

Our Drinking Water Is Regulated

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Public Participation Opportunities

We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings.

Date: Last Thursday of each month

Time: 4 p.m.

Phone: (610) 406-6300

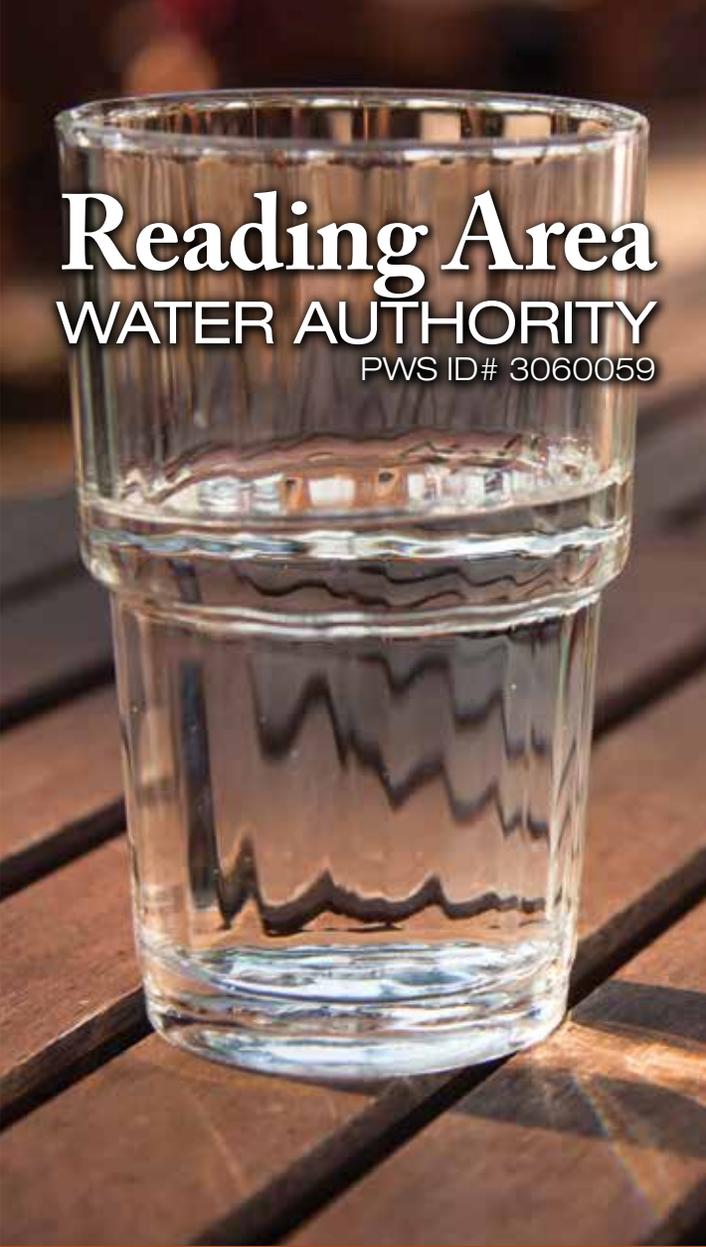
Location: 1801 Kutztown Road
Reading, Pennsylvania

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact Dean A. Miller at (610) 406-6300.

En Español

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

Reading Area Water Authority
1801 Kutztown Road
Reading, PA 19604



Reading Area
WATER AUTHORITY

PWS ID# 3060059

2015
Annual Drinking
Water Quality
Report

Source of Drinking Water

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 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 runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Where Do We Get Our Drinking Water?

The water supply for the City of Reading is obtained from Lake Ontelaunee, located six miles north of the City of Reading. Lake Ontelaunee is a 1,082-acre man made lake with a drainage area of approximately 192 square miles. Of which, the City of Reading owns 3,142.5 acres. The area around the lake consists of a marginal sanitary strip, with a minimum width of 500 feet, which surrounds the periphery of all but one section of the lake. This marginal strip was acquired by the city to minimize the pollution entering into the

lake from the shore.

The Ontelaunee Creek, originating in Lehigh County, is the major tributary of Lake Ontelaunee. It is then joined by several other tributaries to form Maiden Creek, which is the main stream feeding Lake Ontelaunee. Surface water enters Lake Ontelaunee mainly from the Maiden Creek and its main tributary the Saucony Creek, with inputs from the Bailey Creek, and other small tributaries that empty directly into the lake.

The dam, which is located on Route 73, was constructed in 1926 and raised to its present height in 1935. The dam has a capacity of 3.88 billion gallons. Water from the lake is then delivered to the Maiden Creek Filter Plant by gravity. The Reading Area Water Authority also has the capability of drawing water from Maiden Creek.

All Drinking Water May Contain Contaminants

In order to ensure that tap water is safe to drink, EPA and DEP prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP regulations establish limits for contaminants in bottled water which 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 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).

Required Additional Health Information for Lead

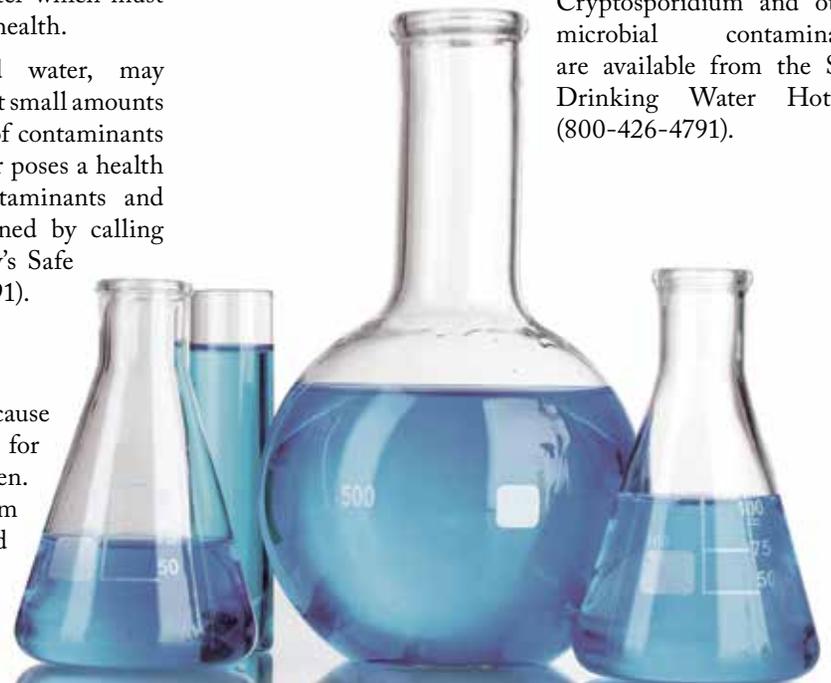
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Reading Area Water Authority

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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

People Who May Be More Vulnerable to Contaminants

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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).



We routinely monitor for contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2015. 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 of our data is from prior years in accordance with the Safe Drinking Water Act. The date has been noted on the sampling results table.

Entry Point Disinfectant Residual

Contaminant (Units)	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Sample Date	Violation Y/N	Likely Source of Contamination
Chlorine (ppm)	0.20	0.39	0.39-4.00	July 2015	N	Water additive used to control microbes

Chemical Contaminants

Chemical (Units)	MCL in CCR Units	MCLG	Highest Level Detected	Range of Detections	Sample Date	Violation Y/N	Likely Source of Contamination
Chlorine (Monthly Average of Distribution System (ppm)	MRDL=4	MRDL=4	2.37	1.89-2.37	Dec. 2015	N	Water additive used to control microbes
Total Trihalomethanes (TTHM) (ppb)	80	80	44*	22-67**	April 2015	N	By-product of drinking water chlorination
Haloacetic acids Five (HAA5) (ppb)	60	60	41*	25-47**	April 2015	N	By-product of drinking water chlorination

*Based on a running annual average.

**Based on the quarterly averages for the CCR year.

Radionuclides

Contaminant (Units)	MCL	MCLG	Highest Level Detected	Violation Y/N	Sample Date	Likely Source of Contamination
Radium 228 (pCi/L)	5	0	3.2	N	May 2014	Erosion of natural deposits

Some people who drink water containing radium 226 or 228 in excess of the MCL over many years have an increased risk of getting cancer.

Microbial Contaminants

Contaminant	Violation Y/N	MCL	MCLG	Highest # or % of Positive Samples	Likely Source of Contamination
Total Coliform Bacteria	N	For systems that collect ≥ 40 samples/month: 5% of monthly samples are positive	0	1.85	Naturally present in the environment

Reading Area Water Authority is required based on population served to do ninety bacteriological samples per month. In October 2015, 1 routine and 1 check sample were confirmed to be positive for total coliform.

Lead and Copper

Contaminant (Units)	Violation Y/N	Date Sampled	Action Level	MCLG	90th Percentile	# Sites Over AL	Likely Source of Contamination
Copper (ppm)	N	2013	1.3	1.3	0.246	0 out of 31	Corrosion of household plumbing systems
Lead (ppb)	N	2013	15	0	3.0	2 out of 31	

In June 2013, to comply with the Lead and Copper rule, Reading Area Water Authority conducted one study of 31 samples. 2 samples out of 31 samples were found to be above the required Action Levels established for lead.

Turbidity

Contaminant (Units)	Violation Y/N	Date Sampled	MCL	MCLG	Highest Level Detected	Likely Source of Contamination
Turbidity (NTU)	N	May 2015	TT=1 NTU for a single measurement	0	0.202 NTU	Soil runoff
		N/A	TT=at least 95% of monthly samples ≤0.3 NTU		100%	

Safe Drinking Water Act monthly filter plant performance level requirements (PLR) state 95% of monthly samples must be ≤ 0.3 NTU. The required treatment technique (TT) value for a conventional plant is 1.0 NTU. The Reading Area Water Authority maintained 100% of its samples at the PLR and its TT value through all of 2015.

Total Organic Carbon

Substance(Units)	Range of Levels	Range of Removal Ratio	Sample Date	Likely Source of Contamination
Drinking Water (ppm)	0.8-1.6	15-53%	June & Nov. 2015	Naturally present in the environment

Total Organic Carbon (TOC) has no health effect. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THM) and haloacetic acids (HAA), which are reported elsewhere in this report.

Inorganic Contaminants							
Contaminant (Units)	Violation Y/N	Date Sampled	MCL	MCLG	Highest Level Detected	Range of Detections	Likely Source of Contamination
Fluoride (ppm)	N	Oct. & Nov. 2015	2.0	2.0	0.96	0.43-0.96	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)		Jan. 2015	10.0	10.0	4.26	2.14-4.26	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Barium (ppm)		Jan. 2015	2.0	2.0	0.018	0.018	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

Unregulated Contaminant Monitoring Regulation – Cycle 3 (UCMR3)

The purpose of UCMR3 is to “collect occurrence data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe Water Drinking Act”. All testing performed quarterly starting in 2013.

Unregulated Contaminants						
Contaminant (Units)	Location	March	June	Sept.	Dec.	Likely Source of Contamination
Chromium (ppb)	EP101 Pumping Station	0.22	ND	0.31	0.26	Naturally occurring used in making steel and other alloys. Other forms also used for chrome plating, dyes and pigments, leather tanning and wood preservation
	320 S. 17th St. (DSMRT)	0.27	ND	ND	0.28	
Strontium (ppb)	EP101 Pumping Station	104	123	127	131	Naturally occurring element historically, commercial use has been in the faceplate glass of cathode ray tube televisions to block x-ray emissions
	320 S. 17th St. (DSMRT)	113	123	127	133	
Chromium, Hexavalent (ppb)	EP101 Pumping Station	0.18	0.043	0.051	0.12	Naturally occurring used in making steel and other alloys. Other forms also used for chrome plating, dyes and pigments, leather tanning and wood preservation
	320 S. 17th St. (DSMRT)	0.18	0.078	0.043	0.10	

Due to drought conditions, during August 2014, we had higher than normal manganese in our source water. For one day the manganese level of our entry point was higher than the secondary contaminant MCL of 50 ppb. The U.S. EPA has established National Secondary Drinking Water Regulations that set non-mandatory water quality standards for 15 contaminants. Manganese is one of those contaminants. The U.S. EPA does not enforce these “secondary maximum contaminant levels” or SMCLs.

They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations such as taste, color and odor.

These contaminants are not considered to present a risk to human health at the SMCL. Noticeable effects above the secondary MCL: black to brown color: black staining; bitter metallic taste.

SYNTHETIC ORGANIC COMPOUNDS (SOCs):

We had no detections of SOC in 2015.

Definitions

In the table you might find terms and abbreviations you are not familiar with. To help you better understand these terms we’ve provided the following definitions:

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 allowed in drinking water. There is convincing evidence that addition of a 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.

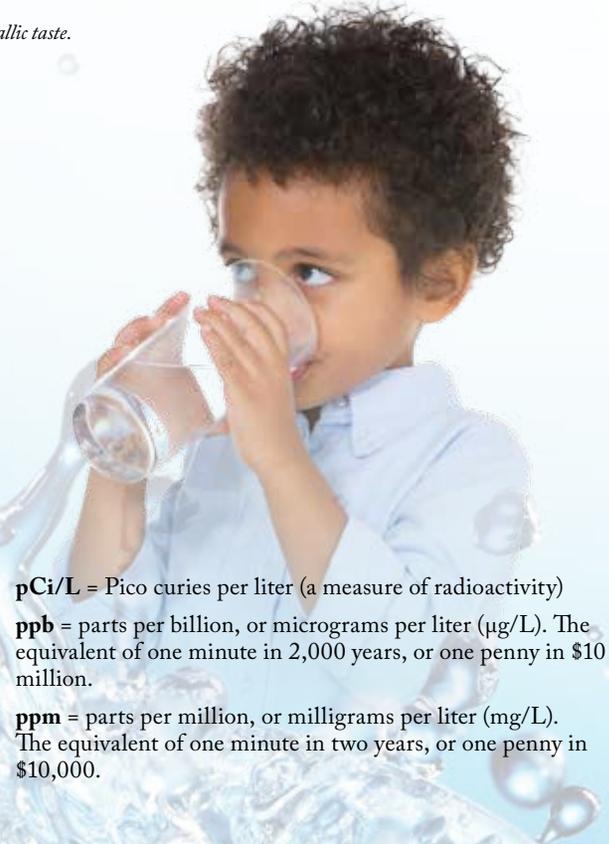
Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

Detection Limit - The lowest level detected by the laboratory.

ND (Non-Detectable) - A result below the detection limit for the chemical.

NTU (Nephelometric Turbidity Unit) - Measure of turbidity using a specific instrument to measure the cloudiness of the water.

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



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

ppb = parts per billion, or micrograms per liter (µg/L). The equivalent of one minute in 2,000 years, or one penny in \$10 million.

ppm = parts per million, or milligrams per liter (mg/L). The equivalent of one minute in two years, or one penny in \$10,000.