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Buckingham Township
P.O. Box 413
Buckingham, PA 18912

Annual Drinking Water Quality Report
Buckingham Township – Furlong Area System

Buckingham Township Furlong Water System

2015 Annual Drinking Water Quality Report – PWSID #1090159

Spanish (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. (This report contains important information about your drinking water. Have someone translate it for you or speak with someone who understands it)

Is my water safe?

Last year, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. Buckingham Township vigilantly safeguards its water supplies and we are proud to report that our system did not violate a maximum contaminant level or any other water quality standard in 2015.

Do I need to take special precautions?

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 Water Drinking 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. Buckingham Township 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 drinking 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>.

Information about arsenic

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system and may have an increased risk of getting cancer

Information about copper

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer kidney or liver damage. People with Wilson's disease should consult their personal doctor. When your water has been sitting for several hours, you can minimize the potential for copper exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

Information about alpha emitters

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.

Where does my water come from?

Nine wells - two located along Forest Grove Road, two in the Buckingham Forest Development, two near the intersection of York and Sugarbottom roads, one along route 413 south of route 263 and two near the intersection of Upper Mountain and Forest Grove Roads. In 2015, seven of the nine wells were in operation for at least part of the year.

Source water assessment and its availability

Source water assessment was completed by the Penn State Environmental Resources Research Institute and received from PA DEP in June of 2007. A Sourcewater Protection Steering Committee worked with DEP's Engineer who prepared a comprehensive plan for all the Township's water systems. This plan will be revisited and updated from time to time and may be reviewed at the Township's administrative office at 4613 Hughesian Drive, Buckingham, PA 18912.

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 human activity. Contaminants that may be present in Sourcewater 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.

In order to ensure that tap water is safe to drink, EPA and DEP prescribe 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)

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 contact Graham Orton, Water and Wastewater Department Director of Operations at 215-794-8834. We want you to be informed about your water supply. If you want to learn more, please attend any of our Water and Sewer Commission meetings held at the Township Administration Building at 4613 Hughesian Drive, Buckingham PA 18912. These meetings are held at the call of the Chairman. Call Tom Kelso, Commission Consultant at 215-348-8257 for details. Also, the Township Board of Supervisors meets at least 1 time per month at the Administration Building. The meetings are usually held on the 2nd and/or 4th Wednesdays. Call 215-794-8834 or visit the Township's website at www.buckinghampa.org to get details on the next or future meetings.

Other Information

In addition to the constituents reported to you in this report, Buckingham Township monitors for 15 other inorganic chemicals (such as Cadmium), 21 volatile organic chemicals (such as industrial degreasers and gasoline additives), 38 synthetic organic chemicals (such as pesticides and herbicides), unregulated contaminants, and four radionuclides. Four of these were detected in 2015 - chloride at 64 to 114 ppm, sulfate at 12.6 to 39.9 ppm, Manganese at ND to 0.02 ppm and zinc at 0.0081 to 0.0091 ppm. The secondary MCL of chloride (250 ppm), sulfate (250 ppm), Manganese (0.05 ppm) and zinc (5 ppm) were not exceeded. We check chlorine residual continuously. Hardness, as CaCO₃, ranged between 232 and 328 mg/l. At Buckingham Township, we work around the clock to provide top quality water. We ask that all our customers help us protect our water resources, which are the heart of our community, our way of life and our children's future and to continue to or start to use our finite water resources conservatively and wisely all the time.

Results of radon monitoring

Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON). Our experience thus far indicates that, as a rule of thumb, there will be an increase of about 1 pCi/L in the air inside a home for every 10,000 pCi/l of radon in household water. In 2007, radon was detected in a range from less than 100 to 850 pCi/L.

Water Quality Data Table

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 Commonwealth of Pennsylvania 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. If there is a range in years, it is because two new system entry points were added in 2010 and 2011. Results from the new entry points have been averaged with results from the other 2 entry points that were sampled in earlier years.

<u>Contaminants</u>	<u>MCLG or MRDLG</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water</u>	<u>Range</u>		<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
				<u>Low</u>	<u>High</u>			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.)								
Chlorine (as Cl ₂) (ppm)	4	4	1.4	0.6	2.3	2015	No	Water additive used to control microbes
Total Trihalomethanes (TTHMs) (ppb)	NA	80	19.1	9.6	25.7	2015	No	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	NA	60	6.4	1.4	12.6	2015	No	By-product of drinking water chlorination
Inorganic Contaminants								
Barium (ppm)	2	2	0.25	0.17	0.25	2015	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Arsenic (ppb)	10	0	3.5	ND	3.5	2015	No	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Chromium (ppb)	100	100	2.2	ND	2.2	2015	No	Discharge from steel and pulp mills, erosion of natural deposits
Selenium (ppb)	50	50	5.4	ND	5.4	2015	No	Discharge from petroleum and metal refineries, erosion of natural deposits, discharge from mines
Fluoride (ppm)	2	2	0.14	ND	0.14	2015	No	Erosion of natural deposits, discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	3.27	0.50	3.27	2015	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	7.62	ND	7.62	2011-14	No	Erosion of natural deposits
Radium (combined 226/228) (pCi/L)	0	5	3.66	ND	3.66	2011-14	No	Erosion of natural deposits
Uranium (ug/L)	0	30	8.47	ND	8.47	2012-14	No	Erosion of natural deposits
Beta/photon emitters (pCi/L)	0	50*	3.18	3.08	3.24	2010-11	No	Decay of natural and man-made deposits

*EPA considers 50 pCi/L to be the level of concern for beta particles

<u>Contaminant</u>	<u>Minimum Disinfectant Residual</u>	<u>Lowest Level Detected</u>	<u>Range of Detections</u>	<u>Units</u>	<u>Sample Date</u>	<u>Violation Y/N</u>	<u>Sources of Contamination</u>
Entry Point Disinfection Residual minimum – chlorine	0.2 to 0.4	0.6	0.6 to 2.3	ppm	2015	No	Water additive used to control microbes

<u>Lead and Copper Contaminants</u>	<u>Action Level</u>	<u>MCLG</u>	<u>90th percentile Value</u>	<u>Sample Date</u>	<u># Samples Exceeding AL of total sites</u>	<u>Exceeds AL</u>	<u>Typical Source</u>
Copper - action level at consumer taps (ppm)	1.3	1.3	1.16	2015	1 out of 10	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	15	0	< 2	2015	0 out of 10	No	Corrosion of household plumbing systems; Erosion of natural deposits

Microbial Contaminant	MCL	MCLG	# of positive samples	Date	Violation Y/N	Sources of Contamination
Total Coliform Bacteria	More than 1 positive monthly sample	0	0	2015	N	Naturally present in the environment

Contaminant	MCL	MCLG	Level detected	Sample Date	Violation Y/N	Sources of Contamination
Turbidity	TT = 1 NTU For a single Measurement	0	0.4	February 2015	N	Soil Runoff

Turbidity	TT = at least 95% of monthly Samples ≤ 0.3 NTU		98.8%	February 2015	N	
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Unit Descriptions	
Term	Definition
ug/L	ug/L : Number of micrograms of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.
Important Drinking Water Definitions	
Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: 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.
MCL	MCL: Maximum Contaminant Level: 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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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 contaminants.
Minimum Residual Disinfectant Level	The minimum level of residual disinfectant required at the entry point to the distribution system.
MRDL	MRDL: Maximum residual disinfectant level. 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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

Additional Information for Nitrate

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.

For more information please contact:

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