

West Cocalico Township  
Water Authority  
PWSID# 7360141

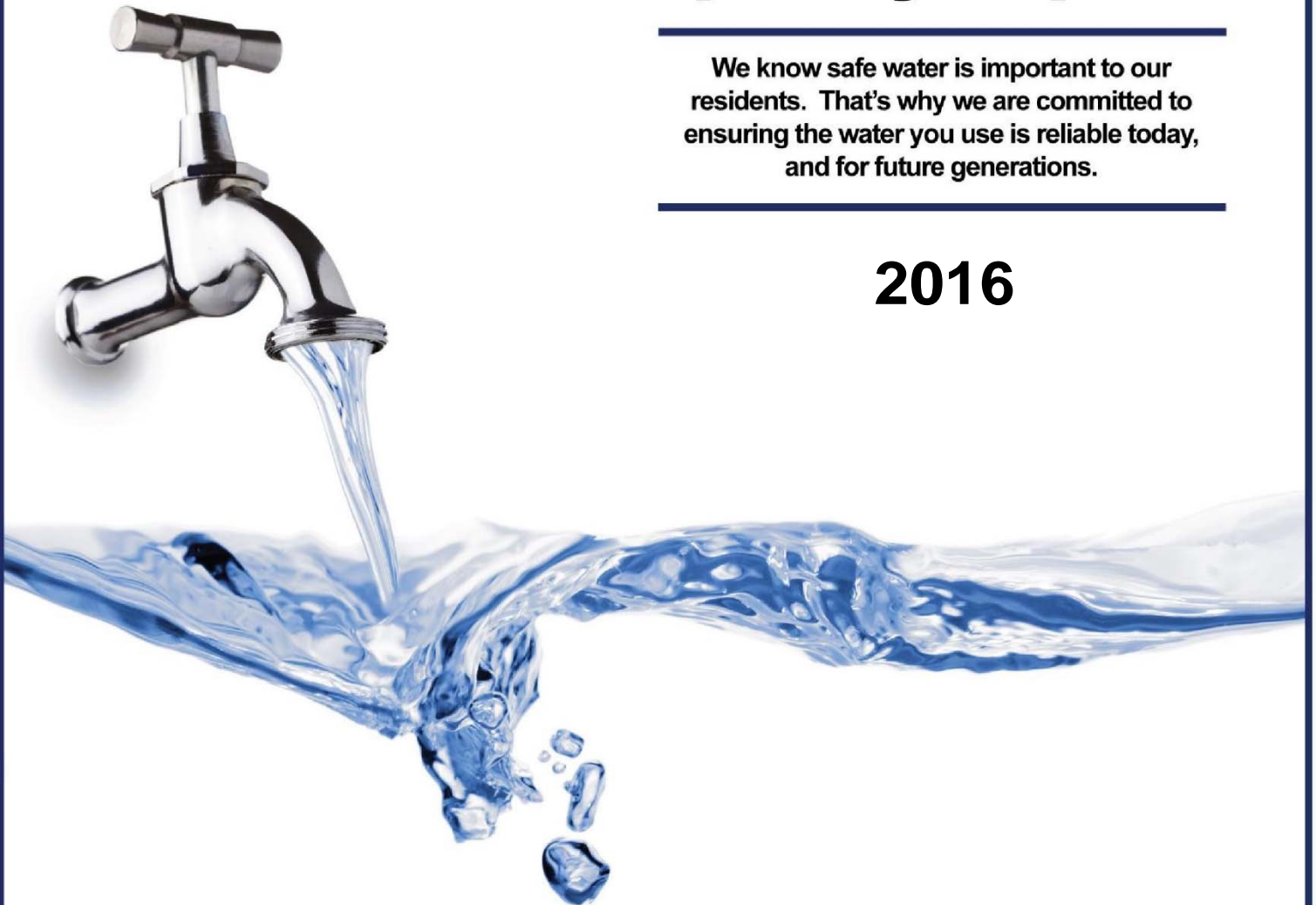
**annual**  
*water*  
**quality report**

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We know safe water is important to our residents. That's why we are committed to ensuring the water you use is reliable today, and for future generations.

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**2016**



*Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien. (This report contains very important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)*

### **WATER SYSTEM INFORMATION:**

We are pleased to present to you this year's Annual Drinking Water Quality Report (Operating Year 2016). 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 delivery system and protect our groundwater resources. We are committed to ensuring the quality of your water.

If you have any questions about this report or concerning your water utility, please contact the Authority at 717-336-6265 between 8:00 a.m. and 4:30 p.m. Monday through Friday. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held every second Tuesday at 7:00 p.m. in the Township Meeting Room of the West Cocalico Township Building.

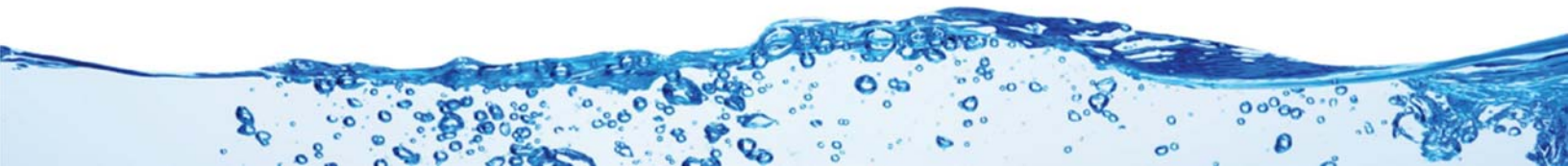
### **SOURCES OF WATER:**

Our water source currently consists of three groundwater wells, all of which are located within West Cocalico Township: Well #1, Well #2, and Well #3.

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 (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 West Cocalico Authority Water System 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 Nitrate:** Nitrate in drinking water at levels above 10ppm 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.



## 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 as supplied by PADEP. 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 Water Drinking Act*. The date has been noted on the sampling results table.

## DEFINITIONS AND ABBREVIATIONS:

In the following table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we have 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 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 ( $\mu\text{g/L}$ )

*ppm* = parts per million, or milligrams per liter ( $\text{mg/L}$ )

*ppq* = parts per quadrillion, or picograms per liter

*ppt* = parts per trillion, or nanograms per liter

**SAMPLE RESULTS:**

Chemical Contaminants								
Contaminant	MCL	MCLG	Max Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Arsenic	10	0	2	ND – 2	ppb	2015	N	Erosion of natural deposits; Runoff from glass and electronics production wastes
Barium	2	2	0.595	0.232 – 0.595	ppm	2015	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine	MRDL = 4	MRDLG = 4	1.78	0.68 – 1.78	ppm	2016	N	Water additive used to control microbes
Chromium	100	100	1	ND – 1	ppb	2015	N	Discharge from steel and pulp mills; Erosion of natural deposits
Combined Uranium	20	0	2.9	1.2 – 2.9	pCi/L	2012 – 2013	N	Erosion of natural deposits; Discharge from petroleum factories; Discharge from Chemical factories
Gross Alpha	15	0	0.767	0.026 – 0.767	pCi/L	2015 – 2016	N	Erosion of natural deposits; Discharge from petroleum factories; Discharge from Chemical factories
Haloacetic Acids (HAA)	60	N/A	ND	One sample taken	ppb	2016	N	By-product of drinking water disinfection
Nitrate	10	10	8.61	2.46-8.61	ppm	2016	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radium-226	5	0	0.325	ND – 0.325	pCi/L	2015 – 2016	N	Erosion of natural deposits; Discharge from petroleum factories; Discharge from Chemical factories
Radium-228	5	0	0.656	0.567 – 0.656	pCi/L	2015 – 2016	N	Erosion of natural deposits; Discharge from petroleum factories; Discharge from Chemical factories
Total Trihalomethanes (TTHM)	80	N/A	0.7	One sample taken	ppb	2016	N	By-product of drinking water chlorination

Entry Point Disinfectant Residual							
Contaminant	Min RDL	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine (Entry Point 100) Well #1	0.7	0.46	0.46 – 1.68	ppm	2016	Y	Water additive used to control microbes
Chlorine (Entry Point 101) Well #2	0.8	1.46	1.45 – 1.86	ppm	2016	N	Water additive used to control microbes
Chlorine (Entry Point 102) Well #3	0.4	0.18	0.18 – 1.77	ppm	2016	Y	Water additive used to control microbes

Lead and Copper								
Contaminant	AL	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Sample Date	Violation Y/N	Sources of Contamination
Lead	15	0	4.2	ppb	0 out of 10	2016	N	Corrosion of household plumbing
Copper	1.3	1.3	0.89	ppm	0 out of 10	2016	N	Corrosion of household plumbing

Microbial						
Contaminants	MCL	MCLG	Highest # or % Positive Samples	Violation Y/N	Sources of Contamination	
Total Coliform Bacteria	For systems that collect <40 samples/month: more than 1 positive monthly sample	0	0	N	Naturally present in the environment	

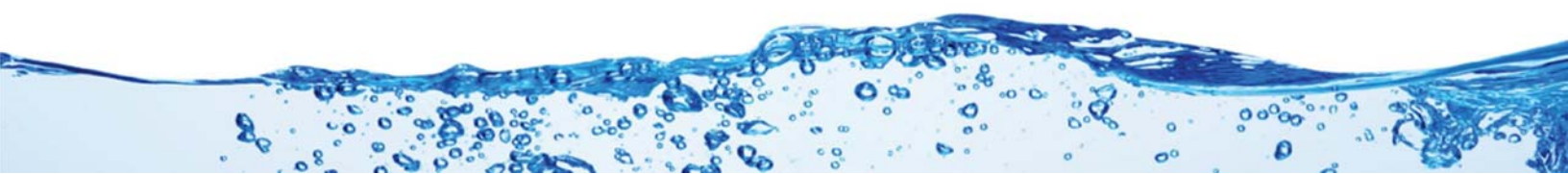
### **What does this mean?**

All sources of drinking water are subject to potential contamination by constants that are naturally occurring or manmade. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. 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. 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.

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 lifetime to have a one-in-a-million chance of having the described health effect.

### **VIOLATIONS:**

In 2016, our system had four incidents which are considered violations under Federal and State requirements.

1. Under the Revised Total Coliform Rule (rTCR), our system was required to start additional sampling this year regarding the new rule. Due to an issue with our laboratory, our initial sampling event did not fall within the required sampling window. This is considered a violation. Of the 20 samples collected this year for Total Coliform in the distribution system, a total of 0 had positive results.
  2. Under the Disinfection Byproducts Rule (DBPR), we are required to sample for Haloacetic Acids in a very narrow window of +/- 3-days of the designated sampling date of September 14<sup>th</sup>. The sample date was missed, and the actual sampling date was November 11, 2016. The actual result of Not Detected indicates that the water met the MCL of less than 60 ppb.
  3. Under the Disinfection Byproducts Rule (DBPR), we are required to sample for Trihalomethanes in a very narrow window of +/- 3-days of the designated sampling date of September 14<sup>th</sup>. The sample date was missed, and the actual sampling date was November 11, 2016. The actual result of 0.7 ppb indicates that the water met the MCL of less than 80 ppb.
  4. Each water source is required to meet a minimum residual chlorine level to ensure that the water remains safe from microbiological contamination. This is called the Entry Point Disinfectant Residual. In 2016, both Well #1 and Well #3 failed to meet the minimum required levels for short periods of time due to operational issues with the chemical feed equipment. Total coliform and E.coli are tests that we are required to perform at several points throughout our system. These tests sample are intended to detect the presence of indicator organisms that would point to a potential microbiological contamination issue. A total of 40 samples were collected this year between for Total coliform or E.coli. Of these 40 samples, a total of 0 had positive results. This indicates our water appears to have remained bacteriologically safe to drink.
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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 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, metals, and asbestos. These can be naturally-occurring in groundwater or result from urban stormwater run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. Certain piping systems such as transite, lead, or copper piping and lead soldering used in older homes can contribute to the occurrence of these contaminants in drinking water.
- *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 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).

**West Cocalico Township Authority**

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<http://westcocalicotownship.com>

This facility operates under the Pennsylvania Public Water Supply Identification (PWSID) #7360141

