2005 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, 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, 2005. 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 (2003)	10	10	4.8	3.14 – 4.8	ppm	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Barium (2003)	2	2	1.78	Single Sample	ppm	NO	Erosion of natural deposits
Tetrachloroethylene (2005)	5	0	0.7	Single Sample	ppb	NO	Discharge from factories and dry cleaners
Trihalomethanes (2005)	80	n/a	36.2	6-76.1	ppb	NO	By-product of drinking water chlorination
HAA (Haloacetic Acids) (2005)	60	n/a	26.7	1.4-57.6	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 (2005)	MRDL 4	MRDLG 4	0.75	0.44-0.75	ppm	NO	Additive to control microbes Disinfectant residual

Contaminant	Action Level (AL)	MCLG	90th 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.

- 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.

CITY OF LANCASTER, PA ANNUAL DRINKING WATER QUALITY REPORT

Este informe contiene información muy importante sobre su agua de beber. Tradúzcalo ó hable con alguien que lo entienda bien.

WATER SYSTEM INFORMATION:

This report explains testing performed on City of Lancaster drinking water. If you have questions about this report, please contact Al Nagy at 717-291-4833. This annual report and the "2006 Drinking Water Analysis Report" are available at the City web site: **www.cityoflancasterpa.com**. Our Pennsylvania public water supply identification number is PA 7360058. We want you to be informed about your water supply. If you desire to learn more, consider attending City Council meetings the second and fourth Tuesday of every month.

SOURCES OF WATER:

City water sources are the Conestoga and Susquehanna Rivers. The Conestoga Treatment Plant is within City limits, adjacent to East Lampeter Township and east of the Conestoga River. The Susquehanna Treatment Plant is situated in West Hempfield Township, near Columbia Boro and east of the Susquehanna River.

The Susquehanna River Basin Commission completed a Source Water Assessment of the Susquehanna River basin in June 2003. The Assessment found that our sources are potentially most susceptible to agricultural activity and urban development. Summary reports of the Assessment are available by writing to Al Nagy, 150 Pitney Road, Lancaster, PA 17601-5625. They are also available on the PA DEP web site at **www.dep.state.pa.us** (Keyword: "DEP source water"). Complete reports were distributed to municipalities, water supplier, local planning agencies and PA DEP offices. Copies of the complete report are also available for review at the PA DEP, Lancaster County Office, 717/299-7601.

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, 2005. 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. The sample collection dates have been listed in parentheses on the sampling result tables.

Some people may be more vulnerable to contamination in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have under gone 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. Environmental Protection Agency(EPA) guidelines listing ways to lessen the risk by infection Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline, 800/426-4791.

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.

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)

DETECTED SAMPLE RESULTS: CONESTOGA WATER TREATMENT PLANT:

Chemical Contaminant	MCL In CCR Units	MCLG	Highest Level Detected	Range of Detections	Units	Violation Y/N	Sources of Contamination
Atrazine	3	3	0.24	Single sample	ppb	N	Runoff from herbicide used on row crops.
Barium	2	2	0.054	Single sample	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural products.
Chlorine	4	4	0.55 (lowest test level)	0.55 - 1.1	ppm	N	Water additive used to control microbes.
Fluoride	2	2	0.8	Single sample	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer aluminum factories.
Nitrate	10	10	8.2	5.5 - 8.2	ppm	N	Runoff from fertilizer use.
Total Organic Carbon	TT	n/a	2.7	0.9 - 2.7	ppm	N	Naturally present in the environment.
Gross Beta Particle Activity (tested 2004)	50	50	5.5	Single sample	pci/L.	N	Decay of natural and manmade products.
Combined Radium (tested 2004)	5	5	0.1	Single sample	pci/L.	N	Erosion of natural products.

Microbial Contaminants	MCL	MCLG	Highest # or % of Positive Samples	Violation Y/N	Typical Sources of Contamination
Total Coliform Bacteria	5% of monthly samples are positive	0	0	N	Naturally present in the environment.
Fecal Coliform Bacteria or *E. coli*	0	0	0	N	Human and animal fecal waste.

Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Of TT Y/N	Source of Contamination
Turbidity (NTU)	TT=1 NTU for a single measurement	0	0.24	6/2/2005	N	Soil runoff
	TT= at least 95% of monthly samples ≤0.3 NTU		100%	All under 0.3 NTU	N	

Turbidity is a measure of water clarity. It is a good indicator of the effectiveness of our filtration process.

DETECTED SAMPLE RESULTS: SUSQUEHANNA WATER TREATMENT PLANT:

Chemical Contaminant	MCL In CCR Units	MCLG	Highest Level Detected	Range of Detections	Units	Violation Y/N	Sources of Contamination
Barium (tested 2004)	2	2	0.026	Single sample	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural products..
Chlorine	4	4	0.65 (lowest test level)	0.65 - 1.2	ppm	N	Water additive used to control microbes.
Fluoride	2	2	0.6	Single sample	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer aluminum factories.
Nitrate	10	10	1.8	1.3 - 1.8	ppm	N	Runoff from fertilizer use.
Total Organic Carbon	TT	n/a	4.1	1.1 - 4.1	ppm	N	Naturally present in the environment.

Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation Of TT Y/N	Source of Contamination
Turbidity (NTU)	TT=1 NTU for a single measurement	0	0.28	4/7/2005	N	Soil runoff
	TT= at least 95% of monthly samples ≤0.3 NTU		99.86%	5/2005	N	

Turbidity is a measure of water clarity. It is a good indicator of the effectiveness of our filtration process.

DETECTED SAMPLE RESULTS: DISTRIBUTION SYSTEM:

Chemical Contaminant	MCL In CCR Units	MCLG	Highest Annual Average	Range of Detections	Units	Violation Y/N	Sources of Contamination
Haloacetic acids (HAA)	60	n/a	56 *	0 - 49	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs)	80	n/a	57	9 - 101	ppb	N	By-product of drinking water disinfection.

* 2nd qtr. 2004 - 4th quarter 2005.

Contaminant	Action Level (AL)	MCLG	90th Percentile Value	Units	# of Sites Above AL of Total Sites	Violation Of TT Y/N	Sources of Contamination
Lead (tested 2004)	15	0	8	ppb	1 of 52	N	Corrosion of household plumbing.
Copper (tested 2004)	1.3	1.3	0.11	ppm	0 of 52	N	Corrosion of household plumbing.

Microbial Contaminants	MCL	MCLG	Highest # or % of Positive Samples	Violation Y/N	Typical Sources of Contamination
Total Coliform Bacteria	• 5% of monthly samples are positive	0	0	N	Naturally present in the environment.
Fecal Coliform Bacteria or *E. coli*	0	0	0	N	Human and animal fecal waste.

HEALTH EFFECTS: NO MAXIMUM CONTAMINANT LEVELS (MCL'S) OR TREATMENT TECHNIQUES WERE EXCEEDED.

OTHER INFORMATION:

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.

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 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 the tap water. Additional information is available from the EPA's Safe Drinking Water Hotline (800-426-4791) or at their web site: **www.epa.gov.**

Turbidity is a measure of water clarity. It is a good indicator of the effectiveness of our filtration process.

Cryptosporidium was detected 5 of 12 untreated Conestoga River water samples. Cryptosporidium is a microbial pathogen found in river water. Although filtration removes Cryptosporidium, filtration cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in the Conestoga River source (untreated) water. Current test methods cannot determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease in a few weeks. However immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

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 that limit the amount of certain contaminants in water provided by public water systems.

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) or at their web site: **www.epa.gov.**

In 2004, we conducted the EPA unregulated contaminant survey. No unregulated contaminants were found. This monitoring helps EPA to determine where certain chemical contaminants occur and whether it needs to regulate those contaminants.

To ensure safe drinking water, we perform over 33,000 chemical and bacteriological water quality tests per year. The water is treated using a conventional treatment process and chlorinated for disinfection of bacteria. Fluoride is added to enhance dental protection. A phosphate additive is used to control corrosion and lead. Detected contaminants are at levels that are in compliance with federal and state drinking water regulations.

The Bureau of Water is a member of the American Water Works Association's "Partnership for Safe Drinking Water". In 2004 we received an award from the PA Department of Environmental Resources recognizing five consecutive years of maintaining high water quality standards

West Earl Township
PO BOX 787
Brownstown, PA 17508

Presorted
First-Class Mail
U.S. POSTAGE PAID
Brownstown, PA
Permit No. 1