

STATE COLLEGE BOROUGH WATER AUTHORITY 2016 WATER QUALITY REPORT

NO VIOLATIONS!

HIGH QUALITY WATER

The State College Borough Water Authority is pleased to present our annual *“Water Quality Report”* for the year **2016**. Included in this report is information about the quality of our water and how it compares to standards set by state and federal agencies. We would like to recognize our thirty-seven employees and seven Authority members for their hard work and dedication and our customers for their support in helping to build one of the finest water systems in Pennsylvania. A water system that each year consistently *meets all regulatory standards*.

The Authority system includes a water treatment plant, twenty-three wells and one reservoir. With a total permitted usage of 9.1 million gallons of water per day. The SCBWA serves the Borough of State College and portions of Benner, College, Ferguson, Harris and Patton Townships. The name and municipal location of each well field and the reservoir can be found on page 3 of this report. Copies of the report may be obtained by calling (814) 238-6766 or by visiting our website at www.scbwa.org.

SOURCE WATER ASSESSMENT

The purpose of the State College Borough Water Authority source water assessment was to determine the susceptibility of a public water source to pollution and to maintain or improve raw water quality at the source. The main objective of the assessment was to identify pollutants in the contributing area and then rank them in order of concern. A letter value of “A” (high) thru “F” (low) was assigned to each contaminant. The factors that were used to determine the assigned value were time of travel, persistence, quantity and sensitivity of the water source.

The highest ranked possible source of contamination (PSOC) identified in the Authority source water assessment, ranked at an “A”, was transportation corridors. Roads are present in all contributing areas of the SCBWA’s well fields. Routes US 322 and I-99 are identified as potential sources of spills, contaminated runoff and road salt. The next highest possible source of contamination was land use in residential and light commercial areas. Developments are present in all of the well field’s contributing areas. A rank of “B” was assigned to this PSOC. The sewer lines located throughout all the contributing areas were ranked a “C”, due to intermittent overflows.

A summary report of the Assessment is available on the *Source Water Assessment & Protection Web* page at:

<http://www.elibrary.dep.state.pa.us/dsweb/View/Collection-10045>

Complete reports were distributed to municipalities, water suppliers, local planning agencies and PADEP offices. Copies of the complete report are available for review at the Pa. DEP Williamsport Regional Office , Records Management Unit at (570) 327-3636.

Important Notice

English: This Water Quality Report contains important information about your drinking water. Translate it, or speak with someone who understands it.”

Español:“Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.”

AUTHORITY MEETINGS

Open to the Public
Third Thursday
of each Month
4:00PM in the
Board Room
1201 West Branch
Road
State College, PA

For questions about
the quality of
SCBWA drinking
water, call
Brian Heiser at
(814) 238-6766

EDUCATIONAL INFORMATION

The sources of drinking water (both tap 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, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.**
- **Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.**
- **Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban storm water runoff and residual sources.**
- **Organic chemical contaminants, including synthetic and volatile organic chemicals, that 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, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. It is reasonable to expect drinking water, including bottled water, may contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

Nitrate can be found in drinking water in many rural Pennsylvania communities. It is the primary source of nitrogen for plants. Although nitrate is known to originate from various sources, agricultural practices are generally considered to be the most serious source of contamination.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer and 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.

Cryptosporidium and Giardia are microscopic organisms that, when ingested, can result in diarrhea, fever and other gastrointestinal symptoms. The State College Borough Water Authority has tested for *Cryptosporidium* and *Giardia* in all required wells and has never detected them in treated water. *Giardia* was discovered in our reservoir in 1988 and resulted in the building of our filtration plant. These organisms are typically found in streams and come from animal wastes. Both are eliminated in our water by an effective treatment combination including filtration, coagulation and disinfection. The Environmental Protection Agency (EPA) and the Centers for Disease Control (CDC) guidelines on the appropriate means to lessen the risk of infection by *Giardia*, *Cryptosporidium* and other microbial contaminants are available by calling the EPA’s “Safe Drinking Water Hotline” at 1-800-426-4791.

LEAD AND YOUR WATER

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 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 at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>. The Authority tested for lead and copper in 2016 and will again in 2019, for approximately 35-40 residences. The results may be found on page 4 of this report.

Sources of Supply

Ground Water

- Well Field No. 1 (*Thomas*)
Harris Township
- Well Field No. 2 (*Gray's Woods*)
Halfmoon Township
- Well Field No. 3 (*Harter*)
College / Harris Townships
- Well Field No. 4 (*Nixon*)
Ferguson Township
- Well Field No. 5 (*Chestnut Ridge*)
Ferguson Township
- Well Field No. 6 (*Alexander*)
Benner Township
- Well Field No. 7 (*Kocher*)
Ferguson Township

Surface Water

- Shingletown Gap Reservoir
(Harris Township)

MONITORING YOUR WATER: The State College Borough Water Authority routinely monitors for contaminants in your drinking water according to federal and state laws. The table shows 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 are from prior years in accordance with the Safe Drinking Water Act. The date has been noted in the sampling results

DEFINITIONS

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

Level I Assessment - The 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 II Assessment - 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.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the Maximum Contaminant Level Goals 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 known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

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 the radioactivity in water.

ppm = Parts per million, or milligrams per liter (mg/l).

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

ppt = Parts per trillion, or nanograms per liter (ng/L).

Non-Detect - Laboratory analysis indicates that a contaminant is not present at a detectable level.

Turbidity (NTU) - Nephelometric Turbidity Unit - a measure of water clarity. Good indicator of effectiveness of filtration.

TREATED WATER QUALITY RESULTS– 2016

Chemical Contaminants								
Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	MRDL=4	MRDL=4	1.72	0.83-1.72	ppm	2016	N	Water additive used to control microbes.
Fluoride	2*	4	1.83	0.10-1.83	ppm	2016	N	Water additive that promotes strong teeth
Nitrate	10	10	6.17	1.27-6.17	ppm	2016	N	Runoff from fertilizer use.
Haloacetic Acids	60	NA	6.87	0-6.87	ppb	2016	N	By-product of drinking water disinfection.
Total Trihalomethanes	80	NA	19.9	0.00-19.9	ppb	2016	N	By-product of drinking water chlorination.
Barium	2	2	0.032	0.032	ppm	2016	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits

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

Entry Point Disinfectant Residual							
Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	0.40	0.83	0.83-1.72	ppm	2016	N	Water additive used to control microbes.

Lead and Copper (Sampled in 2016, Next Sample Year 2019)							
Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Y/N	Sources of Contamination
Lead	15	0	2.58	ppb	0	N	Corrosion of household plumbing.
Copper	1.3	1.3	0.229	ppm	0	N	

Turbidity							
Contaminant	MCL	MCL G	Level Detected	Sample Date	Violation Y/N	Source of Contamination	
Turbidity	TT=1 NTU for a single measurement	0	0.030	4/14/16	N	Soil runoff	
	TT= at least 95% of monthly samples ≤ 0.3 NTU		0.018	8/14/16	N		

Total Organic Carbon (TOC)					
Contaminant	Range of % Removal Required	Range of percent removal achieved	Number of quarters out of compliance	Violation Y/N	Source of Contamination
TOC	15%	99%	0	N	Naturally present in the environment

Listed above are only those contaminants which were detected in State College Borough Water Authority drinking water.
All are below allowable levels.