

2018 Annual Drinking Water Quality Report
Warwick Township Municipal Authority
“Rothsville” Water System PWSID# 7360120

Est informe contiene informacion importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda. (This report contains very important information about your drinking water. Translate it, or speak with someone who understands it.)

WATER SYSTEM INFORMATION: This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please call the Warwick Township Municipal Authority (“WTMA”) office at (717) 627-2379. We want you to be informed about your water supply and are pleased to present this year’s Annual Drinking Water Quality Report. If you want to learn more, please attend any of our regularly scheduled meetings held on the third Tuesday of each month at 7:00 p.m. at the Warwick Township Municipal Building, 315 Clay Road, Lititz, PA 17543. You can also visit www.warwicktownship.org/wtma for information about the Authority and your water supply and/or sanitary sewer service.

SOURCES OF WATER: The Rothsville Water System serves 761 connections within the village of Rothsville. The water sources for WTMA’s Rothsville Water System are wells located within Rothsville. The wells are permitted by the Pennsylvania Department of Environmental Protection (“PA DEP”) to produce 288,000 gallons of water per day. There are two 440,000 gallon storage tanks which provide an emergency water storage supply. Following the recommendations of the Wellhead Protection Plan, WTMA drilled, tested, and received approval from the Susquehanna River Basin Commission (SRBC) and PADEP for a second well. The second well provides a backup source for the Rothsville system. Testing of the well began in the fall of 2016 and was completed in May 2017. The second well was placed into operation in August 2017. Both wells are typically alternated on a monthly basis to supply water to the Rothsville system. The Rothsville recharge zone can easily be identified by signs indicating the water supply area. **Please be mindful that pollution affects your water supply.**

WTMA continues its efforts to protect your drinking water through its Wellhead Protection Program which was approved by the PADEP in 2002. In December 2018, the WTMA updated their Wellhead Protection Plan to include the additional new well in the WTMA system. The updated plan was submitted to the PADEP and approved in February 2019. The Wellhead Protection Committee consists of representatives of municipal and county government and agencies, local businesses and interested citizens. The group meets annually to discuss the status of existing programs and to suggest additional ways in which we can protect our precious resource. Due to the success of its “Ag-Management” Program, WTMA has been invited to share the results of this innovative partnership with others through forums such as Pennsylvania Municipal Authorities Association, PADEP, and SRBC Seminars. The Ag-Management Program owes a large portion of its success to the outstanding cooperation provided by our farming partners.

In 2005, the PADEP prepared a Source Water Assessment Report which identified the primary activities to which the water source is susceptible. On a scale from A (high priority) to F (low priority) the report rated Agricultural Activities “B” and Residential Activities as a “C”. The Source Water Assessment Report is available for review at the WTMA office.

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).

MONITORING AND TREATMENT OF YOUR DRINKING WATER: The goal of WTMA is and always has been to provide to you a safe and dependable supply of drinking water. Four of WTMA's employees are PA State certified water operators who routinely monitor for contaminants in your drinking water according to federal and state regulations. In addition, an outside laboratory collects random water samples throughout the water system on a monthly basis. Test results are reported to the PADEP. Water from the Rothsville wells are treated using chlorine and a nitrate removal process. Fluoride is not added to the treated water. Due to the limestone geology, water in the Rothsville system is considered "hard", having between 21 and 24 grains of hardness.

The Rothsville water System is routinely monitored for contaminants in your drinking water according to federal and state laws. The following table shows the results of our monitoring for the period of **January 1 to December 31, 2018.** The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some data could be from prior years in accordance with the Safe Drinking Water Act. The year in which the data is from prior years is noted in the sampling results table.

DEFINITIONS AND ABBREVIATIONS

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

Maximum Contaminant Level (MCL) - 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.

Maximum Contaminant Level Goal (MCLG) - 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.

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant that is allowed in drinking water. There is convincing evidence that the addition of disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - 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.

Minimum Residual Disinfectant Level (MinRDL) – The minimum level of residual disinfectant required at the entry point to the distribution system.

Nephelometric Turbidity Unit (NTU) – A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 and/or why total coliform bacteria have been found in our water system on multiple occasions.

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

Mrem/year = millirems per year (a measure of radiation absorbed by the body)

pCi/L = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter (mg/L)

ppq = parts per quadrillion, or picograms per liter

ppt = parts per trillion, or nanograms per liter

ppb = parts per billion, or micrograms per liter (ug/L)

DETECTED SAMPLE RESULTS

CHEMICAL CONTAMINANTS								
Contaminant	MCL in CCR units	MCLG	Average Level Detected	Range of Detections	Units	Sample Date	Detections in Violation Y/N	Sources of Contamination
BARIUM ¹	2	2	0.028	0.028	ppm	2018	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE ¹	2*	2	0.20	0.20	ppm	2018	N	Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories; erosion of natural deposits
NITRATE	10	10	4.825	0 – 5.7	ppm	2018	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TRIHALOMETHANES	80	n/a	14.4	14.4	ppb	2018	N	By-product of drinking water chlorination

*EPA's MCL for Fluoride is 4 ppm. However, Pennsylvania has set a lower MCL to better protect human health.

¹Sampling was performed in 2018 for other regulated Inorganic Compounds (IOCs) but no other compounds were detected.

- Sampling was performed in 2014 for Asbestos but it was not detected.
- Sampling was performed in 2015 for Uranium, Gross Alpha, Radium-226 and Radium-228 but no compounds were detected above the EPA detection limit of 1pCi/L.
- Sampling was performed in 2017 for Synthetic Organic Compounds (SOCs) and Volatile Organic Compounds (VOCs) but no compounds were detected
- Sampling was performed in 2018 for Nitrite and Haloacetic Acids but no compounds were detected.

ENTRY POINT DISINFECTANT RESIDUAL							
Contaminant	Min RDL	Lowest Level Detected	Range of Detections	Units	Sample Date	Detections in Violation Y/N	Sources of Contamination
CHLORINE	0.40	0.53	0.53 – 1.2	ppm	2018	N	Water additive to control microbes

DISTRIBUTION SYSTEM DISINFECTION RESIDUAL							
Contaminant	MRDL	Month of Highest Average Result	Highest Average Result	Range of Average Results	Units	Results in Violation Y/N	Sources of Contamination
CHLORINE	4.0	November 2018	0.58	0.17 – 0.58	ppm	N	Water additive to control microbes

Sampling for Total Coliform was also conducted in the distribution system in 2017. Total coliform was absent in all samples.

LEAD AND COPPER (2016)							
Contaminant	Action Level (AL)	MCL G	90 th Percentile Value	Units	# of Sites Above AL of Total Sites	Detections in Violation Y/N	Sources of Contamination
COPPER	1.3	1.3	0.21	ppm	0 of 10	N	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives
LEAD	15	0	4.3	ppb	0 of 10	N	Corrosion of household plumbing; erosion of natural deposits

NOTICE OF VIOLATIONS:

There were no water quality violations in 2018.

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 materials, 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 run-off, 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 run-off 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 and PADEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and PADEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottle 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 (800) 426-4791.

INFORMATION ABOUT NITRATES: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six 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 for advice from your health care provider. **Nitrate reduction facilities were online for the entire year of 2018.**

INFORMATION ABOUT 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. The WTMA 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, 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>.

WHAT THIS MEANS

As you can see under the 'violations' heading in the first table, the "Rothsville" water system had **no** water quality violations in 2018. MCL's are set at very stringent levels by the EPA to protect human health. The EPA has determined that your water is safe at these levels. WTMA is proud that your drinking water meets or exceeds all Federal and State requirements.