

ANNUAL WATER
QUALITY
REPORT

WATER TESTING PERFORMED IN 2016



Presented By
Reynoldsburg Water Department

We've Come a Long Way

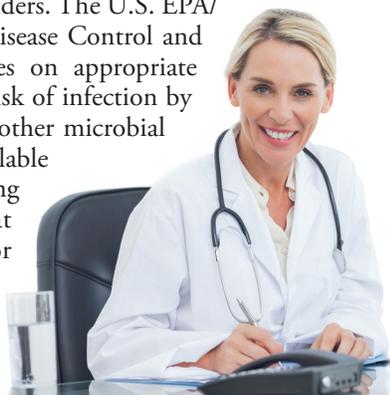
Once again we are proud to present our annual water quality report covering the period between January 1 and December 31, 2016. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at any hour—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach, education, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Community Participation

Public participation and comment are encouraged at regular meetings of Reynoldsburg City Council, which meets the second and fourth Mondays of each month at 7:30 p.m. (except August and holidays) at the Municipal Building, 7232 East Main Street, Reynoldsburg, Ohio.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Testing For *Cryptosporidium*

Cryptosporidium (Crypto), for example, is a microscopic organism that, when ingested, can result in diarrhea, fever, and other gastrointestinal symptoms. It is important to note not all Crypto species are human pathogens and may not cause any adverse effects in humans. Crypto comes from animal waste in the watershed and may be found in our source water; it is found in surface water throughout the US. Crypto is eliminated by using a multi-barrier water treatment process including coagulation, sedimentation, softening, filtration, and disinfection; however, the most commonly used filtration methods can not guarantee 100 percent removal.

Columbus' water is regularly tested for organisms that could be harmful to people, including *Cryptosporidium*. Crypto was detected 4 out of 24 times in the Scioto River and 3 out of 24 times in Big Walnut Creek. Crypto was detected in 0 out of 11 times in the HCWP tap water. It should be noted that the presence in tap water was minimal, and current testing methods do not enable us to determine if the organisms are dead or if they are capable of causing disease.

For additional information or questions about Columbus water quality, please call the Water Quality Assurance Lab at (614) 645-7691.

Where Does My Water Come From?

The City of Reynoldsburg purchases its water from the City of Columbus. We receive our water through six master water meters. The water from Columbus entering Reynoldsburg on East Main Street and along East Broad Street is treated at the Hap Cremean Water Plant (HCWP). The Hap Cremean Water Plant utilizes surface water from the Hoover Reservoir on Big Walnut Creek. The water entering Reynoldsburg on SR 256 is treated at the Parsons Avenue Water Plant. The Parsons Avenue Water Plant draws water from a groundwater supply. We purchased 1.019 billion gallons of drinking water from Columbus in 2016, an average 2.791 million gallons per day.

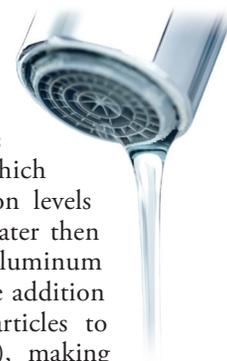
Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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/lead.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water sources and sent to an aeration tank, which allows for oxidation of the high iron levels that are present in the water. The water then goes to a mixing tank where polyaluminum chloride and soda ash are added. The addition of these substances cause small particles to adhere to one another (called floc), making them heavy enough to settle into a basin from which sediment is removed. Chlorine is then added for disinfection. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller, suspended particles are removed, turbidity disappears and clear water emerges.

Chlorine is added again as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, soda ash (to adjust the final pH and alkalinity), fluoride (to prevent tooth decay, and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to sanitized, underground reservoirs, water towers, and into your home or business.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Jason Worley at (614) 322-4500.



What type of container is best for storing water?

Consumer Reports has consistently advised that glass or BPA-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing “7 PC” (code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

How much emergency water should I keep?

Typically, 1 gallon per person per day is recommended. For a family of four, that would be 12 gallons for 3 days. Humans can survive without food for 1 month, but can survive only 1 week without water.

How long can I store drinking water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria before it was filled with tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

How long does it take a water supplier to produce one glass of drinking water?

It could take up to 45 minutes to produce a single glass of drinking water.

How many community water systems are there in the U.S.?

About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40% of total water use). Toilets use about 4 to 6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State allows us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

Please note that we have a current, unconditioned license to operate our water system.

REGULATED SUBSTANCES											
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	Reynoldsburg Water Distribution System		Hap Cremean Water Plant		Parsons Avenue Water Plant		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Atrazine (ppb)	2016	3	3	NA	NA	0.10	<0.10–0.29	ND	NA	No	Runoff from herbicide used on row crops
Chlorine (ppm)	2016	[4]	[4]	1.43	0.79–1.44	1.59	0.34–2.40	1.14	0.41–1.93	No	Water additive used to control microbes
Fluoride (ppm)	2016	4	4	NA	NA	0.92	0.71–1.01	0.92	0.84–0.97	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2016	60	NA	39.6	16.2–61.5	51.6	26.2–65.2	7.4	5.1–9.1	No	By-product of drinking water disinfection
Nitrate (ppm)	2016	10	10	NA	NA	1.5	0.7–1.5	ND	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Simazine (ppb)	2016	4	4	NA	NA	0.10	<0.10–0.28	ND	NA	No	Herbicide runoff
TTHMs [Total Trihalomethanes] (ppb)	2016	80	NA	51.6	28.3–85.8	62.7	22.2–87.7	27.0	15.9–35.6	No	By-product of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2016	5% positive monthly samples	0	0	NA	NA	NA	NA	NA	No	Naturally present in the environment
Total Organic Carbon [TOC] ¹ (removal ratio)	2016	TT	NA	NA	NA	2.57	2.11–4.03	NA	NA	No	Naturally present in the environment
Turbidity ² (NTU)	2016	TT	NA	NA	NA	0.14	0.04–0.14	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2016	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	NA	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH% TILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2014	1.3	1.3	0.0524	0.00041–0.01026	0/33	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2014	15	0	1.8	<1.0–2.6	0/33	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Reynoldsburg Water Distribution System		Hap Cremean Water Plant		Parsons Avenue Water Plant		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
1,4-Dioxane ³ (ppb)	2014	0.07	<0.07–0.071	NA	NA	0.09	0.07–0.10	Used as a solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics, and shampoos
Chlorate ³ (ppb)	2014	<20	<20–<20	ND	NA	ND	NA	Agricultural defoliant or desiccant
Chromium [Total] ³ (ppb)	2014	0.32	0.28–0.34	0.29	0.22–0.35	0.45	0.34–0.56	Naturally occurring element; Steel production
Hardness (ppm)	2016	NA	NA	102	93–111	122	121–124	Naturally occurring
Hexavalent Chromium ³ (ppb)	2014	0.17	0.16–0.18	0.19	0.15–0.24	0.15	0.10–0.18	Chrome plating; Dyes & pigments; Wood preservation
Molybdenum ³ (ppb)	2014	5.7	4.4–7	5.8	4.2–7.6	9.9	8.5–12.0	Naturally occurring element found in ores and present in plants, animals, and bacteria
Strontium ³ (ppb)	2014	193	170–220	169	150–180	410	370–480	Naturally occurring element
Vanadium ³ (ppb)	2014	0.55	0.48–0.61	0.50	0.37–0.69	ND	NA	Naturally occurring element

¹The value reported under Amount Detected for TOC is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of the TOC removal requirements.

²Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

³This contaminant was sampled under the UCMR3 program.

Definitions

AL (Action Level): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as LRAAs.

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.

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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.