NORTH PENN WATER AUTHORITY
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This report is also available online at
www.npwa.org

2018

ANNUAL DRINKING WATER QUALITY REPORT

EAST ROCKHILL

PWSID#1090141

This report is being mailed to you as a requirement of the Federal Safe Drinking Water Act.

"A dedicated, professional workforce committed to providing the community with a safe, reliable, and economical water supply."

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East Rockhill Ridge Run Satellite System – PWSID # 1090141

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.

Owners of multiple family dwellings, commercial businesses, public housing, or similar situations, are encouraged to post and/or distribute this report. Additional copies are available and can be obtained at North Penn Water Authority's operations center or by calling (215) 855-3617.

This report is also available online at www.npwa.org.

Water System Information

This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and Pennsylvania Department of Environmental Protection (PA DEP) state standards.

If you have any questions about this report, please contact Lindsay Hughes, NPWA's Community Relations Coordinator, at **(215) 855-3617** or visit our website at **www.npwa.org**.

In September of 2016, due to elevated levels of perfluorinated compounds (PFCs), NPWA shut down the two public groundwater wells in the East Rockhill Ridge Run Satellite System. At that time, all homeowners were notified by letter of the situation. As of that date, the 194 customers served by NPWA's two groundwater wells began receiving water from Perkasie Regional Authority (PRA). In November of 2017, a letter was sent to all of those customers notifying them that after evaluating several alternatives for long-term solutions, an agreement had been reached between NPWA and PRA selling the East Rockhill Ridge Run Satellite System to PRA.

Since NPWA owned the water system through most of 2017, customers in the East Rockhill Ridge Run Satellite System are receiving this Water Quality Report from North Penn Water Authority. The water being provided, however, has been coming from PRA since the end of 2016, and therefore, water quality data being provided has been received from PRA to include in this report. Since NPWA no longer owns the East Rockhill Ridge Run Satellite System, this report will be the last one that the 194 customers in this system receive from NPWA. Future Water Quality Reports, beginning with the 2019 report, will be provided directly by PRA as owner of the East Rockhill Ridge Run System.

If you want to learn more about Perkasie Regional Authority, please contact them by phone at **(215) 257-3654**, via email at **info@perkasieauthority.org** or by attending any of their regularly scheduled meetings. Meetings are held on **the first Monday and third Tuesday of each month at the Perkasie Regional Authority Office located at 150 Ridge Road, Sellersville. Meetings begin at 7:00 p.m.**

Sources of Water

Starting on September 26, 2016 – present, East Rockhill's Ridge Run System source of water comes from Perkasie Regional Authority. Perkasie's water source is comprised of several municipal wells in the Borough of Perkasie as well as East Rockhill Township. A Source Water Assessment of Perkasie's sources was completed in 2005 by the PA Department of Environmental Protection (PA DEP). The Assessment found that the sources have a high sensitivity because of the detection of Volatile Organic Compounds (VOCs) and the presence of naturally occurring arsenic. However, they are potentially most susceptible to contamination from transportation corridors and agricultural activities. Overall, Perkasie's sources have little risk of significant contamination. A summary report of the Assessment is available on the Source Water Assessment Summary Reports eLibrary web page: **http://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 Southeast Regional Office, Records Management Unit at **(484)250-5910**. The East Rockhill Satellite System is physically separated from the NPWA main system. Water from the two systems does not ever mix.

MONITORING YOUR WATER

This past year, NPWA and Perkasie Regional Authority routinely monitored 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, 2017. 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.

PEOPLE WITH SPECIAL HEALTH CONCERNS

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)**.

HOW PERKASIE REGIONAL AUTHORITY IS ENSURING QUALITY DRINKING WATER

safe

quality

tested

economical

The use of ground water requires very little source water treatment. The water recharging the underground water storage aquifers is filtered through the earth and rocks as it makes its way down to the underground storage area. Precipitation in the form of rain or snow is generally "soft" water. As it filters through the ground, it picks up minerals such as calcium and magnesium which changes it to "hard" water. Generally, the most noticeable draw back to "hard" water is less suds in your washer or while you shampoo and the calcium (white crystals) build-up in your hot water tanks. Therefore, the only treatment added to the water is chlorine for disinfecting and a food grade polyphosphate called Aqua Mag to control scaling and corrosion. Perkasie Regional Authority also filters a portion of the water at Wells 10 and 11 through a ferric oxide media (iron) to reduce the arsenic level below the Drinking Water Standard of 10 ppb.

Below is a list of parameters which NPWA monitored for in 2017 but DID NOT DETECT:

Coliform Bacteria	
E. Coli	Total Coliform Bacteria

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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 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 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 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.

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)**.

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. Your water supplier 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**.

INFORMATION ABOUT ARSENIC

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. The standard is determined by a running annual average. Perkasie Regional Authority's average for the year was 8.4 ppb.

INFORMATION ABOUT FLUORIDE

While your water meets EPA's standards for fluoride, it does contain low levels of fluoride. Perkasie Regional Authority does not use fluoride as an additive. The fluoride that is detected is from erosion of natural deposits, or discharge from fertilizer and manufacturing. The EPA warns that while low levels of fluoride can help prevent cavities, children under nine years of age may develop cosmetic discoloration of their permanent teeth (dental fluorosis) by drinking water that contains more than 2 parts per million (ppm). Dental fluorosis, in its moderate or severe forms, may result in brown staining and or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Drinking water containing more than 4 ppm of fluoride (EPA's drinking water standard) can increase your risk of developing bone disease. Perkasie Regional Authority has reported forty-three samples for fluoride in the past 5 years, forty of those samples have been a non-detection. The highest of the three samples that had detectable levels was 1.4 ppm, below the risk & actionable limits. The PA DEP has set the actionable limit at 2 ppm and the EPA has set the actionable limit at 4 ppm.

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East Rockhill Ridge Run Satellite System – PWSID # 1090141

DETECTED SAMPLE RESULTS

North Penn Water Authority – East Rockhill Ridge Run Satellite System – PWSID # 1090141

CHEMICAL CONTAMINANTS – MONITORED IN DISTRIBUTION SYSTEM

Contaminant	MCL	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation Yes/No	Sources of Contamination
Chlorine	MRDL=4	MRDLG=4	0.85	0.54 – 0.85	ppm	2017	No	Water additive used to control microbes
Haloacetic Acids (HAAs)	60	N/A	5.6	2.28 – 5.6	ppb	2017	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs)	80	N/A	23.0	5.9 – 23.0	ppb	2017	No	By-product of drinking water chlorination

LEAD AND COPPER – MONITORED IN DISTRIBUTION SYSTEM

Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Sample Date	Violation Yes/No	Sources of Contamination
Lead	15	0	4	ppb	0 out of 10	2016	No	Corrosion of household plumbing
Copper	1.3	1.3	0.279	ppm	0 out of 10	2016	No	Corrosion of household plumbing

Below are the most recent results for NPWA Wells NP73 and NP74. Although both of these wells were shut down in September 2016 and were not used at all during 2017, we are still required to provide you with the most recent test results for these sources.

CHEMICAL CONTAMINANTS – MONITORED AT WELLS – NP73 AND NP74

Contaminant	MCL	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation Yes/No	Sources of Contamination
Arsenic	10	0	2	2 – 2	ppb	2015	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Chromium	100	100	2	1 – 2	ppb	2015	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride	2	2	0.114	0 – 0.114	ppm	2015	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate	10	10	0.733	0.382 – 0.733	ppm	2016	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Alpha Emitters	15	0	3.31	2.89 – 3.31	pCi/L	2012 and 2015	No	Erosion of natural deposits
Combined Radium	5	0	0.50	0.14 – 0.50	pCi/L	2015	No	Erosion of natural deposits
Uranium	30	0	5.56	2.98 – 5.56	µg/L	2012 and 2015	No	Erosion of natural deposits
Gross Beta	50	0	2.11	2.11	pCi/L	2015	No	Decay of natural and man-made deposits

Perfluorinated Compounds (PFCs):

Testing of public groundwater wells for perfluorinated compounds (PFCs) was done as part of the federal Unregulated Contaminant Monitoring Rule (UCMR 3). As such, these compounds are not currently regulated by the government and there are no drinking water standards established for compliance. Rather, there is only a health advisory level (HAL) established which, as the name implies, is advisory only. Because of the small size of the East Rockhill system which serves 194 residential customers, NPWA was not required by the UCMR 3 to test these wells for PFCs. However, due to the recent detections of PFOA and PFOS in nearby communities, in an abundance of caution, in 2016 the Authority voluntarily sampled the wells in order to be proactive.

NPWA received laboratory data on September 12, 2016 confirming that levels of PFCs were found at slightly elevated levels. The health advisory level (HAL) for the combination of perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), collectively known as PFCs, is 70 parts per trillion (ppt). NPWA measured a level of 117 ppt in our well NP74 and a level of 65 ppt in our well NP73 in East Rockhill. A public notice was sent to customers on September 21, 2016 alerting them of the PFC levels detected and actions the Authority took regarding the detection levels.

These chemicals are among a family of manmade chemicals that have been used for decades as an ingredient to make products that resist heat, oil, stains, grease and water, and are used in foam products for firefighting. They are extremely resistant to breaking down in the environment.

Studies indicate that exposure to PFOS and PFOA over certain levels may result in adverse effects, including developmental effects, such as low birth weight, to fetuses during pregnancy or breastfed infants, testicular and/or kidney cancer, liver tissue damage, immune and thyroid effects and other effects such as cholesterol changes.

WELL NP73 RESULTS

Contaminant	Average Level Detected	Range of Detections	Units	Sample Date
Perfluorooctanesulfonic acid (PFOS)	57	57 – 57	ppt	Aug. and Sept. 2016
Perfluorooctanoic acid (PFOA)	7.6	7.1 – 8.0	ppt	Aug. and Sept. 2016
PFOS + PFOA*	64.6	64.1 – 65.0	ppt	Aug. and Sept. 2016
***PFOS + PFOA have a combined HAL (Health Advisory Level) of 70 ppt**				
Perfluorohexanesulfonic acid (PFHxS)	25.5	21 – 30	ppt	Aug. and Sept. 2016
Perfluoroheptanoic acid (PFHpA)	4.0	3.9 – 4.0	ppt	Aug. and Sept. 2016
Perfluorobutanesulfonic acid (PFBS)	2.7	0 – 5.3	ppt	Aug. and Sept. 2016

WELL NP74 RESULTS

Contaminant	Average Level Detected	Range of Detections	Units	Sample Date
Perfluorooctanesulfonic acid (PFOS)	104	98 – 110	ppt	Aug. and Sept. 2016
Perfluorooctanoic acid (PFOA)	6.9	6.7 – 7.1	ppt	Aug. and Sept. 2016
PFOS + PFOA*	110.9	104.7 – 117.1	ppt	Aug. and Sept. 2016
***PFOS + PFOA have a combined HAL (Health Advisory Level) of 70 ppt**				
Perfluorohexanesulfonic acid (PFHxS)	34.5	31 – 38	ppt	Aug. and Sept. 2016
Perfluoroheptanoic acid (PFHpA)	5.3	5.2 – 5.3	ppt	Aug. and Sept. 2016
Perfluorobutanesulfonic acid (PFBS)	2.1	0 – 4.2	ppt	Aug. and Sept. 2016

DETECTED SAMPLE RESULTS

Perkasie Regional Authority – PWSID # 1090046

CHEMICAL CONTAMINANTS

Contaminant	MCL	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation Yes/No	Sources of Contamination
Arsenic	10	0	9.17*	6.2 – 10.2	ppb	2017	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Chlorine	MRDL=4	MRDLG=4	1.00	0.51 – 1.23	ppm	2017	No	Water additive used to control microbes
Fluoride	2	2	0	0	ppm	2017	No	Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Nitrate	10	10	0.71	ND – 0.71	ppm	2017	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Haloacetic Acids (HAAs)	60	N/A	4.7	2.2 – 4.7	ppb	2017	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs)	80	N/A	39	32 – 39	ppb	2017	No	By-product of drinking water chlorination
Alpha Emitters	15	0	4.92	4.92	pCi/L	2014	No	Erosion of natural deposits
Combined Radium	5	0	3.76	0.452 – 3.76	pCi/L	2014 and 2017	No	Erosion of natural deposits
Uranium	30	0	4.48	3.4 – 4.48	µg/L	2017	No	Erosion of natural deposits

*Since compliance is based on an annual average, this value represents the highest annual average result.

ENTRY POINT DISINFECTANT RESIDUAL

Contaminant	Minimum Disinfectant Residual	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Yes/No	Sources of Contamination
Chlorine *EP 101*	0.4	0.87	0.87 – 1.18	ppm	10/27/2017	No	Water additive used to control microbes
Chlorine *EP 102*	0.4	0.4	0.4 – 1.09	ppm	01/19/2017	No	Water additive used to control microbes
Chlorine *EP 103*	0.4	0.73	0.73 – 1.06	ppm	06/21/2017	No	Water additive used to control microbes
Chlorine *EP 105*	0.4	0.41	0.41 – 1.29	ppm	07/05/2017	No	Water additive used to control microbes

LEAD AND COPPER

Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Sample Date	Violation Yes/No	Sources of Contamination
Lead	15	0	1.5	ppb	0 out of 30	2016	No	Corrosion of household plumbing
Copper	1.3	1.3	0.501	ppm	0 out of 30	2016	No	Corrosion of household plumbing

Perkasie Regional Authority – Violations:

Reporting Violation: The Volatile Organic Compounds (VOCs) sample for EP 105 was processed after the required due date. Although the sample was below the violation level, it needs to be disclosed in this section.

DEFINITIONS

In the above tables you will find many terms and abbreviations you might not be 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 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.
- N/A: Not Applicable
- ND: no detection
- pCi/L: picocuries per liter (a measure of radioactivity)
- ppm: parts per million, or milligrams per liter (mg/L)
- ppb: parts per billion, or micrograms per liter (µg/L)
- ppt: parts per trillion, or nanograms per liter (ng/L)