

# 2006 ANNUAL DRINKING WATER QUALITY REPORT

PWSID #: 7360143

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, 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 Conestoga Water Treatment 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 to December 31, 2006. 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 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.

**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	Sources of Contamination
Chromium (2003)	100	100	5	Single Sample	ppb	NO	Erosion of natural deposits
Nitrate (2006)	10	10	6.8	4.18 – 6.8	ppm	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage
Barium (2003)	2	2	0.0178	Single Sample	ppm	NO	Erosion of natural deposits
Tetrachloroethylene (2006)	5	0	0.8	Single Sample	ppb	NO	Discharge from factories and dry cleaners
Trihalomethanes (2006)	80	n/a	28.5	17.2-43.6	ppb	NO	By-product of drinking water chlorination
HAA (Haloacetic Acids) (2006)	60	n/a	15.8	3-36.3	ppb	NO	By-products of drinking water chlorination
Radium (2003)	5	0	2.5	Single Sample	pCi/L	NO	Decay of natural deposits
Fluoride (2003)	2	2	0.11	n/a	ppm	NO	Water additive to promote strong teeth
Chlorine Residual (2006)	MRDL 4	MRDLG 4	1.17	0.50-1.17	ppm	NO	Additive to control microbes Disinfectant residual

Contaminant	Action Level (AL)	MCLG	90 <sup>th</sup> Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Of TT	Sources of Contamination
Lead (2004)	15	0	4.0	ppb	1	NO	Household plumbing corrosion
Copper (2004)	1.3	1.3	0.313	ppm	0	NO	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 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).

### **OTHER INFORMATION:**

**ABOUT LEAD:** Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline.

**ABOUT 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.

# ANNUAL DRINKING WATER QUALITY REPORT

PWS ID#7360058 -- CITY OF LANCASTER, PA

***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. We want you to be informed about your water supply. If you have questions about this report or your water utility, please contact Al Nagy at 717-291-4833.

## SOURCES OF WATER:

Our sources of water are the Conestoga River and the Susquehanna River

A Source Water Assessment was completed in 2002 by the PA Department of Environmental Protection (PADEP). The Assessment found our sources are potentially most susceptible to agricultural activity, accidental spills along roads and urban development. Overall, our sources have a low risk of significant contamination. The Assessment is available in the PA DEP's e-library accessed through their web site at [www.dep.state.pa.us](http://www.dep.state.pa.us) (Keyword: "source water"). Complete reports were distributed to municipalities, water suppliers, local planning agencies and PA DEP offices. Copies of the complete report are available for review at the PA DEP Lancaster County District Office at 717-299-7601.

**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 drinking water regulations. The following tables show the results of our monitoring for the period of January 1 to December 31, 2006. 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.

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**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)

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**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: CONESTOGA WATER TREATMENT PLANT:**

Chemical Contaminant	MCL in CCR units	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation	Sources of Contamination
Atrazine	3	3	0.03	0.0 – 0.03	PPM	4/26 & 10/31/06	No	Runoff from herbicides used on row crops
Barium (tested in 2004)	2	2	0.054	Single sample	PPM	4/13/04	No	Erosion of natural deposits
Chlorine	MRDL=4	MRDLG=4	0.4 [lowest test level]	0.4 - 1.4	PPM	Daily	No	Water additive used to control microbes
Fluoride *	2	2	0.9	Single lab sample *	PPM	4/13/04	No	Water additive which promotes strong teeth
Nitrate **	10	10	8.1	4.3 – 8.1	PPM	Quarterly **	No	Runoff from fertilizer use
Total Organic Carbon	TT	N/A	3.2	1.1 – 3.2	PPM	Monthly	No	Naturally present in the environment
Beta/Photon emitters (tested in 2003)	50	50	5.5	Single Sample	PCi/L.	6/24/03	No	Decay of natural and manmade products
Combined Radium (tested in 2003)	5	5	0.1	Single Sample	PCi/L.	6/24/03	No	Erosion of natural deposits

\* Fluoride is field tested daily.

\*\* Nitrate is field tested once a week.

Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation of TT	Source of Contamination
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Turbidity	TT=1 NTU for a single measurement	0	0.13 NTU	6/5/2006	No	Soil runoff
Turbidity	TT= at least 95% of monthly samples ≤0.3 NTU		100 %	All tests under 0.3 NTU	No	

### **DETECTED SAMPLE RESULTS: SUSQUEHANNA WATER TREATMENT PLANT**

Chemical Contaminant	MCL in CCR units	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation	Sources of Contamination
Barium (tested in 2004)	2	2	0.026	Single sample	PPM	4/13/04	No	Erosion of natural deposits
Chlorine	MRDL=4	---	0.6 [lowest test level]	0.6-1.5	PPM	Daily	No	Water additive used to control microbes
Fluoride *	2	2	0.8	Single Lab sample *	PPM	4/13/04	No	Water additive which promotes strong teeth
Nitrate **	10	10	0.8	Single Lab sample **	PPM	6/7/2006	No	Runoff from fertilizer use
Total Organic Carbon	TT	N/A	2.5	0.9 – 2.5	PPM	Monthly	No	Naturally present in the environment

\* Fluoride is field tested daily.

\*\* Nitrate is field tested once a week.

Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation	Source of Contamination
Turbidity	TT=1 NTU for a single measurement	0	0.19 NTU	6/8/2006	No	Soil runoff
Turbidity	TT= at least 95% of monthly samples ≤0.3 NTU		100 %	All tests under 0.3 NTU	No	

### **DETECTED SAMPLE RESULTS: DISTRIBUTION SYSTEM:**

Chemical Contaminant	MCL in CCR units	MCLG	Highest Level Detected	Range of Detections	Units	Sample Date	Violation	Sources of Contamination
Haloacetic Acids (HAA)	60	n/a	36 *	18 - 77	PPB	Quarterly	No	By-product of drinking water disinfection
Trihalomethanes (THM)	80	n/a	48 **	14 - 108	PPB	Quarterly	No	By-product of drinking water disinfection

\* 1<sup>st</sup> quarter 2006 – 4<sup>th</sup> quarter 2006 (12 month running annual average).

\*\* 3<sup>rd</sup> quarter 2005 – 2<sup>nd</sup> quarter 2006 (12 month running annual average).

Contaminant	Action Level (AL)	MCLG	90 <sup>th</sup> Percentile Value	Units	# of Sites Above AL of Total Sites	Violation	Sources of Contamination
Lead [tested in 2004]	15	0	8	PPB	1 of 52	No	Corrosion of household plumbing.
Copper [tested in 2004]	1.3	1.3	0.11	PPM	0 of 52	No	Corrosion of household Plumbing.

## 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:

- Nitrate in drinking water at levels above 10 PPM is a health risk for infants less than six months of age. High nitrate 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 advice from your health care provider
- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
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