, resulting in iron particles settling on the surfaces of the water mains and household water pipes. This condition is most noticeable when there is rapid water movement through the mains such as when there is a water main break, which stirs these particles and suspends it in the water supply until it can settle again. While this occurrence may be unpleasant, it is not harmful for consumption. In 2000, the Village of Oostburg began adding silicates to the water supply in an effort to control the rust color in the water.

Occasionally we get reports on a "sulfur smell" or "rotten egg smell" in the water. This can be caused by the sulfate content of our water. This is often most noticeable on hot water from the water heater. Routine flushing of the water heater can help reduce this problem. Currently the Village of Oostburg is adding Chlorine to the water supply in an attempt to improve this problem.

The Village of Oostburg currently has numerous dead ends in the water distribution system. These dead ends do not get the system wide water flow that "looped" mains get; therefore, higher levels of these solids have a chance to settle in the mains. To help with this problem, waterworks personnel flush all hydrants (to stir up and wash out settled solids), including dead ends, twice per year.

So, What Does It Mean?

We're proud that your drinking water meets or exceeds all Federal and State requirements. The EPA has determined that **YOUR WATER IS SAFE** at these levels.

Conclusion

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at the Village of Oostburg work hard to provide top quality water to every tap. 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. If you have any questions about this report or concerning your water utility, please contact **Greg LeMahieu**, Utilities Supervisor (946-0942) or Jill E. Ludens, Clerk/Treasurer (564-3214). 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 board meetings. They are held on the second Monday of every month at the Oostburg Municipal Office, 1140 Minnesota Avenue, Oostburg, at 6:00PM.