

2018

Quality on Tap

Consumer Confidence Report

BIRDSBORO MUNICIPAL AUTHORITY

202 East Main Street • Birdsboro, PA 19508

PWSID #3060010

We are pleased to present to you this year's "Quality on Tap" Consumer Confidence Report. This Report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of your water.

Sources of Water:

The sources of drinking water include Indian Run and Stinson Run Reservoirs, Dyer Quarry, and Hay Creek. It is important to note that the major source of water for our residents comes from springs, located in the mountains surrounding Birdsboro. These sources then flow into our reservoirs. This minimizes the opportunity for surface run-off problems that could lead to contamination. The water is then piped to the water treatment plant for control and monitoring of contaminants. We provide filtration through membrane technology and disinfection treatment prior to distribution into the system. We are committed to ensuring the quality of your water, and the Birdsboro Municipal Authority works around the clock to provide top quality water to every tap.

Need More Information?

If you have any questions about this Report or concerning your water utility, please contact:



Mr. Aaron Durso
Borough Manager
(610) 582-6030

Or contact the Customer Service line
at: (610) 582-3000

If you want to learn more, please attend any of our regularly scheduled meetings. They are held at 6:30 p.m. on the second Tuesday of each month in the Borough Hall. Also, please visit our Website:
www.birdsboroma.com

Know the Health Risks

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or man-made. All 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 the water poses a health risk.

In order to ensure that tap water is safe to drink, EPA and PA DEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration and PA DEP regulations establish limits for contaminants in bottled water which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA Office of Water website at www.epa.gov/OGWDW. MCLs 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 lifetime to have a one-in-a-million chance of having the described health effect.

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* at 1-800-426-4791.

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 services lines and home plumbing. Birdsboro Municipal 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>.

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 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 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 byproducts 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.

The Authority is concerned with protecting its water sources. Current treatment processes ensure that raw water from the Authority's reservoirs and creek intake becomes finished water that meets all Federal and State drinking water standards. A copy of the Source Water Assessment Report is available from the Authority for review.



Impurities Detected by the Birdsboro Municipal Authority

Chemical Contaminants								
Contaminant	MCL in CCR Units	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	MRDL=4	MRDLG=4	1.03	0.48 to 1.03	ppm	2018	N	Water additive used to control microbes.
Barium	2	2	0.018	0.018	ppm	2018	N	Discharge of drilling wastes; Discharge from metal refineries, Erosion of natural deposits.
Chromium (IOC)	100	100	0.4	0.4	ppb	2018	N	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (Free) (IOC)	200	200	1	1	ppb	2018	N	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
Nickel (IOC)	100	100	0.6	0.6	ppb	2018	N	Erosion of natural deposits.
Nitrate	10	10	0.18	0.18	ppm	2018	N	Runoff from fertilizer use.
Haloacetic Acids (HAA5)	60	n/a	70.5 ⁽¹⁾	36.8 to 167	ppb	2018	Y	By-product of drinking water disinfection.
Trihalomethanes (TTHM)	80	n/a	74.9 ⁽¹⁾	26.1 to 192	ppb	2018	N	By-product of drinking water disinfection.

(1) Multiple samples are taken each quarter for HAA5 and TTHM. The reported Highest Level Detected represents the highest Locational Running Annual Average (LRAA) of your distribution samples.

Physical Properties						
Contaminant	MCL	MCLG	Level Detected	Sample Date⁽²⁾	Violation Y/N	Sources of Contamination
Turbidity ⁽¹⁾	TT=1 NTU for a single measurement	0	0.132 NTU	8/12/18	N	Soil runoff.
	TT= at least 95% of monthly samples <0.3 NTU	0	100 %	8/18	N	Soil runoff.

- (1) TT = Treatment Technique; to meet TT standard, at least 95% of monthly samples must be less than or equal to 0.30 NTU. Also, no single sample may exceed 1.0 NTU.
- (2) Date of highest measurement.

Entry Point Disinfectant Residual							
Contaminant	Min. Required Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date ⁽¹⁾	Violation Y/N	Sources of Contamination
Chlorine, Loc. 101	0.2	0.47	0.47 to 1.90	ppm	2/13/2018	N	Water additive used to control microbes.

(1) Date of lowest level detected

Lead and Copper (2016)							
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	3	ppb	0 of 21	N	Corrosion of household plumbing.
Copper	1.3	1.3	0.111	ppm	0 of 21	N	Corrosion of household plumbing.

The Action Level for Lead and Copper serves as a trigger for water systems to take additional treatment steps if exceeded in more than 10% of tap water samples. The Action Level for Lead is 15 ug/L, and the Action Level for Copper is 1.3 mg/L. No Lead or Copper samples taken in 2016 were above the required Action Level (AL) as shown above.

Unregulated Contaminants ⁽¹⁾						
Substance	Sample Location	MCL	EPA MCLG (EPA Goal)	Range of Detections	Violation Y/N	Sources of Contaminant
Chlorate	Entry Point	N/A	N/A	0.31 - 0.52 mg/L	N	Byproduct of drinking water chlorination.
	Distribution System	N/A	N/A	0.30 - 0.50 mg/L	N	Byproduct of drinking water chlorination.
Chromium-6	Entry Point	N/A	N/A	0.08 - 0.099 ug/L	N	Naturally occurring; erosion of natural chromium deposits.
	Distribution System	N/A	N/A	0.09 - 0.096 ug/L	N	Naturally occurring; erosion of natural chromium deposits.
Manganese	Entry Point	N/A	0.05 mg/L	0.0014 - 0.0016 mg/L	N	Naturally occurring in the environment in rocks and soil.
	Distribution System	N/A	0.05 mg/L	ND - 0.0012 mg/L	N	Naturally occurring in the environment in rocks and soil.
Strontium	Entry Point	N/A	N/A	0.012 - 0.018 mg/L	N	Naturally occurring in air, rocks, soil, dust, coal, oil, etc.
	Distribution System	N/A	N/A	0.014 - 0.018 mg/L	N	Naturally occurring in air, rocks, soil, dust, coal, oil, etc.

(1) These results were received during Unregulated Contaminant Monitoring Regulation (UCMR3) conducted by the US EPA in 2015. Samples were taken at the Entry Point and within the distribution system. Unregulated contaminant monitoring helps the EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Impurities Detected by the Birdsboro Municipal Authority (Cont'd...)

We routinely monitor for contaminants in your drinking water according to federal and state laws. The preceding tables show 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 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.

This table shows only the contaminants that were detected and the levels at which they were detected. There were many other contaminants that were not detected in the samples collected for analysis.

Remember that the presence of certain constituents does not necessarily pose a health risk. All drinking water may be reasonably expected to contain at least small amounts of some constituents.

Definitions

In the tables in this report you will find many terms and abbreviations that might not be familiar to you. 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.

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.

MCL - Maximum Contaminant Level

The "Maximum Allowed" is 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 "Goal" is 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.

mg/l - Milligrams per liter or Parts per million (ppm)

One milligram per liter corresponds to one minute in two years or a single penny in \$10,000.

MRDL - Maximum Residual Disinfectant Level

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that

In the 3rd and 4th quarter of 2018, the testing results for Haloacetic Acids (HAA5) indicated that our system exceeded the standard, or maximum contaminant level (MCL), for HAA5. The standard for HAA5 is 0.060 mg/l based on a quarterly average. In the 3rd quarter, the HAA5 sample result in our system was at a level of 0.0705 mg/L in your drinking water. In the 4th quarter, the HAA5 sample result in our system was at a level of 0.0657 mg/L in your drinking water. In addition, we did not submit the Public Notice for these violations in a timely manner. Some people who drink water containing Haloacetic Acids in excess of the MCL over many years may have an increased risk of getting cancer. Haloacetic acids can form when organic material naturally occurring in the water reacts with the chlorine added for disinfection.

This is likely due to excessive rainfall experienced in 2019. The Authority is currently investing in capital projects to reduce the formation of HAA5 in the water, including a mixer in the Cocalico Road Tank and a coagulant feed system at the Birdsboro Water Treatment Plant. We are working on resolving this issue in the system as soon as possible.

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 contamination.

pCi/l - Picocuries per liter

Picocuries per liter is a measure of the radioactivity in water.

ug/l - Micrograms per liter

One microgram per liter corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

TT - Treatment Technique

A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

A Message from... Birdsboro Municipal Authority

Our commitment is to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.

A Source Water Assessment of our sources was completed by the PA Department of Environmental Protection (PA DEP). The Assessment has found that our sources are potentially most susceptible to transportation and pipeline accidents, contaminants released from public recreation activities, mining activities and agricultural runoff. Overall, our sources have a moderate risk of significant contamination. A summary report of the Assessment is available on the Source Water Assessment Summary Reports eLibrary web page: www.elibrary.dep.state.pa.us/dsweb/View/Collection-10045. 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 717-705-4700.

For more information, please visit our Website:

www.birdsboroma.com

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.)



Undetected Impurities Tested for by the Birdsboro Municipal Authority & the Borough of Birdsboro

Undetected Contaminants

Volatile Organic Chemicals (2018)

1,1,1-Trichloroethane
1,1,2-Trichloroethane
1,1-Dichloroethylene
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,2-Dichloroethane
1,2-Dichloropropane
Benzene
Carbon Tetrachloride
Chlorobenzene
cis-1,2-Dichloroethylene
Dichloromethane
Ethylbenzene
para-Dichlorobenzene
Styrene
Tetrachloroethylene
Toluene
trans-1,2-Dichloroethylene
Trichloroethylene
Vinyl Chloride
Xylenes (Total)

Inorganic Contaminants (2018)

Antimony Fluoride
Arsenic Mercury
Asbestos (2013) Nitrite - Nitrogen
Beryllium Selenium
Cadmium Thallium

Radiological Contaminants

Gross Alpha (2014) Combined Uranium (2011)

Disinfection By-Products (2018)

Bromoform (THM)

Microbial Contaminants (2018)

Total Coliform

Synthetic Organic Chemicals (2017)

1,2-Dibromo-3-Chloropropane
2,3,7,8 - TCDD (dioxin)
2,4 - D
2,4,5 - TP Silvex
Alachlor
Atrazine
Benzo(A)pyrene
Carbofuran
Chlordane
Di (2-ethylhexyl)adipate
Di (2-ethylhexyl)phthalate
Dinoseb
Diquat
Endothall
Endrin
Ethylene Dibromide
Glyphosate
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Lindane
Methoxychlor
Oxamyl
PCBs
Pentachlorophenol
Piclorem
Simazine
Toxaphene
Carbaryl (2007)
Methomyl (2007)
Dicamba (2007)
Aldicarb Sulfoxide (2007)
Aldicarb Sulfone (2007)
Metolachlor (2007)
Aldicarb (2007)
3-Hydroxycarbofuran (2007)

*Contaminants not regulated by the DEP.

UCMR3 testing showed 22 additional parameters that were not detected.

Note: Not all contaminants are sampled for every year, according to DEP regulations.

Those contaminants that were not sampled for in 2018 are noted with the last year of sampling.