

Town of Orange 2019 Consumer Confidence Report

Is my water safe? YES

Last year, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. We conducted tests for over 61 contaminants. We only detected 9 of those contaminants and found **none** at levels higher than the EPA allows. Once again we are proud to report that our system has not violated a maximum contaminant level or any other water quality standard, during the calendar year 2019.

Do I need to take special precautions?

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Announcement: Virginia Department of Health, 2019 Water Treatment Plant Performance Award for Excellence in Granular Media Filtration.

The Town of Orange Water Treatment Plant is pleased to report that on Feb. 25th 2020 the Commonwealth of Virginia Department of Health Office of Drinking Water Congratulated the Town of Orange Water Treatment Plant for winning the 2019 Bronze Water Treatment Plant Performance Award for Excellence in Granular Media Filtration. For the Bronze Award, performance is measured as consistently low applied water and filtered water turbidity, a water quality characteristic which is the result of skilled, dedicated waterworks operation with well-informed operators and responsive management.

Where does my water come from?

Raw water is withdrawn from the Rapidan River. Passed through a raw water reservoir. Treated, Filtered, and pumped from the Town of Orange Water Treatment Plant, into the distribution system that supplies pressure and fills Finish Water storage reservoirs located in the Town of Orange.

Source Water Protection Plan:

In 2012 The Town of Orange began drafting a Source Water Protection Plan and advisory committee, it was implemented in 2013, along with annual survey.

Source Water assessment and availability:

Assessment: The Virginia Department of Health conducted a source water assessment of our system in 2002. Due to the sensitive nature of some of this material, the report is considered by VDH to be excluded from the Freedom of Information Act.

Availability: The Town of Orange has a 45 million gallon raw water reservoir to help ensure a steady reliable supply of water.

Cryptosporidium (Crypto): The Town of Orange Water Treatment Plant has completed 4 years of testing of our Source Water for Crypto before any type of treatment occurs to maintain compliance with the Long Term 2 Enhanced Surface Water Treatment Rule (LT2). According to § 141.701 (a) (4) of the LT2 the Town of Orange Water Treatment Plant began monitoring for Crypto on April 5, 2010 and continued until March 5, 2012. **No Cryptosporidium was detected during the first 2 years of testing.**

However in Round 2 of the Long Term 2 Surface Water Treatment Rule (LT2SWTR) conducted by the Town of Orange Water Treatment Plant, from September 12, 2017 to August 13, 2019 Some Crypto was detected in the Source Water before any treatment occurs. See attached, Water Quality Data Table.

Cryptosporidium: (Crypto) is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Crypto the most commonly-used filtration methods cannot guarantee 100 % removal. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Crypto may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants, small children and elderly are at a greater risk of developing life-threatening illness. We encourage immuo-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. **Cryptosporidium must be ingested to cause disease, and may be spread through means other than drinking water.**

Why are there contaminants in my drinking water?

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 (EPA) Safe Drinking Water Hotline (800-426-4791). 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: microbial contaminants, such as viruses and bacteria, that 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; and 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. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Flushing Program: The Town of Orange has an annual flushing program. This helps the overall quality of water in the system. If flushing the water lines in your area makes your water discolored, please notify the public works department at 540-672-4791 or call the town office at 540-672-1020. Flushing your water line will help speed the recovery of quality water in your home or business.

Additional Information for Lead:

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. Town of Orange Water Treatment Plant 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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 <http://www.epa.gov/safewater/lead>.

Water Quality Data Table

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

	MCLG or	MCL, TT, or	Your	Range		Samp le		
<u>Contaminants</u>	<u>MRDL</u> <u>G</u>	<u>MRDL</u>	<u>Water</u>	<u>Low</u>	<u>High</u>	<u>Date</u>	<u>Violation</u>	<u>Typical Source</u>
Disinfectants & Disinfection By-Products (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)								
Chlorine (ppm)	NA	4	1.68	0.82	2.94	2019	No	Added at the water plant for disinfection
Haloacetic Acids (HAA5) (ppb) DBP01 Daisy Drive DBP02 Boxley Lane	NA	60	32 34	23 20	50 53	2019	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHM) ppb. DBP01 Daisy Drive DBP02 Boxley Lane	NA	80	47 41	20 22	90 84	2019	No	By-product of drinking water chlorination
Inorganic Contaminants								
Fluoride (ppm)	4	4	.63	0.43	.80	2019	No	Erosion of natural deposits; Water additive
Nitrate [measured as Nitrogen] (ppm)	10	10	0.10	NA	NA	2019	No	Runoff from fertilizer, Leaching from septic tanks and natural deposits

Barium (ppm)	2	2	0.016	-	-	2019	No	Erosion of natural deposits
Radionuclides								
Gross Alpha, Incl. Radon &U Radium-228	none	15 PCI/L	.2 PCI/L	NA	NA	2018	No	Decay of natural and man- made deposits of certain minerals that are radioactive
Gross Beta Particle Activity	none	5 PCI/L	<.5 PCI/L	NA	NA	2018	No	
	none	4 millirems per year	1.4 PCI/L	NA	NA	2018	No	

Microbiological Contaminants “Detected”								
E. coli: (# positive samples / month)	0	1	1 Jan	NA	NA	2017		

RTC R: E. coli (# positive samples / month)		N	0			2017		
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Total Coliform (positive samples) Jan 01 to March 31	0		0	NA	NA	2019	No	Naturally present in the environment
Cryptosporidium: In source water	Detected in 2 samples. April and July		Oocysts per / liter April = 0.1 July = 0.1			2019	No	Naturally present in the environment.
Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. A minimum TOC removal ratio of 1.0 is required, based on a quarterly determination of the running annual average of monthly results. Our (RAA) for this time period was 1.32						2019	No	Naturally present in the environment
Turbidity (NTU) 100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation.						2019	No	Soil runoff
The highest single Turbidity measurement in 2019 occurred on January 9 th , it was 0.099 NTU. With Conventional Filtration the turbidity level of representative samples of a system’s combined filtered water must at no time exceed 1.0 NTU.								

			Your	Sample	# Samples	Exceeds	
Contaminants	MCLG	AL	Water	Date	Exceeding AL	AL	Typical Source

Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.387	2017	0	No	Corrosion of household plumbing systems, Erosion of natural deposits
Lead - action level at consumer taps (ppm)	0	0.015	0.003	2017	0	No	Corrosion of household plumbing systems, Erosion of natural deposits

Unit Descriptions	
<u>Term</u>	<u>Definition</u>
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NTU	NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.
<	Below detection limit
PCI/L	PCI/L: picocuries per Liter (PCI/L)
mrem/year	milirems per year (a measure of radiation absorbed by the body)
Important Drinking Water Definitions	
<u>Term</u>	<u>Definition</u>
MCLG	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.
MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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.
MRDL	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level
RTCR	Revised Total Coliform Rule

For more information please contact:
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Please Note: CCRs will not be distributed in the US Mail. A copy of the CCR is available for pick-up in the Town Office at 119 Belleview Avenue, Orange. You may also view a copy on the Town's website at www.townoforangeva.org at <http://www.townoforangeva.org/DocumentCenter/View/1092/2019-CCR-Mailed-in-2020>.