

2004 Water Quality Report

Shillington Municipal Authority

We're very pleased to provide you with this year's 2004 Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.

Este informe contiene informacion muy importante sobre su agua de beber. Traduzcalo o hable con alguien que lo entienda bien.

OVERVIEW:

We are a consecutive system, meaning we purchase all our water from the Western Berks Water Authority which is treated surface water from the Tulpehocken Creek. Within our system, we test for lead, copper, total coliform, total trihalomethanes and haloacetic acids and are pleased to report that our water meets all Federal and State requirements. This report also shows the water quality from our supplier and what it means.

In 2002, the Philadelphia Water Department, working under contract for the Pennsylvania Department of Environmental Protection, completed a Source Water Assessment for the Western Berks Water Authority. This Assessment evaluated potential contaminant threats to the raw water sources used by the Western Berks Water Authority and the susceptibility of the sources to these threats. The following items were identified as the top three concerns:

1. Nitrate and pesticide contamination from agricultural runoff.
2. Bacterial and chemical contamination from discharges of sewage treatment plants and industrial sources.
3. Contamination from roadway accidents and urban runoff.

The Western Berks Water Authority is concerned about protecting its water source. Current treatment processes ensure that raw water from the Tulpehocken Creek becomes finished water that meets all Federal and State drinking water standards. A copy of the Source Water Assessment report is available for review by contacting the Western Berks Water Authority at (610) 678-4400.

If you have any questions about this water quality report or concerning your water utility, please contact Michael D. Mountz, Borough Manager at (610) 777-1338 for any questions concerning the Shillington Municipal Authority. Any questions regarding the water source and/or treatment may be addressed to Gary Rhoads, Western Berks Water Authority Operations Manager at (610) 678-4400. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of the regularly scheduled Borough Council meetings held the second Thursday of each month beginning at 7:30 p.m. in the Borough's Police/Municipal Building or the Western Berks Water Authority meetings held the first Wednesday of each month at 11:30 a.m. at the treatment plant located at 91 Water Road, Sinking Spring.

The Shillington Municipal Authority routinely monitors for constituents 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, 2004. 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 tables indicate the month/year of the most recent samples for those constituents not tested for during the report year.

KEY TO TABLES:

In the following 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:

Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present at a detectable level.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure for the cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - The “Maximum Allowed” is 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 “Goal” is 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.

MNR - Monitoring not required, but recommended.

Na - Not applicable

TEST RESULTS						
Inorganic Contaminants						
Contaminant (Unit of)	Violation Y/N	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm) (a)	N	1.31	0.68-1.31	4	4	Erosion of natural deposits; water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm) (a)	N	7.13	4.02-7.13	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Disinfection By-Products						
Haloacetic Acids(5) (ppb) (a)	N	36	13-36	Na	60	By-product of drinking water chlorination
Haloacetic Acids(5) (ppb)	N	28	8-28	Na	60	By-product of drinking water chlorination
TTHM (ppb) (a)	N	27	17.1-39.5	Na	80	By-product of drinking water chlorination

Contaminant (Unit of)	Violation Y/N	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	N	34	18.7-54	Na	80	By-product of drinking water chlorination
Total Organic Carbon (a) (b)	N	1.8	Na	Na	TT	Naturally occurring organic matter

Footnotes:

(a) Western Berks Water Authority samples

(b) A “Percent Removal” is specified with regard for Total Organic Carbon. This percent removal is determined by the amount of alkalinity in the raw water source. Given the levels of alkalinity in our raw water the Western Berks Water Authority’s required percent removal range is 15-25% (depending on water chemistry). Percent removal achieved by Western Berks Water Authority is 30-59%

ADDITIONAL TEST RESULTS						
Lead and Copper Rule						
Contaminant (Unit of)	Violation Y/N	Level Detected	Range	Action Level (AL)	MCLG	Likely Source of Contamination
Copper(ppm) 9/2004	N	0.237	(c)	1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb) 9/2004	N	2	(c)	15	0	Corrosion of household plumbing systems; Erosion of natural deposits

Footnotes:

(c) None of the 30 samples we collected exceeded the action level

ADDITIONAL TEST RESULTS					
Contaminant (Unit of)	Violation Y/N	No. of Positive Samples/Month	MCL	MCLG	Likely Source of Contamination
Total Coliform Bacteria (a)	N	3.6	≥ 5% monthly samples are positive	0	Naturally present in the environment
Total Coliform Bacteria	N	NP	≥ 5% monthly samples are positive	0	Naturally present in the environment

Footnotes:

(a) Western Berks Water Authority sample

NP = No Bacteria Present

ADDITIONAL TEST RESULTS

Microbiological Contaminants

Contaminant (Unit of)	Violation Y/N	Lowest Monthly % of Samples meeting TT/month	MCL = (TT)	MCLG	Likely Source of Contamination
Turbidity (NTU) (a)	Y	(b)	95% of monthly samples ≤ TT (0.3)	Na	Soil runoff

Footnotes:

(a) Western Berks Water Authority samples

(b) For Turbidity, the Treatment Technique (TT) depends on the type of filtration provided. Compliance is based on 95% or more of the total monthly samples being \leq TT (0.3 NTU). No single sample may exceed 1.0 NTU. The highest single measurement was 3. Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

The Western Berks Water Authority did report on December 31, 2004, an event occurred at the treatment plant that resulted in a slug of high turbidity water in the combined filter effluent line. While one filter was backwashing, another filter had its filter effluent turbidity rise from the increased flow. The second filter was taken out of service and filtered to waste. When that filter was returned to service, the combined filter effluent turbidity went up to 3.0. While the elevated reading did not occur during one of the state prescribed 4 hour sampling intervals, the high reading was recorded on the plants computer system and reported to the Pennsylvania Department of Environmental Protection. The overall duration of the spike was approximately seven minutes. Policies have been changed to require a filter be backwashed before its return to service. Other than after a normal backwash procedure, filters must be returned to service by a licensed operator. Cleaning out of the filter effluent channel in early 2005 should remove the years of accumulated sediment that is believed to have been stirred up during the valve changing operations.

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.

As you can see by the tables, our system has not exceeded a maximum contaminant level. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through monitoring and testing that some constituents have been detected.

Additional Health Information:

All sources of drinking water are subject to potential contaminants that are naturally occurring or man made. Those contaminants 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.

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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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.

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).

The Shillington Municipal Authority, the Shillington Borough Council and all Shillington employees work diligently to provide you with quality drinking water. We are proud to share this report with you indicating that we have again achieved an outstanding record in meeting the Safe Drinking Water Program requirements during 2004. As always, we are constantly striving to provide you, the consumer, with excellent water. You are encouraged to contact us with any suggestions you feel may benefit us with this effort.

Additional information can be obtained at the following web sites:

www.wbwa.org - for information on the Western Berks Water Authority system

www.waterdata.com - for water quality data for community water systems through the United States

www.epa.gov/safewater/ - EPA's drinking water web site