

## 2015 ANNUAL DRINKING WATER QUALITY REPORT

PWSID #: 7360143

NAME: WEST EARL TOWNSHIP

*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. Translate it, or speak with someone who understands it.)

### 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 Robert Buckwalter, Jr. at 157 W. Metzler Road, PO Box 202, Brownstown, PA 17508 or by calling 717-859-3201.

We want you to be informed about your water supply. If you want to learn more, please attend any of our regularly scheduled meetings. They are held the first Monday of every month at 7 p.m.

### SOURCES OF WATER:

The Nolt Well located north of Turtle Hill Road and surface water from the City of Lancaster – primarily from the Susquehanna River Water Plant.

**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).**

### 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, 2015 to December 31, 2015. 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.

### DEFINITIONS AND ABBREVIATIONS:

**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 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.

**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 (µg/L)

**ppm** = parts per million, or milligrams per liter (mg/L)

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

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

**DETECTED SAMPLE RESULTS:**

Chemical Contaminant	MCL In CCR Units	MCLG	Highest Level Detected	Range of Detections	Units	Violation Y/N	Sources of Contamination
Nitrate (2015)	10	10	4.3	3.8 – 4.3	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (2015)	N/A	N/A	33.6	30.1 – 33.6	ppm	N	Byproduct of nitrate reduction
Tetrachloroethylene (2015)	5	0	.8	Single Sample	ppb	N	Discharge from factories and dry cleaners
Trihalomethanes (2015)	80	N/A	60.37*	15.8 – 120	ppb	N	By-product of drinking water chlorination
HAA (Haloacetic Acids) (2015)	60	N/A	29.44*	19.8 – 43.6	ppb	N	By-product of drinking water chlorination
Total Dissolved Solids (2015)	500	500	493	409 - 493	ppm	N	Byproduct of nitrate reduction
Chlorine Residual (2015)	MRDL 4	MRDLG 4	1	0.45 - 1	ppm	N	Additive to control microbes Disinfectant residual
Chromium (2012)	100	100	8.5	Single Sample	ppm	N	Erosion of natural deposits
Barium (2012)	2	2	.055	Single Sample	ppm	N	Erosion of natural deposits

\* Highest running annual average

Entry Point Disinfectant Residual							
Contaminant	MinRDL	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Chlorine	0.2	0.43	0.43 - .81	ppm	2015	N	Water additive used to control microbes.

Contaminant	Action Level (AL)	MCLG	90 <sup>th</sup> Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Of TT Y/N	Sources of Contamination
Lead (2013)	15	0	0	ppb	0	N	Household plumbing corrosion
Copper (2013)	1.3	1.3	0.14	ppm	0	N	Household plumbing corrosion

**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 and metals, which can be naturally-occurring or result from urban storm water run-off, 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 storm water 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 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, 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).

**OTHER 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. West Earl 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 drinking water, testing methods, and steps you can take to minimize exposure these are available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

# 2015 ANNUAL DRINKING WATER QUALITY REPORT

**PWSID #: 7360058 -- NAME: CITY OF LANCASTER, PA**

*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).*

## **WATER SYSTEM INFORMATION:**

This report shows our water quality and what it means. We want you to be informed about your water supply. If you have any questions about this report or concerning your water utility, please contact the water quality lab at (717) 291-4818.

## **SOURCES OF WATER:**

Our sources of water are the Conestoga River and the Susquehanna River located in Lancaster County. A Source Water Assessment was completed in 2012 by the PA Department of Environmental Protection (PA DEP). The Assessment found our sources are potentially susceptible to agricultural activity, accidental spills along roads and urban runoff. Overall, our sources have a low risk of significant contamination. The assessment is available at: <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-59455/RS7360058001%20City%20of%20Lancaster%20BofW.pdf>. Complete reports were distributed to municipalities, water supplier, local planning agencies and PA DEP offices. Copies of the complete report are available at the DEP Regional Office, Records Management Unit at 484-250-5910.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as individuals 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).

## **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, 2015. 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.

## **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.

**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

**ppb** = parts per billion, or micrograms per liter

**pCi/L** = picocuries per liter, measure of radiation

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

**mrem/year** = millirems per year

**ppm** = parts per million or milligrams per liter

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

**DETECTED SAMPLE RESULTS: SUSQUEHANNA PLANT; ENTRY POINT 101**

Chemical Contaminants								
Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Barium	2	2	0.021	---	ppm	2015	N	Erosion of natural deposits.
Fluoride	2*	2	0.50	---	ppm	2015	N	Water additive that promotes strong teeth.
Nitrate	10	10	0.79	---	ppm	2015	N	Runoff from fertilizer use.
Combined Uranium	30	0	1.06	---	pCi/L	2011	N	Erosion of natural deposits.

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

Turbidity						
Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Y/N	Source of Contamination
Turbidity	TT=1 NTU for a single measurement	0	0.06 NTU	01/07/15, 01/08/15, 12/30/15	N	Soil runoff.
	TT= at least 95% of monthly samples ≤0.3 NTU		≤0.3 NTU 100% of the time	Jan - Dec 2015	N	

Total Organic Carbon (TOC)					
Contaminant	Range of percent Removal Required	Range of percent removal achieved	Number of quarters out of compliance	Violation Y/N	Sources of Contamination
TOC	0% - 35%	0%-51%	0	N	Naturally present in environment.

\* The samples in February, May, June, and November had low % removal. The water plant was still in compliance because the SUVAs were less than 2.0 and the performance ratio was 1.0 or greater for each quarter.

Entry Point Disinfectant Residual: Susquehanna and Conestoga Treatment Plants							
Contaminant	MinRDL	Lowest Level Detected	Range of Detections	Units	Date of Lowest Sample	Violation Y/N	Sources of Contamination
Susquehanna Plant Chlorine	0.2	0.24	0.24 - 1.97	ppm	10/29/15	N	Water additive used to control microbes.
Conestoga Plant Chlorine	0.2	0.50	0.50 - 1.42	ppm	11/17/15	N	Water additive used to control microbes.

**DETECTED SAMPLE RESULTS: CONESTOGA WATER PLANT; ENTRY POINT 102**

Chemical Contaminants								
Contaminant	MCL in CCR Units	MCLG	Level Detected	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Barium	2	2	0.049	---	ppm	2015	N	Erosion of natural deposits.
Fluoride	2*	2	0.64	---	ppm	2015	N	Water additive to promote strong teeth.
Nitrate	10	10	6.0	Four samples 2.5 - 6.0	ppm	2015	N	Runoff from fertilizer use.
Combined Uranium	30	0	1.48	---	pCi/L	2011	N	Erosion of natural deposits.
Gross Beta Particle Activity	50**	0	3.8	---	pCi/L	2014	N	Decay of natural and man-made deposits

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

\*\*The MCL for Gross Beta Particle Activity is 4 mrem/year. Since there is no simple conversion between mrem/year and pCi/L, EPA considers 50 pCi/L to be the level of concern for Gross Beta Particle Activity.

Turbidity						
Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Y/N	Source of Contamination
Turbidity	TT=1 NTU for a single measurement	0	0.15 NTU	08/04/15	N	Soil runoff.
	TT= at least 95% of monthly samples ≤ 0.3 NTU		≤ 0.3 NTU 100% of the time	Jan - Dec 2015	N	

Total Organic Carbon (TOC)					
Contaminant	Range of % Removal Required	Range of percent removal achieved	Number of quarters out of compliance	Violation Y/N	Sources of Contamination
TOC	15 – 25%	22% - 46%	0	N	Naturally present in environment.

## DETECTED SAMPLE RESULTS: DISTRIBUTION SYSTEM

Distribution Disinfectant Residual							
Contaminant	MRDL	Highest Average Result	Range of Monthly Avg Results	Units	Month w/ Highest Avg. Result	Violation Y/N	Sources of Contamination
Chlorine	4.0	1.0	0.7 - 1.0	ppm	August 2015	N	Water additive used to control microbes.

Disinfection Byproducts								
Contaminant	MCL in CCR Units	MCLG	Highest RAA	Range of Detections	Units	Sample Date	Violation Y/N	Sources of Contamination
Haloacetic Acids	60	n/a	59.6	8.9 - 93.3	ppb	2015	N *	By-product of disinfection
Trihalomethanes	80	n/a	70.8	9.9 - 161	ppb	2015	N *	By-product of disinfection

\*Violation of MCL is based on Running Annual Average

Lead and Copper								
Contaminant	Action Level (AL)	MCLG	90 <sup>th</sup> Percentile Value	Units	# of Sites Above AL of Total Sites	Sample Date	Violation Y/N	Sources of Contamination
Lead	15	0	4.5	ppb	0 of 52	2013	N	Corrosion of home plumbing.
Copper	1.3	1.3	0.11	ppm	0 of 52	2013	N	Corrosion of home plumbing

Microbial						
Contaminants	MCL	MCLG	Highest # or % of Positive Samples	Violation Y/N	Sources of Contamination	
Total Coliform Bacteria	For systems that collect ≥ 40 samples/month: 5% of monthly samples are positive	0	0	N	Naturally present in environment.	
Fecal Coliform Bacteria or E. coli	0	0	0	N	Human and animal fecal waste	

### VIOLATIONS:

No Violations

## **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 and metals, which can be naturally-occurring or result from urban stormwater run-off, 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 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).

## **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 City of Lancaster, Bureau of Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. Lead was not detected in City drinking water when it leaves our treatment plants and underground pipes. 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>. For information about lead, go to the city web site:

<http://www.cityoflanasterpa.com/lanastercity/lib/lanastercity/lead.pdf>. If you have questions about City drinking water, contact the water quality lab at 717-291-4818.