

2017 ANNUAL DRINKING WATER QUALITY REPORT

PWSID #: 7220022 Lykens Borough Authority

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda. (This report contains important information about your drinking water. Have someone translate it for you, 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 Lykens Borough Authority office at (717) 453-7279.

We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second Wednesday of each month at 6:00pm and are held at 200 Main St, Lykens, PA 17048. Any citizen wanting to address the Authority is encouraged to notify the Authority office before the meeting date with their concerns. This will ensure that your concerns will be addressed in a timely fashion. We are striving to improve water quality above and beyond the Pennsylvania State Regulations.

SOURCES OF WATER:

Our main source of water is surface water coming from Rattling Creek source code 001. We also have a ground water supply named Well #1 source code 002 that draws from the Alluvial Mantle Aquifer.

A Source Water Assessment of our sources was completed in July 2004 by the PA Department of Environmental Protection (PA DEP). The Assessment has found that our sources are potentially most susceptible to Road deicing materials, accidental spills along roads and leaks in underground storage tanks. Overall, our sources have little risk of significant contamination. A summary report of the Assessment is available on the *Source Water Assessment & Protection* web page at (<http://www.dep.state.pa.us/dep/deputate/watermgt/wc/Subjects/SrceProt/SourceAssessment/default.htm>). Complete reports were distributed to municipalities, water supplier, local planning agencies and PA DEP offices. Copies of the complete report are available for review at the PA. DEP South Central Regional Office, Records Management Unit at (717)-705-4732

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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).

MONITORING YOUR WATER:

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, 2016 .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.

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.

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.

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

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)

ppb = parts per billion, or micrograms per liter ($\mu\text{g}/\text{L}$)

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

ppq = parts per quadrillion, or picograms per liter

ppt = parts per trillion, or nanograms

GOOD INFO TO KNOW

Total Organic Carbon TOC levels were less than 2.0 mg/l so we really don't need to meet any specific removal requirements.

MCL,s are set at very stringent levels for health effects. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a life time to have a one-in-million chance of having the described health effect.

Nitrates: As a precaution we always notify physicians and health care providers in this area if their is ever a higher than normal level of nitrates in the water supply.

Lead: Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed or reduced.

Total Coliform Bacteria - Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Fecal coliform and E. coli - Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Turbidity (NTU) - Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Alpha emitters (pCi/l) - Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

VIOLATIONS:

We are pleased to report that we had no violations for the 2017 monitoring year.

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:

- 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 storm water 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 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.
- 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 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).

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 Lykens Borough 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 or at <http://www.epa.gov/safewater/lead>.

Entry Point Disinfectant Residual							
Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine Entry Point 101	0.2	0.62	0.89-2.15	ppm	9/7/2017	N	Water additive used to control microbes.

Entry Point Disinfectant Residual							
Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine Entry Point 102	1.4	1.41	0.34-2.2	ppm	7/16/2017	N	Water additive used to control microbes.

Lead and Copper							
Contaminant	Action Level (AL)	MCLG	90 th Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Copper	1.3	1.3	0.622	ppb	1	N	Corrosion of household plumbing.
Copper	1.3	1.3	1.23	ppm	2	N	Corrosion of household plumbing.

Microbial						
	MCL	MCLG	Highest # or % of Positive Samples		Violation Y/N	Sources of Contamination
Total Coliform Bacteria	For systems that collect <40 samples/month: • More than 1 positive monthly sample For systems that collect ≥ 40 samples/month: • 5% of monthly samples are positive	0	0		N	Naturally present in the environment.
Fecal Coliform Bacteria or E. coli	0	0	0		N	Human and animal fecal waste

Turbidity						
Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Y/N	Source of Contamination
Turbidity	TT=1 NTU for a single measurement	0	.96	7/17/17	N	Soil runoff.
	TT= at least 95% of monthly samples<0.3 NTU		100%		N	

Distribution Disinfectant Residual 2017							
Contaminant	Month of Highest Avg Result	Highest Avg Result	MRDL	Over MDRL	Lowest Avg Result	Unit of Measure	
Chlorine	Feb	1.38	4		0. 79	MG/L	

Chemical Contaminants								
Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Nitrate	10	10	1.57	1-9	ppm	3/16/17	N	Runoff From fertilizer use
Barium	2	2	0.016		ppm	3/16/17	N	Discharge of drilling waste; Discharge from metal refineries Erosion of natural deposits
Chlorine	MRDL =4	MRDL=4	2.20	0.89-2.20	ppm	4/8/17	N	Water additive Used to control microbes
Chromium	100	100	0		ppb	3/24/17	N	Discharge from Steel and pulp mills Erosion of natural deposits
Haloacetic Acids HAA5	60	NA	.0477	10-47.7	ppb	10/19/17	N	By-product of drinking water disinfection
Total Trihalomethanes TTHM	80	NA	.0511	11.1-51.1	ppb	7/20/17	N	By-product of drinking water disinfection